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Preliminary Site Contamination Investigation Buckland Park Proposal Walker Corporation / DayCorp

3 November 2008 Reference 31495 Revision 5



### **Document Control**



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# Appendix A

Site Sampling Locations - Soil

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Quality Control Analysis - Soil

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Groundwater Monitoring Well Gauge and Purge Sheet

### Appendix H

Laboratory Analysis Certificates - Groundwater

### Appendix I

Chain of Custody Forms - Groundwater

### Appendix J

Quality Control Analysis - Groundwater



# **Limitations of this Report**

The outcome of this report is limited to information supplied for the activities associated with the nominated scope of works only. This report does not detail or define the full extent or otherwise of contamination on the property lot under investigation, but rather has been prepared to indicate contaminant concentrations within the investigation area.

Soil and rock formations are often variable, resulting in the heterogeneous distribution of contaminants across a site. The accuracy with which sub-surface conditions are characterised depends on the frequency and methods of sampling and the uniformity of sub-surface conditions and is therefore limited by the scope of the works undertaken.

We note that this report has been prepared for the use of the client and in part is based on information provided by them. Connell Wagner takes no responsibility and disclaims all liability whatsoever for any loss or damage that the client may suffer as a result of using or relying on any such information or recommendations contained in this report, except to the extent Connell Wagner expressly indicates in this report that it has verified the information to its satisfaction.

It should be noted that this report is not an auditors report. Should further information become available regarding the conditions at the site, including previously unknown likely sources of contamination, Connell Wagner reserves the right to review the report in the context of the additional information.



# **Abbreviations**

ASS	Acid Sulfate Soil
ALS	ALS Laboratory Group
Amdel	Amdel Analytical Laboratories
ANZECC	Australian and New Zealand Environment and Conservation Council
AHD	Australian Height Datum
AS	Australian Standard
Bgl	Below ground level
Bgs	Below ground surface
Btoc	Below top of casing
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
BH	Borehole
COC	Chain of Custody
Connell Wagner	Connell Wagner Pty Ltd
DQO	Data Quality Objective
°C	Degrees Celsius
DWLBC	Department of Water, Land and Biodiversity Conservation
DO	Dissolved Oxygen
EIL	Ecological Investigation Level
EC	Electrical Conductivity
EPPWQ	Environmental Protection Policy Water Quality
ESA	Environmental Site Assessment
GIL	Groundwater Investigation Level
GW	Groundwater Well
HIL	
ha	Health Investigation Level Hectares
C <sub>6</sub> -C <sub>36</sub>	Hydrocarbon Chainlength Fraction
ID	Identification
IP	Interface Probe
ILs	
LOQ	Investigation Levels Limit of Quantification
LOQ	Limit of Quantinication  Limit of Reporting
μg/L	Micrograms per litre
	Milligrams per litre
mg/L mS/cm	Millisiemens per centimetre
mV	Millivolt
MGT	MGT Environmental Consulting Pty Ltd
MW	Monitoring Well
NA	Not Analysed
NATA	National Association of Testing Authorities
NEPC	National Environmental Protection Council
NEPM	National Environmental Protection Measure
NSWEPA	New South Wales Environment Protection Authority
OCP	Organochlorine Pesticide
OPP	Organophosphorous Pesticide
ReDox	Oxidation/Reduction potential
	Parts per million
Ppm	
Ppm <sub>v</sub> PID	Parts per million by volume Photoionisation Detector
PCB	
PAH	Polychlorinated Biphenyls  Polycyclic Argentic Hydrogerbon
PQL	Polycyclic Aromatic Hydrocarbon  Practical Quantitation Limit
FUL	i iacticai Quantitation Liniit



PEV	Protected Environmental Values
QA	Quality Assurance
QC	Quality Control
RPD	Relative Percentage Difference
SVOC	Semi-Volatile Organic Compound
SB	Soil Bore
SA EPA	South Australian Environment Protection Authority
SKM	Sinclair Knight Merz Pty Ltd
SOP	Standard Operating Procedure
SWL	Standing Water Level
TD	Total Depth
TDS	Total Dissolved Solids
TOC	Top of Casing
TP	Test Pit
TPH	Total Petroleum Hydrocarbon
UST	Underground Storage Tank
VIC EPA	Environment Protection Authority Victoria
VOC	Volatile Organic Compound



# 1. Executive Summary

Joint venture partners Walker and Coporation and DayCorp commissioned Connell Wagner to undertake a preliminary site contamination investigation to establish the potential site contamination risks, and the site's suitability for the proposal.

The site is 1,308 hectares, located within in the City of Playford, approximately 32 kilometres north of Adelaide, west of Port Wakefield Road and south of the Gawler River. The site is currently farmland.

The joint venture partners proposal includes 12,000 residential allotments, with supporting commercial, retail, community, education, employment and open space facilities. The proposal will be constructed over a period of 25 years.

This report details the results of the Preliminary Site Investigation which was carried out in accordance with the National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM, 1999), the "Australian Standards 4482. 1-2005 – Guide to Sampling and Investigation of Potentially Contaminated Soil, Part 1: Non-volatile and semi-volatile compounds", as well as South Australian regulatory requirements outlined in the South Australia *Environment Protection Act 1993*.

The objectives of this investigation were to determine:

- Potentially contaminating activities previously undertaken on the site and in its vicinity.
- If significant contamination has been caused by these activities.
- Whether contamination has the potential to have crossed property boundaries, and
- Recommendations for the Masterplan design and ongoing management of contamination, if identified.

This preliminary site contamination investigation was conducted based on information provided by Connell Wager in a separate report *Site History Investigation, Buckland Park, 2008, Connell Wagner.*The site history investigation was based on general knowledge of potential contamination issues on agricultural land and market gardens and the requirement to assess potential significant risks associated with the proposal. It is intended only to identify potential constraints to the uses proposed in the Masterplan, and to identify additional investigations required should the proposal be approved and proceed.

For the purpose of this report the site has been split into seven sectors being:

- North Sector East (approx. 390ha) bounded by the Gawler River to the north, Tippets Bridge Road to the west, Legoe Road to the south and the site boundary to the east.
- North Sector West (approx. 240ha) bounded by the Gawler River to the north, Tippets Bridge Road to the east, Legoe Road to the south and the site boundary to the west boundary
- Central Sector (approx. 100ha) bounded by Tippets Bridge Road to the east, Legoe Road to the north, Beagle Hole Road to the west and Park Road to the south.
- South Sector West (approx. 260ha) bounded by Park Road to the north, Penrice salt fields to the west, Tippets Bridge Road to the east and the site boundary to the south.
- South Sector East (approx. 50ha) –bounded by Tippets Bridge Road to the west, Legoe Road to the north, Park Road and Thompson Road to the south, Port Wakefield Road and Brooks Road to the east
- South Sector (approx. 200ha) bounded by Brooks Road to the east, Thompson Road to the South and Legoe Road to the North. Borders the Central Sector and South Sector West, to the west.
- East Sector (approx. 90ha) bounded by Port Wakefield Road to the East, Buckland Road to the West, and the site boundary to the South and North.



The results of site history investigation suggested that:

- The primary use of the majority of the site (North Sector West, North Sector East, South Sector West) site has been for grazing, with a low potential risk of contamination
- Cropping of North Sector West, North Sector East, and South Sector West for barley has
  occurred rotationally over time, with a correspondingly low to moderate risk of contamination. In
  both cases, any contamination would be broad and diffuse over a large portion of the site.
- Some localised contamination may have occurred in the Central Sector due to market gardening activities, however this has only occurred in the last ten years hence the risk of contamination is moderate, due to the more benign nature of chemicals likely to be in use.
- Land reshaping was noted to have occurred in the Thompson Creek area on the eastern boundary of North Sector West, which may have required fill to be imported but is more likely to have consisted of grading of the existing landform.
- Very localised contamination may have occurred in the tractor maintenance compound at the northern end of Buckland Road however the risk of contamination is not likely to be high.
- A significant proportion of the land within and surrounding South Sector East, East Sector, and the top portion of South Sector (predominantly north of Park Road) has been in use for market gardening since the 1950s, with a proportionally moderate to high risk of contamination
- The balance of the site has been in use for grazing and broad acre cropping. In any case, these
  activities (due to extent and chemical application methods) may have resulted in contamination
  diffused over a large portion of the site.
- Localised soil (and potentially groundwater) contamination may have occurred in association with a drainage line along Park Road.

A site inspection identified the following areas of potential contamination concern:

- North Sector East predominantly grazing, potentially broad contaminant distribution, low apparent risk
- North Sector West –grazing but with some indications of soil disturbance along the south and western boundary, potentially broad contaminant distribution, moderate apparent risk, increasing in disturbed areas
- Central Sector orchard, agricultural, glass houses potentially localised contaminant distribution (hot spots), high apparent risk
- Southern Sector West grazing but with some indications of soil disturbance along the south and western boundary and close proximity to Penrice salt fields, potentially broad contaminant distribution, moderate apparent risk, increasing in disturbed areas
- Southern Sector East grazing but with some indications of soil disturbance along the eastern
  and western boundaries, potentially broad contaminant distribution, moderate apparent risk,
  increasing in disturbed (hot spot) areas
- South Sector use for market gardening, with a proportionally moderate to high risk of contamination
- East Sector use for market gardening, with a proportionally moderate to high risk of contamination

The purpose of this preliminary investigation is to determine the broad scale condition of the site and identify any contamination issues which would pose significant risk to the viability of the development. It is not intended to detect contamination issues affecting relatively small portions of the site.

The following scope of works was undertaken:

### Soil Investigation:

Preparation of a site specific Site Safety Plan



- Review of underground service plans (provided by others)
- Drilling/excavation at 15 locations over North Sector East (grid locations) to a depth of 2 metres with logging of returns
- Drilling/excavation at 10 locations over North Sector West (grid locations) to a depth of 2 metres with logging of returns
- Drilling/excavation at 20 locations over Central Sector (grid locations) to a depth of 2 metres with logging of returns
- Drilling/excavation at 10 locations over Southern Sector West (grid locations) to a depth of 2 metres with logging of returns
- Drilling/excavation at 20 locations over Southern Sector West (grid locations) to a depth of 2 metres with logging of returns
- Collection of a minimum of 3 soil samples from each location, based on visual observation (fill
  horizons, evidence of contamination) with headspace screening of all soil samples for volatile
  organic compounds (VOCs) using a photoionisation detector (PID)
- Submission of:
  - One selected near surface sample from each location for analysis for metals, polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene and xylenes (BTEX) and organochlorine pesticides (OCP)
  - Twelve selected samples for analysis for VIC EPA Screen, based on visual indication of potential contamination
  - Four inter-laboratory duplicate samples, eight intra-laboratory duplicate samples and five rinsate blank sample for analysis for metals and OCPs for quality control purposes
- Storage of all soil samples for potential additional analysis

#### Groundwater Investigation:

- Installation of 15 groundwater monitoring wells over the site to a nominal depth of 5 metres (appropriate permits required)
- Survey of well location and elevation to allow estimation of groundwater flow direction
- Development of wells after installation using a pump
- Gauging of monitoring wells using an interface probe
- Purging and sampling of newly installed wells approximately one week following installation (using disposable bailers)
- Submission of
  - Five groundwater samples for analysis for metals, PAH and OCPs
  - Six groundwater samples for analysis for metals, PAH, OCPs, pH and TDS
  - One selected groundwater samples for analysis for VIC EPA Screen
  - Three selected groundwater samples for analysis for VIC EPA Screen, pH and TDS
  - Collection of two inter-laboratory duplicate groundwater samples, two intra-laboratory duplicate sample and two rinsate blank sample and analysis for metals and OCPs for quality control purposes

Review of field quality control (QC) sample analyses results and internal laboratory QC analyses suggest that the Preliminary Site Contamination Investigation of Buckland Park was undertaken at a satisfactory standard and that the results of analysis provide reliable data with regards to the areas sampled over the site.

The results of this preliminary site contamination investigation indicate the majority of contaminants identified in soil across the site were recorded at levels below the NEMP Health Investigation Levels (HIL) and Ecological Investigation Levels (EIL). One recorded reading at TP69 0-0.1 of 1100 mg/kg for copper exceeded NEPM A HIL. Soil samples TP11 (0.05-0.15), TP22 (0.4-0.5) and TP37 (0.05-0.15)



exceeded NEMP EIL for Manganese. No indication of contaminating activities was observed in these areas and it is possible these levels of metals occur naturally within the soil.

The majority of contaminants identified in groundwater on the site were recorded at levels below the NEMP GIL 'Marine Aquatic Ecosystems' and SA EPA EPPWQ 'Aquatic Ecosystems' (Marine). Samples GW4, GW5, GW6, GW11, GW12, GW13, GW14, GW15 exceeded NEMP GIL for Copper. GW3 exceeded both NEMP GIL and EPPQW for Copper. GW5 exceeded both NEMP GIL and EPPWQ for Nickel. No indication of contaminating activities was observed in these areas and it is possible these levels of metals occur naturally within the groundwater.

The results of this preliminary site contamination investigation found the majority of soil and groundwater samples were below adopted guidelines. However, some soil and groundwater levels have exceeded adopted guidelines and these areas will require further investigation as part of detailed design work.

The results of this preliminary site contamination investigation indicate no major signs of contamination across the site. It must be noted that this is only a preliminary site contamination investigation and contamination is not an impediment to approval of the proposal. Any area of land proposed to be developed for any sensitive use on the site will require a comprehensive soil and groundwater investigation along with the appointment of an accredited Victorian EPA auditor.



## 2. Introduction

## 2.1 Background

Joint venture partners Walker Corporation and DayCorp commissioned Connell Wagner to undertake a preliminary site contamination investigation at the site identified in Figure 2-1 to establish the potential site contamination risks, and the site's suitability for the proposal, illustrated in the Masterplan at Figure 3-2.

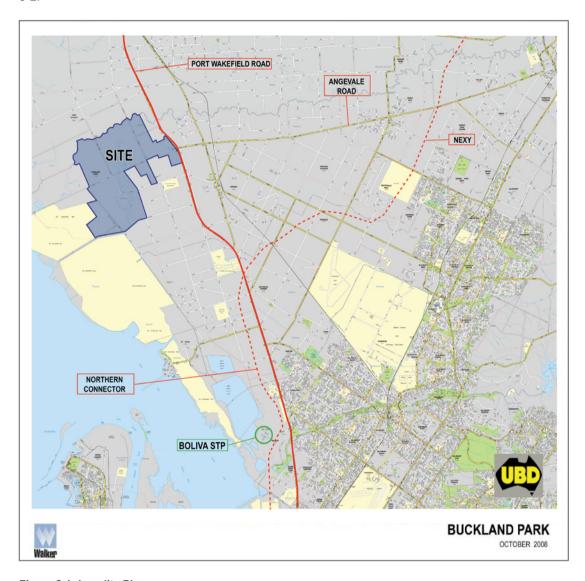


Figure 2-1: Locality Plan

The site is 1,308 hectares, located within in the City of Playford, approximately 32 kilometres north of Adelaide, west of Port Wakefield Road and south of the Gawler River. The site is currently farmland.

The joint venture partner's proposal includes 12,000 residential allotments, with supporting commercial, retail, community, education, employment and open space facilities. The proposal will be constructed over a period of 25 years. It is illustrated in the Masterplan at Figure 3-2.



This report details the results of the Preliminary Site Investigation which was carried out in accordance with the National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM, 1999), the "Australian Standards 4482. 1-2005 – Guide to Sampling and Investigation of Potentially Contaminated Soil, Part 1: Non-volatile and semi-volatile compounds", as well as South Australian regulatory requirements outlined in the South Australia *Environment Protection Act 1993*.

## 2.2 Objectives

The objectives of this investigation were to determine:

- Potentially contaminating activities previously undertaken on the site and in its vicinity.
- If significant contamination has been caused by these activities.
- Whether contamination has the potential to have crossed property boundaries, and
- Recommendations for the Masterplan design and ongoing management of contamination, if identified.

This preliminary site contamination investigation was conducted based on general knowledge of potential contamination issues on agricultural land and market gardens and the requirement to assess potential significant risks associated with the proposal. It is intended only to identify potential constraints to the uses proposed in the Masterplan and to identify additional investigations required should the proposal be approved and proceed.



# 3. Environmental Description

## 3.1 Site Location and Description

The site is 1,308 ha within the City of Playford, approximately 32 kilometres north of Adelaide, west of Port Wakefield Road and south of the Gawler River. Figure 2-1 illustrates the location of the site in the northern Adelaide.



Figure 3-1: Site Plan

The majority of land use on the site is grazing of cattle and agriculture with large, apparently disused glass houses located along Park Road in the south west part of the site. Surrounding land uses include Buckland Lake to the north west, Cheetham's salt pans to the west, cropping and glass houses to the south-east and a composting facility to the south of the site.

## 3.2 Topography

The terrain of the site is very flat with grades of up to 0.2 percent, generally falling to the west. At the time of the site inspection (June/July 2007), ponding of water was observed in a number of locations and along minor creek lines through the site.

# 3.3 Soils and Geology

The geological survey of South Australia indicates that the majority of the site is underlain by Pooraka formation, typically comprising of pale red-brown sandy clay containing carbonate. The St Kilda formation, consisting of shelly sand with a high organic component, and Glanville Formations, can be found towards the coast. Bedrock is not expected to occur in the upper 30m depth at the site. A preliminary geotechnical classification of the site was undertaken by Golder Associates and detailed in *Preliminary Geotechnical Investigation, Buckland Park, South Australia, Golder Associates, 2008.* 

St Kilda Formation and Holocene Alluvium area are associated with nearby coastal regions and of high probability of Acid Sufate Soils (ASS). Preliminary field investigations of ASS by Golder Associates in their report *Preliminary ASS Investigation, Buckland Park, Golder Associates, October 2008,* found a low risk for acid sulfate soils on the site.



## 3.4 Hydrology and Hydrogeology

Surface water hydrology of the site is largely controlled by the Gawler River situated immediately north of the site. Thompson Creek extends from the north east to the middle of the site and is a shallow intermittent ephemeral watercourse that channels surface flows during the wet season and periods of flooding when the Gawler River overflows. Two salt pans are present to the southwest of the site and are currently operated by Cheetham Salt.

Existing available data obtained from the Department of Water, Land and Biodiversity Conservation (DWLBC) database on groundwater levels in the watertable aquifer showed that water levels are quite shallow, at approximately 1m to 6m below ground level (bgl) and groundwater highly saline. A detailed assessment of hydrology and hydrogeology at the site is provided by SKM in *Buckland Park Hydrogeology Assessment Report, SKM, November 2008.* 

## 3.5 The Proposal

The proposal comprises the following elements:

- 12.000 residential allotments
- Schools
- Community facilities
- Recreational facilities
- A district centre
- Local shopping precincts
- Open Space
- Stormwater management facilities
- Water features

The Masterplan can be observed in Figure 3-2.



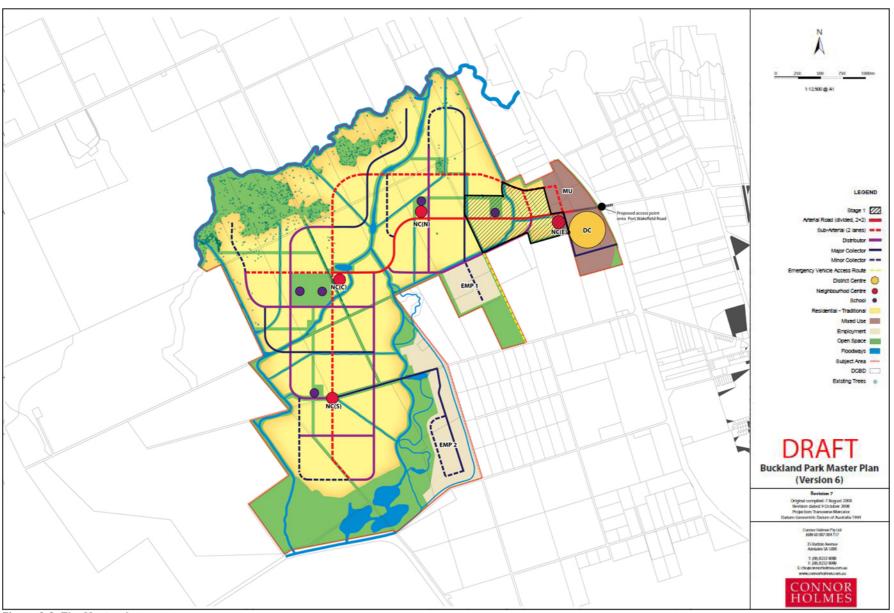


Figure 3-2: The Masterplan



# 4. Site History Assessment

A site history investigation was undertaken and reported separately (*Site History Investigation, Buckland Park Proposal, Connell Wagner Pty Ltd, October 2008*). This site history investigation has been prepared in accordance with the National Environment Protection (Assessment of Site Contamination) Measure 1999 to determine:

- Potentially contaminating land use (past or present)
- Probable contaminants stored/used/disposed on site (past and present)
- Probable locations and distribution of contaminant storage/use/disposal on site (past and present)

Sources of the site history investigation included:

- South Australia Land Titles Office
- South Australia Department of Environment and Heritage: Mapland
- Interviews with site land owners
- Site inspection (undertaken by Connell Wagner on 13<sup>th</sup> December 2007)

## 4.1 Site History Summary

Potentially contaminating activities identified in the site history investigation are summarised along with their significance in Table 4-1. Degrees of significance are outlined in the table below and are based on general knowledge of potential contamination issues on agricultural land and market gardens and are defined as follows:

High	Contaminants from activity have a high potential to cause harm to receptors including
	ecosystems and humans
Moderate	Contaminants from activity have a moderate potential to cause harm to receptors
	including ecosystems and humans
Low	Contaminants from activity have a low potential to cause harm to receptors including
	ecosystems and humans



Table 4-1: Summary of potentially contaminating activities

Potentially contaminating activity	Potential contaminants	Likely locations	Persistence / mobility in soils, toxicity	Chemical analytes	Likely Significance
Market gardens - glasshouses, sheds, importation of fill and possible minor landfill	Application of herbicides, pesticides, insecticides and/or fertilisers, metals	Central Sector and north of Park Road on South Sector East	Variable persistence and mobility in soils. Generally low toxicity to humans.	Glyphosate, triazines and arsesnic, organochlorine and organophosphate pesticides, metals	Moderate to high. Localised. Minor significance in soils if modern organic herbicides have been used. However, if arsenic-based herbicides or chlorinated organics were used historically the risk profile may be higher.
Importation of fill – unknown source(s)	Bitumen, oil, metals, arsenic, pesticides, acid/caustic substances	Over whole site (unlikely), potentially at Thompson Creek area Northern Sector West	Various levels of mobility, persistence and toxicity.	Hydrocarbons (PAH and TPH), arsenic and heavy metals, pH, pesticides	Low. Only of major significance should levels in soil prove to be elevated. Extent likely to be localised. Grading (reshaping of natural) likely to have occurred rather than importation.
Broad scale farming (barley for feed)	Pesticide/herbicide Application	Whole site at different times, not extensive duration at any particular location (rotational)	Various levels of mobility, persistence and toxicity.	Glyphosate, triazines and arsesnic, organochlorine and organophosphate pesticides	Low. Minor potential contamination particularly if modern organic herbicides or no pesticides and herbicides have been used.
Grazing	Pesticide/herbicide Application	Whole site at different times, not extensive duration at any particular location (rotational)	Various levels of mobility, persistence and toxicity.	Glyphosate, triazines and arsesnic, organochlorine and organophosphate pesticides	Low. Minor potential contamination particularly if modern organic herbicides or no pesticides and herbicides have been used.
Vehicle service compound	Petroleum Hydrocarbons, metals	North Sector West - Northern end of Buckland Road	Medium to high persistence and low mobility in soil.	TPH, PAH, metals	Low to moderate. Small area (approximately 400 square metres)
Drainage line, Park Road	Contaminated agricultural wastewater Herbicides, pesticides, nutrients, metals	South Sector East, southern boundary	Various levels of mobility, persistence and toxicity.	organochlorine and organophosphate pesticides, metals, nutrients	Low to moderate. Localised, dilute contaminants.
Olive groves close to western boundary (offsite)	Pesticide/herbicide Application	North Sector West – western boundary	Various levels of mobility, persistence and toxicity.	Glyphosate, triazines and arsesnic, organochlorine and organophosphate pesticides	Low. Localised potential impact. Minor potential contamination particularly as modern organic chemicals or no pesticides and herbicides have been used.



For the purpose of this assessment the site was divided into 7 sectors:

- North Sector East (approx. 390ha) bounded by the Gawler River to the north, Tippets Bridge Road to the west, Legoe Road to the south and the site boundary to the east
- North Sector West (approx. 240ha) bounded by the Gawler River to the north, Tippets Bridge Road to the east, Legoe Road to the south and the site boundary to the westboundary
- Central Sector (approx. 100ha) bounded by Tippets Bridge Road to the east, Legoe Road to the north, Beagle Hole Road to the west and Park Road to the south
- South Sector West (approx. 260ha) bounded by Park Road to the north, Penrice salt fields to the west, Tippets Bridge Road to the east and the site boundary to the south
- South Sector East (approx. 50ha) –bounded by Tippets Bridge Road to the west, Legoe Road to the north, Park Road and Thompson Road to the south, Port Wakefield Road and Brooks Road to the east
- South Sector (approx. 200ha) bounded by Brooks Road to the east, Thompson Road to the South and Legoe Road to the North. Borders the Central Sector and South Sector West, to the west.
- East Sector (approx. 90ha) bounded by Port Wakefield Road to the East, Buckland Road to the West, and the site boundary to the South and North.

A summary of the potential contamination risks to the site sectors are outlined in Table 4-2 and displayed in Figure 4-1.

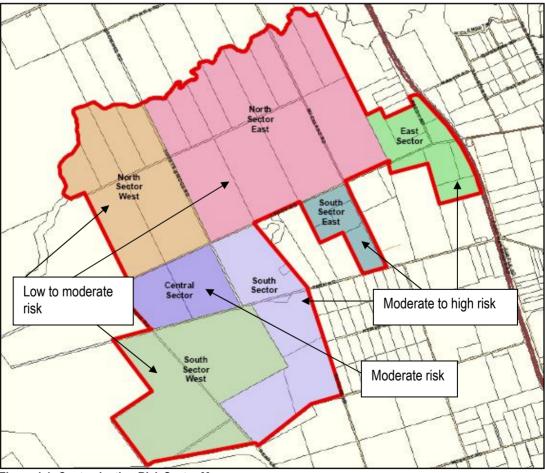


Figure 4-1: Contamination Risk Sector Map



Table 4-2: Site Sector Risk Summary

Table 4-2: Site Secto		
Sector	Comments	Potential contamination risk
North Sector West	Primary use for grazing, rotational use for barley cropping. Any contamination from both activities would be broad and diffuse over a large portion of these site sectors. Land reshaping has occurred in the Thompson Creek area on the eastern boundary of the sector. Fill may have been imported here, but it is more likely to have consisted of grading of the existing landform.	Low to moderate
North Sector East	Primary use for grazing, rotational use for barley cropping. Any contamination from both activities would be broad and diffuse over a large portion of these site sectors. Very localised contamination may have occurred in the tractor maintenance compound at the northern end of Buckland Road with the risk of contamination likely to be low	Low to moderate
South Sector West	Primary use for grazing, rotational use for barley cropping. Any contamination from both activities would be broad and diffuse over a large portion of these site sectors	Low to moderate
Central Sector	Some localised contamination may have occurred due to market gardening activities. This has only occurred in this sector for the last ten years and the risk of contamination is moderate, due to the more benign nature of chemicals likely to be in use. Soil within the drainage ditch noted along Park Road may have been contaminated by chemicals in waste-water discharged from agricultural activities outside and within the site.	Moderate
South Sector East	A significant proportion of the land within and surrounding this sector has been used for market gardening since the 1950s. The balance of the sector has been used for grazing and broad acre cropping.	Moderate to high
South Sector	A significant proportion of the land within and surrounding the top portion of this sector (predominantly north of Park Road) has been used for market gardening since the 1950s. Soil within the drainage ditch noted along Park Road may have been contaminated by chemicals in waste-water discharged from agricultural activities outside and within the site. The balance of the sector has been used for grazing and broad acre cropping.	Moderate to high
East Sector	A significant proportion of the land within and surrounding this sector has been used for market gardening since the 1950s. The balance of the sector has been used for grazing and broad acre cropping.	Moderate to high

Note: Risk rankings are based on the New Zealand Risk Based Screening System for Contaminated Land Management, 2004.

It was also noted during the investigation:

Potential contamination "hot spots" (point sources) associated with agricultural and grazing
activities including landfills and sheep and cattle dips, were not identified during the site history
investigation.



 Soil within the storage dam for the Virginia pipeline treated wastewater (from the Bolivar Sewage treatment plant) may have been contaminated by chemicals within the wastewater however this us unlikely.

## 4.2 Site History Conclusions

The site history investigation suggests that the primary use of the site has been for grazing and broad acre cropping (barley for stock feed) rotating over the majority of the site at different times. In both cases, any contamination would be broad and diffuse over a large portion of the site decreasing associated contamination risks. The most significant risk areas are in the South Sector East, East Sector, and the top portion of the South Sector (predominantly north of Park Road) where a significant proportion of the land within and surrounding these sectors has been used for market gardening since the 1950s.

These conclusions are provided to guide the preliminary site contamination assessment prepared by Connell Wager



## 5. Site Assessment

#### 5.1 Introduction

Soil sampling field work was undertaken from the 18<sup>th</sup> to the 23<sup>rd</sup> of January and from the 3<sup>rd</sup> of April to the 9<sup>th</sup> of April 2008. Groundwater sampling was undertaken from the 6<sup>th</sup> to the 8<sup>th</sup> of May 2008.

Drillmax Pty Ltd was contracted by Connell Wagner to undertake soil test pitting and groundwater well installation.

## 5.2 Data Quality Objectives

Data quality objectives (DQOs) are quantitative and qualitative statements that define the study objective and provide a framework for the reliable collection and reporting of data upon which the site contamination assessment is based. The DQO's, based on the standard 7-step approach, for this assessment are shown in Table 5-1: Data quality objectives based on the standard 7-step approach

Table 5-1: Data quality objectives based on the standard 7-step approach

Process	Response
Step 1: State the Problem	Previous and current site use may have resulted in significant levels of contamination in portions of the site.
Step 2: Identify the Decision	Are associated contaminants likely to be present at the site at concentrations potentially affecting proposed future land uses.
Step 3: Identify the Inputs to the Decision	Site history and data collected from analysis of targeted soil samples in and around identified potentially contaminated areas.
Step 4: Define the Boundaries of the Study	The geographic boundary of this assessment is the site boundary. Localised areas of potentially significant contaminated have been identified. Soil samples to be collected from surface and depth to assess vertical extent of contamination.
Step 5: Develop a Decision Rule	Decisions to be based on National Environment Protection Measure (NEPM) guideline levels for commercial industrial use and residential use.
Step 6: Specify Tolerable Limits on Decision Errors	Sufficient sampling and analysis to limit the probability of decision error to 10%. Data quality indicators to be used to evaluate data acceptability.
Step 7: Optimise the Design for Obtaining Data	Soil samples to be collected on a targeted basis (and some grid) focussing on identified potential areas of contamination.  Quality Assurance (QA) procedures will be followed and Quality Control (QC) samples collected.

## 5.3 Approach to the Preliminary Site Contamination Investigation

In broad terms, the scope of the proposed preliminary investigation is sufficient to provide an understanding of potential contamination issues over the site, including a sufficient site history investigation and soil and groundwater sampling to identify significant site constraints.

A soil and groundwater sampling plan was developed for the site based on the apparent risk identified in the site history investigation and the site inspection.

The purpose of this preliminary investigation is to determine the broad scale condition of the site and identify any contamination issues which would pose significant risk to the viability of the development. It is not intended to detect contamination issues affecting relatively small portions of the site. The



preliminary investigation included excavation of test pits, soil logging and sampling, installation of groundwater wells and water sampling, and analysis and reporting as detailed below. All testing was undertaken by a National Association of Testing Authorities (NATA) registered laboratory.

## 5.4 Conceptual Site Model

Rainfall leaching through the surface soils may produce a leachate containing the contaminant chemicals of concern. Contaminants entering the dynamic groundwater system may contaminate groundwater discharge to water courses and therefore the receiving biological and human receptors. Surface water runoff from stormwater events may also contain contaminants of concern and discharge into Thompson Creek and into salt pans and adjacent to the site.

Ares of environmental concern and potential contaminants of concern are outlined in Table 5-2

Table 5-2 Areas of environmental concern and potential contaminants of concern

Areas of Environmental Concern	Potential Contaminants of Concern	
Central Sector and north of Park Road on South	Herbicides, pesticides, insecticides and/or fertilisers,	
Sector East  Over whole site (unlikely), potentially at	metals  Bitumen, oil, metals, arsenic, pesticides,	
Thompson Creek area Northern Sector West Whole site at different times, not extensive	acid/caustic substances Pesticide/herbicide Application	
duration at any particular location (rotational)		
North Sector West - Northern end of Buckland Road	Petroleum Hydrocarbons, metals	
South Sector East, southern boundary	Herbicides, pesticides, nutrients, metals	
North Sector West – western boundary	Pesticide/herbicide Application	

### 5.4.1 Potential Receptors

Potential contamination receptors for the site include:

- Staff and workers on the site
- Local residential areas
- Children playing on the site
- Water courses including Gawler River, Buckland Lake, Thompson Creek
- Native fauna and grazing animals
- Groundwater
- Commercial and other persons accessing the site

### 5.4.2 Contaminant Pathways

Potential contaminant pathways for the site include:

- Ingestion
- Dermal Contact
- Groundwater Flow
- Surface Water Flow



# 6. Soil Investigation

## 6.1 Scope of Works

- Preparation of a site specific Site Safety Plan
- Review of underground service plans (provided by others)
- Drilling/excavation at 15 locations over North Sector East (grid locations) to a depth of 2 metres with logging of returns
- Drilling/excavation at 10 locations over North Sector West (grid locations) to a depth of 2 metres with logging of returns
- Drilling/excavation at 20 locations over Central Sector (grid locations) to a depth of 2 metres with logging of returns
- Drilling/excavation at 10 locations over Southern Sector West (grid locations) to a depth of 2 metres with logging of returns
- Drilling/excavation at 20 locations over Southern Sector West (grid locations) to a depth of 2 metres with logging of returns
- Collection of a minimum of 3 soil samples from each location, based on visual observation (fill horizons, evidence of contamination) with headspace screening of all soil samples for volatile organic compounds (VOCs) using a photoionisation detector (PID)
- Submission of:
  - One selected near surface sample from each location for analysis for metals, polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene and xylenes (BTEX) and organochlorine pesticides (OCP)
  - Twelve selected samples for analysis for VIC EPA Screen, based on visual indication of potential contamination
  - Four inter-laboratory duplicate samples, eight intra-laboratory duplicate samples and five rinsate blank sample for analysis for metals and OCPs for quality control purposes
- Storage of all soil samples for potential additional analysis

## 6.2 Methodology

The following general methodology was adopted for this preliminary site inspection:

- Use of disposable gloves and collection of samples directly from the pit wall or excavator bucket during test pit sampling to prevent cross-contamination between samples.
- Collection of samples near surface (0.1-0.2m or deeper depending on fill or rubble content at the surface) and at half metre intervals thereafter
- Headspace screening of all soil samples for volatile organic compounds (VOCs) using a photoionisation detector (PID), where the target sample is immediately split, half placed in a jar for potential analysis and half placed in a food grade zip lock bag for VOC screening
- Calibration of the PID by the supplier prior to delivery and by the field operator daily
- Immediate storage of soil samples in laboratory supplied glass sample jars and in an ice cooled esky

While this investigation will provide a good indication of the site's condition and will inform future detailed investigations, it must be noted that, given the broad sample distribution, it does not meet the requirements of a contaminated land Auditor. Future investigations will meet this criterion.



#### 6.2.1 PID Analysis

A PID was used by Connell Wagner to measure headspace VOC concentrations in soil samples. Calibration of the PID was carried out by the supplier on the day of headspace VOC measurement. Samples for PID testing were taken from the potential contamination risk areas, as well as randomly from other soil cores. VOC concentrations are noted within soil bore logs (Appendix B).

#### 6.2.2 Laboratory Analysis

In total 481 primary soil samples were sent to Amdel Laboratories for analysis or storage. All samples were tracked on chain of custody (COC) documentation (Appendix D). Selected soil samples were analysed for:

- TPH (77 samples)
- PAH (80 samples)
- Metals (88 samples)
- OCP (88 samples)
- BTEX (70 samples)
- Vic EPA Screen (13 samples)

#### 6.2.3 Sampling Plan

Figures in Appendix A show the location of all test-pit sites and groundwater wells at the site.



# 7. Groundwater Investigation

## 7.1 Scope of Works

- Service location by professional locators
- Installation of 15 groundwater monitoring wells over the site to a nominal depth of 5 metres (appropriate permits required)
- Survey of well location and elevation to allow estimation of groundwater flow direction
- Development of wells after installation using a pump
- Gauging of monitoring wells using an interface probe
- Purging and sampling of newly installed wells approximately one week following installation (using disposable bailers)
- Submission of
  - Five groundwater samples for analysis for metals, PAH and OCPs
  - Six groundwater samples for analysis for metals, PAH, OCPs, pH and TDS
  - One selected groundwater samples for analysis for VIC EPA Screen
  - Three selected groundwater samples for analysis for VIC EPA Screen, pH and TDS
  - Collection of two inter-laboratory duplicate groundwater samples, two intra-laboratory duplicate sample and two rinsate blank sample and analysis for metals and OCPs for quality control purposes

## 7.2 Methodology

### 7.2.1 Site Safety

Prior to commencement of the Soil Contamination Assessment, a Job Safety Analysis and Method Statement were completed. This document was reviewed and signed by all Connell Wagner personnel involved in the groundwater monitoring.

#### 7.2.2 Groundwater Sampling

Groundwater investigation undertaken between the 6th and the 15th of May 2008 consisted of:

- Installation of 15 groundwater monitoring wells to a nominal depth of 5 metres
- Sealing of well annular space with a bentonite seal and grout to the surface
- Use of disposable gloves for collection of samples
- Purging a minimum of three well volumes (measuring water quality parameters conductivity, pH and redox to determine when representative groundwater could be sampled)
- Collection of groundwater samples using a disposable bailer

Specific actions included within the sampling process are listed below:

- Each well was gauged prior to sampling using an interface probe.
- The groundwater wells were purged and sampled using a 12V submersible pump with a reusable hose
- Water samples were taken from the discharge hole at the bottom of the bailer
- Bailers were disposed of after sampling at each borehole locations
- The Interface Probe and any reusable sampling equipment underwent a decontamination process following use in each of the groundwater wells, which involved a wash using a detergent (Napi-San) and water mixture, and then a rinsing with plain tap water.



#### 7.2.3 Groundwater field parameters

During the groundwater sampling process, field parameters including dissolved oxygen (DO), electrical conductivity (EC), pH, reduction-oxidation potential (ReDox) and temperature were recorded at the surface following the extraction of each individual calculated well volume. Well volumes were extracted until the water quality parameters stabilised to within 0.05 for pH, 0.5°C for temperature, 10% for Redox and DO and 3% for EC for two consecutive readings, with a minimum of three well volume extractions per well. Samples were not collected from each groundwater well until stabilisation of these parameters was observed. All groundwater field parameters stabilisation levels were recorded in accordance with AS4482.1

### 7.2.4 Laboratory Analysis

The primary groundwater samples and the intra-lab duplicate samples were analysed by Amdel, and the inter-lab triplicate samples were analysed by MGT. All of these laboratories are National Association of Testing Authorities (NATA) accredited for the tests performed. The analytical methods and laboratory reporting limits for groundwater are included in the laboratory certificates in Appendix H and chain of custody forms are included in Appendix I.

Selected groundwater samples were analysed for:

- OCP (11 samples)
- PAH (11 samples)
- Metals (11 samples)
- pH (9 samples)
- Vic EPA Screen (4 samples)
- TDS (9 samples



# 8. Soil Investigation Results

## 8.1 Investigation Guidelines

The assessment of human health and environmental risk from soils on site has been undertaken by comparing levels of contaminants identified on site with appropriate National Environment Protection (Assessment of Site Contamination) Measure (NEPM, 1999) Health Investigation Levels (HILs).

Based on potential residential use of the site, the investigation guideline for soils used was HIL – Criteria A ['Standard' residential with garden/accessible soil (home-grown produce contributing less than 10% of vegetable and fruit intake; no poultry): this category includes children's day-care centres, kindergartens, preschools and primary schools]. Results of analysis were also compared to the NEPM Ecological Investigation Levels (Interim Urban) to determine whether site contaminant concentrations may pose a threat to ecological receptors.

## 8.2 Soil Investigation Results

#### 8.2.1 Soil Profiles

The site's general soil profile consisted of mainly silty clay to a depth of 2 metres, with a greater sandier content in northern portions of North Sector East and North Sector West. Soil colour was generally brown to red brown. Moisture was encountered within some pits in South Sector West. Borehole logs are attached in Appendix B. Soil profiles were consistent with geotechnical information detailed by Golder Associates in *Preliminary Geotechnical Investigation, Buckland Park, Golder Associates, 2008.* 

#### 8.2.2 PID Results

The results of headspace VOC concentrations measurement are presented within the soil logs (Appendix B). Photoionization detector (PID) readings were taken with each soil sample taken over a range of depths.

The majority of samples encountered no reading of volatile hydrocarbon with the exception of those outlined in Table 8-1.

Table 8-1: PID Results

Test Pit / Depth	PID reading (ppm)
TP34 (0.4 – 0.5)	0.2
TP34 (0.9 – 1)	0.3
TP35 (0.5 – 0.15)	0.4
TP35 (0.4 – 0.5)	1.1
TP36 (0.5 – 0.15)	0.3
TP36 (0.4 – 0.5)	0.4
TP36 (0.9 – 1)	0.3
TP37 (0.4 – 0.5)	1.5
TP 37 (0.9 – 1)	0.3



### 8.2.3 Soil Analytical Results

Significant contaminant concentrations detected at the site in this assessment are highlighted in Table 8-2. These concentrations are considered significant because they either exceed HIL A levels or they are indicative of potentially significant contamination. All other target analytes had concentrations below the adopted guidelines or below the laboratory limit of reporting (LOR). Laboratory analysis certificates are included in Appendix C. A site sampling plan with test pit locations is included in Appendix A.

Table 8-2: Significant soil results

Analytes (mg/kg)				TPH				M	etals	
		C <sub>6</sub> -C <sub>9</sub>	C <sub>10</sub> -C <sub>14</sub>	C <sub>15</sub> -C <sub>28</sub>	C <sub>29</sub> -C <sub>36</sub>	C <sub>10</sub> -C <sub>36</sub>	Mn	Pb	Zn	Cu
NEPM HIL A		NA	NA	90(Ar)	5600	NA	1500	300	7000	1000
NEI	PM EILs			5600(AI)			500	600	200	100
	TP9	<10	<50	<100	<mark>110</mark>	<mark>110</mark>	NA	22	38	34
	(0.05-0.15)									
	TP11	<10	<50	<100	<mark>140</mark>	<mark>140</mark>	534	13	42	25
40	(0.05-0.15									
Pits	TP22	<10	<50	<100	<100	NA	<mark>553</mark>	9	25	21
Grid	(0.4-0.5)									
0	TP37	NA	<50	<100	<100	NA	<mark>604</mark>	15	12	13
	(0.05-0.15)									
	TP69	NA	<10	21	38	59	NA	9.1	32	<mark>1100</mark>
	(0-0.1)									

## 8.3 Quality Control Review - Soil

The quality control samples collected are outlined in Table 8-3.

Table 8-3: Quality control samples collected for soil analysis

<b>Quality Control</b>	Sample ID	Duplicate / Triplicate	Analyte
QC1	TP2 0.05 - 0.15	Duplicate	Metals, OCP, OPP, Ph, Sulphate/Sulphide
QC2	TP2 0.05 – 0.15	Triplicate	Metals, OCP, OPP, Ph, Sulphate/Sulphide
QC3	TP4 0.05-0.15	Duplicate	On Hold
QC4	TP5 0.4-0.5	Duplicate	On Hold
QC5	TP5 0.4-0.5	Triplicate	On Hold
QC6	TP8 0.05-0.15	Duplicate	On Hold
QC7	TP8 0.05-0.15	Triplicate	On Hold
QC8	TP11 0.4-0.5	Duplicate	On Hold
QC9	TP16 0.05-0.15	Duplicate	Metals, OCP, OPP, Ph, Sulphate/Sulphide
QC10	TP16 0.05-0.15	Triplicate	On Hold
QC11	TP24 0.05-0.15	Duplicate	On Hold
QC12	TP24 0.05-0.15	Triplicate	On Hold
CQ13	TP28 0.05-0.15	Duplicate	Metals, OCP, OPP, Ph, Sulphate/Sulphide
QC14	TP32 0.9-1.0	Duplicate	On Hold



Quality Control	Sample ID	Duplicate / Triplicate	Analyte
QC15	TP33 0.05-0.15	Duplicate / Tiplicate  Duplicate	Metals, OCP, OPP, Ph, Sulphate/Sulphide
QC16	TP33 0.05-0.15	Triplicate	Metals, OCP, OPP, Ph, Sulphate/Sulphide
QC17	TP35 0.4-0.5m	Duplicate	On Hold
QC1A	TP38 0-0.1m	Duplicate	On Hold
QC2B	TP39 0-0.1m	Duplicate	Metals, OCP
QC3A	TP40 0.2-0.3	Duplicate	On Hold
QC4A	TP42 0.9-1m	Duplicate	On Hold
QC5A	TP43 0.2-0.3m	Duplicate	On Hold
QC6A	TP44 0.1-0.2m	Duplicate	Metals, TPH, PAH, OCP, pH, BTEX
QC7A	TP45 0.2-0.3m	Duplicate	Metals, TPH, PAH, OCP, pH, BTEX
QC8A	TP47 0-0.1m	Duplicate	On Hold
QC9A	TP48 0.2-0.3m	Duplicate	On Hold
QC10A	TP50 0-0.1m	Duplicate	On Hold
QC11A	TP51 0.2-0.3m	Duplicate	On Hold
QC12A	TP52 0.4-0.5m	Duplicate	On Hold
QC14A	TP55 1.9-2m	Duplicate	On Hold
QC15A	TP70 0-0.1m	Duplicate	Metals, OCP
QC16A	TP58 0.2-0.3m	Duplicate	On Hold
QC17A	TP60 0-0.1m	Duplicate	Metals, TPH, PAH, OCP, pH, BTEX
QC18A	TP61 0.2-0.3m	Duplicate	Metals, OCP
QC19A	TP63 0.4-0.5m	Duplicate	On Hold
QC20A	TP64 0.9-1m	Duplicate	On Hold
QC21A	TP66 0-0.1m	Duplicate	On Hold
QC22A	TP68 0-0.1m	Duplicate	On Hold
QC23A	TP71 0-0.1m	Duplicate	Metals, OCP
QC24A	TP72 0.4-0.5m	Duplicate	On Hold
QC25A	TP74 0-0.1m	Duplicate	Metals, OCP
QC26A	TP76 0-0.1m	Duplicate	On Hold
QC27A	TP77 0.9-1m	Duplicate	On Hold

Relative percentage difference (RPD) calculations were undertaken on all duplicate pairs. The RPD is defined as the difference between the duplicate samples as a percentage of the mean. The RPD is not calculated when one or both of the duplicate results are below the laboratory LOR. For the purpose of this report RPD's greater than 50% for both metals and/or organics have been considered significant. RPD results for quality control samples are included in Appendix E.

### 8.3.1 Quality Control – Soil Investigation

#### Inter-laboratory duplicates

- One RPD was recorded above 50%. The RPD for Boron was recorded at 90.9% for QC16 -TP33 (0.05 – 0.015).
- All other RPD's for inter-laboratory duplicates were recorded below 50% and results suggest that no laboratory or sampling error has occurred.



#### Intra-laboratory duplicates

- One RPD was recorded above 50%. The RPD for Trivalent Chromuim was recorded at 54.5% for QC9 TP16 (0.05 0.15).
- All other RPD's for intra-laboratory duplicates were recorded below 50% and results suggest that no laboratory or sampling error has occurred.

#### **Equipment Rinsate**

Rinsate samples were not obtained during test pit sampling.

#### **Discussion of RPD Results**

The consistency of the metal concentrations for both primary and duplicate samples suggests that laboratory or sampling error has not occurred. It also suggests that systematic error has not occurred at the primary laboratory.

### 8.3.2 Quality Control – Laboratory

Additional quality control procedures were undertaken within the primary laboratory itself including:

- Spike recovery percentages
- Method blanks testing

All testing of method blanks delivered results below the LOR, indicating that no cross-contamination is occurring between equipment and soil samples.



### 8.3.3 Quality Review Conclusions

In summary, the following can be concluded from the quality control review for soil investigation results:

- The number of quality control samples analysed were sufficient to comply with NEPM quality control guidelines.
- Overall, RPDs results suggest that no laboratory or sampling errors have occurred.
- Results obtained for the equipment rinsate blank suggests that cross-contamination of samples is not likely to have occurred during the sampling event.
- Holding times were acceptable for the analytes targeted.
- The laboratory undertook internal quality control procedures.
- No significant quality issues regarding sample analysis were identified throughout the quality control procedures.
- The analysis results are therefore considered to represent the concentrations of chemicals in samples provided to the laboratory.



# 9. Groundwater Investigation Results

## 9.1 Investigation Guidelines

The assessment of human health and environmental risk from groundwater beneath the site has been undertaken by comparing levels of groundwater contaminants identified on site with NEPM (1999) Groundwater Investigation Levels (GILs) 'Marine Aquatic Ecosystems', along with SA EPA Environmental Protection Policy Water Quality (EPPWQ) Protected Environmental Values (PEVs) 'Aquatic Ecosystems' (Marine).

The nearest potential environmental receptor is the Gulf of St Vincent. EPPWQ Potable PEVs have also been considered although the salinity of the groundwater would preclude any beneficial use.

## 9.2 Groundwater Investigation Results

#### 9.2.1 Groundwater Field Parameters

Table 9-1 displays the final stabilised field parameters readings for each of the groundwater wells. Details of the field measurements were recorded within the groundwater sampling field record sheets in Appendix G. It was noted from the results that:

- Concentration of Dissolved Oxygen (DO) in the groundwater varied from 1.64ppm to 3.9ppm.
- Electrical Conductivity (EC) of groundwater varied from 3.55 mS/cm to 56.5 mS/cm.
- pH values varied from 6.52 to 8.34.
- Oxidation/Reduction potential (ReDox) of the groundwater varied from 22mV to 228mV.
- Groundwater temperature varied from 18.7 °C to 21.9 °C.

**Table 9-1: Groundwater Field Parameters** 

Groundwater	Date Sampled	Depth to Groundwater btoc* (m)	Elevation of Groundwater (mAHD)	Field Parameters				
Well				DO (ppm)	EC (mS/cm)	рН	ReDox (mV)	Temperature (°C)
GW1	06/05/2008	3.51	2.01	2.35	3.55	8.11	70	18.9
GW2	06/05/2008	3.525	2.03	2.58	4.62	8.34	47	20.5
GW3	06/05/2008	2.55	1.77	1.94	56.5	7.36	85	20.1
GW4	08/05/2008	3.4	1.05	2.58	53.00	7.43	85	21
GW5	15/05/2008	3.05	6.43	2.54	10.71	7.01	162	19.7
GW6	07/05/2008	3.65	3.32	3.49	14.34	7.62	64	20.4
GW7	05/05/2008	3.25	7.11	1.72	7.45	7.92	59	21.9
GW8	15/05/2008	3.86	5.77	3.61	9.11	7.21	208	21.4
GW9	08/05/2008	3.83	3.94	1.64	8.43	7.34	22	19.6
GW10	15/05/2008	4.422	7.01	3.40	5.42	7.45	222	20.5
GW11	07/05/2008	2.26	1.95	1.85	25.30	7.50	47	20.2
GW12	15/05/2008	7.45	4.32	2.69	12.53	6.52	228	18.7
GW13	07/05/2008	3.37	2.80	1.65	26.90	7.65	45	20.6
GW14	07/05/2008	2.61	2.00	2.05	27.40	7.29	70	20.6
GW15	05/05/2008	2.54	3.50	3.90	7.38	7.77	225	20.8

\*Below top of casing



#### 9.2.2 Groundwater Analysis

The groundwater results indicate that some of the groundwater samples displayed dissolved metal concentrations greater than the NEPM Groundwater Investigation Levels for Marine Aquatic Ecosystems and EPPWQ. These exceedences are highlighted below in Table 9-2. Other target analytes had concentrations below the adopted guidelines or below the laboratory LOR. The laboratory certificates of analysis for the groundwater data can be found in Appendix H. A site sampling plan with locations of groundwater wells is included in Appendix F.

Table 9-2: NEPM GIL Exceedences in Groundwater Analysis

Analytes (μg/L)	Metals (µg/L)		
	Copper	Nickel	
NEPM GIL (Aquatic Ecosystems, Marine)	5	15	
SA EPA EPP (WQ) 2003 (Aquatic Ecosystems, Marine)	10	15	
SA EPA EPP (WQ) 2003 criteria for potable water (µg/L)	2000	20	
GW3	<mark>17</mark>	6.4	
GW4	<mark>15</mark>	7	
GW5	<mark>8.4</mark>	<mark>17</mark>	
GW6	<mark>5.1</mark>	<5	
GW11	<mark>5.4</mark>	<5	
GW12	<mark>5.4</mark>	8.2	
GW13	<mark>6.9</mark>	<5	
GW14	<mark>7.2</mark>	<5	
GW15	<mark>9.7</mark>	9.4	
GW5	<mark>8.4</mark>	<mark>17</mark>	

## 9.3 Quality Control Review - Groundwater

The following quality control samples were collected:

- Duplicate samples: QC1 (GW3) and QC4 (GW15)
- Triplicate Samples: QC2 (GW3) and QC5 (GW15)
- Equipment rinsate blank samples: QC3, QC6

Two intra-laboratory duplicates (QC1 & QC4) and two inter-laboratory triplicates (QC2 & QC5) were analysed for the same set of analytes as the relevant original sample.

All of the equipment rinsate blank samples were analysed for eight metals (As, Cd, Cr, Cu, Hg, Hi, Pb, and Zn) and THP.

Relevant percentage difference (RPD) calculations were undertaken on all duplicate and triplicate pairs. The RPD is defined as the difference between the duplicate samples as a percentage of the man. The RPD is not calculated where both the primary sample and QC sample concentrates are below the laboratory limit of reporting (LOR) however where only one sample has concentrations below the RPD is calculated assuming a concentration equal to the LOR.

### 9.3.1 Quality Control – Groundwater Investigation

The RPD results for the intra-laboratory duplicates and triplicates were as follows in Table 9-3 (refer to Appendix J for all RPD results):



Table 9-3: Quality Control Analysis Results with RPD's Greater than 50%

Inter-laboratory Triplicates								
Analyte	QC4	GW15	RPD%					
TDS (mg/L)	5400	2300	80.5%					
Intra-laboratory Duplicates								
Analyte	QC5	GW15	RPD%					
Chromium (µg/L)	3	17	140%					
TDS (mg/L)	4600	2300	66.7%					

#### Inter-laboratory triplicate

The RPD results for the inter-laboratory triplicates were as follows:

- RPD results could not be calculated for a number of analytes as many of the results were below the LOR (refer to Appendix J for detail)
- RPD results were above 50% for Total Dissolved Solids (TDS) for QC4 (GW15)

It was concluded that results do not suggest systematic error at the primary laboratory due to the majority of the RPD's being below 50%.

#### Intra-laboratory duplicates

The RPD results for the inter-laboratory duplicates were as follows:

- RPD results could not be calculated for a number of analytes as many of the results were below the LOR (refer to Appendix J for detail)
- RPD results were above 50% for Total Dissolved Solids (TDS) and Chromium for QC5 (GW15)

It was concluded that results do not suggest systematic error at the primary laboratory due to the majority of the RPD's being below 50%.

#### **Equipment Rinsate Blank**

The results of analysis of both equipment rinsate blanks (QC3, QC6) indicated concentrations of all target analytes below the laboratory LOR, with the exception of Copper ( $52\mu g/L$ ) in QC3 and Pesticide b-BHC ( $45\mu g/L$ ) in QC6.

The absence of other metals in the rinsate water that were recorded in the groundwater samples also suggests that cross-contamination of samples is not likely to have occurred during the sampling event.

#### **Discussion of RPD Results**

The consistency of the metal concentrations for both primary and duplicate samples suggests that laboratory or sampling error has not occurred. It also suggests that systematic error has not occurred at the primary laboratory.

#### **Quality Control – Laboratory**

Additional quality control procedures were undertaken within the primary laboratory itself including:

- Spike recovery percentages
- Method blanks testing



All testing of method blanks delivered results below the LOR, indicating that no cross-contamination is occurring between equipment and soil samples.

#### 9.3.2 Quality Review Conclusions

In summary, the following can be concluded from the quality control review for groundwater investigation results:

- The number of quality control samples analysed were sufficient to comply with NEPM quality control guidelines.
- Overall, RPDs results suggest that no laboratory or sampling errors have occurred.
- Results obtained for the equipment rinsate blank suggests that cross-contamination of samples is not likely to have occurred during the sampling event.
- Holding times were acceptable for the analytes targeted.
- The laboratory undertook internal quality control procedures.
- No significant quality issues regarding sample analysis were identified throughout the quality control procedures.
- The analysis results are therefore considered to represent the concentrations of chemicals in samples provided to the laboratory.



#### 10. Discussion

#### 10.1 Significant Results Summary

#### 10.1.1 Significant Results Soil Analysis

As the proposal includes residential uses on the site, the investigation guideline for soils used was HIL – Criteria A ['Standard' residential with garden/accessible soil (home-grown produce contributing less than 10% of vegetable and fruit intake; no poultry): this category includes children's day-care centres, kindergartens, preschools and primary schools]. Results of analysis are also compared to the NEPM Ecological Investigation Levels (Interim Urban) to determine whether site contaminant concentrations may pose a threat to ecological receptors.

The majority of contaminants identified on site were recorded at levels below the NEMP Health Investigation Levels (HIL) and Ecological Investigation Levels (EIL). One recorded reading at TP69 0-0.1 of 1100 mg/kg for copper exceeded NEPM A HIL. Soil samples TP11 (0.05-0.15), TP22 (0.4-0.5) and TP37 (0.05-0.15) exceeded NEMP EIL for Manganese. Further investigation is required in the areas of these test pits to delineate contamination of soil within the area. No indication of contaminating activities was observed in these areas and it is possible these levels of metals occur naturally within the soil.

#### 10.1.2 Significant Results Groundwater Analysis

The assessment of human health and environmental risk from groundwater beneath the site has been undertaken by comparing levels of groundwater contaminants identified on site with NEPM (1999) Groundwater Investigation Levels (GILs) 'Marine Aquatic Ecosystems', along with SA EPA Environmental Protection Policy Water Quality (EPPWQ) Protected Environmental Values (PEVs) 'Aquatic Ecosystems' (Marine). The nearest potential environmental receptor is the Gulf of St Vincent. EPPWQ Potable PEVs have also been considered although the salinity of the groundwater would preclude any beneficial use.

The majority of contaminants identified on the site were recorded at levels below the NEMP GIL and SA EPA EPPWQ. Samples GW4, GW5, GW6, GW11, GW12, GW13, GW14, GW15 exceeded NEMP GIL for Copper. GW3 exceeded both NEMP GIL and EPPQW for Copper. GW5 exceeded both NEMP GIL and EPPWQ for Nickel.

Further soil and groundwater investigation may be required in areas where adopted guidelines for groundwater have been exceeded. No indication of contaminating activities was observed in these areas and it is possible these levels of metals occur naturally within the groundwater.

#### 10.2 Risks

The results of this preliminary site contamination investigation found the majority of soil and groundwater samples were below adopted guidelines. Areas where soil and groundwater levels have exceeded adopted guidelines will require further investigation to delineate areas of risk.

This report is a preliminary investigation only and is intended only to identify potential constraints to the uses proposed in the Masterplan and to identify additional investigations required should the proposal be approved and proceed. Greater risk areas remain those areas within and surrounding South Sector East, East Sector, and the top portion of South Sector (predominantly north of Park Road). These areas have been in use for market gardening since the 1950s, with a proportionally moderate to high risk of contamination. This risk ranking is based on the New Zealand Risk Based Screening System for Contaminated Land Management, 2004.



### 11. Conclusions and Recommendations

Connell Wagner was commissioned to undertake a preliminary site contamination investigation of the site to estimate the potential site contamination risks, and the suitability of the site for the proposed land uses illustrated in the Masterplan.

A site history investigation prepared by Connell Wagner (Site History Investigation: Buckland Park Proposal, Connell Wagner 2008) was prepared to assess the potential contamination risks of site. This was conducted with the general knowledge of potential contamination issues on agricultural land and market gardens and the potential significant contamination risks associated with the site and the proposal. The preliminary site contamination investigation was planned and undertaken based on information outlined in the site history investigation.

This report details the results of the preliminary site contamination investigation which was carried out generally in accordance with the National Environment Protection (Assessment of Site Contamination) Measure 1999, the "Australian Standards 4482. 1-2005 – Guide to Sampling and Investigation of Potentially Contaminated Soil, Part 1: Non-volatile and semi-volatile compounds", as well as South Australian regulatory requirements outlined in the South Australia *Environment Protection Act* 1993.

The results of this preliminary site contamination investigation found the majority of soil and groundwater samples were below adopted guidelines. However, some soil and groundwater levels have exceeded adopted guidelines and these areas will require further investigation as part of detailed design work.

The results of this preliminary site contamination investigation indicate no major signs of contamination across the site. It must be noted that this is only a preliminary site contamination investigation. Any part of the site proposed for any sensitive use will require a comprehensive soil and groundwater investigation along with the appointment of an accredited Victorian EPA auditor.

This investigation has achieved the objectives outlined in Section 2.2. These objectives were to determine:

- Potentially contaminating activities at the site and locations
- If significant contamination has been caused by these activities
- Whether contamination has the potential to have crossed property boundaries, and
- Recommendations to address soil contamination issues, if identified

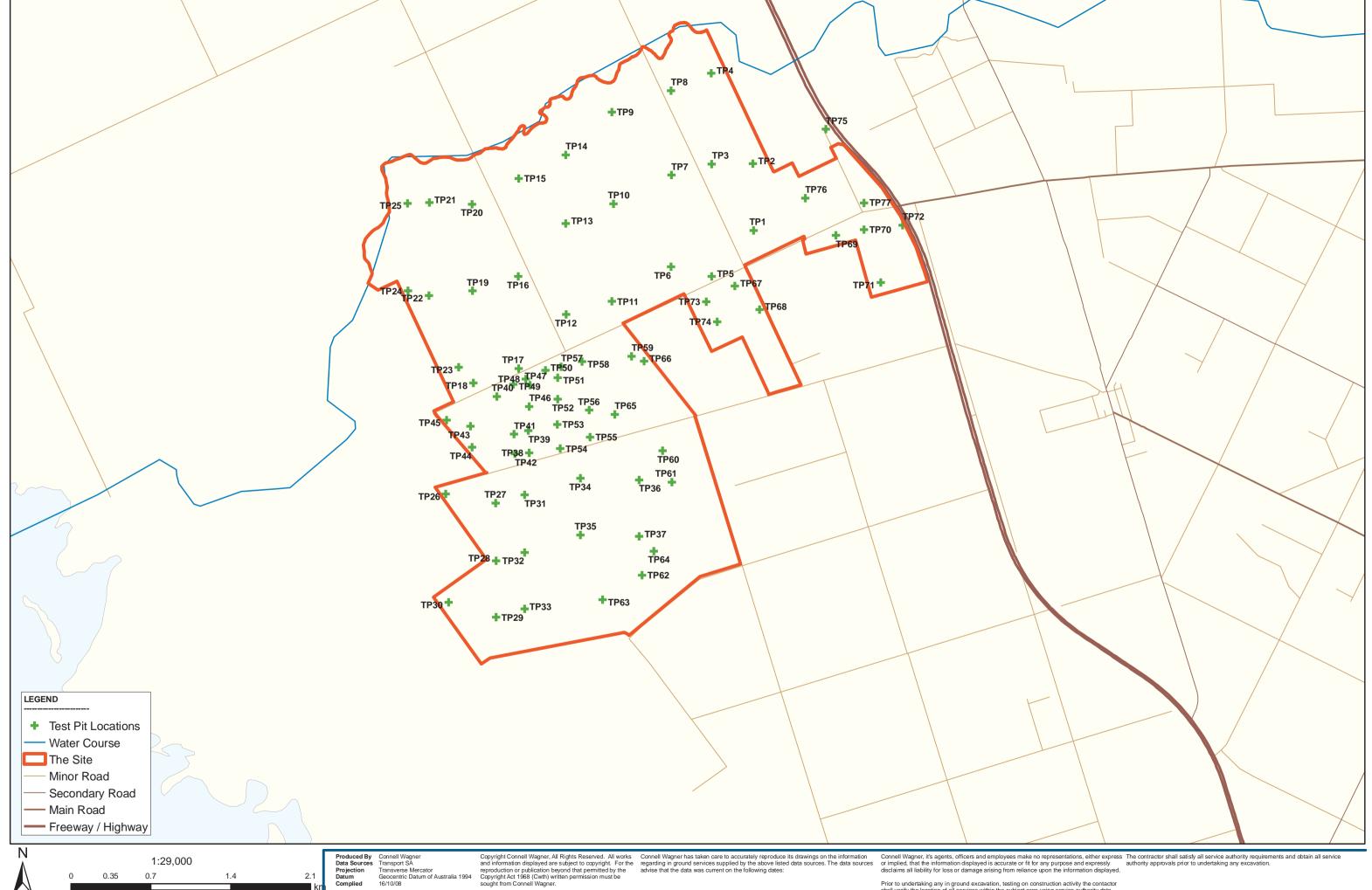


# Appendix A

Site Sampling Locations – Soil

# **Appendix A**





1:29,000 0.35

Prior to undertaking any in ground excavation, testing on construction activity the contactor shall verify the location of all services within the subject area using service authority data and onsite support and appropriate location techniques.

# Appendix B

Soil Bore Logs

# **Appendix B**



Sample No.

TP1

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: Matthew Eygenraam E0273371 N6162624 Drilling Date: 1/18/2008 Location: Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth ( Samples Readings Additional Comments consist. density (soil type: plasticity / grainsize, colour, other components) (ppm) 0.05-0.15m FG 0 Brown arev 0.2 Sandy SILT D Light brown/grey 0.4-0.5m 0 0.4 0.6 0.7 Silty CLAY D Red brown 0.8 0.9-1.0m 0 1.0 None encountered Test 1.2 1.4 Silty CLAY D-M Red brown with grey mottles 1.6 Minor charcoal inclusions 1-2mm 1.8 1.9-2.0m 2 End of Test Pit @ 2m emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring amples & tests

Bulk sample

Disturbed sampl black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VL medium plasticity high plasticity very loose loose Environmental MD med. dense dense firm stiff sample SPT blow with D VD PP SPT blow wither
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue

Sheet

TP2

1 of 1

Clien	t:	Walker C	orpor	ation	Proje	ect No.		31495-00	1
Proje	ect:	Buckland	Park		Logg	ged by:		April Free	man
Loca	tion:	E027336	6 N61	63213	Drilli	ng Date	<b>e</b> :	1/18/2008	\$
Drill (	Compa	ny: Dr	illMax	Driller: John	Hole	Diame	eter:	-	
Rig/C	Core:			Method: Test pit	Hole	Depth	:	2m	
Method	Water	Depth (m)	Classification	Description of Soil (soil type: plasticity / grainsize, colour, other components)	moisture	consist. density	Samples	PID Readings (ppm)	Additional Comments
		0.2 — 0.25		Sandy SILT Light brown  Silty CLAY LP Red brown	D	St St	0.05-0.15m QC1 (duplicate) QC2 (triplicate)	0	<u>-</u>
		0.4 —		Minor charcoal inclusions 1-2mm			0.4-0.5m	0	_ - - -
Test pit	None encountered	1.0 —		Sitty CLAY MP_HP Red brown Some organic matter	D	St	0.9-1.0m	0	- - - -
		1.4 — -		Silty CLAY	M	S			_
		1.6 — - 1.8 —		MP-HP Red brown with grey mottles Minor charcoal inclusions 1-2mm					_ _ _
		2 —		End of Test Pit @ 2m			1.9-2.0m	0	_
		-							_
emark	s:								
method D dia AV au AT au W wa B bla H ha C ca P pe NQ, N HQ, P	ethod diatube / auger drilling V-Bit F auger drilling TC-Bit washbore blade claw/tricone/roller hand auger cable tool percussion D NMI C diamond			plasticity LP low plasticity MP medium plasticity Water level water inflow water loss (%)  water loss (%)  LP low plasticity MP medium plasticity MP midium plasticity R red Br brown C coarse Gr green Bl blue  water loss (%)  Dosphap 873  Level 1 Septimus Roe Square  Colour B black P pale D dry M moist W wet R red Br brown O orange -PL approx. at plastic limit -PL greather then plastic limit	cohes VS S F St VSt H	stency/dei ive very soft soft firm stiff very stiff hard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m D de VD ve	samples & tests B Bulk sample pry loose ose d. dense anse ory dense by dense anse ory dense by SPT blow with sample pry SPT blow without VS sample U50,Pocket U75 penetrometer Vane shear

Sample No.

TP3

Clien	:	Walker C	orpora	ation					Proje	ct No.		31495-00	1	
Proje	ct:	Buckland	Park						Logg	ed by:		April Free	man	
Locat	ion:	E0273004	4 N61	63204					Drillin	g Date	:	1/18/2008	<b>;</b>	
Drill C	ompa	ny: Dri	illMax		Driller: John				Hole	Diamet	ter:	-		
Rig/C	ore:				Method: Test pi	t			Hole	Depth:		1m		
Method	Water	Depth (m)	Classification	(soil ty	Descr pe: plasticity / grain	iption of Soil size, colour, o	other co	omponents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional Comment	s
		_		Silty CLAY LP Medium brown					D	VSt	0.05-0.15m	0		-
		0.2 <del>-</del> - 0.35		Clayey SILT w FG Medium grey	ith sand				D	St	0.2-0.25m	0		
		0.4 —		Silty CLAY MP Red brown Minor charcoal Some sand FG	inclusions 1-2mm				D	F	0.4-0.5m	0		
		0.6 —												_
		0.8 —									0.9-1.0m	0		_
	-	1.0 —			End of	Test Pit @ 1m								
t	ntere													
Test pit	None encountered	1.2 —												-
		_												-
		1.4 —												_
		1.6 —												_
		1.8 —												
		-												=
		2 -												-
emark	3:	<u> </u>										1		
L														
AV au AT au W wa B bla H ha C ca P pe NQ, NI HQ, PO	diatube auger drilling V-Bit auger drilling TC-Bit washbore blade claw/tricone/roller hand auger cable tool percussion , MMLC diamond				plasticity LP low plasticity MP medium plasticity HP high plasticity  grainsize F fine M medium C coarse	colour B black W white D G grey M R red Br brown O orange y yellow Gr green Bl blue	pale dark mottle	moisture D dry M moist W wet <pl approx.="" at="" less="" limit="" plastic="" than="" ~pl="">PL greather then plastic limit</pl>	cohesi VS v S s F fi St s VSt v H fi	tency/den ve very soft oft irm stiff very stiff eard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m a D de		mple ed sample mental w with w without
Conne	ı Waqne	r Pty Ltd ABI	N 54 00	15 1,39,873	Level 1 Septi	mus Roe Square	Tel	ephone +61 8 92231	500			-	noell Wann	

Sample No.

TP4

1 of 1 Sheet

Clien	t:	Walker C	orpor	ation					Proje	ct No.		31495-00	1	
Proje	ct:	Buckland	Park						Logg	ed by:		April Free	man	
Loca	tion:	E027300	1 N61	64002					Drillin	ng Date	<b>)</b> :	1/18/2008		
Drill (	Compa	ny: Dr	illMax		Driller: Johi	า			Hole	Diame	ter:	-		
Rig/C	ore:				Method: Test	: pit			Hole	Depth:	:	1m		
Method	Water	Depth (m)	Classification	(soil ty	Despe: plasticity / gr	scription of So ainsize, coloui		omponents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional Comme	nts
				Clayey SILT w Medium brown					D	St	0.05-0.15m	0		
		-									QC3 (duplicate)			_
		0.2 —												_
														_
		0.4		Silty CLAY					D	F				
				MP-HP Red brown							0.5-0.6m	0		
				Minor charcoal	inclusions 1-2mm									Ī
		0.6 —												_
		+		Sandy CLAY					D	F				
		0.8 —		LP Orange brown										
		0.0		Minor charcoal Limestone incl	inclusions 1-2mm usions ~20%									
		-									0.9-1.0m	0		-
		1.0												
	ered	1.0			End	of Test Pit @ 1	m							
Test pit	None encountered	-												-
Tes	ne en													
	No	1.2 —												
		_												_
		1.4 —												_
														Ī
		1.6 —												_
		-												-
		1.8 —												
		-												-
		2 —												
		-												
		-												-
emark	s.													
omark	J.													
AT au W wa B bla	atube iger drillin iger drillin ashbore ade claw/t		C F M	e support casing foam mud water er	plasticity LP low plasticity MP medium plastic HP high plasticity grainsize	ty W white G grey R red Br brown	P pale D dark M mottle	moisture D dry M moist W wet <pl less="" limit<="" plastic="" td="" than=""><td>VS V S s F f St s</td><td>very soft soft irm stiff</td><td>pp&lt;25kPa 25&gt;pp&lt;50kPa 50&gt;pp&lt;100kPa 100&gt;pp&lt;200kPa</td><td>L lo MD m D de</td><td>ery loose D Distur ose E Enviro ed. dense N* samplense N SPT b</td><td>sample bed sample onmental le olow with</td></pl>	VS V S s F f St s	very soft soft irm stiff	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa	L lo MD m D de	ery loose D Distur ose E Enviro ed. dense N* samplense N SPT b	sample bed sample onmental le olow with
C ca		diamond coring	¥	water level water inflow water loss (%)	F fine M medium C coarse	O orange Y yellow Gr green BI blue		~PL approx. at plastic limit >PL greather then plastic limit		very stiff nard	200>pp<400kPa pp>400kPa	VD ve	VS sampl U50,Pocke U75 peneti	olow without le et rometer
Conne	II Wagne	r Pty Ltd AB			Level 1 S 256 Adela	eptimus Roe Squa		lephone +61 8 922315 csimile +61 8 932316				Cor	nell Waqı	

Sample No.

TP5

Clien	:	Walker Co	rpora	ation					Proje	ect No.		31495-00	1
Proje	ct:	Buckland F	Park						Logg	ed by:		April Free	man
Locat	ion:	E0273005	N61	62220					Drillir	ng Date	<b>)</b> :	1/18/2008	3
Drill C	ompa	ny: Drill	lMax		Driller: John				Hole	Diame	eter:	-	
Rig/C	ore:				Method: Test pi	it			Hole	Depth	:	1m	
Method	Water	Depth (m)	Classification	(soil typ	Descr pe: plasticity / grain	ription of Soil size, colour,	other co	omponents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional Comments
		-		Clayey SILT w Medium brown	ith sand FG				D	St	0.05-0.15m	0	-
		0.2 —		Charcoal patch	0.2-0.25m ~30 x 10c	m					0.2-0.25m	0	_
		0.4 –		Silty CLAY MP Orange brown Limestone inclu Some gravel in	isions ~5% clusions, angular, 1-5	mm			D	F	0.4-0.5m QC4 (duplicate) QC5 (triplicate)	0	_
		0.6 —											_
		0.8 —		Silty CLAY MP Orange brown Limestone inclu Some gravel in	isions ~20% clusions, angular, 1-5	mm			М	S			_
		1.0									0.9-1.0m	0	_
Test pit	None encountered	-			End of	Test Pit @ 1m	ı						-
Т	None e	1.2 —											
		1.4 —											_
		-											-
		1.6 —											
		1.8 —											_
		2 —											-
													- _
emark	3:									<u> </u>			l
metho D dia AV au AT au W wa B bla H ha C ca P pe	thod diatube auger drilling V-Bit auger drilling TC-Bit washbore blade clawtricone/roller hand auger cable tool percussion , NMLC diamond				plasticity LP low plasticity MP medium plasticity HP high plasticity  grainsize F fine M medium C coarse	colour B black P W white D G grey M R red Br brown O crange Y yellow Gr green Bl blue	pale dark mottle	moisture D dry M moist W wet <pl -pl="" approx.="" at="" less="" limit="" plastic="" than="">PL greather ther plastic limit</pl>	Cohesi VS V S S F f St S VSt V	stency/der ve very soft soft irrm stiff very stiff hard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L la MD m D de	ary loose D Disturbed sample E Environmental Red. dense ense N SPT blow with sample P SPT blow without VS sample U50, Pocket U75 penetrometer
Conne	l Wagne	r Ptv Ltd ABN			Level 1 Septi	mus Roe Square	Tel	ephone +61 8 9223	1500			_	noell Wagner

Sample No.

TP6

Client	:	Walker Co	orpora	ation					Proje	ct No.		31495-00	1	
Proje	ct:	Buckland	Park						Logg	ed by:		April Free	man	
Locat	ion:	E0272648	N61	62305					Drillin	g Date	:	1/18/2008	1	
Drill C	ompa	ny: Dril	llMax		Driller: John				Hole	Diame	ter:	-		
Rig/C	ore:		_	ſ	Method: Test p	it			Hole	Depth:		1m	Ī	
Method	Water	Depth (m)	Classification	(soil ty	Desci pe: plasticity / grain	ription of Soil ssize, colour,		omponents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional Comments	i
Test pit Mei	None encountered We	0.2 — 0.4 — 0.6 — 1.0 — 1.2 — 1.4 —	Classi	Silty CLAY LP Medium brown  Silty CLAY MP-HP Orange brown Limestone incl Minor gravel in  Silty CLAY MP Orange brown Limestone incl	usions ~30% clusions 1-2mm usions ~20% clusions 1-10mm	Test Pit @ 1n		omponents)	D D D	Le L	0.05-0.15m  0.4-0.5m			
		1.6 — - 1.8 —												-
		2 2.2 -												- - - -
emark	3:													
AV au AT au W wa B bla H ha C cal P pel NQ, NI HQ, PO	thod diatube auger drilling V-Bit auger drilling TC-Bit washbore blade clawfricone/roller hand auger cable tool percussion , NMLC diamond				plasticity LP low plasticity MP medium plasticity HP high plasticity grainsize F fine M medium C coarse	colour B black P W white D G grey M R red Br brown O orange Y yellow Gr green Bl blue  mus Roe Square	dark mottle	moisture D dry M moist W wet -PL less than plastic limit -PL approx. at plastic limit >PL greather then plastic limit	cohesi VS V S s F f St s VSt V H h	tency/der ve very soft soft irm tiff ery stiff laard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m D de VD ve	samples & ter B Bulk sam D Disturber ose E Environm ed. dense nnse N SPT blow vample PP SPT blow VS sample U50,Pocket U75 penetrom Vane shei	ple sample ental with without eter ar

Sample No.

TP7

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 1/18/2008 Location: E0272650 N6163107 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth ( Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) 0.05-0.15m MG 0 Light brown 0.2 Silty CLAY D Orange brown 0.4 Limestone inclusions ~5% 0.4-0.5m 0 0.6 Silty CLAY D MP Orange brown 8.0 Limestone inclusions ~20% 0.9-1.0m 0 1.0 None encountered Test 1.2 Silty CLAY D Orange brown with some grey mottles Limestone inclusions ~10% 1.4 1.6 1.8 1.9-2.0m 2 End of Test Pit @ 2m emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand augur
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring amples & tests

Bulk sample

Disturbed sampl black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VL medium plasticity high plasticity very loose loose S son F firm Environmental MD med. dense dense sample SPT blow with orange yellow green blue VD sample PP SPT blow with VS sample U50,Pocket U75 penetromete

Sample No.

Sheet

TP8 1 of 1

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 1/21/2008 Location: E0272645 N6163849 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Samples Readings Additional Comments consist. density (soil type: plasticity / grainsize, colour, other components) (ppm) 0.05-0.15m 0 Medium brown QC6 (duplicate) QC7 (triplicate) 0.2 Silty CLAY D Dark brown 0.4 0.5-0.6m 0 0.6 8.0 Silty CLAY D MP Orange brown Minor charcoal inclusions 1-2mm 0.9-1.0m 0 1.0 None encountered Test 1.2 1.4 1.6 1.8 1.9-2.0m 2 End of Test Pit @ 2m emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring amples & tests

Bulk sample

Disturbed sampl black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose Environmental MD med. dense dense firm stiff sample SPT blow with D VD PP SPT blow wither
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue

Sample No.

TP9

Clien	:	Walker Co	orpora	ation					Proje	ct No.		31495-00	1	
Proje	ct:	Buckland	Park						Logg	ed by:		April Free	man	
Locat	ion:	E0272126	6 N61	63659					Drillir	g Date	:	1/21/2008	i e	
Drill C	ompa	ny: Dri	ilMax		Driller: John				Hole	Diamet	er:	-		
Rig/C	ore:			ı	Method: Test pi	it			Hole	Depth:		1m		
Method	Water	Depth (m)	Classification	(soil ty	Descr pe: plasticity / grain	ription of Soil ssize, colour,	other co	omponents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional Comments	
		-		Silty CLAY LP Medium brown					D	St	0.05-0.15m	0		-
		0.2 -		Silty CLAY MP Dark brown					D	St				
		0.4 —									0.4-0.5m	0		_
		0.6 —												_
		0.8 —												
											0.9-1.0m	0		
	р	1.0 —			End of	Test Pit @ 1m	1							
it	ıntere													
Test pit	None encountered	1.2 —												-
		-												-
		1.4 —												-
		1.6 —												_
		1.8 —												
		2 —												-
		_												
emark	s:													
AT au W wa B bla H ha C ca P pe NQ, NI HQ, PO	tube ger drillin de claw/t nd auger ble tool cussion MLC	g TC-Bit ricone/roller diamond coring	M I Wate	water level water inflow water loss (%)	plasticity LP low plasticity MP medium plasticity HP high plasticity grainsize F fine M medium C coarse	colour B black W white D G grey R red Br brown O orange Y yellow Gr green Bl blue	mottle	moisture D dry M moist W wet <pl -pl="" approx.="" at="" less="" limit="" plastic="" than="">PL greather then plastic limit</pl>	cohesi VS V S s F f St s VSt V	tency/den ve erry soft ooft irrm etiff erry stiff eard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m D de VD ve	ry lose D Disturbed E Environme ed. dense et. dense rry dense rry dense PP SPT blow VS sample U50,Pocket U75 penetrome Vane sheet	ole sample ental with without eter
onne	ı Wagne	r Pty Ltd ABN	v 54 00	15 1 <sub>63</sub> 8 873	Level 1 Septi	imus Roe Square	Tel	ephone +61 8 92231	500			-	noell Wanne	

Sample No.

TP10

Clien	t:	Walker Co	rporation				Proj	ect No.		31495-00	1
Proje	ct:	Buckland F	ark				Log	ged by:		April Free	man
Loca	ion:	E0272141	N6162858				Drilli	ng Date	<b>:</b> :	1/21/2008	
Drill (	Compa	ny: Drilll	Max	Driller: John			Hole	Diame	ter:	-	
Rig/C	ore:			Method: Test pi	t		Hole	Depth		1m	
Method	Water	Depth (m)	Classification (soil ty	Descri pe: plasticity / grain	iption of Soil size, colour, oth	ner components)	moisture	consist.	Samples	PID Readings (ppm)	Additional Comments
		0.2	Silty CLAY LP Medium brown	1			D	H	0.05-0.15m	0	-
		0.4 —	MP Dark brown						0.4-0.5m	0	- - -
		0.6 -	Silty CLAY				D	s			-
		1.0	MP	with some dark grey n				5	0.9-1.0m	0	-
	ered	-		End of	Test Pit @ 1m						
Test pit	None encountered	1.2 —									-
		1.4 —									-
		- 1.6 —									-
		1.8 —									-
		2 —									- -
emark	s:										_
AV au AT au W wa B bla H ha C ca P pe NQ, N HQ, Pe	diatube  / auger drilling V-Bit / auger drilling TC-Bit / washbore / blade claw/tricone/roller / hand auger / cable tool / percussion / NMLC diamond / water water / water level / water inflow / water inflow / water inflow			plasticity LP low plasticity MP medium plasticity HP high plasticity grainsize F fine M medium C coarse	w white <b>D</b> d	ale and moisture D dry M moist W wet spatial and plastic lim PL greather t plastic lim	cohes VS S F sit St VSt t H	stency/der sive very soft soft firm stiff very stiff hard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m D de	samples & tests B Bulk sample D Disturbed sample See E Environmental ed. dense nse N SPT blow with sample PP SPT blow with sample U50,Pocket U75 penetrometer Vane shear
Conne	II Wagne	r Pty Ltd ABN	54 005 139 873	Level 1 Septin	mus Roe Square	Telephone +61 8 92	231500			_	nell Wagner

Sample No.

TP11

1 of 1 Sheet

Clien	t:	Walker Co	orpor	ation					Proje	ct No.		31495-00	1
Proje	ct:	Buckland	Park						Logg	ed by:		April Free	man
Locat	tion:	E0272129	9 N61	62001					Drillir	ng Date	<b>)</b> :	1/21/2008	
Drill C	Compa	ny: Dri	llMax		Driller: John				Hole	Diame	ter:	-	
Rig/C	ore:			1	Method: Test pi	it			Hole	Depth:	:	1m	
Method	Water	Depth (m)	Classification		Descr pe: plasticity / grain	iption of Soil size, colour, o	other con	nponents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional Comments
		-		Silty CLAY LP Medium brown					D	Н	0.05-0.15m	0	_
		0.2 -		Silty CLAY MP Dark brown					D	F			_
		0.4 —									0.4-0.5m QC8 (duplicate)	0	_
		0.6 —											_
		0.8 —		Silty CLAY					D	S			-
		_		MP	n with some orange b	rown mottles					0.9-1.0m	0	_
	pe.	1.0			End of	Test Pit @ 1m							
pit	unter												
Test pit	None encountered	1.2 —											
		-											-
		1.4 —											_
		-											-
		1.6 —											_
		1.8 —											_
		1.0 -											_
		2 —											_
		-											_
		_											-
emark	s:												
AT au W wa B bla H ha C ca	atube ger drillinger drillingeshbore ade claw/t and auger ble tool rcussion MLC	g V-Bit g TC-Bit ricone/roller diamond coring	C F M W wate		plasticity LP low plasticity MP medium plasticity HP high plasticity grainsize F fine M medium C coarse	colour B black W white D G grey M R red Br brown O orange Y yellow Gr green Bl blue	pale dark Monttle W	1 moist	VS VS S S S S S S S S S S S S S S S S S	tency/der ve very soft soft irm stiff very stiff nard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m D de	samples & tests B Bulk sample ry loose D Disturbed sample cose E Environmental ed. dense nse N SPT blow with sample PP SPT blow without VS sample USD,Pocket UTS penetrometer Vane shear
Conne	II Wagne	r Pty Ltd ABN	V 54 00	15 1,39,873	Level 1 Septi	mus Roe Square		hone +61 8 922315				Cor	nnell Wagner

Sample No.

TP12

Client:	Walker Corpor	ation	Project No.		31495-001	
Project:	Buckland Park		Logged by:		April Freen	nan
Location:	E0271726 N61	61885	Drilling Date:		1/21/2008	
Drill Compa	any: DrillMax	Driller: John	Hole Diamete	r:	-	
Rig/Core:		Method: Test pit	Hole Depth:		2m	
Method	Depth (m)	Description of Soil (soil type: plasticity / grainsize, colour, other components)	moisture condition consist.	Samples	PID Readings (ppm)	Additional Comments
		Silty CLAY with sand FG LP	D St	0.05-0.15m	0	
Test pit None encountered	0.2 —  0.4 —  0.6 —  1.0 —  1.2 —  1.4 —  1.6 —  1.8 —  2 —		D St D S	0.05-0.15m 0.4-0.5m	0	
emarks:			1			
method D diatube AV auger drilli W washbore B blade claw. H hand auge C cable tool P percussion NQ, NMLC HQ, PQ	ing V-Bit Fing TC-Bit Wwater	water level water inflow water oss (%)  water sos (%)  water loss (%)	consistency/densite cohesive VS very soft S soft F firm St stiff VSt very stiff H hard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L loo MD me D der VD ver	y loose D Disturbed sample E Environmental N* sample

Sample No.

TP13

Client:	Walker C	Corpora	ation					Proje	ct No.		31495-00	1	
Project:	Buckland	d Park						Logg	ed by:		April Free	man	
Location:	E027172	24 N61	62684					Drillin	g Date	:	1/21/2008	3	
Drill Compa	any: D	rillMax		Driller: John				Hole	Diame	ter:	-		
Rig/Core:	,			Method: Test pit	t				Depth:		2m		
Method	Depth (m)	Classification	(soil ty		iption of Soil	other c	omponents)	moisture condition		Samples	PID Readings (ppm)	Additional Co	omments
Test pit None encountered	0.2 — 0.4 — 0.6 — 0.8 — 1.0 — 1.2 — 1.4 — 1.6 — 1.8 — 2 —		Sitty CLAY LP Medium brown  Sitty CLAY MP Dark brown  Dark brown with	h red brown and grey t				E 8 D	<b>8</b>	0.05-0.15m  0.4-0.5m  0.9-1.0m	0 0		
emarks:													
method D diatube AV auger drilli AT auger drilli W washbore B blade claw H hand auge C cable tool P percussion NQ, NMLC HQ, PQ  Connell Wagn	ring TC-Bit  //tricone/roller er  diamond coring	C of F if M is W is water	water level water level water inflow water loss (%)	plasticity LP low plasticity MP medium plasticity HP high plasticity  grainsize F fine M medium C coarse	colour B black P W white D G grey M R red Br brown O orange Y yellow Gr green Bl blue  mus Roe Square	pale dark mottle	moisture  D dry M moist W wet <pl -pl="" approx.="" at="" less="" limit="" plastic="" than="">PL greather then plastic limit ephone +61 8 922315</pl>	cohesin VS v S s F fi St s VSt v H h	ery soft oft rm tiff	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m I D de I VD ve	esive B Pry loose D Ose E led. dense N* ense N Pry dense P VS U50	pples & tests Bulk sample Disturbed sample Environmental sample SPT blow with sample SPT blow without sample pocket penetrometer Vane shear

Sample No.

TP14

Client	:	Walker Co	orporatio	on					Proje	ct No.		31495-00	1
Proje	ct:	Buckland I	Park						Logg	ed by:		April Free	man
Locat	ion:	E0271723	N61632	284					Drillin	g Date	):	1/21/2008	
Drill C	ompa	ny: Dril	lMax		Driller: John				Hole	Diame	ter:	-	
Rig/C	ore:	T			Method: Test pit	t			Hole	Depth:	ı	2m	
Method	Water	Depth (m)	Classification		Descripe: plasticity / grains	iption of Soil size, colour,		omponents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional Comments
		_	LP	ty CLAY edium-dark br	own				D	St	0.05-0.15m	0	_
		0.2 -	MP	ity CLAY					D	F	0.4-0.5m	0	-
		0.6 —											_
		0.8 —	LP	ty CLAY ght brown					D	VS			_
	7.	1.0 —									0.9-1.0m	0	_
Test pit	None encountered	_											_
	None	1.2 —											_
		1.4 —											_
		1.6 —											_
		-											_
		1.8 -	LG Ligh	tht brown	inclusions 1-5mm				D	VS	1.9-2.0m	0	_
		2 —			End of Tes	t Pit @ 2m							
		-			End of Tes	. 7 11. 12. 2111							_
		4											
emark	S:	L	ı							<u> </u>	<u> </u>	1	
AT aug W wa B bla H hai C cal P per NQ, NN HQ, PO	tube ger drilling ger drilling shbore de claw/to nd auger ble tool cussion ILC	g V-Bit g TC-Bit ricone/roller diamond coring ir Pty Ltd ABN	(dd/mm/yy) Wa	ng n l er water level water inflow water loss (%)	plasticity LP low plasticity MP medium plasticity Hp high plasticity  grainsize F fine M medium C coarse	colour B black P W white D G grey M R red Br brown O orange Y yellow Gr green Bl blue	dark mottle	moisture D dry M moist W wet -PL less than plastic limit -PL approx. at plastic limit >PL greather then plastic limit	cohesi VS v S s F fi St s VSt v H fi	tency/der ve erry soft oft irm tiff erery stiff eard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m D de VD ve	samples & tests B Bulk sample Ose D Disturbed sample ed. dense snse snse sny dense PP SPT blow without VS sample U50,Pocket U75 penetrometer Vane shear

Sample No.

TP15

Client:	Walker Cor	rporation					Proje	ct No.		31495-00	1
Project:	Buckland P									April Free	man
Location:	E0271311	N6163078					Drillin	g Date	:	1/21/2008	3
Drill Compa	any: Drill	Max	Driller: John				Hole	Diame	ter:	-	
Rig/Core:			Method: Test pit	t			Hole	Depth:		1m	
Method	Depth (m)	Classification (soil type)	Descri pe: plasticity / grains	iption of Soil size, colour, o	ther com	nponents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional Comments
Test pit MA None encountered W	0.2 — 0.4 — 0.6 — 0.8 — 1.0 — 1.2 — 1.4 — 1.6 — 1.8 — 1.8 — 1.2 — 1.8 —	Silty CLAY MP Dark brown  Silty CLAY MP Red brown		Test Pit @ 1m		ропенку	puos	E	0.05-0.15m  0.4-0.5m	(ppm) 0	
emarks:	2.2 —										_
	ı	1			-				_		1
method D diatube AV auger drill AT auger drill W washbore B blade claw H hand auge C cable tool P percussion NQ, NMLC HQ, PQ	ing TC-Bit  //tricone/roller er  diamond coring	hole support C casing F foam M mud W water water water level water inflow water loss (%)	plasticity LP low plasticity MP medium plasticity HP high plasticity  grainsize F fine M medium C coarse	W white D	pale dark mottle W	moist	cohesing VS v v S s s F fill St s v St v H h	ery soft oft rm tiff	pp<25kPa 25>pp<50kPa 50>pp<100kPa 50>pp<200kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m I D de I VD ve	esive B Bulk sample S B Bulk sample S B Bulk sample D Disturbed sample D Disturbed sample E Emvironmental etd. dense anse sry dense P SPT blow with sample PP SPT blow without VS sample U50, Pocket U75 penetrometer Vans shear

Sample No.

TP16

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 1/21/2008 Location: E0271306 N6162220 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 1m Ξ PID Description of Soil Water moisture condition Depth Samples Readings Additional Comments consist. density (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand FG 0.05-0.15m 0 Light brown QC9 (duplicate) QC10 (triplilcate) 0.2 Silty CLAY D Orange brown with dark grey specks ~1-2mm 0.4-0.5m 0 0.4 0.6 8.0 Clayey SILT D Orange brown 0.9-1.0m 0 1.0 End of Test Pit @ 1m None encountered Test 1.2 1.4 1.6 1.8 2 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose Environmental MD med. dense dense firm stiff sample SPT blow with D VD SPI blow with sample
PP SPT blow with
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue

Sample No.

TP17

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 1/21/2008 Location: E0271311 N6161411 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 1m Ξ PID Description of Soil Water moisture condition Depth ( consist. density Samples Readings Additional Comments (soil type: plasticity / grainsize, colour, other components) (ppm) Clayey SILT with sand FG 0.05-0.15m 0 0.2 Silty SAND D Red brown 0.4-0.5m 0 0.4 0.6 8.0 Silty CLAY D Red brown with grey mottles 0.9 None encountered 0.9-1.0m 0 Test 1.0 End of Test Pit @ 1m 1.2 1.4 1.6 1.8 2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample lour black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose S son F firm St stiff Environmental MD med. dense dense sample SPT blow with D VD PP SPT blow wither
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue

Sample No.

TP18

Client:		Walker Corporation										31495-001				
Project:		Buckland Park							Logg	Logged by:			April Freeman			
Locatio	n:	E0270912	2 N61	61286					Drillir	g Date	:	1/21/2008				
Drill Co	mpai	any: DrillMax Driller: John							Hole	Diame	ter:	-				
Rig/Co	re:		- 1		Method: Test pi	it			Hole	Depth:		2m	ı			
Method	Water	Depth (m)	Classification	(soil ty	Descr pe: plasticity / grain	iption of Soil size, colour,	other c	omponents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional Commen	ıts		
	None encountered	0.2 —  0.4 —  0.6 —  1.0 —  1.2 —  1.4 —  1.6 —  2		Silty CLAY MP Red brown	clusions –7mm inclusions 1-2mm	st Pit @ 2m			D D	100 T F	0.05-0.15m  0.4-0.5m  0.9-1.0m	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				
		1														
		2.2 —														
emarks:												•	•			
AV auge AT auge W wash B blade H hand C cable P percu NQ, NML HQ, PQ	D diatube AT auger drilling V-Bit AT auger drilling TC-Bit W washbore H hand auger C cable tool P percussion NQ, NMLC diamond				plasticity LP low plasticity MP medium plasticity HP high plasticity  grainsize F fine M medium C coarse	colour B black P W white D G grey M R red Br brown O orange Y yellow Gr green Bl blue mus Roe Square	dark mottle	moisture D dry M moist W wet PL less than plastic limit -PL approx. at plastic limit >PL greather then plastic limit	cohesi VS V S s F f St s VSt V	tency/den ve ery soft ooft irm tiff ery stiff aard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp>200kPa 200>pp<400kPa pp>400kPa	L la MD m D di VD ve	ery loose D Disturb	ample sed sample mental sow with sow without commeter hear		

Sample No.

TP19

1 of 1 Sheet

Client:		Walker Corporation								ct No.		31495-001			
Project: Location:		Buckland	Park						Logged by:			April Freeman			
Loca	tion:	E0270904	4 N61	62091					Drillin	g Date	:	1/21/2008			
Drill (	Compa	ny: Dri	llMax		Driller: John				Hole	Diame	ter:	-			
Rig/C	ore:	Method: Test pit							Hole	Depth:		2m			
Method	Water	Depth (m)	Classification	Description of Soil (soil type: plasticity / grainsize, colour, other components)						consist. density	Samples	PID Readings (ppm)	Additional Comments		
				Silty CLAY LP					moisture condition	VSt	0.05-0.15m	0			
Test pit	None encountered	0.2 — 0.4 — 0.6 — 1.0 — 1.2 — 1.4 — 1.6 — 1.8 — 2 —			th sand FG	st Pit @ 2m			D	St	0.05-0.15m  0.4-0.5m  0.9-1.0m	0 0			
		_											_		
		2.2 —													
emark	s:	<u> </u>										ı			
AT au W wa B bla H ha C ca P pe NQ, N HQ, P	atube uger drillin uger drillin ashbore ade claw/t and auger able tool ercussion MLC Q		C F H W water	water level water inflow water loss (%)	plasticity LP low plasticity MP medium plasticity HP high plasticity grainsize F fine M medium C coarse	colour B black P W white D G grey M R red Br brown O crange Y yellow Gr green Bl blue mus Roe Square	mottle	moisture D dry M moist W wet <pl -pl="" approx.="" at="" less="" limit="" plastic="" than="">PL greather then plastic limit ephone +61 8 922315(</pl>	Cohesin VS v S s F fi St s VSt v H h	tency/den ve ery soft oft rm tiff ery stiff ard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp>200kPa 200>pp<400kPa pp>400kPa	L loc MD mo D de VD ve	samples & tests  B Bulk sample pry loose D Disturbed sample et. dense et. dense snse nse N SPT blow with sample PP SPT blow without VS sample U50,Pocket U75 penetrometer Vane shear		

Sample No.

TP20 1 of 1

Walker Corporation Client: 31495-001 Project No. April Freeman Project: Buckland Park Logged by: E0270903 N6162855 Drilling Date: 1/21/2008 Drill Company: Driller: John Hole Diameter: Rig/Core Method: Test pit Hole Depth: PID Readings (ppm) Method Description of Soil (soil type: plasticity / grainsize, colour, other components) Water Depth Fest pit located on top of mound ~300m x 100m x 2m 0.05-0.15m 0 MG Light red brown 0.2 0.4-0.5m 0.4 -0.6 — 0.8 -1.0 -1.2 1.4 None encountered Test pit 1.6 -1.8 -2 2.2 -2.4 -2.6 2.8 2.8-2.9m Slightly higher clay content at 2.9m End of Test Pit @ 2.9m 2.9



Sample No.

TP21

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 1/21/2008 Location: E0270524 N6162868 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 1m Ξ PID Description of Soil Water moisture condition Depth ( consist. density Samples Readings Additional Comments (soil type: plasticity / grainsize, colour, other components) (ppm) 0.05-0.15m 0 Medium brown 0.2 Silty SAND D VS MG Red brown 0.4-0.5m 0 0.4 0.6 8.0 0.9-1.0m 0 1.0 End of Test Pit @ 1m None encountered Test 1.2 1.4 1.6 1.8 2 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample lour black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose S soft
F firm
St stiff
VSt very:
H hard L MD D VD Environmental med. dense dense sample SPT blow with PP SPT blow wither
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue

Sample No.

TP22

Client		Walker Corporation									31495-001			
Projec	t:	Buckland Park									April Freeman			
Locati	on:	E0270523	N6162052					Drillin	g Date	:	1/21/2008			
Drill C	ompa	ny: Drill	Max	Driller: John					Diame	ter:	-			
Rig/Core:				Method: Test pit		Hole	Depth:		1m					
Method	Water	Depth (m)	O	Descri pe: plasticity / grains	ption of Soil size, colour, o	ther com	ponents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional Comm	ents	
Test pit Meth	None encountered Wate	1.0 — 1.4 — 1.6 — 1.8 — — 1.8 — — — — — — — — — — — — — — — — — — —	Silty CLAY MP Dark brown  Silty CLAY MP Define the control of the	pe: plasticity / grains		ther com	ponents)	moistura D	T and T densist density	0.05-0.15m  0.4-0.5m		Additional Comm	ents	
		2 -											- - -	
emarks	:	<u> </u>								1	L			
method D diatube AV auger drilling V-Bit AT auger drilling TC-Bit W washbore B blade clawfricrone/roller H hand auger C cable tool P percussion NQ, NMLC diamond HQ, PQ coring			hole support C casing F foam M mud W water water water inflow water inflow water loss (%)	plasticity LP low plasticity MP medium plasticity HP high plasticity grainsize F fine M medium C coarse	W white D	pale dark mottle W < F	wet PL less than plastic limit PL approx. at plastic limit	VS v S s F fi St s VSt v	ery soft oft rm tiff	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m D de	D Distrom   D Distrom	sample urbed sample ronmental ple blow with ple blow without ple set	
Connell	Wagne	Ptv Ltd ABN	54 005 1,39,873	Level 1 Septin	nus Roe Square	Teleph	one +61 8 922315	000			-	nell Wan		

Sample No.

TP23

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: Matt Eygenraam Drilling Date: 1/22/2008 Location: E0270783 N6161423 Drill Company: DrillMax Driller: Craig Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth consist. density Readings Additional Comments Samples (soil type: plasticity / grainsize, colour, other components) (ppm) LP Medium Grain 0.05-0.15m 0 Grey brown 0.2 0.4 Silty sandy CLAY 0.4-0.5m Red/brown/grey with small black inclusions Medium grain 0.6 Silty CLAY Red brown grey mottles Fine grain 8.0 0.9-1.0m 0 1.0 None encountered Test 1.2 1.4 1.6 1.8 1.9-2.0m 2 End of Test Pit @ 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose S son F firm St stiff Environmental MD med. dense dense sample SPT blow with D VD PP SPT blow without Sample
PP SPT blow without Sample
U50,Pocket
U75 penetrometer orange yellow green blue

Sample No.

TP24

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: Matt Eygenraam Drilling Date: 1/22/2008 Location: E0270338 N6162092 Drill Company: DrillMax Driller: Craig Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) LP Medium Grain QC11 (duplicate 0 Dark brown QC12 (triplilcate 0.2 Silty sandy CLAY LP Medium Grain Very dark brown 0.4 0.4-0.5m 0 Silty clayey SAND D Red brown 0.6 Medium grain 8.0 0.9-1.0m 0 1.0 None encountered Test 1.2 1.4 Red brown some black inclusions 1.6 Fine grain 1.8 1.9-2.0m 2 End of Test Pit @ 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand augur
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VL medium plasticity high plasticity very loose loose Environmental MD med. dense dense firm stiff sample SPT blow with orange yellow green blue VD sample
PP SPT blow without VS sample U50,Pocket U75 penetromete

Sample No.

TP25

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: Matt Eygenraam Drilling Date: 1/22/2008 Location: E0270335 N6162863 Drill Company: DrillMax Driller: Craig Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 1m Ξ PID Description of Soil Water moisture condition Depth ( consist. density Readings Additional Comments Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty sandy CLAY 0.05-0.15m 0 Dark brown Medium Grain 0.2 Silty CLAY Red brown Fine Grain 0.4 0.4-0.5m 0 0.6 8.0 0.9-1.0m LP, Fine Grain Red brown with small black inclusions 1.0 End of Test Pit @ 1m None encountered Test 1.2 1.4 1.6 1.8 2 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose S son F firm St stiff Environmental MD med. dense dense sample SPT blow with D VD PP SPT blow wither
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue

Sample No.

TP26

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: Matt Eygenraam E0270671 N6160311 Drilling Date: 1/22/2008 Location: Drill Company: DrillMax Driller: Craig Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth ( Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty sandy CLAY 0.05-0.15m ΙP 0 Brown Medium Grain 0.2 0.4 Silty sandy CLAY 0.4-0.5m Brown Fine Grain 0.6 8.0 0.9-1.0m 0 1.0 Silty CLAY None encountered Red brown Test Fine Grain 1.2 1.4 1.6 1.8 ΗP Red brown Fine Grain 1.9-2.0m 2 End of Test Pit @ 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose S son F firm St stiff Environmental MD med. dense dense sample SPT blow with D VD PP SPT blow wither
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue

Sample No.

**TP27** 

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: Matt Eygenraam E0271107 N6160230 Drilling Date: 1/22/2008 Location: Drill Company: DrillMax Driller: Craig Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 1m Ξ PID Description of Soil Water moisture condition Depth ( consist. density Readings Additional Comments Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty clayey SAND 0.05-0.15m 0 Red Brown Medium Grain 0.2 0.4 0.4-0.5m 0 0.6 8.0 0.9-1.0m 0 1.0 End of Test Pit @ 1m None encountered Test 1.2 1.4 1.6 1.8 2 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample lour black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose S soft
F firm
St stiff
VSt very:
H hard L MD D VD Environmental med. dense dense sample SPT blow with PP SPT blow wither
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue

Sample No.

TP28

1 of 1 Sheet

Client:		Walker Corporation							Proje	ct No.		31495-001			
Project:		Buckland	Park					Logged by:				Matt Eygenraam			
Loca	ion:	E027111	1 N61	59726	0					g Date	):	1/22/2008			
Drill (	Compa	ny: Dri	DrillMax Driller: Craig							Diame	ter:	-			
Rig/C	ore:				Method: Test pit				Hole	Depth:		1m			
Method	Water	Depth (m)	Classification	(soil typ	Descri e: plasticity / grains	ption of Soil size, colour, o	other con	nponents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional C	comments	
		0.2 —		Silty SAND LP Red Brown Medium Grain					D	F	0.05-0.15m CQ13 (Duplicate	0			
		0.4 —		Silty clayey SA LP Red Brown Medium Grain	ND				D	Ø	0.4-0.5m	0			
		0.6		Silty clay					D	S					
		0.8 —		Red brown MP Medium Grain										_	
		1.0									0.9-1.0m	0		_	
	pe.	1.0			End of Test	t Pit @ 1m									
pit	unter														
Test pit	None encountered	1.2 _													
		1.4 _												_	
		_													
		1.6												_	
		1.8 _												-	
		2 —													
		2.2 —												-	
emark	s:								1						
metho D dia AV au AT au W wa B bla H ha C ca P pe	method D diatube AV auger drilling V-Bit AT auger drilling TC-Bit W washborie B blade claw/tricone/roller H hand auger C cable tool P percussion NQ, NMLC diamond				plasticity LP low plasticity MP medium plasticity HP high plasticity  grainsize F fine M medium C coarse	colour B black W white D G grey R red Br brown O orange Y yellow Gr green Bl blue	pale dark Monttle W	moist	VS v S s F fi St s VSt v	tency/der ve ery soft oft rm tiff ery stiff ard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m D de	Bery loose Dose E E ed. dense N'ense N ery dense		
		coring r Pty Ltd ABI			Level 1 Septir 256 Adelaide	nus Roe Square		hone +61 8 922315 nile +61 8 932316				Cor	nell W	Vane shear	

Sample No.

TP29

1 of 1 Sheet Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: Matt Eygenraam Drilling Date: 1/22/2008 Location: E0271111 N6159229 Drill Company: DrillMax Driller: Craig Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) 0.05-0.15m ΙP 0 Brown Medium Grain 0.2 Silty CLAY Red brown Fine grain 0.4 0.4-0.5m 0 Silty CLAY D Red Brown, grey inclusions 0.6 Fine Grain 8.0 0.9-1.0m 0 1.0 None encountered Test 1.2 1.4 1.6 Silty CLAY Fine Grain HP 1.8 1.9-2.0m 2 End of Test Pit @ 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose S son F firm St stiff Environmental MD med. dense dense sample SPT blow with D VD PP SPT blow wither
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue

Sample No.

**TP30** 

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: Matt Eygenraam Drilling Date: 1/22/2008 Location: E02706095 N6159359 Drill Company: DrillMax Driller: Craig Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 1m Ξ PID Description of Soil Water moisture condition Depth ( Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) 0.05-0.15m 0 Red Brown Fine grain 0.2 0.4 Silty clayey SAND 0.4-0.5m Red Brown Fine Grain 0.6 8.0 Silty clayey SAND MP-HP D Red Brown Fine Grain 0.9-1.0m 0 1.0 End of Test Pit @ 1m None encountered Test 1.2 1.4 1.6 1.8 2 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing F foam M mud W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose S son F firm St stiff Environmental MD med. dense dense sample SPT blow with D VD PP SPT blow wither
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue

Sample No.

TP31

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: Matt Eygenraam Drilling Date: 1/22/2008 Location: E0271363 N6160302 Drill Company: DrillMax Driller: Craig Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth ( Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) 0.05-0.15m ΙP 0 Brown Fine Grain 0.2 0.4 Silty CLAY 0.4-0.5m LP, Fine grain
Brown with 10mm dark brown peds Silty CLAY D Red Brown, grey inclusions 0.6 Fine Grain with 20mm hard peds 8.0 0.9-1.0m 0 1.0 Silty clayey sand None encountered Medium grain Test Red brown 1.2 1.4 1.6 1.8 1.9-2.0m Silty clay Red brown MP, Medium grain 2 End of Test Pit @ 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand augur
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring amples & tests

Bulk sample

Disturbed sampl black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing F foam M mud W water pp<25kPa VL medium plasticity high plasticity pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa very loose loose Environmental MD med. dense dense firm stiff sample SPT blow with PP SPT blow wither
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue VD

Sample No.

TP32

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: Matt Eygenraam Drilling Date: 1/22/2008 Location: E0271360 N6159800 Drill Company: DrillMax Driller: Craig Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 1m Ξ PID Description of Soil Water moisture condition Depth ( Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) 0.05-0.15m ΙP 0 Red Brown Medium grain 0.2 Silty CLAY Red Brown 0.4 0.4-0.5m 0 Medium Grain 0.6 8.0 Silty sandy CLAY 0.9-1.0m QC14 (duplicate Red Brown Medium Grain 1.0 End of Test Pit @ 1m None encountered Test 1.2 1.4 1.6 1.8 2 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing F foam M mud W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose S son F firm St stiff Environmental MD D VD med. dense dense sample SPT blow with PP SPT blow wither
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue

Sample No.

TP33

Client	::	Walker Co	rporati	ion						Proje	ct No.		31495-00	1	
Proje	ct:	Buckland F	Park							Logg	ed by:		Matt Eyge	nraam	
_ocat	ion:	E0271360	N6159	9300						Drillin	g Date	e:	1/22/2008		
Orill C	ompa	ny: Drill	Max		Driller: Craig					Hole	Diame	ter:	-		
Rig/C	ore:				Method: Test pi	<u>t</u>				Hole	Depth:	<u> </u>	1m		
Method	Water	Depth (m)	Classification	(soil typ	Descripe: plasticity / grain	ption of Soil size, colour,		ompone	ents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additiona	I Comments
Test pit	None encountered	0.2 — 0.4 — 0.6 — 0.8 — 1.0 — 1.2 —	S LI R M	ed Brown ledium grain	End of Tes	t Pit @ 1m					St	0.05-0.15m QC15 (Duplicate) QC16 (Triplicate) 0.4-0.5m	0		
		1.4 — 1.6 — 1.8 — 2 —													
mark	s:	<u> </u>										l		<u> </u>	
AT au W wa B bla H ha C ca	atube ger drillir ger drillir ishbore ide claw/ ind auger ble tool rcussion MLC	ng TC-Bit tricone/roller	<u> </u>	sing am ud	plasticity LP low plasticity MP medium plasticity HP high plasticity grainsize F fine M medium C coarse	colour B black P W white D G grey N R red Br brown O orange Y yellow Gr green Bl blue	dark	W we <pl ap="" les="" pla="" ~pl="">PL gre</pl>	y oist	VS v S s F fi St s VSt v	tency/der ve ery soft oft rm tiff ery stiff ard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m D de	esive ry loose pse ed. dense inse ry dense	samples & tests B Bulk sample D Disturbed sample E Environmental N* sample N SPT blow with sample PP SPT blow without VS sample U50,Pocket U75 penetrometer Vane shear

Sample No.

TP34

Client:	V	/alker Co	orpora	ation					Proje	ect No.		31495-00	1
Project:	В	uckland	Park						Logg	ed by:		Matt Eyge	enraam
Location:	E	0271850	) N61	60450					Drillir	ng Date	:	1/23/2008	1
Drill Com	pany	r: Dri	ilMax		Driller: Craig				Hole	Diame	ter:	-	
Rig/Core:	:		۲ ا		Method: Test pit	t			Hole	Depth:		1m	T
Method		Depth (m)	Classification		Descripe: plasticity / grains	iption of Soil size, colour, o	other c	omponents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional Comments
Test pit Me None encountered W.		0.2 — 0.4 — 0.6 — 0.8 — 1.2 — 1.4 — 1.6 — 1.8 — - 1.8		Sitty CLAY Dark brown / gr LP Medium Grain  Sitty CLAY LP-MP Brown Medium grain  Sitty clayey sa LP-MP Red Brown, gre Fine Grain  Sitty CLAY Red brown Medium Grain MP	rey	size, colour, d	other c	omponents)		The consist of the constant of	0.05-0.15m  0.4-0.5m  0.9-1.0m		
		2			End of Tes	t Pit @ 2m			-				
		ŀ			Liiu Vi 165	n 😊 2111							
		$\dashv$											-
emarks:													
method D diatube AV auger dr AT auger dr W washbor B blade cla H hand au C cable to P percussi NQ, NMLC HQ, PQ  Connell Wa	rilling \ rilling T re aw/trice ager ool ion dia co	C-Bit one/roller amond ring	C construction of the cons	water level water level water inflow water loss (%)	plasticity LP low plasticity MP medium plasticity HP high plasticity  grainsize F fine M medium C coarse	colour B black P W white D G grey M R red Br brown O orange Y yellow Gr green Bl blue		moisture D dry M moist W wet <pl -pl="" approx.="" at="" less="" limit="" plastic="" than="">PL greather then plastic limit  PL greather then plastic limit</pl>	cohesi VS V S S F f St S VSt V	tency/den ve very soft soft irrm stiff very stiff hard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m I D de I VD ve	samples & tests B Bulk sample D Disturbed sample E Environmental N* sample NSPT blow with sample PP SPT blow without VS sample US0.Pocket U75 penetrometer Vane shear

Sample No.

TP35

Clien	t:	Walker	Corpor	ation						Proje	ct No.		31495-001		
Proje	ct:	Bucklan	d Park							Logge	ed by:		Matt Eyge	nraam	
_oca	ion:	E02718	50 N6′	159950						Drillin	g Date	e:	1/23/2008		
Orill C	Compa	any: D	rillMax	(	Driller: Craig					Hole	Diame	ter:	-		
Rig/C	ore:				Method: Test pi	t				Hole	Depth:		1m		
Method	Water	Depth (m)	Classification		Descr pe: plasticity / grain	iption of Soi size, colour		ompone	ents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additiona	I Comments
Test pit Test pit	None enoountered V	0.2 - 0.4 - 0.6 - 0.8 - 1 - 1.2 _ 1.4 _ 1.6 _ 1.8 _ 1.	Class	Silty CLAY LP Dark Brown Medium grain  Silty CLAY MP Red Brown Medium Grain  Silty CLAY MP-HP Brown with whi Medium Grain							H	0.05-0.15m 0.4-0.5m QC17 (Duplicate)	0.4		
		2.2 –													_
mark	s:											1	I		
AT au W wa B bla H ha C ca	atube ger drillinger drillingshbore ade claw/ and augen ble tool rcussion MLC	ng TC-Bit tricone/roller	C F M W wat	_	plasticity LP low plasticity MP medium plasticity HP high plasticity grainstze F fine M medium C coarse	W white	P pale D dark M mottle	pla ~PL app pla >PL gre	ist	VS von S Signature St Signature	ency/der ve ery soft oft rm tiff ery stiff	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L loc MD me D de	isive ry loose use ed. dense use ry dense ry dense	samples & tests B Bulk sample D Disturbed sample E Environmental N* sample N SPT blow with sample PP SPT blow without VS sample U50,Pocket U75 penetrometer Vane shear

Sample No.

**TP36** 

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: Matt Eygenraam Drilling Date: 1/23/2008 Location: E0272367 N6160437 Drill Company: DrillMax Driller: Craig Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth ( Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) 0.05-0.15m Medium Grain 0.2 0.4 Silty CLAY 0.4-0.5m 0.4 Dark brown Medium grain 0.6 Silty CLAY I P-MP Red Brown with black hard inclusions Medium grain 8.0 0.9-1.0m 0.3 None encountered Test 1.2 1.4 1.6 1.8 1.9-2.0m 1.2 2 End of Test Pit @ 2m emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose S son F firm St stiff Environmental MD med. dense dense sample SPT blow with D VD PP SPT blow wither
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue

Sample No.

**TP37** 

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: Matt Eygenraam Drilling Date: 1/23/2008 Location: E0272367 N6159937 Drill Company: DrillMax Driller: Craig Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 1m Ξ PID Description of Soil Water moisture condition Depth ( consist. density Readings Additional Comments Samples (soil type: plasticity / grainsize, colour, other components) (ppm) 0.05-0.15m Dark Brown/grey Medium grain 0.2 Silty CLAY 0.4-0.5m Red Brown 0.4 Medium Grain 0.6 8.0 Silty CLAY D MP Red Medium Grain 0.9-1.0m 0.3 End of Test Pit @ 1m None encountered Test 1.2 1.4 1.6 1.8 2 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample lour black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing F foam M mud W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose S son F firm St stiff Environmental MD med. dense dense sample SPT blow with D VD PP SPT blow wither
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue

Sample No.

TP38

1 of 1 Sheet Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/3/2008 Location: E0271401 N6160671 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth consist. density Readings Additional Comments Samples (soil type: plasticity / grainsize, colour, other components) (ppm) 0-0.1m ΙP Light brown Organic inclusions 0.2 Silty CLAY 0.2-0.3m 0.3 Silty CLAY Light brown 0.4 0.4-0.5m 0.6 Silty CLAY with some sand FG MP Orange brown 8.0 0.9-1.0m Test 1.2 1.4 1.6 Silty Sand Orange brown 1.8 1.9-2.0m 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample lour black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing F foam M mud W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose S son F firm St stiff Environmental MD med. dense dense sample SPT blow with D VD PP SPT blow without Sample
PP SPT blow without Sample
U50,Pocket
U75 penetrometer orange yellow green blue

Sample No.

TP39 1 of 1 Sheet

Client	:	Walker C	orpor	ation					Proje	ct No.		31495-00	1
Proje	ct:	Buckland	l Park					Logg	ed by:		April Free	man	
Locat	ion:	E027139	5 N61	60865					Drillin	g Date	:	4/3/2008	
Drill C	ompa	ny: Dr	illMax		Driller: Johnny	/			Hole	Diamet	ter:	-	
Rig/C	ore:				Method: Test pi	t			Hole	Depth:		2m	
Method	Water	Depth (m)	Classification		pe: plasticity / grain	iption of Soil size, colour, o	other c	omponents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional Comments
				Silty CLAY wing FG MP Light brown					D	8	0-0.1m QC2A		
		0.2 —		Organic inclusi Tilled Silty CLAY win FG, LP					D	St	0.2-0.3m		
		0.3		Light brown Silty CLAY wi	th sand				D	St			
		0.4 —		FG LP Orange brown							0.4-0.5m		
		0.6 —											
		0.8 —		Silty CLAY HP Orange brown					М	VSt	0.9-1.0m		
	tered	1 —											
Test pit	None encountered	1.2 _											
		1.4 _											-
		1.6 _		Silty CLAY wi	th cond				М	F			
		- 1.8		FG MP	with some grey mottle	s			IVI	,			
		-									1.9-2.0m		-
	2 EOH at 2m												-
		2.2 —											
emark	s:												
AT au W wa B bla H ha C ca	atube ger drillin ger drillin sshbore ade claw/t and auger ble tool rcussion MLC	g TC-Bit	C F M W water	water er	plasticity LP low plasticity MP medium plasticity HP high plasticity  grainstze F fine M medium C coarse	colour B black W white G grey M red Br brown O orange Y yellow Gr green BI blue	pale dark mottle	moisture D dry M moist W wet <pl -pl="" approx.="" at="" less="" limit="" plastic="" than="">PL greather then plastic limit</pl>	VS VS F f St s	tency/den ve very soft soft irm stiff ery stiff eard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m D de	ary loose D Disturbed sample Sed. dense ed. dense ense N SPT blow with sample PP SPT blow without VS sample U50, Pocket U75 penetrometer
Conne	l Wagne	er Pty Ltd AB			Level 1 Septin	mus Roe Square		ephone +61 8 922315				Car	nell Wagner

Sample No.

TP40

Buckland E027112							Loga	ed by:			
E027112	20 NG1					Loggi	eu by.		April Free	eman	
	20 110 1	61164					Drillin	g Date	:	4/3/2008	
any: Di	rillMax		Driller: Johnny	/			Hole	Diamet	ter:	-	
			Method: Test pit	t			Hole	Depth:		2m	
Depth (m)	Classification	(soil ty		•	er compo	nents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional Comments
0.2 - 0.3 - 0.4 - 0.6 - 0.7 - 0.8 - 1 - 1.2 _ 1.4 _ 1.6 _ 1.7 - 1.8 2 - 2 - 1.8 _ 1.8		FG LP Light brown Organic inclusi Tilled Silty CLAY wit FG MP Orange brown  Silty CLAY wit MG MP Orange brown	th sand th samd th samd  th samd  rown with grey mottles rolusions, 1-20mm, and	gular			D D M	μορ σ σ σ F	0-0.1m  0.2-0.3m QC3A  0.4-0.5m	(ppin)	Had to move TP slightly off grid due to patch of potatoes
2.2 —											
									<u> </u>	l	
ng V-Bit ng TC-Bit /tricone/roller r	C of F f M r W water	casing coam mud water or water level water inflow water loss (%)	plasticity LP low plasticity MP medium plasticity HP high plasticity  grainsize F fine M medium C coarse	W white D de G grey M m R red Br brown O orange y yellow Gr green BI blue	ale D M W <pl ~pl="">PL</pl>	dry moist wet less than plastic limit approx. at plastic limit greather then plastic limit	VS V S S F fi St S VSt V H h	ery soft oft rm tiff ery stiff	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa	L lo MD m D d VD vi	ery loose D Disturbed sample E Environmental N' sample ery dense ery dense P P SPT blow without VS sample U50, Pocket U75 penetrometer Vane shear
	0.2 — 0.3 — 0.4 — 0.6 — 0.7 — 0.8 — 1 — 1.2 — 1.4 — 1.6 — 2 — 2.2 — 2.2 — dig V-Bit tricone/roller diamond coring	(E) 4ddd O O O O O O O O O O O O O O O O O	(soil ty grade of the series	Method: Test pi  Descr (soil type: plasticity / grain  Silty CLAY with sand FG LP Light brown Organic inclusions Tilled  Silty CLAY with some sand FG MP Orange brown  Silty CLAY with sand FG MP Orange brown  1.4 -  Silty CLAY with sand MG MP Orange brown  1.5 -  Silty CLAY with sand MG MP Orange brown  1.6 -  1.7 -  Silty CLAY with sand MG MP Orange brown  1.8 -  1.9 -  Silty CLAY with sand MG MP Orange brown  1.9 -  Silty CLAY with sand MG MP Orange brown  1.0 -  Silty CLAY with sand MG MP Orange brown  1.2 -  1.4 -  1.5 -  Silty CLAY with sand MG MP Orange brown  1 -  Silty CLAY with sand MG MP Orange brown  1 -  Silty CLAY with sand MG MP Orange brown  1 -  Silty CLAY with sand MG MP Orange brown  1 -  Silty CLAY with sand MG MP Orange brown  1 -  Silty CLAY with sand MG MP Orange brown  1 -  Silty CLAY with sand MG MP Orange brown  1 -  Silty CLAY with sand MG MP MP Orange brown  1 -  Silty CLAY with sand MG MP MP Orange brown  1 -  C c casing F foam MP M mud W water water inflow coring  W water water inflow water inflow water inflow water inflow water inflow coring  W water water inflow coring  G coarse	Method: Test pit    Color   Description of Soil	Method: Test pit    Compared   Co	Method: Test pit    Comparison   Description of Soil   Description of Soil   Sity CLAY with sand   PG   Description   Des	Method: Test pil Hole  Description of Soil  (soil type: plasticity / grainsize, colour, other components)  Sity CLAY with sand FG UP Light trown Organic inclusions Tilled  Sity CLAY with sand FG O.4 - Sity CLAY with sand FG O.6 - Orange brown  1 - Sity CLAY with sand MG O.8 - Orange brown  1 - Sity CLAY with sand MG O.8 - Orange brown  1 - Sity CLAY with sand MG Orange brown  1 - Sity CLAY with sand MG Orange brown  1 - Sity CLAY with sand MG MP Orange brown  1 - Sity CLAY with sand MG MG MP Orange brown  1 - Sity CLAY with sand MG MG MP Orange brown  1 - Sity CLAY with sand MG MG MP Orange brown  1 - Sity CLAY with sand MG	Method: Test pit	Method: Test pit    Common   Description of Soil   Description of Soil   Soil   Description of Soil   Soil   Description of Soil   Description of Soil   Soil   Description of S	Method: Test pit   Method: Test pit pit   Method: Test pit   Method: Test pit   Method: Test pit pit pit pit pit pit pit pit pit pi

Sample No.

TP41

1 of 1 Sheet

Clien	t:	Walker Co	orpora	ation					Proje	ct No.		31495-00	Sneet 1	
Proje	ct:	Buckland	Park						Logg	ed by:		April Free	man	
Loca	tion:	E0271270	N61	60835					Drillin	g Date	<b>:</b> :	4/3/2008		
Drill (	Compa	ny: Dri	llMax		Driller: Johnny	,			Hole	Diame	ter:	-		
Rig/C	ore:				Method: Test pit	t			Hole	Depth:		2m		
Method	Water	Depth (m)	Classification	(soil ty	Descri pe: plasticity / grains	iption of Soil size, colour, o	ther co	mponents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional Cor	nments
		0.2 -		Sitty CLAY wif FG LP Light brown Organic inclusi Sitty CLAY wif FG, L-MP Light brown Sitty CLAY M-HP Orange brown Minor gravel in	ons th sand	gular			D	St	0-0.1m 0.2-0.3m 0.4-0.5m			
		0.6 —												
		0.6		Clayey SAND MG				М	S	0.9-1.0m				
		4		Orange brown										
	pə.	1 –												
pit	None encountered													
Test pit	enco													
	None	1.2 _												
		1.4 _												
		_												
		1.6 _												
		1.7		Silty SAND					М	S				
		1.8 _		MG Orange brown							1.9-2.0m			_
		-												-
		2			EC	OH at 2m								
													1	
		2.2 —												
emark	s:													
AT au W wa B bla H ha C ca	atube uger drillin uger drillin user drillin user drillin user de claw/t und auger uble tool urcussion MLC	g V-Bit g TC-Bit ricone/roller diamond coring	C of find the find th	water er	plasticity LP low plasticity MP medium plasticity HP high plasticity  grainsize F fine M medium C coarse	W white D	pale dark mottle	moisture D dry M moist W wet  PL less than plastic limit -PL approx. at plastic limit >PL greather then plastic limit	VS VS S S S F F F St S VSt V	tency/der ve erry soft oft irm titiff erry stiff	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m D de	### B	oles & tests Bulk sample Disturbed sample Environmental sample SPT blow with sample SPT blow without sample Pocket benetrometer Vane shear
Conne	II Wagne	r Pty Ltd ABN	154 00	5 1,39,873	Level 1 Septir	nus Roe Square		phone +61 8 922315				Cor	nell Wa	

Sample No.

TP42

Client	:	Walker C	Corpora	ation					Proje	ect No.		31495-00	1	
Proje	ct:	Buckland	d Park						Logg	jed by:		April Free	man	
Locat	ion:	E027127	'6 N61	60662					Drillin	ng Date	:	4/3/2008		
Drill C	ompa	ny: D	rillMax		Driller: Johnny	/			Hole	Diamet	ter:	-		
Rig/C	ore:				Method: Test pi	t			Hole	Depth:		2m		
Method	Water	Depth (m)	Classification	(soil ty	Descr pe: plasticity / grain	iption of Soil size, colour, ot	ther co	mponents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additiona	al Comments
				Silty CLAY MP					D	F	0-0.1m			
		-		Medium brown Some organic i Tilled										
		0.2 —		Silty CLAY LP					D	St	0.2-0.3m			
		_		Medium brown										
		0.4 —		Silty CLAY					M	St	0.4-0.5m			
				M-HP Light brown										
		0.6 —												
		0.7		Silty CLAY wit	th some sand			M	St					
		0.8 —		MG MP										
		0.0		Medium brown							0.9-1.0m			
		_									QC4A			
	ъ	1 —												
ij	intere													
Test pit	encor	_												
	None encountered	1.2 _												
		_												=
		1.4 _												_
		-												
		1.6 _												
		1.0 _												
		_												
		4.0												
		1.8 _		Silty CLAY wit	th sand				М	S				
				FG MP							1.9-2.0m			
				Orange brown										
		2 —	_											
					EC	OH at 2m								
		=												7
		2.2 —												
emark:	S:			<u>I</u>				<u> </u>		<u> </u>		<u> </u>		
AT au W wa B bla H ha C cal	tube ger drilling ger drilling shbore de claw/ti nd auger	g V-Bit g TC-Bit ricone/roller	C F	water level	plasticity LP low plasticity MP medium plasticity Hp high plasticity  grainsize F fine M medium C coarse	W white D	pale dark mottle	moisture D dry M moist W wet <pl -pl="" approx.="" at="" greather="" less="" limit="" plastic="" td="" than="" then<=""><td>VS VS F f St s VSt VSt V</td><td>stency/den ive very soft soft firm stiff very stiff hard</td><td>pp&lt;25kPa 25&gt;pp&lt;50kPa 50&gt;pp&lt;100kPa 100&gt;pp&lt;200kPa 200&gt;pp&lt;400kPa pp&gt;400kPa</td><td>L lo MD m D de</td><td>esive ery loose ose ed. dense ense ery dense</td><td>samples &amp; tests B Bulk sample D Disturbed sample E Environmental N* sample N SPT blow with sample PP SPT blow without VS sample</td></pl>	VS VS F f St s VSt VSt V	stency/den ive very soft soft firm stiff very stiff hard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m D de	esive ery loose ose ed. dense ense ery dense	samples & tests B Bulk sample D Disturbed sample E Environmental N* sample N SPT blow with sample PP SPT blow without VS sample
NQ, NI HQ, PC	/LC	diamond coring	(स्तां	water inflow water loss (%)	C coarse	BI blue		plastic limit						U50,Pocket U75 penetrometer
				)5 1,39,873	Level 1 Septi	mus Roe Square	Tele	phone +61 8 922315	00			_	noell V	Vane shear

Sample No.

TP43

PID additional Comments ppm)
PID Additional Comments
PID addings Additional Comments
PID addings Additional Comments
eadings Additional Comments
_
-
_
1
samples & tests
non-cohesive         B         Bulk sample           VL         very loose         D         Disturbed sample           L         loose         E         Environmental           MD         med.dense         N'         sample           D         dense         N         SPT blow with           you very dense         sample
\ L

Sample No.

**TP44** 

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/3/2008 Location: E0270885 N6160710 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth consist. density Readings Additional Comments Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand FG QC6A Light brown Organic inclusions 0.2 Silty CLAY with sand 0.2-0.3m D FG Light brown 0.4 Silty CLAY with sand 0.4-0.5m ΙP Orange brown 0.6 8.0 Silty CLAY 0.9-1.0m Orange brown Test 1.2 1.4 1.6 1.8 Sandy CLAY with silt 1.9-2.0m MG Red brown with light brown mottles 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample lour black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing F foam M mud W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa medium plasticity high plasticity very loose loose S son F firm St stiff Environmental MD med. dense dense sample SPT blow with PP SPT blow witho
sample
PP SPT blow witho
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue VD

Sample No.

TP45

Client	:	Walker Co	orpora	ation					Proje	ect No.		31495-00	)1	
Proje	ct:	Buckland	Park					Logg	ed by:		April Free	eman		
Locat	ion:	E0270677	7 N61	60959					Drillir	ng Date	):	4/3/2008		
Drill C	ompa	ny: Dril	llMax		Driller: Johnny	/			Hole	Diame	ter:	-		
Rig/C	ore:		_		Method: Test pi	t			Hole	Depth:	ı	2m	1	
Method	Water	Depth (m)	Classification	(soil ty	Descri pe: plasticity / grain	iption of Soil size, colour,	other c	omponents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Addition	al Comments
Test pit Met	Encountered water at ~0.6m	0.2 — 0.3 — 0.4 — 0.6 — 1.2 — 1.4 — 1.6 — 1.7 — 1.8 —		Silty CLAY wimed MG MP Light brown  Silty CLAY wimed b	th some sand  th sand  th sand  th some sand  nclusions, 2-15mm, and rown with some grey many many many many many many many man	gular nottles	other c	omponents)	nsiou D D M	Sistrop   S	0.2-0.3m QC7A 0.4-0.5m			n dried up dam/
		2 -			EC	OH at 2m							-	
		2.2 —												
emark	3:													
AT au W wa B bla H ha C cal P pel NQ, NI HQ, PO	tube ger drillin ger drillin ger drillin gshbore de claw/t nd auger ble tool cussion MLC	g V-Bit g TC-Bit ricone/roller diamond coring r Pty Ltd ABN	C (C F f M r W v water	water level water linflow water loss (%)	plasticity LP low plasticity MP medium plasticity Hp high plasticity  grainsize F fine M medium C coarse	colour B black P W white D G grey M R red Br brown O crange Y yellow Gr green Bl blue mus Roe Square	mottle	moisture D dry M moist W wet <pl less="" limit="" plastic="" than="">PL approx. at plastic limit &gt;PL greather then plastic limit</pl>	Cohesi VS V S S F f St S VSt V	stency/der ve very soft soft irrm stiff very stiff nard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPc 200>pp<400kPa pp>400kPa	L ko MD n I D d I VD v	ery loose pose ned. dense dense ery dense	samples & tests B Bulk sample D Disturbed sample E Environmental N sample N SPT blow with SPT blow without VS sample U50,Pocket U75 penetrometer Vane shear

Sample No.

**TP46** 

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/3/2008 Location: E0271401 N6161076 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand 0-0.1m MG LP Light brown Organic inclusions 0.2 Silty CLAY with some sand D 0.2-0.3m FG Medium-dark brown 0.4 Silty CLAY with some sand 0.4-0.5m Orange brown with some limestone inclusions ~5% 0.6 8.0 Silty CLAY MP 0.9-1.0m Orange brown Minor gravel inclusions, 2-10mm, angular Test 1.2 1.4 1.6 1.7 Silty CLAY with some sand MG 1.8 Orange brown 1.9-2.0m 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa medium plasticity high plasticity pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa very loose loose S son F firm Environmental MD med. dense dense sample SPT blow with orange yellow green blue VD sample
PP SPT blow without VS sample U50,Pocket U75 penetromete diamond coring HQ, PQ

Sample No.

**TP47** 

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/3/2008 Location: E0271411 N6161267 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand TP located in an old market FG QC8A garden Light brown Organic inclusions Tilled 0.2 Silty CLAY with sand 0.2-0.3m D FG Medium brown 0.4 Silty CLAY with some sand 0.4-0.5m Orange brown with some limestone inclusions ~5% 0.6 8.0 Clayey SAND MG. 0.9-1.0m Orange brown Minor gravel inclusions, 1-20mm, angular Test 1.2 1.4 1.6 1.8 Silty CLAY with sand 1.9-2.0m Orange brown 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa medium plasticity high plasticity very loose loose pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa S son F firm Environmental MD med. dense dense sample SPT blow with orange yellow green blue VD sample
PP SPT blow without VS sample U50,Pocket U75 penetromete diamond coring HQ, PQ

Sample No.

**TP48** 

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/3/2008 Location: E0271371 N6161320 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition consist. density Readings Additional Comments Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand 0-0.1m FG greenhouse currently in use Light brown Tilled 0.2 Silty CLAY with sand D 0.2-0.3m FG QC9A Light brown 0.4 Silty CLAY 0.4-0.5m Red brown 0.6 0.7 Silty CLAY with sand MG MP 8.0 Red brown 0.9-1.0m Test 1.2 1.4 1.6 1.8 Silty CLAY with sand 1.9-2.0m Red brown with some orange mottles 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand augur
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample lour black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing F foam M mud W water pp<25kPa medium plasticity high plasticity pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa very loose loose S son F firm Environmental MD med. dense dense sample SPT blow with PP SPT blow witho
sample
PP SPT blow witho
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue VD

Sample No.

TP49

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/7/2008 Location: E0271263 N6161276 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Method: Test pit Hole Depth 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand 0-0.1m ΙP rubbish stockpiles FG Light brown Organic inclusions 0.2 Silty CLAY with sand D 0.2-0.3m FG Medium brown 0.4 Silty CLAY 0.4-0.5m Orange brown 0.6 0.7 Silty CLAY Orange brown 8.0 0.9-1.0m Test 1.2 1.4 1.6 1.7 Clayey SAND MG 1.8 Red brown 1.9-2.0m 2 EOH at 2m SP1: E0271266 N6161285, Soil stockpile combined with rubbish, Sandy CLAY, LP, Light brown, D, VS SP2: E0271245 N6161273, Soil stockpile combined with rubbish, Sandy CLAY, 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand augur
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water Bulk sample Disturbed samp very soft soft pp<25kPa medium plasticity high plasticity very loose loose pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa S son F firm Environmental MD med. dense
D dense sample SPT blow with orange yellow green blue VD sample
PP SPT blow without VS sample U50,Pocket U75 penetromete

Sample No.

TP50

Sheet 1 of 1

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/7/2008 Location: E0271544 N6161398 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand MG QC10A greenhouse LP Light brown Tilled 0.2 Silty CLAY 0.2-0.3m 0.3 Silty CLAY Orange brown 0.4 0.4-0.5m 0.6 8.0 Silty CLAY with sand MG 0.9-1.0m Orange brown Test 1.2 1.4 1.6 1.8 Silty CLAY 1.9-2.0m Orange brown 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample lour black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose S son F firm Environmental MD med. dense dense sample SPT blow with PP SPT blow without Sample
PP SPT blow without Sample
U50,Pocket
U75 penetrometer orange yellow green blue VD

Sample No.

TP51

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/7/2008 Location: E0271652 N6161330 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand 0-0.1m MG Light brown Organic inclusions 0.2 Silty CLAY D 0.2-0.3m QC11A Medium brown 0.4 Silty CLAY with sand 0.4-0.5m Orange brown Minor limestone inclusions ~10% 0.6 8.0 Silty CLAY D 0.9-1.0m Orange brown Test 1.2 1.4 1.6 1.7 Silty CLAY with sand FG 1.8 Red brown 1.9-2.0m 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample lour black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa medium plasticity high plasticity pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa very loose loose S son F firm St stiff Environmental MD med. dense dense sample SPT blow with PP SPT blow witho
sample
PP SPT blow witho
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue VD

Sample No.

TP52

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/7/2008 Location: E0271653 N6161141 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand 0-0.1m MG Medium brown Organic inclusions 0.2 Silty CLAY with sand D 0.2-0.3m MG Medium brown 0.4 Silty CLAY with sand 0.4-0.5m Orange brown Minor gravel inclusions ~10mm, angular 0.6 0.7 Silty CLAY with sand MG 8.0 Orange brown Gravel inclusions, 1-15mm, angular 0.9-1.0m Test 1.2 1.4 1.6 1.7 Silty CLAY with sand MG 1.8 Minor gravel inclusions 1-10mm, angular 1.9-2.0m 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand augur
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa medium plasticity high plasticity very loose loose pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa S son F firm Environmental MD med. dense dense sample SPT blow with orange yellow green blue VD sample
PP SPT blow without VS sample U50,Pocket U75 penetromete

Sample No.

TP53

Client	t:	Walker	Corpo	ration						Proje	ct No.		31495-001	
Proje	ct:	Bucklar	nd Parl	<						Logg	ed by:		April Freen	nan
_ocat	ion:	E02716	647 N6	160923						Drillin	g Date:		4/7/2008	
Orill C	Compa	any: I	DrillMa	х	Driller: Johnny	/				Hole	Diamet	er:	-	
Rig/C	ore:				Method: Test pi	t				Hole	Depth:		2m	
Method	Water	Depth (m)	Classification		Descr ype: plasticity / grain	iption of Soil size, colour,		compone	ents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional Comments
				Silty CLAY MP						D	VSt	0-0.1m		
Test pit	None encountered	0.2 - 0.4 - 0.6 - 1 -	-	MP Light grey brov Organic inclus Silty CLAY MP Dark brown Silty CLAY M-HP Orange brown	n					M	VSt St	0.2-0.3m 0.4-0.5m		
		1.4 _	-											-
				Silty CLAY HP						М	St			
		1.8 _	-	Medium browr	n with orange and grey	mottles						1.9-2.0m		
					EC	OH at 2m								
		2.2 -	_											
mark	s:												Į.	
AT au W wa B bla H ha C ca	atube ger drillinger drillingshbore ade claw/ and augen ble tool rcussion MLC	ng TC-Bit tricone/rolle	C F M W r wa	le support casing foam mud water tter  water level water inflow water inflow water loss (%)	plasticity LP low plasticity MP medium plasticity HP high plasticity grainsize F fine M medium C coarse	colour B black P W white C G grey N R red Br brown O orange Y yellow Gr green Bl blue	) dark	pla: ~PL app pla: >PL gre	ist	VS v S s F fi St s VSt v	tency/densive ery soft oft rm tiff ery stiff ard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L loo MD me D der	y loose D Disturbed samp

Sample No.

TP54

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/7/2008 Location: E0271674 N6160709 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth ( consist. density Readings Additional Comments Samples (soil type: plasticity / grainsize, colour, other components) (ppm) 0-0.1m Light grev brown Organic inclusions 0.2 Silty CLAY 0.2-0.3m D M-HP Dark grey brown 0.4 Silty CLAY 0.4-0.5m Medium brown 0.6 8.0 0.9-1.0m Test 1.2 1.4 1.6 1.8 Sandy CLAY MG LP 1.9-2.0m Red brown 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample lour black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose S son F firm Environmental MD med. dense dense sample SPT blow with D VD PP SPT blow without Sample
PP SPT blow without Sample
U50,Pocket
U75 penetrometer orange yellow green blue nell Wagner Pty Ltd ABN 54 005 1,39,87 Level 1 Septimus Roe Square

Sample No.

TP55

1 of 1 Sheet Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/7/2008 Location: E0271935 N6160812 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand 0-0.1m FG Light grey brown Organic inclusions 0.2 Silty CLAY 0.2-0.3m D MP Dark brown 0.4 Clayey SAND 0.4-0.5m Orange brown 0.6 8.0 Silty CLAY with some sand FG 0.9-1.0m Red brown with light brown and grey mottles Test 1.2 1.4 1.6 1.8 1.9-2.0m Red brown with light brown mottles QC14A Minor gravel inclusions 1-10mm, angular 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand augur
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring amples & tests

Bulk sample

Disturbed sampl black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa VL medium plasticity high plasticity pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa very loose loose S son F firm Environmental MD med. dense dense sample SPT blow with orange yellow green blue VD sample
PP SPT blow without VS sample U50,Pocket U75 penetromete

Sample No.

TP56

Client	t:	Walke	r Cor	pora	ation						Proje	ct No.		31495-001	1	
Proje	ct:	Buckla	nd P	ark							Logg	ed by:		April Freer	man	
_ocat	ion:	E0271	1 08	<b>N</b> 610	61045						Drillin	ng Date	<u>:                                    </u>	4/7/2008		
Orill C	Compa	any:	DrillN	Лах		Driller: Johnny	/				Hole	Diamet	er:	-		
Rig/C	ore:					Method: Test pi	t				Hole	Depth:		2m		
Method	Water	Depth (m)	3	Classification	(soil ty	Descripe: plasticity / grain	iption of So size, coloui		ompo	onents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additiona	I Comments
					Silty CLAY wit	th sand					D	VS	0-0.1m			
		0.2	<u>-</u>		LP Light brown Silty CLAY wit FG LP Medium-dark b						D	St	0.2-0.3m			
		0.4	-		Silty CLAY wit FG MP Orange brown						M	F	0.4-0.5m			
		0.8														
		0.8			Silty CLAY MP Orange brown Some gravel in	nclusions, 1-10mm, an	gular				М	F	0.9-1.0m			
		1														
	tered															
Test pit	lcount		-													
Те	None encountered	1.2														
	Ň															
		1.4														
			1													
		1.6														
			1													
		1.8	$\bot$		Silty CLAY						M	F				
					MP	with light brown mottle	es				IVI		1.9-2.0m			
		2	+	-												
						EC	OH at 2m									
			1													
		2.2	4													
mark	s:	I										I				
AT au W wa B bla H ha C ca	atube ger drillinger drillingshbore ade claw/ and augen ble tool rcussion MLC	ng TC-Bit tricone/roll		C of F for M m W w water	nud vater •r	plasticity LP low plasticity MP medium plasticity HP high plasticity  grainsize F fine M medium C coarse	W white	P pale D dark M mottle	moist D M W <pl ~pl="">PL</pl>	dry moist wet less than plastic limit approx. at plastic limit greather then plastic limit	VS v S s F ff St s VSt v	tency/den ve very soft ort orm stiff very stiff hard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp=400kPa pp>400kPa	L loc MD me D de	esive ny loose ose ed. dense onse ny dense	samples & tests B Bulk sample D Disturbed sample E Environmental N* sample N SPT blow with sample PP SPT blow without VS sample U50,Pocket U75 penetrometer Vane shear

Sample No.

TP57

1 of 1 Sheet Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/7/2008 Location: E0271680 N6161426 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand MG QC15A LP Light brown Organic inclusions 0.2 0.2-0.3m Silty CLAY with sand D MG Medium brown 0.4 Silty CLAY with some sand 0.4-0.5m MP Red brown with light orange mottles 0.6 0.7 Silty CLAY with sand MG MP 8.0 Orange brown 0.9-1.0m Test 1.2 1.4 1.6 1.8 Clayey SAND 1.9-2.0m Light orange brown 2 EOH at 2m SP3: E0271704 N6161320, Stockpiled soil, Sandy CLAY, MG, LP, orange brown 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring amples & tests

Bulk sample

Disturbed sampl black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa medium plasticity high plasticity very loose loose pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa S son F firm Environmental MD med. dense dense sample SPT blow with orange yellow green blue VD sample
PP SPT blow without VS sample U50,Pocket U75 penetromete coring HQ, PQ

Sample No.

TP58

Client	t:	Walker	Corpo	ration					Proje	ct No.		31495-001		
Proje	ct:	Bucklar	nd Park	(					Logg	ed by:		April Freen	nan	
_ocat	ion:	E02718	866 N6	161473					Drillin	g Date:		4/7/2008		
Orill C	Compa	ıny: l	OrillMax	K	Driller: Johnny	,			Hole	Diamet	er:	-		
Rig/C	ore:				Method: Test pi	<u>t                                      </u>			Hole	Depth:		2m		
Method	Water	Depth (m)	Classification	(soil ty	Descri pe: plasticity / grain	ption of Soil size, colour,	omponer	nts)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additiona	l Comments
				Silty CLAY wi	th sand				D	S	0-0.1m			
		0.2 -		LP Medium brown Organic inclusi  Silty CLAY wi MG LP Medium brown	ith sand				D	VSt	0.2-0.3m QC16A			
		0.4 -		Silty CLAY					М	F	0.4-0.5m			
		0.6 -	- - -	MP Orange brown										
		0.8 -	1		th some sand				М	S				
Test pit	None encountered	1.2 _		FG MP Orange brown							0.9-1.0m			
			-											
		1.6 _												
		1.8												
				Clayey SAND MG Orange brown					М	VS	1.9-2.0m			
		2 -			Fſ	OH at 2m								
		2.2 -				44 4111								
mark	s:								1	<u>.                                    </u>				
AT au W wa B bla H ha C ca	atube ger drillinger drillingshbore ade claw/ and augen ble tool rcussion MLC	ng TC-Bit tricone/rolle	C F M W wa	le support casing foam mud water ter  water level water inflow water inflow water loss (%)	plasticity LP low plasticity MP medium plasticity HP high plasticity grainsize F fine M medium C coarse	colour B black W white G grey M red Br brown O crange y yellow Gr green Bl blue	plas ~PL appi plas >PL grea	than tic limit rox. at tic limit sther then tic limit	VS v S s F fi St s VSt v	tency/density ve ery soft oft rm tiff ery stiff aard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L loo MD me D der	y loose	samples & tests  B Bulk sample D bisturbed sample E Environmental N* sample N SPT blow with sample PP SPT blow without VS sample U50,Pocket U75 penetrometer Vane shear

Sample No.

TP59

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/7/2008 Location: E0272299 N6161517 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth consist. density Readings Additional Comments Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand 0-0.1m FG Light brown Organic inclusions 0.2 Silty CLAY 0.2-0.3m D Dark brown 0.4 Silty CLAY 0.4-0.5m Orange brown 0.6 8.0 Silty CLAY with sand 0.9-1.0m Orange brown Test 1.2 1.4 1.6 1.8 Silty CLAY with sand MG MP 1.9-2.0m 10.1 Orange brown with light brown mottles Minor gravel inclusions, 1-15mm, angular 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa medium plasticity high plasticity pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa very loose loose S son F firm Environmental MD med. dense dense sample SPT blow with PP SPT blow witho
sample
PP SPT blow witho
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue VD

Sample No.

TP60

1 of 1 Sheet

Jient		walker Corporation								rroje	ct No.		31495-001		
Proje	ct:	Buckland Park								Logg	ed by:		April Freeman		
_ocat	ation: E0272574 N6160691						Drillin	g Date	:	4/8/2008					
Orill Company: DrillMax Driller: Johnny									Hole Diameter:			-			
Rig/Core: Method: Test pit									Hole	Depth:		2m			
Method	Water	Depth (m)	Classification		Desci pe: plasticity / grain	ription of Soil nsize, colour,		omponents)		moisture condition		Samples	PID Readings (ppm)	Additiona	Comments
		-		Silty CLAY LP Medium brown Organic inclusi						D	S	0-0.1m QC17A			
	None encountered	0.2 —		Silty CLAY						D	VSt	0.2-0.3m			
		_		Dark brown											
		0.4 —		Silty CLAY M-HP Medium brown						M	St	0.4-0.5m			
		0.6 —													
		0.7		Silty CLAY						M	St				
		0.8 —		M-HP Medium brown								0.9-1.0m			
		-													
		1 —													
Test pit		1.2 _													
		1.4 _													
		-													
		1.6 _													
		1.8 _													
		-		Clayey SAND MG Orange brown						М	S	1.9-2.0m			
		2 —				OU -4 2									
		-			E	OH at 2m									
		2.2 —													
mark	s:			•											
				1		1.								-	
AT aug W wa B bla H hai C cal	tube ger drillinger drillingshbore de claw/ nd auger ble tool cussion		C F M W wat	_	plasticity LP low plasticity MP medium plasticity HP high plasticity grainsize F fine M medium C coarse	colour B black P W white D G grey M R red Br brown O orange Y yellow Gr green Bl blue		moisture D dry M moist W wet <pl less="" lin="" plastic="" than="">PL greather plastic lin</pl>	mit t nit	VS v S S F fi St S VSt v	tency/den ve ery soft oft rm tiff ery stiff ard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L loc MD me D dei	y loose	samples & tests B Bulk sample D Disturbed sample E Environmental N* sample N SPT blow with sample PP SPT blow without VS sample U50, Pocket U75 penetrometer
		er Pty Ltd AB			Lovel 1 Sept	imus Roe Square	Tol	lephone +61 8 9	2231500						Vane shear

Sample No.

TP61

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/8/2008 Location: E0272653 N6160415 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) 0-0.1m MP Medium brown Minor gravel inclusions ~1mm 0.2 Silty CLAY with sand D 0.2-0.3m QC18A Medium brown 0.4 Silty CLAY 0.4-0.5m Medium brown with orange and grey mottles 0.6 0.7 Silty CLAY with sand MP 8.0 Light brown with orange and grey mottles 0.9-1.0m Test 1.2 1.4 1.6 1.7 Silty CLAY 1.8 Light brown with orange and grey mottles 1.9-2.0m 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand augur
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring amples & tests

Bulk sample

Disturbed sampl black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa VL medium plasticity high plasticity pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa very loose loose S son F firm Environmental MD med. dense dense sample SPT blow with orange yellow green blue VD sample
PP SPT blow without VS sample U50,Pocket U75 penetromete Level 1 Septimus Roe Square

Sample No.

TP62

1 of 1 Sheet

Project: Buckland Par Location: E0272392 Ne Drill Company: DrillMa Rig/Core:	x Driller: Johnny Method: Test pit	Hole [	g Date	:	April Freen	nan		
Drill Company: DrillMa	x Driller: Johnny Method: Test pit	Hole [		:	4/8/2008			
Rig/Core:	Method: Test pit		Diamet			4/8/2008		
Rig/Core:	Method: Test pit		Hole Diameter:			-		
		I IOIC L	Hole Depth: 2m					
Method Water Depth (m)	Description of Soil (soil type: plasticity / grainsize, colour, other components)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additional Comments		
0.2	Silty CLAY with sand MG LP Light brown Organic inclusions  Silty CLAY MP Medium-dark brown  Silty CLAY with sand MG LP Orange brown Gravel inclusions, 1-15mm, angular  Silty CLAY with sand MG MG LP Drange brown Minor gravel inclusions 1-10mm, angular	igin D  M  M	ruco dueb σ F F	0.2-0.3m 0.2-0.5m	(ppm)			
2.2 —								
emarks:								
D diatube AV auger drilling V-Bit AT auger drilling TC-Bit W washbore B blade clawfricone/roller H hand auger C cable tool P percussion	Die support   Casing   Casin	vs ve S sc F fir St st VSt ve H ha	ery soft oft m	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L loo MD me D der VD ver	samples & tests B Bulk sample ry loose D Disturbed sample ad. dense S E Environmental N' sample N SPT blow with sample PP SPT blow without VS sample U50,Pocket U75 penetrometer Vane shear		

Sample No.

**TP63** 

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/8/2008 Location: E0272046 N6159382 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand 0-0.1m MG LP Light brown 0.2 Silty CLAY with sand 0.2-0.3m D MG Light brown Minor gravel inclusions, 1-10mm, angular 0.4 Silty CLAY with some sand 0.4-0.5m MP Medium brown with orange and grey mottles 0.6 8.0 0.9-1.0m Test 1.2 1.4 1.6 1.7 Silty CLAY with sand FG 1.8 Minor gravel inclusions 1-10mm, angular 1.9-2.0m 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand augur
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa medium plasticity high plasticity pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa very loose loose S son F firm Environmental MD med. dense dense sample SPT blow with orange yellow green blue VD sample
PP SPT blow without VS sample U50,Pocket U75 penetromete

Sample No.

TP64

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/8/2008 Location: E0272494 N6159811 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: 2m Method: Test pit Ξ PID Description of Soil Water moisture condition Depth ( Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) 0-0.1m TP located at edge of creek MP Dark brown 0.2 0.2-0.3m 0.4 0.4-0.5m Silty CLAY Medium brown 0.6 8.0 Silty CLAY 0.9-1.0m Grey brown with orange mottles QC20A Test 1.2 1.4 1.6 1.8 Silty CLAY 1.9-2.0m Dark grey 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring amples & tests

Bulk sample

Disturbed sampl black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose S son F firm Environmental MD med. dense dense sample SPT blow with D VD PP SPT blow wither
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue

Sample No.

TP65

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/8/2008 Location: E0272154 N6161009 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition consist. density Readings Additional Comments Samples (soil type: plasticity / grainsize, colour, other components) (ppm) 0-0.1m MP Light brown Organic inclusions 0.2 Silty CLAY with some sand 0.2-0.3m D FG Dark brown 0.4 Silty CLAY with sand 0.4-0.5m MP Medium orange brown 0.6 0.7 Silty CLAY with sand MP 8.0 Orange brown 0.9-1.0m Test 1.2 1.4 1.6 1.8 1.9-2.0m 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample lour black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa medium plasticity high plasticity very loose loose S son F firm St stiff Environmental MD med. dense dense sample SPT blow with PP SPT blow without Sample
PP SPT blow without Sample
U50,Pocket
U75 penetrometer orange yellow green blue VD

Sample No.

TP66

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/8/2008 Location: E0272412 N6161477 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand MG QC21A Light brown Organic inclusions 0.2 Silty CLAY 0.2-0.3m D Dark brown 0.4 Silty CLAY 0.4-0.5m Orange brown 0.6 8.0 0.9-1.0m Test 1.2 1.4 1.6 1.8 Silty CLAY with sand MG 1.9-2.0m Red brown with light brown mottles 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample lour black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa medium plasticity high plasticity very loose loose S son F firm St stiff Environmental MD med. dense dense sample SPT blow with PP SPT blow witho
sample
PP SPT blow witho
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue VD nell Wagner Pty Ltd ABN 54 005 1,39,87 Level 1 Septimus Roe Square

Sample No.

**TP67** 

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/8/2008 Location: E0273207 N6162138 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) 0-0.1m Medium brown Organic inclusions 0.2 Silty CLAY 0.2-0.3m Medium brown 0.4 Silty CLAY with sand 0.4-0.5m Light orange brown Minor limestone inclusions ~5% 0.6 8.0 Silty CLAY with sand D MG 0.9-1.0m Light orange brown Minor limestone inclusions~10% Minor gravel inclusions 1-5mm, angular Test 1.2 1.4 1.6 1.8 1.9-2.0m 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand augur
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa medium plasticity high plasticity pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa very loose loose S son F firm St stiff Environmental MD med. dense dense sample SPT blow with orange yellow green blue VD sample SPT blow with VS sample U50,Pocket U75 penetromete

Sample No.

**TP68** 

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/8/2008 Location: E0273424 N6161932 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) 0-0.1m MG Orange brown 0.2 Clayey SAND D 0.2-0.3m MG. QC22A Medium brown 0.4 Gravelly CLAY 0.4-0.5m 1-20mm, angular Orange brown Limestone inclusions ~10% 0.6 8.0 Silty CLAY with gravel D 0.9-1.0m 1-15mm, angular Limestone inclusions ~10% Test 1.2 1.4 1.6 1.8 Silty CLAY with sand MG MP 1.9-2.0m Orange brown Gravel inclusions 1-5mm, angular 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand augur
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa medium plasticity high plasticity pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa very loose loose S son F firm St stiff Environmental MD med. dense dense sample SPT blow with orange yellow green blue VD sample
PP SPT blow without VS sample U50,Pocket U75 penetromete nell Wagner Pty Ltd ABN 54 005 1,39,87 Level 1 Septimus Roe Square

Sample No.

TP69

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/9/2008 Location: E0274093 N6162582 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand 0-0.1m MG Orange brown Minor gravel inclusions, 1-10mm, angular 0.2 Silty CLAY with sand 0.2-0.3m D MG L-MP Red brown 0.4 Silty CLAY with sand 0.4-0.5m L-MP Orange brown Limestone inclusions ~10% Minor gravel inclusions, 1-10mm, angular 0.6 8.0 Silty CLAY with some sand FG 0.9-1.0m Orange brown Gravel inclusions, 1-10mm, angular Test 1.2 1.4 1.6 1.8 1.9-2.0m 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand augur
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa medium plasticity high plasticity very loose loose pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa S son F firm St stiff Environmental MD med. dense dense sample SPT blow with orange yellow green blue VD sample SPT blow with VS sample U50,Pocket U75 penetromete

Sample No.

1 of 1 Sheet

**TP70** 

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/9/2008 Location: E0274340 N6162630 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand 0-0.1m FG L-MP Light brown 0.2 Silty CLAY with sand 0.2-0.3m D FG L-MP Red brown 0.4 Silty CLAY with sand 0.4-0.5m MP Orange brown Limestone inclusions ~10% Gravel inclusions 1-10mm, angular 0.6 8.0 Silty CLAY MP 0.9-1.0m Orange brown Limestone inclusions ~5% Some gravel inclusions 1-10mm, angular Test 1.2 1.4 1.6 1.8 1.9-2.0m 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand augur
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa VL medium plasticity high plasticity pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa very loose loose S son F firm St stiff Environmental MD med. dense dense sample SPT blow with orange yellow green blue VD sample SPT blow with VS sample U50,Pocket U75 penetromete Level 1 Septimus Roe Square

Sample No.

**TP71** 

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/9/2008 Location: E0274487 N6162167 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand MG QC23A L-MP Medium brown Organic inclusions 0.2 0.2-0.3m 0.4 Silty CLAY with sand 0.4-0.5m L-MP Medium brown 0.6 8.0 Silty CLAY with sand MG 0.9-1.0m Orange brown Minor gravel inclusions, 1-5mm, angular Test 1.2 1.4 1.6 1.8 Silty CLAY with sand MG MP 1.9-2.0m Light orange brown Gravel inclusions 1-50mm, angular 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand augur
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring amples & tests

Bulk sample

Disturbed sampl black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa medium plasticity high plasticity pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa very loose loose S son F firm Environmental MD med. dense dense sample SPT blow with orange yellow green blue VD sample SPT blow without VS sample U50,Pocket U75 penetromete Level 1 Septimus Roe Square

Sample No.

TP72

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/9/2008 Location: E0274679 N6162672 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Method: Test pit Hole Depth 2m Ξ PID Description of Soil Water moisture condition Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with some sand 0-0.1m MG MP Medium brown Organic inclusions 0.2 Silty CLAY with sand 0.2-0.3m MG Orange brown with some medium brown mottles Some gravel inclusions, 1-10mm, angular 0.4 Silty CLAY with sand 0.4-0.5m ΙP Orange brown Limestone inclusions ~10% Gravel inclusions 1-10mm, angular 0.6 8.0 Silty CLAY with sand MG 0.9-1.0m Limestone inclusions ~5% Gravel inclusions 1-20mm, angular Test 1.2 1.4 1.6 1.8 1.9-2.0m 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water Bulk sample Disturbed samp pp<25kPa medium plasticity high plasticity very loose loose pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa S son F firm Environmental MD med. dense dense sample SPT blow with orange yellow green blue VD sample SPT blow with VS sample U50,Pocket U75 penetromete coring HQ, PQ

Sample No.

TP73

1 of 1 Sheet Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/9/2008 Location: E0272954 N6161995 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand 0-0.1m MG MP Medium brown Organic inclusions 0.2 Silty CLAY with sand 0.2-0.3m MG, L-MP 0.3 Silty CLAY with sand MG L-MP 0.4 0.4-0.5m Light orange brown Gravel inclusions, 1-10mm, angular 0.6 8.0 Silty CLAY with sand MG 0.9-1.0m Orange brown with light brown mottles Minor gravel inclusions, 1-10mm, angular Test 1.2 1.4 1.6 1.8 1.9-2.0m 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand augur
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water pp<25kPa VL medium plasticity high plasticity very loose loose pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa Environmental MD med. dense dense firm stiff sample SPT blow with orange yellow green blue VD sample SPT blow with VS sample U50,Pocket U75 penetromete

Sample No.

TP74

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/9/2008 Location: E0273050 N6161822 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Method: Test pit Hole Depth 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand MG QC25A Medium brown Organic inclusions 0.2 Silty CLAY with sand 0.2-0.3m D MG, L-MP Dark brown 0.4 Silty CLAY with sand 0.4-0.5m MP Orange brown Limestone inclusions ~10% Gravel inclusions, 1-10mm, angular 0.6 8.0 Silty CLAY MP 0.9-1.0m Orange brown Gravel inclusions 1-10mm, angular Limestone inclusions ~5% Test 1.2 1.4 1.6 1.8 Silty CLAY with sand MG MP 1.9-2.0m Orange brown Gravel inclusions, 1-10mm, angular Limestone inclusions ~10% 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing
F foam
M mud
W water Bulk sample Disturbed samp pp<25kPa medium plasticity high plasticity very loose loose pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa S son F firm Environmental MD med. dense dense sample SPT blow with orange yellow green blue VD sample SPT blow without VS sample U50,Pocket U75 penetromete coring HQ, PQ nell Wagner Pty Ltd ABN 54 005 1 ผู้ 38 87 Level 1 Septimus Roe Square

Sample No.

TP75

Sheet 1 of 1

Client	:	Walker	Corpor	ation						Proje	ct No.		31495-001		
Proje	ct:	Bucklan	d Park							Logge	ed by:		April Freer	nan	
_ocat	ion:	E02740	06 N61	63512						Drillin	g Date:		4/9/2008		
Orill C	ompa	ıny: D	rillMax		Driller: Johnny	1				Hole	Diamet	er:	-		
Rig/C	ore:				Method: Test pi	t				Hole	Depth:		2m		
Method	Water	Depth (m)	Classification	(soil ty	Descr pe: plasticity / grain	iption of So size, colour		omponent	s)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additiona	I Comments
				Silty CLAY wi	th sand					D	S	0-0.1m			
Test pit	None encountered	0.2 - 0.3 - 0.4 0.6 1.2 1.4 1.6 1.8 1.		Silty CLAY wi FG MP Medium brown Silty CLAY wi FG, MP Medium brown Silty CLAY MP Red brown	th sand						VSt VSt	0.2-0.3m  0.4-0.5m  0.9-1.0m			
		2 -			FC	OH at 2m									
		_	]			ut £111									
		2.2 -	-												
mark	s:	·		1							<u> </u>				
AV au AT au W wa B bla H ha C cal P per	ethod diatube / auger drilling V-Bit / auger drilling TC-Bit washbore blade claw/tricone/roller hand auger cable tool percussion , NMLC diamond			e support casing foam mud water water level water inflow water loss (%)	plasticity LP low plasticity MP medium plasticity HP high plasticity grainsize F fine M medium C coarse	W white	P pale D dark M mottle	~PL appro plastic >PL greath	c limit x. at	VS von S St St St St VSt von	tency/dens ve ery soft oft rm tiff ery stiff ard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp>400kPa pp>400kPa	L loc MD me D dei	y loose	samples & tests B Bulk sample D Disturbed sample E Environmental N* sample N SPT blow with sample PP SPT blow without VS sample U50,Pocket U75 penetrometer Vane shear

Sample No.

TP76

Sheet 1 of 1

Client	:	Walker	Cor	pora	ation						Proje	ct No.		31495-00	1	
Proje	ct:	Buckla	nd P	ark							Logg	ed by:		April Free	man	
_ocat	ion:	E0273	826 1	N61	62907						Drillin	g Date	:	4/9/2008		
Orill C	ompa	ıny:	DrillN	Лах		Driller: Johnny	1				Hole	Diamet	ter:	-		
Rig/C	ore:					Method: Test pi	t				Hole	Depth:		2m		
Method	Water	Depth (m)	;	Classification	(soil ty	Descripe: plasticity / grain	iption of So size, colou		ompor	nents)	moisture condition	consist. density	Samples	PID Readings (ppm)	Additiona	Comments
					<b>Silty CLAY wit</b> MG LP	th sand					D	VSt	0-0.1m QC26A		TP located in watermelon f	
		0.2			Light brown											
		0.2	_		Silty CLAY wit MG LP Light brown	th sand					D	F	0.2-0.3m			
		0.4	┢		Silty CLAY wit	th sand					М	F	0.4-0.5m			
		0.6			FG L-MP Red brown											
		0.8														
		0.0			Silty CLAY MP Red brown						М	F	0.9-1.0m			
	pe	1 -														
pit	None encountered															
Test pit	enoc															
	Non	1.2														
		1.4														
			1													
		1.6														
		1.7	+		Silty CLAY wit	th sand					М	St				
		1.8			MG MP											
					Orange brown Limestone inclu Gravel inclusion	usions ~10% ns, 1-10mm, angular							1.9-2.0m			
		2 -	╁								+					
						EC	OH at 2m									
			1													
		2.2	-													
mark	3:	1									1		<u> </u>	1	1	
AT au W wa B bla H ha C cal	atube ger drillir ger drillir ishbore ide claw/i ind auger ble tool rcussion MLC	ng TC-Bit tricone/rolle		C c F for M n W w wate	nud vater •r	plasticity LP low plasticity MP medium plasticity HP high plasticity  grainsize F fine M medium C coarse	W white	P pale D dark M mottle	M r W v <pl li<br="">~PL a ~PL a</pl>	re dry noist wet eess than plastic limit approx. at plastic limit greather then plastic limit	VS v S s F ff St s VSt v	tency/den ve very soft coft irrm stiff rery stiff leard	pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa	L lo MD m D de	esive ery loose ose led. dense ense ery dense	samples & tests B Bulk sample D Disturbed sample E Environmental N* sample N SPT blow with sample PP SPT blow without VS sample U50, Pocket U75 penetrometer Vane shear

Sample No.

**TP77** 

1 of 1 Sheet

Client: Walker Corporation Project No. 31495-001 Project: **Buckland Park** Logged by: April Freeman Drilling Date: 4/9/2008 Location: E0274341 N6162867 Drill Company: DrillMax Driller: Hole Diameter: Rig/Core: Hole Depth: Method: Test pit 2m Ξ PID Description of Soil Water moisture condition Depth Readings Additional Comments consist. density Samples (soil type: plasticity / grainsize, colour, other components) (ppm) Silty CLAY with sand 0-0.1m MG Light brown Organic inclusions 0.2 Silty CLAY 0.2-0.3m D Dark red brown 0.4 Silty CLAY 0.4-0.5m Red brown Limestone inclusions ~10% 0.6 8.0 0.9-1.0m QC27A Test 1.2 1.4 1.6 1.7 Silty CLAY 1.8 Limestone inclusions ~10% Minor gravel inclusions 1-5mm, angular 1.9-2.0m 2 EOH at 2m 2.2 emarks method
D diatube
AV auger drilling V-Bit
AT auger drilling TC-Bit
W washbore
B blade clawtricone/roller
H hand auger
C cable tool
P percussion
NQ, NMLC diamond
HQ, PQ coring samples & tests

Bulk sample
Disturbed sample black white grey red brown moisture
D dry
M moist
W wet
<PL less than
plastic limit
-PL approx. at
plastic limit
>PL greather then
plastic limit C casing F foam M mud W water pp<25kPa 25>pp<50kPa 50>pp<100kPa 100>pp<200kPa 200>pp<400kPa pp>400kPa VLmedium plasticity high plasticity very loose loose S son F firm Environmental MD med. dense dense sample SPT blow with PP SPT blow witho
sample
PP SPT blow witho
VS sample
U50,Pocket
U75 penetrometer orange yellow green blue VD

# **Appendix C**

Laboratory Analysis Certificates - Soil

# **Appendix C**









results of tests, calibrations and/or measurements results of tests, canorations and included in this document are traceable to Australian/national standards. NATA is a signatory to Australian and a standards. NATA is a the APLAC mutual recognition arrangem mutual recognition of the equivalence calibration and inspection reports.



AUSTRALIAN QUARANTINE AND INSPECTION SERVICE

SYDNEY License No. N0356

Quarantine Approved Premises criteria 5.1 for quarantine Quarantine Approved remises criteria 5.1 for quarantine containment level 1 (QCI) facilities. Class five criteria cover premises utilised for research, analysis and testing of biological material, soil, animal, plant and human products.

#### **CUSTOMER CENTRIC - ANALYTICAL CHEMISTS**

#### FINAL CERTIFICATE OF ANALYSIS - ENVIRONMENTAL DIVISION

E035990 Cover Page 1 of 4 **Laboratory Report No:** plus Sample Results

Connell Wagner Pty Ltd (SA) **Client Name: Buckland Park Client Reference:** April Freeman

**Contact Name:** Date Received: 23/01/2008 na **Chain of Custody No: SOIL** Date Reported: 15/02/2008 Sample Matrix:

This Final Certificate of Analysis consists of sample results, DQI's, method descriptions, laboratory definitions, and internationally recognised NATA accreditation and endorsement. The DQO compliance relates specifically to QA/QC results as performed as part of the sample analysis, and may provide an indication of sample result quality. Transfer of report ownership from Labmark to the client shall only occur once full & final payment has been settled and verified. All report copies may be retracted where full payment has not occured within the agreed settlement period.

#### **QUALITY ASSURANCE CRITERIA**

1 in first 5-20, then 1 every 20 samples Accuracy: matrix spike:

> lcs, crm, method: 1 per analytical batch

addition per target organic method surrogate spike:

Precision: laboratory duplicate: 1 in first 5-10, then 1 every 10 samples

> laboratory triplicate: re-extracted & reported when duplicate

> > RPD values exceed acceptance criteria

**Holding Times:** soils, waters: Refer to LabMark Preservation & THT

table

VOC's 14 days water / soil

VAC's 7 days water or 14 days acidified

VAC's 14 days soil

SVOC's 7 days water, 14 days soil Pesticides 7 days water, 14 days soil Metals 6 months general elements

Mercury 28 days

Confirmation: target organic analysis: GC/MS, or confirmatory column

Sensitivity: EOL:

(MDL)

#### QUALITY CONTROL GLOBAL ACCEPTANCE CRITERIA (GAC)

Accuracy: spike, lcs, crm general analytes 70% - 130% recovery

surrogate: phenol analytes 50% - 130% recovery

organophosphorous pesticide analytes

60% - 130% recovery

phenoxy acid herbicides, organotin

50% - 130% recovery

anion/cation bal: +/- 10% (0-3 meq/l),

+/- 5% (>3 meq/l)

Precision: method blank: not detected >95% of the reported EQL

> duplicate lab 0-30% (>10xEQL), 0-75% (5-10xEQL)

RPD (metals): 0-100% (<5xEQL)

duplicate lab 0-50% (>10xEQL), 0-75% (5-10xEQL)

RPD: 0-100% (<5xEQL)

#### **OUALITY CONTROL** ANALYTE SPECIFIC ACCEPTANCE CRITERIA (ASAC)

Accuracy: spike, lcs, crm analyte specific recovery data

surrogate: <3xsd of historical mean

Typically 2-5 x Method Detection Limit **Uncertainty:** measurement calculated from spike, lcs:

historical analyte specific control

charts

#### RESULT ANNOTATION

Data Quality Objective matrix spike recovery s: p: pending bcs: batch specific lcs Data Quality Indicator d: laboratory duplicate laboratory control sample bmb: batch specific mb lcs:

**Estimated Quantitation Limit** t: laboratory triplicate certified reference material crm:

not applicable RPD relative % difference mb: method blank

\* SYDNEY: Unit 1, 8 Leighton Place Asquith NSW 2077

Quality Control (Report signatory) david.burns@labmark.com.au

Ivan Povolny Authorising Chemist (NATA signatory)

ivan.povolny@labmark.com.au

Authorising Chemist (NATA signatory) simon.mills@labmark.com.au

This document is issued in accordance with NATA's accreditation requirements.

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#### CUSTOMER CENTRIC - ANALYTICAL CHEMISTS



Laboratory Report: E035990

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#### **NEPC GUIDELINE COMPLIANCE - DQO**

#### GENERAL

- A. Results relate specifically to samples as received. Sample results are not corrected for matrix spike, lcs, or surrogate recovery data.
- B. EQL's are matrix dependant and may be increased due to sample dilution or matrix interference.
- C. Laboratory QA/QC samples are specific to this project.
- Inter-laboratory proficiency results are available upon request. NATA accreditation details available at www.nata.asn.au.
- E. VOC spikes & surrogates added to samples during extraction, SVOC spikes & surrogates added prior to extraction.
- F. Recovery data outside GAC limits shall be investigated and compared to ASAC (historical mean +/- 3sd). If recovery data <20%, then the relevant results for that compound are considered not reliable.
- G. Recovery data (ms, surrogate, crm, lcs) outside ASAC limits shall initiate an investigative action. Anomolous QC data is examined in conjunction with other QC samples and a final decision whether to accept or reject results is provided by the professional judgement of the senior analyst. The USEPA-CLP National Functional Guidelines are referred to for specific recommendations.
- H. Extraction (preparation) date refers to the date that sample preparation was initiated. Note that certain methods not requiring sample preparation (eg. VOCs in water, etc) may report a common extraction and analysis date.
- I. LabMark shall maintain an official copy of this Certificate of Analysis for all tracable reference purposes.

#### 2. CHAIN OF CUSTODY (COC) & SAMPLE RECEIPT NOTICE (SRN) REQUIREMENTS

- A. SRN issued to client upon sample receipt & login verification.
- B. Preservation & sampling date details specified on COC and SRN, unless noted.
- C. Sample Integrity & Validated Time of Sample Receipt (VTSR) Holding Times verified (preservation may extend holding time, refer to preservation chart).

#### 3. NATA ACCREDITED METHODS

\* SYDNEY: Unit 1, 8 Leighton Place Asquith NSW 2077

- A. NATA accreditation held for each in-house method and sample matrix type reported, unless noted below (Refer to subcontracted test reports for NATA accreditation status).
- B. NATA accredited in-house laboratory methods are referenced from NEPC, ASTM, modified USEPA / APHA documents. Corporate Accreditation No. 13542.
- C. Subcontracted analyses: Refer to Sample Receipt Notice and additional DQO comments.

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#### CUSTOMER CENTRIC - ANALYTICAL CHEMISTS



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#### 4. QA/QC FREQUENCY COMPLIANCE TABLE SPECIFIC TO THIS REPORT

Matrix:	SOIL						
Page:	Method:	Totals:	#d	%d-ratio	#t	#s	%s-ratio
1	BTEX by P&T	18	3	17%	0	2	11%
1	Volatile TPH by P&T (vTPH)	23	3	13%	0	2	9%
5	Petroleum Hydrocarbons (TPH)	22	3	14%	0	2	9%
9	Polyaromatic Hydrocarbons (PAH)	23	3	13%	0	2	9%
13	Phenols by GC/MS	4	0	0%	0	0	0%
14	Organochlorine Pesticides (OC)	24	3	13%	0	2	8%
18	Organophosphorus Pesticides (OP)	20	3	15%	0	2	10%
21	Acid extractable mercury	24	2	8%	0	1	4%
23	Volatile Aromatic Compounds (VAC)	4	0	0%	0	0	0%
25	Acid extractable metals	24	3	13%	0	2	8%
29	pH in soil	24	3	13%	0	0	0%
31	Acid extractable metals	24	3	13%	0	2	8%
33	Speciated Chromium	20	3	15%	0	2	10%
35	Fluoride	4	0	0%	0	0	0%
36	Sulphate/Sulphite	24	3	13%	0	2	8%
38	Total Cyanide	4	0	0%	0	0	0%
39	Phenoxy Acid Herbicides	22	3	14%	0	2	9%
43	Moisture	25					

#### GLOSSARY:

#d number of discrete duplicate extractions/analyses performed.

 $\label{eq:continuous} \mbox{$^{\circ}$ d-ratio} \quad \mbox{NEPC guideline for laboratory duplicates is 1 in 10 samples (min 10%).}$ 

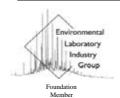
#t number of triplicate extractions/analyses performed.

#s number of spiked samples analysed.

%s-ratio USEPA guideline for laboratory matrix spikes is 1 in 20 samples (min 5%).



#### CUSTOMER CENTRIC - ANALYTICAL CHEMISTS



**Laboratory Report: E035990** 

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#### 5. ADDITIONAL COMMENTS SPECIFIC TO THIS REPORT

- A. All tests were conducted by LabMark Environmental Sydney, NATA accreditation No. 13542, Corporate Site No. 13535, unless indicated below.
- B. Metals (soil) chromium and zinc recovery for sample 138239s at 142% and 141% respectively, corresponding LCS recovery is 95% and 99% respectively.
- C. Phenoxy acid herbicides (soil) 3,4-DCPA surrogate recovery range for samples is 51% 114%, corresponding LCS recovery is 88%.
- D. Phenoxy acid herbicides (soil) dalapon recovery for matrix spike #138218s, 138239s is 23%, 22% respectively, corresponding LCS recovery is 20%.
- E. Phenoxy acid herbicides (soil) LCS recovery for fluxopyr is 45%.
- F. Refer to LabMark historical control chart recovery range data. QA/QC (phenoxy acid herbicides) results reported within 3sd of the historical analyte specific mean results, and therefore considered acceptable for laboratory release.

Laboratory QA/QC data shall relate specifically to this report, and may provide an indication of site specific sample result quality. LabMark <u>DOES NOT</u> report <u>NON-RELEVANT BATCH QA/QC</u> data. Acceptance of this self assessment certificate does not preclude any requirement for a QA/QC review by a accredited contaminated site EPA auditor, when and wherever necessary. Laboratory QA/QC self assessment references available upon request.

\* SYDNEY: Unit 1, 8 Leighton Place Asquith NSW 2077

## HISTORICAL CONTROL CHART DATA - QA/QC

Sydney

## Analyte mean and standard deviation

PHOXY\_S

For the period: 01/01/2007 12:00:00 AM to 31/12/2007 11:59:59 PM

#### **SPIKES**

Analyte Name	<u>n</u>	<u>Mean</u>	1 SD	Range	_	2 SD	Range	-	3 SD	Range
2,4,5-T	4	72	9	63 to 81		18	54 to 90		27	45 to 99
2,4,5-TP (Silvex)	4	81	14	67 to 95		28	53 to 109		42	39 to 123
2,4-D	4	75	3	72 to 78		6	69 to 81		9	66 to 84
2,4-DB	4	93	10	83 to 103		20	73 to 113		30	63 to 123
3,4-DCPA (Surr @ 0.4 mg/kg)	4	<b>79</b>	5	74 to 84		10	69 to 89		15	64 to 94
Clopyralid	4	82	15	67 to 97		30	52 to 112		45	37 to 127
Dalapon	4	33	8	25 to 41		16	17 to 49		24	9 to 57
Dicamba	4	87	17	70 to 104		34	53 to 121		51	36 to 138
Dichlorprop	4	84	19	65 to 103		38	46 to 122		57	27 to 141
Fluxopyr	3	76	6	70 to 82		12	64 to 88		18	58 to 94
MCPA	4	<b>79</b>	10	69 to 89		20	59 to 99		30	49 to 109
MCPB	4	89	10	79 to 99		20	69 to 109		30	59 to 119
MCPP	4	85	9	76 to 94		18	67 to 103		27	58 to 112
o-Chlorophenoxy acid	4	91	15	76 to 106		30	61 to 121		45	46 to 136
p-Chlorophenoxy acid	4	77	10	67 to 87		20	57 to 97		30	47 to 107
Triclopyr	4	80	14	66 to 94		28	52 to 108		42	38 to 122
LCS_S										
Analyte Name	<u>n</u>	<u>Mean</u>	1 SD	Range	_	2 SD	Range	-	3 SD	Range
2,4,5-T	31	86	11	75 to 97		22	64 to 108		33	53 to 119
2,4,5-TP (Silvex)	31	91	12	79 to 103		24	67 to 115		36	55 to 127
2,4-D	31	86	11	75 to 97		22	64 to 108		33	53 to 119
2,4-DB	31	89	12	77 to 101		24	65 to 113		36	53 to 125
3,4-DCPA (Surr @ 0.4 mg/kg)	31	88	9	79 to 97		18	70 to 106		27	61 to 115
Clopyralid	31	75	15	60 to 90		30	45 to 105		45	30 to 120
Dalapon	29	33	14	19 to 47		28	5 to 61		42	0 to 75
Dicamba	31	88	13	75 to 101		26	62 to 114		39	49 to 127
Dichlorprop	31	90	11	79 to 101		22	68 to 112		33	57 to 123
Fluxopyr	31	73	12	61 to 85		24	49 to 97		36	37 to 109
MCPA	31	86	11	75 to 97		22	64 to 108		33	53 to 119
MCPB	31	88	12	76 to 100		24	64 to 112		36	52 to 124
MCPP	31	86	10	76 to 96		20	66 to 106		30	56 to 116
o-Chlorophenoxy acid	31	82	11	71 to 93		22	60 to 104		33	49 to 115
p-Chlorophenoxy acid	31	80	12	68 to 92		24	56 to 104		36	44 to 116
Triclopyr	31	88	12	76 to 100		24	64 to 112		36	52 to 124



Connell Wagner Pty Ltd (SA)

Contact Name: April Freeman

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**Date:** 15/02/08

of Analysis

Client Reference: Buckland Park 31495 This report supercedes reports issued on: 05/02/08

Laboratory Identification		138208	138212	138218	138222	138225	138231	138234	138239	138245	138248
Sample Identification		TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8	TP9	TP10
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	21/1/08	21/1/08	21/1/08
mple Identification  cpth (m) mpling Date recorded on COC boratory Extraction (Preparation) Date boratory Analysis Date  ethod: E002.2  FEX by P&T cnzene cluene chylbenzene eta- and para-Xylene cho-Xylene ctal Xylene oFB (Surr @ 10mg/kg)  ethod: E003.2		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date		3/2/08	3/2/08	3/2/08	3/2/08	1/2/08	3/2/08	3/2/08	3/2/08	3/2/08	1/2/08
Method: E002.2 BTEX by P&T	EQL										
Benzene	0.2	< 0.2	< 0.2	< 0.2	< 0.2		< 0.2	< 0.2	< 0.2	< 0.2	
Toluene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	
Ethylbenzene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	
meta- and para-Xylene	1	<1	<1	<1	<1		<1	<1	<1	<1	
ortho-Xylene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	
Total Xylene											
CDFB (Surr @ 10mg/kg)		111%	114%	119%	118%		119%	118%	118%	116%	
Method: E003.2 Volatile TPH by P&T (vTPH) C6 - C9 Fraction	<b>EQL</b> 10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E003.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/FID.

E002.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/PID/MSD.



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**Contact Name:** April Freeman

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Final

Client Reference: Buckland Park 31495 This report supercedes reports issued on: 05/02/08

Laboratory Identification		138251	138255	138259	138263	138267	138270	138275	138278	138282	138286
Sample Identification		TP11	TP12	TP13	TP14	TP15	TP16	TP17	TP18	TP19	TP20
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date	_	3/2/08	3/2/08	3/2/08	3/2/08	1/2/08	3/2/08	3/2/08	3/2/08	3/2/08	1/2/08
Method: E002.2 BTEX by P&T	EQL										
Benzene	0.2	< 0.2	< 0.2	< 0.2	< 0.2		< 0.2	< 0.2	< 0.2	< 0.2	
Toluene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	
Ethylbenzene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	
meta- and para-Xylene	1	<1	<1	<1	<1		<1	<1	<1	<1	
ortho-Xylene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	
Total Xylene											
CDFB (Surr @ 10mg/kg)		123%	119%	118%	119%		117%	117%	114%	117%	
Method: E003.2 Volatile TPH by P&T (vTPH) C6 - C9 Fraction	<b>EQL</b> 10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E003.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/FID.

E002.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/PID/MSD.



Client Name: Connell Wagner Pty Ltd (SA)

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Laboratory Identification		138291	138295	138208d	138208r	138231d	138231r	138245d	138245r	138218s	138239s
Sample Identification		TP21	TP22	QC	QC	QC	QC	QC	QC	QC	QC
Depth (m)		0.05-0.15	0.4-0.5								
Sampling Date recorded on COC		21/1/08	21/1/08								
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08		30/1/08		30/1/08		30/1/08	30/1/08
Laboratory Analysis Date		3/2/08	3/2/08	3/2/08		3/2/08		3/2/08		3/2/08	3/2/08
Method: E002.2 BTEX by P&T Benzene Toluene Ethylbenzene meta- and para-Xylene ortho-Xylene Total Xylene CDFB (Surr @ 10mg/kg)	EQL 0.2 0.5 0.5 1 0.5 	<0.2 <0.5 <0.5 <1 <0.5  120%	<0.2 <0.5 <0.5 <1 <0.5  110%	<0.2 <0.5 <0.5 <1 <0.5  115%	     4%	<0.2 <0.5 <0.5 <1 <0.5  117%	     2%	<0.2 <0.5 <0.5 <1 <0.5  117%	     1%	94% 100% 98% 93% 106%  120%	95% 100% 98% 93% 107%  119%
Method: E003.2 Volatile TPH by P&T (vTPH) C6 - C9 Fraction	<b>EQL</b> 10	<10	<10	<10		<10		<10		96%	94%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E003.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/FID.

E002.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/PID/MSD.



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Client Reference: Buckland Park 31495

Laboratory Identification		lcs	mb						
Sample Identification		QC	QC						
Depth (m)									
Sampling Date recorded on COC									
ample Identification  epth (m) ampling Date recorded on COC aboratory Extraction (Preparation) Date aboratory Analysis Date  Iethod: E002.2 TEX by P&T enzene oluene thylbenzene etta- and para-Xylene rtho-Xylene		30/1/08	30/1/08						
Laboratory Analysis Date	=	30/1/08	30/1/08						
Method: E002.2									
BTEX by P&T	EQL								
Benzene	0.2	102%	< 0.2						
Toluene	0.5	107%	< 0.5						
Ethylbenzene	0.5	104%	< 0.5						
meta- and para-Xylene	1	110%	<1						
ortho-Xylene	0.5	111%	< 0.5						
Total Xylene									
CDFB (Surr @ 10mg/kg)		99%	89%						
				I		ĺ	ĺ		I

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

Method: E003.2

C6 - C9 Fraction

Volatile TPH by P&T (vTPH)

E003.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/FID.

E002.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/PID/MSD.

**EQL** 

10

104%

<10



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<b>Laboratory Identification</b>		138208	138212	138218	138222	138225	138231	138234	138239	138245	138248
Sample Identification		TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8	TP9	TP10
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
ampling Date recorded on COC		18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	21/1/08	21/1/08	21/1/08
aboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date		1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08
Method: E006.2 Petroleum Hydrocarbons (TPH) C10 - C14 Fraction C15 - C28 Fraction C29 - C36 Fraction Sum of TPH C10 - C36	EQL 50 100 100	<50 <100 <100	<50 <100 <100 	<50 <100 <100 	<50 <100 <100 	<50 <100 <100 	<50 <100 <100	<50 <100 <100	<50 <100 <100	<50 <100 110 110	<50 <100 <100 

Results expressed in mg/kg dry weight unless otherwise specified

Comments:



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April Freeman

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<b>Laboratory Identification</b>		138251	138255	138259	138263	138267	138270	138275	138278	138282	138286
Sample Identification		TP11	TP12	TP13	TP14	TP15	TP16	TP17	TP18	TP19	TP20
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
mpling Date recorded on COC		21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08
aboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date		1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08
Method: E006.2 Petroleum Hydrocarbons (TPH) C10 - C14 Fraction C15 - C28 Fraction C29 - C36 Fraction Sum of TPH C10 - C36	EQL 50 100 100	<50 <100 140 140	<50 <100 <100 	<50 <100 <100 	<50 <100 <100 	<50 <100 <100 	<50 <100 <100	<50 <100 <100	<50 <100 <100	<50 <100 <100 	<50 <100 <100

Results expressed in mg/kg dry weight unless otherwise specified

Comments:



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<b>Laboratory Identification</b>		138291	138295	138208d	138208r	138231d	138231r	138245d	138245r	138218s	138239s
Sample Identification		TP21	TP22	QC	QC	QC	QC	QC	QC	QC	QC
Depth (m)		0.05-0.15	0.4-0.5								
Sampling Date recorded on COC		21/1/08	21/1/08								
boratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08		30/1/08		30/1/08		30/1/08	30/1/08
boratory Extraction (Preparation) Date boratory Analysis Date		1/2/08	1/2/08	1/2/08		1/2/08		1/2/08		1/2/08	1/2/08
Method: E006.2 Petroleum Hydrocarbons (TPH) C10 - C14 Fraction C15 - C28 Fraction C29 - C36 Fraction Sum of TPH C10 - C36	EQL 50 100 100	<50 <100 <100 	<50 <100 <100 	<50 <100 <100 	  	<50 <100 <100 	  	<50 <100 <100 	  	 77%  	 82%  

Results expressed in mg/kg dry weight unless otherwise specified

Comments:



Connell Wagner Pty Ltd (SA) **Client Name:** 

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<b>Laboratory Identification</b>		lcs	mb				
Sample Identification		QC	QC				
ample Identification  Pepth (m)  ampling Date recorded on COC  aboratory Extraction (Preparation) Date  aboratory Analysis Date  Iethod: E006.2  etroleum Hydrocarbons (TPH)  10 - C14 Fraction  15 - C28 Fraction  29 - C36 Fraction							
Laboratory Extraction (Preparation) Date  Laboratory Analysis Date		30/1/08 31/1/08	30/1/08 31/1/08				
Method: E006.2 Petroleum Hydrocarbons (TPH) C10 - C14 Fraction C15 - C28 Fraction C29 - C36 Fraction Sum of TPH C10 - C36	EQL 50 100 100	 78%  	<50 <100 <100 				

Results expressed in mg/kg dry weight unless otherwise specified

Comments:



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Client Reference: Buckland Park 31495 This report supercedes reports issued on: 05/02/08

Laboratory Identification		138208	138212	138218	138222	138225	138231	138234	138239	138245	138248
Sample Identification		TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8	TP9	TP10
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	21/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date		31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	1/2/08	1/2/08	31/1/08
Method: E007.2 Polyaromatic Hydrocarbons (PAH) Naphthalene Acenaphthylene Acenaphthene Fluorene	EQL 0.5 0.5 0.5 0.5	<0.5 <0.5 <0.5 <0.5									
Phenanthrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b)&(k)fluoranthene	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a) pyrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-c,d)pyrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Sum of reported PAHs											
2-FBP (Surr @ 5mg/kg)		99%	85%	104%	107%	103%	99%	96%	89%	110%	85%
TP-d14 (Surr @ 5mg/kg)		110%	90%	101%	112%	104%	107%	103%	93%	104%	84%

Results expressed in mg/kg dry weight unless otherwise specified

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April Freeman **Date:** 15/02/08 **Contact Name:** 

Buckland Park 31495 **Client Reference:** This report supercedes reports issued on: 05/02/08

Laboratory Identification		138251	138255	138259	138263	138266	138267	138270	138275	138278	138282
Sample Identification		TP11	TP12	TP13	TP14	TP14	TP15	TP16	TP17	TP18	TP19
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	1.9-2.0	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date		1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	31/1/08	1/2/08	1/2/08	1/2/08	1/2/08
Method: E007.2 Polyaromatic Hydrocarbons (PAH) Naphthalene	EQL 0.5 0.5	<0.5 <0.5									
Acenaphthylene Acenaphthene	0.5	<0.5 <0.5	<0.5	<0.5	<0.5	<0.5 <0.5	<0.5	<0.5 <0.5	<0.5	<0.5 <0.5	<0.5 <0.5
Fluorene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	< 0.5
Phenanthrene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	< 0.5	<0.5	<0.5
Anthracene	0.5	<0.5	<0.5	<0.5	<0.5	< 0.5	<0.5	< 0.5	<0.5	< 0.5	<0.5
Fluoranthene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.5	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b)&(k)fluoranthene	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a) pyrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-c,d)pyrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Sum of reported PAHs											
2-FBP (Surr @ 5mg/kg)		91%	110%	97%	112%	99%	110%	73%	102%	91%	96%
TP-d14 (Surr @ 5mg/kg)		94%	111%	100%	106%	103%	112%	78%	107%	99%	103%

Results expressed in mg/kg dry weight unless otherwise specified

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April Freeman **Date:** 15/02/08 **Contact Name:** 

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Laboratory Identification		138286	138291	138295	138208d	138208r	138231d	138231r	138245d	138245r	138218s
Sample Identification		TP20	TP21	TP22	QC						
Depth (m)		0.05-0.15	0.05-0.15	0.4-0.5							
Sampling Date recorded on COC		21/1/08	21/1/08	21/1/08							
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08		30/1/08		30/1/08		30/1/08
Laboratory Analysis Date		31/1/08	1/2/08	1/2/08	31/1/08		31/1/08		1/2/08		31/1/08
Method: E007.2 Polyaromatic Hydrocarbons (PAH) Naphthalene	<b>EQL</b> 0.5	<0.5	<0.5	<0.5	<0.5		<0.5		<0.5	-	98%
Acenaphthylene	0.5	<0.5	<0.5	<0.5	< 0.5		< 0.5		< 0.5		89%
Acenaphthene	0.5	< 0.5	< 0.5	< 0.5	<0.5		< 0.5		< 0.5		90%
Fluorene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		< 0.5		91%
Phenanthrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		< 0.5		94%
Anthracene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		< 0.5		95%
Fluoranthene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		< 0.5		97%
Pyrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		< 0.5		95%
Benz(a)anthracene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		< 0.5		94%
Chrysene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		< 0.5		94%
Benzo(b)&(k)fluoranthene	1	<1	<1	<1	<1		<1		<1		97%
Benzo(a) pyrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		< 0.5		93%
Indeno(1,2,3-c,d)pyrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		< 0.5		92%
Dibenz(a,h)anthracene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		< 0.5		94%
Benzo(g,h,i)perylene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		< 0.5		95%
Sum of reported PAHs											
2-FBP (Surr @ 5mg/kg)		114%	86%	97%	89%	11%	90%	10%	110%	0%	89%
TP-d14 (Surr @ 5mg/kg)		118%	92%	103%	94%	16%	89%	18%	109%	5%	92%

Results expressed in mg/kg dry weight unless otherwise specified

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April Freeman

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Laboratory Identification		138239s	lcs	mb				
Sample Identification		QC	QC	QC				
Depth (m)								
Sampling Date recorded on COC								
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08				
Laboratory Analysis Date		1/2/08	31/1/08	30/1/08				
Method: E007.2 Polyaromatic Hydrocarbons (PAH) Naphthalene	<b>EQL</b> 0.5	96%	94%	<0.5				
Acenaphthylene	0.5	90%	89%	<0.5				
Acenaphthene	0.5	90%	91%	<0.5				
Fluorene	0.5	91%	96%	<0.5				
Phenanthrene	0.5	90%	95%	< 0.5				
Anthracene	0.5	92%	95%	< 0.5				
Fluoranthene	0.5	92%	97%	< 0.5				
Pyrene	0.5	95%	94%	< 0.5				
Benz(a)anthracene	0.5	91%	95%	< 0.5				
Chrysene	0.5	100%	93%	< 0.5				
Benzo(b)&(k)fluoranthene	1	91%	92%	<1				
Benzo(a) pyrene	0.5	90%	90%	< 0.5				
Indeno(1,2,3-c,d)pyrene	0.5	90%	86%	< 0.5				
Dibenz(a,h)anthracene	0.5	90%	86%	< 0.5				
Benzo(g,h,i)perylene	0.5	92%	90%	< 0.5				
Sum of reported PAHs								
2-FBP (Surr @ 5mg/kg)		91%	106%	100%				
TP-d14 (Surr @ 5mg/kg)		93%	113%	112%				

Results expressed in mg/kg dry weight unless otherwise specified

Comments:



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Laboratory Identification		138225	138248	138267	138286	lcs	mb		
Sample Identification		TP5	TP10	TP15	TP20	QC	QC		
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15				
Sampling Date recorded on COC		18/1/08	21/1/08	21/1/08	21/1/08				
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08		
Laboratory Analysis Date	_	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	30/1/08		
Method: E008.2									
Phenols by GC/MS	EQL								
Phenol	0.5	< 0.5	< 0.5	< 0.5	< 0.5	104%	< 0.5		
2-chlorophenol	0.5	< 0.5	< 0.5	< 0.5	< 0.5	101%	< 0.5		
2-methylphenol	0.5	< 0.5	< 0.5	< 0.5	< 0.5	98%	< 0.5		
3-&4-methylphenol	1.0	<1.0	<1.0	<1.0	<1.0	101%	<1.0		
2-nitrophenol	0.5	< 0.5	< 0.5	< 0.5	< 0.5	94%	< 0.5		
2,4-dimethylphenol	0.5	< 0.5	< 0.5	< 0.5	< 0.5	101%	< 0.5		
2,4-dichlorophenol	0.5	< 0.5	< 0.5	< 0.5	< 0.5	100%	< 0.5		
4-chloro-3-methylphenol	0.5	< 0.5	< 0.5	< 0.5	< 0.5	96%	< 0.5		
2,4,6-trichlorophenol	0.5	< 0.5	< 0.5	< 0.5	< 0.5	92%	< 0.5		
2,4,5-trichlorophenol	0.5	< 0.5	< 0.5	< 0.5	< 0.5	105%	< 0.5		
Pentachlorophenol	1	<1	<1	<1	<1	79%	<1		
Sum of reported phenols									
2-FP (Surr @ 5mg/kg)		100%	77%	111%	117%	100%	100%		
Phenol-d5 (Surr @ 5mg/kg)		58%	73%	85%	83%	100%	100%		
2,4,6-TBP (Surr @ 5mg/kg)		75%	64%	90%	94%	94%	74%		

Results expressed in mg/kg dry weight unless otherwise specified

Comments:



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Client Reference: Buckland Park 31495 This report supercedes reports issued on: 05/02/08

Laboratory Identification		138208	138212	138213	138218	138222	138225	138231	138234	138239	138245
Sample Identification		TP1	TP2	QC1	TP3	TP4	TP5	TP6	TP7	TP8	TP9
Depth (m)		0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date		2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08
Method: E013.2 Organochlorine Pesticides (OC) a-BHC	EQL 0.05	<0.05	<0.05	<0.05	<0.05	<0.05 <0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene b-BHC	0.05 0.05	<0.05 <0.05	<0.05 <0.05	<0.05 <0.05	<0.05 <0.05	<0.05	<0.05 <0.05	<0.05 <0.05	<0.05 <0.05	<0.05 <0.05	<0.05 <0.05
g-BHC (Lindane) d-BHC	0.05 0.05 0.05	<0.05 <0.05 <0.05									
Heptachlor	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
trans-chlordane	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
cis-chlordane	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4,4-DDE	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4,4-DDD	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4,4-DDT	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Methoxychlor  DBC (Surr @ 0.2mg/kg)	0.2	<0.2 107%	<0.2 92%	<0.2 108%	<0.2 104%	<0.2 107%	<0.2 103%	<0.2 103%	<0.2 99%	<0.2 92%	<0.2 109%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:



**Client Reference:** 

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Laboratory Identification		138248	138251	138255	138259	138263	138267	138270	138271	138275	138278
Sample Identification		TP10	TP11	TP12	TP13	TP14	TP15	TP16	QC9	TP17	TP18
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15
Sampling Date recorded on COC		21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date		2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08
Method: E013.2											
Organochlorine Pesticides (OC)	EQL										
a-BHC	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
trans-chlordane	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
cis-chlordane	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4,4-DDE	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4,4-DDD	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4,4-DDT	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Methoxychlor	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
DBC (Surr @ 0.2mg/kg)		86%	95%	106%	97%	101%	112%	77%	91%	112%	107%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:



**Client Reference:** 

Connell Wagner Pty Ltd (SA)

Buckland Park 31495

**Contact Name:** April Freeman

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**Date:** 15/02/08

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This report supercedes reports issued on: 05/02/08

Laboratory Identification		138282	138286	138291	138295	138208d	138208r	138231d	138231r	138245d	138245r
Sample Identification		TP19	TP20	TP21	TP22	QC	QC	QC	QC	QC	QC
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.4-0.5						
Sampling Date recorded on COC		21/1/08	21/1/08	21/1/08	21/1/08						
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08		30/1/08		30/1/08	
Laboratory Analysis Date		2/2/08	2/2/08	2/2/08	2/2/08	2/2/08		2/2/08		2/2/08	
Method: E013.2 Organochlorine Pesticides (OC) a-BHC	<b>EQL</b> 0.05	<0.05	<0.05	<0.05	< 0.05	< 0.05		< 0.05		< 0.05	
Hexachlorobenzene	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05	
b-BHC	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05	
g-BHC (Lindane)	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05	
d-BHC	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05	
Heptachlor	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05	
Aldrin	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05	
Heptachlor epoxide	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05	
trans-chlordane	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05	
Endosulfan I	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05	
cis-chlordane	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05	
Dieldrin	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05	
4,4-DDE	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05	
Endrin	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05	
Endosulfan II	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05	
4,4-DDD	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05	
Endosulfan sulphate	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05	
4,4-DDT	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2		< 0.2		< 0.2	
Methoxychlor	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2		< 0.2		< 0.2	
DBC (Surr @ 0.2mg/kg)		100%	118%	96%	103%	96%	11%	92%	11%	113%	4%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:



**Client Reference:** 

Connell Wagner Pty Ltd (SA) **Client Name:** 

April Freeman **Contact Name:** 

Buckland Park 31495

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This report supercedes reports issued on: 05/02/08

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**Date:** 15/02/08

Laboratory Identification		138218s	138239s	lcs	mb			
Sample Identification		QC	QC	QC	QC			
Depth (m)								
Sampling Date recorded on COC								
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08			
Laboratory Analysis Date		2/2/08	2/2/08	31/1/08	31/1/08			
Method: E013.2 Organochlorine Pesticides (OC) a-BHC	<b>EQL</b> 0.05	96%	94%	97%	< 0.05			
Hexachlorobenzene	0.05	98%	96%	100%	< 0.05			
b-BHC	0.05	108%	105%	101%	< 0.05			
g-BHC (Lindane)	0.05	103%	101%	101%	< 0.05			
d-BHC	0.05	108%	105%	99%	< 0.05			
Heptachlor	0.05	107%	105%	99%	< 0.05			
Aldrin	0.05	105%	103%	97%	< 0.05			
Heptachlor epoxide	0.05	107%	104%	95%	< 0.05			
trans-chlordane	0.05	108%	105%	98%	< 0.05			
Endosulfan I	0.05	103%	100%	99%	< 0.05			
cis-chlordane	0.05	102%	100%	99%	< 0.05			
Dieldrin	0.05	110%	107%	101%	< 0.05			
4,4-DDE	0.05	115%	113%	104%	< 0.05			
Endrin	0.05	110%	107%	106%	< 0.05			
Endosulfan II	0.05	108%	105%	100%	< 0.05			
4,4-DDD	0.05	113%	109%	103%	< 0.05			
Endosulfan sulphate	0.05	112%	110%	100%	< 0.05			
4,4-DDT	0.2	112%	115%	99%	< 0.2			
Methoxychlor	0.2	114%	111%	106%	< 0.2			
DBC (Surr @ 0.2mg/kg)		101%	108%	105%	117%			

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E013.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/dual ECD.



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April Freeman **Date:** 15/02/08 **Contact Name:** 

Buckland Park 31495 **Client Reference:** This report supercedes reports issued on: 05/02/08

Laboratory Identification		138208	138212	138213	138218	138222	138231	138234	138239	138245	138251
Sample Identification		TP1	TP2	QC1	TP3	TP4	TP6	TP7	TP8	TP9	TP11
Depth (m)		0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	21/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date		31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	1/2/08
Method: E014.2 Organophosphorus Pesticides (OP) Dichlorvos	<b>EQL</b> 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mevinphos (Phosdrin) Demeton (total)	0.5	<0.5 <1	<0.5	<0.5 <1	<0.5 <1	<0.5	<0.5 <1	<0.5	<0.5 <1	<0.5	<0.5 <1
Ethoprop	0.5	<0.5	<1 <0.5	<0.5	<0.5	<1 <0.5	<0.5	<1 <0.5	<0.5	<1 <0.5	<0.5
Monocrotophos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Phorate	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dimethoate	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Diazinon	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Disulfoton	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Methyl parathion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ronnel	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fenitrothion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Malathion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorpyrifos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fenthion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Parathion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Stirofos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Prothiofos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Azinophos methyl	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Coumaphos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
TPP (Surr @ 2mg/kg)		111%	102%	117%	110%	108%	111%	109%	96%	121%	97%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E014.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/MSD.



Connell Wagner Pty Ltd (SA)

April Freeman **Date:** 15/02/08

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of Analysis

Buckland Park 31495 **Client Reference:** This report supercedes reports issued on: 05/02/08

Laboratory Identification		138255	138259	138263	138270	138271	138275	138278	138282	138291	138295
Sample Identification		TP12	TP13	TP14	TP16	QC9	TP17	TP18	TP19	TP21	TP22
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.4-0.5
Sampling Date recorded on COC		21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date		1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08
Method: E014.2 Organophosphorus Pesticides (OP) Dichlorvos	<b>EQL</b> 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mevinphos (Phosdrin)	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Demeton (total)	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethoprop	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Monocrotophos	0.5	< 0.5	<0.5	< 0.5	< 0.5	< 0.5	<0.5	< 0.5	< 0.5	< 0.5	< 0.5
Phorate	0.5	< 0.5	<0.5	< 0.5	< 0.5	< 0.5	<0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dimethoate	0.5	< 0.5	<0.5	< 0.5	< 0.5	< 0.5	<0.5	< 0.5	< 0.5	< 0.5	< 0.5
Diazinon	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.5	< 0.5	< 0.5	< 0.5	< 0.5
Disulfoton	0.5 0.5	<0.5 <0.5	<0.5	<0.5 <0.5	< 0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
Methyl parathion Ronnel	0.5	<0.5 <0.5	<0.5 <0.5	<0.5	<0.5 <0.5	<0.5 <0.5	<0.5	<0.5 <0.5	<0.5	<0.5 <0.5	<0.5 <0.5
Fenitrothion	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Malathion	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	< 0.5	<0.5	<0.5	< 0.5
Chlorpyrifos	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenthion	0.5	<0.5	<0.5	<0.5	<0.5	< 0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Parathion	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Stirofos	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	< 0.5	<0.5	< 0.5
Prothiofos	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	< 0.5	< 0.5	<0.5	< 0.5
Azinophos methyl	0.5	<0.5	<0.5	< 0.5	<0.5	< 0.5	<0.5	< 0.5	< 0.5	<0.5	< 0.5
Coumaphos	0.5	< 0.5	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
TPP (Surr @ 2mg/kg)		106%	104%	111%	85%	99%	117%	113%	105%	98%	108%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E014.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/MSD.



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of Analysis

April Freeman **Date:** 15/02/08 **Contact Name:** 

Buckland Park 31495 **Client Reference:** This report supercedes reports issued on: 05/02/08

Laboratory Identification		138208d	138208r	138231d	138231r	138245d	138245r	138218s	138239s	lcs	mb
Sample Identification		QC									
Depth (m)											
Sampling Date recorded on COC											
Laboratory Extraction (Preparation) Date		30/1/08		30/1/08		30/1/08		30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date	_	31/1/08		31/1/08		31/1/08		31/1/08	31/1/08	31/1/08	31/1/08
Method: E014.2 Organophosphorus Pesticides (OP) Dichlorvos	<b>EQL</b> 0.5	<0.5		<0.5		<0.5		128%	128%	120%	<0.5
Mevinphos (Phosdrin)	0.5	< 0.5		< 0.5		< 0.5		90%	89%	96%	< 0.5
Demeton (total)	1	<1		<1		<1		122%	123%	125%	<1
Ethoprop	0.5	< 0.5		< 0.5		< 0.5		128%	129%	122%	< 0.5
Monocrotophos	0.5	< 0.5		< 0.5		< 0.5		71%	74%	129%	< 0.5
Phorate	0.5	< 0.5		< 0.5		< 0.5		123%	128%	121%	< 0.5
Dimethoate	0.5	< 0.5		< 0.5		< 0.5		108%	107%	116%	< 0.5
Diazinon	0.5	< 0.5		< 0.5		< 0.5		112%	109%	111%	< 0.5
Disulfoton	0.5	< 0.5		< 0.5		< 0.5		122%	122%	116%	< 0.5
Methyl parathion	0.5	< 0.5		< 0.5		< 0.5		117%	116%	118%	< 0.5
Ronnel	0.5	< 0.5		< 0.5		< 0.5		111%	108%	116%	< 0.5
Fenitrothion	0.5	< 0.5		< 0.5		< 0.5		117%	119%	115%	< 0.5
Malathion	0.5	< 0.5		< 0.5		< 0.5		122%	125%	123%	< 0.5
Chlorpyrifos	0.5	< 0.5		< 0.5		< 0.5		117%	111%	110%	< 0.5
Fenthion	0.5	< 0.5		< 0.5		< 0.5		129%	125%	129%	< 0.5
Parathion	0.5	< 0.5		< 0.5		< 0.5		130%	130%	126%	< 0.5
Stirofos	0.5	< 0.5		< 0.5		< 0.5		104%	95%	112%	< 0.5
Prothiofos	0.5	< 0.5		< 0.5		< 0.5		118%	115%	122%	< 0.5
Azinophos methyl	0.5	< 0.5		< 0.5		< 0.5		114%	104%	116%	< 0.5
Coumaphos	0.5	< 0.5		< 0.5		< 0.5		119%	118%	121%	< 0.5
TPP (Surr @ 2mg/kg)		99%	11%	99%	11%	115%	5%	112%	102%	104%	102%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E014.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/MSD.



Connell Wagner Pty Ltd (SA)

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**Contact Name:** 

**Client Name:** 

April Freeman

**Date:** 15/02/08

of Analysis

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**Client Reference:** 

Buckland Park 31495

This report supercedes reports issued on: 05/02/08

Laboratory Identification		138208	138212	138213	138218	138222	138225	138231	138234	138239	138245
Sample Identification		TP1	TP2	QC1	TP3	TP4	TP5	TP6	TP7	TP8	TP9
Depth (m)		0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date	=	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	31/1/08
Method: E026.2 Acid extractable mercury Mercury	<b>EQL</b> 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E026.2: 0.5g digested with nitric/hydrochloric acid. Analysis by CV-ICP-MS or FIMS.

Laboratory Identification		138248	138251	138255	138259	138263	138267	138270	138271	138275	138278
Sample Identification		TP10	TP11	TP12	TP13	TP14	TP15	TP16	QC9	TP17	TP18
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15
Sampling Date recorded on COC		21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date		31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08
Method: E026.2 Acid extractable mercury Mercury	<b>EQL</b> 0.05	0.06	0.05	<0.05	0.06	<0.05	0.07	<0.05	<0.05	<0.05	0.07

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E026.2: 0.5g digested with nitric/hydrochloric acid. Analysis by CV-ICP-MS or FIMS.



Connell Wagner Pty Ltd (SA)

Contact Name: April Freeman

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**Date:** 15/02/08

of Analysis

**Client Reference:** 

Buckland Park 31495

This report supercedes reports issued on: 05/02/08

<b>Laboratory Identification</b>		138282	138286	138291	138295	138208d	138208r	138245d	138245r	138218s	crm
Sample Identification		TP19	TP20	TP21	TP22	QC	QC	QC	QC	QC	QC
Depth (m) Sampling Date recorded on COC		0.05-0.15 21/1/08	0.05-0.15 21/1/08	0.05-0.15 21/1/08	0.4-0.5 21/1/08	 		 			 
Laboratory Extraction (Preparation) Date Laboratory Analysis Date		30/1/08 31/1/08	30/1/08 31/1/08	30/1/08 31/1/08	30/1/08 31/1/08	30/1/08 1/2/08		30/1/08 31/1/08		30/1/08 1/2/08	30/1/08 30/1/08
Method: E026.2 Acid extractable mercury Mercury	<b>EQL</b> 0.05	0.05	<0.05	0.05	<0.05	<0.05		0.09	29%	88%	87%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E026.2: 0.5g digested with nitric/hydrochloric acid. Analysis by CV-ICP-MS or FIMS.

<b>Laboratory Identification</b>		lcs	mb				
Sample Identification		QC	QC				
Depth (m)							
Sampling Date recorded on COC							
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08				
Laboratory Analysis Date		30/1/08	30/1/08				
Method: E026.2 Acid extractable mercury Mercury	<b>EQL</b> 0.05	86%	<0.05				

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E026.2: 0.5g digested with nitric/hydrochloric acid. Analysis by CV-ICP-MS or FIMS.



Connell Wagner Pty Ltd (SA) **Client Name:** 

April Freeman **Contact Name:** 

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Buckland Park 31495 This report supercedes reports issued on: 05/02/08 **Client Reference:** 

Sample Identification  Depth (m) Sampling Date recorded on COC  Laboratory Extraction (Preparation) Date	TP5 0.05-0.15 18/1/08 30/1/08 1/2/08	TP10 0.05-0.15 21/1/08 30/1/08	TP15 0.05-0.15 21/1/08	TP20 0.05-0.15	QC	QC		
Sampling Date recorded on COC	18/1/08 30/1/08	21/1/08 30/1/08	21/1/08					
Sampling Date recorded on COC	18/1/08 30/1/08	21/1/08 30/1/08	21/1/08					
1 0	30/1/08	30/1/08	<b>.</b>	21/1/08				
Education (Treparation) Bute			30/1/08	30/1/08	30/1/08	30/1/08		
Laboratory Analysis Date	1/2/00	1/2/08	1/2/08	1/2/08	30/1/08	30/1/08		
Method: E009.2		1/2/00	1, 2, 00	1, 2, 00	20/1/00	20/1/00		
Volatile Aromatic Compounds (VAC)   E(	т							
Benzene 0.		< 0.5	< 0.5	< 0.5	108%	< 0.5		
Toluene 0.		< 0.5	< 0.5	<0.5	105%	< 0.5		
Chlorobenzene 0.		< 0.5	< 0.5	< 0.5	109%	< 0.5		
Ethylbenzene 0.		< 0.5	< 0.5	< 0.5	108%	< 0.5		
m- & p-xylene	<1	<1	<1	<1	110%	<1		
Styrene 0.	5 <0.5	< 0.5	< 0.5	< 0.5	110%	< 0.5		
o-xylene 0.	5 <0.5	< 0.5	< 0.5	< 0.5	109%	< 0.5		
Isopropylbenzene 0.	5 <0.5	< 0.5	< 0.5	< 0.5	109%	< 0.5		
Bromobenzene 0.	5 <0.5	< 0.5	< 0.5	< 0.5	109%	< 0.5		
n-propylbenzene 0.	5 <0.5	< 0.5	< 0.5	< 0.5	110%	< 0.5		
2-chlorotoluene 0.	5 <0.5	< 0.5	< 0.5	< 0.5	110%	< 0.5		
4-chlorotoluene 0.	5 <0.5	< 0.5	< 0.5	< 0.5	110%	< 0.5		
1,3,5-trimethylbenzene 0.	5 <0.5	< 0.5	< 0.5	< 0.5	110%	< 0.5		
tert-butylbenzene 0.	5 <0.5	< 0.5	< 0.5	< 0.5	111%	< 0.5		
1,2,4-trimethylbenzene		< 0.5	< 0.5	< 0.5	110%	< 0.5		
sec-butylbenzene 0.		< 0.5	< 0.5	< 0.5	110%	< 0.5		
1,3-dichlorobenzene		< 0.5	< 0.5	< 0.5	109%	< 0.5		
1,4-dichlorobenzene 0.		< 0.5	< 0.5	< 0.5	111%	< 0.5		
p-isopropyltoluene 0.		< 0.5	< 0.5	< 0.5	110%	< 0.5		
1,2-dichlorobenzene 0.		< 0.5	< 0.5	< 0.5	109%	< 0.5		
n-butylbenzene 0.		< 0.5	< 0.5	< 0.5	110%	< 0.5		
1,2,4-trichlorobenzene 0		< 0.5	< 0.5	< 0.5	115%	< 0.5		
Naphthalene 0.		< 0.5	< 0.5	< 0.5	110%	< 0.5		
1,2,3-trichlorobenzene 0.		< 0.5	< 0.5	< 0.5	116%	< 0.5		
BCP (Surr @ 20mg/kg)	11.,0	89%	106%	123%	111%	87%		
DCFB (Surr @ 20mg/kg)	106%	84%	102%	116%	109%	82%		



**Client Name:** 

**Contact Name:** 

**Client Reference:** 

E035990

Connell Wagner Pty Ltd (SA)

April Freeman

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**Date:** 15/02/08 of Analysis

This report supercedes reports issued on: 05/02/08

Results expressed in mg/kg dry weight unless otherwise specified Comments:

E009.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/MS.



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**Contact Name:** April Freeman

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**Date:** 15/02/08

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Client Reference: Buckland Park 31495 This report supercedes reports issued on: 05/02/08

Laboratory Identification		138208	138212	138213	138218	138222	138225	138231	138234	138239	138245
Sample Identification		TP1	TP2	QC1	TP3	TP4	TP5	TP6	TP7	TP8	TP9
Depth (m)		0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date	_	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08
Method : E022.2											
Acid extractable metals	EQL										
Arsenic	1	1	2	2	3	2	1	2	<1	3	5
Beryllium	1	<1	<1	<1	1	<1		<1	<1	1	1
Boron	5	<5	<5	<5	<5	<5		5	<5	<5	<5
Cadmium	0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.2
Chromium	1	10	14	17	35	16	15	19	10	35	42
Cobalt	1						3				
Copper	2	5	7	8	23	10	7	11	5	25	34
Lead	2	7	8	9	17	8	7	11	4	16	22
Manganese	5	95	131	143	256	170		192	169	458	296
Molybdenum	1						<1				
Nickel	1						6				
Selenium	2						<2				
Tin	1						<1				
Zinc	5	10	10	11	28	12	10	16	8	26	38

Results expressed in mg/kg dry weight unless otherwise specified

Comments: - # Percent recovery not available due to significant background levels of analyte in sample.



Client Name: Connell Wagner Pty Ltd (SA)

Contact Name: April Freeman

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Laboratory Identification		138248	138251	138255	138259	138263	138267	138270	138271	138275	138278
Sample Identification		TP10	TP11	TP12	TP13	TP14	TP15	TP16	QC9	TP17	TP18
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15
Sampling Date recorded on COC		21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date	<u>.</u>	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08
Method: E022.2 Acid extractable metals	EQL										
Arsenic	1	3	3	2	3	2	3	2	2	2	3
Beryllium	1		1	<1	1	<1		<1	<1	<1	1
Boron	5		<5	<5	<5	<5		8	12	18	<5
Cadmium	0.1	0.1	0.3	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	0.1
Chromium	1	31	39	29	40	19	33	16	20	22	43
Cobalt	1	14					11				
Copper	2	22	25	18	28	14	25	9	11	11	31
Lead	2	15	13	10	12	9	14	5	5	5	16
Manganese	5		534	397	462	300		152	155	211	392
Molybdenum	1	1					<1				
Nickel	1	14					14				
Selenium	2	<2					<2				
Tin	1	<1					<1				
Zinc	5	<5	42	20	30	18	29	12	15	16	33

Results expressed in mg/kg dry weight unless otherwise specified

Comments: - # Percent recovery not available due to significant background levels of analyte in sample.



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**Client Name: Contact Name:** 

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Connell Wagner Pty Ltd (SA)

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<b>Laboratory Identification</b>		138282	138286	138291	138295	138208d	138208r	138231d	138231r	138245d	138245r
Sample Identification		TP19	TP20	TP21	TP22	QC	QC	QC	QC	QC	QC
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.4-0.5						
Sampling Date recorded on COC		21/1/08	21/1/08	21/1/08	21/1/08						
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08		30/1/08		30/1/08	
aboratory Analysis Date		31/1/08	31/1/08	31/1/08	31/1/08	31/1/08		31/1/08		31/1/08	
Method: E022.2											
Acid extractable metals	EQL										
Arsenic	1	2	<1	2	3	1	0%	2	0%	4	22%
Beryllium	1	<1		<1	1	<1		<1		2	67%
Boron	5	<5		<5	13	<5		7	33%	<5	
Cadmium	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		0.1	>0%	0.1	67%
Chromium	1	21	7	17	36	10	0%	23	19%	46	9%
Cobalt	1		1								
Copper	2	14	3	11	21	4	22%	12	9%	36	6%
Lead	2	10	3	8	9	7	0%	13	17%	22	0%
Manganese	5	220		149	553	91	4%	208	8%	285	4%
Molybdenum	1		<1								
Nickel	1		2								
Selenium	2		<2								
Tin	1		<1								
Zinc	5	15	8	17	25	9	11%	17	6%	38	0%

Results expressed in mg/kg dry weight unless otherwise specified

Comments: - # Percent recovery not available due to significant background levels of analyte in sample.



Client Name: Connell Wagner Pty Ltd (SA)

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**Date:** 15/02/08 of Analysis

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Laboratory Identification		138218s	138239s	crm	lcs	mb			
Sample Identification		QC	QC	QC	QC	QC			
Depth (m)									
Sampling Date recorded on COC									
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08			
Laboratory Analysis Date	_	31/1/08	31/1/08	30/1/08	30/1/08	30/1/08			
Method: E022.2 Acid extractable metals	EQL								
Arsenic	1	81%	94%	81%	83%	<1			
Beryllium	1	82%	94%	94%	100%	<1			
Boron	5	73%	78%		84%	<5			
Cadmium	0.1	92%	102%	88%	99%	< 0.1			
Chromium	1	92%	142%	83%	95%	<1			
Cobalt	1			77%	88%	<1			
Copper	2	77%	114%	83%	87%	<2			
Lead	2	91%	108%	93%	101%	<2			
Manganese	5	#	#	83%	92%	<5			
Molybdenum	1			79%	87%	<1			
Nickel	1			75%	85%	<1			
Selenium	2			96%	93%	<2			
Tin	1			80%	91%	<1			
Zinc	5	94%	141%	85%	99%	<5			

Results expressed in mg/kg dry weight unless otherwise specified

Comments: - # Percent recovery not available due to significant background levels of analyte in sample.



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Contact Name: April Freeman Date: 15/02/08

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Laboratory Identification		138208	138212	138213	138218	138222	138225	138231	138234	138239	138245
Sample Identification		TP1	TP2	QC1	TP3	TP4	TP5	TP6	TP7	TP8	TP9
Depth (m) Sampling Date recorded on COC		0.05-0.15 18/1/08	0.05-0.15 18/1/08	 18/1/08	0.05-0.15 18/1/08	0.05-0.15 18/1/08	0.05-0.15 18/1/08	0.05-0.15 18/1/08	0.05-0.15 18/1/08	0.05-0.15 21/1/08	0.05-0.15 21/1/08
Laboratory Extraction (Preparation) Date Laboratory Analysis Date		25/1/08 25/1/08	25/1/08 25/1/08	25/1/08 25/1/08	25/1/08 25/1/08	25/1/08 25/1/08	25/1/08 25/1/08	25/1/08 25/1/08	25/1/08 25/1/08	25/1/08 25/1/08	25/1/08 25/1/08
Method: E018.2 pH in soil pH (pH units)	<b>EQL</b> 0.1	6.1	6.8	6.7	6.3	5.8	6.6	6.5	6.7	6.5	6.4

Results expressed in pH units unless otherwise specified

Comments:

E018.2: 1:5 soil leachate. Followed by measurement by pH ion selective electrode. Results expressed as per leachate.

<b>Laboratory Identification</b>		138248	138251	138255	138259	138263	138267	138270	138271	138275	138278
Sample Identification		TP10	TP11	TP12	TP13	TP14	TP15	TP16	QC9	TP17	TP18
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15
Sampling Date recorded on COC		21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		25/1/08	25/1/08	25/1/08	25/1/08	25/1/08	25/1/08	25/1/08	25/1/08	25/1/08	25/1/08
Laboratory Analysis Date		25/1/08	25/1/08	25/1/08	25/1/08	25/1/08	25/1/08	25/1/08	25/1/08	25/1/08	25/1/08
Method: E018.2 pH in soil pH (pH units)	<b>EQL</b> 0.1	6.8	6.4	6.5	6.5	6.3	6.3	8.6	8.6	10.0	6.4

Results expressed in pH units unless otherwise specified

Comments:

E018.2: 1:5 soil leachate. Followed by measurement by pH ion selective electrode. Results expressed as per leachate.



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**Client Name: Contact Name:** 

April Freeman

**Date:** 15/02/08

of Analysis

**Client Reference:** 

Buckland Park 31495

This report supercedes reports issued on: 05/02/08

Laboratory Identification		138282	138286	138291	138295	138208d	138208r	138239d	138239r	138275d	138275r
Sample Identification		TP19	TP20	TP21	TP22	QC	QC	QC	QC	QC	QC
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.4-0.5						
Sampling Date recorded on COC		21/1/08	21/1/08	21/1/08	21/1/08						
Laboratory Extraction (Preparation) Date		25/1/08	25/1/08	25/1/08	25/1/08	25/1/08		25/1/08		25/1/08	
Laboratory Analysis Date		25/1/08	25/1/08	25/1/08	25/1/08	25/1/08		25/1/08		25/1/08	
Method: E018.2 pH in soil pH (pH units)	<b>EQL</b> 0.1	7.8	6.9	6.4	8.9	6.1	0%	6.5	0%	10.0	0%

Results expressed in pH units unless otherwise specified

Comments:

E018.2: 1:5 soil leachate. Followed by measurement by pH ion selective electrode. Results expressed as per leachate.



Connell Wagner Pty Ltd (SA)

Contact Name: April Freeman Date: 15/02/08

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Laboratory Identification		138208	138212	138213	138218	138222	138225	138231	138234	138239	138245
Sample Identification		TP1	TP2	QC1	TP3	TP4	TP5	TP6	TP7	TP8	TP9
Depth (m) Sampling Date recorded on COC		0.05-0.15 18/1/08	0.05-0.15 18/1/08	 18/1/08	0.05-0.15 18/1/08	0.05-0.15 18/1/08	0.05-0.15 18/1/08	0.05-0.15 18/1/08	0.05-0.15 18/1/08	0.05-0.15 21/1/08	0.05-0.15 21/1/08
Laboratory Extraction (Preparation) Date Laboratory Analysis Date		30/1/08 31/1/08	30/1/08 31/1/08	30/1/08 31/1/08	30/1/08 31/1/08	30/1/08 31/1/08	30/1/08 31/1/08	30/1/08 31/1/08	30/1/08 31/1/08	30/1/08 31/1/08	30/1/08 31/1/08
Method: E020.2/E030.2 Acid extractable metals Sulphur	<b>EQL</b> 100	100	100	100	300	200	100	200	<100	300	400

Results expressed in mg/kg dry weight unless otherwise specified

Comments: -

E020.2/E030.2: 0.5g digested with nitric/hydrochloric acid . Analysis by AAS and/or ICP-OES.

<b>Laboratory Identification</b>		138248	138251	138255	138259	138263	138267	138270	138271	138275	138278
Sample Identification		TP10	TP11	TP12	TP13	TP14	TP15	TP16	QC9	TP17	TP18
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15
Sampling Date recorded on COC		21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date		31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08
Method: E020.2/E030.2 Acid extractable metals Sulphur	<b>EQL</b> 100	200	400	200	200	200	400	100	100	100	300

Results expressed in mg/kg dry weight unless otherwise specified

Comments: -

E020.2/E030.2: 0.5g digested with nitric/hydrochloric acid . Analysis by AAS and/or ICP-OES.



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<b>Laboratory Identification</b>		138282	138286	138291	138295	138208d	138208r	138231d	138231r	138245d	138245r
Sample Identification		TP19	TP20	TP21	TP22	QC	QC	QC	QC	QC	QC
Depth (m) Sampling Date recorded on COC		0.05-0.15 21/1/08	0.05-0.15 21/1/08	0.05-0.15 21/1/08	0.4-0.5 21/1/08						
Laboratory Extraction (Preparation) Date Laboratory Analysis Date		30/1/08 31/1/08	30/1/08 31/1/08	30/1/08 31/1/08	30/1/08 31/1/08	30/1/08 31/1/08		30/1/08 31/1/08		30/1/08 31/1/08	
Method: E020.2/E030.2 Acid extractable metals Sulphur	<b>EQL</b> 100	200	100	200	200	100	0%	200	0%	300	29%

Results expressed in mg/kg dry weight unless otherwise specified

Comments: -

E020.2/E030.2: 0.5g digested with nitric/hydrochloric acid . Analysis by AAS and/or ICP-OES.

Laboratory Identification		138218s	138239s	crm	lcs	mb			
Sample Identification		QC	QC	QC	QC	QC			
Depth (m)									
Sampling Date recorded on COC									
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08			
Laboratory Analysis Date		31/1/08	31/1/08	31/1/08	31/1/08	31/1/08			
Method: E020.2/E030.2 Acid extractable metals Sulphur	<b>EQL</b> 100	98%	116%	97%	111%	<100			

Results expressed in mg/kg dry weight unless otherwise specified

Comments: -

E020.2/E030.2: 0.5g digested with nitric/hydrochloric acid . Analysis by AAS and/or ICP-OES.



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Laboratory Identification		138208	138212	138213	138218	138222	138231	138234	138239	138245	138251
Sample Identification		TP1	TP2	QC1	TP3	TP4	TP6	TP7	TP8	TP9	TP11
Depth (m) Sampling Date recorded on COC		0.05-0.15 18/1/08	0.05-0.15 18/1/08	 18/1/08	0.05-0.15 18/1/08	0.05-0.15 18/1/08	0.05-0.15 18/1/08	0.05-0.15 18/1/08	0.05-0.15 21/1/08	0.05-0.15 21/1/08	0.05-0.15 21/1/08
Laboratory Extraction (Preparation) Date Laboratory Analysis Date		30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08
Method: E043.2/E057.2 Speciated Chromium Hexavalent Chromium Trivalent Chromium	<b>EQL</b> 1 1	<1 9	<1 13	<1 16	<1 34	<1 15	<1 13	<1 25	<1 9	<1 28	<1 44

Results expressed in mg/kg dry weight unless otherwise specified

Comments: ## Percent recovery not available due to interference from the sample.

E043.2/E057.2: Alkaline digestion followed by determination by colour.

Laboratory Identification		138255	138259	138263	138270	138271	138275	138278	138282	138291	138295
Sample Identification		TP12	TP13	TP14	TP16	QC9	TP17	TP18	TP19	TP21	TP22
Depth (m) Sampling Date recorded on COC		0.05-0.15 21/1/08	0.05-0.15 21/1/08	0.05-0.15 21/1/08	0.05-0.15 21/1/08	 21/1/08	0.05-0.15 21/1/08	0.05-0.15 21/1/08	0.05-0.15 21/1/08	0.05-0.15 21/1/08	0.4-0.5 21/1/08
Laboratory Extraction (Preparation) Date Laboratory Analysis Date		30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08
Method: E043.2/E057.2 Speciated Chromium Hexavalent Chromium Trivalent Chromium	<b>EQL</b> 1 1	<1 18	<1 52	<1 37	<1 35	<1 20	<1 43	<1 42	<1 17	<1 19	<1 44

Results expressed in mg/kg dry weight unless otherwise specified

Comments: ## Percent recovery not available due to interference from the sample.

E043.2/E057.2: Alkaline digestion followed by determination by colour.



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Laboratory Identification		138208d	138208r	138231d	138231r	138245d	138245r	138218s	138239s	lcs	mb
Sample Identification		QC	QC	QC	QC	QC	QC	QC	QC	QC	QC
Depth (m) Sampling Date recorded on COC											
Laboratory Extraction (Preparation) Date Laboratory Analysis Date		30/1/08 1/2/08		30/1/08 1/2/08		30/1/08 1/2/08		30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08	30/1/08 1/2/08
Method: E043.2/E057.2 Speciated Chromium Hexavalent Chromium Trivalent Chromium	<b>EQL</b> 1 1	<1 9	 0%	<1 16	 21%	<1 30	 7%	 1%	## 	94% 	<1 

Results expressed in mg/kg dry weight unless otherwise specified

Comments: ## Percent recovery not available due to interference from the sample.

E043.2/E057.2: Alkaline digestion followed by determination by colour.



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Laboratory Identification		138225	138248	138267	138286	lcs	mb		
Sample Identification		TP5	TP10	TP15	TP20	QC	QC		
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15				
Sampling Date recorded on COC		18/1/08	21/1/08	21/1/08	21/1/08				
Laboratory Extraction (Preparation) Date		25/1/08	25/1/08	25/1/08	25/1/08	25/1/08	25/1/08		
Laboratory Analysis Date		29/1/08	29/1/08	29/1/08	29/1/08	29/1/08	29/1/08		
Method: E034.2/E045.2 Fluoride Fluoride	EQL 1	3	6	1	<1	95%	<1		

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E034.2/E045.2: 1:5 water extraction. Determined by FIA-Ion Selective Electrode and/or by Ion Chromatography.



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Laboratory Identification		138208	138212	138213	138218	138222	138225	138231	138234	138239	138245
Sample Identification		TP1	TP2	QC1	TP3	TP4	TP5	TP6	TP7	TP8	TP9
Depth (m) Sampling Date recorded on COC		0.05-0.15 18/1/08	0.05-0.15 18/1/08	 18/1/08	0.05-0.15 18/1/08	0.05-0.15 18/1/08	0.05-0.15 18/1/08	0.05-0.15 18/1/08	0.05-0.15 18/1/08	0.05-0.15 21/1/08	0.05-0.15 21/1/08
Laboratory Extraction (Preparation) Date Laboratory Analysis Date		25/1/08 29/1/08	25/1/08 29/1/08	25/1/08 29/1/08	25/1/08 29/1/08	25/1/08 29/1/08	25/1/08 29/1/08	25/1/08 29/1/08	25/1/08 29/1/08	25/1/08 29/1/08	25/1/08 29/1/08
Method: E042.2/E045.2 Sulphate/Sulphite Sulphate	<b>EQL</b> 10	20	30	20	40	20	20	20	<10	20	30

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E042.2/E045.2: 1:5 water extraction. Determination by colour and/or Ion Chromatography. Note Sulphite test is not covered by NATA accreditation.

Laboratory Identification		138248	138251	138255	138259	138263	138267	138270	138271	138275	138278
Sample Identification		TP10	TP11	TP12	TP13	TP14	TP15	TP16	QC9	TP17	TP18
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15
Sampling Date recorded on COC		21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		25/1/08	25/1/08	25/1/08	25/1/08	25/1/08	25/1/08	25/1/08	25/1/08	25/1/08	25/1/08
Laboratory Analysis Date		29/1/08	29/1/08	29/1/08	29/1/08	29/1/08	29/1/08	29/1/08	29/1/08	29/1/08	29/1/08
Method: E042.2/E045.2 Sulphate/Sulphite Sulphate	<b>EQL</b> 10	20	80	10	40	<10	20	<10	<10	20	50

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E042.2/E045.2: 1:5 water extraction. Determination by colour and/or Ion Chromatography. Note Sulphite test is not covered by NATA accreditation.



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Laboratory Identification		138282	138286	138291	138295	138208d	138208r	138239d	138239r	138275d	138275r
Sample Identification		TP19	TP20	TP21	TP22	QC	QC	QC	QC	QC	QC
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.4-0.5						
Sampling Date recorded on COC		21/1/08	21/1/08	21/1/08	21/1/08						
Laboratory Extraction (Preparation) Date		25/1/08	25/1/08	25/1/08	25/1/08	25/1/08		25/1/08		25/1/08	
Laboratory Analysis Date		29/1/08	29/1/08	29/1/08	29/1/08	29/1/08		29/1/08		29/1/08	
Method: E042.2/E045.2 Sulphate/Sulphite Sulphate	<b>EQL</b> 10	<10	<10	50	170	10	67%	20	0%	20	0%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E042.2/E045.2: 1:5 water extraction. Determination by colour and/or Ion Chromatography. Note Sulphite test is not covered by NATA accreditation.

Laboratory Identification		138212s	138245s	lcs	mb			
Sample Identification		QC	QC	QC	QC			
Depth (m)								
Sampling Date recorded on COC								
Laboratory Extraction (Preparation) Date		25/1/08	25/1/08	25/1/08	25/1/08			
Laboratory Analysis Date		29/1/08	29/1/08	29/1/08	29/1/08			
Method: E042.2/E045.2 Sulphate/Sulphite Sulphate	<b>EQL</b> 10	104%	99%	105%	<10			

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E042.2/E045.2: 1:5 water extraction. Determination by colour and/or Ion Chromatography. Note Sulphite test is not covered by NATA accreditation.



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Laboratory Identification		138225	138248	138267	138286	lcs	mb		
Sample Identification		TP5	TP10	TP15	TP20	QC	QC		
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15				
Sampling Date recorded on COC		18/1/08	21/1/08	21/1/08	21/1/08				
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08		
Laboratory Analysis Date		31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08		
Method: E040.2/E054.2 Total Cyanide Total Cyanide	EQL 1	<1	<1	<1	<1	95%	<1		

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E040.2/E054.2: Caustic extract followed by strong acid distillion. Analysis by colour.



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Laboratory Identification		138208	138212	138218	138222	138225	138231	138234	138239	138245	138248
Sample Identification		TP1	TP2	TP3	TP4	TP5	TP6	TP7	TP8	TP9	TP10
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	21/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date		11/2/08	11/2/08	11/2/08	11/2/08	11/2/08	11/2/08	11/2/08	11/2/08	11/2/08	11/2/08
Method: E024.2											
Phenoxy Acid Herbicides	EQL										
Dalapon	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Clopyralid	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
o-Chlorophenoxy acid	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
p-Chlorophenoxy acid	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dicamba	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MCPP	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MCPA	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dichlorprop	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-D	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Triclopyr	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-TP (Silvex)	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MCPB	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-T	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluxopyr	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-DB	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3,4-DCPA (Surr @ 0.4 mg/kg)		68%	78%	114%	64%	84%	60%	82%	51%	67%	75%

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Comments:



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<b>Laboratory Identification</b>		138251	138255	138259	138263	138267	138270	138275	138278	138282	138286
Sample Identification		TP11	TP12	TP13	TP14	TP15	TP16	TP17	TP18	TP19	TP20
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date		11/2/08	11/2/08	11/2/08	14/2/08	11/2/08	11/2/08	11/2/08	11/2/08	11/2/08	12/2/08
Method: E024.2											
Phenoxy Acid Herbicides	EQL										
Dalapon	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Clopyralid	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
o-Chlorophenoxy acid	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
p-Chlorophenoxy acid	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dicamba	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MCPP	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MCPA	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dichlorprop	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-D	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Triclopyr	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-TP (Silvex)	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MCPB	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-T	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluxopyr	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-DB	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3,4-DCPA (Surr @ 0.4 mg/kg)		55%	63%	51%	57%	52%	64%	85%	64%	59%	58%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:



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Sample Identification		TP21	TP22	QC							
Depth (m)		0.05-0.15	0.4-0.5								
Sampling Date recorded on COC		21/1/08	21/1/08								
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08		30/1/08		30/1/08		30/1/08	30/1/08
Laboratory Analysis Date		12/2/08	12/2/08	11/2/08		11/2/08		11/2/08		14/2/08	14/2/08
Method: E024.2											
Phenoxy Acid Herbicides	EQL										
Dalapon	0.1	< 0.1	< 0.1	< 0.1		< 0.1		< 0.1		23%	22%
Clopyralid	0.1	< 0.1	< 0.1	< 0.1		< 0.1		< 0.1		63%	67%
o-Chlorophenoxy acid	0.1	< 0.1	< 0.1	< 0.1		< 0.1		< 0.1		71%	79%
p-Chlorophenoxy acid	0.1	< 0.1	< 0.1	< 0.1		< 0.1		< 0.1		66%	74%
Dicamba	0.1	< 0.1	< 0.1	< 0.1		< 0.1		< 0.1		75%	73%
MCPP	0.1	< 0.1	< 0.1	< 0.1		< 0.1		< 0.1		96%	83%
MCPA	0.1	< 0.1	< 0.1	< 0.1		< 0.1		< 0.1		73%	74%
Dichlorprop	0.1	< 0.1	< 0.1	< 0.1		< 0.1		< 0.1		77%	77%
2,4-D	0.1	< 0.1	< 0.1	< 0.1		< 0.1		< 0.1		71%	72%
Triclopyr	0.1	< 0.1	< 0.1	< 0.1		< 0.1		< 0.1		74%	81%
2,4,5-TP (Silvex)	0.1	< 0.1	< 0.1	< 0.1		< 0.1		< 0.1		64%	73%
MCPB	0.1	< 0.1	< 0.1	< 0.1		< 0.1		< 0.1		75%	85%
2,4,5-T	0.1	< 0.1	< 0.1	< 0.1		< 0.1		< 0.1		64%	72%
Fluxopyr	0.1	< 0.1	< 0.1	< 0.1		< 0.1		< 0.1		107%	72%
2,4-DB	0.1	< 0.1	< 0.1	< 0.1		< 0.1		< 0.1		69%	84%
3,4-DCPA (Surr @ 0.4 mg/kg)		62%	66%	79%	15%	60%	0%	66%	2%	73%	88%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:



Client Name: Connell Wagner Pty Ltd (SA)

**Contact Name:** April Freeman

Client Reference: Buckland Park 31495

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plus cover page

**Date:** 15/02/08

Certificate

of Analysis

Final

This report supercedes reports issued on: 05/02/08

Laboratory Identification		lcs	mb								
Sample Identification		QC	QC								
Depth (m)											
Sampling Date recorded on COC											
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08								1
Laboratory Analysis Date		11/2/08	11/2/08								l
Method : E024.2											I
Phenoxy Acid Herbicides	EQL										
Dalapon	0.1	20%	< 0.1								
Clopyralid	0.1	68%	< 0.1								
o-Chlorophenoxy acid	0.1	75%	< 0.1								
p-Chlorophenoxy acid	0.1	71%	< 0.1								
Dicamba	0.1	81%	< 0.1								
MCPP	0.1	78%	< 0.1								
MCPA	0.1	75%	< 0.1								
Dichlorprop	0.1	82%	< 0.1								
2,4-D	0.1	74%	< 0.1								
Triclopyr	0.1	72%	< 0.1								
2,4,5-TP (Silvex)	0.1	83%	< 0.1								
MCPB	0.1	82%	< 0.1								
2,4,5-T	0.1	74%	< 0.1								l
Fluxopyr	0.1	45%	< 0.1								l
2,4-DB	0.1	82%	< 0.1								
3,4-DCPA (Surr @ 0.4 mg/kg)		88%	86%								l
				I	ĺ	1	1	ľ	I	I	1

Results expressed in mg/kg dry weight unless otherwise specified

Comments:



Connell Wagner Pty Ltd (SA)

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Client Name:
Contact Name:

April Freeman

**Date:** 15/02/08

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**Client Reference:** 

Buckland Park 31495

This report supercedes reports issued on: 05/02/08

Laboratory Identification		138208	138212	138213	138218	138222	138225	138231	138234	138239	138245
Sample Identification		TP1	TP2	QC1	TP3	TP4	TP5	TP6	TP7	TP8	TP9
Depth (m)		0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	18/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date	<u> </u>	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08
Method: E005.2 Moisture Moisture	EQL 		1	2	3	2	2	3	1	5	8

Results expressed in % w/w unless otherwise specified

Comments:

E005.2: Moisture by gravimetric analysis. Results are in % w/w.

<b>Laboratory Identification</b>		138248	138251	138255	138259	138263	138266	138267	138270	138271	138275
Sample Identification		TP10	TP11	TP12	TP13	TP14	TP14	TP15	TP16	QC9	TP17
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	1.9-2.0	0.05-0.15	0.05-0.15		0.05-0.15
Sampling Date recorded on COC		21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08
Laboratory Extraction (Preparation) Date		30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08
Laboratory Analysis Date		31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08
Method: E005.2 Moisture Moisture	EQL 	7	3	2	4	2	2	3	1	2	31

Results expressed in % w/w unless otherwise specified

Comments:

E005.2: Moisture by gravimetric analysis. Results are in % w/w.



**Client Reference:** 

**EQL** 

6

Connell Wagner Pty Ltd (SA)

**Contact Name:** April Freeman

5

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of Analysis

Final

0%

**Date:** 15/02/08

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This report supercedes reports issued on: 05/02/08

3

Laboratory Identification	138278	138282	138286	138291	138295	138208d	138208r	138231d	138231r	138239d
Sample Identification	TP18	TP19	TP20	TP21	TP22	QC	QC	QC	QC	QC
Depth (m)	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.4-0.5					
Sampling Date recorded on COC	21/1/08	21/1/08	21/1/08	21/1/08	21/1/08					
Laboratory Extraction (Preparation) Date	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08	30/1/08		30/1/08		30/1/08
Laboratory Analysis Date	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08		31/1/08		31/1/08
Method: E005.2										

Buckland Park 31495

Results expressed in % w/w unless otherwise specified

Comments:

Moisture Moisture

E005.2: Moisture by gravimetric analysis. Results are in % w/w.

Laboratory Identification		138239r	138245d	138245r	138275d	138275r			
Sample Identification		QC	QC	QC	QC	QC			
Depth (m) Sampling Date recorded on COC									
Laboratory Extraction (Preparation) Date Laboratory Analysis Date			30/1/08 31/1/08		30/1/08 31/1/08				
Method: E005.2 Moisture Moisture	EQL 	0%	9	12%	31	0%			

Results expressed in % w/w unless otherwise specified

Comments:

E005.2: Moisture by gravimetric analysis. Results are in % w/w.



Quality, Service, Support

Report Date: 29/01/2008 Report Time: 3:19:38PM

Sample

# Receipt



Notice (SRN) for E035990

	Client Details	Laboratory Reference Information									
Client Name: Client Phone:	Connell Wagner Pty Ltd (SA) 08 82379777		ve this information ready contacting Labmark.								
Client Fax: Contact Name:	08 82314765 April Freeman	Laboratory Report:	E035990								
Contact Email: Client Address:	freemana@conwag.com 55 Grenfell St. Adelaide SA 5000	Quotation Number: Laboratory Address:	Q0218.EM Unit 1, 8 Leighton Pl. Asquith NSW 2077								
Project Name: Project Number:	Buckland Park 31495	Phone: Fax:	61 2 9476 6533 61 2 9476 8219								
CoC Serial Number Purchase Order: Surcharge:	r: - Not provided Not provided - No surcharge applied (results by 6:30pm on due date) SOIL	Sample Receipt Contact Email: Reporting Contact: Email:	ct: Jakleen El Galada jakleen.galada@labmark.com.au Jyothi Lal jyothi.lal@labmark.com.au								
Date Sampled (ea	rliest date): 18/01/2008 ceived: 23/01/2008 cipt Notice issued: 29/01/2008	NATA Accreditation: TGA GMP License: APVMA License: AQIS Approval: AQIS Entry Permit:	13542 185-336 (Sydney) 6105 (Sydney) NO356 (Sydney) 200521534 (Sydney)								
Reporting Requir	ements: Electronic Data Download required:N	0 1	nvoice Number: 30173								

Sample Condition: COC received with samples. Report number and lab ID's defined on COC.

Samples received in good order.

Samples received with cooling media: Ice bricks .

Samples received chilled. Security seals not used.

Sample container & chemical preservation suitable .

Comments: SRN Reissued. Sample QC2 Forwarded to ALS.

**Holding Times:** Date received allows for sufficient time to meet Technical Holding Times.

Preservation: Chemical preservation of samples satisfactory for requested analytes.

### **Important Notes:**

LabMark shall responsibly dispose of spent customer soil and water samples which includes the disintegration of the sample label. A sample disposal fee of \$1.00 is applicable on all samples received by the laboratory regardless of whether they have undergone analytical testing. Sample disposal of environmental samples shall be 31 days (water) and 3 months (soil, HN03 preserved samples) after laboratory receipt, unless otherwise requested in writing by the client. Samples requested to be held in non-refrigerated storage shall incur \$5.00/ sample/ 3 months. Additional refrigerated storage shall incur \$30/ sample/ 3 months. Combination prices apply only if requested. Transfer of report ownership from LabMark to the client shall occur once full and final payment has been settled and verified. All report copies may be retracted where full payment does not occur within the agreed settlement period.

**Analysis comments:** 

**Subcontracted Analyses:** 



**Report Date : 29/01/2008 Report Time : 3:19:38PM** 

Sample

# Receipt



Notice (SRN) for E035990

The table below represents LabMark's understanding and interpretation of the customer supplied sample COC request (refer to SRN comments section on first page for external subcontracting method details). Please confirm that your COC request has been entered correctly. Due to THT and TAT requirements, testing shall commence immediately as per this table, unless the customer intervenes with a correction prior to testing.

GRID RE	VIEW TABLE	Requested Analysis																			
	VIEW INDEE									1.0	ques	lea A									$\Box$
No. Date Depth	Client Sample ID	BTEX by P&T	Speciated Chromium	Fluoride	Acid extractable mercury	ногр ом ногр	Acid extractable metals	Acid extractable metals	MISSING	Moisture	Organochlorine Pesticides (OC)	Organophosphorus Pesticides (OP)	Polyaromatic Hydrocarbons (PAH)	pH in soil	Phenols by GC/MS	Phenoxy Acid Herbicides	PREP Not Reported	Sulphate/Sulphite	Total Cyanide	Petroleum Hydrocarbons (TPH)	Volatile Aromatic Compounds (VAC)
138208 18/01 0.05-0.15	TP1	٠	٠		•		•	•		•	٠	٠	٠	٠		٠	٠	٠		٠	
138209 18/01 0.4-0.5	TP1					٠															
138210 18/01 0.9-1.0	TP1					٠															
138211 18/01 1.9-2.0	TP1					٠															
138212 18/01 0.05-0.15	TP2	٠	٠		•		•	•		•	٠	٠	٠	٠		٠	٠	٠		٠	
138213 18/01	QC1		•		•		•	•		٠	٠	•		٠			٠	٠			
138215 18/01 0.4-0.5	TP2					٠															
138216 18/01 0.9-1.0	TP2					٠															
138217 18/01 1.9-2.0	TP2					٠															
138218 18/01 0.05-0.15	TP3	٠	٠		٠		٠	٠		٠	٠	٠	٠	٠		٠	٠	٠		٠	
138219 18/01 0.2-0.25	TP3					٠															
138220 18/01 0.4-0.5	TP3					٠															
138221 18/01 0.9-1.0	TP3					٠															
138222 18/01 0.05-0.15	TP4	٠	•		•		•	•		٠	٠	•	٠	•		٠	٠	٠		٠	
138223 18/01	QC3					٠															
138224 18/01 0.4-0.5	TP4					٠															
138225 18/01 0.05-0.15	TP5			٠	•		٠	٠		٠	٠		٠	•	•	•	٠	٠	•	٠	•
138226 18/01 0.2-0.25	TP5					٠															
138227 18/01 0.4-0.5	TP5					٠															
138228 18/01	QC4					٠															
138229 18/01	QC5					٠															
138230 18/01 0.9-1.0	TP5					٠															
138231 18/01 0.05-0.15	TP6	٠	•		•		•	•		•	٠	٠	٠	•		٠	•	•		٠	
138232 18/01 0.4-0.5	TP6					٠	Ť	Ť				Ī	Ē			Ī		Ĺ		_	П
138233 18/01 0.9-1.0	TP6					•															П
138234 18/01 0.05-0.15	TP7	•	•		•		•	•		•	•	•	•	•		•	•	•		•	П
138235 18/01 0.4-0.5	TP7					•										Ĺ					П
138236 18/01 0.9-1.0	TP7					•										l					П
138237 18/01 1.9-2.0	TP7					•										l					П
138238 18/01 0.9-1.0	TP4					•										l					П
138239 18/01 0.05-0.15	TP8	•	•		•		•	•		•	•	•	•	•		•	•	•		•	$\Box$
138240 18/01	QC6					٠									Ì						$\Box$

Thank you for choosing Labmark to analyse your project samples.

Additional information on www.labmark.com.au



**Report Date : 29/01/2008 Report Time : 3:19:38PM** 

Sample

# Receipt



Notice (SRN) for E035990

The table below represents LabMark's understanding and interpretation of the customer supplied sample COC request (refer to SRN comments section on first page for external subcontracting method details). Please confirm that your COC request has been entered correctly. Due to THT and TAT requirements, testing shall commence immediately as per this table, unless the customer intervenes with a correction prior to testing.

GRID REVIEW TABLE	Requested Analysis																			
										1		,								
																				()
										$\odot$	O)	ЭАН)							Î	(VA
										s (O	sides	) su							(TPI	spun
				cury		als	als			cide	estic	arbo			ides				suoc	mpoı
		Speciated Chromium		Acid extractable mercury		Acid extractable metals	Acid extractable metals			Organochlorine Pesticides (OC)	Organophosphorus Pesticides (OP)	Polyaromatic Hydrocarbons (PAH)		MS	Phenoxy Acid Herbicides	PREP Not Reported	e e		Petroleum Hydrocarbons (TPH)	Volatile Aromatic Compounds (VAC)
	Ľ	hror		table	ON HOLD	table	table			rine	spho	ic Hy		Phenols by GC/MS	Η̈́	зеро	Sulphate/Sulphite	qe	-lydr	mati
	y P8	ed C	a)	traci	NO	trac	trac	16	e)	chlo	ohda	mat	oil	s by	ry Ac	Vot F	te/Su	yani	un	: Aro
	BTEX by P&T	eciat	Fluoride	id ex	НОГР	id ex	id ex	MISSING	Moisture	ganc	ganc	lyarc	pH in soil	enol	enox	EP 1	lpha	Total Cyanide	trole	latile
No. Date Depth Client Sample ID	ВТ	Sp	FIL	Ac	ЭН	Ac	Ac	Σ	Mc	ō	Or	Ро	Hd	Ph	Н	PR	Su	To	Pe	Vo
138241 18/01 QC7					٠	<u> </u>														
138242 18/01 0.5-0.6 TP8					٠															
138243 18/01 0.9-1.0 TP8					٠															
138244 18/01 1.9-2.0 TP8					٠															
138245 18/01 0.05-0.15 TP9 138246 18/01 0.4-0.5 TP9	٠	٠		٠	_	٠	٠		٠	٠	٠	٠	٠		٠	٠	٠		٠	
138247 18/01 0.9-1.0 TP9					•															
138248 18/01 0.05-0.15 TP10			_	_	٠	_	_		_	_		_	_	_	_	_	_	_	_	_
138249 18/01 0.4-0.5 TP10			٠	•	_	٠	۰		•	٠		٠	٠	•	•	٠	٠	٠	•	•
138250 18/01 0.9-1.0 TP10					•															
138251 18/01 0.05-0.15 TP11					٠		_		_	_	_	_	_		_	_	_		_	
138252 18/01 0.4-0.5 TP11	•	٠		•	•	•	•		•	٠	٠	٠	٠		•	٠	•		•	
138253 18/01 QC8					•															
138254 18/01 0.9-1.0 TP11					•															
138255 18/01 0.05-0.15 TP12	•	•		•	•	•	•		•	•	•	•	•		•	•	•		•	
138256 18/01 0.4-0.5 TP12	_	•			•	•	•		-	_	•	•			•	•			•	
138257 18/01 0.9-1.0 TP12					•															
138258 18/01 1.9-2.0 TP12					Ť															
138259 18/01 0.05-0.15 TP13	•	•		•	•	٠	•		•	•	•	•	٠		•	٠	•		•	
138260 18/01 0.4-0.5 TP13		•		·	•	Ť	Ť		_		•	•	•		_	•	•		_	
138261 18/01 0.9-1.0 TP13					•															
138262 18/01 1.9-2.0 TP13					•															
138263 18/01 0.05-0.15 TP14	٠	٠		٠		٠	٠		٠	٠	٠	٠	٠		•	٠	٠		٠	
138264 18/01 0.4-0.5 TP14								٠												
138265 18/01 0.9-1.0 TP14					٠															
138266 18/01 1.9-2.0 TP14									٠			٠				٠				
138267 18/01 0.05-0.15 TP15			٠	٠		٠	٠		٠	٠		٠	٠	٠	٠	٠	٠	•	•	٠
138268 18/01 0.4-0.5 TP15					٠															
138269 18/01 0.9-1.0 TP15					٠															
138270 18/01 0.05-0.15 TP16	•	•		٠		٠	٠		٠	٠	٠	٠	٠		٠	٠	٠		٠	
138271 18/01 QC9		•		•		•	•		•	•	٠		٠			٠	٠			
138272 18/01 QC10					•															

Thank you for choosing Labmark to analyse your project samples.

Additional information on www.labmark.com.au



**Report Date : 29/01/2008 Report Time : 3:19:38PM** 

Sample

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Notice (SRN) for E035990

The table below represents LabMark's understanding and interpretation of the customer supplied sample COC request (refer to SRN comments section on first page for external subcontracting method details). Please confirm that your COC request has been entered correctly. Due to THT and TAT requirements, testing shall commence immediately as per this table, unless the customer intervenes with a correction prior to testing.

	G	RID RE	VIEW TABLE	Requested Analysis																			
															Ĭ								
														<u></u>									(C)
													(C)	s (OF	PAH							Ī	V (V
													0) sa	icide	) suc							(TP	spund
					_		Acid extractable mercury		tals	tals			Organochlorine Pesticides (OC)	Organophosphorus Pesticides (OP)	Polyaromatic Hydrocarbons (PAH)			Phenoxy Acid Herbicides	_			Petroleum Hydrocarbons (TPH)	Volatile Aromatic Compounds (VAC)
					Speciated Chromium		e me	Q.	Acid extractable metals	Acid extractable metals			Pes	snuc	ydro		MS	lerbi	PREP Not Reported	ite		rocar	ic Cc
				&Τ	Chro		tabl	ON HOLD	tabl	tabl			orine	ndsc	tic H		/ GC/	cid F	Rep	hdln	ide	Hyd	omat
				by P	ted	e e	xtrac		xtrac	xtrac	NG	n.e	ochl	obhc	oma	soil	ls by	xy A	Not	ate/S	Cyan	mne	e Ard
No	Data	Donth	Client Comple ID	BTEX by P&T	pecia	Fluoride	cid e	НОГР	cid e	cid e	MISSING	Moisture	rgan	rgan	olyar	pH in soil	Phenols by GC/MS	heno	REP	Sulphate/Sulphite	Total Cyanide	etrol	olatil
		<b>Depth</b> 0.4-0.5	Client Sample ID TP16	В	S	4	٨	=	٧	⋖	2	2	0	0	ď	d	Ь	Ь	Ь	S	Τ	Ь	>
138274			TP16					•									-						$\vdash$
		0.05-0.15	TP17	٠	•		٠	•	•	•		٠	•	•	•	•		•	•	•		•	$\vdash$
		0.4-0.5	TP17	Ť	_		Ť	•	_	_		Ť		_		_		_	_				T
138277	18/01	0.9-1.0	TP17					•															1
138278	18/01	0.05-0.15	TP18	٠	•		٠		٠	•		•	•	•	٠	•		•	٠	•		٠	1
138279	18/01	0.4-0.5	TP18					٠															
138280	18/01	0.9-1.0	TP18					٠															
138281	18/01	1.9-2.0	TP18								٠												
		0.05-0.15	TP19	•	•		•		٠	•		•	•	•	•	•		•	•	•		٠	
138283			TP19					٠															
		0.9-1.0	TP19					٠															
138285			TP19					٠															$oxed{oxed}$
		0.05-0.15	TP20			٠	٠		٠	٠		٠	٠		٠	٠	٠	٠	٠	٠	٠	٠	٠
		0.4-0.5	TP20	-	<u> </u>			٠										<u> </u>					₩
138288			TP20					٠															₩
		1.9-2.0	TP20	1				٠															₩
138290		0.05-0.15	TP20 TP21	-	-			٠	_	_		_	-		-	_	_	-	-	_		_	$\vdash$
138291			TP21	•	٠		٠	_	٠	•		•	٠	•	•	•		•	•			٠	$\vdash$
138292			TP21	-			1	•				1					<del>                                     </del>		1		1		$\vdash$
		0.05-0.15	TP22	+				•										$\vdash$					$\vdash$
138295			TP22	•	•		•	•	•	•		•	•	•	•	•	<del>                                     </del>	•	•	•	1	•	$\vdash$
		0.9-1.0	TP22	-	-		-	•	-	-		-	-	-	-	-		-	-	-		•	+
		0.4-0.5	TP14	1			t	•									1						t
138514																							

'PREP Not Reported' refers to an internal laboratory instruction - client confirmation of this parameter is not required.



Report Date: 29/01/2008 Report Time: 3:19:38PM

Sample

# Receipt



Notice (SRN) for E035990

The table below represents LabMark's understanding and interpretation of the customer supplied sample COC request (refer to SRN comments section on first page for external subcontracting method details). Please confirm that your COC request has been entered correctly. Due to THT and TAT requirements, testing shall commence immediately as per this table, unless the customer intervenes with a correction prior to testing.

GRID REVIEW TABLE	Requested Analysis												$\neg$				
	Î																
	(vTP																
	P&T																
	l by																
	౼																
	Volatile TPH by P&T (vTPH)																
No. Date Depth Client Sample ID	Λo															Щ	
138208 18/01 0.05-0.15 TP1	٠																
138212 18/01 0.05-0.15 TP2	٠																
138213 18/01 QC1 138218 18/01 0.05-0.15 TP3	•															_	
138218 18/01 0.05-0.15 TP3 138222 18/01 0.05-0.15 TP4	•															$\dashv$	
138225 18/01 0.05-0.15 TP5	•															-	
138231 18/01 0.05-0.15 TP6	•															$\dashv$	
138234 18/01 0.05-0.15 TP7	•															$\dashv$	
138239 18/01 0.05-0.15 TP8	•															$\dashv$	
138245 18/01 0.05-0.15 TP9	•															$\dashv$	
138248 18/01 0.05-0.15 TP10	•															$\neg$	
138251 18/01 0.05-0.15 TP11	•																
138255 18/01 0.05-0.15 TP12	•																
138259 18/01 0.05-0.15 TP13	٠																
138263 18/01 0.05-0.15 TP14	•																
138267 18/01 0.05-0.15 TP15	٠																
138270 18/01 0.05-0.15 TP16	•																
138275 18/01 0.05-0.15 TP17	٠																
138278 18/01 0.05-0.15 TP18	٠																
138282 18/01 0.05-0.15 TP19	•																
138286 18/01 0.05-0.15 TP20	٠																
138291 18/01 0.05-0.15 TP21	٠																
138295 18/01 0.4-0.5 TP22	٠	<u> </u>															
Totals:	23																ı

'PREP Not Reported' refers to an internal laboratory instruction - client confirmation of this parameter is not required.



Quality, Service, Support

**Report Date : 29/01/2008 Report Time : 3:19:38PM** 

Sample

# Receipt



Notice (SRN) for E035990

										Re	aves	ted A	naly	sis				<del></del>
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				ⅎ		_		۶	٤			ese						
		S	ary	Sulphur	nic	Beryllium	uc	Cadmium	Chromium	per	7	Manganese	<b>.</b> .					
		MET-T_S	Mercury	SS	Arsenic	Ber	Boron	Cad	Chr	Copper	Lead	Mar	Zinc					
		ME	S	AS_		S		S	S		S	S	S					
	OH 40 1 75	M12 -	HG-T_S	MET-AAS_S	MET-T_S	MET-T_S	MET-T_S	MET-T_S	MET-T_S	MET-T_S	MET-T_S	MET-T_S	MET-T_					
No. Date Depth	Client Sample ID	Ž	_	_	_					•								
138208 18/01 0.05-0.15 138212 18/01 0.05-0.15	TP1 TP2		•	•	•	•	•	•	•	•	•	•	•		├			
138212 18/01 0.03-0.13	QC1		•	•	•	•	•	•	•	•	•	•	•					
138218 18/01 0.05-0.15	TP3		•	•	•	•	•	•	•	•	•	•	•					
138222 18/01 0.05-0.15	TP4		•	•	•	•	•	•	•	•	•	•	•				$\dashv$	
138225 18/01 0.05-0.15	TP5	•	-	•			-	-			-	-					-+	
138231 18/01 0.05-0.15	TP6		٠	•	•	٠	٠	•	•	•	٠	٠	٠				-+	
138234 18/01 0.05-0.15	TP7		•	•	•	•	•	•	•	•	•	•	•					
138239 18/01 0.05-0.15	TP8		•	•	•	•	•	•	•	•	•	•	•					
138245 18/01 0.05-0.15	TP9		٠	٠	٠	٠	٠	٠	•	•	٠	٠	٠				-	
138248 18/01 0.05-0.15	TP10	٠		٠														
138251 18/01 0.05-0.15	TP11		٠	٠	٠	٠	٠	٠	•	•	٠	٠	٠					
138255 18/01 0.05-0.15	TP12		٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠				$\neg$	
138259 18/01 0.05-0.15	TP13		٠	٠	•	٠	٠	٠	•	•	٠	٠	٠					
138263 18/01 0.05-0.15	TP14		٠	٠	٠	٠	٠	٠	•	٠	٠	٠	٠					
138267 18/01 0.05-0.15	TP15	٠		٠														
138270 18/01 0.05-0.15	TP16		•	•	•	٠	٠	٠	٠	•	•	•	٠					
138271 18/01	QC9		٠	٠	•	٠	٠	٠	٠	٠	٠	٠	٠					
138275 18/01 0.05-0.15	TP17		٠	٠	•	٠	٠	٠	٠	٠	٠	٠	٠					
138278 18/01 0.05-0.15	TP18		•	•	•	٠	٠	٠	٠	٠	•	٠	•					
138282 18/01 0.05-0.15	TP19		•	•	•	٠	٠	٠	٠	٠	•	٠	٠					
138286 18/01 0.05-0.15	TP20	•		•														
138291 18/01 0.05-0.15	TP21		٠	٠	٠	٠	•	٠	•	•	٠	٠	٠					
138295 18/01 0.4-0.5	TP22		٠	٠	•	•	٠	٠	•	•	٠	٠	٠					
	Totals:	4	20	24	20	20	20	20	20	20	20	20	20					





results of tests, calibrations and/or measurements results of tests, canorations and included in this document are traceable to Australian/national standards. NATA is a signatory to Australian and a standards. NATA is a the APLAC mutual recognition arrangem mutual recognition of the equivalence calibration and inspection reports.



AUSTRALIAN QUARANTINE AND INSPECTION SERVICE

SYDNEY License No. N0356

Quarantine Approved Premises criteria 5.1 for quarantine Quarantine Approved remises criteria 5.1 for quarantine containment level 1 (QCI) facilities. Class five criteria cover premises utilised for research, analysis and testing of biological material, soil, animal, plant and human products.

#### **CUSTOMER CENTRIC - ANALYTICAL CHEMISTS**

## FINAL CERTIFICATE OF ANALYSIS - ENVIRONMENTAL DIVISION

E036019 Cover Page 1 of 4 **Laboratory Report No:** 

Connell Wagner Pty Ltd (SA) **Client Name:** plus Sample Results

**Buckland Park Client Reference:** Matt Eygenraam **Contact Name:** 

Date Received: 29/01/2008 **Chain of Custody No:** na **SOIL** Date Reported: 15/02/2008 Sample Matrix:

This Final Certificate of Analysis consists of sample results, DQI's, method descriptions, laboratory definitions, and internationally recognised NATA accreditation and endorsement. The DQO compliance relates specifically to QA/QC results as performed as part of the sample analysis, and may provide an indication of sample result quality. Transfer of report ownership from Labmark to the client shall only occur once full & final payment has been settled and verified. All report copies may be retracted where full payment has not occured within the agreed settlement period.

#### **QUALITY ASSURANCE CRITERIA**

1 in first 5-20, then 1 every 20 samples Accuracy: matrix spike:

> lcs, crm, method: 1 per analytical batch

addition per target organic method surrogate spike:

Precision: laboratory duplicate: 1 in first 5-10, then 1 every 10 samples

> laboratory triplicate: re-extracted & reported when duplicate

RPD values exceed acceptance criteria

**Holding Times:** soils, waters: Refer to LabMark Preservation & THT

table

VOC's 14 days water / soil

VAC's 7 days water or 14 days acidified

VAC's 14 days soil

SVOC's 7 days water, 14 days soil Pesticides 7 days water, 14 days soil Metals 6 months general elements

Mercury 28 days

Confirmation: target organic analysis: GC/MS, or confirmatory column

(MDL)

### QUALITY CONTROL GLOBAL ACCEPTANCE CRITERIA (GAC)

Accuracy: spike, lcs, crm general analytes 70% - 130% recovery

surrogate: phenol analytes 50% - 130% recovery

organophosphorous pesticide analytes

60% - 130% recovery

phenoxy acid herbicides, organotin

50% - 130% recovery

anion/cation bal: +/- 10% (0-3 meq/l), +/- 5% (>3 meq/l)

Precision: method blank: not detected >95% of the reported EQL

> duplicate lab 0-30% (>10xEQL), 0-75% (5-10xEQL)

RPD (metals): 0-100% (<5xEQL)

duplicate lab 0-50% (>10xEQL), 0-75% (5-10xEQL)

RPD: 0-100% (<5xEQL)

### **OUALITY CONTROL** ANALYTE SPECIFIC ACCEPTANCE CRITERIA (ASAC)

Accuracy: spike, lcs, crm analyte specific recovery data

surrogate: <3xsd of historical mean

Sensitivity: EOL: Typically 2-5 x Method Detection Limit **Uncertainty:** measurement calculated from spike, lcs:

historical analyte specific control

charts

### RESULT ANNOTATION

Data Quality Objective matrix spike recovery s: p: pending bcs: batch specific lcs Data Quality Indicator d: laboratory duplicate laboratory control sample bmb: batch specific mb lcs:

**Estimated Quantitation Limit** t: laboratory triplicate certified reference material crm:

not applicable RPD relative % difference mb: method blank

\* SYDNEY: Unit 1, 8 Leighton Place Asquith NSW 2077

Quality Control (Report signatory) david.burns@labmark.com.au

Ivan Povolny Authorising Chemist (NATA signatory)

ivan.povolny@labmark.com.au

Authorising Chemist (NATA signatory) simon.mills@labmark.com.au

This document is issued in accordance with NATA's accreditation requirements.

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#### CUSTOMER CENTRIC - ANALYTICAL CHEMISTS



**Laboratory Report: E036019** 

Cover Page 2 of 4

### **NEPC GUIDELINE COMPLIANCE - DQO**

#### GENERAL

- A. Results relate specifically to samples as received. Sample results are not corrected for matrix spike, lcs, or surrogate recovery data.
- B. EQL's are matrix dependant and may be increased due to sample dilution or matrix interference.
- C. Laboratory QA/QC samples are specific to this project.
- Inter-laboratory proficiency results are available upon request. NATA accreditation details available at www.nata.asn.au.
- E. VOC spikes & surrogates added to samples during extraction, SVOC spikes & surrogates added prior to extraction.
- F. Recovery data outside GAC limits shall be investigated and compared to ASAC (historical mean +/- 3sd). If recovery data <20%, then the relevant results for that compound are considered not reliable.
- G. Recovery data (ms, surrogate, crm, lcs) outside ASAC limits shall initiate an investigative action. Anomolous QC data is examined in conjunction with other QC samples and a final decision whether to accept or reject results is provided by the professional judgement of the senior analyst. The USEPA-CLP National Functional Guidelines are referred to for specific recommendations.
- H. Extraction (preparation) date refers to the date that sample preparation was initiated. Note that certain methods not requiring sample preparation (eg. VOCs in water, etc) may report a common extraction and analysis date.
- I. LabMark shall maintain an official copy of this Certificate of Analysis for all tracable reference purposes.

### 2. CHAIN OF CUSTODY (COC) & SAMPLE RECEIPT NOTICE (SRN) REQUIREMENTS

- A. SRN issued to client upon sample receipt & login verification.
- B. Preservation & sampling date details specified on COC and SRN, unless noted.
- C. Sample Integrity & Validated Time of Sample Receipt (VTSR) Holding Times verified (preservation may extend holding time, refer to preservation chart).

#### 3. NATA ACCREDITED METHODS

- A. NATA accreditation held for each in-house method and sample matrix type reported, unless noted below (Refer to subcontracted test reports for NATA accreditation status).
- B. NATA accredited in-house laboratory methods are referenced from NEPC, ASTM, modified USEPA / APHA documents. Corporate Accreditation No. 13542.
- C. Subcontracted analyses: Refer to Sample Receipt Notice and additional DQO comments.

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### CUSTOMER CENTRIC - ANALYTICAL CHEMISTS



**Laboratory Report: E036019** 

Cover Page 3 of 4

#### 4. QA/QC FREQUENCY COMPLIANCE TABLE SPECIFIC TO THIS REPORT

Matrix:							
Page:	Method:	Totals:	#d	%d-ratio	#t	#s	%s-ratio
1	BTEX by P&T	12	2	17%	0	1	8%
1	Volatile TPH by P&T (vTPH)	14	2	14%	0	1	7%
4	Petroleum Hydrocarbons (TPH)	15	2	13%	0	1	7%
7	Polyaromatic Hydrocarbons (PAH)	15	2	13%	0	1	7%
10	Phenols by GC/MS	2	0	0%	0	0	0%
11	Organochlorine Pesticides (OC)	17	2	12%	0	1	6%
14	Organophosphorus Pesticides (OP)	15	2	13%	0	1	7%
17	Acid extractable mercury	17	2	12%	0	1	6%
19	Volatile Aromatic Compounds (VAC)	2	0	0%	0	0	0%
21	Acid extractable metals	17	2	12%	0	1	6%
24	pH in soil	17	2	12%	0	0	0%
26	Acid extractable metals	17	2	12%	0	1	6%
28	Speciated Chromium	15	2	13%	0	1	7%
30	Fluoride	2	0	0%	0	0	0%
31	Sulphate/Sulphite	17	2	12%	0	1	6%
33	Total Cyanide	2	0	0%	0	0	0%
34	Phenoxy Acid Herbicides	15	2	13%	0	1	7%
37	Moisture	17					

#### GLOSSARY:

#d number of discrete duplicate extractions/analyses performed.

%d-ratio NEPC guideline for laboratory duplicates is 1 in 10 samples (min 10%).

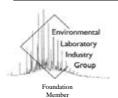
#t number of triplicate extractions/analyses performed.

#s number of spiked samples analysed.

%s-ratio USEPA guideline for laboratory matrix spikes is 1 in 20 samples (min 5%).



#### CUSTOMER CENTRIC - ANALYTICAL CHEMISTS



Laboratory Report: E036019

Cover Page 4 of 4

#### 5. ADDITIONAL COMMENTS SPECIFIC TO THIS REPORT

- A. All tests were conducted by LabMark Environmental Sydney, NATA accreditation No. 13542, Corporate Site No. 13535, unless indicated below.
- B: Metals (soil) chromium recovery for sample 138658s at 139%, lcs recovery at 112%.
- C: Hexavalent Chromium recovery for matrix spike Lab # 138658s at 54%, corresponding LCS recovery is 96%.
- D. Phenoxy acid herbicides (soil) 3,4-DCPA surrogate recovery Lab #138698 is 56%, corresponding LCS recovery is 82%.
- E. Phenoxy acid herbicides (soil) dalapon recovery for matrix spike Lab #138658s is 26%, corresponding LCS recovery is 23%.
- F. Refer to LabMark historical control chart recovery range data. QA/QC (phenoxy acid herbicides) results reported within 3sd of the historical analyte specific mean results, and therefore considered acceptable for laboratory release.
- G. Analysis received with insufficient time to analyse within technical holding time for fluoride, ph and sulphate, refer to sample receipt notice.
- H. Metals (soil) Lab # 138689d reported RPD of 38% for chromium.

Laboratory QA/QC data shall relate specifically to this report, and may provide an indication of site specific sample result quality. LabMark <u>DOES NOT</u> report <u>NON-RELEVANT BATCH QA/QC</u> data. Acceptance of this self assessment certificate does not preclude any requirement for a QA/QC review by a accredited contaminated site EPA auditor, when and wherever necessary. Laboratory QA/QC self assessment references available upon request.

\* SYDNEY: Unit 1, 8 Leighton Place Asquith NSW 2077

## HISTORICAL CONTROL CHART DATA - QA/QC

Sydney

# Analyte mean and standard deviation

PHOXY\_S

For the period:  $01/01/2007\ 12:00:00\ AM$  to  $31/12/2007\ 11:59:59\ PM$ 

### **SPIKES**

Analyte Name	<u>n</u>	<u>Mean</u>	1 SD	Range	_	2 SD	Range	-	3 SD	Range
2,4,5-T	4	72	9	63 to 81		18	54 to 90		27	45 to 99
2,4,5-TP (Silvex)	4	81	14	67 to 95		28	53 to 109		42	39 to 123
2,4-D	4	75	3	72 to 78		6	69 to 81		9	66 to 84
2,4-DB	4	93	10	83 to 103		20	73 to 113		30	63 to 123
3,4-DCPA (Surr @ 0.4 mg/kg)	4	<b>79</b>	5	74 to 84		10	69 to 89		15	64 to 94
Clopyralid	4	82	15	67 to 97		30	52 to 112		45	37 to 127
Dalapon	4	33	8	25 to 41		16	17 to 49		24	9 to 57
Dicamba	4	87	17	70 to 104		34	53 to 121		51	36 to 138
Dichlorprop	4	84	19	65 to 103		38	46 to 122		57	27 to 141
Fluxopyr	3	76	6	70 to 82		12	64 to 88		18	58 to 94
MCPA	4	<b>79</b>	10	69 to 89		20	59 to 99		30	49 to 109
MCPB	4	89	10	79 to 99		20	69 to 109		30	59 to 119
MCPP	4	85	9	76 to 94		18	67 to 103		27	58 to 112
o-Chlorophenoxy acid	4	91	15	76 to 106		30	61 to 121		45	46 to 136
p-Chlorophenoxy acid	4	77	10	67 to 87		20	57 to 97		30	47 to 107
Triclopyr	4	80	14	66 to 94		28	52 to 108		42	38 to 122
LCS_S										
Analyte Name	<u>n</u>	<u>Mean</u>	1 SD	Range	_	2 SD	Range	-	3 SD	Range
2,4,5-T	31	86	11	75 to 97		22	64 to 108		33	53 to 119
2,4,5-TP (Silvex)	31	91	12	79 to 103		24	67 to 115		36	55 to 127
2,4-D	31	86	11	75 to 97		22	64 to 108		33	53 to 119
2,4-DB	31	89	12	77 to 101		24	65 to 113		36	53 to 125
3,4-DCPA (Surr @ 0.4 mg/kg)	31	88	9	79 to 97		18	70 to 106		27	61 to 115
Clopyralid	31	75	15	60 to 90		30	45 to 105		45	30 to 120
Dalapon	29	33	14	19 to 47		28	5 to 61		42	0 to 75
Dicamba	31	88	13	75 to 101		26	62 to 114		39	49 to 127
Dichlorprop	31	90	11	79 to 101		22	68 to 112		33	57 to 123
Fluxopyr	31	73	12	61 to 85		24	49 to 97		36	37 to 109
MCPA	31	86	11	75 to 97		22	64 to 108		33	53 to 119
MCPB	31	88	12	76 to 100		24	64 to 112		36	52 to 124
MCPP	31	86	10	76 to 96		20	66 to 106		30	56 to 116
o-Chlorophenoxy acid	31	82	11	71 to 93		22	60 to 104		33	49 to 115
p-Chlorophenoxy acid	31	80	12	68 to 92		24	56 to 104		36	44 to 116
Triclopyr	31	88	12	76 to 100		24	64 to 112		36	52 to 124



Client Name: Connell Wagner Pty Ltd (SA)

**Contact Name:** Matt Eygenraam

vgenraam **Date:** 15/02/08

**Page:** 1 of 38

plus cover page

Final

Certificate

of Analysis

Client Reference: Buckland Park 31495 This report supercedes reports issued on: 08/02/08

Laboratory Identification		138654	138658	138664	138667	138671	138674	138678	138682	138685	138689
Sample Identification		TP23	TP24	TP25	TP26	TP27	TP28	TP29	TP30	TP31	TP32
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08
Laboratory Extraction (Preparation) Date		29/1/08	29/1/08	29/1/08	29/1/08	29/1/08	29/1/08	29/1/08	29/1/08	29/1/08	29/1/08
Laboratory Analysis Date		4/2/08	4/2/08	4/2/08	5/2/08	5/2/08	5/2/08	5/2/08	5/2/08	5/2/08	5/2/08
Method: E002.2 BTEX by P&T	EQL										
Benzene	0.2	< 0.2	< 0.2	< 0.2	< 0.2		< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Toluene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
meta- and para-Xylene	1	<1	<1	<1	<1		<1	<1	<1	<1	<1
ortho-Xylene	0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Total Xylene											
CDFB (Surr @ 10mg/kg)		104%	96%	107%	106%		105%	106%	101%	103%	102%
Method: E003.2 Volatile TPH by P&T (vTPH) C6 - C9 Fraction	<b>EQL</b> 10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E003.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/FID.

E002.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/PID/MSD.



**Client Name:** 

**Client Reference:** 

Connell Wagner Pty Ltd (SA)

Buckland Park 31495

**Contact Name:** Matt Eygenraam

**Page:** 2 of 38 plus cover page

Certificate

Final

**Date:** 15/02/08

of Analysis

This report supercedes reports issued on: 08/02/08

<b>Laboratory Identification</b>		138693	138698	138702	138706	138654d	138654r	138689d	138689r	138658s	lcs
Sample Identification		TP33	TP34	TP35	TP36	QC	QC	QC	QC	QC	QC
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15						
Sampling Date recorded on COC		22/1/08	23/1/08	23/1/08	23/1/08						
Laboratory Extraction (Preparation) Date		29/1/08	1/2/08	1/2/08	1/2/08	29/1/08		29/1/08		29/1/08	29/1/08
Laboratory Analysis Date		5/2/08	5/2/08	5/2/08	5/2/08	4/2/08		5/2/08		4/2/08	29/1/08
Method: E002.2 BTEX by P&T Benzene Toluene Ethylbenzene meta- and para-Xylene ortho-Xylene	EQL 0.2 0.5 0.5 1 0.5	<0.2 <0.5 <0.5 <1 <0.5	   	<0.2 <0.5 <0.5 <1 <0.5	<0.2 <0.5 <0.5 <1 <0.5	<0.2 <0.5 <0.5 <1 <0.5	1111	<0.2 <0.5 <0.5 <1 <0.5	1 1 1	87% 86% 85% 79% 90%	71% 82% 83% 84% 86%
Total Xylene CDFB (Surr @ 10mg/kg)		 102%		 105%	 104%	 107%	 3%	 104%	 2%	 97%	 81%
Method: E003.2 Volatile TPH by P&T (vTPH) C6 - C9 Fraction	<b>EQL</b> 10	<10	<10	<10	<10	<10		<10		82%	79%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E003.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/FID.

E002.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/PID/MSD.



Client Name: Connell Wagner Pty Ltd (SA)

**Contact Name:** Matt Eygenraam

Client Reference: Buckland Park 31495

Page: 3 of 38 Final

plus cover page Certificate

**Date:** 15/02/08 of Analysis

This report supercedes reports issued on: 08/02/08

Laboratory Identification		lcs	mb	mb				
Sample Identification		QC	QC	QC				
Depth (m)								
Sampling Date recorded on COC								
Laboratory Extraction (Preparation) Date		1/2/08	29/1/08	1/2/08				
Laboratory Analysis Date	_	3/2/08	29/1/08	3/2/08				
Method: E002.2 BTEX by P&T	EQL							
Benzene	0.2	101%	< 0.2	< 0.2				
Toluene	0.5	110%	< 0.5	< 0.5				
Ethylbenzene	0.5	111%	< 0.5	< 0.5				
meta- and para-Xylene	1	118%	<1	<1				
ortho-Xylene	0.5	118%	< 0.5	< 0.5				
Total Xylene								
CDFB (Surr @ 10mg/kg)		121%	78%	108%				
Method: E003.2 Volatile TPH by P&T (vTPH) C6 - C9 Fraction	<b>EQL</b> 10	104%	<10	<10				

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E003.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/FID.

E002.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/PID/MSD.



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<b>Laboratory Identification</b>		138654	138658	138664	138667	138671	138674	138678	138682	138685	138689
Sample Identification		TP23	TP24	TP25	TP26	TP27	TP28	TP29	TP30	TP31	TP32
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08
Laboratory Extraction (Preparation) Date		31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08
Laboratory Analysis Date		1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08
Method: E006.2 Petroleum Hydrocarbons (TPH) C10 - C14 Fraction C15 - C28 Fraction C29 - C36 Fraction Sum of TPH C10 - C36	EQL 50 100 100	<50 <100 <100	<50 <100 <100	<50 <100 <100	<50 <100 <100	<50 <100 <100 	<50 <100 <100	<50 <100 <100	<50 <100 <100	<50 <100 <100 	<50 <100 <100

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E006.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/FID.



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<b>Laboratory Identification</b>		138693	138698	138702	138706	138710	138654d	138654r	138689d	138689r	138658s
Sample Identification		TP33	TP34	TP35	TP36	TP37	QC	QC	QC	QC	QC
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15					
Sampling Date recorded on COC		22/1/08	23/1/08	23/1/08	23/1/08	23/1/08					
Laboratory Extraction (Preparation) Date		31/1/08	1/2/08	1/2/08	1/2/08	1/2/08	31/1/08		31/1/08		31/1/08
Laboratory Analysis Date		1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08		1/2/08		1/2/08
Method: E006.2 Petroleum Hydrocarbons (TPH) C10 - C14 Fraction C15 - C28 Fraction C29 - C36 Fraction Sum of TPH C10 - C36	EQL 50 100 100 	<50 <100 <100 	<50 <100 <100 	<50 <100 <100 	<50 <100 <100 	<50 <100 <100 	<50 <100 <100 	  	<50 <100 <100 	1 1 1	 99%  

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E006.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/FID.



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Laboratory Identification		lcs	lcs	mb	mb			
Sample Identification		QC	QC	QC	QC			
Depth (m) Sampling Data recorded on COC								
Sampling Date recorded on COC			1/2/00		1/2/00			
Laboratory Extraction (Preparation) Date		31/1/08	1/2/08	31/1/08	1/2/08			
Laboratory Analysis Date		1/2/08	1/2/08	1/2/08	1/2/08			
Method: E006.2 Petroleum Hydrocarbons (TPH) C10 - C14 Fraction C15 - C28 Fraction C29 - C36 Fraction Sum of TPH C10 - C36	EQL 50 100 100	 93%  	 95%  	<50 <100 <100	<50 <100 <100 			

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E006.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/FID.



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Laboratory Identification		138654	138658	138664	138667	138671	138674	138678	138682	138685	138689
Sample Identification		TP23	TP24	TP25	TP26	TP27	TP28	TP29	TP30	TP31	TP32
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08
Laboratory Extraction (Preparation) Date		31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08
Laboratory Analysis Date		2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08
Method: E007.2 Polyaromatic Hydrocarbons (PAH)	EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Naphthalene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.5	< 0.5	< 0.5
Acenaphthylene	0.5	< 0.5	< 0.5	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	< 0.5	<0.5	<0.5	< 0.5	<0.5	< 0.5	<0.5	< 0.5	< 0.5	<0.5
Phenanthrene	0.5	<0.5	<0.5	<0.5	< 0.5	<0.5	<0.5	<0.5	< 0.5	<0.5	<0.5
Anthracene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	< 0.5	<0.5	<0.5
Fluoranthene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	< 0.5	<0.5	<0.5
Pyrene	0.5	< 0.5	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	< 0.5	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b)&(k)fluoranthene	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzo(a) pyrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-c,d)pyrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Sum of reported PAHs											
2-FBP (Surr @ 5mg/kg)		109%	93%	111%	113%	101%	91%	109%	101%	89%	109%
TP-d14 (Surr @ 5mg/kg)		124%	101%	116%	119%	101%	93%	111%	100%	89%	113%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E007.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/MS.



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Laboratory Identification		138693	138698	138702	138706	138710	138654d	138654r	138689d	138689r	138658s
Sample Identification		TP33	TP34	TP35	TP36	TP37	QC	QC	QC	QC	QC
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15					
Sampling Date recorded on COC		22/1/08	23/1/08	23/1/08	23/1/08	23/1/08					
Laboratory Extraction (Preparation) Date		31/1/08	1/2/08	1/2/08	1/2/08	1/2/08	31/1/08		31/1/08		31/1/08
Laboratory Analysis Date		2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08		2/2/08		2/2/08
Method: E007.2 Polyaromatic Hydrocarbons (PAH) Naphthalene	<b>EQL</b> 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5		95%
Acenaphthylene	0.5	< 0.5	< 0.5	<0.5	< 0.5	< 0.5	< 0.5		< 0.5		95%
Acenaphthene Fluorene	0.5 0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5		<0.5 <0.5		94% 92%
Phenanthrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		95%
Anthracene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		95%
Fluoranthene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		94%
Pyrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		94%
Benz(a)anthracene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		92%
Chrysene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		95%
Benzo(b)&(k)fluoranthene	1	<1	<1	<1	<1	<1	<1		<1		91%
Benzo(a) pyrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		93%
Indeno(1,2,3-c,d)pyrene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		93%
Dibenz(a,h)anthracene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		93%
Benzo(g,h,i)perylene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		95%
Sum of reported PAHs											
2-FBP (Surr @ 5mg/kg)		95%	102%	95%	103%	93%	100%	9%	102%	7%	94%
TP-d14 (Surr @ 5mg/kg)		96%	108%	96%	95%	91%	106%	16%	100%	12%	98%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E007.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/MS.



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<b>Laboratory Identification</b>		lcs	lcs	mb	mb			
Sample Identification		QC	QC	QC	QC			
Depth (m)								
Sampling Date recorded on COC								
Laboratory Extraction (Preparation) Date		31/1/08	1/2/08	31/1/08	1/2/08			
Laboratory Analysis Date		1/2/08	1/2/08	1/2/08	1/2/08			
Method: E007.2 Polyaromatic Hydrocarbons (PAH) Naphthalene Acenaphthylene Acenaphthene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene Benz(a)anthracene Chrysene Benzo(b)&(k)fluoranthene Benzo(a) pyrene Indeno(1,2,3-c,d)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene	EQL 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	89% 85% 88% 83% 88% 86% 87% 88% 87% 91% 86% 83% 83%	95% 93% 95% 94% 93% 95% 92% 96% 94% 94% 94% 95% 92% 95%	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5			
Sum of reported PAHs 2-FBP (Surr @ 5mg/kg) TP-d14 (Surr @ 5mg/kg)	  	 96% 100%	 97% 98%	 102% 108%	 102% 111%			

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E007.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/MS.



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Laboratory Identification		138671	138698	lcs	lcs	mb	mb		
Sample Identification		TP27	TP34	QC	QC	QC	QC		
Depth (m)		0.05-0.15	0.05-0.15						
Sampling Date recorded on COC		22/1/08	23/1/08						
Laboratory Extraction (Preparation) Date		31/1/08	1/2/08	31/1/08	1/2/08	31/1/08	1/2/08		
Laboratory Analysis Date	_	2/2/08	2/2/08	1/2/08	1/2/08	1/2/08	1/2/08		
Method: E008.2									
Phenols by GC/MS	EQL								
Phenol	0.5	< 0.5	< 0.5	95%	101%	< 0.5	< 0.5		
2-chlorophenol	0.5	< 0.5	< 0.5	89%	98%	< 0.5	< 0.5		
2-methylphenol	0.5	< 0.5	< 0.5	100%	99%	< 0.5	< 0.5		
3-&4-methylphenol	1.0	<1.0	<1.0	86%	90%	<1.0	<1.0		
2-nitrophenol	0.5	< 0.5	< 0.5	86%	90%	< 0.5	< 0.5		
2,4-dimethylphenol	0.5	< 0.5	< 0.5	89%	98%	< 0.5	< 0.5		
2,4-dichlorophenol	0.5	< 0.5	< 0.5	72%	93%	< 0.5	< 0.5		
4-chloro-3-methylphenol	0.5	< 0.5	< 0.5	90%	108%	< 0.5	< 0.5		
2,4,6-trichlorophenol	0.5	< 0.5	< 0.5	87%	93%	< 0.5	< 0.5		
2,4,5-trichlorophenol	0.5	< 0.5	< 0.5	84%	84%	< 0.5	< 0.5		
Pentachlorophenol	1	<1	<1	86%	79%	<1	<1		
Sum of reported phenols									
2-FP (Surr @ 5mg/kg)		105%	101%	99%	101%	108%	112%		
Phenol-d5 (Surr @ 5mg/kg)		93%	75%	93%	91%	100%	104%		
2,4,6-TBP (Surr @ 5mg/kg)		106%	105%	107%	105%	113%	116%		

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E008.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/MS.



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Matt Eygenraam **Contact Name:** 

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Laboratory Identification		138654	138658	138664	138667	138671	138674	138675	138678	138682	138685
Sample Identification		TP23	TP24	TP25	TP26	TP27	TP28	QC13	TP29	TP30	TP31
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08
Laboratory Extraction (Preparation) Date		31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08
Laboratory Analysis Date		2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08
Method: E013.2 Organochlorine Pesticides (OC) a-BHC Hexachlorobenzene b-BHC g-BHC (Lindane) d-BHC Heptachlor Aldrin Heptachlor epoxide trans-chlordane Endosulfan I cis-chlordane Dieldrin 4,4-DDE Endrin Endosulfan II	EQL 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.0	<0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05	<0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05	<0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05	<0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05	<0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05	<0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05	<0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05	<0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05	<0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05	<0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05
4,4-DDD	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4,4-DDT	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Methoxychlor  DBC (Surr @ 0.2mg/kg)	0.2	<0.2 115%	<0.2 98%	<0.2 99%	<0.2 108%	<0.2 99%	<0.2 89%	<0.2 98%	<0.2 105%	<0.2 99%	<0.2 90%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E013.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/dual ECD.



Connell Wagner Pty Ltd (SA)

Matt Eygenraam **Contact Name:** 

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Laboratory Identification		138689	138693	138694	138698	138702	138706	138710	138654d	138654r	138689d
Sample Identification		TP32	TP33	QC15	TP34	TP35	TP36	TP37	QC	QC	QC
Depth (m)		0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15			
Sampling Date recorded on COC		22/1/08	22/1/08	22/1/08	23/1/08	23/1/08	23/1/08	23/1/08			
Laboratory Extraction (Preparation) Date		31/1/08	31/1/08	31/1/08	1/2/08	1/2/08	1/2/08	1/2/08	31/1/08		31/1/08
Laboratory Analysis Date		2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08		2/2/08
Method: E013.2 Organochlorine Pesticides (OC) a-BHC Hexachlorobenzene b-BHC g-BHC (Lindane)	EQL 0.05 0.05 0.05 0.05	<0.05 <0.05 <0.05 <0.05	  	<0.05 <0.05 <0.05 <0.05							
d-BHC	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05		< 0.05
Heptachlor Aldrin	0.05 0.05	<0.05 <0.05		<0.05 <0.05							
Heptachlor epoxide trans-chlordane	0.05 0.05	<0.05 <0.05		<0.05 <0.05							
Endosulfan I cis-chlordane	0.05 0.05	<0.05 <0.05		<0.05 <0.05							
Dieldrin 4,4-DDE	0.05 0.05	<0.05 <0.05		<0.05 <0.05							
Endrin Endosulfan II	0.05 0.05	<0.05 <0.05		<0.05 <0.05							
4,4-DDD Endosulfan sulphate	0.05 0.05	<0.05 <0.05		<0.05 <0.05							
4,4-DDT Methoxychlor	0.2 0.2	<0.2 <0.2		<0.2 <0.2							
DBC (Surr @ 0.2mg/kg)		107%	95%	99%	99%	93%	94%	90%	106%	8%	98%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E013.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/dual ECD.



**Client Reference:** 

Connell Wagner Pty Ltd (SA) **Client Name:** 

Matt Eygenraam **Contact Name:** 

This report supercedes reports issued on: 08/02/08

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Laboratory Identification		138689r	138658s	lcs	lcs	mb	mb		
Sample Identification		QC	QC	QC	QC	QC	QC		
Depth (m)									
Sampling Date recorded on COC									
Laboratory Extraction (Preparation) Date			31/1/08	31/1/08	1/2/08	31/1/08	1/2/08		
Laboratory Analysis Date			2/2/08	2/2/08	2/2/08	2/2/08	2/2/08		
Method: E013.2									
Organochlorine Pesticides (OC)	EQL								
a-BHC	0.05		94%	98%	90%	< 0.05	< 0.05		
Hexachlorobenzene	0.05		96%	100%	93%	< 0.05	< 0.05		
b-BHC	0.05		107%	103%	95%	< 0.05	< 0.05		
g-BHC (Lindane)	0.05		102%	101%	92%	< 0.05	< 0.05		
d-BHC	0.05		108%	104%	93%	< 0.05	< 0.05		
Heptachlor	0.05		105%	105%	95%	< 0.05	< 0.05		
Aldrin	0.05		104%	104%	94%	< 0.05	< 0.05		
Heptachlor epoxide	0.05		105%	109%	100%	< 0.05	< 0.05		
trans-chlordane	0.05		107%	107%	95%	< 0.05	< 0.05		
Endosulfan I	0.05		102%	106%	95%	< 0.05	< 0.05		
cis-chlordane	0.05		101%	106%	94%	< 0.05	< 0.05		
Dieldrin	0.05		107%	108%	96%	< 0.05	< 0.05		
4,4-DDE	0.05		112%	113%	100%	< 0.05	< 0.05		
Endrin	0.05		108%	106%	94%	< 0.05	< 0.05		
Endosulfan II	0.05		106%	106%	94%	< 0.05	< 0.05		
4,4-DDD	0.05		113%	104%	92%	< 0.05	< 0.05		
Endosulfan sulphate	0.05		107%	107%	95%	< 0.05	< 0.05		
4,4-DDT	0.2		100%	102%	89%	< 0.2	< 0.2		
Methoxychlor	0.2		109%	109%	98%	< 0.2	< 0.2		
DBC (Surr @ 0.2mg/kg)		9%	98%	103%	103%	103%	103%		

Buckland Park 31495

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E013.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/dual ECD.



Connell Wagner Pty Ltd (SA)

Matt Eygenraam

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Buckland Park 31495 **Client Reference:** This report supercedes reports issued on: 08/02/08

Laboratory Identification		138654	138658	138664	138667	138674	138675	138678	138682	138685	138689
Sample Identification		TP23	TP24	TP25	TP26	TP28	QC13	TP29	TP30	TP31	TP32
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08
Laboratory Extraction (Preparation) Date		31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08
Laboratory Analysis Date		2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08
Method: E014.2 Organophosphorus Pesticides (OP) Dichlorvos	<b>EQL</b> 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mevinphos (Phosdrin)	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Demeton (total)	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethoprop	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Monocrotophos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Phorate	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dimethoate	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Diazinon	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Disulfoton	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Methyl parathion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ronnel	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fenitrothion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Malathion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorpyrifos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Fenthion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Parathion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Stirofos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Prothiofos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Azinophos methyl	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Coumaphos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
TPP (Surr @ 2mg/kg)		125%	106%	115%	115%	98%	104%	108%	104%	93%	114%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E014.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/MSD.



Connell Wagner Pty Ltd (SA)

Matt Eygenraam **Contact Name:** 

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Buckland Park 31495 **Client Reference:** This report supercedes reports issued on: 08/02/08

Laboratory Identification		138693	138694	138702	138706	138710	138654d	138654r	138689d	138689r	138658s
Sample Identification		TP33	QC15	TP35	TP36	TP37	QC	QC	QC	QC	QC
Depth (m)		0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15					
Sampling Date recorded on COC		22/1/08	22/1/08	23/1/08	23/1/08	23/1/08					
Laboratory Extraction (Preparation) Date		31/1/08	31/1/08	1/2/08	1/2/08	1/2/08	31/1/08		31/1/08		31/1/08
Laboratory Analysis Date	_	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08	2/2/08		2/2/08		2/2/08
Method: E014.2 Organophosphorus Pesticides (OP) Dichlorvos	<b>EQL</b> 0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5		129%
Mevinphos (Phosdrin)	0.5	< 0.5	< 0.5	<0.5	< 0.5	< 0.5	< 0.5		< 0.5		96%
Demeton (total)	1	<1	<1	<1	<1	<1	<1		<1		126%
Ethoprop	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		117%
Monocrotophos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		96%
Phorate	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		124%
Dimethoate	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		115%
Diazinon	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		116%
Disulfoton	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		127%
Methyl parathion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		121%
Ronnel	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		121%
Fenitrothion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		121%
Malathion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		130%
Chlorpyrifos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		121%
Fenthion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		126%
Parathion	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		123%
Stirofos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		116%
Prothiofos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		125%
Azinophos methyl	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		116%
Coumaphos	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5		122%
TPP (Surr @ 2mg/kg)		100%	105%	99%	100%	93%	110%	13%	104%	9%	101%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E014.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/MSD.



E036019 **Laboratory Report No:** 

Connell Wagner Pty Ltd (SA) **Client Name:** 

Matt Eygenraam **Contact Name:** 

Buckland Park 31495 **Client Reference:** 

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of Analysis **Date:** 15/02/08

This report supercedes reports issued on: 08/02/08

<b>Laboratory Identification</b>		lcs	lcs	mb	mb			
Sample Identification		QC	QC	QC	QC			
Depth (m)								
Sampling Date recorded on COC								
Laboratory Extraction (Preparation) Date		31/1/08	1/2/08	31/1/08	1/2/08			
Laboratory Analysis Date	_	2/2/08	2/2/08	2/2/08	2/2/08			
Method: E014.2 Organophosphorus Pesticides (OP) Dichlorvos Mevinphos (Phosdrin) Demeton (total) Ethoprop Monocrotophos Phorate Dimethoate Diazinon Disulfoton Methyl parathion Ronnel Fenitrothion Malathion Chlorpyrifos Fenthion Parathion Stirofos	EQL 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	129% 97% 124% 116% 112% 125% 114% 115% 127% 104% 119% 110% 127% 116% 130% 118% 108%	124% 96% 118% 114% 107% 123% 106% 106% 120% 100% 110% 121% 107% 128% 113% 100%	<0.5 <0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5			
Prothiofos	0.5	120%	111%	<0.5	< 0.5			
Azinophos methyl	0.5	102%	94%	<0.5	< 0.5			
Coumaphos TPP (Surr @ 2mg/kg)	0.5	115% <i>111%</i>	105% 96%	<0.5 102%	<0.5 109%			

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E014.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45). Analysis by GC/MSD.



Client Name: Connell Wagner Pty Ltd (SA)

Contact Name: Matt Eygenraam

Client Reference: Buckland Park 31495

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Laboratory Identification		138654	138658	138664	138667	138671	138674	138675	138678	138682	138685
Sample Identification		TP23	TP24	TP25	TP26	TP27	TP28	QC13	TP29	TP30	TP31
Depth (m) Sampling Date recorded on COC		0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08
Laboratory Extraction (Preparation) Date Laboratory Analysis Date		31/1/08 1/2/08	31/1/08 1/2/08	31/1/08 1/2/08	31/1/08 1/2/08	31/1/08 1/2/08	31/1/08 1/2/08	31/1/08 1/2/08	31/1/08 1/2/08	31/1/08 1/2/08	31/1/08 1/2/08
Method: E026.2 Acid extractable mercury Mercury	<b>EQL</b> 0.05	<0.05	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E026.2: 0.5g digested with nitric/hydrochloric acid. Analysis by CV-ICP-MS or FIMS.

Laboratory Identification		138689	138693	138694	138698	138702	138706	138710	138654d	138654r	138689d
Sample Identification		TP32	TP33	QC15	TP34	TP35	TP36	TP37	QC	QC	QC
Depth (m)		0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15			
Sampling Date recorded on COC		22/1/08	22/1/08	22/1/08	23/1/08	23/1/08	23/1/08	23/1/08			
Laboratory Extraction (Preparation) Date		31/1/08	31/1/08	31/1/08	1/2/08	1/2/08	1/2/08	1/2/08	31/1/08		31/1/08
Laboratory Analysis Date		1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08		1/2/08
Method: E026.2 Acid extractable mercury Mercury	<b>EQL</b> 0.05	<0.05	<0.05	<0.05	0.08	<0.05	0.05	<0.05	<0.05	1	<0.05

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E026.2: 0.5g digested with nitric/hydrochloric acid. Analysis by CV-ICP-MS or FIMS.



Connell Wagner Pty Ltd (SA) **Client Name:** 

Matt Eygenraam **Contact Name:** 

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Buckland Park 31495 **Client Reference:** 

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Laboratory Identification		138689r	138658s	crm	crm	lcs	lcs	mb	mb	
Sample Identification		QC	QC	QC	QC	QC	QC	QC	QC	
Depth (m) Sampling Date recorded on COC										
Laboratory Extraction (Preparation) Date Laboratory Analysis Date			31/1/08 1/2/08	31/1/08 31/1/08	1/2/08 1/2/08	31/1/08 31/1/08	1/2/08 1/2/08	31/1/08 31/1/08	1/2/08 1/2/08	
Method: E026.2 Acid extractable mercury Mercury	<b>EQL</b> 0.05		80%	123%	79%	94%	71%	<0.05	<0.05	

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E026.2: 0.5g digested with nitric/hydrochloric acid. Analysis by CV-ICP-MS or FIMS.



E036019 **Laboratory Report No:** 

Connell Wagner Pty Ltd (SA) **Client Name:** 

**Contact Name:** Matt Eygenraam

Buckland Park 31495 **Client Reference:** 

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of Analysis **Date:** 15/02/08

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<b>Laboratory Identification</b>		138671	138698	lcs	lcs	mb	mb		
Sample Identification		TP27	TP34	QC	QC	QC	QC		
Depth (m)		0.05-0.15	0.05-0.15						
Sampling Date recorded on COC		22/1/08	23/1/08						
Laboratory Extraction (Preparation) Date		29/1/08	1/2/08	29/1/08	1/2/08	29/1/08	1/2/08		
Laboratory Analysis Date		5/2/08	5/2/08	1/2/08	2/2/08	31/1/08	2/2/08		
Method: E009.2									
Volatile Aromatic Compounds (VAC)	EQL								
Benzene	0.5	< 0.5	< 0.5	95%	87%	< 0.5	< 0.5		
Toluene	0.5	< 0.5	< 0.5	80%	87%	< 0.5	< 0.5		
Chlorobenzene	0.5	< 0.5	< 0.5	117%	86%	< 0.5	< 0.5		
Ethylbenzene	0.5	< 0.5	< 0.5	111%	87%	< 0.5	< 0.5		
m- & p-xylene	1	<1	<1	106%	88%	<1	<1		
Styrene	0.5	< 0.5	< 0.5	115%	86%	< 0.5	< 0.5		
o-xylene	0.5	< 0.5	< 0.5	110%	87%	< 0.5	< 0.5		
Isopropylbenzene	0.5	< 0.5	< 0.5	115%	86%	< 0.5	< 0.5		
Bromobenzene	0.5	< 0.5	< 0.5	112%	87%	< 0.5	< 0.5		
n-propylbenzene	0.5	< 0.5	< 0.5	114%	86%	< 0.5	< 0.5		
2-chlorotoluene	0.5	< 0.5	< 0.5	111%	86%	< 0.5	< 0.5		
4-chlorotoluene	0.5	< 0.5	< 0.5	113%	85%	< 0.5	< 0.5		
1,3,5-trimethylbenzene	0.5	< 0.5	< 0.5	114%	86%	< 0.5	< 0.5		
tert-butylbenzene	0.5	< 0.5	< 0.5	119%	86%	< 0.5	< 0.5		
1,2,4-trimethylbenzene	0.5	< 0.5	< 0.5	104%	87%	< 0.5	< 0.5		
sec-butylbenzene	0.5	< 0.5	< 0.5	122%	87%	< 0.5	< 0.5		
1,3-dichlorobenzene	0.5	< 0.5	< 0.5	110%	85%	< 0.5	< 0.5		
1,4-dichlorobenzene	0.5	< 0.5	< 0.5	112%	88%	< 0.5	< 0.5		
p-isopropyltoluene	0.5	< 0.5	< 0.5	121%	87%	< 0.5	< 0.5		
1,2-dichlorobenzene	0.5	< 0.5	< 0.5	110%	87%	< 0.5	< 0.5		
n-butylbenzene	0.5	< 0.5	< 0.5	127%	89%	< 0.5	< 0.5		
1,2,4-trichlorobenzene	0.5	< 0.5	< 0.5	128%	88%	< 0.5	< 0.5		
Naphthalene	0.5	< 0.5	< 0.5	98%	87%	< 0.5	< 0.5		
1,2,3-trichlorobenzene	0.5	< 0.5	< 0.5	127%	89%	< 0.5	< 0.5		
BCP (Surr @ 20mg/kg)		86%	86%	82%	86%	126%	115%		
DCFB (Surr @ 20mg/kg)		86%	87%	79%	85%	125%	112%		



**Client Name:** 

**Contact Name:** 

**Client Reference:** 

E036019

Connell Wagner Pty Ltd (SA)

Matt Eygenraam

Buckland Park 31495

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**Date:** 15/02/08 of Analysis

This report supercedes reports issued on: 08/02/08

Results expressed in mg/kg dry weight unless otherwise specified Comments:

E009.2: 8-10g soil extracted with 20ml methanol. Analysis by P&T/GC/MS.



Connell Wagner Pty Ltd (SA)

Matt Eygenraam **Contact Name:** 

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This report supercedes reports issued on: 08/02/08

Laboratory Identification		138654	138658	138664	138667	138671	138674	138675	138678	138682	138685
Sample Identification		TP23	TP24	TP25	TP26	TP27	TP28	QC13	TP29	TP30	TP31
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08
Laboratory Extraction (Preparation) Date		31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08	31/1/08
Laboratory Analysis Date	_	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08
Method: E022.2											
Acid extractable metals	EQL										
Arsenic	1	1	3	5	2	1	1	1	11	3	1
Beryllium	1	<1	1	2	<1		<1	<1	<1	<1	<1
Boron	5	<5	5	14	6		<5	<5	16	5	<5
Cadmium	0.1	< 0.1	0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chromium	1	6	31	53	9	7	10	9	22	11	14
Cobalt	1					2					
Copper	2	3	18	32	4	3	4	4	8	4	6
Lead	2	3	13	20	6	4	5	4	10	6	6
Manganese	5	34	393	443	130		116	97	457	109	93
Molybdenum	1					<1					
Nickel	1					2					
Selenium	2					<2					
Tin	1					<1					
Zinc	5	10	34	53	13	6	8	11	14	10	10

Results expressed in mg/kg dry weight unless otherwise specified

Comments: - # Percent recovery not available due to significant background levels of analyte in sample.

E022.2: 0.5g digested in nitric/hydrochloric acid. Analysis by ICP-MS.



Connell Wagner Pty Ltd (SA)

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Laboratory Identification		138689	138693	138694	138698	138702	138706	138710	138654d	138654r	138689d
Sample Identification		TP32	TP33	QC15	TP34	TP35	TP36	TP37	QC	QC	QC
Depth (m)		0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15			
Sampling Date recorded on COC		22/1/08	22/1/08	22/1/08	23/1/08	23/1/08	23/1/08	23/1/08			
Laboratory Extraction (Preparation) Date		31/1/08	31/1/08	31/1/08	1/2/08	1/2/08	1/2/08	1/2/08	31/1/08		31/1/08
Laboratory Analysis Date	_	1/2/08	1/2/08	1/2/08	2/2/08	2/2/08	2/2/08	2/2/08	1/2/08		1/2/08
Method: E022.2											
Acid extractable metals	EQL										
Arsenic	1	2	2	2	3	3	3	3	<1	>0%	2
Beryllium	1	<1	<1	<1		1	1	<1	<1		<1
Boron	5	9	6	<5		5	7	<5	<5		5
Cadmium	0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	0.1	< 0.1	< 0.1		< 0.1
Chromium	1	19	12	12	25	34	30	19	5	18%	13
Cobalt	1				9						
Copper	2	10	6	5	18	21	17	13	3	0%	7
Lead	2	7	6	6	12	13	13	15	3	0%	5
Manganese	5	183	71	66		347	285	604	33	3%	158
Molybdenum	1				<1						
Nickel	1				13						
Selenium	2				<2						
Tin	1				<1						
Zinc	5	13	10	9	16	20	18	12	10	0%	10

Results expressed in mg/kg dry weight unless otherwise specified

Comments: - # Percent recovery not available due to significant background levels of analyte in sample.

E022.2: 0.5g digested in nitric/hydrochloric acid. Analysis by ICP-MS.



**Client Reference:** 

Client Name: Connell Wagner Pty Ltd (SA)

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Laboratory Identification		138689r	138658s	crm	crm	lcs	lcs	mb	mb	
Sample Identification		QC	QC	QC	QC	QC	QC	QC	QC	
Depth (m)										
Sampling Date recorded on COC										
Laboratory Extraction (Preparation) Date			31/1/08	31/1/08	1/2/08	31/1/08	1/2/08	31/1/08	1/2/08	
Laboratory Analysis Date	_		1/2/08	31/1/08	2/2/08	31/1/08	2/2/08	31/1/08	2/2/08	
Method: E022.2	FOL									
Acid extractable metals	EQL	00/	020/	1050/	000/	1040/	070/	.1	.1	
Arsenic	1	0%	93%	105%	99%	104%	97%	<1	<1	
Beryllium	1 7		97%	96%	98%	94%	98%	<1	<1	
Boron	5	57%	109%	73%	72%	85%	104%	<5	<5	
Cadmium	0.1		96%	97%	89%	98%	98%	< 0.1	< 0.1	
Chromium	1	38%	139%	106%	98%	112%	99%	<1	<1	
Cobalt	1			104%	95%	102%	96%	<1	<1	
Copper	2	35%	108%	105%	97%	105%	99%	<2	<2	
Lead	2	33%	107%	96%	89%	107%	105%	<2	<2	
Manganese	5	15%	#	101%	94%	106%	95%	<5	<5	
Molybdenum	1			109%	104%	98%	95%	<1	<1	
Nickel	1			104%	98%	102%	95%	<1	<1	
Selenium	2			95%	85%	108%	99%	<2	<2	
Tin	1			70%	72%	105%	100%	<1	<1	
Zinc	5	26%	109%	98%	88%	100%	102%	<5	<5	

Results expressed in mg/kg dry weight unless otherwise specified

Comments: - # Percent recovery not available due to significant background levels of analyte in sample.

E022.2: 0.5g digested in nitric/hydrochloric acid. Analysis by ICP-MS.



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Matt Eygenraam

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Laboratory Identification		138654	138658	138664	138667	138671	138674	138675	138678	138682	138685
Sample Identification		TP23	TP24	TP25	TP26	TP27	TP28	QC13	TP29	TP30	TP31
Depth (m) Sampling Date recorded on COC		0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08
Laboratory Extraction (Preparation) Date Laboratory Analysis Date		31/1/08 31/1/08	31/1/08 31/1/08	31/1/08 31/1/08	31/1/08 31/1/08	31/1/08 31/1/08	31/1/08 31/1/08	31/1/08 31/1/08	31/1/08 31/1/08	31/1/08 31/1/08	31/1/08 31/1/08
Method: E018.2 pH in soil pH (pH units)	<b>EQL</b> 0.1	6.2	6.7	6.8	7.9	6.8	8.8	8.8	7.7	6.1	6.5

Results expressed in pH units unless otherwise specified

Comments:

E018.2: 1:5 soil leachate. Followed by measurement by pH ion selective electrode. Results expressed as per leachate.

Laboratory Identification		138689	138693	138694	138698	138702	138706	138710	138654d	138654r	138689d
Sample Identification		TP32	TP33	QC15	TP34	TP35	TP36	TP37	QC	QC	QC
Depth (m)		0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15			
Sampling Date recorded on COC		22/1/08	22/1/08	22/1/08	23/1/08	23/1/08	23/1/08	23/1/08			
Laboratory Extraction (Preparation) Date		31/1/08	31/1/08	31/1/08	1/2/08	1/2/08	1/2/08	1/2/08	31/1/08		31/1/08
Laboratory Analysis Date		31/1/08	31/1/08	31/1/08	1/2/08	1/2/08	1/2/08	1/2/08	31/1/08		31/1/08
Method: E018.2 pH in soil pH (pH units)	<b>EQL</b> 0.1	7.0	6.5	6.9	6.8	6.3	6.5	6.9	6.3	2%	7.1

Results expressed in pH units unless otherwise specified

Comments:

E018.2: 1:5 soil leachate. Followed by measurement by pH ion selective electrode. Results expressed as per leachate.



Connell Wagner Pty Ltd (SA) **Client Name:** 

**Contact Name:** Matt Eygenraam **Date:** 15/02/08

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<b>Laboratory Identification</b>		138689r					
Sample Identification		QC					
Depth (m)							
Sampling Date recorded on COC							
Laboratory Extraction (Preparation) Date							
Laboratory Analysis Date	_						
Method: E018.2 pH in soil pH (pH units)	<b>EQL</b> 0.1	1%					

Results expressed in pH units unless otherwise specified

Comments:

E018.2: 1:5 soil leachate. Followed by measurement by pH ion selective electrode. Results expressed as per leachate.



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Laboratory Identification		138654	138658	138664	138667	138671	138674	138675	138678	138682	138685
Sample Identification		TP23	TP24	TP25	TP26	TP27	TP28	QC13	TP29	TP30	TP31
Depth (m) Sampling Date recorded on COC		0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08
Laboratory Extraction (Preparation) Date Laboratory Analysis Date		31/1/08 31/1/08	31/1/08 31/1/08	31/1/08 31/1/08	31/1/08 31/1/08	31/1/08 31/1/08	31/1/08 31/1/08	31/1/08 31/1/08	31/1/08 31/1/08	31/1/08 31/1/08	31/1/08 31/1/08
Method: E020.2/E030.2 Acid extractable metals Sulphur	<b>EQL</b> 100	200	300	500	300	<100	100	100	200	100	100

Results expressed in mg/kg dry weight unless otherwise specified

Comments: -

E020.2/E030.2: 0.5g digested with nitric/hydrochloric acid . Analysis by AAS and/or ICP-OES.

Laboratory Identification		138689	138693	138694	138698	138702	138706	138710	138654d	138654r	138689d
Sample Identification		TP32	TP33	QC15	TP34	TP35	TP36	TP37	QC	QC	QC
Depth (m)		0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15			
Sampling Date recorded on COC		22/1/08	22/1/08	22/1/08	23/1/08	23/1/08	23/1/08	23/1/08			
Laboratory Extraction (Preparation) Date		31/1/08	31/1/08	31/1/08	1/2/08	1/2/08	1/2/08	1/2/08	31/1/08		31/1/08
Laboratory Analysis Date		31/1/08	31/1/08	31/1/08	1/2/08	1/2/08	1/2/08	1/2/08	31/1/08		31/1/08
Method: E020,2/E030.2 Acid extractable metals Sulphur	<b>EQL</b> 100	200	100	100	200	300	300	200	200	0%	200

Results expressed in mg/kg dry weight unless otherwise specified

Comments: -

E020.2/E030.2: 0.5g digested with nitric/hydrochloric acid . Analysis by AAS and/or ICP-OES.



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<b>Laboratory Identification</b>		138689r	138658s	crm	lcs	mb			
Sample Identification		QC	QC	QC	QC	QC			
Depth (m)									
Sampling Date recorded on COC									
Laboratory Extraction (Preparation) Date			31/1/08	31/1/08	31/1/08	31/1/08			
Laboratory Analysis Date	_		31/1/08	31/1/08	31/1/08	31/1/08			
Method: E020.2/E030.2 Acid extractable metals Sulphur	<b>EQL</b> 100	0%	114%	98%	105%	<100			

Results expressed in mg/kg dry weight unless otherwise specified

Comments: -

E020.2/E030.2: 0.5g digested with nitric/hydrochloric acid . Analysis by AAS and/or ICP-OES.



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Laboratory Identification		138654	138658	138664	138667	138674	138675	138678	138682	138685	138689
Sample Identification		TP23	TP24	TP25	TP26	TP28	QC13	TP29	TP30	TP31	TP32
Depth (m) Sampling Date recorded on COC		0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08
Laboratory Extraction (Preparation) Date Laboratory Analysis Date		31/1/08 5/2/08	31/1/08 5/2/08	31/1/08 5/2/08	31/1/08 5/2/08	31/1/08 5/2/08	31/1/08 5/2/08	31/1/08 5/2/08	31/1/08 5/2/08	31/1/08 5/2/08	31/1/08 5/2/08
Method: E043.2/E057.2 Speciated Chromium Hexavalent Chromium Trivalent Chromium	<b>EQL</b> 1 1	<1 5	<1 30	<1 52	<1 8	<1 9	<1 8	<1 21	<1 10	<1 13	<1 18

Results expressed in mg/kg dry weight unless otherwise specified

Comments: -

E043.2/E057.2: Alkaline digestion followed by determination by colour.

Laboratory Identification		138693	138694	138702	138706	138710	138654d	138654r	138689d	138689r	138658s
Sample Identification		TP33	QC15	TP35	TP36	TP37	QC	QC	QC	QC	QC
Depth (m) Sampling Date recorded on COC		0.05-0.15 22/1/08	 22/1/08	0.05-0.15 23/1/08	0.05-0.15 23/1/08	0.05-0.15 23/1/08					
Laboratory Extraction (Preparation) Date Laboratory Analysis Date		31/1/08 5/2/08	31/1/08 5/2/08	1/2/08 5/2/08	1/2/08 5/2/08	1/2/08 5/2/08	31/1/08 5/2/08	1-	31/1/08 5/2/08		31/1/08 5/2/08
Method: E043.2/E057.2 Speciated Chromium Hexavalent Chromium Trivalent Chromium	<b>EQL</b> 1 1	<1 11	<1 11	<1 33	1 29	<1 18	<1 4	 22%	<1 12	 40%	54% 

Results expressed in mg/kg dry weight unless otherwise specified

Comments: -

E043.2/E057.2: Alkaline digestion followed by determination by colour.



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Connell Wagner Pty Ltd (SA) **Client Name:** 

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<b>Laboratory Identification</b>		lcs	lcs	mb	mb			
Sample Identification		QC	QC	QC	QC			
Depth (m)								
Sampling Date recorded on COC								
Laboratory Extraction (Preparation) Date		31/1/08	1/2/08	31/1/08	1/2/08			
Laboratory Analysis Date		5/2/08	5/2/08	5/2/08	5/2/08			
Method: E043.2/E057.2 Speciated Chromium Hexavalent Chromium	EQL 1	96%	94%	<1	<1			

Results expressed in mg/kg dry weight unless otherwise specified

Comments: -

E043.2/E057.2: Alkaline digestion followed by determination by colour.



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Laboratory Identification		138671	138698	lcs	lcs	mb	mb		
Sample Identification		TP27	TP34	QC	QC	QC	QC		
Depth (m)		0.05-0.15	0.05-0.15						
Sampling Date recorded on COC		22/1/08	23/1/08						
Laboratory Extraction (Preparation) Date		31/1/08	1/2/08	31/1/08	1/2/08	31/1/08	1/2/08		
Laboratory Analysis Date		4/2/08	4/2/08	4/2/08	4/2/08	4/2/08	4/2/08		
Method: E034.2/E045.2 Fluoride Fluoride	EQL 1	<1	3	89%	89%	<1	<1		

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E034.2/E045.2: 1:5 water extraction. Determined by FIA-Ion Selective Electrode and/or by Ion Chromatography.



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Laboratory Identification		138654	138658	138664	138667	138671	138674	138675	138678	138682	138685
Sample Identification		TP23	TP24	TP25	TP26	TP27	TP28	QC13	TP29	TP30	TP31
Depth (m) Sampling Date recorded on COC		0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08
Laboratory Extraction (Preparation) Date Laboratory Analysis Date		31/1/08 4/2/08	31/1/08 4/2/08	31/1/08 4/2/08	31/1/08 4/2/08	31/1/08 4/2/08	31/1/08 4/2/08	31/1/08 4/2/08	31/1/08 4/2/08	31/1/08 4/2/08	31/1/08 4/2/08
Method: E042.2/E045.2 Sulphate/Sulphite Sulphate	<b>EQL</b> 10	30	20	40	<10	<10	<10	<10	30	30	10

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E042.2/E045.2: 1:5 water extraction. Determination by colour and/or Ion Chromatography. Note Sulphite test is not covered by NATA accreditation.

Laboratory Identification		138689	138693	138694	138698	138702	138706	138710	138654d	138654r	138689d
Sample Identification		TP32	TP33	QC15	TP34	TP35	TP36	TP37	QC	QC	QC
Depth (m)		0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15			
Sampling Date recorded on COC		22/1/08	22/1/08	22/1/08	23/1/08	23/1/08	23/1/08	23/1/08			
Laboratory Extraction (Preparation) Date		31/1/08	31/1/08	31/1/08	1/2/08	1/2/08	1/2/08	1/2/08	31/1/08		31/1/08
Laboratory Analysis Date		4/2/08	4/2/08	4/2/08	4/2/08	4/2/08	4/2/08	4/2/08	4/2/08		4/2/08
Method: E042.2/E045.2 Sulphate/Sulphite Sulphate	<b>EQL</b> 10	<10	30	40	20	350	140	30	20	40%	<10

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E042.2/E045.2: 1:5 water extraction. Determination by colour and/or Ion Chromatography. Note Sulphite test is not covered by NATA accreditation.



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Laboratory Identification		138689r	138658s	lcs	lcs	mb	mb		
Sample Identification		QC	QC	QC	QC	QC	QC		
Depth (m)									
Sampling Date recorded on COC									
Laboratory Extraction (Preparation) Date			31/1/08	31/1/08	1/2/08	31/1/08	1/2/08		
Laboratory Analysis Date	<u> </u>		4/2/08	4/2/08	4/2/08	4/2/08	4/2/08		
Method: E042.2/E045.2 Sulphate/Sulphite Sulphate	<b>EQL</b> 10		92%	95%	96%	<10	<10		

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E042.2/E045.2: 1:5 water extraction. Determination by colour and/or Ion Chromatography. Note Sulphite test is not covered by NATA accreditation.



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Laboratory Identification		138671	138698	lcs	lcs	mb	mb		
Sample Identification		TP27	TP34	QC	QC	QC	QC		
Depth (m)		0.05-0.15	0.05-0.15						
Sampling Date recorded on COC		22/1/08	23/1/08						
Laboratory Extraction (Preparation) Date		31/1/08	1/2/08	31/1/08	1/2/08	31/1/08	1/2/08		
Laboratory Analysis Date		4/2/08	4/2/08	4/2/08	4/2/08	4/2/08	4/2/08		
Method: E040.2/E054.2 Total Cyanide Total Cyanide	EQL 1	<1	<1	87%	87%	<1	<1		

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E040.2/E054.2: Caustic extract followed by strong acid distillion. Analysis by colour.



**Laboratory Report No:** E036019

**Client Reference:** 

Connell Wagner Pty Ltd (SA)

Matt Eygenraam

Buckland Park 31495

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Certificate

Final

**Date:** 15/02/08

of Analysis

**Date:** 15/02/00

This report supercedes reports issued on: 08/02/08

Laboratory Identification		138654	138658	138664	138667	138671	138674	138678	138682	138685	138689
Sample Identification		TP23	TP24	TP25	TP26	TP27	TP28	TP29	TP30	TP31	TP32
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15
Sampling Date recorded on COC		22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08	22/1/08
Laboratory Extraction (Preparation) Date		1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08
Laboratory Analysis Date		14/2/08	14/2/08	14/2/08	14/2/08	14/2/08	14/2/08	14/2/08	14/2/08	15/2/08	15/2/08
Method: E024.2											
Phenoxy Acid Herbicides	EQL										
Dalapon	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Clopyralid	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
o-Chlorophenoxy acid	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
p-Chlorophenoxy acid	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dicamba	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MCPP	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MCPA	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dichlorprop	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-D	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Triclopyr	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-TP (Silvex)	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
MCPB	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-T	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluxopyr	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4-DB	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
3,4-DCPA (Surr @ 0.4 mg/kg)		82%	74%	60%	64%	79%	72%	75%	74%	63%	64%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E024.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45) followed by methylation. Analysis by GC/MS.



**Laboratory Report No:** E036019

Connell Wagner Pty Ltd (SA)

Matt Eygenraam **Contact Name:** 

plus cover page **Date:** 15/02/08

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of Analysis

Final

Buckland Park 31495 **Client Reference:** This report supercedes reports issued on: 08/02/08

Laboratory Identification		138693	138698	138702	138706	138710	138654d	138654r	138689d	138689r	138658s
Sample Identification		TP33	TP34	TP35	TP36	TP37	QC	QC	QC	QC	QC
Depth (m)		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15					
Sampling Date recorded on COC		22/1/08	23/1/08	23/1/08	23/1/08	23/1/08					
Laboratory Extraction (Preparation) Date		1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08		1/2/08		1/2/08
Laboratory Analysis Date		15/2/08	15/2/08	15/2/08	15/2/08	15/2/08	14/2/08		15/2/08	-	14/2/08
Method: E024.2											
Phenoxy Acid Herbicides	EQL										
Dalapon	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1		26%
Clopyralid	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1		118%
o-Chlorophenoxy acid	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1		116%
p-Chlorophenoxy acid	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1		106%
Dicamba	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1		126%
MCPP	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1		113%
MCPA	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1		97%
Dichlorprop	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1		97%
2,4-D	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1		86%
Triclopyr	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1		73%
2,4,5-TP (Silvex)	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1		74%
МСРВ	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1		129%
2,4,5-T	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1		61%
Fluxopyr	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1		77%
2,4-DB	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		< 0.1		125%
3,4-DCPA (Surr @ 0.4 mg/kg)		86%	56%	67%	78%	75%	75%	9%	66%	3%	71%

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E024.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45) followed by methylation. Analysis by GC/MS.



**Laboratory Report No:** E036019

Connell Wagner Pty Ltd (SA) **Client Name:** 

Matt Eygenraam **Contact Name:** 

Buckland Park 31495 **Client Reference:** 

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of Analysis **Date:** 15/02/08

This report supercedes reports issued on: 08/02/08

Laboratory Identification		lcs	mb				
Sample Identification		QC	QC				
Depth (m)							
Sampling Date recorded on COC							
Laboratory Extraction (Preparation) Date		1/2/08	1/2/08				
Laboratory Analysis Date		14/2/08	14/2/08				
Method: E024.2							
Phenoxy Acid Herbicides	EQL						
Dalapon	0.1	23%	< 0.1				
Clopyralid	0.1	76%	< 0.1				
o-Chlorophenoxy acid	0.1	76%	< 0.1				
p-Chlorophenoxy acid	0.1	71%	< 0.1				
Dicamba	0.1	83%	< 0.1				
MCPP	0.1	90%	< 0.1				
MCPA	0.1	81%	< 0.1				
Dichlorprop	0.1	82%	< 0.1				
2,4-D	0.1	91%	< 0.1				
Triclopyr	0.1	92%	< 0.1				
2,4,5-TP (Silvex)	0.1	83%	< 0.1				
MCPB	0.1	80%	< 0.1				
2,4,5-T	0.1	74%	< 0.1				
Fluxopyr	0.1	67%	< 0.1				
2,4-DB	0.1	80%	< 0.1				
3,4-DCPA (Surr @ 0.4 mg/kg)		82%	85%				

Results expressed in mg/kg dry weight unless otherwise specified

Comments:

E024.2: 8-10g soil extracted with 20ml DCM/Acetone/Hexane (10:45:45) followed by methylation. Analysis by GC/MS.



**Laboratory Report No:** E036019

**Client Reference:** 

Connell Wagner Pty Ltd (SA)

Matt Eygenraam

Buckland Park 31495

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This report supercedes reports issued on: 08/02/08

Laboratory Identification		138654	138658	138664	138667	138671	138674	138675	138678	138682	138685
Sample Identification		TP23	TP24	TP25	TP26	TP27	TP28	QC13	TP29	TP30	TP31
Depth (m) Sampling Date recorded on COC		0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08	0.05-0.15 22/1/08
Laboratory Extraction (Preparation) Date Laboratory Analysis Date		31/1/08 1/2/08	31/1/08 1/2/08	31/1/08 1/2/08	31/1/08 1/2/08	31/1/08 1/2/08	31/1/08 1/2/08	31/1/08 1/2/08	31/1/08 1/2/08	31/1/08 1/2/08	31/1/08 1/2/08
Method: E005.2 Moisture Moisture	EQL 	3	25	2			1		1		1

Results expressed in % w/w unless otherwise specified

Comments:

E005.2: Moisture by gravimetric analysis. Results are in % w/w.

Laboratory Identification		138689	138693	138694	138698	138702	138706	138710	138654d	138654r	138689d
Sample Identification		TP32	TP33	QC15	TP34	TP35	TP36	TP37	QC	QC	QC
Depth (m)		0.05-0.15	0.05-0.15		0.05-0.15	0.05-0.15	0.05-0.15	0.05-0.15			
Sampling Date recorded on COC		22/1/08	22/1/08	22/1/08	23/1/08	23/1/08	23/1/08	23/1/08			
Laboratory Extraction (Preparation) Date		31/1/08	31/1/08	31/1/08	1/2/08	1/2/08	1/2/08	1/2/08	31/1/08		31/1/08
Laboratory Analysis Date		1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08	1/2/08		1/2/08
Method: E005.2 Moisture Moisture	EQL 	1	1	1	2	1	3	4	3	0%	1

Results expressed in % w/w unless otherwise specified

Comments:

E005.2: Moisture by gravimetric analysis. Results are in % w/w.



E036019 **Laboratory Report No:** 

Connell Wagner Pty Ltd (SA) **Client Name:** 

**Contact Name:** Matt Eygenraam

Buckland Park 31495 This report supercedes reports issued on: 08/02/08 **Client Reference:** 

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**Date:** 15/02/08

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Certificate

of Analysis

<b>Laboratory Identification</b>		138689r					
Sample Identification		QC					
Depth (m)							
Sampling Date recorded on COC							
Laboratory Extraction (Preparation) Date							
Laboratory Analysis Date							
Method: E005.2 Moisture Moisture	EQL 	0%					

Results expressed in % w/w unless otherwise specified

Comments:

E005.2: Moisture by gravimetric analysis. Results are in % w/w.



Quality, Service, Support

Report Date: 30/01/2008 Report Time: 3:22:53PM

Sample

# Receipt



Notice (SRN) for E036019

	Client Details	Laboratory	Reference Information
Client Name: Client Phone:	Connell Wagner Pty Ltd (SA) 08 82379777		ve this information ready contacting Labmark.
Client Fax: Contact Name: Contact Email: Client Address:	08 82314765 Matt Eygenraam eygenraamm@conwag.com 55 Grenfell St. Adelaide SA 5000	Laboratory Report: Quotation Number: Laboratory Address:	<b>E036019</b> - Not provided, standard prices apply Unit 1, 8 Leighton Pl. Asquith NSW 2077
Project Name: Project Number: CoC Serial Numbe Purchase Order: Surcharge: Sample Matrix:	Buckland Park 31495  Ir: - Not provided Not provided - No surcharge applied (results by 6:30pm on due date)  SOIL	Phone: Fax: Sample Receipt Contact Email: Reporting Contact: Email:	61 2 9476 6533 61 2 9476 8219 ct: Jakleen El Galada jakleen.galada@labmark.com.au Jyothi Lal jyothi.lal@labmark.com.au
Date Sampled (ea Date Samples Rec Date Sample Rec Date Preliminary I	29/01/2008 eipt Notice issued: 30/01/2008	NATA Accreditation: TGA GMP License: APVMA License: AQIS Approval: AQIS Entry Permit:	13542 185-336 (Sydney) 6105 (Sydney) NO356 (Sydney) 200521534 (Sydney)
Reporting Requir	ements: Electronic Data Download required:N	lo <b>lı</b>	nvoice Number: 30203

Sample Condition: COC received with samples. Report number and lab ID's defined on COC.

Samples received partly damaged. Refer to comments for details .

Samples received with cooling media: Ice bricks .

Samples received chilled. Security seals intact.

Sample container & chemical preservation suitable.

Comments: Sample TP37\_0.05-0.15 arrived broken and was salvaged in Lab. Sample will be analysed for all but

volatiles at clients request. Sample QC16 forwarded to MGT. Analysis received withinsufficient time to

analyse within THT for nutrients.

**Holding Times:** Date received allows for sufficient time to meet Technical Holding Times.

Note: There are Samples within this batch that have been received by the laboratory 0 day(s) after Technical Holding Times expire. LabMark cannot guarantee THT compliance, refer to the extraction

dates detailed in the sample grid for confirmation.

Preservation: Chemical preservation of samples satisfactory for requested analytes.

### **Important Notes:**

LabMark shall responsibly dispose of spent customer soil and water samples which includes the disintegration of the sample label. A sample disposal fee of \$1.00 is applicable on all samples received by the laboratory regardless of whether they have undergone analytical testing. Sample disposal of environmental samples shall be 31 days (water) and 3 months (soil, HN03 preserved samples) after laboratory receipt, unless otherwise requested in writing by the client. Samples requested to be held in non-refrigerated storage shall incur \$5.00/ sample/ 3 months. Additional refrigerated storage shall incur \$30/ sample/ 3 months. Combination prices apply only if requested. Transfer of report ownership from LabMark to the client shall occur once full and final payment has been settled and verified. All report copies may be retracted where full payment does not occur within the agreed settlement period.

**Analysis comments:** 

**Subcontracted Analyses:** 



**Report Date : 30/01/2008 Report Time : 3:22:53PM** 

Sample

# Receipt



Notice (SRN) for E036019

The table below represents LabMark's understanding and interpretation of the customer supplied sample COC request (refer to SRN comments section on first page for external subcontracting method details). Please confirm that your COC request has been entered correctly. Due to THT and TAT requirements, testing shall commence immediately as per this table, unless the customer intervenes with a correction prior to testing.

GRID REVIEW TABLE	ı								Do	anoc	ted A	nolv	eic							$\neg$
OND REVIEW TABLE									Ke	ques	icu A	шацу	515							一
No. Date Depth Client Sample ID	BTEX by P&T	Speciated Chromium	Fluoride	Acid extractable mercury	ногр ом ногр	Acid extractable metals	Acid extractable metals	Moisture	Organochlorine Pesticides (OC)	Organophosphorus Pesticides (OP)	Polyaromatic Hydrocarbons (PAH)	pH in soil	Phenols by GC/MS	Phenoxy Acid Herbicides	PREP Not Reported	Sulphate/Sulphite	Total Cyanide	Petroleum Hydrocarbons (TPH)	Volatile Aromatic Compounds (VAC)	Volatile TPH by P&T (vTPH)
138654 22/01 0.05-0.15 TP23	٠	•		•		•	•	•	•	•	٠	٠		•	٠	٠		•		•
138655 22/01 0.4-0.5 TP23					•															
138656 22/01 0.9-1.0 TP23					•															
138657 22/01 1.9-2.0 TP23					•															
138658 22/01 0.05-0.15 TP24	•	•		•		•	•	•	•	•	•	•		•	•	•		•		•
138659 22/01 QC11	_	Ť		-	•	Ť	_	Ť	Ť	Ť	Ť	Ť		Ť	Ť	Ť		_		Ī
138660 22/01 QC12					•															
138661 22/01 0.4-0.5 TP24					•															
138662 22/01 0.9-1.0 TP24					٠															
138663 22/01 1.9-2.0 TP24					٠															
138664 22/01 0.05-0.15 TP25	•	•		•	Ť	•	•	•	•	•	•	•		•	•	•		•		•
138665 22/01 0.4-0.5 TP25	Ť	_		_	•	Ť	Ť	Ť	Ť	Ť	_	Ť		Ť	Ť	_		_		Ť
138666 22/01 0.9-1.0 TP25					٠															
138667 22/01 0.05-0.15 TP26	•	•		•	Ť	•	•	٠	•	•	•	•		•	•	•		•		•
138668 22/01 0.4-0.5 TP26	Ť	Ť		Ť	•	Ť	Ť	Ť	Ť	Ť	Ť	Ť		Ť	Ť	Ť		Ť		Ť
138669 22/01 0.9-1.0 TP26					Ť															
138670 22/01 1.9-2.0 TP26					•															
138671 22/01 0.05-0.15 TP27			•	•	•	•		•	•		•	•	•	•	•	•	•	•	•	•
138672 22/01 0.4-0.5 TP27			•	•	-	•	•	•	•		•	٠	•	•	•	•	•	•	٠	-
138673 22/01 0.9-1.0 TP27					•															
138674 22/01 0.05-0.15 TP28	•	_		•	•	_	_	_	_	_	•	•		_	_	•		•		•
138675 22/01 QC13	•	•		_		•	•	•	•	•	•			•	•	_		•		-
138676 22/01 0.4-0.5 TP28		•		•	_	٠	•	٠	•	•		٠	1	1	•	•				$\vdash$
138677 22/01 0.9-1.0 TP28					•															Н
138678 22/01 0.05-0.15 TP29	<u> </u>	_		_	٠	_	L	_	_	_	_	_		_	_	-		_		H
	•	•		•	_	٠	٠	٠	٠	•	•	٠		•	•	•		•		•
138679 22/01 0.4-0.5 TP29					•	<del> </del>	-	-	<del> </del>				-	<u> </u>	-					$\vdash\vdash$
138680 22/01 0.9-1.0 TP29					•	-	-		-						-					Н
138681 22/01 1.9-2.0 TP29	_				٠	_	_	_	_	_	_	_			_	_				
138682 22/01 0.05-0.15 TP30	•	•		•		٠	٠	٠	٠	٠	٠	٠	<b> </b>	٠	•	٠		•		•
138683 22/01 0.4-0.5 TP30					٠		-								-					Щ
138684 22/01 0.9-1.0 TP30					٠		-								-					Щ
138685 22/01 0.05-0.15 TP31	•	•		•		•	•	•	•	•	•	•		•	•	•		•		•

Thank you for choosing Labmark to analyse your project samples.

Additional information on www.labmark.com.au



**Report Date : 30/01/2008 Report Time : 3:22:53PM** 

## Sample

# Receipt



Notice (SRN) for E036019

The table below represents LabMark's understanding and interpretation of the customer supplied sample COC request (refer to SRN comments section on first page for external subcontracting method details). Please confirm that your COC request has been entered correctly. Due to THT and TAT requirements, testing shall commence immediately as per this table, unless the customer intervenes with a correction prior to testing.

GRID REVIEW TABLE									Re	anes	ted A	nalv	sis							$\neg$
ORID REVIEW TABLE										ques	100 71	I	313							
	BTEX by P&T	Speciated Chromium	ide	Acid extractable mercury	ногр ом ногр	Acid extractable metals	Acid extractable metals	Moisture	Organochlorine Pesticides (OC)	Organophosphorus Pesticides (OP)	Polyaromatic Hydrocarbons (PAH)	pH in soil	Phenols by GC/MS	Phenoxy Acid Herbicides	PREP Not Reported	Sulphate/Sulphite	Total Cyanide	Petroleum Hydrocarbons (TPH)	Volatile Aromatic Compounds (VAC)	Volatile TPH by P&T (vTPH)
No. Date Depth Client Sample ID	BTE)	Spec	Fluoride	Acid	HOL	Acid	Acid	Mois	Orga	Orga	Polya	pH ir	Pher	Pher	PREF	Sulp	Tota	Petro	Vola	Vola
138686 22/01 0.4-0.5 TP31	†				•	_	_													
138687 22/01 0.9-1.0 TP31	1				•															
138688 22/01 1.9-2.0 TP31	†				•															
138689 22/01 0.05-0.15 TP32	•	٠		٠	_	•	•	•	•	•	•	•		•	•	•		•		٠
138690 22/01 0.4-0.5 TP32	Ť	Ī		Ī	•	Ī	_	Ť	_	_	Ť	Ť		_	Ť	_		_		Ť
138691 22/01 0.9-1.0 TP32	1				•															
138692 22/01 QC14	†				•															
138693 22/01 0.05-0.15 TP33	•	•		٠		•	•	•	•	٠	•	٠		•	•	•		٠		٠
138694 22/01 QC15		٠		٠		•	•	٠	•	٠		٠			•	٠				
138696 22/01 0.4-0.5 TP33					٠															
138697 22/01 0.9-1.0 TP33					•															
138698 23/01 0.05-0.15 TP34			•	•		•	•	•	•		•	٠	•	•	•	•	•	•	•	•
138699 23/01 0.4-0.5 TP34					•															
138700 23/01 0.9-1.0 TP34					•															
138701 23/01 1.9-2.0 TP34					•															
138702 23/01 0.05-0.15 TP35	•	•		•		•	•	٠	•	٠	٠	٠		•	•	٠		٠		•
138703 23/01 0.4-0.5 TP35					•															
138704 23/01 0.9-1.0 TP35					•															
138705 23/01 QC17					•															
138706 23/01 0.05-0.15 TP36	•	•		٠		•	•	٠	•	٠	٠	•		٠	•	٠		•		•
138707 23/01 0.4-0.5 TP36					•															
138708 23/01 0.9-1.0 TP36	1				•															
138709 23/01 1.9-2.0 TP36	1				•															
138710 23/01 0.05-0.15 TP37	1	•		•		•	•	•	•	•	•	•		•	•	•		•		
138711 23/01 0.4-0.5 TP37	1				•															
138712 23/01 0.9-1.0 TP37					٠															
Totals:	12	15	2	17	41	17	17	17	17	15	15	17	2	15	17	17	2	15	2	14

'PREP Not Reported' refers to an internal laboratory instruction - client confirmation of this parameter is not required.



Quality, Service, Support

**Report Date : 30/01/2008 Report Time : 3:22:53PM** 

Sample

# Receipt



Notice (SRN) for E036019

										Re	ques	ted A	nalys	sis				$\neg$
										<u> </u>	<u> </u>	1						$\dashv$
				_				_	ے			se						
		(x)	2	Sulphur	ji.	lium	_	mir	miur	ēr		Jane						
		MET-T_S	Mercury		Arsenic	Beryllium	Boron	Cadmium	Chromium	Copper	Lead	Manganese	Zinc					
		MET		S_S	s_				S_				Z S_					
			T_S	MET-AAS_S	날	글	MET-T_S	MET-T_S	Ė	MET-T_S	MET-T_S	MET-T_S	FT_					
No. Date Depth	Client Sample ID	M12	HG-T_S	MEI	MET-T_	MET-T_S	MEI	MEI	MET-T_	MEI	MEI	ME	MET-T_					
138654 22/01 0.05-0.15	TP23		•	•	•	٠	٠	٠	٠	•	•	•	٠					
138658 22/01 0.05-0.15	TP24		•	•	•	٠	٠	٠	٠	•	•	٠	٠					
138664 22/01 0.05-0.15	TP25		•	•	•	٠	٠	٠	٠	•	٠	٠	٠					
138667 22/01 0.05-0.15	TP26		•	•	•	٠	٠	•	•	٠	٠	•	٠					
138671 22/01 0.05-0.15	TP27	•		•														
138674 22/01 0.05-0.15			•	•	•	٠	٠	٠	٠	•	٠	٠	٠					
138675 22/01	QC13		•	•	•	٠	•	•	•	•	•	•	•					
138678 22/01 0.05-0.15	TP29		•	•	•	٠	•	•	•	•	•	•	•					
138682 22/01 0.05-0.15	TP30		•	•	•	٠	٠	٠	٠	٠	٠	٠	٠					
138685 22/01 0.05-0.15			•	•	•	٠	•	•	•	•	٠	•	٠					
138689 22/01 0.05-0.15			•	•	•	٠	٠	٠	٠	•	٠	٠	٠					
138693 22/01 0.05-0.15			•	•	•	٠	٠	٠	٠	•	٠	٠	٠					
138694 22/01	QC15		•	•	•	٠	٠	٠	٠	•	٠	٠	٠					
138698 23/01 0.05-0.15	TP34	•		•														
138702 23/01 0.05-0.15			•	•	•	٠	٠	•	•	•	٠	•	٠					
138706 23/01 0.05-0.15	TP36		•	•	•	•	•	•	•	•	•	•	•					
138710 23/01 0.05-0.15	TP37		•	•	•	٠	٠	•	•	•	٠	•	٠					
	Totals:	2	15	17	15	15	15	15	15	15	15	15	15					



Accreditation Number: 1645



### CONNELL WAGNER (SA) PTY LTD 55 Grenfell St ADELAIDE SA 5000

Attention: April Freeman

Project 08ENME0008403

Client Reference 31495

**Buckland Park** 

Received Date 07/04/2008 09:00:00 AM

Customer Sample ID Amdel Sample Number Date Sampled			TP38 0-0.1 936078 03/04/2008	TP38 0.2-0.3 936079 03/04/2008	TP38 0.4-0.5 936081 03/04/2008	QC1A 936082 03/04/2008	TP38 0.9-1.0 936084 03/04/2008
voc							
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&	Т						
Benzene	0.2	mg/kg	<0.2	-	-	-	-
Ethylbenzene	1	mg/kg	<1.0	-	-	-	-
Meta- & Para- Xylene	2	mg/kg	<2.0	-	-	-	-
Ortho-Xylene	1	mg/kg	<1.0	-	-	-	-
Toluene	1	mg/kg	<1.0	-	-	-	-
Total Xylenes	3	mg/kg	<3.0	-	-	-	-
C6-C9 Fraction	5	mg/kg	<5.0	-	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	101	-	-	-	-
1100 MAH(BTEX & C6-C9) in Soil I	P&T						
Benzene	0.2	mg/kg	-	<0.2	-	-	-
Cumene	0.5	mg/kg	-	<0.5	-	-	-
Ethylbenzene	1	mg/kg	-	<1.0	-	-	-
Meta- & Para- Xylene	2	mg/kg	-	<2.0	-	-	-
Ortho-Xylene	1	mg/kg	-	<1.0	-	-	-
Styrene	0.5	mg/kg	-	<0.5	-	-	-
Toluene	1	mg/kg	-	<1.0	-	-	-
Total Xylenes	3	mg/kg	-	<3.0	-	-	-
C6-C9 Fraction	5	mg/kg	-	<5.0	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	-	105	-	-	-
1300 VOCs in Soil by P&T							
1,1,1,2-Tetrachloroethane	1	mg/kg	-	<1.0	-	-	-
1,1,1-Trichloroethane	1	mg/kg	-	<1.0	-	-	-
1,1,2,2-Tetrachloroethane	1	mg/kg	-	<1.0	-	-	-
1,1,2-Trichloroethane	1	mg/kg	-	<1.0	-	-	-
1,1-Dichloroethane	1	mg/kg	-	<1.0	-	-	-
1,1-Dichloroethene	1	mg/kg	-	<1.0	-	-	-
1,1-Dichloropropylene	1	mg/kg	-	<1.0	-	-	-
1,2,3-Trichlorobenzene	1	mg/kg	-	<1.0	-	-	-
1,2,3-Trichloropropane	1	mg/kg	-	<1.0	-	-	-
1,2,4-Trichlorobenzene	1	mg/kg	-	<1.0	-	-	-
1,2,4-Trimethylbenzene	1	mg/kg	-	<1.0	-	-	-
1,2-Dibromo-3-chloropropane	1	mg/kg	-	<1.0	-	-	-
1,2-Dibromoethane	1	mg/kg	-	<1.0	-	-	-
1,2-Dichlorobenzene	1	mg/kg	-	<1.0	-	-	-
1,2-Dichloroethane	1	mg/kg	-	<1.0	-	-	-
1,2-Dichloropropane	1	mg/kg	-	<1.0	-	-	-
1,3,5-Trimethylbenzene	1	mg/kg	-	<1.0	-	-	-

Amdel Ltd 1868 Dandenong Rd Clayton VIC Australia 3168 ABN: 30 008 127 802 Telephone: (03) 9538 2277 Facsimile: (03) 9538 2278



Customer Sample ID Amdel Sample Number			TP38 0-0.1 936078	TP38 0.2-0.3 936079	TP38 0.4-0.5 936081	QC1A 936082	TP38 0.9-1.0 936084
Date Sampled			03/04/2008	03/04/2008	03/04/2008	03/04/2008	03/04/2008
VOC Test/Reference	PQL	Unit					
				-4.0			
1,3-Dichlorobenzene	1	mg/kg	-	<1.0	-	-	-
1,3-Dichloropropane	1	mg/kg	-	<1.0	-	-	-
1,4-Dichlorobenzene	1	mg/kg	-	<1.0	-	-	-
2,2-Dichloropropane	10	mg/kg	-	<10.0	-	-	-
2-butanone	10	mg/kg	-	<10.0	-	-	-
2-Chlorotoluene 4-Chlorotoluene	1 1	mg/kg	-	<1.0 <1.0	-	-	-
	10	mg/kg	-	<10.0	-	-	-
4-methyl-2-pentanone Benzene	0.2	mg/kg mg/kg	-	<0.2	-	-	-
Bromobenzene	1	mg/kg	-	<1.0	-	-	-
Bromochloromethane	1	mg/kg	-	<1.0	_	_	-
Bromodichloromethane	1	mg/kg	-	<1.0	-	-	-
Bromoform	1	mg/kg	-	<1.0	_	_	-
Bromomethane	1		-	<1.0	-	-	-
Carbon Tetrachloride	1	mg/kg	-	<1.0	-	-	-
Chlorobenzene		mg/kg	-		-	-	-
Chloroethane	1 1	mg/kg	-	<1.0 <1.0	-	-	-
Chloroform	1	mg/kg	-	<1.0	-	-	-
Chloromethane	1	mg/kg	-	<1.0	-	-	-
cis-1,2-Dichloroethene	1	mg/kg	-	<1.0	-	-	-
		mg/kg	-	<1.0	-	-	-
cis-1,3-Dichloropropene Dibromochloromethane	1 1	mg/kg	-	<1.0	-	-	-
		mg/kg	-		-	-	-
Dibromomethane Dichlorodifluoromethane	1 1	mg/kg	-	<1.0 <1.0	-	-	-
		mg/kg	-		-	-	-
Ethylbenzene Hexachlorobutadiene	1	mg/kg	-	<1.0	-	-	-
Hexachloroethane	1	mg/kg	-	<1.0	-	-	-
	1	mg/kg	-	<1.0	-	-	-
Isopropylbenzene	0.5	mg/kg	-	<0.5	-	-	-
Meta- & Para- Xylene Methylene Chloride	2 5	mg/kg	-	<2.0	-	-	-
•		mg/kg	-	<5.0	-	-	-
Naphthalene	1	mg/kg	-	<1.0	-	-	-
n-Butylbenzene	1	mg/kg	-	<1.0	-	-	-
n-Propylbenzene	1	mg/kg	-	<1.0	-	-	-
Ortho-Xylene	1	mg/kg	-	<1.0	-	-	-
Pentachloroethane	1	mg/kg	-	<1.0	-	-	-
p-Isopropyltoluene	1	mg/kg	-	<1.0	-	-	-
sec-Butylbenzene	1	mg/kg	-	<1.0	-	-	-
Styrene	0.5	mg/kg	-	<0.5	-	-	-
tert-Butylbenzene	1	mg/kg	-	<1.0	-	-	-
Tetrachloroethene	1	mg/kg	-	<1.0	-	-	-
Toluene	1	mg/kg	-	<1.0	-	-	-
trans-1,2-Dichloroethene	1	mg/kg	-	<1.0	-	-	-
trans-1,3-Dichloropropene	1	mg/kg	-	<1.0	-	-	-
Trichloroethene Trichloroftyoromethone	1	mg/kg	-	<1.0	-	-	-
Trichlorofluoromethane	1	mg/kg	-	<1.0	-	-	-
Vinyl Chloride	1	mg/kg	-	<1.0	-	-	-
Total Xylenes	3	mg/kg	-	<3.0	-	-	-
Toluene-D8 - Surrogate	1	%	-	95	-	-	-
4-Bromofluorobenzene - Surrogate	1	%	-	95	-	-	-
Pentafluorobenzene-Surrogate	1	%	-	72	-	-	-



Customer Sample ID Amdel Sample Number			TP38 0-0.1 936078	TP38 0.2-0.3 936079	TP38 0.4-0.5 936081	QC1A 936082	TP38 0.9-1.0 936084
Date Sampled			03/04/2008	03/04/2008	03/04/2008	03/04/2008	03/04/2008
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	-MS						
a-BHC	0.5	mg/kg	<0.5	<0.5	-	-	-
a-Chlordane	0.5	mg/kg	<0.5	<0.5	-	-	-
a-Endosulfan	0.5	mg/kg	<0.5	<0.5	-	-	-
Aldrin	0.5	mg/kg	<0.5	<0.5	-	-	-
o-BHC	0.5	mg/kg	<0.5	<0.5	-	-	-
o-Endosulfan	0.5	mg/kg	<0.5	<0.5	-	-	-
I-BHC	0.5	mg/kg	<0.5	<0.5	-	-	-
DDD	0.5	mg/kg	<0.5	<0.5	-	-	-
DDE	0.5	mg/kg	<0.5	<0.5	-	-	-
DDT	0.5	mg/kg	<0.5	<0.5	-	-	-
Dieldrin	0.5	mg/kg	<0.5	<0.5	-	-	-
Endosulfan sulfate	0.5	mg/kg	<0.5	<0.5	-	-	-
Endrin	0.5	mg/kg	<0.5	<0.5	-	-	-
Endrin Aldehyde	0.5	mg/kg	<0.5	<0.5	-	-	-
g-BHC	0.5	mg/kg	<0.5	<0.5	_	_	_
-Chlordane	0.5	mg/kg	<0.5	<0.5	_	_	_
Heptachlor	0.5	mg/kg	<0.5	<0.5	_	_	_
leptachlor epoxide	0.5	mg/kg	<0.5	<0.5	_	_	_
Hexachlorobenzene (HCB)	0.5	mg/kg	<0.5	<0.5	_	_	_
Methoxychlor	0.5	mg/kg	<0.5	<0.5	_	_	_
Dxychlordane	0.5	mg/kg	<0.5	<0.5	_	_	_
2,4,5,6-tetrachloro-m-xylene - Surrogate	-	%	111	110	-	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	<0.5	<0.5	-	-	-
Acenaphthylene	0.5	mg/kg	<0.5	<0.5	-	-	-
Anthracene	0.5	mg/kg	<0.5	<0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	<0.5	<0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	<0.5	<0.5	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	<1	<1	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	<0.5	-	-	-
Chrysene	0.5	mg/kg	<0.5	<0.5	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	<0.5	<0.5	-	-	-
luoranthene	0.5	mg/kg	<0.5	<0.5	-	-	-
luorene	0.5	mg/kg	<0.5	<0.5	-	-	-
ndeno(123-cd)pyrene	0.5	mg/kg	<0.5	<0.5	-	-	-
laphthalene	0.5	mg/kg	<0.5	<0.5	-	-	-
Phenanthrene	0.5	mg/kg	<0.5	<0.5	-	-	-
Pyrene	0.5	mg/kg	<0.5	<0.5	-	-	-
Sum of PAHs	0.5	mg/kg	<0.5	<0.5	-	-	-
-Fluorobiphenyl - Surrogate	-	%	100	102	-	-	-
-Terphenyl-D14 - Surrogate	-	%	130	130	-	-	_
Anthracene-d10 - Surrogate	-	%	106	102	-	-	-
2600 PCBs in Soil by GC							
Aroclor 1016DB	0.5	mg/kg	-	<0.5	-	-	-
Aroclor 1221DB	0.5	mg/kg	-	<0.5	-	-	-
Aroclor 1232 and 1242 as totalDB	1	mg/kg	-	<1	-	-	-
Aroclor 1248 and 1254 as totalDB	1	mg/kg	-	<1	-	-	-
Aroclor 1260DB	0.5	mg/kg	_	<0.5	_	_	_



Customer Sample ID Amdel Sample Number			TP38 0-0.1 936078	TP38 0.2-0.3 936079	TP38 0.4-0.5 936081	QC1A 936082	TP38 0.9-1.0 936084
Date Sampled			03/04/2008	03/04/2008	03/04/2008	03/04/2008	03/04/2008
SVOC							
Test/Reference	PQL	Unit					
Total Polychlorinated biphenylsDB	1	mg/kg	-	<1	-	-	-
Decachlorobiphenyl - PCB surrogate	1	%	-	100	-	-	-
2800 Individual Phenols in Soil by	GC						
2,3,4,6-Tetrachlorophenol	1	mg/kg	-	<1	-	-	-
2,3,4-Trichlorophenol	0.5	mg/kg	-	<0.5	-	-	-
2,3,5,6-Tetrachlorophenol	1	mg/kg	-	<1	-	-	-
2,3,5-Trichlorophenol	0.5	mg/kg	-	<0.5	-	-	-
2,3,6-Trichlorophenol	0.5	mg/kg	-	<0.5	-	-	-
2,3-Dichlorophenol	1	mg/kg	-	<1	-	-	-
2,4 & 2,5-Dichlorophenol	2	mg/kg	-	<2	-	-	-
2,4,6-Trichlorophenol	0.5	mg/kg	-	<0.5	-	-	-
2,6-Dichlorophenol	0.5	mg/kg	-	<0.5	-	-	-
2-Chlorophenol	0.5	mg/kg	-	<0.5	-	-	-
2-Methylphenol	0.5	mg/kg	-	<0.5	-	-	-
3,4-Dichlorophenol	0.5	mg/kg	-	<0.5	-	-	-
3,5-Dichlorophenol	0.5	mg/kg	-	<0.5	-	-	-
3-Chlorophenol & 4-Chlorophenol	1	mg/kg	-	<1	-	-	-
3-Methylphenol & 4-Methylphenol	1	mg/kg	-	<1	-	-	-
4-Chloro-3-methylphenol	0.5	mg/kg	-	<0.5	-	-	-
Pentachlorophenol	1	mg/kg	-	<1	-	-	-
Phenol	0.5	mg/kg	-	<0.5	-	-	-
2,4,6-Tribromophenol-Surrogate	1	%	-	59	-	-	-
2000 TPH (C10 - C36) in Soil by GC	;						
C10-C14 Fraction	10	mg/kg	<10	<10	-	-	-
C15-C28 Fraction	20	mg/kg	<20	<20	-	-	-
C29-C36 Fraction	20	mg/kg	<20	<20	-	-	-
Metals							
Test/Reference	PQL	Unit					
3400 Mercury in Soil by FIMS							
Mercury	0.01	mg/kg	-	0.03	-	-	-
3100 Total Metals in Soil By ICP/MS	s						
Antimony	2	mg/kg	-	<2	-	-	-
Arsenic	2	mg/kg	3.4	2.8	-	-	-
Barium	2	mg/kg	-	77	-	-	-
Cadmium	2	mg/kg	<2	<2	-	-	-
Chromium	2	mg/kg	60	65	-	-	-
Cobalt	2	mg/kg	-	14	-	-	-
Copper	2	mg/kg	30	29	-	-	-
Lead	2	mg/kg	23	13	-	-	-
Manganese	2	mg/kg	-	380	-	-	-
Molybdenum	2	mg/kg	-	<2	-	-	-
Nickel	2	mg/kg	23	24	-	-	-
Selenium	2	mg/kg	-	<2	-	-	-
Tin	2	mg/kg	-	2.3	-	-	-
Zinc	2	mg/kg	31	28	-	-	-
Inorganics							
Test/Reference	PQL	Unit					
4300 Anions in Soil by IC Fluoride (Soluble)	2	mg/kg	-	6	-	-	-



Customer Sample ID Amdel Sample Number			TP38 0-0.1 936078	TP38 0.2-0.3 936079	TP38 0.4-0.5 936081	QC1A 936082	TP38 0.9-1.0 936084
Date Sampled			03/04/2008	03/04/2008	03/04/2008	03/04/2008	03/04/2008
Inorganics Test/Reference	PQL	Unit					
4270 Total Cyanide in Soil Colour	metric						
Total Cyanide	0.1	mg/kg	-	0.3	-	-	-
4000 pH in Soil							
рН	0.1	pН	7.4	8.6	-	-	-
Miscellaneous Test/Reference	PQL	Unit					
	FQL	Offic					
5000 Moisture Content % Moisture	1	%	6	14	-	-	-
Customer Sample ID Amdel Sample Number			TP38 1.9-2.0 936085	TP39 0-0.1 936086	QC2A 936088	TP39 0.2-0.3 936089	TP39 0.4-0.5 936091
Date Sampled			03/04/2008	03/04/2008	03/04/2008	03/04/2008	03/04/2008
VOC	DOI						
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P8 Benzene	ι <b>Τ</b> 0.2	mg/kg	_	<0.2	-	-	_
Ethylbenzene	1	mg/kg	-	<1.0	-	-	_
Meta- & Para- Xylene	2	mg/kg	-	<2.0	-	-	-
Ortho-Xylene	1	mg/kg	-	<1.0	-	-	-
Toluene	1	mg/kg	-	<1.0	-	-	-
Total Xylenes	3	mg/kg	-	<3.0	-	-	-
C6-C9 Fraction	5	mg/kg	-	<5.0	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	-	97	-	-	-
SVOC	DOL	1.1-24					
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-							
a-BHC	0.5	mg/kg	-	<0.5	<0.5	-	-
a-Chlordane	0.5	mg/kg	-	<0.5	<0.5	-	-
a-Endosulfan Aldrin	0.5 0.5	mg/kg mg/kg	-	<0.5 <0.5	<0.5 <0.5	-	-
b-BHC	0.5	mg/kg	-	<0.5	<0.5	_	_
b-Endosulfan	0.5	mg/kg	_	<0.5	<0.5	_	_
d-BHC	0.5	mg/kg	-	<0.5	<0.5	-	-
DDD	0.5	mg/kg	-	<0.5	<0.5	-	_
DDE	0.5	mg/kg	-	<0.5	<0.5	-	-
DDT	0.5	mg/kg	-	<0.5	<0.5	-	-
Dieldrin	0.5	mg/kg	-	<0.5	<0.5	-	-
Endosulfan sulfate	0.5	mg/kg	-	<0.5	<0.5	-	-
Endrin	0.5	mg/kg	-	<0.5	<0.5	-	-
Endrin Aldehyde	0.5	mg/kg	-	<0.5	<0.5	-	-
g-BHC	0.5	mg/kg	-	<0.5	<0.5	-	-
g-Chlordane	0.5	mg/kg	-	<0.5	<0.5	-	-
Heptachlor	0.5	mg/kg	-	<0.5	<0.5	-	-
Heptachlor epoxide	0.5	mg/kg	-	<0.5	<0.5	-	-
Hexachlorobenzene (HCB)	0.5	mg/kg	-	<0.5	<0.5	-	-
Methoxychlor	0.5	mg/kg	-	<0.5	<0.5	-	-
Oxychlordane	0.5	mg/kg	-	<0.5	<0.5	-	-



Customer Sample ID Amdel Sample Number Date Sampled			TP38 1.9-2.0 936085 03/04/2008	TP39 0-0.1 936086 03/04/2008	QC2A 936088 03/04/2008	TP39 0.2-0.3 936089 03/04/2008	TP39 0.4-0.5 936091 03/04/2008
SVOC			00/04/2000	00/04/2000	03/04/2000	00/04/2000	00/04/2000
Test/Reference	PQL	Unit					
2,4,5,6-tetrachloro-m-xylene - Surrogate	-	%	-	110	101	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	<0.5	-	-	-
Acenaphthylene	0.5	mg/kg	-	<0.5	-	-	-
Anthracene	0.5	mg/kg	-	<0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	-	<0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	-	<0.5	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	<1	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	<0.5	-	-	-
Chrysene	0.5	mg/kg	-	<0.5	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	-	<0.5	-	-	-
Fluoranthene	0.5	mg/kg	-	<0.5	-	-	-
Fluorene	0.5	mg/kg	-	<0.5	-	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	-	<0.5	-	-	-
Naphthalene	0.5	mg/kg	-	<0.5	-	-	-
Phenanthrene	0.5	mg/kg	-	<0.5	-	-	-
Pyrene	0.5	mg/kg	-	<0.5	-	-	-
Sum of PAHs	0.5	mg/kg	-	<0.5	-	-	-
2-Fluorobiphenyl - Surrogate	-	%	-	97	-	-	-
p-Terphenyl-D14 - Surrogate	-	%	-	122	-	-	-
Anthracene-d10 - Surrogate	-	%	-	100	-	-	-
<b>2000 TPH (C10 - C36) in Soil by GC</b> C10-C14 Fraction	10	mg/kg	-	<10	-	-	-
C15-C28 Fraction	20	mg/kg	-	<20	-	-	-
C29-C36 Fraction	20	mg/kg	-	<20	-	-	-
Metals		0 0					
Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS							
Arsenic	2	mg/kg	-	2.2	<2	-	-
Cadmium	2	mg/kg	-	<2	<2	-	-
Chromium	2	mg/kg	-	32	22	-	-
Copper	2	mg/kg	-	13	9.3	-	-
Lead	2	mg/kg	-	11	8.4	-	-
Nickel	2	mg/kg	-	11	7.1	-	-
Zinc	2	mg/kg	-	17	12	-	-
Inorganics							
Test/Reference	PQL	Unit					
4000 pH in Soil	0.4	mLI.		7.4			
рН	0.1	рН	-	7.1	-	-	-
Miscellaneous Test/Reference	PQL	Unit					
5000 Moisture Content							
% Moisture	1	%	-	3	3	-	-



Customer Sample ID Amdel Sample Number			TP39 0.9-1.0 936092	TP39 1.9-2.0 936093	TP40 0-0.1 936095	TP40 0.2-0.3 936096	QC3A 936098
Date Sampled			03/04/2008	03/04/2008	03/04/2008	03/04/2008	03/04/2008
VOC	DOL	1.124					
Test/Reference	PQL	Unit					
I100 BTEX &(C6-C9) in Soil by P&	Т						
Benzene	0.2	mg/kg	-	-	-	<0.2	-
Ethylbenzene	1	mg/kg	-	-	-	<1.0	-
Meta- & Para- Xylene	2	mg/kg	-	-	-	<2.0	-
Ortho-Xylene	1	mg/kg	-	-	-	<1.0	-
Γoluene	1	mg/kg	-	-	-	<1.0	-
Total Xylenes	3	mg/kg	-	-	-	<3.0	-
C6-C9 Fraction	5	mg/kg	-	-	-	<5.0	-
I-Bromofluorobenzene - Surrogate	-	%	-	-	-	105	-
SVOC							
Test/Reference	PQL	Unit					
300 OC Pesticides in Soil by GC-							
a-BHC	0.5	mg/kg	-	-	-	<0.5	-
a-Chlordane	0.5	mg/kg	-	-	-	<0.5	-
a-Endosulfan	0.5	mg/kg	-	-	-	<0.5	-
Aldrin	0.5	mg/kg	-	-	-	<0.5	-
o-BHC	0.5	mg/kg	-	-	-	<0.5	-
o-Endosulfan	0.5	mg/kg	-	-	-	<0.5	-
I-BHC	0.5	mg/kg	-	-	-	<0.5	-
DDD	0.5	mg/kg	-	-	-	<0.5	-
DDE	0.5	mg/kg	-	-	-	<0.5	-
ODT	0.5	mg/kg	-	-	-	<0.5	-
Dieldrin	0.5	mg/kg	-	-	-	<0.5	_
Endosulfan sulfate	0.5	mg/kg	-	-	-	<0.5	_
Endrin	0.5	mg/kg	-	_	_	<0.5	_
Endrin Aldehyde	0.5	mg/kg	-	_	_	<0.5	_
a-BHC	0.5	mg/kg	-	_	_	<0.5	_
g-Chlordane	0.5	mg/kg	-	_	_	<0.5	_
Heptachlor	0.5	mg/kg	_	_	_	<0.5	_
Heptachlor epoxide	0.5	mg/kg	_	_	_	<0.5	_
Hexachlorobenzene (HCB)	0.5	mg/kg		_	_	<0.5	_
Methoxychlor	0.5	mg/kg	_	_	_	<0.5	_
Oxychlordane	0.5		-	-	-	<0.5	-
2,4,5,6-tetrachloro-m-xylene -	0.5	mg/kg %	-	-	-	<0.5 108	-
Surrogate	-	70	-	-	-	106	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	-	-	<0.5	-
Acenaphthylene	0.5	mg/kg	-	-	-	<0.5	-
Anthracene	0.5	mg/kg	-	-	-	<0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	-	<0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	-	<0.5	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	-	<1	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	<0.5	-
Chrysene	0.5	mg/kg	-	-	-	<0.5	-
Dibenz(ah)anthracene	0.5	mg/kg	-	-	-	<0.5	-
Fluoranthene	0.5	mg/kg	-	-	-	<0.5	-
Fluorene	0.5	mg/kg	-	-	-	<0.5	-
ndeno(123-cd)pyrene	0.5	mg/kg	-	-	-	<0.5	-
laphthalene	0.5	mg/kg	-	-	-	<0.5	-
Phenanthrene	0.5	mg/kg	_	_		<0.5	_



Customer Sample ID Amdel Sample Number			TP39 0.9-1.0 936092	TP39 1.9-2.0 936093	TP40 0-0.1 936095	TP40 0.2-0.3 936096	QC3A 936098
Date Sampled			03/04/2008	03/04/2008	03/04/2008	03/04/2008	03/04/2008
SVOC Test/Reference	PQL	Unit					
r est/Reference	PQL	Unit					
Pyrene	0.5	mg/kg	-	-	-	<0.5	-
Sum of PAHs	0.5	mg/kg	-	-	-	<0.5	-
2-Fluorobiphenyl - Surrogate	-	%	-	-	-	96	-
o-Terphenyl-D14 - Surrogate	-	%	-	-	-	126	-
Anthracene-d10 - Surrogate	-	%	-	-	-	104	-
2000 TPH (C10 - C36) in Soil by GC							
C10-C14 Fraction	10	mg/kg	-	-	-	<10	-
C15-C28 Fraction	20	mg/kg	-	-	-	<20	-
C29-C36 Fraction	20	mg/kg	-	-	-	<20	-
Metals							
Гest/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS							
Arsenic	2	mg/kg	-	-	-	2.5	-
Cadmium	2	mg/kg	-	-	-	<2	-
Chromium	2	mg/kg	_	_	_	36	-
Copper	2	mg/kg	_	_	_	18	_
_ead	2	mg/kg	_	_	_	9.2	_
Nickel	2	mg/kg	_	_	_	15	
	2		-	-	-	25	-
Zinc	2	mg/kg	-	-	-	25	-
norganics	DO1						
Test/Reference	PQL	Unit					
1000 pH in Soil							
ρΗ	0.1	pН	-	-	-	8.4	-
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content							
% Moisture	1	%	-	-	-	9	-
Ourstoner Commiss ID			TD40.0.4.0.5	TD40 0 0 4 0	TD40.4.0.2.0	TP41 0-0.1	TD44 0 2 0
Customer Sample ID Amdel Sample Number			TP40 0.4-0.5 936100	TP40 0.9-1.0 936101	TP40 1.9-2.0 936103	936104	TP41 0.2-0
Amder Sample Number Date Sampled			03/04/2008	03/04/2008	03/04/2008	03/04/2008	03/04/2008
VOC			00/04/2000	00/0-4/2000	00/04/2000	00/04/2000	00/0-4/2000
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&T							
Benzene	0.2	mg/kg	-	-	-	-	<0.2
Ethylbenzene	1	mg/kg	_	_	_	_	<1.0
Meta- & Para- Xylene	2	mg/kg	_	_	_	_	<2.0
Ortho-Xylene	1	mg/kg	_	_	_	_	<1.0
Ortno-Xylene Foluene			-	-	-	-	<1.0 <1.0
	1	mg/kg	-	-	-	-	
Total Xylenes	3	mg/kg	-	-	-	-	<3.0
C6-C9 Fraction	5	mg/kg	-	-	-	-	<5.0
	-	%	-	-	-	-	106
1-Bromofluorobenzene - Surrogate							
SVOC							
-	PQL	Unit					
SVOC		Unit					



Customer Sample ID Amdel Sample Number Date Sampled			TP40 0.4-0.5 936100 03/04/2008	TP40 0.9-1.0 936101 03/04/2008	TP40 1.9-2.0 936103 03/04/2008	TP41 0-0.1 936104 03/04/2008	TP41 0.2-0.3 936106 03/04/2008
SVOC							
Test/Reference	PQL	Unit					
a-Chlordane	0.5	mg/kg	-	=	-	-	<0.5
a-Endosulfan	0.5	mg/kg	-	-	-	-	<0.5
Aldrin	0.5	mg/kg	-	-	-	-	<0.5
b-BHC	0.5	mg/kg	-	-	-	-	<0.5
b-Endosulfan	0.5	mg/kg	-	-	-	-	<0.5
d-BHC	0.5	mg/kg	-	-	-	-	<0.5
DDD	0.5	mg/kg	-	-	-	-	<0.5
DDE	0.5	mg/kg	-	-	-	-	<0.5
DDT	0.5	mg/kg	-	-	-	-	<0.5
Dieldrin	0.5	mg/kg	-	-	-	-	<0.5
Endosulfan sulfate	0.5	mg/kg	-	-	-	-	<0.5
Endrin	0.5	mg/kg	-	-	-	-	<0.5
Endrin Aldehyde	0.5	mg/kg	-	-	-	-	<0.5
g-BHC	0.5	mg/kg	-	-	-	-	<0.5
g-Chlordane	0.5	mg/kg	-	-	-	-	<0.5
Heptachlor	0.5	mg/kg	-	-	-	-	<0.5
Heptachlor epoxide	0.5	mg/kg	-	-	-	-	<0.5
Hexachlorobenzene (HCB)	0.5	mg/kg	-	-	-	-	<0.5
Methoxychlor	0.5	mg/kg	-	-	-	-	<0.5
Oxychlordane	0.5	mg/kg	-	-	-	-	<0.5
2,4,5,6-tetrachloro-m-xylene - Surrogate 2100 PAH in Soil by GC	-	%	-	-	-	-	105
Acenaphthene	0.5	mg/kg	-	-	-	-	<0.5
Acenaphthylene	0.5	mg/kg	-	-	-	-	<0.5
Anthracene	0.5	mg/kg	-	-	-	-	<0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	-	<0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	-	<0.5
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	-	-	<1
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	-	<0.5
Chrysene	0.5	mg/kg	-	-	-	-	<0.5
Dibenz(ah)anthracene	0.5	mg/kg	-	-	-	-	<0.5
Fluoranthene	0.5	mg/kg	-	-	-	-	<0.5
Fluorene	0.5	mg/kg	-	-	-	-	<0.5
Indeno(123-cd)pyrene	0.5	mg/kg	-	-	-	-	<0.5
Naphthalene	0.5	mg/kg	-	-	-	-	<0.5
Phenanthrene	0.5	mg/kg	-	-	-	-	<0.5
Pyrene	0.5	mg/kg	-	-	-	-	<0.5
Sum of PAHs	0.5	mg/kg	-	-	-	-	<0.5
2-Fluorobiphenyl - Surrogate	-	%	-	-	-	-	98
p-Terphenyl-D14 - Surrogate	-	%	-	-	-	-	127
Anthracene-d10 - Surrogate	-	%	-	-	-	-	99
<b>2000 TPH (C10 - C36) in Soil by GC</b> C10-C14 Fraction	10	mg/kg	-	-	-	-	<10
C15-C28 Fraction	20	mg/kg	-	-	-	-	<20
C29-C36 Fraction	20	mg/kg	-	-	-	-	<20
<b>Metals</b> Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS Arsenic	2	mg/kg	-	-	-	-	2.3

First Reported: 16 April 2008

Date Printed: 16 April 2008



Customer Sample ID Amdel Sample Number Date Sampled Metals			TP40 0.4-0.5 936100 03/04/2008	TP40 0.9-1.0 936101 03/04/2008	TP40 1.9-2.0 936103 03/04/2008	TP41 0-0.1 936104 03/04/2008	TP41 0.2-0.3 936106 03/04/2008
Test/Reference	PQL	Unit					
Cadmium	2	mg/kg	-	-	-	-	<2
Chromium	2	mg/kg	-	-	-	-	41
Copper	2	mg/kg	-	-	-	-	21
Lead	2	mg/kg	-	-	-	-	12
Nickel	2	mg/kg	-	-	-	-	15
Zinc	2	mg/kg	-	-	-	-	25
Inorganics							
Test/Reference	PQL	Unit					
<b>4000 pH in Soil</b> pH	0.1	pН	-	-	-	-	6.2
<b>Miscellaneous</b> Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	-	-	-	-	8

Customer Sample ID Amdel Sample Number Date Sampled			TP41 0.4-0.5 936107 03/04/2008	TP41 0.9-1.0 936109 03/04/2008	TP41 1.9-2.0 936110 03/04/2008	TP42 0-0.1 936111 03/04/2008	TP42 0.2-0.3 936113 03/04/2008
<b>VOC</b> Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P8	.T						
Benzene	0.2	mg/kg	-	-	-	<0.2	-
Ethylbenzene	1	mg/kg	-	-	-	<1.0	-
Meta- & Para- Xylene	2	mg/kg	-	-	-	<2.0	-
Ortho-Xylene	1	mg/kg	-	-	-	<1.0	-
Toluene	1	mg/kg	-	-	-	<1.0	-
Total Xylenes	3	mg/kg	-	-	-	<3.0	-
C6-C9 Fraction	5	mg/kg	-	-	-	<5.0	-
4-Bromofluorobenzene - Surrogate	-	%	-	-	-	106	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	·MS						
a-BHC	0.5	mg/kg	-	-	-	<0.5	-
a-Chlordane	0.5	mg/kg	-	-	-	<0.5	-
a-Endosulfan	0.5	mg/kg	-	-	-	<0.5	-
Aldrin	0.5	mg/kg	-	-	-	<0.5	-
b-BHC	0.5	mg/kg	-	-	-	<0.5	-
o-Endosulfan	0.5	mg/kg	-	-	-	<0.5	-
d-BHC	0.5	mg/kg	-	-	-	<0.5	-
DDD	0.5	mg/kg	-	-	-	<0.5	-
DDE	0.5	mg/kg	-	-	-	<0.5	-
DDT	0.5	mg/kg	-	-	-	<0.5	-
Dieldrin	0.5	mg/kg	-	-	-	<0.5	-
Endosulfan sulfate	0.5	mg/kg	-	-	-	<0.5	-
Endrin	0.5	mg/kg	-	-	-	<0.5	-
Endrin Aldehyde	0.5	mg/kg	-	-	-	<0.5	-



Customer Sample ID Amdel Sample Number Date Sampled			TP41 0.4-0.5 936107 03/04/2008	TP41 0.9-1.0 936109 03/04/2008	TP41 1.9-2.0 936110 03/04/2008	TP42 0-0.1 936111 03/04/2008	TP42 0.2-0.3 936113 03/04/2008
SVOC			00/04/2000	00/04/2000	03/04/2000	00/04/2000	00/04/2000
Test/Reference	PQL	Unit					
g-BHC	0.5	mg/kg		_	-	<0.5	-
g-Chlordane	0.5	mg/kg	-	_	_	<0.5	_
Heptachlor	0.5	mg/kg	-	_	_	<0.5	_
Heptachlor epoxide	0.5	mg/kg	-	-	_	<0.5	-
Hexachlorobenzene (HCB)	0.5	mg/kg	-	-	_	<0.5	-
Methoxychlor	0.5	mg/kg	-	-	_	<0.5	-
Oxychlordane	0.5	mg/kg	-	-	-	<0.5	-
2,4,5,6-tetrachloro-m-xylene - Surrogate	-	%	-	-	-	112	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	-	-	<0.5	-
Acenaphthylene	0.5	mg/kg	-	-	-	<0.5	-
Anthracene	0.5	mg/kg	-	-	-	<0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	-	<0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	-	<0.5	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	-	<1	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	<0.5	-
Chrysene	0.5	mg/kg	-	-	-	<0.5	-
Dibenz(ah)anthracene	0.5	mg/kg	-	-	-	<0.5	-
Fluoranthene	0.5	mg/kg	-	-	-	<0.5	-
Fluorene	0.5	mg/kg	-	-	-	<0.5	-
Indeno(123-cd)pyrene	0.5	mg/kg	-	-	-	<0.5	-
Naphthalene	0.5	mg/kg	-	-	-	<0.5	-
Phenanthrene	0.5	mg/kg	-	-	-	<0.5	-
Pyrene	0.5	mg/kg	-	-	-	<0.5	-
Sum of PAHs	0.5	mg/kg	-	-	-	<0.5	-
2-Fluorobiphenyl - Surrogate	_	%	-	-	-	100	-
p-Terphenyl-D14 - Surrogate	-	%	-	-	-	124	-
Anthracene-d10 - Surrogate	-	%	-	-	-	101	-
<b>2000 TPH (C10 - C36) in Soil by GC</b> C10-C14 Fraction	10	mg/kg	-	_	_	<10	_
C15-C28 Fraction	20	mg/kg	_	_	_	<20	_
C29-C36 Fraction	20	mg/kg	_	_	_	24	_
Metals		99					
Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS	_						
Arsenic	2	mg/kg	-	-	-	2.7	-
Cadmium	2	mg/kg	-	-	-	<2	-
Chromium	2	mg/kg	-	-	-	53	-
Copper	2	mg/kg	-	-	-	25	-
Lead	2	mg/kg	-	-	-	15	-
Nickel	2	mg/kg	-	-	-	19	-
Zinc	2	mg/kg	-	-	-	25	-
Inorganics Test/Reference	PQL	Unit					
4000 pH in Soil							
pH	0.1	рН	-	-	-	7.2	-
Miscellaneous		•					
Test/Reference	PQL	Unit					



Customer Sample ID	<u> </u>	<u> </u>	TP41 0.4-0.5	TP41 0.9-1.0	TP41 1.9-2.0	TP42 0-0.1	TP42 0.2-0.3
Amdel Sample Number			936107	936109	936110	936111	936113
Date Sampled			03/04/2008	03/04/2008	03/04/2008	03/04/2008	03/04/2008
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content							
% Moisture	1	%	-	-	-	4	-

Customer Sample ID Amdel Sample Number			TP42 0.4-0.5 936114	TP42 0.9-1.0 936116	QC4A 936117	TP42 1.9-2.0 936119	TP43 0-0.1 936120
Date Sampled			03/04/2008	03/04/2008	03/04/2008	03/04/2008	03/04/2008
VOC	DOL	Linit					
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&							
Benzene	0.2	mg/kg	-	-	-	-	<0.2
Ethylbenzene	1	mg/kg	-	-	-	-	<1.0
Meta- & Para- Xylene	2	mg/kg	-	-	-	-	<2.0
Ortho-Xylene	1	mg/kg	-	-	-	-	<1.0
Toluene	1	mg/kg	-	-	-	-	<1.0
Total Xylenes	3	mg/kg	-	-	-	-	<3.0
C6-C9 Fraction	5	mg/kg	-	-	-	-	<5.0
4-Bromofluorobenzene - Surrogate	-	%	-	-	-	-	100
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	MS						
a-BHC	0.5	mg/kg	-	-	-	-	<0.5
a-Chlordane	0.5	mg/kg	-	-	-	-	<0.5
a-Endosulfan	0.5	mg/kg	-	-	-	-	<0.5
Aldrin	0.5	mg/kg	-	-	-	-	<0.5
b-BHC	0.5	mg/kg	-	-	-	-	<0.5
b-Endosulfan	0.5	mg/kg	-	-	-	-	<0.5
d-BHC	0.5	mg/kg	-	-	-	-	<0.5
DDD	0.5	mg/kg	-	-	-	-	<0.5
DDE	0.5	mg/kg	-	_	_	-	<0.5
DDT	0.5	mg/kg	-	-	-	-	<0.5
Dieldrin	0.5	mg/kg	-	_	_	-	<0.5
Endosulfan sulfate	0.5	mg/kg	-	_	_	-	<0.5
Endrin	0.5	mg/kg	-	_	_	-	<0.5
Endrin Aldehyde	0.5	mg/kg	-	_	_	-	<0.5
g-BHC	0.5	mg/kg	-	_	_	-	<0.5
g-Chlordane	0.5	mg/kg	-	_	_	-	<0.5
Heptachlor	0.5	mg/kg	-	_	_	-	<0.5
Heptachlor epoxide	0.5	mg/kg	-	-	-	-	<0.5
Hexachlorobenzene (HCB)	0.5	mg/kg	-	-	-	-	<0.5
Methoxychlor	0.5	mg/kg	-	-	-	_	<0.5
Oxychlordane	0.5	mg/kg	-	-	-	_	<0.5
2,4,5,6-tetrachloro-m-xylene -	-	%	_	_	_	_	103
Surrogate	-	,,					.00
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	-	-	-	<0.5
Acenaphthylene	0.5	mg/kg	-	-	-	-	<0.5
Anthracene	0.5	mg/kg	-	-	-	-	<0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	-	<0.5

Date Printed: 16 April 2008



Customer Sample ID Amdel Sample Number Date Sampled			TP42 0.4-0.5 936114 03/04/2008	TP42 0.9-1.0 936116 03/04/2008	QC4A 936117 03/04/2008	TP42 1.9-2.0 936119 03/04/2008	TP43 0-0.1 936120 03/04/2008
SVOC Test/Reference	PQL	Unit					
Benzo(a)pyrene	0.5	mg/kg	-	_	_	_	<0.5
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	-	_	<1
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	_	<0.5
Chrysene	0.5	mg/kg	-	-	-	_	<0.5
Dibenz(ah)anthracene	0.5	mg/kg	-	-	_	-	<0.5
Fluoranthene	0.5	mg/kg	-	-	-	-	<0.5
Fluorene	0.5	mg/kg	-	-	-	-	<0.5
ndeno(123-cd)pyrene	0.5	mg/kg	-	-	_	_	<0.5
Naphthalene	0.5	mg/kg	-	-	_	_	<0.5
Phenanthrene	0.5	mg/kg	-	_	_	_	<0.5
Pyrene	0.5	mg/kg	-	-	_	_	<0.5
Sum of PAHs	0.5	mg/kg	-	-	-	-	<0.5
2-Fluorobiphenyl - Surrogate	-	%	-	-	-	-	98
p-Terphenyl-D14 - Surrogate	_	%	-	-	-	-	126
Anthracene-d10 - Surrogate	_	%	-	_	-	-	100
2000 TPH (C10 - C36) in Soil by GC							
C10-C14 Fraction	10	mg/kg	-	-	-	-	<10
C15-C28 Fraction	20	mg/kg	-	-	-	-	<20
C29-C36 Fraction	20	mg/kg	-	-	-	-	<20
Metals							
Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS							
Arsenic	2	mg/kg	-	-	-	-	<2
Cadmium	2	mg/kg	-	-	-	-	<2
Chromium	2	mg/kg	-	-	-	-	20
Copper	2	mg/kg	-	-	-	-	13
_ead	2	mg/kg	-	-	-	-	7.5
Nickel	2	mg/kg	-	-	-	-	7.5
Zinc	2	mg/kg	-	-	-	-	21
norganics Fest/Reference	PQL	Unit					
1 estrice	I QL	Offic					
4000 pH in Soil							
Н	0.1	pН	-	-	-	-	8.2
<b>Miscellaneous</b> Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	-	-	-	-	2
Customer Sample ID Amdel Sample Number	1	%	TP44 0-0.1 936129	TP44 0.2-0.3 936130	TP44 0.4-0.5 936132	TP44 0.9-1.0 936133	TP44 1.9-2.0 936134
Date Sampled			03/04/2008	03/04/2008	03/04/2008	03/04/2008	03/04/2008
<b>/OC</b> Fest/Reference	PQL	Unit					
100 BTEX &(C6-C9) in Soil by P&T							
Benzene	0.2	mg/kg	<0.2	-	-	-	-
Ethylbenzene	1	mg/kg	<1.0	-	-	-	-
Meta- & Para- Xylene	2	mg/kg	<2.0	_	_	_	

First Reported: 16 April 2008 Date Printed: 16 April 2008 Amdel Ltd 1868 Dandenong Rd Clayton VIC Australia 3168 ABN: 30 008 127 802 Telephone: (03) 9538 2277 Facsimile: (03) 9538 2278

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Customer Sample ID Amdel Sample Number Date Sampled			TP44 0-0.1 936129 03/04/2008	TP44 0.2-0.3 936130 03/04/2008	TP44 0.4-0.5 936132 03/04/2008	TP44 0.9-1.0 936133 03/04/2008	TP44 1.9-2.0 936134 03/04/2008
VOC			30.0 2000	00/0 !!=000	00/04/2000	00.0 = 000	00/0 !!! 2000
Test/Reference	PQL	Unit					
Ortho-Xylene	1	mg/kg	<1.0	-	-	-	-
Toluene	1	mg/kg	<1.0	-	-	-	-
Total Xylenes	3	mg/kg	<3.0	-	-	-	-
C6-C9 Fraction	5	mg/kg	<5.0	-	-	_	-
4-Bromofluorobenzene - Surrogate	-	%	98	-	-	-	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-M	s						
a-BHC	0.5	mg/kg	<0.5	-	-	-	-
a-Chlordane	0.5	mg/kg	<0.5	-	-	-	-
a-Endosulfan	0.5	mg/kg	<0.5	-	-	-	-
Aldrin	0.5	mg/kg	<0.5	-	-	-	-
b-BHC	0.5	mg/kg	<0.5	-	-	-	-
b-Endosulfan	0.5	mg/kg	<0.5	-	-	-	-
d-BHC	0.5	mg/kg	<0.5	-	-	-	-
DDD	0.5	mg/kg	<0.5	-	-	-	-
DDE	0.5	mg/kg	<0.5	-	-	-	-
DDT	0.5	mg/kg	<0.5	-	-	-	-
Dieldrin	0.5	mg/kg	<0.5	-	-	-	-
Endosulfan sulfate	0.5	mg/kg	<0.5	-	-	-	-
Endrin	0.5	mg/kg	<0.5	-	-	_	-
Endrin Aldehyde	0.5	mg/kg	<0.5	-	-	_	-
g-BHC	0.5	mg/kg	<0.5	-	_	_	_
g-Chlordane	0.5	mg/kg	<0.5	-	_	_	_
Heptachlor	0.5	mg/kg	<0.5	-	_	_	_
Heptachlor epoxide	0.5	mg/kg	<0.5	-	_	_	_
Hexachlorobenzene (HCB)	0.5	mg/kg	<0.5	_	_	_	_
Methoxychlor	0.5	mg/kg	<0.5	_	_	_	_
Oxychlordane	0.5	mg/kg	<0.5	_	_	_	_
2,4,5,6-tetrachloro-m-xylene -	-	%	112	_	_	_	_
Surrogate		,,	2				
2100 PAH in Soil by GC Acenaphthene	0.5	mg/kg	<0.5	_	_	_	_
Acenaphthylene	0.5	mg/kg	<0.5	_	_	_	_
Anthracene	0.5	mg/kg	<0.5	_	_	_	_
Benz(a)anthracene	0.5	mg/kg	<0.5	_	_	_	_
Benzo(a)pyrene	0.5	mg/kg	<0.5				
Benzo(b)&(k)fluoranthene	1	mg/kg	<1	-	-	-	-
				-	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	-	-	-	-
Chrysene Dibonz (ab) anthropone	0.5	mg/kg	<0.5	-	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	<0.5	-	-	-	-
Fluoranthene	0.5	mg/kg	<0.5	-	-	-	-
Fluorene	0.5	mg/kg	<0.5	-	-	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	<0.5	-	-	-	-
Naphthalene	0.5	mg/kg	<0.5	-	-	-	-
Phenanthrene	0.5	mg/kg	<0.5	-	-	-	-
Pyrene	0.5	mg/kg	<0.5	-	-	-	-
Sum of PAHs	0.5	mg/kg	<0.5	-	-	-	-
2-Fluorobiphenyl - Surrogate	-	%	100	-	-	-	-
p-Terphenyl-D14 - Surrogate	-	%	125	-	-	-	-



Customer Sample ID Amdel Sample Number Date Sampled			TP44 0-0.1 936129 03/04/2008	TP44 0.2-0.3 936130 03/04/2008	TP44 0.4-0.5 936132 03/04/2008	TP44 0.9-1.0 936133 03/04/2008	TP44 1.9-2.0 936134 03/04/2008
<b>SVOC</b> Test/Reference	PQL	Unit					
Anthracene-d10 - Surrogate	-	%	103	-	-	-	-
2000 TPH (C10 - C36) in Soil by GC							
C10-C14 Fraction	10	mg/kg	<10	-	-	-	-
C15-C28 Fraction	20	mg/kg	<20	-	-	-	-
C29-C36 Fraction	20	mg/kg	<20	-	-	-	-
<b>Metals</b> Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS							
Arsenic	2	mg/kg	<2	-	-	-	-
Cadmium	2	mg/kg	<2	-	-	-	-
Chromium	2	mg/kg	20	-	-	-	-
Copper	2	mg/kg	12	-	-	-	-
Lead	2	mg/kg	6.4	-	-	-	-
Nickel	2	mg/kg	8.0	-	-	-	-
Zinc	2	mg/kg	19	-	-	-	-
Inorganics Test/Reference	PQL	Unit					
4000 pH in Soil							
pH .	0.1	pН	8.4	-	-	-	-
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	4	-	-	-	-
Customer Sample ID Amdel Sample Number			TP45 0-0.1	TP45 0.2-0.3	QC7A	TP45 0.4-0.5 936141	TP45 0.9-1.0 936143
Date Sampled			936136 03/04/2008	936137 03/04/2008	936139 03/04/2008	03/04/2008	03/04/2008
Date Sampled VOC							
	PQL	Unit					
VOC	PQL 0.2			03/04/2008			
VOC Test/Reference  1100 BTEX &(C6-C9) in Soil by P&T Benzene		Unit mg/kg mg/kg		<b>03/04/2008</b> <0.2			
VOC Test/Reference  1100 BTEX &(C6-C9) in Soil by P&T Benzene Ethylbenzene	0.2	mg/kg		03/04/2008			
VOC Test/Reference  1100 BTEX &(C6-C9) in Soil by P&T Benzene Ethylbenzene Meta- & Para- Xylene	0.2	mg/kg mg/kg mg/kg		<b>03/04/2008</b> <0.2 <1.0			
VOC Test/Reference  1100 BTEX &(C6-C9) in Soil by P&T Benzene Ethylbenzene Meta- & Para- Xylene Ortho-Xylene	0.2 1 2	mg/kg mg/kg mg/kg mg/kg		<0.2 <1.0 <2.0			
VOC Test/Reference  1100 BTEX &(C6-C9) in Soil by P&T Benzene	0.2 1 2	mg/kg mg/kg mg/kg		<0.2 <1.0 <2.0 <1.0			

%

Unit

mg/kg

mg/kg

mg/kg

mg/kg

0.5 mg/kg

PQL

0.5

0.5

0.5

0.5

4-Bromofluorobenzene - Surrogate

2300 OC Pesticides in Soil by GC-MS

svoc

a-BHC

Aldrin

b-BHC

a-Chlordane

a-Endosulfan

Test/Reference

Date Printed: 16 April 2008 ABN: 30 008 127 802 Telephone: (03) 9538 2277 Facsimile: (03) 9538 2278 Final Report Number: 294891

94

<0.5

<0.5

<0.5

<0.5

<0.5



Customer Sample ID Amdel Sample Number Date Sampled			TP45 0-0.1 936136 03/04/2008	TP45 0.2-0.3 936137 03/04/2008	QC7A 936139 03/04/2008	TP45 0.4-0.5 936141 03/04/2008	TP45 0.9-1.0 936143 03/04/2008
SVOC			03/04/2008	03/04/2006	03/04/2006	03/04/2008	03/04/2000
Test/Reference	PQL	Unit					
b-Endosulfan	0.5	mg/kg	-	<0.5	-	-	-
d-BHC	0.5	mg/kg	-	<0.5	-	-	-
DDD	0.5	mg/kg	-	<0.5	-	-	-
DDE	0.5	mg/kg	-	<0.5	-	-	-
DDT	0.5	mg/kg	-	<0.5	-	-	-
Dieldrin	0.5	mg/kg	-	<0.5	-	-	-
Endosulfan sulfate	0.5	mg/kg	-	<0.5	-	-	-
Endrin	0.5	mg/kg	-	<0.5	-	-	-
Endrin Aldehyde	0.5	mg/kg	-	<0.5	-	-	-
g-BHC	0.5	mg/kg	-	<0.5	-	-	-
g-Chlordane	0.5	mg/kg	-	<0.5	-	-	-
Heptachlor	0.5	mg/kg	-	<0.5	-	-	-
Heptachlor epoxide	0.5	mg/kg	-	<0.5	-	-	-
Hexachlorobenzene (HCB)	0.5	mg/kg	-	<0.5	-	-	-
Methoxychlor	0.5	mg/kg	-	<0.5	-	-	-
Oxychlordane	0.5	mg/kg	-	<0.5	-	-	-
2,4,5,6-tetrachloro-m-xylene - Surrogate	-	%	-	102	-	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	<0.5	-	-	-
Acenaphthylene	0.5	mg/kg	-	<0.5	-	-	-
Anthracene	0.5	mg/kg	-	<0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	-	<0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	-	<0.5	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	<1	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	<0.5	-	-	-
Chrysene	0.5	mg/kg	-	<0.5	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	-	<0.5	-	-	-
Fluoranthene	0.5	mg/kg	-	<0.5	-	-	-
Fluorene	0.5	mg/kg	-	<0.5	-	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	-	<0.5	-	-	-
Naphthalene	0.5	mg/kg	-	<0.5	-	-	-
Phenanthrene	0.5	mg/kg	-	<0.5	-	-	-
Pyrene	0.5	mg/kg	-	<0.5	-	-	-
Sum of PAHs	0.5	mg/kg	-	<0.5	-	-	-
2-Fluorobiphenyl - Surrogate	-	%	-	95	-	-	-
p-Terphenyl-D14 - Surrogate	-	%	-	125	-	-	-
Anthracene-d10 - Surrogate	-	%	-	102	-	-	-
2000 TPH (C10 - C36) in Soil by GC							
C10-C14 Fraction	10	mg/kg	-	<10	-	-	-
C15-C28 Fraction	20	mg/kg	-	<20	-	-	-
C29-C36 Fraction	20	mg/kg	-	<20	-	-	-
Metals Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS							
Arsenic	2	mg/kg	-	2.7	-	-	-
Cadmium	2	mg/kg	-	<2	-	-	-
Chromium	2	mg/kg	-	41	-	-	-
Copper	2	mg/kg	-	19	-	-	-
Lead	2	mg/kg	-	8.5	-	-	-



PQL 2 2 PQL 0.1 PQL	Unit mg/kg mg/kg Unit pH Unit	- TP45 1.9-2.0	9.3  17946 0-0.1	03/04/2008  TP46 0.2-0.3	03/04/2008  TP46 0.4-0.5	03/04/2008  TP46 0.9-1.0
2 2 PQL 0.1 PQL	mg/kg mg/kg Unit pH Unit		9.3	-	- - - TP46 0.4-0.5	- - - TP46 0.9-1.0
2 2 PQL 0.1 PQL	mg/kg mg/kg Unit pH Unit		9.3	-	- - - TP46 0.4-0.5	- - TP46 0.9-1.0
PQL 0.1 PQL 1	mg/kg Unit  pH Unit		9.3	-	- - - TP46 0.4-0.5	- - - TP46 0.9-1.0
PQL 0.1 PQL 1	Unit pH Unit		9.3	- - TP46 0.2-0.3	- - TP46 0.4-0.5	- - TP46 0.9-1.0
0.1 PQL	pH Unit		13	- - TP46 0.2-0.3	- - TP46 0.4-0.5	- - TP46 0.9-1.0
0.1 PQL	pH Unit		13	- - TP46 0.2-0.3	- - TP46 0.4-0.5	- - TP46 0.9-1.0
PQL 1	Unit		13	- - TP46 0.2-0.3	- - TP46 0.4-0.5	- - TP46 0.9-1.0
PQL 1	Unit		13	- - TP46 0.2-0.3	- - TP46 0.4-0.5	- - TP46 0.9-1.0
1				- TP46 0.2-0.3	- TP46 0.4-0.5	- TP46 0.9-1.0
1				- TP46 0.2-0.3	- TP46 0.4-0.5	- TP46 0.9-1.0
	%			- TP46 0.2-0.3	- TP46 0.4-0.5	- TP46 0.9-1.0
	%			TP46 0.2-0.3	- TP46 0.4-0.5	TP46 0.9-1.0
			TP46 0-0.1	TP46 0.2-0.3	TP46 0.4-0.5	TP46 0.9-1.0
			TP46 0-0.1	TP46 0.2-0.3	TP46 0.4-0.5	TP46 0.9-1.0
			TP46 0-0.1	TP46 0.2-0.3	TP46 0.4-0.5	TP46 0.9-1.0
		936144				
			936145	936147	936148	936150
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		-		-	-	-
		-		-	-	-
	PQL  0.2 1 2 1 1 3 5 - PQL  0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.	0.2 mg/kg 1 mg/kg 2 mg/kg 1 mg/kg 1 mg/kg 3 mg/kg 5 mg/kg - %  PQL Unit  0.5 mg/kg	0.2 mg/kg - 1 mg/kg - 2 mg/kg - 1 mg/kg - 1 mg/kg - 1 mg/kg - 3 mg/kg - 5 mg/kg % -  PQL Unit  0.5 mg/kg -	0.2       mg/kg       -       <0.2	0.2 mg/kg - <0.2 - <1.0 - <2.0 - <1.0 - <2.0 - <1.0 - <2.0 - <1.0 - <2.0 - <1.0 - <2.0 - <1.0 - <2.0 - <1.0 - <1.0 - <2.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0 - <1.0	0.2 mg/kg - < <0.2 - < <0.2   - < < < < < < < < < < < < < < < < < <



Customer Sample ID Amdel Sample Number			TP45 1.9-2.0 936144 03/04/2008	TP46 0-0.1 936145 03/04/2008	TP46 0.2-0.3 936147	TP46 0.4-0.5 936148 03/04/2008	TP46 0.9-1.0 936150 03/04/2008
Date Sampled			03/04/2008	03/04/2008	03/04/2008	03/04/2008	03/04/2008
<b>SVOC</b> Test/Reference	PQL	Unit					
Hexachlorobenzene (HCB)	0.5	mg/kg	-	<0.5	-	-	-
Methoxychlor	0.5	mg/kg	-	<0.5	-	-	-
Oxychlordane	0.5	mg/kg	-	<0.5	-	-	-
2,4,5,6-tetrachloro-m-xylene - Surrogate	-	%	-	106	-	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	<0.5	-	-	-
Acenaphthylene	0.5	mg/kg	-	<0.5	-	-	-
Anthracene	0.5	mg/kg	-	<0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	-	<0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	-	<0.5	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	<1	-	-	_
Benzo(g.h.i)perylene	0.5	mg/kg	-	<0.5	-	-	-
Chrysene	0.5	mg/kg	-	<0.5	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	_	<0.5	_	_	_
Fluoranthene	0.5	mg/kg	_	<0.5	_	_	_
Fluorene	0.5	mg/kg	_	<0.5	_	_	
Indeno(123-cd)pyrene	0.5	mg/kg		<0.5			
Naphthalene	0.5	mg/kg	-	<0.5	-	-	-
•			-		-	-	_
Phenanthrene	0.5	mg/kg	-	<0.5	-	-	-
Pyrene Cura of BALLa	0.5	mg/kg	-	<0.5	-	-	-
Sum of PAHs	0.5	mg/kg	-	<0.5	-	-	-
2-Fluorobiphenyl - Surrogate	-	%	-	95	-	-	-
p-Terphenyl-D14 - Surrogate	-	%	-	122	-	-	-
Anthracene-d10 - Surrogate	<del>-</del>	%	-	96	-	-	-
<b>2000 TPH (C10 - C36) in Soil by G</b> 0 C10-C14 Fraction	10	mg/kg	_	<10	_	_	_
C15-C28 Fraction	20	mg/kg		<20			
C29-C36 Fraction	20		-	<20	-	-	-
	20	mg/kg	-	<20	-	-	-
<b>Metals</b> Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/M	ıs						
Arsenic	2	mg/kg	-	<2	-	-	-
Cadmium	2	mg/kg	-	<2	-	-	-
Chromium	2	mg/kg	-	22	-	-	-
Copper	2	mg/kg	-	26	-	-	-
Lead	2	mg/kg	-	6.8	-	-	-
Nickel	2	mg/kg	-	7.2	-	-	-
Zinc	2	mg/kg	-	15	-	-	-
Inorganics		5 5					
Test/Reference	PQL	Unit					
4000 pH in Soil	0.4	nU		6.7			
pH	0.1	pН	-	6.7	-	-	-
Miscellaneous	<b>5</b>						
Test/Reference	PQL	Unit					
<b>5000 Moisture Content</b> % Moisture	1	%	-	3	-	-	-



Customer Sample ID Amdel Sample Number			TP46 1.9-2.0 936151	TP47 0-0.1 936152	QC8A 936154	TP47 0.2-0.3 936155	TP47 0.4-0.5 936156
Date Sampled			03/04/2008	03/04/2008	03/04/2008	03/04/2008	03/04/2008
voc							
Test/Reference	PQL	Unit					
1100 MAH(BTEX & C6-C9) in Soil	P&T						
Benzene	0.2	mg/kg	-	<0.2	-	-	-
Cumene	0.5	mg/kg	-	<0.5	-	-	-
Ethylbenzene	1	mg/kg	-	<1.0	-	-	-
Meta- & Para- Xylene	2	mg/kg	-	<2.0	-	-	-
Ortho-Xylene	1	mg/kg	-	<1.0	-	-	-
Styrene	0.5	mg/kg	-	<0.5	-	-	-
Toluene	1	mg/kg	-	<1.0	-	-	-
Total Xylenes	3	mg/kg	-	<3.0	-	-	-
C6-C9 Fraction	5	mg/kg	-	<5.0	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	-	103	-	-	-
1300 VOCs in Soil by P&T							
1,1,1,2-Tetrachloroethane	1	mg/kg	-	<1.0	-	-	-
1,1,1-Trichloroethane	1	mg/kg	-	<1.0	-	-	-
1,1,2,2-Tetrachloroethane	1	mg/kg	-	<1.0	-	-	-
1,1,2-Trichloroethane	1	mg/kg	-	<1.0	-	-	-
1,1-Dichloroethane	1	mg/kg	-	<1.0	-	-	-
1,1-Dichloroethene	1	mg/kg	-	<1.0	-	-	-
1,1-Dichloropropylene	1	mg/kg	-	<1.0	-	-	-
1,2,3-Trichlorobenzene	1	mg/kg	-	<1.0	-	-	-
1,2,3-Trichloropropane	1	mg/kg	-	<1.0	-	-	-
1,2,4-Trichlorobenzene	1	mg/kg	-	<1.0	-	-	-
1,2,4-Trimethylbenzene	1	mg/kg	-	<1.0	-	-	-
1,2-Dibromo-3-chloropropane	1	mg/kg	-	<1.0	-	-	-
1,2-Dibromoethane	1	mg/kg	-	<1.0	-	-	_
1,2-Dichlorobenzene	1	mg/kg	-	<1.0	-	-	_
1,2-Dichloroethane	1	mg/kg	-	<1.0	-	-	_
1,2-Dichloropropane	1	mg/kg	-	<1.0	_	-	_
1,3,5-Trimethylbenzene	1	mg/kg	_	<1.0	_	-	_
1,3-Dichlorobenzene	1	mg/kg	_	<1.0	_	-	_
1,3-Dichloropropane	1	mg/kg	_	<1.0	_	_	_
1,4-Dichlorobenzene	1	mg/kg	_	<1.0	_	_	_
2,2-Dichloropropane	10	mg/kg	_	<10.0	_	_	_
2-butanone	10	mg/kg	_	<10.0	_	_	_
2-Chlorotoluene	1	mg/kg	_	<1.0	_	_	_
1-Chlorotoluene	1	mg/kg	_	<1.0	_	_	
4-methyl-2-pentanone	10	mg/kg	_	<10.0	_	_	_
a-metryi-z-pentarione Benzene	0.2	mg/kg	-	<0.2	-	-	-
Bromobenzene	1	mg/kg	-	<1.0	=	-	-
Bromochloromethane	1	mg/kg	-	<1.0	-	-	-
Bromodichloromethane	1	mg/kg	_	<1.0	_	_	_
Bromoform	1		-	<1.0	=	-	-
Bromomethane	1	mg/kg mg/kg	-	<1.0	-	-	-
			-	<1.0	=	-	-
Carbon Tetrachloride	1	mg/kg	-		-	-	-
Chlorobenzene	1	mg/kg	-	<1.0	-	-	-
Chloroethane	1	mg/kg	-	<1.0	-	-	-
Chloroform	1	mg/kg	-	<1.0	-	-	-
Chloromethane	1	mg/kg	-	<1.0	-	-	-
cis-1,2-Dichloroethene	1	mg/kg	-	<1.0	-	-	-
cis-1,3-Dichloropropene	1	mg/kg	-	<1.0	-	-	-



Customer Sample ID Amdel Sample Number			TP46 1.9-2.0 936151	TP47 0-0.1 936152	QC8A 936154	TP47 0.2-0.3 936155	TP47 0.4-0.5 936156
Date Sampled			03/04/2008	03/04/2008	03/04/2008	03/04/2008	03/04/2008
VOC							
Test/Reference	PQL	Unit					
Dibromochloromethane	1	mg/kg	-	<1.0	-	-	-
Dibromomethane	1	mg/kg	-	<1.0	-	-	-
Dichlorodifluoromethane	1	mg/kg	-	<1.0	-	-	-
Ethylbenzene	1	mg/kg	-	<1.0	-	-	-
Hexachlorobutadiene	1	mg/kg	-	<1.0	-	-	-
Hexachloroethane	1	mg/kg	-	<1.0	-	-	-
Isopropylbenzene	0.5	mg/kg	-	<0.5	-	-	-
Meta- & Para- Xylene	2	mg/kg	-	<2.0	-	-	-
Methylene Chloride	5	mg/kg	-	<5.0	-	-	-
Naphthalene	1	mg/kg	-	<1.0	-	-	-
n-Butylbenzene	1	mg/kg	-	<1.0	-	-	-
n-Propylbenzene	1	mg/kg	-	<1.0	-	-	-
Ortho-Xylene	1	mg/kg	-	<1.0	-	-	-
Pentachloroethane	1	mg/kg	-	<1.0	-	-	-
p-Isopropyltoluene	1	mg/kg	-	<1.0	-	-	-
sec-Butylbenzene	1	mg/kg	-	<1.0	-	-	-
Styrene	0.5	mg/kg	-	<0.5	-	-	-
tert-Butylbenzene	1	mg/kg	-	<1.0	-	-	-
Tetrachloroethene	1	mg/kg	-	<1.0	-	-	-
Toluene	1	mg/kg	-	<1.0	-	-	-
trans-1,2-Dichloroethene	1	mg/kg	-	<1.0	-	-	-
trans-1,3-Dichloropropene	1	mg/kg	-	<1.0	-	-	-
Trichloroethene	1	mg/kg	-	<1.0	-	-	-
Trichlorofluoromethane	1	mg/kg	-	<1.0	-	-	-
Vinyl Chloride	1	mg/kg	-	<1.0	-	-	-
Total Xylenes	3	mg/kg	-	<3.0	-	-	-
Toluene-D8 - Surrogate	1	%	-	90	-	-	-
4-Bromofluorobenzene - Surrogate	1	%	-	80	-	-	-
Pentafluorobenzene-Surrogate	1	%	-	77	-	-	-
SVOC							
Test/Reference	PQL	Unit					
2200 OC Bootisides in Sail by CC	MC						
2300 OC Pesticides in Soil by GC- a-BHC	- <b>IVIS</b> 0.5	mg/kg	_	<0.5	_	_	_
a-Chlordane	0.5	mg/kg	_	<0.5	_	_	_
a-Endosulfan	0.5	mg/kg	_	<0.5	_	_	_
Aldrin	0.5	mg/kg	_	<0.5	_	_	_
b-BHC	0.5	mg/kg	_	<0.5	_	_	_
b-Endosulfan	0.5	mg/kg	_	<0.5	_	_	_
d-BHC	0.5	mg/kg	_	<0.5	_	_	_
DDD	0.5	mg/kg	_	<0.5	_	_	_
DDE	0.5	mg/kg	_	<0.5	_	_	_
DDT	0.5	mg/kg	_	<0.5	_	_	_
Dieldrin	0.5	mg/kg	-	<0.5	_	_	_
Endosulfan sulfate	0.5	mg/kg	_	<0.5	_	_	_
Endrin	0.5	mg/kg	-	<0.5	-	-	-
			-	<0.5	-	-	-
Endrin Aldehyde	0.5	mg/kg	-		-	-	-
g-BHC	0.5	mg/kg	-	<0.5	-	-	-
g-Chlordane	0.5	mg/kg	-	<0.5	-	-	-
Heptachlor	0.5	mg/kg	-	<0.5	-	-	-



Customer Sample ID Amdel Sample Number			TP46 1.9-2.0 936151	TP47 0-0.1 936152	QC8A 936154	TP47 0.2-0.3 936155	TP47 0.4-0.5 936156
Date Sampled			03/04/2008	03/04/2008	03/04/2008	03/04/2008	03/04/2008
SVOC							
Test/Reference	PQL	Unit					
Heptachlor epoxide	0.5	mg/kg	-	<0.5	-	-	-
Hexachlorobenzene (HCB)	0.5	mg/kg	-	<0.5	-	-	-
Methoxychlor	0.5	mg/kg	-	<0.5	-	-	-
Oxychlordane	0.5	mg/kg	-	<0.5	-	-	-
2,4,5,6-tetrachloro-m-xylene - Surrogate	-	%	-	110	-	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	<0.5	-	-	-
Acenaphthylene	0.5	mg/kg	-	<0.5	-	-	-
Anthracene	0.5	mg/kg	-	<0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	-	<0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	-	<0.5	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	<1	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	<0.5	-	-	-
Chrysene	0.5	mg/kg	-	<0.5	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	-	<0.5	-	-	-
Fluoranthene	0.5	mg/kg	-	<0.5	-	-	-
Fluorene	0.5	mg/kg	-	<0.5	-	-	-
ndeno(123-cd)pyrene	0.5	mg/kg	-	<0.5	-	-	-
laphthalene	0.5	mg/kg	-	<0.5	-	-	-
Phenanthrene	0.5	mg/kg	-	<0.5	-	-	-
Pyrene	0.5	mg/kg	-	<0.5	-	-	-
Sum of PAHs	0.5	mg/kg	-	<0.5	-	-	-
-Fluorobiphenyl - Surrogate	-	%	-	99	-	-	-
-Terphenyl-D14 - Surrogate	-	%	-	124	-	-	-
Anthracene-d10 - Surrogate	-	%	-	102	-	-	-
2600 PCBs in Soil by GC							
Aroclor 1016DB	0.5	mg/kg	-	<0.5	-	-	-
Aroclor 1221DB	0.5	mg/kg	-	<0.5	-	-	-
Aroclor 1232 and 1242 as totalDB	1	mg/kg	-	<1	-	-	-
Aroclor 1248 and 1254 as totalDB	1	mg/kg	-	<1	-	-	-
Aroclor 1260DB	0.5	mg/kg	-	<0.5	-	-	-
otal Polychlorinated biphenylsDB	1	mg/kg	-	<1	-	-	-
Decachlorobiphenyl - PCB surrogate	1	%	-	98	-	-	-
2800 Individual Phenols in Soil by GC 2,3,4,6-Tetrachlorophenol	1	mg/kg	-	<1	-	-	-
2,3,4-Trichlorophenol	0.5	mg/kg	-	<0.5	-	-	-
2,3,5,6-Tetrachlorophenol	1	mg/kg	-	<1	-	-	-
2,3,5-Trichlorophenol	0.5	mg/kg	-	<0.5	-	-	-
2,3,6-Trichlorophenol	0.5	mg/kg	-	<0.5	-	-	-
2,3-Dichlorophenol	1	mg/kg	-	<1	-	-	-
,4 & 2,5-Dichlorophenol	2	mg/kg	-	<2	-	-	-
2,4,6-Trichlorophenol	0.5	mg/kg	-	<0.5	-	-	-
2,6-Dichlorophenol	0.5	mg/kg	-	<0.5	-	-	-
2-Chlorophenol	0.5	mg/kg	-	<0.5	-	-	_
-Methylphenol	0.5	mg/kg	-	<0.5	-	_	_
3,4-Dichlorophenol	0.5	mg/kg	_	<0.5	_	_	_
5,5-Dichlorophenol	0.5	mg/kg	_	<0.5	_	_	_
-Chlorophenol & 4-Chlorophenol	1	mg/kg	_	<1	_	_	_
Omorophenora 4-Oniorophenor	1	mg/kg	=	21	-	-	-



Customer Sample ID Amdel Sample Number Date Sampled			TP46 1.9-2.0 936151 03/04/2008	TP47 0-0.1 936152 03/04/2008	QC8A 936154 03/04/2008	TP47 0.2-0.3 936155 03/04/2008	TP47 0.4-0.9 936156 03/04/2008
svoc							
Гest/Reference	PQL	Unit					
-Chloro-3-methylphenol	0.5	mg/kg	-	<0.5	-	-	-
Pentachlorophenol	1	mg/kg	-	<1	-	-	-
Phenol	0.5	mg/kg	-	<0.5	-	-	-
2,4,6-Tribromophenol-Surrogate	1	%	-	44	-	-	-
2000 TPH (C10 - C36) in Soil by GC							
C10-C14 Fraction	10	mg/kg	-	<10	-	-	-
C15-C28 Fraction	20	mg/kg	-	<20	-	-	-
C29-C36 Fraction	20	mg/kg	-	<20	-	-	-
Metals							
rest/Reference	PQL	Unit					
3400 Mercury in Soil by FIMS		,,		0.04			
Mercury	0.01	mg/kg	-	0.01	-	-	-
3100 Total Metals in Soil By ICP/MS	^			-20			
Antimony	2	mg/kg	-	<2	-	-	-
Arsenic	2	mg/kg	-	<2	-	-	-
Barium	2	mg/kg	-	37	-	-	-
Cadmium	2	mg/kg	-	<2	-	-	-
Chromium	2	mg/kg	-	20	-	-	-
Cobalt	2	mg/kg	-	5.0	-	-	-
Copper	2	mg/kg	-	8.9	-	-	-
.ead	2	mg/kg	-	7.2	-	-	-
Manganese	2	mg/kg	-	170	-	-	-
Molybdenum	2	mg/kg	-	<2	-	-	-
lickel	2	mg/kg	-	7.3	-	-	-
Selenium	2	mg/kg	-	<2	-	-	-
Гin	2	mg/kg	-	<2	-	-	-
Zinc	2	mg/kg	-	12	-	-	-
norganics							
Test/Reference	PQL	Unit					
1300 Anions in Soil by IC Fluoride (Soluble)	2	mg/kg		<2			
		mg/kg	-	<2	-	-	-
<b>1270 Total Cyanide in Soil Colourme</b> Fotal Cyanide	e <b>tric</b> 0.1	ma/ka		0.4			
•	0.1	mg/kg	-	0.4	-	-	-
4000 pH in Soil oH	0.1	pН	_	6.8	_	_	_
	0.1	рп	-	0.0	-	-	-
Miscellaneous Fest/Reference	PQL	Unit					
restretetete	FQL	Offic					
5000 Moisture Content							
% Moisture	1	%	-	4	-	-	-
Customer Sample ID			TP47 0.9-1.0	TP47 1.9-2.0	TP48 0-0.1	TP48 0.2-0.3	QC9A
Amdel Sample Number			936158 03/04/2008	936159 03/04/2008	936160 03/04/2008	936162 03/04/2008	936163 03/04/2008
Date Sampled /OC			U3/U4/2UU0	U3/U4/ZUU0	U3/U4/2UU8	U3/U4/ZUU0	03/04/2008
Fest/Reference	PQL	Unit					
	1 QL	31III					
100 BTEX &(C6-C9) in Soil by P&T	0.0					10.0	
Benzene	0.2	mg/kg	-	-	-	<0.2	-

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Customer Sample ID Amdel Sample Number			TP47 0.9-1.0 936158	TP47 1.9-2.0 936159	TP48 0-0.1 936160	TP48 0.2-0.3 936162	QC9A 936163
Date Sampled			03/04/2008	03/04/2008	03/04/2008	03/04/2008	03/04/2008
VOC	DOL	l lmit					
Test/Reference	PQL	Unit					
Ethylbenzene	1	mg/kg	-	-	-	<1.0	-
Meta- & Para- Xylene	2	mg/kg	-	-	-	<2.0	-
Ortho-Xylene	1	mg/kg	-	-	-	<1.0	-
Toluene	1	mg/kg	-	-	-	<1.0	-
Total Xylenes	3	mg/kg	-	-	-	<3.0	-
C6-C9 Fraction	5	mg/kg	-	-	-	<5.0	-
1-Bromofluorobenzene - Surrogate	-	%	-	-	-	101	-
SVOC							
Test/Reference	PQL	Unit					
300 OC Pesticides in Soil by GC-	MS						
a-BHC	0.5	mg/kg	-	-	-	<0.5	-
a-Chlordane	0.5	mg/kg	-	-	-	<0.5	-
a-Endosulfan	0.5	mg/kg	-	-	-	<0.5	-
Aldrin	0.5	mg/kg	-	-	-	<0.5	-
o-BHC	0.5	mg/kg	-	-	-	<0.5	-
o-Endosulfan	0.5	mg/kg	-	-	-	<0.5	-
I-BHC	0.5	mg/kg	-	-	-	<0.5	-
ODD	0.5	mg/kg	-	-	-	<0.5	-
DDE	0.5	mg/kg	-	_	-	<0.5	_
ODT	0.5	mg/kg	-	-	-	<0.5	-
Dieldrin	0.5	mg/kg	-	_	-	<0.5	_
Endosulfan sulfate	0.5	mg/kg	-	-	-	<0.5	-
Endrin	0.5	mg/kg	-	-	-	<0.5	_
Endrin Aldehyde	0.5	mg/kg	-	_	-	<0.5	_
g-BHC	0.5	mg/kg	-	-	-	<0.5	-
g-Chlordane	0.5	mg/kg	-	-	-	<0.5	-
- Heptachlor	0.5	mg/kg	-	-	-	<0.5	-
- Heptachlor epoxide	0.5	mg/kg	-	-	-	<0.5	-
Hexachlorobenzene (HCB)	0.5	mg/kg	-	-	-	<0.5	-
Methoxychlor	0.5	mg/kg	-	-	-	<0.5	-
Dxychlordane	0.5	mg/kg	-	-	-	<0.5	-
2,4,5,6-tetrachloro-m-xylene -	-	%	-	-	-	108	-
Surrogate							
2100 PAH in Soil by GC		,,				0.5	
Acenaphthene	0.5	mg/kg	-	-	-	<0.5	-
Acenaphthylene	0.5	mg/kg	-	-	-	<0.5	-
Anthracene	0.5	mg/kg	-	-	-	<0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	-	<0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	-	<0.5	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	-	<1	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	<0.5	-
Chrysene	0.5	mg/kg	-	-	-	<0.5	-
Dibenz(ah)anthracene	0.5	mg/kg	-	-	-	<0.5	-
Fluoranthene	0.5	mg/kg	-	-	-	<0.5	-
Fluorene	0.5	mg/kg	-	-	-	<0.5	-
ndeno(123-cd)pyrene	0.5	mg/kg	-	-	-	<0.5	-
laphthalene	0.5	mg/kg	-	-	-	<0.5	-
Phenanthrene	0.5	mg/kg	-	-	-	<0.5	-
Pyrene	0.5	mg/kg	-	-	-	<0.5	-
Sum of PAHs	0.5	mg/kg	-	-	-	<0.5	-



Customer Sample ID Amdel Sample Number Date Sampled SVOC			TP47 0.9-1.0 936158 03/04/2008	TP47 1.9-2.0 936159 03/04/2008	TP48 0-0.1 936160 03/04/2008	TP48 0.2-0.3 936162 03/04/2008	QC9A 936163 03/04/2008
Test/Reference	PQL	Unit					
2-Fluorobiphenyl - Surrogate	-	%	-	-	-	100	-
p-Terphenyl-D14 - Surrogate	-	%	-	-	-	122	-
Anthracene-d10 - Surrogate	-	%	-	-	-	101	-
2000 TPH (C10 - C36) in Soil by G	С						
C10-C14 Fraction	10	mg/kg	-	-	-	<10	-
C15-C28 Fraction	20	mg/kg	-	-	-	<20	-
C29-C36 Fraction	20	mg/kg	-	-	-	<20	-
Metals							
Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/N	/IS						
Arsenic	2	mg/kg	-	-	-	<2	-
Cadmium	2	mg/kg	-	-	-	<2	-
Chromium	2	mg/kg	-	-	-	38	-
Copper	2	mg/kg	-	-	-	19	-
Lead	2	mg/kg	-	-	-	16	-
Nickel	2	mg/kg	-	-	-	13	-
Zinc	2	mg/kg	-	-	-	23	-
Inorganics							
Test/Reference	PQL	Unit					
4000 pH in Soil							
рН	0.1	рН	-	-	-	6.3	-
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content							
% Moisture	1	%	_	_	_	4	_

### Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Extracted	Analysed	
1100 BTEX &(C6-C9) in Soil by P&T		13/04/2008	
1100 MAH(BTEX & C6-C9) in Soil P&T		13/04/2008	
1300 VOCs in Soil by P&T	11/04/2008	14/04/2008	
2000 TPH (C10 - C36) in Soil by GC	08/04/2008	11/04/2008	
2100 PAH in Soil by GC	08/04/2008	13/04/2008	
2300 OC Pesticides in Soil by GC-MS	08/04/2008	14/04/2008	
2600 PCBs in Soil by GC	08/04/2008	14/04/2008	
2800 Individual Phenols in Soil by GC	08/04/2008	11/04/2008	
3100 Total Metals in Soil By ICP/MS	15/04/2008	16/04/2008	
3400 Mercury in Soil by FIMS	14/04/2008	15/04/2008	
4000 pH in Soil		14/04/2008	
4270 Total Cyanide in Soil Colourmetric	10/04/2008	11/04/2008	
4300 Anions in Soil by IC	08/04/2008	10/04/2008	
5000 Moisture Content		07/04/2008	



### **Amdel Internal Quality Control Review**

#### General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples
  are included in this QC report where applicable. Additional QC data may be available on request.
- 2. Amdel QC Acceptance/Rejection criteria are available on request.
- 3. Proficiency trial results are available on request.
- 4. Actual PQLs are matrix dependant. Quotes PQLs may be raised where sample extracts are diluted due to interferences.
- 5. Results are uncorrected for matrix spike or surrogate recoveries.
- 6. Test samples duplicated or spiked, are for this job only and are identified in the following QC report.
- 7. SVOC analyses on waters are performed on homogenized, unfiltered sample, unless noted otherwise.
- 8. When individual results are qualified in the body of a report, refer to the qualifier descriptions that follow.

#### **Holding Times**

Please refer to 'Sampling and Preservation Chart for Soils & Waters' for holding times. (Form LM-FOR-ADM-020)

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgement.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitablity qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

\*\*NOTE: pH duplicates are reported as a range NOT an RPD

#### **Quality Control Results**

#### Laboratory: EN\_METALS

Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
950760 [ Method Blank ]	•		•	•	-	
3100 Metals in Soil - As Received						
Antimony	mg/kg	<2		< 2	Т	
Arsenic	mg/kg	<2		< 2	Т	
Barium	mg/kg	<2		< 2	Т	
Beryllium	mg/kg	<2		< 2	Т	
Cadmium	mg/kg	<2		< 2	Т	
Chromium	mg/kg	<2		< 2	Т	
Cobalt	mg/kg	<2		< 2	Т	
Copper	mg/kg	<2		< 2	Т	
Lead	mg/kg	<2		< 2	Т	
Manganese	mg/kg	<2		< 2	Т	
Molybdenum	mg/kg	<2		< 2	Т	
Nickel	mg/kg	<2		< 2	Т	
Selenium	mg/kg	<2		< 2	Т	
Tin	mg/kg	<2		< 2	Т	
Vanadium	mg/kg	<2		< 2	Т	
Zinc	mg/kg	<2		< 2	Т	
950958 [ Method Blank ]	•			•	•	
3400 Mercury in Soil by FIMS						
Mercury	mg/kg	<0.01		< 0.01	Т	

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Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
950761 [ Laboratory Control Sample ]	+					+	
3100 Metals in Soil - As Received			Expected Value	Percent Recovery			
Antimony	mg/kg	100	100.0	102	70-130 %	Т	
Arsenic	mg/kg	98	100.0	98	70-130 %	Т	
Barium	mg/kg	110	100.0	112	70-130 %	Т	
Cadmium	mg/kg	100	100.0	101	70-130 %	Т	
Chromium	mg/kg	100	100.0	104	70-130 %	Т	
Cobalt	mg/kg	91	100.0	91	70-130 %	Т	
Copper	mg/kg	94	100.0	94	70-130 %	Т	
Lead	mg/kg	110	100.0	111	70-130 %	Т	
Manganese	mg/kg	94	100.0	94	70-130 %	Т	
Molybdenum	mg/kg	120	100.0	116	70-130 %	Т	
Nickel	mg/kg	96	100.0	96	70-130 %	Т	
Selenium	mg/kg	93	100.0	93	70-130 %	Т	
Tin	mg/kg	110	100.0	112	70-130 %	Т	
Vanadium	mg/kg	99	100.0	99	70-130 %	Т	
Zinc	mg/kg	89	100.0	89	70-130 %	Т	
950959 [ Laboratory Control Sample ]	•	•				•	
3400 Mercury in Soil by FIMS			Expected Value	Percent Recovery			
Mercury	mg/kg	9.9	10.0	99	80-120 %	Т	
939055 [ Duplicate of 936078 ]						•	
3100 Total Metals in Soil By ICP/MS			Result 2	RPD			
Arsenic	mg/kg	3.0	3.4	12	0-30 %	Т	
Cadmium	mg/kg	<2	<2	<1	0-30 %	T	
Chromium	mg/kg	61	60	1	0-30 %	T	
Copper	mg/kg	28	30	6	0-30 %	T	
Lead	mg/kg	20	23	13	0-30 %	T	
Nickel	mg/kg	22	23	4	0-30 %	Т	
Zinc	mg/kg	31	31	<1	0-30 %	<del>                                     </del>	
939073 [ Spike of 936086 ]			<u> </u>			+	
3100 Total Metals in Soil By ICP/MS			Spike Value	Percent Recovery			
Arsenic	mg/kg	95	100.0	93	70-130 %	Т	
Cadmium	mg/kg	93	100.0	93	70-130 %	<del>  '</del>	
Chromium	mg/kg	130	100.0	95	70-130 %	<del>  '</del>	
Copper	mg/kg	100	100.0	90	70-130 %	T .	
Lead	mg/kg	110	100.0	97	70-130 %	<del>  '</del>	
Nickel	mg/kg	100	100.0	94	70-130 %	<del>  '</del>	
Zinc	mg/kg	99	100.0	83	70-130 %	<del>  '</del>	
Laboratory: <b>EN_PREP</b>	mg/kg	99	100.0	65	70-130 %	+ '-	ļ
Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
939052 [ Duplicate of 936079 ]		!	!			<del>-</del>	
5000 Moisture Content			Result 2	RPD			<b> </b>
% Moisture	%	14	14	N/A	N/A	N/A	-
939071 [ Duplicate of 936079 ]	/0		17	13/7	14/73	1 11//	
			Booult 2	DDD I			-
5000 Moisture Content  % Moisture	%	14	Result 2	RPD N/A	N/A	N/A	
	70	14	14	IN/A	IN/A	I IN/A	ļ
Laboratory: EN_SVOC		1	1		Accentance	Pass	Qualifying
Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Limits	Codes
939687 [ Method Blank ]			1	1			
2000 TPH (C10 - C36) in Soil by GC							ļ
C10-C14 Fraction	mg/kg	<10			< 10	Т	
C15-C28 Fraction	mg/kg	<20			< 20	Т	<u> </u>
C29-C36 Fraction	mg/kg	<20	1		< 20	T	I

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Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifyii Codes
939689 [ Method Blank ]	1	<del> </del>	l		+	
2100 PAH in Soil by GC						
Acenaphthene	mg/kg	<0.5		< 0.5	Т	
Acenaphthylene	mg/kg	<0.5		< 0.5	Т	
Anthracene	mg/kg	<0.5		< 0.5	T	
Benz(a)anthracene	mg/kg	<0.5		< 0.5	Т	
Benzo(a)pyrene	mg/kg	<0.5		< 0.5	T	
Benzo(b)&(k)fluoranthene	mg/kg	<1		< 1	Т	
Benzo(g.h.i)perylene	mg/kg	<0.5		< 0.5	Т	
Chrysene	mg/kg	<0.5		< 0.5	Т	
Dibenz(ah)anthracene	mg/kg	<0.5		< 0.5	Т	
Fluoranthene	mg/kg	<0.5		< 0.5	Т	
Fluorene	mg/kg	<0.5		< 0.5	T	
Indeno(123-cd)pyrene	mg/kg	<0.5		< 0.5	T	
Naphthalene	mg/kg	<0.5		< 0.5	Т	
Phenanthrene	mg/kg	<0.5		< 0.5	T	
Pyrene	mg/kg	<0.5		< 0.5	T	
Sum of PAHs	mg/kg	<0.5		< 0.5	Т	
2-Fluorobiphenyl - Surrogate	%	100		70-130 %	Т	
Anthracene-d10 - Surrogate	%	100		70-130 %	Т	
p-Terphenyl-D14 - Surrogate	%	126		70-130 %	Т	
2300 OC Pesticides in Soil by GC-MS		-			-	
a-BHC	mg/kg	<0.5	<del>                                     </del>	< 0.5	Т	
a-Chlordane	mg/kg	<0.5		< 0.5	<del>                                     </del>	
a-Endosulfan	mg/kg	<0.5		< 0.5	<del>  '</del>	
Aldrin	mg/kg	<0.5		< 0.5	T	
b-BHC	mg/kg	<0.5		< 0.5	T	
b-Endosulfan	mg/kg	<0.5		< 0.5	<del>  '</del>	
d-BHC	mg/kg	<0.5		< 0.5	T	
DDD	mg/kg	<0.5		< 0.5	T	
DDE	mg/kg	<0.5		< 0.5	<del>  '</del>	
DDT	mg/kg	<0.5		< 0.5	T	
Dieldrin	mg/kg	<0.5		< 0.5	T	
Endosulfan sulfate	mg/kg	<0.5		< 0.5	† <u>†</u>	
Endrin	mg/kg	<0.5		< 0.5	T	
Endrin Aldehyde	mg/kg	<0.5		< 0.5	T	
g-BHC	mg/kg	<0.5		< 0.5	† †	
g-Chlordane	_	<0.5		< 0.5	† †	
Heptachlor	mg/kg mg/kg	<0.5		< 0.5	T T	
Heptachlor epoxide	mg/kg	<0.5	<del> </del>	< 0.5	† †	
Hexachlorobenzene (HCB)	mg/kg	<0.5		< 0.5	† †	
Methoxychlor		<0.5		< 0.5	† † T	
Oxychlordane	mg/kg mg/kg	<0.5		< 0.5	'   T	
2,4,5,6-tetrachloro-m-xylene - Surrogate	%	105		70-130 %	'   T	
	70	100		70-130 %	<del></del>	
2600 PCBs in Soil by GC	m = n	-0 F	<del>                                     </del>	-05	1 -	
Aroclor 1016	mg/kg	<0.5		< 0.5	T	
Aroclor 1221	mg/kg	<0.5		< 0.5	T	
Aroclor 1232 and 1242 as total	mg/kg	<1		<1	T	
Aroclor 1248 and 1254 as total	mg/kg	<1	<del>                                     </del>	<1	T	
Aroclor 1260	mg/kg	<0.5	<del>                                     </del>	< 0.5	T	
Total Polychlorinated biphenyls	mg/kg	<1		< 1	T	
Decachlorobiphenyl - PCB surrogate	%	91		70-130 %	Т	
2800 Individual Phenols in Soil by GC	_	1			_	
2,3,4,6-Tetrachlorophenol	mg/kg	<1		<1	Т	
2,3,4-Trichlorophenol	mg/kg	<0.5		< 0.5	Т	
2,3,5,6-Tetrachlorophenol	mg/kg	<1		<1	Т	
2,3,5-Trichlorophenol	mg/kg	<0.5		< 0.5	Т	
2,3,6-Trichlorophenol	mg/kg	<0.5		< 0.5	Т	
	mg/kg	<1		< 1	T	



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		1					
Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
939689 [ Method Blank ]	-		!	<del>                                     </del>	Lime	Liiiillo	Couco
2800 Individual Phenols in Soil by GC			1				
2,4,6-Trichlorophenol	mg/kg	<0.5			< 0.5	Т	
2,6-Dichlorophenol	mg/kg	<0.5			< 0.5	T	
2-Chlorophenol	mg/kg	<0.5			< 0.5	T	
2-Methylphenol	mg/kg	<0.5			< 0.5	<del>  '</del>	
3,4-Dichlorophenol	mg/kg	<0.5			< 0.5	<del>                                     </del>	
3,5-Dichlorophenol	mg/kg	<0.5			< 0.5	<del>  '</del>	
3-Chlorophenol & 4-Chlorophenol	mg/kg	<1			< 1	<del>  '</del>	
3-Methylphenol & 4-Methylphenol	mg/kg	<1			<1	T	
4-Chloro-3-methylphenol	mg/kg	<0.5			< 0.5	† † T	
• •		<1			< 1	† †	
Pentachlorophenol	mg/kg						
Phenol	mg/kg	<0.5			< 0.5	T	
2,4,6-Tribromophenol-Surrogate	%	104			50-130 %	T	
939694 [ Method Blank ]			1	<del>                                     </del>			
2000 TPH (C10 - C36) in Soil by GC		1					
C10-C14 Fraction	mg/kg	<10			< 10	Т	
C15-C28 Fraction	mg/kg	<20			< 20	Т	
C29-C36 Fraction	mg/kg	<20			< 20	Т	
939688 [ Laboratory Control Sample ]	•	•				•	
2000 TPH (C10 - C36) in Soil by GC			Expected Value	Percent Recovery			
C10-C14 Fraction	mg/kg	110	125.0	88	70-130 %	Т	
C15-C28 Fraction	mg/kg	100	125.0	82	70-130 %	Т	
C29-C36 Fraction	mg/kg	110	125.0	90	70-130 %	Т	
939692 [ Laboratory Control Sample ]	•		•				
2800 Individual Phenols in Soil by GC			Expected Value	Percent Recovery			
2,3,4,6-Tetrachlorophenol	mg/kg	4.3	4.0	108	50-130 %	Т	
2,3,4-Trichlorophenol	mg/kg	4.3	4.0	108	50-130 %	Т	
2,3,5,6-Tetrachlorophenol	mg/kg	4.3	4.0	108	50-130 %	T	
2,3,5-Trichlorophenol	mg/kg	4.2	4.0	106	50-130 %	T	
2,3,6-Trichlorophenol	mg/kg	4.1	4.0	103	50-130 %	T T	
2,3-Dichlorophenol	mg/kg	4.0	4.0	100	50-130 %	T	
2,4&2,5-Dichlorophenol	mg/kg	8.6	8.0	108	50-130 %	T	
2,4,6-Trichlorophenol	mg/kg	4.2	4.0	106	50-130 %	T	
2,6-Dichlorophenol	mg/kg	4.1	4.0	102	50-130 %	T	
2-Chlorophenol	mg/kg	4.2	4.0	104	50-130 %	T	
2-Methylphenol	mg/kg	4.2	4.0	105	50-130 %	T T	
3,4-Dichlorophenol	mg/kg	4.3	4.0	108	50-130 %	<del>                                     </del>	
3,5-Dichlorophenol	mg/kg	4.4	4.0	110	50-130 %	T	
3-Chlorophenol & 4-Chlorophenol	mg/kg	8.4	8.0	105	50-130 %	† <u>†</u>	
3-Methylphenol & 4-Methylphenol	mg/kg	8.5	8.0	106	50-130 %	† †	
4-Chloro-3-methylphenol	mg/kg	4.3	4.0	108	50-130 %	'   T	
Pentachlorophenol		8.6	8.0	108	50-130 %	T T	
•	mg/kg	4.5	4.0	113	50-130 %	Т Т	
Phenol	mg/kg		4.0	113			
2,4,6-Tribromophenol-Surrogate	%	104	1	ļļ	50-130 %	Т	
939695 [ Laboratory Control Sample ]			1	1			
2000 TPH (C10 - C36) in Soil by GC		1	Expected Value	Percent Recovery		-	
C10-C14 Fraction	mg/kg	110	125.0	91	70-130 %	Т	
C15-C28 Fraction			1050	89	70 120 0/	1 -	I
C29-C36 Fraction	mg/kg mg/kg	110 120	125.0 125.0	96	70-130 % 70-130 %	T	

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Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyir Codes
939058 [ Duplicate of 936078 ]					1	•	
2300 OC Pesticides in Soil by GC-MS			Result 2	RPD			
a-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
a-Chlordane	mg/kg	<0.5	<0.5	<1	0-30 %	T	
a-Endosulfan	mg/kg	<0.5	<0.5	<1	0-30 %	† <del>.</del>	
Aldrin	mg/kg	<0.5	<0.5	<1	0-30 %	T	
b-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	† <sub>T</sub>	
b-Endosulfan	mg/kg	<0.5	<0.5	<1	0-30 %	T	
d-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	T	
DDD	mg/kg	<0.5	<0.5	<1	0-30 %	T T	
DDE	mg/kg	<0.5	<0.5	<1	0-30 %	T	
DDT	mg/kg	<0.5	<0.5	<1	0-30 %	T	
Dieldrin	mg/kg	<0.5	<0.5	<1	0-30 %	T T	
Endosulfan sulfate	mg/kg	<0.5	<0.5	<1	0-30 %	† <del>.</del>	
Endrin	mg/kg	<0.5	<0.5	<1	0-30 %	T	
Endrin Aldehyde	mg/kg	<0.5	<0.5	<1	0-30 %	<del>                                     </del>	
g-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	<del>                                     </del>	
g-Chlordane	mg/kg	<0.5	<0.5	<1	0-30 %	<u>'</u>	
•		<0.5	<0.5	<1	0-30 %	'   T	
Heptachlor Heptachlor epoxide	mg/kg mg/kg	<0.5 <0.5	<0.5 <0.5	<1	0-30 %	'   T	
<u> </u>	mg/kg		<b>+</b>		<b>+</b>	<del>  '</del>	
Hexachlorobenzene (HCB)	mg/kg	<0.5	<0.5	<1	0-30 %		
Methoxychlor	mg/kg	<0.5	<0.5	<1	0-30 %	T	
Oxychlordane	mg/kg	<0.5	<0.5	<1	0-30 %		
2,4,5,6-tetrachloro-m-xylene - Surrogate	%	104	ļ		70-130 %	Т	
939062 [ Duplicate of 936078 ]							
2100 PAH in Soil by GC	_		Result 2	RPD			
Acenaphthene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Acenaphthylene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Anthracene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Benz(a)anthracene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Benzo(a)pyrene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Benzo(b)&(k)fluoranthene	mg/kg	<1	<1	<1	0-30 %	Т	
Benzo(g.h.i)perylene	mg/kg	<0.5	<0.5	<1	0-30 %	T	
Chrysene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Dibenz(ah)anthracene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Fluoranthene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Fluorene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Indeno(123-cd)pyrene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Naphthalene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Phenanthrene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Pyrene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Sum of PAHs	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
2-Fluorobiphenyl - Surrogate	%	96			70-130 %	Т	
Anthracene-d10 - Surrogate	%	102			70-130 %	Т	
p-Terphenyl-D14 - Surrogate	%	124			70-130 %	Т	
939063 [ Duplicate of 936079 ]	+	l	<del>.</del>	<del>!</del>	+	+	
2100 PAH in Soil by GC			Result 2	RPD	1		
2-Fluorobiphenyl - Surrogate	%	102	result 2	INFD	70-130 %	Т	
Anthracene-d10 - Surrogate	%	102	1		70-130 %	'   T	
p-Terphenyl-D14 - Surrogate	%	129	<del> </del>		70-130 %	'   T	
	7/0	129	<del> </del>	ļ	10-130 %	+ '	
039070 [ Duplicate of 936078 ]					1		
2000 TPH (C10 - C36) in Soil by GC		1	Result 2	RPD	1		
C10-C14 Fraction	mg/kg	<10	<10	<1	0-30 %	T	
C15-C28 Fraction	mg/kg	<20	<20	<1	0-30 %	Т	
C29-C36 Fraction	mg/kg	<20	<20	<1	0-30 %	Т	
939071 [ Duplicate of 936079 ]							
			Result 2	RPD			
2000 TPH (C10 - C36) in Soil by GC							
2000 TPH (C10 - C36) in Soil by GC C10-C14 Fraction	mg/kg	<10	<10	<1	0-30 %	Т	
2000 TPH (C10 - C36) in Soil by GC C10-C14 Fraction C15-C28 Fraction	mg/kg mg/kg	<10 <20	<10 <20	<1 <1	0-30 % 0-30 %	T	



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyin Codes
939074 [ Spike of 936086 ]	-		-	+		1	
2300 OC Pesticides in Soil by GC-MS			Spike Value	Percent Recovery			
a-BHC	mg/kg	2.1	2.0	106	70-130 %	Т	
a-Chlordane	mg/kg	2.2	2.0	110	70-130 %	Т	
a-Endosulfan	mg/kg	2.8	N/A	N/A	N/A	N/A	
Aldrin	mg/kg	1.9	2.0	94	70-130 %	T T	
b-BHC	mg/kg	2.0	2.0	99	70-130 %	T	
b-Endosulfan	mg/kg	2.4	2.0	122	70-130 %	T	
d-BHC	mg/kg	2.3	2.0	114	70-130 %	T	
DDD	mg/kg	2.4	2.0	121	70-130 %	<b>Т</b> т	
DDE	mg/kg	2.8	2.0	142	70-130 %	F	
DDT	mg/kg	2.4	2.0	122	70-130 %	<del>  '</del>	
Dieldrin	mg/kg	2.6	N/A	N/A	N/A	N/A	
Endosulfan sulfate	mg/kg	2.2	2.0	111	70-130 %	T	
Endrin	mg/kg	2.8	N/A	N/A	N/A	N/A	
				_			
Endrin Aldehyde	mg/kg	2.3	2.0	115 106	70-130 % 70-130 %	T	<del>                                     </del>
g-BHC	mg/kg		l	+	70-130 %		<del>                                     </del>
g-Chlordane	mg/kg	2.2	2.0	112		T	<del>                                     </del>
Heptachlor	mg/kg	1.9	2.0	96	70-130 %	T	
Heptachlor epoxide	mg/kg	2.7	2.0	134	70-130 %	F	-
Hexachlorobenzene (HCB)	mg/kg	2.2	2.0	110	70-130 %	Т	
Methoxychlor	mg/kg	2.2	2.0	111	70-130 %	Т	
Oxychlordane	mg/kg	<0.5	N/A	N/A	N/A	N/A	
2,4,5,6-tetrachloro-m-xylene - Surrogate	%	104	ļ	1	70-130 %	Т	
939075 [ Spike of 936086 ]							
2100 PAH in Soil by GC			Spike Value	Percent Recovery			
Acenaphthene	mg/kg	2.0	2.0	99	70-130 %	Т	
Acenaphthylene	mg/kg	1.9	2.0	95	70-130 %	Т	
Anthracene	mg/kg	1.9	2.0	96	70-130 %	Т	
Benz(a)anthracene	mg/kg	1.9	2.0	96	70-130 %	Т	
Benzo(a)pyrene	mg/kg	1.8	2.0	89	70-130 %	Т	
Benzo(b)&(k)fluoranthene	mg/kg	4.0	4.0	100	70-130 %	Т	
Benzo(g.h.i)perylene	mg/kg	2.0	2.0	100	70-130 %	Т	
Chrysene	mg/kg	1.9	2.0	96	70-130 %	T	
Dibenz(ah)anthracene	mg/kg	2.0	2.0	100	70-130 %	Т	
Fluoranthene	mg/kg	2.6	2.0	129	70-130 %	<b>Т</b> т	
Fluorene	mg/kg	1.9	2.0	95	70-130 %	† T	
Indeno(123-cd)pyrene	mg/kg	2.0	2.0	101	70-130 %	<del>  '</del>	
Naphthalene	mg/kg	2.0	2.0	101	70-130 %	† † T	<u> </u>
Phenanthrene	mg/kg	2.0	2.0	100	70-130 %	† † T	$\vdash$
Pyrene	mg/kg	2.4	2.0	121	70-130 %	† † T	<b>—</b>
Sum of PAHs		32	32.0	101	70-130 %	† † T	<del>                                     </del>
2-Fluorobiphenyl - Surrogate	mg/kg %	99	32.0	101	70-130 %	т Т	<u> </u>
	%	99		+ -	70-130 %	T	<del>                                     </del>
Anthracene-d10 - Surrogate				+ -			<u> </u>
p-Terphenyl-D14 - Surrogate	%	124	<u> </u>	1	70-130 %	Т	<del>                                     </del>
939076 [ Spike of 936086 ]			Omilies Malian	I Barrant Barrant			
2000 TPH (C10 - C36) in Soil by GC		440	Spike Value	Percent Recovery	70 100 01	1 -	<u> </u>
C10-C14 Fraction	mg/kg	110	125.0	87	70-130 %	T -	
C15-C28 Fraction	mg/kg	110	125.0	84	70-130 %	T	
C29-C36 Fraction	mg/kg	120	125.0	82	70-130 %	Т	<u> </u>
aboratory: EN_VOC							
Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyi Code:



Sample, Test, Result Reference	Units	Result 1	1		Acceptance Limits	Pass Limits	Qualifyir Codes
946072 [ Method Blank ]	-	!	!		Liiiillo	Linito	00000
1300 VOCs in Soil by P&T			1	1			
1,1,1,2-Tetrachloroethane	mg/kg	<1.0			< 1	Т	
1,1,1-Trichloroethane	mg/kg	<1.0			< 1	T	
1,1,2,2-Tetrachloroethane	mg/kg	<1.0			< 1	T	
1,1,2-Trichloroethane	mg/kg	<1.0			< 1	Т	
1,1-Dichloroethane	mg/kg	<1.0			< 1	Т	
1,1-Dichloroethene	mg/kg	<1.0			< 1	Т	
1,1-Dichloropropylene	mg/kg	<1.0			< 1	Т	
1,2,3-Trichlorobenzene	mg/kg	<1.0			< 1	Т	
1,2,3-Trichloropropane	mg/kg	<1.0			< 1	Т	
1,2,4-Trichlorobenzene	mg/kg	<1.0			< 1	Т	
1,2,4-Trimethylbenzene	mg/kg	<1.0			< 1	Т	
1,2-Dibromo-3-chloropropane	mg/kg	<1.0			< 1	Т	
1,2-Dibromoethane	mg/kg	<1.0			< 1	Т	
1,2-Dichlorobenzene	mg/kg	<1.0			< 1	Т	
1,2-Dichloroethane	mg/kg	<1.0			< 1	Т	
1,2-Dichloropropane	mg/kg	<1.0			< 1	Т	
1,3,5-Trimethylbenzene	mg/kg	<1.0			< 1	Т	
1,3-Dichlorobenzene	mg/kg	<1.0			< 1	Т	
1,3-Dichloropropane	mg/kg	<1.0			< 1	Т	
1,4-Dichlorobenzene	mg/kg	<1.0			< 1	Т	
2,2-Dichloropropane	mg/kg	<10.0			< 10	Т	
2-butanone	mg/kg	<10.0			< 10	Т	
2-Chlorotoluene	mg/kg	<1.0			< 1	Т	
4-Chlorotoluene	mg/kg	<1.0			< 1	Т	
4-methyl-2-pentanone	mg/kg	<10.0			< 10	Т	
Benzene	mg/kg	<0.2			< 0.2	Т	
Bromobenzene	mg/kg	<1.0			< 1	Т	
Bromochloromethane	mg/kg	<1.0			< 1	Т	
Bromodichloromethane	mg/kg	<1.0			< 1	Т	
Bromoform	mg/kg	<1.0			< 1	Т	
Bromomethane	mg/kg	<1.0			< 1	Т	
Carbon Tetrachloride	mg/kg	<1.0			< 1	Т	
Chlorobenzene	mg/kg	<1.0			< 1	Т	
Chloroethane	mg/kg	<1.0			< 1	Т	
Chloroform	mg/kg	<1.0			< 1	Т	
Chloromethane	mg/kg	<1.0			< 1	Т	
cis-1,2-Dichloroethene	mg/kg	<1.0			< 1	Т	
cis-1,3-Dichloropropene	mg/kg	<1.0			< 1	Т	
Dibromochloromethane	mg/kg	<1.0			< 1	Т	
Dibromomethane	mg/kg	<1.0			< 1	Т	
Dichlorodifluoromethane	mg/kg	<1.0			< 1	Т	
Ethylbenzene	mg/kg	<1.0			< 1	Т	
Hexachlorobutadiene	mg/kg	<1.0			< 1	Т	
Hexachloroethane	mg/kg	<1.0			< 1	Т	
Isopropylbenzene	mg/kg	<0.5			< 0.5	Т	
Meta- & Para- Xylene	mg/kg	<2.0			< 2	Т	
Methylene Chloride	mg/kg	<5.0			< 5	Т	
Naphthalene	mg/kg	<1.0			< 1	Т	
n-Butylbenzene	mg/kg	<1.0			< 1	Т	
n-Propylbenzene	mg/kg	<1.0			< 1	Т	
Ortho-Xylene	mg/kg	<1.0			< 1	Т	
Pentachloroethane	mg/kg	<1.0			< 1	Т	
p-Isopropyltoluene	mg/kg	<1.0			< 1	Т	
sec-Butylbenzene	mg/kg	<1.0			< 1	Т	
Styrene	mg/kg	<0.5			< 0.5	Т	
tert-Butylbenzene	mg/kg	<1.0			< 1	Т	
Tetrachloroethene	mg/kg	<1.0			< 1	Т	
Toluene	mg/kg	<1.0			< 1	Т	
Total Xylenes	mg/kg	<3.0	1		< 3	Т	1



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyin Codes
946072 [ Method Blank ]			<u> </u>		Lillits	Liiiillo	Codes
1300 VOCs in Soil by P&T							
trans-1,2-Dichloroethene	mg/kg	<1.0			< 1	Т	
trans-1,3-Dichloropropene	mg/kg	<1.0			< 1	<del>  '</del>	
Trichloroethene	mg/kg	<1.0			< 1	<del>                                     </del>	
Trichlorofluoromethane	mg/kg	<1.0			< 1	<del>                                     </del>	
Vinyl Chloride	mg/kg	<1.0			< 1	<del>                                     </del>	
Pentafluorobenzene-Surrogate	%	70			70-130 %	<del>                                     </del>	
Toluene-D8 - Surrogate	%	95			70-130 %	<del>                                     </del>	
946124 [ Method Blank ]	,,,		!			+	
1100 BTEX in Soil by P&T			1	1			
Benzene	mg/kg	<0.2			< 0.2	Т	
C6-C9 Fraction	mg/kg	<5			< 5	<del>                                     </del>	
Ethylbenzene	mg/kg	<1			< 1	<del>                                     </del>	
Meta- & Para- Xylene	mg/kg	<2			< 2	<del>                                     </del>	
Ortho-Xylene	mg/kg	<1			< 1	T .	
Toluene	mg/kg	<1			<1	† † T	
Total Xylenes	mg/kg	<3			< 3	+ +	
4-Bromofluorobenzene - Surrogate	%	112			70-130 %	+ +	
946075 [ Laboratory Control Sample ]	/0	112	-		70-100 /0	+ '-	
			Expected Value	Percent Perceyor			
1300 VOCs in Soil by P&T 1,1,1-Trichloroethane	mg/kg	12	Expected Value 10.0	Percent Recovery 119	70-130 %	Т	
1,1,2,2-Tetrachloroethane	mg/kg	12	10.0	119	70-130 %	† † T	
1,1,2-Trichloroethane		11	10.0	111	70-130 %	<del>  '</del>	
	mg/kg	11	10.0	107	70-130 %	<del>  '</del>	
1,1-Dichloroethane	mg/kg	12	10.0	125	70-130 %	† <u>†</u>	
1,1-Dichloroethene	mg/kg					'   T	
1,2-Dichlorobenzene	mg/kg	11	10.0	107	70-130 % 70-130 %	<del>  '</del>	
1,2-Dichloroethane	mg/kg	11 11	10.0	110 115	70-130 %	'   T	
1,2-Dichloropropane	mg/kg	12	10.0	118		'   T	
1,3-Dichlorobenzene	mg/kg	11		110	70-130 % 70-130 %	<del>  '</del>	
1,4-Dichlorobenzene	mg/kg		10.0			<u>'</u>	
Benzene	mg/kg	12	10.0	117	70-130 %	'   T	
Bromodichloromethane	mg/kg	11	10.0	106	70-130 %	_	
Bromoform	mg/kg	11	10.0	114	70-130 %	T	
Carbon Tetrachloride	mg/kg	12	10.0	120	70-130 %	T	
Chloroform	mg/kg	10	10.0	103	70-130 %	T	
Chloroform	mg/kg	14	N/A	N/A	N/A	N/A	
cis-1,3-Dichloropropene	mg/kg	10	10.0	102	70-130 %	T	
Dibromochloromethane	mg/kg	11	10.0	114	70-130 %	T	
Ethylbenzene	mg/kg	10	10.0	104	70-130 %	T	
Methylene Chloride	mg/kg	9.9	10.0	99	70-130 %	T	
Tetrachloroethene	mg/kg	9.4	10.0	94	70-130 %	T	
Toluene	mg/kg	11	10.0	114	70-130 %	T	
trans-1,2-Dichloroethene	mg/kg	11	10.0	105	70-130 %	T	
trans-1,3-Dichloropropene	mg/kg	10	10.0	104	70-130 %	T	
Trichloroethene	mg/kg	12	10.0	115	70-130 %	Т	
946125 [ Laboratory Control Sample ]			1 =	l			
1100 BTEX in Soil by P&T	1		Expected Value	Percent Recovery	70 400 04	1 -	
Benzene	mg/kg	4.7	5.0	94	70-130 %	T	
C6-C9 Fraction	mg/kg	59	50.0	120	70-130 %	T	
Ethylbenzene	mg/kg	4.8	5.0	96	70-130 %	T	
Meta- & Para- Xylene	mg/kg	9.8	10.0	98	70-130 %	T	
Ortho-Xylene	mg/kg	5.0	5.0	99	70-130 %	T	
Toluene	mg/kg	4.7	5.0	95	70-130 %	T	
Total Xylenes	mg/kg	15	N/A	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	%	113	<u>                                     </u>		70-130 %	T	

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Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
939051 [ Duplicate of 936078 ]		ļ	<del> </del>	<del></del>	LIIIIIII	Liiilis	Codes
1100 BTEX &(C6-C9) in Soil by P&T			Result 2	RPD			
Benzene	mg/kg	<0.2	<0.2	<1	0-30 %	Т	
C6-C9 Fraction	mg/kg	<5.0	<5.0	<1	0-30 %	T	
Ethylbenzene	mg/kg	<1.0	<1.0	<1	0-30 %	T	
Meta- & Para- Xylene	mg/kg	<2.0	<2.0	<1	0-30 %	Т	
Ortho-Xylene	mg/kg	<1.0	<1.0	<1	0-30 %	T	
Toluene	mg/kg	<1.0	<1.0	<1	0-30 %	Т	
Total Xylenes	mg/kg	<3.0	<3.0	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	%	102			70-130 %	Т	
939052 [ Duplicate of 936079 ]	,~		!	<del></del>	10 100 70	<del></del>	
1100 MAH(BTEX & C6-C9) in Soil P&T			Result 2	RPD			
Benzene	mg/kg	<0.2	<0.2	<1	0-30 %	Т	
C6-C9 Fraction	mg/kg	<5.0	<5.0	<1	0-30 %	† †	
Cumene	mg/kg	<0.5	<0.5	N/A	N/A	N/A	
Ethylbenzene	mg/kg	<1.0	<1.0	<1	0-30 %	T	
Meta- & Para- Xylene	mg/kg	<2.0	<2.0	<1	0-30 %	† †	1
Ortho-Xylene	mg/kg	<1.0	<1.0	<1	0-30 %	† †	
Styrene	mg/kg	<0.5	<0.5	N/A	N/A	N/A	1
Toluene	mg/kg	<1.0	<1.0	<1	0-30 %	T	<b>†</b>
Total Xylenes	mg/kg	<3.0	<3.0	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	%	104	-0.0	1071	70-130 %	T	
939072 [ Spike of 936086 ]	- "	· · · · ·	+	+		+ -	
1100 BTEX &(C6-C9) in Soil by P&T			Spike Value	Percent Recovery			<del>                                     </del>
Benzene	mg/kg	4.2	5.0	84	70-130 %	Т	
C6-C9 Fraction	mg/kg	4.2	50.0	84	70-130 %	† †	
Ethylbenzene	mg/kg	4.4	5.0	87	70-130 %	† ' T	
Meta- & Para- Xylene	mg/kg	8.8	10.0	88	70-130 %	'   T	
Ortho-Xylene	mg/kg	4.4	5.0	88	70-130 %	† †	
Sample Weight	ilig/kg	10.0	N/A	N/A	N/A	N/A	
Toluene	mg/kg	4.3	5.0	86	70-130 %	T	
Total Xylenes		13	N/A	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	mg/kg %	103	IN/A	IN/A	70-130 %	T	
Laboratory: EN_WATERS	70	100	!	<del></del>	70 100 70	<del></del>	<b></b>
Sample, Test, Result Reference	Units	Result 1			Acceptance		Qualifyin
• • • •	011110	1 toodit 1	ļ	L	Limits	Limits	Codes
938131 [ Method Blank ]			1				-
4300 Anions in Soil by IC	1					1 -	-
Bromide (Soluble)	mg/kg	<2		1	< 2	T	<del>                                     </del>
Chloride (Soluble)	mg/kg	<2			< 2	T	-
Fluoride (Soluble)	mg/kg	<2		<del>                                     </del>	< 2	T	
Nitrate (Soluble)	mg/kg	<2			< 2	T	-
Nitrite (Soluble)	mg/kg	<2	1	<del>                                     </del>	< 2	T	<del>                                     </del>
Orthophosphorus (Soluble)	mg/kg	<2	<del> </del>	<del>                                     </del>	< 2	T	
Sulphate (Soluble)	mg/kg	<2	ļ	<b></b>	< 2	Т	-
943224 [ Method Blank ]			1				
4270 Total Cyanide in Soil Colourmetric		<u> </u>		<del>                                     </del>			-
Total Cyanide	mg/kg	<0.1	ļ		< 0.1	Т	<del>                                     </del>
938133 [ Laboratory Control Sample ]			1	1			<b></b>
4300 Anions in Soil by IC			Expected Value	Percent Recovery			<b></b>
Bromide (Soluble)	mg/kg	570	500.0	113	75-125 %	Т	<u> </u>
Chloride (Soluble)	mg/kg	480	500.0	97	75-125 %	Т	
Fluoride (Soluble)	mg/kg	490	500.0	97	75-125 %	Т	<u> </u>
Nitrate (Soluble)	mg/kg	450	500.0	90	75-125 %	Т	<u> </u>
Nitrite (Soluble)	mg/kg	530	500.0	106	75-125 %	Т	
Orthophosphorus (Soluble)	mg/kg	530	500.0	107	75-125 %	Т	
Sulphate (Soluble)	mg/kg	430	500.0	85	75-125 %	Т	<u> </u>
				-			1
943227 [ Laboratory Control Sample ]							
			Expected Value	Percent Recovery			



#### Laboratory: EN\_WATERS

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
939068 [ Duplicate of 936078 ]						•	
4000 pH in Soil			Result 2	RPD			
pН	pН	7.5	7.4	0.1	0-0.5 pH	T	
939069 [ Duplicate of 936079 ]	•	_	_	-	-		
4000 pH in Soil		_	Result 2	RPD		_	
pH	pН	8.6	8.6	0.0	0-0.5 pH	T	

#### Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Samples correctly preserved	Yes
Organic samples had Teflon liners	Yes
Samples received with Zero Headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

#### **Authorised By**

Ruth Callander	Client Services Officer	
Alex Petridis	Senior Analyst - SVOC	Accreditation Number: 1645
Mark Herbstreit	Senior Analyst - Metals	Accreditation Number: 1645
Helen Lei	Senior Analyst - Waters	Accreditation Number: 1645
Khoa Pham	Analyst - VOC	Accreditation Number: 1645
Olga Alieva	Analyst - SVOC	Accreditation Number: 1645

#### **Laboratory Manager**

Anthony Crane Operations Manager

Final Report

- Indicates Not Requested \* Indicates NATA accreditation does not cover the performance of this service

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The samples were not collected by Amdel staff.

First Reported: 16 April 2008

Date Printed: 16 April 2008



Accreditation Number: 1645



## CONNELL WAGNER (SA) PTY LTD 55 Grenfell St ADELAIDE SA 5000

Attention: April Freeman

Project 08ENME0008762

Client Reference 31495

**Buckland Park** 

Received Date 09/04/2008 09:02:00 AM

Customer Sample ID Amdel Sample Number Date Sampled			TP49 0-0.1 941380 07/04/2008	TP49 0.2-0.3 941381 07/04/2008	TP49 0.4-0.5 941382 07/04/2008	TP49 0.9-1.0 941383 07/04/2008	TP49 1.9-2.0 941384 07/04/2008
voc							
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&	·Τ						
Benzene	0.2	mg/kg	<0.2	-	-	-	-
Ethylbenzene	1	mg/kg	<1.0	-	-	-	-
Meta- & Para- Xylene	2	mg/kg	<2.0	-	-	-	-
Ortho-Xylene	1	mg/kg	<1.0	-	-	-	-
Toluene	1	mg/kg	<1.0	-	-	-	-
Total Xylenes	3	mg/kg	<3.0	-	-	-	-
C6-C9 Fraction	5	mg/kg	<5.0	-	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	91	-	-	-	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	-MS						
a-BHC	0.5	mg/kg	<0.5	-	-	-	-
a-Chlordane	0.5	mg/kg	<0.5	-	-	-	-
a-Endosulfan	0.5	mg/kg	<0.5	-	-	-	-
Aldrin	0.5	mg/kg	<0.5	-	-	-	-
b-BHC	0.5	mg/kg	<0.5	-	-	-	-
b-Endosulfan	0.5	mg/kg	<0.5	-	-	-	-
d-BHC	0.5	mg/kg	<0.5	-	-	-	-
DDD	0.5	mg/kg	<0.5	-	-	-	-
DDE	0.5	mg/kg	<0.5	-	-	-	-
DDT	0.5	mg/kg	<0.5	-	-	-	-
Dieldrin	0.5	mg/kg	<0.5	-	-	-	-
Endosulfan sulfate	0.5	mg/kg	<0.5	-	-	-	-
Endrin	0.5	mg/kg	<0.5	-	-	-	-
Endrin Aldehyde	0.5	mg/kg	<0.5	-	-	-	-
g-BHC	0.5	mg/kg	<0.5	-	-	-	-
g-Chlordane	0.5	mg/kg	<0.5	-	-	-	-
Heptachlor	0.5	mg/kg	<0.5	-	-	-	-
Heptachlor epoxide	0.5	mg/kg	<0.5	-	-	-	-
Hexachlorobenzene (HCB)	0.5	mg/kg	<0.5	-	-	-	-
Methoxychlor	0.5	mg/kg	<0.5	-	-	-	-
Oxychlordane	0.5	mg/kg	<0.5	-	-	-	-
2,4,5,6-tetrachloro-m-xylene - Surrogate	-	%	102	-	-	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	<0.5	-	-	-	-
Acenaphthylene	0.5	mg/kg	<0.5	-	-	-	-

Date Printed: 21 April 2008



Customer Sample ID Amdel Sample Number			TP49 0-0.1 941380	TP49 0.2-0.3 941381	TP49 0.4-0.5 941382	TP49 0.9-1.0 941383	TP49 1.9-2.0 941384
Date Sampled			07/04/2008	07/04/2008	07/04/2008	07/04/2008	07/04/2008
svoc							
Test/Reference	PQL	Unit					
Anthracene	0.5	mg/kg	<0.5	-	-	-	-
Benz(a)anthracene	0.5	mg/kg	<0.5	-	-	-	-
Benzo(a)pyrene	0.5	mg/kg	<0.5	-	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	<1	-	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	-	-	-	-
Chrysene	0.5	mg/kg	<0.5	-	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	<0.5	-	-	-	-
Fluoranthene	0.5	mg/kg	<0.5	-	-	-	-
Fluorene	0.5	mg/kg	<0.5	-	-	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	<0.5	-	-	-	-
Naphthalene	0.5	mg/kg	<0.5	-	-	-	-
Phenanthrene	0.5	mg/kg	<0.5	-	-	-	-
Pyrene	0.5	mg/kg	<0.5	-	-	-	-
Sum of PAHs	0.5	mg/kg	<0.5	-	-	-	-
2-Fluorobiphenyl - Surrogate	-	%	92	-	-	-	-
p-Terphenyl-D14 - Surrogate	-	%	114	-	-	-	-
Anthracene-d10 - Surrogate	-	%	98	-	-	-	-
2000 TPH (C10 - C36) in Soil by GC C10-C14 Fraction	10	mg/kg	<10	_	_	_	_
C15-C28 Fraction	20	mg/kg	<20	-	-	-	-
C29-C36 Fraction	20		<20	-	-	-	-
	20	mg/kg	<b>\2</b> 0	-	-	-	-
<b>Metals</b> Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS							
Arsenic	2	mg/kg	<2	-	-	-	-
Cadmium	2	mg/kg	<2	-	-	-	-
Chromium	2	mg/kg	18	-	-	-	-
Copper	2	mg/kg	7.7	-	-	-	-
Lead	2	mg/kg	8.1	-	-	-	-
Nickel	2	mg/kg	6.0	-	-	-	-
Zinc	2	mg/kg	15	-	-	-	-
Inorganics							
Test/Reference	PQL	Unit					
4000 pH in Soil							
<b>4000 рн III 3011</b> рН	0.1	pН	7.1	-	-	-	-
Miscellaneous		•					
Test/Reference	PQL	Unit					
FOOD Marketonia Oceania di							
5000 Moisture Content % Moisture	1	%	2	_	_	_	_
70 Moscule	,	70	2				
Customer Sample ID			SP1	SP2	TP50 0-0.1	QC10A	TP50 0.2-0.3
Amdel Sample Number Date Sampled			941385 07/04/2008	941386 07/04/2008	941387 07/04/2008	941389 07/04/2008	941390 07/04/2008
<b>VOC</b> Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&T Benzene	0.2	mg/kg	-	-	<0.2	-	-



Customer Sample ID Amdel Sample Number Date Sampled			SP1 941385 07/04/2008	SP2 941386 07/04/2008	TP50 0-0.1 941387 07/04/2008	QC10A 941389 07/04/2008	TP50 0.2-0.3 941390 07/04/2008
VOC					0170 112000		
Test/Reference	PQL	Unit					
Ethylbenzene	1	mg/kg	-	-	<1.0	-	-
Meta- & Para- Xylene	2	mg/kg	-	-	<2.0	-	-
Ortho-Xylene	1	mg/kg	-	-	<1.0	-	-
Toluene	1	mg/kg	-	-	<1.0	-	-
Total Xylenes	3	mg/kg	-	-	<3.0	-	-
C6-C9 Fraction	5	mg/kg	-	-	<5.0	-	-
4-Bromofluorobenzene - Surrogate	-	%	-	-	100	-	-
SVOC							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	MS						
a-BHC	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
a-Chlordane	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
a-Endosulfan	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Aldrin	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
b-BHC	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
b-Endosulfan	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
d-BHC	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
DDD	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
DDE	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
DDT	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Dieldrin	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Endosulfan sulfate	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Endrin	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Endrin Aldehyde	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
g-BHC	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
g-Chlordane	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Heptachlor	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Heptachlor epoxide	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Hexachlorobenzene (HCB)	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Methoxychlor	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Oxychlordane	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
2,4,5,6-tetrachloro-m-xylene - Surrogate	-	%	97	99	96	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Acenaphthylene	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Anthracene	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Benz(a)anthracene	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	<1	<1	<1	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Chrysene	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Dibenz(ah)anthracene	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Fluoranthene	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Fluorene	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Naphthalene	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Phenanthrene	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Pyrene	0.5	mg/kg	<0.5	<0.5	<0.5	-	-
Sum of PAHs	0.5	mg/kg	<0.5	<0.5	<0.5	_	_



Customer Sample ID Amdel Sample Number Date Sampled			SP1 941385 07/04/2008	SP2 941386 07/04/2008	TP50 0-0.1 941387 07/04/2008	QC10A 941389 07/04/2008	TP50 0.2-0.3 941390 07/04/2008
<b>SVOC</b> Test/Reference	PQL	Unit					
2-Fluorobiphenyl - Surrogate	-	%	89	90	88	-	-
p-Terphenyl-D14 - Surrogate	-	%	108	108	109	-	-
Anthracene-d10 - Surrogate	-	%	92	93	93	-	-
<b>2000 TPH (C10 - C36) in Soil by G</b> C10-C14 Fraction	<b>SC</b> 10	mg/kg	_	_	<10	_	_
C15-C28 Fraction	20	mg/kg	_	_	<20	_	_
C29-C36 Fraction	20	mg/kg	-	_	<20	-	_
Metals Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/I	MS						
Arsenic	2	mg/kg	<2	<2	<2	-	-
Cadmium	2	mg/kg	<2	<2	<2	-	-
Chromium	2	mg/kg	19	20	16	-	-
Copper	2	mg/kg	12	18	11	-	-
Lead	2	mg/kg	6.3	6.7	5.6	-	-
Nickel	2	mg/kg	7.5	8.9	5.9	-	-
Zinc	2	mg/kg	28	46	21	-	-
Inorganics Test/Reference	PQL	Unit					
4000 pH in Soil	0.1	рН	-	-	7.2	-	-
<b>Miscellaneous</b> Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	2	2	1	-	-

Customer Sample ID Amdel Sample Number			TP50 0.4-0.5 941391	TP50 0.9-1.0 941392	TP50 1.9-2.0 941393	TP51 0-0.1 941394	TP51 0.2-0.3 941395
Date Sampled			07/04/2008	07/04/2008	07/04/2008	07/04/2008	07/04/2008
voc							
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&	T.						
Benzene	0.2	mg/kg	-	-	-	-	<0.2
Ethylbenzene	1	mg/kg	-	-	-	-	<1.0
Meta- & Para- Xylene	2	mg/kg	-	-	-	-	<2.0
Ortho-Xylene	1	mg/kg	-	-	-	-	<1.0
Toluene	1	mg/kg	-	-	-	-	<1.0
Total Xylenes	3	mg/kg	-	-	-	-	<3.0
C6-C9 Fraction	5	mg/kg	-	-	-	-	<5.0
4-Bromofluorobenzene - Surrogate	-	%	-	-	-	-	99
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	MS						
a-BHC	0.5	mg/kg	-	-	-	-	<0.5
a-Chlordane	0.5	mg/kg	-	-	-	-	<0.5
a-Endosulfan	0.5	mg/kg	-	-	-	-	<0.5



Customer Sample ID Amdel Sample Number			TP50 0.4-0.5 941391	TP50 0.9-1.0 941392	TP50 1.9-2.0 941393	TP51 0-0.1 941394	TP51 0.2-0.3 941395
Date Sampled			07/04/2008	07/04/2008	07/04/2008	07/04/2008	07/04/2008
svoc							
Test/Reference	PQL	Unit					
Aldrin	0.5	mg/kg	-	-	-	-	<0.5
b-BHC	0.5	mg/kg	-	-	-	-	<0.5
b-Endosulfan	0.5	mg/kg	-	-	-	-	<0.5
d-BHC	0.5	mg/kg	-	_	_	-	<0.5
DDD	0.5	mg/kg	-	_	_	_	<0.5
DDE	0.5	mg/kg	-	_	_	_	<0.5
DDT	0.5	mg/kg	-	_	_	_	<0.5
Dieldrin	0.5	mg/kg	-	_	_	_	<0.5
Endosulfan sulfate	0.5	mg/kg	-	_	_	_	<0.5
Endrin	0.5	mg/kg	-	_	_	_	<0.5
Endrin Aldehyde	0.5	mg/kg	_	_	_	_	<0.5
g-BHC	0.5	mg/kg	_	_	_	_	<0.5
g-Chlordane	0.5	mg/kg	-	-	_	_	<0.5
Heptachlor	0.5	mg/kg	_	-	_	_	<0.5
Heptachlor epoxide	0.5	mg/kg	-	-	-	-	<0.5 <0.5
, ,	0.5		-	-	-	-	
Hexachlorobenzene (HCB)	0.5	mg/kg	-	-	-	-	<0.5
Methoxychlor		mg/kg	-	-	-	-	<0.5
Oxychlordane	0.5	mg/kg	-	-	-	-	<0.5
2,4,5,6-tetrachloro-m-xylene - Surrogate 2100 PAH in Soil by GC	-	%	-	-	-	-	104
Acenaphthene	0.5	mg/kg	-	_	_	_	<0.5
Acenaphthylene	0.5	mg/kg	-	_	_	_	<0.5
Anthracene	0.5	mg/kg	-	_	_	_	<0.5
Benz(a)anthracene	0.5	mg/kg	-	_	_	_	<0.5
Benzo(a)pyrene	0.5	mg/kg	-	_	_	_	<0.5
Benzo(b)&(k)fluoranthene	1	mg/kg	_	_	_	_	<1
Benzo(g.h.i)perylene	0.5	mg/kg	_	_	_	_	<0.5
Chrysene	0.5	mg/kg	_	_	_	_	<0.5
Dibenz(ah)anthracene	0.5	mg/kg		_	_	_	<0.5
Fluoranthene	0.5		-	-	-	-	<0.5
Fluorene	0.5	mg/kg mg/kg	-	_	_	_	<0.5
Indeno(123-cd)pyrene	0.5	mg/kg	-	-	-	-	<0.5
			-	-	-	-	<0.5
Naphthalene Phenanthrene	0.5	mg/kg	-	-	-	-	
	0.5	mg/kg	-	-	-	-	<0.5
Pyrene	0.5	mg/kg	-	-	-	-	<0.5
Sum of PAHs	0.5	mg/kg	-	-	-	-	<0.5
2-Fluorobiphenyl - Surrogate	-	%	-	-	-	-	88
p-Terphenyl-D14 - Surrogate	-	%	-	-	-	-	114
Anthracene-d10 - Surrogate	-	%	-	-	-	-	98
2000 TPH (C10 - C36) in Soil by GC C10-C14 Fraction	10	mg/kg	-	-	-	-	<10
C15-C28 Fraction	20	mg/kg	-	-	-	-	<20
C29-C36 Fraction	20	mg/kg	-	-	-	-	<20
Metals Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS							
Arsenic	2	mg/kg	-	-	-	-	2.3
Cadmium	2	mg/kg	-	-	-	-	<2
Chromium	2	mg/kg	-	-	-	-	39



Customer Sample ID Amdel Sample Number Date Sampled			TP50 0.4-0.5 941391 07/04/2008	TP50 0.9-1.0 941392 07/04/2008	TP50 1.9-2.0 941393 07/04/2008	TP51 0-0.1 941394 07/04/2008	TP51 0.2-0.3 941395 07/04/2008
Metals Test/Reference	PQL	Unit					
Copper	2	mg/kg	-	-	-	-	20
Lead	2	mg/kg	-	-	-	-	8.0
Nickel	2	mg/kg	-	-	-	-	21
Zinc	2	mg/kg	-	-	-	-	20
Inorganics							
Test/Reference	PQL	Unit					
4000 pH in Soil	0.1	pН	-	-	-	-	8.8
Miscellaneous Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	-	-	-	-	11

Customer Sample ID Amdel Sample Number			TP52 0.2-0.3 941401	TP52 0.4-0.5 941402	QC12A 941403	TP52 0.9-1.0 941404	TP52 1.9-2.0 941405
Date Sampled			07/04/2008	07/04/2008	07/04/2008	07/04/2008	07/04/2008
VOC							
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&							
Benzene	0.2	mg/kg	<0.2	-	-	-	-
Ethylbenzene	1	mg/kg	<1.0	-	-	-	-
Meta- & Para- Xylene	2	mg/kg	<2.0	-	-	-	-
Ortho-Xylene	1	mg/kg	<1.0	-	-	-	-
Toluene	1	mg/kg	<1.0	-	-	-	-
Total Xylenes	3	mg/kg	<3.0	-	-	-	-
C6-C9 Fraction	5	mg/kg	<5.0	-	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	102	-	-	-	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	MS						
a-BHC	0.5	mg/kg	<0.5	-	-	-	-
a-Chlordane	0.5	mg/kg	<0.5	-	-	-	-
a-Endosulfan	0.5	mg/kg	<0.5	-	-	-	-
Aldrin	0.5	mg/kg	<0.5	-	-	-	-
b-BHC	0.5	mg/kg	<0.5	-	-	-	-
b-Endosulfan	0.5	mg/kg	<0.5	-	-	-	-
d-BHC	0.5	mg/kg	<0.5	-	-	-	-
DDD	0.5	mg/kg	<0.5	-	-	-	-
DDE	0.5	mg/kg	<0.5	-	-	-	-
DDT	0.5	mg/kg	<0.5	-	-	-	-
Dieldrin	0.5	mg/kg	<0.5	-	-	-	-
Endosulfan sulfate	0.5	mg/kg	<0.5	-	-	-	-
Endrin	0.5	mg/kg	<0.5	-	-	-	-
Endrin Aldehyde	0.5	mg/kg	<0.5	-	-	-	-
g-BHC	0.5	mg/kg	<0.5	-	-	-	-
g-Chlordane	0.5	mg/kg	<0.5	_	_	_	_



Customer Sample ID Amdel Sample Number			TP52 0.2-0.3 941401	TP52 0.4-0.5 941402	QC12A 941403	TP52 0.9-1.0 941404	TP52 1.9-2.0 941405
Date Sampled			07/04/2008	07/04/2008	07/04/2008	07/04/2008	07/04/2008
SVOC							
Test/Reference	PQL	Unit					
Heptachlor	0.5	mg/kg	<0.5	-	-	-	-
Heptachlor epoxide	0.5	mg/kg	<0.5	-	-	-	-
Hexachlorobenzene (HCB)	0.5	mg/kg	<0.5	-	-	-	-
Methoxychlor	0.5	mg/kg	<0.5	-	-	-	-
Oxychlordane	0.5	mg/kg	<0.5	-	-	-	-
2,4,5,6-tetrachloro-m-xylene - Surrogate	-	%	102	-	-	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	<0.5	-	-	-	-
Acenaphthylene	0.5	mg/kg	<0.5	-	-	-	-
Anthracene	0.5	mg/kg	<0.5	-	-	-	-
Benz(a)anthracene	0.5	mg/kg	<0.5	-	-	-	-
Benzo(a)pyrene	0.5	mg/kg	<0.5	-	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	<1	-	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	-	-	-	-
Chrysene	0.5	mg/kg	<0.5	-	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	<0.5	-	-	-	-
Fluoranthene	0.5	mg/kg	<0.5	-	-	-	-
Fluorene	0.5	mg/kg	<0.5	-	-	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	<0.5	-	-	-	-
Naphthalene	0.5	mg/kg	<0.5	-	-	-	-
Phenanthrene	0.5	mg/kg	<0.5	-	-	-	-
Pyrene	0.5	mg/kg	<0.5	-	-	-	-
Sum of PAHs	0.5	mg/kg	<0.5	-	-	-	-
2-Fluorobiphenyl - Surrogate	-	%	88	-	-	-	-
p-Terphenyl-D14 - Surrogate	-	%	112	-	-	-	-
Anthracene-d10 - Surrogate	-	%	96	-	-	-	-
<b>2000 TPH (C10 - C36) in Soil by GO</b> C10-C14 Fraction	10	mg/kg	<10	-	-	-	-
C15-C28 Fraction	20	mg/kg	<20	-	-	-	-
C29-C36 Fraction	20	mg/kg	<20	-	-	-	-
Metals							
Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/M							
Arsenic	2	mg/kg	3.8	-	-	-	-
Cadmium	2	mg/kg	<2	-	-	-	-
Chromium	2	mg/kg	43	-	-	-	-
Copper	2	mg/kg	22	-	-	-	-
Lead	2	mg/kg	8.4	-	-	-	-
Nickel	2	mg/kg	23	-	-	-	-
Zinc	2	mg/kg	22	-	-	-	-
Inorganics Test/Reference	PQL	Unit					
4000 pH in Soil							
pH	0.1	рН	8.8	-	-	-	-
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	12	_	_	_	



Customer Sample ID Amdel Sample Number			TP53 0-0.1 941406	TP53 0.2-0.3 941407	TP53 0.4-0.5 941408	TP53 0.9-1.0 941409	TP53 1.9-2.0 941410
Date Sampled			07/04/2008	07/04/2008	07/04/2008	07/04/2008	07/04/2008
<b>VOC</b> Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P& Benzene	T 0.2	mg/kg	_	<0.2	_	_	_
Ethylbenzene	1	mg/kg		<1.0	_	_	
Meta- & Para- Xylene	2	mg/kg mg/kg	_	<2.0	_	_	
Ortho-Xylene	1	mg/kg mg/kg	-	<1.0	_	_	_
Toluene	1	mg/kg	-	<1.0	-	-	-
			-		-	-	-
Total Xylenes	3	mg/kg	-	<3.0 <5.0	-	-	-
C6-C9 Fraction	5	mg/kg	-		-	-	-
4-Bromofluorobenzene - Surrogate	-	%	-	74	-	-	-
1100 MAH(BTEX & C6-C9) in Soil I			10.0				
Benzene	0.2	mg/kg	<0.2	-	-	-	-
Cumene	0.5	mg/kg	<0.5	-	-	-	-
Ethylbenzene	1	mg/kg	<1.0	-	-	-	-
Meta- & Para- Xylene	2	mg/kg	<2.0	-	-	-	-
Ortho-Xylene	1	mg/kg	<1.0	-	-	-	-
Styrene	0.5	mg/kg	<0.5	-	-	-	-
Toluene	1	mg/kg	<1.0	-	-	-	-
Total Xylenes	3	mg/kg	<3.0	-	-	-	-
C6-C9 Fraction	5	mg/kg	<5.0	-	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	102	-	-	-	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	MS						
a-BHC	0.5	mg/kg	<0.5	<0.5	-	-	-
a-Chlordane	0.5	mg/kg	<0.5	<0.5	-	-	-
a-Endosulfan	0.5	mg/kg	<0.5	<0.5	-	-	-
Aldrin	0.5	mg/kg	<0.5	<0.5	-	-	-
b-BHC	0.5	mg/kg	<0.5	<0.5	-	-	-
b-Endosulfan	0.5	mg/kg	<0.5	<0.5	-	-	_
d-BHC	0.5	mg/kg	<0.5	<0.5	_	-	_
DDD	0.5	mg/kg	<0.5	<0.5	_	_	_
DDE	0.5	mg/kg	<0.5	<0.5		_	_
DDT	0.5	mg/kg	<0.5	<0.5	_	_	
Dieldrin	0.5	mg/kg	<0.5	<0.5	_	_	_
Endosulfan sulfate	0.5		<0.5	<0.5	_	_	_
		mg/kg			-	-	-
Endrin	0.5	mg/kg	<0.5	<0.5	-	-	-
Endrin Aldehyde	0.5	mg/kg	<0.5	<0.5	-	-	-
g-BHC	0.5	mg/kg	<0.5	<0.5	-	-	-
g-Chlordane	0.5	mg/kg	<0.5	<0.5	-	-	-
Heptachlor	0.5	mg/kg	<0.5	<0.5	-	-	-
Heptachlor epoxide	0.5	mg/kg	<0.5	<0.5	-	-	-
Hexachlorobenzene (HCB)	0.5	mg/kg	<0.5	<0.5	-	-	-
Methoxychlor	0.5	mg/kg	<0.5	<0.5	-	-	-
Oxychlordane	0.5	mg/kg	<0.5	<0.5	-	-	-
2,4,5,6-tetrachloro-m-xylene - Surrogate	-	%	100	101	-	-	-
Surrogate  2100 PAH in Soil by GC							



Customer Sample ID Amdel Sample Number			TP53 0-0.1 941406	TP53 0.2-0.3 941407	TP53 0.4-0.5 941408	TP53 0.9-1.0 941409	TP53 1.9-2.0 941410
Date Sampled			07/04/2008	07/04/2008	07/04/2008	07/04/2008	07/04/2008
svoc							
Test/Reference	PQL	Unit					
Acenaphthylene	0.5	mg/kg	<0.5	<0.5	-	-	-
Anthracene	0.5	mg/kg	<0.5	<0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	<0.5	<0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	<0.5	<0.5	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	<1	<1	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	<0.5	-	-	-
Chrysene	0.5	mg/kg	<0.5	<0.5	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	<0.5	<0.5	-	-	-
Fluoranthene	0.5	mg/kg	<0.5	<0.5	-	-	-
Fluorene	0.5	mg/kg	<0.5	<0.5	-	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	<0.5	<0.5	-	-	-
Naphthalene	0.5	mg/kg	<0.5	<0.5	_	_	_
Phenanthrene	0.5	mg/kg	<0.5	<0.5	_	_	_
Pyrene	0.5	mg/kg	<0.5	<0.5	_	_	_
Sum of PAHs	0.5	mg/kg	<0.5	<0.5	_	_	_
2-Fluorobiphenyl - Surrogate	-	%	90	89	_	_	
p-Terphenyl-D14 - Surrogate	_	%	110	109	_	_	_
Anthracene-d10 - Surrogate	_	%	95	96	_	_	_
_	-	70	95	90	-	-	-
<b>2600 PCBs in Soil by GC</b> Aroclor 1016DB	0.5	mg/kg	<0.5	_	_	_	_
Aroclor 1221DB	0.5	mg/kg	<0.5	_	_	_	
Aroclor 1232 and 1242 as totalDB	1	mg/kg	<1	_	_	_	_
Aroclor 1248 and 1254 as totalDB	1	mg/kg	<1	-	-	-	_
Aroclor 1260DB	0.5	mg/kg	<0.5	-	-	-	-
	1		<1	-	-	-	-
Total Polychlorinated biphenylsDB		mg/kg		-	-	-	-
Decachlorobiphenyl - PCB surrogate	1	%	86	-	-	-	-
<b>2000 TPH (C10 - C36) in Soil by GC</b> C10-C14 Fraction	10	mg/kg	<10	<10			
C15-C28 Fraction	20	mg/kg	<20	<20	-	-	-
C29-C36 Fraction			<20	<20	-	-	-
	20	mg/kg	<20	<20	-	-	-
Metals	DOL	1.1-24					
Test/Reference	PQL	Unit					
3400 Mercury in Soil by FIMS							
Mercury	0.01	mg/kg	0.02	-	-	-	-
3100 Total Metals in Soil By ICP/MS							
Antimony	2	mg/kg	<2	-	-	-	-
Arsenic	2	mg/kg	2.7	2.3	-	-	-
Barium	2	mg/kg	110	-	-	-	-
Beryllium	2	mg/kg	<2	-	-	-	-
Boron	2	mg/kg	22	-	-	-	-
Cadmium	2	mg/kg	<2	<2	-	-	-
Chromium	2	mg/kg	50	55	-	-	-
Cobalt	2	mg/kg	16	-	-	-	-
Copper	2	mg/kg	28	28	-	-	-
Lead	2	mg/kg	12	10	-	-	-
Manganese	2	mg/kg	440	-	-	-	-
Molybdenum	2	mg/kg	<2	-	-	_	-
Nickel	2	mg/kg	25	27	_	_	_
Selenium	2	mg/kg	<2	-	_	_	_
		1119/19					



Customer Sample ID Amdel Sample Number Date Sampled			TP53 0-0.1 941406 07/04/2008	TP53 0.2-0.3 941407 07/04/2008	TP53 0.4-0.5 941408 07/04/2008	TP53 0.9-1.0 941409 07/04/2008	TP53 1.9-2.0 941410 07/04/2008
Metals Test/Reference	PQL	Unit					
Vanadium	2	mg/kg	56	_	_	_	
Zinc	2	mg/kg	26	26	-	-	-
Inorganics Test/Reference	PQL	Unit					
4300 Anions in Soil by IC Fluoride (Soluble)	2	mg/kg	3	_	_	-	-
<b>4270 Total Cyanide in Soil Colourme</b> Total Cyanide	<b>tric</b> 0.1	mg/kg	0.6	_	_	-	-
<b>4000 pH in Soil</b> pH	0.1	рН	7.4	7.9	-	-	_
4850 Total Phenolics in Soil by SFA Total Phenolics	0.1	mg/kg	<0.1	-	-	-	-
Miscellaneous Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	7	15	-	-	-

Customer Sample ID Amdel Sample Number			TP54 0-0.1 941411	TP54 0.2-0.3 941412	TP54 0.4-0.5 941413	TP54 0.9-1.0 941414	TP54 1.9-2.0 941415
Date Sampled VOC			07/04/2008	07/04/2008	07/04/2008	07/04/2008	07/04/2008
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P8	τ						
Benzene	0.2	mg/kg	<0.2	-	-	-	-
Ethylbenzene	1	mg/kg	<1.0	-	-	-	-
Meta- & Para- Xylene	2	mg/kg	<2.0	-	-	-	-
Ortho-Xylene	1	mg/kg	<1.0	-	-	-	-
Toluene	1	mg/kg	<1.0	-	-	-	-
Total Xylenes	3	mg/kg	<3.0	-	-	-	-
C6-C9 Fraction	5	mg/kg	<5.0	-	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	102	-	-	-	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	·MS						
a-BHC	0.5	mg/kg	<0.5	-	-	-	-
a-Chlordane	0.5	mg/kg	<0.5	-	-	-	-
a-Endosulfan	0.5	mg/kg	<0.5	-	-	-	-
Aldrin	0.5	mg/kg	<0.5	-	-	-	-
b-BHC	0.5	mg/kg	<0.5	-	-	-	-
b-Endosulfan	0.5	mg/kg	<0.5	-	-	-	-
d-BHC	0.5	mg/kg	<0.5	-	-	-	-
DDD	0.5	mg/kg	<0.5	-	-	-	-
DDE	0.5	mg/kg	<0.5	-	-	-	-
DDT	0.5	mg/kg	<0.5	-	-	-	-
Dieldrin	0.5	mg/kg	<0.5	-	-	-	-
Endosulfan sulfate	0.5	mg/kg	<0.5	-	-	-	-
Endrin	0.5	mg/kg	<0.5	-	-	-	-



Customer Sample ID			TP54 0-0.1	TP54 0.2-0.3	TP54 0.4-0.5	TP54 0.9-1.0	TP54 1.9-2.0 941415
Amdel Sample Number			941411	941412	941413	941414	941415 07/04/2008
Date Sampled SVOC			07/04/2008	07/04/2008	07/04/2008	07/04/2008	07/04/2006
Test/Reference	PQL	Unit					
Endrin Aldehyde	0.5	mg/kg	<0.5		_		
g-BHC	0.5	mg/kg	<0.5				
g-Chlordane	0.5	mg/kg	<0.5	_	_	-	_
Heptachlor	0.5	mg/kg	<0.5		_	_	_
Heptachlor epoxide	0.5	mg/kg	<0.5				
Hexachlorobenzene (HCB)	0.5	mg/kg	<0.5	_	_	_	_
Methoxychlor	0.5	mg/kg	<0.5				
Oxychlordane	0.5	mg/kg	<0.5	_	_	_	
2,4,5,6-tetrachloro-m-xylene - Surrogate	-	%	100	-	-	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	<0.5	-	-	-	-
Acenaphthylene	0.5	mg/kg	<0.5	-	-	-	-
Anthracene	0.5	mg/kg	<0.5	-	-	-	-
Benz(a)anthracene	0.5	mg/kg	<0.5	-	-	-	-
Benzo(a)pyrene	0.5	mg/kg	<0.5	-	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	<1	-	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	-	-	-	-
Chrysene	0.5	mg/kg	<0.5	-	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	<0.5	-	-	-	-
Fluoranthene	0.5	mg/kg	<0.5	-	-	-	-
Fluorene	0.5	mg/kg	<0.5	-	-	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	<0.5	-	-	-	-
Naphthalene	0.5	mg/kg	<0.5	-	-	-	-
Phenanthrene	0.5	mg/kg	<0.5	-	-	-	-
Pyrene	0.5	mg/kg	<0.5	-	-	-	-
Sum of PAHs	0.5	mg/kg	<0.5	-	-	-	-
2-Fluorobiphenyl - Surrogate	-	%	88	-	-	-	-
p-Terphenyl-D14 - Surrogate	-	%	110	-	-	-	-
Anthracene-d10 - Surrogate	-	%	95	-	-	-	-
2000 TPH (C10 - C36) in Soil by GC							
C10-C14 Fraction	10	mg/kg	<10	-	-	-	-
C15-C28 Fraction	20	mg/kg	<20	-	-	-	-
C29-C36 Fraction	20	mg/kg	22	-	-	-	-
Metals	DOL	11-2					
Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS	•	ma/ka	-2				
Arsenic	2	mg/kg	<2	-	-	-	-
Cadmium	2	mg/kg	<2	-	-	-	-
Chromium	2	mg/kg	42	-	-	-	-
Copper	2	mg/kg	27	-	-	-	-
Lead	2	mg/kg	16	-	-	-	-
Nickel	2	mg/kg	21	-	-	-	-
Zinc 	2	mg/kg	26	-	-	-	-
Inorganics Test/Reference	PQL	Unit					
<b>4000 pH in Soil</b> pH	0.1	рН	7.4				
•		I.					
Miscellaneous							



Customer Sample ID Amdel Sample Number Date Sampled			TP54 0-0.1 941411 07/04/2008	TP54 0.2-0.3 941412 07/04/2008	TP54 0.4-0.5 941413 07/04/2008	TP54 0.9-1.0 941414 07/04/2008	TP54 1.9-2.0 941415 07/04/2008
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content							
% Moisture	1	%	8	-	-	-	-
Customer Sample ID			TP55 0-0.1	TP55 0.2-0.3	TP55 0.4-0.5	TP55 0.9-1.0	TP55 1.9-2.0
Amdel Sample Number			941416	941417	941418	941420	941421
Date Sampled			07/04/2008	07/04/2008	07/04/2008	07/04/2008	07/04/2008
VOC Test/Reference	PQL	Unit					
	PQL	Unit					
1100 MAH(BTEX & C6-C9) in Soil							
Benzene	0.2	mg/kg	<0.2	-	-	-	-
Cumene	0.5	mg/kg	<0.5	-	-	-	-
Ethylbenzene	1	mg/kg	<1.0	-	-	-	-
Meta- & Para- Xylene	2	mg/kg	<2.0	-	-	-	-
Ortho-Xylene	1	mg/kg	<1.0	-	-	-	-
Styrene	0.5	mg/kg	<0.5	-	-	-	-
Toluene	1	mg/kg	<1.0	-	-	-	-
Total Xylenes	3	mg/kg	<3.0	-	-	-	-
C6-C9 Fraction	5	mg/kg	<5.0	-	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	106	-	-	-	-
SVOC Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC- a-BHC	- <b>MS</b> 0.5	ma/lea	<0.5				
a-Chlordane	0.5	mg/kg	<0.5	-	-	-	-
a-Endosulfan	0.5	mg/kg mg/kg	<0.5	-	-	-	-
Aldrin	0.5	mg/kg	<0.5	-	-	-	-
b-BHC	0.5	mg/kg	<0.5	-	_	_	_
b-Endosulfan	0.5	mg/kg	<0.5	-	-	-	-
d-BHC	0.5	mg/kg	<0.5	-	-	-	-
DDD	0.5	mg/kg	<0.5	-	-	-	-
DDE	0.5	mg/kg	<0.5	-	-	-	-
DDT	0.5	mg/kg	<0.5	-	-	-	-
Dieldrin	0.5		<0.5	-	-	-	-
Endosulfan sulfate	0.5	mg/kg	<0.5	-	-	-	-
Endrin	0.5	mg/kg	<0.5	-	-	-	-
Endrin Aldehyde	0.5	mg/kg	<0.5	-	-	-	-
g-BHC	0.5	mg/kg mg/kg	<0.5	-	-	-	-
-				-	-	-	-
g-Chlordane Heptachlor	0.5 0.5	mg/kg mg/kg	<0.5 <0.5	-	-	-	-
·				-	-	-	-
Heptachlor epoxide Hexachlorobenzene (HCB)	0.5 0.5	mg/kg	<0.5 <0.5	-	-	-	-
		mg/kg mg/kg		-	-	-	-
Methoxychlor Oxychlordane	0.5	mg/kg	<0.5	-	-	-	-
Oxychlordane	0.5	mg/kg	<0.5	-	-	-	-
2,4,5,6-tetrachloro-m-xylene - Surrogate	-	%	99	-	-	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	<0.5	-	-	-	-
Acenaphthylene	0.5	mg/kg	<0.5	-	-	-	-



Customer Sample ID Amdel Sample Number			TP55 0-0.1 941416	TP55 0.2-0.3 941417	TP55 0.4-0.5 941418	TP55 0.9-1.0 941420	TP55 1.9-2.0 941421
Date Sampled			07/04/2008	07/04/2008	07/04/2008	07/04/2008	07/04/2008
svoc							
Test/Reference	PQL	Unit					
Anthracene	0.5	mg/kg	<0.5	-	-	-	-
Benz(a)anthracene	0.5	mg/kg	<0.5	-	-	-	-
Benzo(a)pyrene	0.5	mg/kg	<0.5	-	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	<1	-	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	-	-	-	-
Chrysene	0.5	mg/kg	<0.5	-	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	<0.5	-	-	-	-
Fluoranthene	0.5	mg/kg	<0.5	-	-	-	-
Fluorene	0.5	mg/kg	<0.5	-	-	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	<0.5	-	-	-	-
Naphthalene	0.5	mg/kg	<0.5	-	-	-	-
Phenanthrene	0.5	mg/kg	<0.5	-	-	-	-
Pyrene	0.5	mg/kg	<0.5	-	-	-	-
Sum of PAHs	0.5	mg/kg	<0.5	-	-	-	-
2-Fluorobiphenyl - Surrogate	-	%	87	-	-	-	-
p-Terphenyl-D14 - Surrogate	-	%	109	-	-	-	-
Anthracene-d10 - Surrogate	-	%	93	-	-	-	-
2600 PCBs in Soil by GC Aroclor 1016DB	0.5	mg/kg	<0.5	_	-	-	-
Aroclor 1221DB	0.5	mg/kg	<0.5	-	_	-	_
Aroclor 1232 and 1242 as totalDB	1	mg/kg	<1	_	_	_	_
Aroclor 1248 and 1254 as totalDB	1	mg/kg	· <1	_	_	_	_
Aroclor 1260DB	0.5	mg/kg	<0.5	_	_	_	_
Total Polychlorinated biphenylsDB	1	mg/kg	<1	_	_	_	_
Decachlorobiphenyl - PCB surrogate	1	%	83	_	_	_	_
2000 TPH (C10 - C36) in Soil by GC		,,					
C10-C14 Fraction	10	mg/kg	<10	-	-	-	-
C15-C28 Fraction	20	mg/kg	<20	-	-	-	-
C29-C36 Fraction	20	mg/kg	25	-	-	-	-
Metals							
Test/Reference	PQL	Unit					
2400 Management in Call her FIMO							
3400 Mercury in Soil by FIMS Mercury	0.01	mg/kg	0.01	_		_	_
3100 Total Metals in Soil By ICP/MS		mg/kg	0.01				
Antimony	2	mg/kg	<2	-	-	-	-
Arsenic	2	mg/kg	2.3	-	_	-	_
Barium	2	mg/kg	62	-	_	-	_
Beryllium	2	mg/kg	<2	-	_	-	_
Boron	2	mg/kg	15	-	_	-	_
Cadmium	2	mg/kg	<2	-	_	-	_
Chromium	2	mg/kg	29	_	_	_	_
Cobalt	2	mg/kg	10	_	_	_	_
Copper	2	mg/kg	17	-	-	-	-
Lead	2	mg/kg	19	-	-	-	-
Manganese	2	mg/kg	360	_	-	_	-
Molybdenum	2	mg/kg	<2	_	-	_	-
Nickel	2	mg/kg	13	_	-	_	-
Selenium	2	mg/kg	<2	_	_	_	_
Tin	2	mg/kg	<2	_	-	_	-
	_	J J	=				



Customer Sample ID Amdel Sample Number Date Sampled			TP55 0-0.1 941416 07/04/2008	TP55 0.2-0.3 941417 07/04/2008	TP55 0.4-0.5 941418 07/04/2008	TP55 0.9-1.0 941420 07/04/2008	TP55 1.9-2.0 941421 07/04/2008
<b>Metals</b> Test/Reference	PQL	Unit					
Zinc	2	mg/kg	21	-	-	-	-
Inorganics Test/Reference	PQL	Unit					
4300 Anions in Soil by IC Fluoride (Soluble)	2	mg/kg	<2	-	-	-	-
<b>4270 Total Cyanide in Soil Colourme</b> Total Cyanide	<b>tric</b> 0.1	mg/kg	0.7	-	-	-	-
<b>4000 pH in Soil</b> pH	0.1	рН	7.0	-	-	-	-
<b>4850 Total Phenolics in Soil by SFA</b> Total Phenolics	0.1	mg/kg	<0.1	-	-	-	-
Miscellaneous Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	2	-	-	-	-

Customer Sample ID			QC14A	TP56 0-0.1	TP56 0.2-0.3	TP56 0.4-0.5	TP56 0.9-1.0
Amdel Sample Number			941422	941423	941424	941425	941426
Date Sampled			07/04/2008	07/04/2008	07/04/2008	07/04/2008	07/04/2008
VOC							
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&	т						
Benzene	0.2	mg/kg	-	<0.2	-	-	-
Ethylbenzene	1	mg/kg	-	<1	-	-	-
Meta- & Para- Xylene	2	mg/kg	-	<2	-	-	-
Ortho-Xylene	1	mg/kg	-	<1	-	-	-
Toluene	1	mg/kg	-	<1	-	-	-
Total Xylenes	3	mg/kg	-	<3	-	-	-
C6-C9 Fraction	5	mg/kg	-	<5	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	-	102	-	-	-
SVOC							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	MS						
a-BHC	0.5	mg/kg	-	<0.5	-	-	-
a-Chlordane	0.5	mg/kg	-	<0.5	-	-	-
a-Endosulfan	0.5	mg/kg	-	<0.5	-	-	-
Aldrin	0.5	mg/kg	-	<0.5	-	-	-
b-BHC	0.5	mg/kg	-	<0.5	-	-	-
b-Endosulfan	0.5	mg/kg	-	<0.5	-	-	-
d-BHC	0.5	mg/kg	-	<0.5	-	-	-
DDD	0.5	mg/kg	-	<0.5	-	-	-
DDE	0.5	mg/kg	-	<0.5	-	-	-
DDT	0.5	mg/kg	-	<0.5	-	-	-
Dieldrin	0.5	mg/kg	-	<0.5	-	-	-
Endosulfan sulfate	0.5	mg/kg	-	<0.5	-	-	-
Endrin	0.5	mg/kg	-	<0.5	-	-	-
Endrin Aldehyde	0.5	mg/kg	-	<0.5	_	_	_



Customer Sample ID Amdel Sample Number			QC14A 941422	TP56 0-0.1 941423	TP56 0.2-0.3 941424	TP56 0.4-0.5 941425	TP56 0.9-1.0 941426
Date Sampled			07/04/2008	07/04/2008	07/04/2008	07/04/2008	07/04/2008
<b>SVOC</b> Test/Reference	PQL	Unit					
g-BHC	0.5	mg/kg		<0.5	_	_	-
g-Chlordane	0.5	mg/kg	_	<0.5	_	_	-
Heptachlor	0.5	mg/kg	-	<0.5	_	-	_
Heptachlor epoxide	0.5	mg/kg	_	<0.5	_	-	_
Hexachlorobenzene (HCB)	0.5	mg/kg	_	<0.5	_	-	_
Methoxychlor	0.5	mg/kg	_	<0.5	_	_	_
Oxychlordane	0.5	mg/kg	-	<0.5	_	-	_
2,4,5,6-tetrachloro-m-xylene - Surrogate	-	%	-	98	-	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	<0.5	-	-	-
Acenaphthylene	0.5	mg/kg	-	<0.5	-	-	-
Anthracene	0.5	mg/kg	-	<0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	-	<0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	-	<0.5	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	<1	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	<0.5	-	-	-
Chrysene	0.5	mg/kg	-	<0.5	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	-	<0.5	-	-	-
Fluoranthene	0.5	mg/kg	-	<0.5	-	-	-
Fluorene	0.5	mg/kg	-	<0.5	-	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	-	<0.5	-	-	-
Naphthalene	0.5	mg/kg	-	<0.5	-	-	-
Phenanthrene	0.5	mg/kg	-	<0.5	-	-	-
Pyrene	0.5	mg/kg	-	<0.5	-	-	-
Sum of PAHs	0.5	mg/kg	-	<0.5	-	-	-
2-Fluorobiphenyl - Surrogate	-	%	-	88	-	-	-
p-Terphenyl-D14 - Surrogate	-	%	-	110	-	-	_
Anthracene-d10 - Surrogate	-	%	-	95	-	-	_
<b>2000 TPH (C10 - C36) in Soil by GC</b> C10-C14 Fraction	10	mg/kg	_	<10	_	_	_
C15-C28 Fraction	20	mg/kg	_	<20		_	
C29-C36 Fraction	20	mg/kg	_	<20		_	_
	20	mg/kg		-20			
Metals Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS							
Arsenic	2	mg/kg	-	<2	-	-	-
Cadmium	2	mg/kg	-	<2	-	-	-
Chromium	2	mg/kg	-	9.3	-	-	-
Copper	2	mg/kg	-	3.7	-	-	-
Lead	2	mg/kg	-	6.2	-	-	-
Nickel	2	mg/kg	-	2.6	-	-	-
Zinc	2	mg/kg	-	7.1	-	-	-
Inorganics Test/Reference	PQL	Unit					
4000 pH in Soil							
pH	0.1	рН	-	6.8	-	-	-
Miscellaneous							
Test/Reference	PQL	Unit					



Customer Sample ID			QC14A	TP56 0-0.1	TP56 0.2-0.3	TP56 0.4-0.5	TP56 0.9-1.0
Amdel Sample Number			941422	941423	941424	941425	941426
Date Sampled			07/04/2008	07/04/2008	07/04/2008	07/04/2008	07/04/2008
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content							
% Moisture	1	%	-	2	-	-	-

Customer Sample ID			TP56 1.9-2.0	TP57 0-0.1	QC15A	TP57 0.2-0.3	TP57 0.4-0.5
Amdel Sample Number			941427	941428	941429	941430	941431
Date Sampled			07/04/2008	07/04/2008	07/04/2008	07/04/2008	07/04/2008
VOC							
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&	T						
Benzene	0.2	mg/kg	-	<0.2	-	-	-
Ethylbenzene	1	mg/kg	-	<1.0	-	-	-
Meta- & Para- Xylene	2	mg/kg	-	<2.0	-	-	-
Ortho-Xylene	1	mg/kg	-	<1.0	-	-	-
Toluene	1	mg/kg	-	<1.0	-	-	-
Total Xylenes	3	mg/kg	-	<3.0	-	-	-
C6-C9 Fraction	5	mg/kg	-	<5.0	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	-	105	-	-	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	MS						
a-BHC	0.5	mg/kg	-	<0.5	<0.5	-	-
a-Chlordane	0.5	mg/kg	-	<0.5	<0.5	-	-
a-Endosulfan	0.5	mg/kg	-	<0.5	<0.5	-	-
Aldrin	0.5	mg/kg	-	<0.5	<0.5	-	-
b-BHC	0.5	mg/kg	-	<0.5	<0.5	-	-
b-Endosulfan	0.5	mg/kg	-	<0.5	<0.5	-	-
d-BHC	0.5	mg/kg	-	<0.5	<0.5	-	-
DDD	0.5	mg/kg	-	<0.5	<0.5	-	-
DDE	0.5	mg/kg	-	<0.5	<0.5	-	-
DDT	0.5	mg/kg	-	<0.5	<0.5	-	-
Dieldrin	0.5	mg/kg	-	<0.5	<0.5	-	-
Endosulfan sulfate	0.5	mg/kg	-	<0.5	<0.5	-	-
Endrin	0.5	mg/kg	-	<0.5	<0.5	-	-
Endrin Aldehyde	0.5	mg/kg	-	<0.5	<0.5	-	-
g-BHC	0.5	mg/kg	-	<0.5	<0.5	-	-
g-Chlordane	0.5	mg/kg	-	<0.5	<0.5	-	-
Heptachlor	0.5	mg/kg	-	<0.5	<0.5	-	-
Heptachlor epoxide	0.5	mg/kg	-	<0.5	<0.5	-	-
Hexachlorobenzene (HCB)	0.5	mg/kg	-	<0.5	<0.5	-	-
Methoxychlor	0.5	mg/kg	-	<0.5	<0.5	-	-
Oxychlordane	0.5	mg/kg	-	<0.5	<0.5	-	-
2,4,5,6-tetrachloro-m-xylene - Surrogate	-	%	-	100	100	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	<0.5	-	-	-
Acenaphthylene	0.5	mg/kg	-	<0.5	-	-	-
Anthracene	0.5	mg/kg	-	<0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	-	<0.5	_	-	_



Customer Sample ID Amdel Sample Number Date Sampled			TP56 1.9-2.0 941427 07/04/2008	TP57 0-0.1 941428 07/04/2008	QC15A 941429 07/04/2008	TP57 0.2-0.3 941430 07/04/2008	TP57 0.4-0.5 941431 07/04/2008
svoc							
Test/Reference	PQL	Unit					
Benzo(a)pyrene	0.5	mg/kg	-	<0.5	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	<1	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	<0.5	-	-	-
Chrysene	0.5	mg/kg	-	<0.5	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	-	<0.5	-	-	-
Fluoranthene	0.5	mg/kg	-	<0.5	-	-	-
Fluorene	0.5	mg/kg	-	<0.5	-	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	-	<0.5	-	-	-
Naphthalene	0.5	mg/kg	-	<0.5	-	-	-
Phenanthrene	0.5	mg/kg	-	<0.5	-	-	-
Pyrene	0.5	mg/kg	-	<0.5	-	-	-
Sum of PAHs	0.5	mg/kg	-	<0.5	-	-	-
2-Fluorobiphenyl - Surrogate	-	%	-	90	-	-	-
p-Terphenyl-D14 - Surrogate	-	%	-	110	-	-	-
Anthracene-d10 - Surrogate	-	%	-	95	-	-	-
2000 TPH (C10 - C36) in Soil by GC							
C10-C14 Fraction	10	mg/kg	-	<10	-	-	-
C15-C28 Fraction	20	mg/kg	-	<20	-	-	-
C29-C36 Fraction	20	mg/kg	-	<20	-	-	-
Metals							
Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS							
Arsenic	2	mg/kg	-	<2	<2	-	-
Cadmium	2	mg/kg	-	<2	<2	-	-
Chromium	2	mg/kg	-	12	13	-	-
Copper	2	mg/kg	-	5.0	5.7	-	-
Lead	2	mg/kg	-	5.4	5.9	-	-
Nickel	2	mg/kg	-	3.9	4.3	-	-
Zinc	2	mg/kg	-	8.5	9.1	-	-
Inorganics	DOL	Linit					
Test/Reference	PQL	Unit					
4000 pH in Soil							
рН	0.1	pН	-	6.5	-	-	-
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	-	3	2	-	-
Customer Sample ID Amdel Sample Number Date Sampled			TP57 0.9-1.0 941432 07/04/2008	TP57 1.9-2.0 941433 07/04/2008	SP3 941434 07/04/2008	TP58 0-0.1 941435 07/04/2008	TP58 0.2-0.3 941436 07/04/2008
<b>VOC</b> Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&T							
Benzene	0.2	mg/kg	-	-	-	-	<0.2
Ethylbenzene	1	mg/kg	-	-	-	-	<1.0
Meta- & Para- Xylene	2	mg/kg	-	-	_	-	<2.0



Customer Sample ID Amdel Sample Number			TP57 0.9-1.0 941432	TP57 1.9-2.0 941433	SP3 941434	TP58 0-0.1 941435	TP58 0.2-0.3 941436
Date Sampled			07/04/2008	07/04/2008	07/04/2008	07/04/2008	07/04/2008
VOC	501						
Test/Reference	PQL	Unit					
Ortho-Xylene	1	mg/kg	-	-	-	-	<1.0
Toluene	1	mg/kg	-	-	-	-	<1.0
Total Xylenes	3	mg/kg	-	-	-	-	<3.0
C6-C9 Fraction	5	mg/kg	-	-	-	-	<5.0
4-Bromofluorobenzene - Surrogate	-	%	-	-	-	-	105
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC- a-BHC	MS 0.5	mg/kg					<0.5
а-впо a-Chlordane			-	-	-	-	
	0.5	mg/kg	-	-	-	-	<0.5
a-Endosulfan	0.5	mg/kg	-	-	-	-	<0.5
Aldrin	0.5	mg/kg	-	-	-	-	<0.5
b-BHC	0.5	mg/kg	-	-	-	-	<0.5
b-Endosulfan	0.5	mg/kg	-	-	-	-	<0.5
d-BHC	0.5	mg/kg	-	-	-	-	<0.5
DDD 	0.5	mg/kg	-	-	-	-	<0.5
DDE	0.5	mg/kg	-	-	-	-	<0.5
DDT	0.5	mg/kg	-	-	-	-	<0.5
Dieldrin	0.5	mg/kg	-	-	-	-	<0.5
Endosulfan sulfate	0.5	mg/kg	-	-	-	-	<0.5
Endrin	0.5	mg/kg	-	-	-	-	<0.5
Endrin Aldehyde	0.5	mg/kg	-	-	-	-	<0.5
g-BHC	0.5	mg/kg	-	-	-	-	<0.5
g-Chlordane	0.5	mg/kg	-	-	-	-	<0.5
Heptachlor	0.5	mg/kg	-	-	-	-	<0.5
Heptachlor epoxide	0.5	mg/kg	-	-	-	-	<0.5
Hexachlorobenzene (HCB)	0.5	mg/kg	-	-	-	-	<0.5
Methoxychlor	0.5	mg/kg	-	-	-	-	<0.5
Oxychlordane	0.5	mg/kg	-	-	-	-	<0.5
2,4,5,6-tetrachloro-m-xylene -	-	%	-	-	-	-	95
Surrogate 2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	_	_	_	_	<0.5
Acenaphthylene	0.5	mg/kg	_	_	_	_	<0.5
Anthracene	0.5	mg/kg	_	_	_	_	<0.5
Benz(a)anthracene	0.5	mg/kg	_	_	_	_	<0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	-	<0.5
· · · ·			-	-	-	-	<1
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	-	-	
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	-	<0.5
Chrysene	0.5	mg/kg	-	-	-	-	<0.5
Dibenz(ah)anthracene	0.5	mg/kg	-	-	-	-	<0.5
Fluoranthene 	0.5	mg/kg	-	-	-	-	<0.5
Fluorene	0.5	mg/kg	-	-	-	-	<0.5
Indeno(123-cd)pyrene	0.5	mg/kg	-	-	-	-	<0.5
Naphthalene	0.5	mg/kg	-	-	-	-	<0.5
Phenanthrene	0.5	mg/kg	-	-	-	-	<0.5
Pyrene	0.5	mg/kg	-	-	-	-	<0.5
Sum of PAHs	0.5	mg/kg	-	-	-	-	<0.5
2-Fluorobiphenyl - Surrogate	-	%	-	-	-	-	70
o-Terphenyl-D14 - Surrogate	_	%	-	-	-	-	106



Customer Sample ID Amdel Sample Number Date Sampled			TP57 0.9-1.0 941432 07/04/2008	TP57 1.9-2.0 941433 07/04/2008	SP3 941434 07/04/2008	TP58 0-0.1 941435 07/04/2008	TP58 0.2-0.3 941436 07/04/2008
SVOC Test/Reference	PQL	Unit					
Anthracene-d10 - Surrogate		%	-	_		_	92
2000 TPH (C10 - C36) in Soil by	GC						
C10-C14 Fraction	10	mg/kg	-	-	-	-	<10
C15-C28 Fraction	20	mg/kg	-	-	-	-	<20
C29-C36 Fraction	20	mg/kg	-	-	-	-	<20
Metals							
Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICF	P/MS						
Arsenic	2	mg/kg	-	-	-	-	<2
Cadmium	2	mg/kg	-	-	-	-	<2
Chromium	2	mg/kg	-	-	-	-	22
Copper	2	mg/kg	-	-	-	-	10
Lead	2	mg/kg	-	-	-	-	4.7
Nickel	2	mg/kg	-	-	-	-	8.5
Zinc	2	mg/kg	-	-	-	-	11
Inorganics							
Test/Reference	PQL	Unit					
4000 pH in Soil							
pH	0.1	pН	-	-	-	-	7.8
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content							
% Moisture	1	%	-	-	-	-	4
Customer Sample ID			QC16A	TP58 0.4-0.5	TP58 0.9-1.0	TP58 1.9-2.0	TP59 0-0.1

Customer Sample ID Amdel Sample Number Date Sampled VOC	POL	11-24	QC16A 941437 07/04/2008	TP58 0.4-0.5 941438 07/04/2008	TP58 0.9-1.0 941439 07/04/2008	TP58 1.9-2.0 941440 07/04/2008	TP59 0-0.1 941441 07/04/2008
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&	Т						
Benzene	0.2	mg/kg	-	-	-	-	<0.2
Ethylbenzene	1	mg/kg	-	-	-	-	<1.0
Meta- & Para- Xylene	2	mg/kg	-	-	-	-	<2.0
Ortho-Xylene	1	mg/kg	-	-	-	-	<1.0
Toluene	1	mg/kg	-	-	-	-	<1.0
Total Xylenes	3	mg/kg	-	-	-	-	<3.0
C6-C9 Fraction	5	mg/kg	-	-	-	-	<5.0
4-Bromofluorobenzene - Surrogate	-	%	-	-	-	-	110
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	MS						
a-BHC	0.5	mg/kg	-	-	-	-	<0.5
a-Chlordane	0.5	mg/kg	-	-	-	-	<0.5
a-Endosulfan	0.5	mg/kg	-	-	-	-	<0.5
Aldrin	0.5	mg/kg	-	-	-	-	<0.5
b-BHC	0.5	mg/kg	-	_	_	_	<0.5



Customer Sample ID Amdel Sample Number Date Sampled			QC16A 941437 07/04/2008	TP58 0.4-0.5 941438 07/04/2008	TP58 0.9-1.0 941439 07/04/2008	TP58 1.9-2.0 941440 07/04/2008	TP59 0-0.1 941441 07/04/2008
SVOC							
Test/Reference	PQL	Unit					
b-Endosulfan	0.5	mg/kg	-	-	-	-	<0.5
d-BHC	0.5	mg/kg	-	-	-	-	<0.5
ODD	0.5	mg/kg	-	-	-	-	<0.5
ODE	0.5	mg/kg	-	-	-	-	<0.5
DDT	0.5	mg/kg	-	-	-	-	<0.5
Dieldrin	0.5	mg/kg	-	-	-	-	<0.5
Endosulfan sulfate	0.5	mg/kg	-	-	-	-	<0.5
Endrin	0.5	mg/kg	-	-	-	-	<0.5
Endrin Aldehyde	0.5	mg/kg	-	-	-	-	<0.5
g-BHC	0.5	mg/kg	-	-	-	-	<0.5
g-Chlordane	0.5	mg/kg	-	-	-	-	<0.5
- Heptachlor	0.5	mg/kg	-	-	-	-	<0.5
- Heptachlor epoxide	0.5	mg/kg	-	-	-	-	<0.5
Hexachlorobenzene (HCB)	0.5	mg/kg	-	-	-	-	<0.5
Methoxychlor	0.5	mg/kg	-	-	-	-	<0.5
Dxychlordane	0.5	mg/kg	-	-	-	-	<0.5
2,4,5,6-tetrachloro-m-xylene - Surrogate	-	%	-	-	-	-	96
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	-	-	-	<0.5
Acenaphthylene	0.5	mg/kg	-	-	-	-	<0.5
Anthracene	0.5	mg/kg	-	-	-	-	<0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	-	<0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	-	<0.5
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	-	-	<1
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	-	<0.5
Chrysene	0.5	mg/kg	-	-	-	-	<0.5
Dibenz(ah)anthracene	0.5	mg/kg	-	-	-	-	<0.5
Fluoranthene	0.5	mg/kg	-	-	-	-	<0.5
Fluorene	0.5	mg/kg	-	-	-	-	<0.5
ndeno(123-cd)pyrene	0.5	mg/kg	-	-	-	-	<0.5
Naphthalene	0.5	mg/kg	-	-	-	-	<0.5
Phenanthrene	0.5	mg/kg	-	-	-	-	<0.5
Pyrene	0.5	mg/kg	-	-	-	-	<0.5
Sum of PAHs	0.5	mg/kg	-	-	-	-	<0.5
2-Fluorobiphenyl - Surrogate	-	%	-	-	-	-	80
o-Terphenyl-D14 - Surrogate	-	%	-	-	-	-	106
Anthracene-d10 - Surrogate	-	%	-	-	-	-	92
2000 TPH (C10 - C36) in Soil by GC							
C10-C14 Fraction	10	mg/kg	-	-	-	-	<10
C15-C28 Fraction	20	mg/kg	-	-	-	-	<20
C29-C36 Fraction	20	mg/kg	-	-	-	-	<20
<b>Metals</b> Fest/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS							
Arsenic	2	mg/kg	-	-	-	-	3.0
Cadmium	2	mg/kg	-	-	-	-	<2
Chromium	2	mg/kg	-	-	-	-	40
Copper	2	mg/kg	-	-	-	-	23
_ead	2	mg/kg	-	-	-	-	16



Customer Sample ID Amdel Sample Number Date Sampled			QC16A 941437 07/04/2008	TP58 0.4-0.5 941438 07/04/2008	TP58 0.9-1.0 941439 07/04/2008	TP58 1.9-2.0 941440 07/04/2008	TP59 0-0.1 941441 07/04/2008
Metals Test/Reference	PQL	Unit					
	PQL	Unit					
Nickel	2	mg/kg	-	-	-	-	17
Zinc	2	mg/kg	-	-	-	-	24
Inorganics							
Test/Reference	PQL	Unit					
4000 pH in Soil							
pH	0.1	pН	-	-	-	-	6.3
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content							
% Moisture	1	%	-	-	-	-	8

# Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Extracted	Analysed
1100 BTEX &(C6-C9) in Soil by P&T		15/04/2008
1100 MAH(BTEX & C6-C9) in Soil P&T		14/04/2008
2000 TPH (C10 - C36) in Soil by GC	11/04/2008	14/04/2008
2100 PAH in Soil by GC	11/04/2008	15/04/2008
2300 OC Pesticides in Soil by GC-MS	11/04/2008	15/04/2008
2600 PCBs in Soil by GC	11/04/2008	15/04/2008
3100 Total Metals in Soil By ICP/MS	17/04/2008	18/04/2008
3400 Mercury in Soil by FIMS	17/04/2008	17/04/2008
4000 pH in Soil		14/04/2008
4270 Total Cyanide in Soil Colourmetric	10/04/2008	16/04/2008
4300 Anions in Soil by IC	10/04/2008	11/04/2008
4850 Total Phenolics in Soil by SFA	10/04/2008	16/04/2008
5000 Moisture Content		10/04/2008



### **Amdel Internal Quality Control Review**

#### General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples
  are included in this QC report where applicable. Additional QC data may be available on request.
- 2. Amdel QC Acceptance/Rejection criteria are available on request.
- 3. Proficiency trial results are available on request.
- 4. Actual PQLs are matrix dependant. Quotes PQLs may be raised where sample extracts are diluted due to interferences.
- 5. Results are uncorrected for matrix spike or surrogate recoveries.
- 6. Test samples duplicated or spiked, are for this job only and are identified in the following QC report.
- 7. SVOC analyses on waters are performed on homogenized, unfiltered sample, unless noted otherwise.
- 8. When individual results are qualified in the body of a report, refer to the qualifier descriptions that follow.

#### **Holding Times**

Please refer to 'Sampling and Preservation Chart for Soils & Waters' for holding times. (Form LM-FOR-ADM-020)

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgement.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitablity qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

\*\*NOTE: pH duplicates are reported as a range NOT an RPD

#### **Quality Control Results**

#### Laboratory: EN\_METALS

Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
955170 [ Method Blank ]					1	
3100 Metals in Soil - As Received						
Antimony	mg/kg	<2		< 2	Т	
Arsenic	mg/kg	<2		< 2	Т	
Barium	mg/kg	<2		< 2	Т	
Beryllium	mg/kg	<2		< 2	Т	
Boron	mg/kg	<2		< 2	Т	
Cadmium	mg/kg	<2		< 2	Т	
Chromium	mg/kg	<2		< 2	Т	
Cobalt	mg/kg	<2		< 2	Т	
Copper	mg/kg	<2		< 2	Т	
Lead	mg/kg	<2		< 2	Т	
Manganese	mg/kg	<2		< 2	Т	
Molybdenum	mg/kg	2.3		< 2	F	
Nickel	mg/kg	<2		< 2	Т	
Selenium	mg/kg	<2		< 2	Т	
Tin	mg/kg	<2		< 2	Т	
Vanadium	mg/kg	<2		< 2	Т	
Zinc	mg/kg	<2		< 2	Т	
955200 [ Method Blank ]		•	•	•	•	
3400 Mercury in Soil by FIMS						
Mercury	mg/kg	<0.01		< 0.01	Т	



### Laboratory: EN\_METALS

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
955171 [ Laboratory Control Sample ]			1	<u> </u>		-	
3100 Metals in Soil - As Received			Expected Value	Percent Recovery			
Antimony	mg/kg	100	100.0	100	70-130 %	Т	
Arsenic	mg/kg	99	100.0	99	70-130 %	Т	
Barium	mg/kg	110	100.0	110	70-130 %	Т	
Boron	mg/kg	120	100.0	116	70-130 %	Т	
Cadmium	mg/kg	110	100.0	106	70-130 %	Т	
Chromium	mg/kg	110	100.0	107	70-130 %	Т	
Cobalt	mg/kg	110	100.0	112	70-130 %	Т	
Copper	mg/kg	110	100.0	108	70-130 %	Т	
Lead	mg/kg	100	100.0	102	70-130 %	Т	
Manganese	mg/kg	110	100.0	112	70-130 %	Т	
Nickel	mg/kg	120	100.0	117	70-130 %	Т	
Selenium	mg/kg	93	100.0	93	70-130 %	Т	
Tin	mg/kg	120	100.0	117	70-130 %	Т	
Vanadium	mg/kg	110	100.0	106	70-130 %	Т	
Zinc	mg/kg	97	100.0	97	70-130 %	Т	
955201 [ Laboratory Control Sample ]			-	+		•	
3400 Mercury in Soil by FIMS			Expected Value	Percent Recovery			
Mercury	mg/kg	9.5	10.0	95	80-120 %	Т	
943278 [ Duplicate of 941380 ]	9.1.9	0.0	10.0	+ +	00 120 70	+ -	
			Decult 2	DDD			
3100 Total Metals in Soil By ICP/MS	ma/ka	<2	Result 2	RPD <1	0-30 %	Т	
Arsenic	mg/kg		<b>+</b>			+	
Cadmium	mg/kg	<2	<2	<1	0-30 %	T	
Chromium	mg/kg	17	18	6	0-30 %	T	
Copper	mg/kg	7.7	7.7	1	0-30 %	T	
Lead	mg/kg	7.8	8.1	4	0-30 %	T	
Nickel	mg/kg	6.1	6.0	1	0-30 %	T	
Zinc	mg/kg	15	15	<1	0-30 %	T	
943280 [ Duplicate of 941387 ]			1				
3100 Total Metals in Soil By ICP/MS		ı	Result 2	RPD			
Arsenic	mg/kg	<2	<2	<1	0-30 %	T	
Cadmium	mg/kg	<2	<2	<1	0-30 %		
Chromium	mg/kg	17	16	6	0-30 %	T	
Copper	mg/kg	12	11	9	0-30 %	Т	
Lead	mg/kg	5.6	5.6	1	0-30 %	Т	
Nickel	mg/kg	6.2	5.9	5	0-30 %	T	
Zinc	mg/kg	26	21	20	0-30 %	Т	
943290 [ Spike of 941395 ]							
3100 Total Metals in Soil By ICP/MS			Spike Value	Percent Recovery			
Arsenic	mg/kg	110	100.0	106	70-130 %	Т	
Cadmium	mg/kg	110	100.0	108	70-130 %	Т	
Chromium	mg/kg	160	100.0	123	70-130 %	Т	
Copper	mg/kg	130	100.0	113	70-130 %	Т	
Lead	mg/kg	110	100.0	103	70-130 %	Т	
Nickel	mg/kg	140	100.0	119	70-130 %	Т	
Zinc	mg/kg	120	100.0	99	70-130 %	Т	
Laboratory: EN_SVOC			- <del></del>	- <del></del>	·		- <del>_</del>
Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
944947 [ Method Blank ]	•		+			•	
2000 TPH (C10 - C36) in Soil by GC							
C10-C14 Fraction	mg/kg	<10			< 10	Т	
C15-C28 Fraction	mg/kg	<20		†	< 20	Т	
C29-C36 Fraction	mg/kg	<20	1		< 20	Т	



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
944949 [ Method Blank ]			+			1=	
2600 PCBs in Soil by GC							
Aroclor 1016	mg/kg	<0.5			< 0.5	Т	
Aroclor 1221	mg/kg	<0.5			< 0.5	T	
Aroclor 1232 and 1242 as total	mg/kg	<1			< 1	<del>                                     </del>	
Aroclor 1248 and 1254 as total	mg/kg	<1			<1	<del>                                     </del>	
Aroclor 1260	mg/kg	<0.5			< 0.5	<del>                                     </del>	
Total Polychlorinated biphenyls	mg/kg	<1			< 1	† †	
Decachlorobiphenyl - PCB surrogate	%	95			70-130 %	<del>  '</del>	
, ,	70	93			70-130 //	+ '-	
944954 [ Method Blank ]			1	ı			
2000 TPH (C10 - C36) in Soil by GC	-	1					
C10-C14 Fraction	mg/kg	<10			< 10	T	
C15-C28 Fraction	mg/kg	<20			< 20	Т	
C29-C36 Fraction	mg/kg	<20			< 20	Т	
944956 [ Method Blank ]							
2100 PAH in Soil by GC							
Acenaphthene	mg/kg	<0.5			< 0.5	Т	
Acenaphthylene	mg/kg	<0.5			< 0.5	Т	
Anthracene	mg/kg	<0.5			< 0.5	Т	
Benz(a)anthracene	mg/kg	<0.5			< 0.5	Т	
Benzo(a)pyrene	mg/kg	<0.5			< 0.5	Т	
Benzo(b)&(k)fluoranthene	mg/kg	<1			< 1	Т	
Benzo(g.h.i)perylene	mg/kg	<0.5			< 0.5	Т	
Chrysene	mg/kg	<0.5			< 0.5	Т	
Dibenz(ah)anthracene	mg/kg	<0.5			< 0.5	T	
Fluoranthene	mg/kg	<0.5			< 0.5	Т	
Fluorene	mg/kg	<0.5			< 0.5	T	
Indeno(123-cd)pyrene	mg/kg	<0.5			< 0.5	T T	
Naphthalene	mg/kg	<0.5			< 0.5	T	
Phenanthrene	mg/kg	<0.5			< 0.5	T	
Pyrene	mg/kg	<0.5			< 0.5	<del>                                     </del>	
Sum of PAHs	mg/kg	<0.5			< 0.5	<del>                                     </del>	
2-Fluorobiphenyl - Surrogate	%	104			70-130 %	<del>  '</del>	
Anthracene-d10 - Surrogate	%	110			70-130 %	<del>  '</del>	
	_					+	
p-Terphenyl-D14 - Surrogate	%	124			70-130 %	Т	
2300 OC Pesticides in Soil by GC-ECD		1				_	
a-BHC	mg/kg	<0.5			< 0.5	Т	
a-Chlordane	mg/kg	<0.5			< 0.5	Т	
a-Endosulfan	mg/kg	<0.5			< 0.5	T	
Aldrin	mg/kg	<0.5			< 0.5	Т	
b-BHC	mg/kg	<0.5			< 0.5	T	
b-Endosulfan	mg/kg	<0.5			< 0.5	Т	
d-BHC	mg/kg	<0.5			< 0.5	Т	
DDD	mg/kg	<0.5			< 0.5	Т	
DDE	mg/kg	<0.5			< 0.5	Т	
DDT	mg/kg	<0.5			< 0.5	Т	
Dieldrin	mg/kg	<0.5			< 0.5	Т	
Endosulfan sulfate	mg/kg	<0.5			< 0.5	Т	
Endrin	mg/kg	<0.5			< 0.5	Т	
Endrin Aldehyde	mg/kg	<0.5			< 0.5	Т	
g-BHC	mg/kg	<0.5			< 0.5	Т	
g-Chlordane	mg/kg	<0.5			< 0.5	Т	
Heptachlor	mg/kg	<0.5	1		< 0.5	<del>                                     </del>	
Heptachlor epoxide	mg/kg	<0.5			< 0.5	<del>                                     </del>	
Hexachlorobenzene (HCB)	mg/kg	<0.5			< 0.5	<del>  '</del>	
Methoxychlor		<0.5			< 0.5	<del>  '</del>	
•	mg/kg		1			<u>'</u>	
Oxychlordane	mg/kg	<0.5			< 0.5		
2.4.5.6-tetrachloro-m-xylene-SURROGATE	%	116			70-130 %	Т	



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
944948 [ Laboratory Control Sample ]	-		+	+ +		1	
2000 TPH (C10 - C36) in Soil by GC			Expected Value	Percent Recovery			
C10-C14 Fraction	mg/kg	130	125.0	104	70-130 %	Т	
C15-C28 Fraction	mg/kg	150	125.0	121	70-130 %	<del>                                     </del>	
C29-C36 Fraction	mg/kg	130	125.0	103	70-130 %	╅	
944955 [ Laboratory Control Sample ]	mg/kg	100	120.0	100	70 100 70	<del></del>	
			Francisco de Al Velore	B			
2000 TPH (C10 - C36) in Soil by GC		440	Expected Value	Percent Recovery	70.400.0/	1 -	
C10-C14 Fraction	mg/kg	140	125.0	113	70-130 %	T	
C15-C28 Fraction	mg/kg	160	125.0	126	70-130 %	T	
C29-C36 Fraction	mg/kg	140	125.0	114	70-130 %		
943281 [ Duplicate of 941380 ]							
2300 OC Pesticides in Soil by GC-MS			Result 2	RPD			
a-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
a-Chlordane	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
a-Endosulfan	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Aldrin	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
b-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
b-Endosulfan	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
d-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
DDD	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
DDE	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
DDT	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Dieldrin	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Endosulfan sulfate	mg/kg	<0.5	<0.5	<1	0-30 %	T	
Endrin	mg/kg	<0.5	<0.5	<1	0-30 %	T	
Endrin Aldehyde	mg/kg	<0.5	<0.5	<1	0-30 %	T	
g-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
g-Chlordane	mg/kg	<0.5	<0.5	<1	0-30 %	<del> </del>	
Heptachlor	mg/kg	<0.5	<0.5	<1	0-30 %	+ +	
Heptachlor epoxide	mg/kg	<0.5	<0.5	<1	0-30 %	<del>                                     </del>	
Hexachlorobenzene (HCB)	mg/kg	<0.5	<0.5	<1	0-30 %	<del>                                     </del>	
Methoxychlor	mg/kg	<0.5	<0.5	<1	0-30 %	+ +	
Oxychlordane		<0.5	<0.5	<1	0-30 %	<del>                                     </del>	
2,4,5,6-tetrachloro-m-xylene - Surrogate	mg/kg %	94	V0.5		70-130 %	+ +	
	70	94		ļ .	70-130 %	<u> </u>	
943282 [ Duplicate of 941387 ]				<del> 1</del>			
2300 OC Pesticides in Soil by GC-MS	1		Result 2	RPD			
a-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	T	
a-Chlordane	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
a-Endosulfan	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Aldrin	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
b-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
b-Endosulfan	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
d-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
DDD	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
DDE	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
DDT	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Dieldrin	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Endosulfan sulfate	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Endrin	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Endrin Aldehyde	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
g-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	T	
g-Chlordane	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Heptachlor	mg/kg	<0.5	<0.5	<1	0-30 %	T .	
Heptachlor epoxide	mg/kg	<0.5	<0.5	<1	0-30 %	<del> </del>	
Hexachlorobenzene (HCB)	mg/kg	<0.5	<0.5	<1	0-30 %	<del>                                     </del>	
c. Addition obertize (TIOD)	mg/kg	<0.5	<0.5	<1	0-30 %	<del>  '</del>	
Methoxychlor				1	0-30 /0		I
Methoxychlor Oxychlordane	mg/kg	<0.5	<0.5	<1	0-30 %	T	



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying
943283 [ Duplicate of 941380 ]				ļ	Lillius	Limits	Codes
2100 PAH in Soil by GC			Result 2	RPD	1		
Acenaphthene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Acenaphthylene		<0.5	<0.5	<1	0-30 %	<del>  '</del>	
Anthracene	mg/kg mg/kg	<0.5	<0.5	<1	0-30 %	<del>  '</del>	
Benz(a)anthracene	mg/kg	<0.5	<0.5	<1	0-30 %	<del>  '</del>	
Benzo(a)pyrene	mg/kg	<0.5	<0.5	<1	0-30 %	<del>  '</del>	
Benzo(b)&(k)fluoranthene	mg/kg	<1	<1	<1	0-30 %	<del>  '</del>	
Benzo(g.h.i)perylene	mg/kg	<0.5	<0.5	<1	0-30 %	<del>  '</del>	
Chrysene		<0.5	<0.5	<1	0-30 %	<del>  '</del>	
Dibenz(ah)anthracene	mg/kg mg/kg	<0.5	<0.5	<1	0-30 %	<del>  '</del>	
Fluoranthene	mg/kg	<0.5	<0.5	<1	0-30 %	<del>  '</del>	
Fluorene		<0.5	<0.5	<1	0-30 %	<del>  '</del>	
	mg/kg		1	<1		'   T	
Indeno(123-cd)pyrene	mg/kg	<0.5	<0.5 <0.5	<1	0-30 % 0-30 %	'   T	
Naphthalene	mg/kg	<0.5					
Phenanthrene	mg/kg	<0.5	<0.5	<1	0-30 %	T	
Pyrene	mg/kg	<0.5	<0.5	<1	0-30 %	T -	
Sum of PAHs	mg/kg	<0.5	<0.5	<1	0-30 %	T	
2-Fluorobiphenyl - Surrogate	%	73			70-130 %	T	
Anthracene-d10 - Surrogate	%	90			70-130 %	T	
p-Terphenyl-D14 - Surrogate	%	104			70-130 %	Т	
943284 [ Duplicate of 941387 ]							
2100 PAH in Soil by GC			Result 2	RPD			
Acenaphthene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Acenaphthylene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Anthracene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Benz(a)anthracene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Benzo(a)pyrene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Benzo(b)&(k)fluoranthene	mg/kg	<1	<1	<1	0-30 %	Т	
Benzo(g.h.i)perylene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Chrysene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Dibenz(ah)anthracene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Fluoranthene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Fluorene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Indeno(123-cd)pyrene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Naphthalene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Phenanthrene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Pyrene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Sum of PAHs	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
2-Fluorobiphenyl - Surrogate	%	86			70-130 %	Т	
Anthracene-d10 - Surrogate	%	94			70-130 %	Т	
p-Terphenyl-D14 - Surrogate	%	110			70-130 %	Т	
943287 [ Duplicate of 941380 ]	1	•	•	•	•	-	
2000 TPH (C10 - C36) in Soil by GC			Result 2	RPD			
C10-C14 Fraction	mg/kg	<10	<10	<1	0-30 %	Т	
C15-C28 Fraction	mg/kg	<20	<20	<1	0-30 %	<del>  '</del>	
C29-C36 Fraction	mg/kg	21	<20	5	0-30 %	<del>                                     </del>	
943288 [ Duplicate of 941387 ]	g/ng	-'-			- 5 55 75	+ -	
			Docuit 0	DDD	1		
2000 TPH (C10 - C36) in Soil by GC	m n	-40	Result 2	RPD	0.20.0/	1 -	
C10-C14 Fraction	mg/kg	<10	<10	<1	0-30 %	T	
C15-C28 Fraction	mg/kg	<20	<20	<1	0-30 %	T T	
C29-C36 Fraction	mg/kg	<20	<20	<1	0-30 %	T	



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
943291 [ Spike of 941395 ]	*		•	+		-	
2300 OC Pesticides in Soil by GC-MS			Spike Value	Percent Recovery			
a-BHC	mg/kg	1.8	2.0	88	70-130 %	Т	
a-Chlordane	mg/kg	2.0	2.0	99	70-130 %	<del>Т</del> т	
a-Endosulfan	mg/kg	2.0	2.0	101	70-130 %	Т Т	
Aldrin	mg/kg	1.6	2.0	82	70-130 %	<del>Т</del> т	
b-BHC	mg/kg	1.7	2.0	84	70-130 %	Т Т	
b-Endosulfan	mg/kg	2.0	2.0	101	70-130 %	T	
d-BHC	mg/kg	1.9	2.0	94	70-130 %	T	
DDD	mg/kg	2.1	2.0	104	70-130 %	T	
DDE	mg/kg	2.2	2.0	110	70-130 %	Т	
DDT	mg/kg	1.6	2.0	82	70-130 %	Т	
Dieldrin	mg/kg	2.0	2.0	99	70-130 %	Т Т	
Endosulfan sulfate	mg/kg	1.8	2.0	88	70-130 %	<del>Т</del> т	
Endrin	mg/kg	2.0	2.0	100	70-130 %	Т	
Endrin Aldehyde	mg/kg	2.0	2.0	100	70-130 %	Т Т	
g-BHC	mg/kg	1.7	2.0	85	70-130 %	Т	
g-Chlordane	mg/kg	2.0	2.0	99	70-130 %	Т	
Heptachlor	mg/kg	1.5	2.0	76	70-130 %	Т Т	
Heptachlor epoxide	mg/kg	2.0	2.0	100	70-130 %	Т	
Hexachlorobenzene (HCB)	mg/kg	1.9	2.0	96	70-130 %	Т	
Methoxychlor	mg/kg	1.6	2.0	79	70-130 %	Т	
Oxychlordane	mg/kg	<0.5	N/A	N/A	N/A	N/A	
2,4,5,6-tetrachloro-m-xylene - Surrogate	%	93			70-130 %	T	
943292 [ Spike of 941395 ]	*		+	+		-	
2100 PAH in Soil by GC			Spike Value	Percent Recovery			
Acenaphthene	mg/kg	1.8	2.0	90	70-130 %	Т	
Acenaphthylene	mg/kg	1.7	2.0	85	70-130 %	<del> </del>	
Anthracene	mg/kg	1.8	2.0	90	70-130 %	Т т	
Benz(a)anthracene	mg/kg	1.8	2.0	89	70-130 %	T T	
Benzo(a)pyrene	mg/kg	1.6	2.0	79	70-130 %	Т Т	
Benzo(b)&(k)fluoranthene	mg/kg	3.2	4.0	79	70-130 %	Т т	
Benzo(g.h.i)perylene	mg/kg	1.7	2.0	84	70-130 %	T T	
Chrysene	mg/kg	1.7	2.0	86	70-130 %	Т Т	
Dibenz(ah)anthracene	mg/kg	1.7	2.0	84	70-130 %	T	
Fluoranthene	mg/kg	1.9	2.0	96	70-130 %	Т Т	
Fluorene	mg/kg	1.7	2.0	84	70-130 %	T	
Indeno(123-cd)pyrene	mg/kg	1.7	2.0	85	70-130 %	T	
Naphthalene	mg/kg	1.8	2.0	90	70-130 %	Т Т	
Phenanthrene	mg/kg	1.8	2.0	91	70-130 %	<del>Т</del> т	
Pyrene	mg/kg	1.9	2.0	94	70-130 %	Т	
Sum of PAHs	mg/kg	28	32.0	87	70-130 %	Т Т	
2-Fluorobiphenyl - Surrogate	%	76			70-130 %	<del>Т</del> т	
Anthracene-d10 - Surrogate	%	92			70-130 %	T	
p-Terphenyl-D14 - Surrogate	%	104			70-130 %	T	
943293 [ Spike of 941395 ]			-	-		-	
2000 TPH (C10 - C36) in Soil by GC			Spike Value	Percent Recovery			
C10-C14 Fraction	mg/kg	110	125.0	84	70-130 %	Т	
C15-C28 Fraction	mg/kg	110	125.0	84	70-130 %	T	
C29-C36 Fraction	mg/kg	110	125.0	88	70-130 %	T	
Laboratory: EN_VOC			1 .25.5	+	. 0 . 00 /0	+ -	ļ
	T	_	<u> </u>	1 1	Acceptance	Pass	Qualifying
Sample, Test, Result Reference	Units	Result 1			Limits	Limits	Codes



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
946126 [ Method Blank ]	-	ļ	+	·		1=	- 3400
1100 BTEX in Soil by P&T							
Benzene	mg/kg	<0.2			< 0.2	Т	
C6-C9 Fraction	mg/kg	<5.0			< 5	Т	
Ethylbenzene	mg/kg	<1.0			< 1	T	
Meta- & Para- Xylene	mg/kg	<2.0			< 2	Т	
Ortho-Xylene	mg/kg	<1.0			< 1	T	
Toluene	mg/kg	<1.0			< 1	T	
Total Xylenes	mg/kg	<3.0			< 3	T	
4-Bromofluorobenzene - Surrogate	%	107			70-130 %	T	
946129 [ Method Blank ]			1	-	70 100 70	+ -	
1100 BTEX in Soil by P&T							
Benzene	mg/kg	<0.2			< 0.2	Т	
C6-C9 Fraction	mg/kg	<5.0			< 5	<del>  '</del>	
Ethylbenzene		<1.0			<1	<del>  '</del>	
Meta- & Para- Xylene	mg/kg	<2.0			< 2	<del>  '</del>	
· · · · · · · · · · · · · · · · · · ·	mg/kg					'   T	
Ortho-Xylene	mg/kg	<1.0		-	< 1	T	
Total Yylenes	mg/kg	<1.0			< 1	T	
Total Xylenes  4-Bromofluorobenzene - Surrogate	mg/kg %	<3.0 109		<del>                                     </del>	70-130 %	'   T	
	70	109	-	<u> </u>	10-130 %	+ '	
946127 [ Laboratory Control Sample ]			l =	l			
1100 BTEX in Soil by P&T		1 ,-	Expected Value	Percent Recovery	70 (00 0)	1 -	
Benzene	mg/kg	4.5	5.0	91	70-130 %	Т	
C6-C9 Fraction	mg/kg	56	50.0	110	70-130 %	Т	
Ethylbenzene	mg/kg	4.6	5.0	93	70-130 %	T	
Meta- & Para- Xylene	mg/kg	9.4	10.0	94	70-130 %	Т	
Ortho-Xylene	mg/kg	4.7	5.0	93	70-130 %	Т	
Toluene	mg/kg	4.7	5.0	94	70-130 %	T	
Total Xylenes	mg/kg	14	N/A	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	%	106			70-130 %	Т	
946130 [ Laboratory Control Sample ]							
1100 BTEX in Soil by P&T			Expected Value	Percent Recovery			
Benzene	mg/kg	4.4	5.0	87	70-130 %	Т	
C6-C9 Fraction	mg/kg	42	50.0	84	70-130 %	Т	
Ethylbenzene	mg/kg	4.4	5.0	88	70-130 %	Т	
Meta- & Para- Xylene	mg/kg	8.8	10.0	88	70-130 %	Т	
Ortho-Xylene	mg/kg	4.4	5.0	88	70-130 %	Т	
Toluene	mg/kg	4.4	5.0	87	70-130 %	Т	
Total Xylenes	mg/kg	13	N/A	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	%	104			70-130 %	Т	
943275 [ Duplicate of 941380 ]	•					•	
1100 BTEX &(C6-C9) in Soil by P&T			Result 2	RPD			
Benzene	mg/kg	<0.2	<0.2	<1	0-30 %	Т	
C6-C9 Fraction	mg/kg	<5.0	<5.0	<1	0-30 %	Т	
Ethylbenzene	mg/kg	<1.0	<1.0	<1	0-30 %	Т	
Meta- & Para- Xylene	mg/kg	<2.0	<2.0	<1	0-30 %	T	
Ortho-Xylene	mg/kg	<1.0	<1.0	<1	0-30 %	Т	
Toluene	mg/kg	<1.0	<1.0	<1	0-30 %	T	
Total Xylenes	mg/kg	<3.0	<3.0	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	%	106	1	1,571	70-130 %	T	
	, , ,	<del></del>	+		. 0 . 00 /0	+ -	
	•						
943277 [ Duplicate of 941387 ]	-		D# 0	DDD			
943277 [ Duplicate of 941387 ] 1100 BTEX &(C6-C9) in Soil by P&T	ma#	-0.0	Result 2	RPD	0.20.8/	1 -	
943277 [ Duplicate of 941387 ] 1100 BTEX &(C6-C9) in Soil by P&T Benzene	mg/kg	<0.2	<0.2	<1	0-30 %	T	
943277 [ Duplicate of 941387 ] 1100 BTEX &(C6-C9) in Soil by P&T Benzene C6-C9 Fraction	mg/kg	<5.0	<0.2 <5.0	<1 <1	0-30 %	Т	
943277 [ Duplicate of 941387 ] 1100 BTEX &(C6-C9) in Soil by P&T Benzene C6-C9 Fraction Ethylbenzene	mg/kg mg/kg	<5.0 <1.0	<0.2 <5.0 <1.0	<1 <1 <1	0-30 % 0-30 %	T	
943277 [ Duplicate of 941387 ] 1100 BTEX &(C6-C9) in Soil by P&T Benzene C6-C9 Fraction Ethylbenzene Meta- & Para- Xylene	mg/kg mg/kg mg/kg	<5.0 <1.0 <2.0	<0.2 <5.0 <1.0 <2.0	<1 <1 <1 <1	0-30 % 0-30 % 0-30 %	T T T	
943277 [ Duplicate of 941387 ] 1100 BTEX &(C6-C9) in Soil by P&T Benzene C6-C9 Fraction Ethylbenzene Meta- & Para- Xylene Ortho-Xylene	mg/kg mg/kg mg/kg mg/kg	<5.0 <1.0 <2.0 <1.0	<0.2 <5.0 <1.0 <2.0 <1.0	<1 <1 <1 <1 <1	0-30 % 0-30 % 0-30 % 0-30 %	T T T	
943277 [ Duplicate of 941387 ] 1100 BTEX &(C6-C9) in Soil by P&T Benzene C6-C9 Fraction Ethylbenzene Meta- & Para- Xylene	mg/kg mg/kg mg/kg	<5.0 <1.0 <2.0	<0.2 <5.0 <1.0 <2.0	<1 <1 <1 <1	0-30 % 0-30 % 0-30 %	T T T	

Date Printed: 21 April 2008 Final Report Number: 295702



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
943289 [ Spike of 941395 ]	•	•	•	•		•	
1100 BTEX &(C6-C9) in Soil by P&T			Spike Value	Percent Recovery			
Benzene	mg/kg	3.9	5.0	78	70-130 %	Т	
C6-C9 Fraction	mg/kg	51	50.0	100	70-130 %	Т	
Ethylbenzene	mg/kg	4.0	5.0	79	70-130 %	Т	
Meta- & Para- Xylene	mg/kg	8.0	10.0	80	70-130 %	Т	
Ortho-Xylene	mg/kg	4.0	5.0	81	70-130 %	Т	
Sample Weight	-	9.3	N/A	N/A	N/A	N/A	
Toluene	mg/kg	4.0	5.0	80	70-130 %	Т	
Total Xylenes	mg/kg	12	N/A	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	%	97			70-130 %	Т	

# Laboratory: EN\_WATERS

Sample, Test, Result Reference	Units	Result 1			Acceptance	Pass	Qualifying
1 / /	-		1	<del>                                     </del>	Limits	Limits	Codes
942910 [ Method Blank ]			1	1			
4300 Anions in Soil by IC						1 -	
Bromide (Soluble)	mg/kg	<2			< 2	T	
Chloride (Soluble)	mg/kg	<2			< 2	T	
Fluoride (Soluble)	mg/kg	<2			< 2	T	
Nitrate (Soluble)	mg/kg	<2			< 2	T	
Nitrite (Soluble)	mg/kg	<2			< 2	T	
Orthophosphorus (Soluble)	mg/kg	<2			< 2	T	
Sulphate (Soluble)	mg/kg	<2			< 2	Т	
943242 [ Method Blank ]			1				
4270 Total Cyanide in Soil Colourmetric		1					
Total Cyanide	mg/kg	<0.1			< 0.1	Т	
943774 [ Method Blank ]							
4850 Total Phenolics in Soil by SFA	_	_					
Total Phenolics	mg/kg	<0.1			< 0.1	Т	
942912 [ Laboratory Control Sample ]	•	•	•			•	
4300 Anions in Soil by IC			Expected Value	Percent Recovery			
Bromide (Soluble)	mg/kg	540	500.0	107	75-125 %	Т	
Chloride (Soluble)	mg/kg	500	500.0	100	75-125 %	Т	
Fluoride (Soluble)	mg/kg	420	500.0	85	75-125 %	Т	
Nitrate (Soluble)	mg/kg	520	500.0	104	75-125 %	Т	
Nitrite (Soluble)	mg/kg	560	500.0	113	75-125 %	Т	
Orthophosphorus (Soluble)	mg/kg	480	500.0	95	75-125 %	Т	
Sulphate (Soluble)	mg/kg	400	500.0	80	75-125 %	Т	
943239 [ Laboratory Control Sample ]	•		•	•		•	
4270 Total Cyanide in Soil Colourmetric			Expected Value	Percent Recovery			
Total Cyanide	mg/kg	0.5	0.5	104	70-130 %	Т	
943776 [ Laboratory Control Sample ]	•		•	•			
4850 Total Phenolics in Soil by SFA			Expected Value	Percent Recovery			
Total Phenolics	mg/kg	0.5	0.5	109	70-130 %	Т	
943285 [ Duplicate of 941380 ]	•		•	•		•	
4000 pH in Soil			Result 2	RPD			
pH	pН	7.4	7.1	0.3	0-0.5 pH	Т	
943286 [ Duplicate of 941387 ]	-		•	• •	-	•	
4000 pH in Soil			Result 2	RPD			
pH	pH	7.2	7.2	0.0	0-0.5 pH	Т	
<u> </u>	<del></del>	ļ			·		

# Sample Integrity

Attempt to Chill was evident
Yes
Samples correctly preserved
Yes
Organic samples had Teflon liners
Yes
Samples received with Zero Headspace
Yes
Samples received within HoldingTime
Yes
Some samples have been subcontracted
No



### **Authorised By**

Ruth Callander Client Services Officer

Alex Petridis Senior Analyst - SVOC Accreditation Number: 1645

Mark Herbstreit Senior Analyst - Metals Accreditation Number: 1645

Helen Lei Senior Analyst - Waters Accreditation Number: 1645

Khoa Pham Analyst - VOC Accreditation Number: 1645

**Laboratory Manager** 

Anthony Crane Operations Manager

Final Report

- Indicates Not Requested \* Indicates NATA accreditation does not cover the performance of this service

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The samples were not collected by Amdel staff.



Accreditation Number: 1645



# CONNELL WAGNER (SA) PTY LTD 55 Grenfell St ADELAIDE SA 5000

Attention: April Freeman

Project 08ENME0008924

Client Reference 31495

Buckland park

Received Date 10/04/2008 09:00:00 AM

Customer Sample ID Amdel Sample Number Date Sampled			TP60 0-0.1 944304 08/04/2008	QC17A 944305 08/04/2008	TP60 0.2-0.3 944306 08/04/2008	TP60 0.4-0.5 944307 08/04/2008	TP60 0.9-1.0 944308 08/04/2008
VOC Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P& Benzene	0.2	mg/kg	<0.2	_	_	_	_
Ethylbenzene	1	mg/kg	<1				
Meta- & Para- Xylene	2	mg/kg	<2	_	_	_	_
Ortho-Xylene	1	mg/kg	<1	_	_	_	_
Toluene	1	mg/kg	<1	_	_	_	_
Total Xylenes	3	mg/kg	<3		_	_	_
C6-C9 Fraction	5	mg/kg	<5 <5	_	_	_	_
4-Bromofluorobenzene - Surrogate	3	//////////////////////////////////////	96	_	-	_	_
_	_	70	30	_	-	_	_
SVOC Test/Reference	PQL	Unit					
	FQL	Offic					
2300 OC Pesticides in Soil by GC-	ECD						
a-BHC	0.5	mg/kg	<0.5	<0.5	-	-	-
a-Chlordane	0.5	mg/kg	<0.5	<0.5	-	-	-
a-Endosulfan	0.5	mg/kg	<0.5	<0.5	-	-	-
Aldrin	0.5	mg/kg	<0.5	<0.5	-	-	-
b-BHC	0.5	mg/kg	<0.5	<0.5	-	-	-
b-Endosulfan	0.5	mg/kg	<0.5	<0.5	-	-	-
d-BHC	0.5	mg/kg	<0.5	<0.5	-	-	-
DDD	0.5	mg/kg	<0.5	<0.5	-	-	-
DDE	0.5	mg/kg	<0.5	<0.5	-	-	-
DDT	0.5	mg/kg	<0.5	<0.5	-	-	-
Dieldrin	0.5	mg/kg	<0.5	<0.5	-	-	-
Endosulfan sulfate	0.5	mg/kg	<0.5	<0.5	-	-	-
Endrin	0.5	mg/kg	<0.5	<0.5	-	-	-
Endrin Aldehyde	0.5	mg/kg	<0.5	<0.5	-	-	-
g-BHC	0.5	mg/kg	<0.5	<0.5	-	-	-
g-Chlordane	0.5	mg/kg	<0.5	<0.5	-	-	-
Heptachlor	0.5	mg/kg	<0.5	<0.5	-	-	-
Heptachlor epoxide	0.5	mg/kg	<0.5	<0.5	-	-	-
Hexachlorobenzene (HCB)	0.5	mg/kg	<0.5	<0.5	-	-	-
Methoxychlor	0.5	mg/kg	<0.5	<0.5	-	-	-
Oxychlordane	0.5	mg/kg	<0.5	<0.5	-	-	-
2.4.5.6-tetrachloro-m-xylene-SURROG ATE	1	%	94	98	-	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	<0.5	-	-	-	-
Acenaphthylene	0.5	mg/kg	<0.5	-	-	-	-

Date Printed: 18 April 2008



Customer Sample ID Amdel Sample Number			TP60 0-0.1 944304	QC17A 944305	TP60 0.2-0.3 944306	TP60 0.4-0.5 944307	TP60 0.9-1.0 944308
Date Sampled			08/04/2008	08/04/2008	08/04/2008	08/04/2008	08/04/2008
svoc							
Test/Reference	PQL	Unit					
Anthracene	0.5	mg/kg	<0.5	-	-	-	-
Benz(a)anthracene	0.5	mg/kg	<0.5	-	-	-	-
Benzo(a)pyrene	0.5	mg/kg	<0.5	-	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	<1	-	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	-	-	-	-
Chrysene	0.5	mg/kg	<0.5	-	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	<0.5	-	-	-	-
Fluoranthene	0.5	mg/kg	<0.5	-	-	-	-
Fluorene	0.5	mg/kg	<0.5	-	-	-	-
ndeno(123-cd)pyrene	0.5	mg/kg	<0.5	-	-	-	-
Naphthalene	0.5	mg/kg	<0.5	-	-	-	-
Phenanthrene	0.5	mg/kg	<0.5	-	-	-	-
Pyrene	0.5	mg/kg	<0.5	-	-	-	-
Sum of PAHs	0.5	mg/kg	<0.5	-	-	-	-
2-Fluorobiphenyl - Surrogate	-	%	86	-	-	-	-
o-Terphenyl-D14 - Surrogate	-	%	102	-	-	-	-
Anthracene-d10 - Surrogate	-	%	92	-	-	-	-
2000 TPH (C10 - C36) in Soil by GC C10-C14 Fraction	10	mg/kg	<10	_	_	_	
C15-C28 Fraction	20	mg/kg	<20	_	_	_	_
C29-C36 Fraction	20	mg/kg	75	_	_	_	_
	20	mg/kg	73	-	-	-	-
Metals Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS							
Arsenic	2	mg/kg	<2	<2	-	-	-
Cadmium	2	mg/kg	<2	<2	-	-	-
Chromium	2	mg/kg	29	31	-	-	-
Copper	2	mg/kg	16	16	-	-	-
Lead	2	mg/kg	12	13	-	-	-
Nickel	2	mg/kg	12	13	-	-	-
Zinc	2	mg/kg	22	24	-	-	-
Inorganics							
Test/Reference	PQL	Unit					
4000 pH in Soil							
<b>4000 pH in Soil</b> oH	0.1	pН	8.0	-	-	_	_
Miscellaneous	J. 1	P	5.0				
Miscellaneous Test/Reference	PQL	Unit					
. 331. (010101100	, QL	O I III					
5000 Moisture Content		0/	_	_			
% Moisture	1	%	5	5	-	-	-
Customer Sample ID			TP60 1.9-2.0	TP61 0-0.1	TP61 0.2-0.3	TP61 0.4-0.5	TP61 0.9-1.0
Amdel Sample Number Date Sampled			944309 08/04/2008	944310 08/04/2008	944311 08/04/2008	944312 08/04/2008	944313 08/04/2008
VOC Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&T Benzene	0.2	mg/kg	-	-	<0.2	-	-

First Reported: 17 April 2008 Date Printed: 18 April 2008 Amdel Ltd 1868 Dandenong Rd Clayton VIC Australia 3168 ABN: 30 008 127 802 Telephone: (03) 9538 2277 Facsimile: (03) 9538 2278

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Customer Sample ID Amdel Sample Number Date Sampled	_		TP60 1.9-2.0 944309 08/04/2008	TP61 0-0.1 944310 08/04/2008	TP61 0.2-0.3 944311 08/04/2008	TP61 0.4-0.5 944312 08/04/2008	TP61 0.9-1.0 944313 08/04/2008
VOC			00/04/2000	00/04/2000	00/04/2000	00/04/2000	00/04/2000
Test/Reference	PQL	Unit					
Ethylbenzene	1	mg/kg	-	-	<1	-	-
Meta- & Para- Xylene	2	mg/kg	-	-	<2	-	-
Ortho-Xylene	1	mg/kg	-	-	<1	-	-
Toluene	1	mg/kg	-	-	<1	-	-
Total Xylenes	3	mg/kg	-	-	<3	-	-
C6-C9 Fraction	5	mg/kg	-	-	<5	_	-
4-Bromofluorobenzene - Surrogate	-	%	-	-	94	-	-
SVOC Test/Reference	PQL	Unit					
		OTIIC					
2300 OC Pesticides in Soil by GC-E a-BHC	CD 0.5	mg/kg	-	-	<0.5	-	_
a-Chlordane	0.5	mg/kg	-	_	<0.5	-	-
a-Endosulfan	0.5	mg/kg	-	-	<0.5	-	-
Aldrin	0.5	mg/kg	-	-	<0.5	-	-
b-BHC	0.5	mg/kg	-	-	<0.5	-	_
b-Endosulfan	0.5	mg/kg	-	-	<0.5	-	-
d-BHC	0.5	mg/kg	-	_	<0.5	_	_
DDD	0.5	mg/kg	-	-	<0.5	-	-
DDE	0.5	mg/kg	-	-	<0.5	-	_
DDT	0.5	mg/kg	-	_	<0.5	_	_
Dieldrin	0.5	mg/kg	-	-	<0.5	-	_
Endosulfan sulfate	0.5	mg/kg	-	-	<0.5	-	_
Endrin	0.5	mg/kg	_	_	<0.5	_	_
Endrin Aldehyde	0.5	mg/kg	-	-	<0.5	-	_
g-BHC	0.5	mg/kg	_	-	<0.5	_	_
g-Chlordane	0.5	mg/kg	_	_	<0.5	_	_
Heptachlor	0.5	mg/kg	_	_	<0.5	_	_
Heptachlor epoxide	0.5	mg/kg	-	-	<0.5	-	_
Hexachlorobenzene (HCB)	0.5	mg/kg	-	_	<0.5	_	_
Methoxychlor	0.5	mg/kg	-	_	<0.5	_	_
Oxychlordane	0.5	mg/kg	-	-	<0.5	-	_
2.4.5.6-tetrachloro-m-xylene-SURROG	1	%	-	-	88	-	_
ATE							
2100 PAH in Soil by GC	0.5				-0.5		
Acenaphthene	0.5	mg/kg	-	-	<0.5	-	-
Acenaphthylene	0.5	mg/kg	-	-	<0.5	-	-
Anthracene	0.5	mg/kg	-	-	<0.5	-	-
Benz(a)anthracene	0.5	mg/kg	-	-	<0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	-	-	<0.5	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	<1	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	<0.5	-	-
Chrysene	0.5	mg/kg	-	-	<0.5	-	-
Dibenz(ah)anthracene	0.5	mg/kg	-	-	<0.5	-	-
Fluoranthene	0.5	mg/kg	-	-	<0.5	-	-
Fluorene	0.5	mg/kg	-	-	<0.5	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	-	-	<0.5	-	-
Naphthalene	0.5	mg/kg	-	-	<0.5	-	-
Phenanthrene	0.5	mg/kg	-	-	<0.5	-	-
Pyrene	0.5	mg/kg	-	-	<0.5	-	-
Sum of PAHs	0.5	mg/kg	-	-	<0.5	-	-



Customer Sample ID Amdel Sample Number Date Sampled			TP60 1.9-2.0 944309 08/04/2008	TP61 0-0.1 944310 08/04/2008	TP61 0.2-0.3 944311 08/04/2008	TP61 0.4-0.5 944312 08/04/2008	TP61 0.9-1.0 944313 08/04/2008
<b>SVOC</b> Test/Reference	PQL	Unit					
2-Fluorobiphenyl - Surrogate	-	%	-	-	83	-	-
p-Terphenyl-D14 - Surrogate	-	%	-	-	99	-	-
Anthracene-d10 - Surrogate	-	%	-	-	92	-	-
2000 TPH (C10 - C36) in Soil by G							
C10-C14 Fraction	10	mg/kg	-	-	<10	-	-
C15-C28 Fraction	20	mg/kg	-	-	<20	-	-
C29-C36 Fraction	20	mg/kg	-	-	<20	-	-
<b>Metals</b> Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/N	ıs						
Arsenic	2	mg/kg	-	-	2.5	-	-
Cadmium	2	mg/kg	-	-	<2	-	-
Chromium	2	mg/kg	-	-	30	-	-
Copper	2	mg/kg	-	-	15	-	-
Lead	2	mg/kg	-	-	11	-	-
Nickel	2	mg/kg	-	-	13	-	-
Zinc	2	mg/kg	-	-	17	-	-
Inorganics Test/Reference	PQL	Unit					
4000 pH in Soil	0.1	nU			9.3		
pH	0.1	рН	-	-	შ.პ	-	-
<b>Miscellaneous</b> Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	-	-	13	-	-

Customer Sample ID Amdel Sample Number Date Sampled			TP61 1.9-2.0 944314 08/04/2008	TP62 0-0.1 944315 08/04/2008	TP62 0.2-0.3 944316 08/04/2008	TP62 0.4-0.5 944317 08/04/2008	TP62 0.9-1.0 944318 08/04/2008
VOC Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&	.T						
Benzene	0.2	mg/kg	-	<0.2	-	-	-
Ethylbenzene	1	mg/kg	-	<1	-	-	-
Meta- & Para- Xylene	2	mg/kg	-	<2	-	-	-
Ortho-Xylene	1	mg/kg	-	<1	-	-	-
Toluene	1	mg/kg	-	<1	-	-	-
Total Xylenes	3	mg/kg	-	<3	-	-	-
C6-C9 Fraction	5	mg/kg	-	<5	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	-	103	-	-	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	ECD						
a-BHC	0.5	mg/kg	-	<0.5	-	-	-
a-Chlordane	0.5	mg/kg	-	<0.5	-	-	-
a-Endosulfan	0.5	mg/kg	-	<0.5	-	-	-



Customer Sample ID Amdel Sample Number			TP61 1.9-2.0 944314	TP62 0-0.1 944315	TP62 0.2-0.3 944316	TP62 0.4-0.5 944317	TP62 0.9-1.0 944318
Date Sampled			08/04/2008	08/04/2008	08/04/2008	08/04/2008	08/04/2008
SVOC Test/Reference	PQL	Unit					
Aldrin	0.5	mg/kg		<0.5	_	_	_
b-BHC			-	<0.5	_	_	
	0.5	mg/kg	-			-	-
b-Endosulfan	0.5	mg/kg	-	<0.5	-	-	-
d-BHC	0.5	mg/kg	-	<0.5	-	-	-
DDD	0.5	mg/kg	-	<0.5	-	-	-
DDE	0.5	mg/kg	-	<0.5	-	-	-
DDT	0.5	mg/kg	-	<0.5	-	-	-
Dieldrin	0.5	mg/kg	-	<0.5	-	-	-
Endosulfan sulfate	0.5	mg/kg	-	<0.5	-	-	-
Endrin	0.5	mg/kg	-	<0.5	-	-	-
Endrin Aldehyde	0.5	mg/kg	-	<0.5	-	-	-
g-BHC	0.5	mg/kg	-	<0.5	-	-	-
g-Chlordane	0.5	mg/kg	-	<0.5	-	-	-
Heptachlor	0.5	mg/kg	-	<0.5	-	-	-
Heptachlor epoxide	0.5	mg/kg	-	<0.5	-	-	-
Hexachlorobenzene (HCB)	0.5	mg/kg	-	<0.5	-	-	_
Methoxychlor	0.5	mg/kg	-	<0.5	_	_	_
Oxychlordane	0.5	mg/kg	_	<0.5	_	_	_
2.4.5.6-tetrachloro-m-xylene-SURROG	1	///g///g %		92			
ATE 2100 PAH in Soil by GC	'	76	-	92	-	-	-
Acenaphthene	0.5	mg/kg	_	<0.5	_	_	_
Acenaphthylene	0.5	mg/kg	_	<0.5	_	_	_
Anthracene	0.5	mg/kg		<0.5	_	_	_
Benz(a)anthracene	0.5	mg/kg	-	<0.5		_	_
• •			-		-	-	-
Benzo(a)pyrene	0.5	mg/kg	-	<0.5	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	<1	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	<0.5	-	-	-
Chrysene	0.5	mg/kg	-	<0.5	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	-	<0.5	-	-	-
Fluoranthene	0.5	mg/kg	-	<0.5	-	-	-
Fluorene	0.5	mg/kg	-	<0.5	-	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	-	<0.5	-	-	-
Naphthalene	0.5	mg/kg	-	<0.5	-	-	-
Phenanthrene	0.5	mg/kg	-	<0.5	-	-	-
Pyrene	0.5	mg/kg	-	<0.5	-	-	-
Sum of PAHs	0.5	mg/kg	-	<0.5	-	-	-
2-Fluorobiphenyl - Surrogate	-	%	-	83	-	-	-
p-Terphenyl-D14 - Surrogate	-	%	-	99	-	-	-
Anthracene-d10 - Surrogate	_	%	-	92	-	-	-
2000 TPH (C10 - C36) in Soil by GC				-			
C10-C14 Fraction	10	mg/kg	-	<10	-	-	-
C15-C28 Fraction	20	mg/kg	-	<20	-	-	-
C29-C36 Fraction	20	mg/kg	-	44	-	-	-
Metals		5 5					
Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS							
Arsenic	2	mg/kg	-	2.7	-	-	-
Cadmium	2	mg/kg	-	<2	-	-	-
Chromium	2	mg/kg	-	29	-	-	-



Customer Sample ID Amdel Sample Number Date Sampled Metals			TP61 1.9-2.0 944314 08/04/2008	TP62 0-0.1 944315 08/04/2008	TP62 0.2-0.3 944316 08/04/2008	TP62 0.4-0.5 944317 08/04/2008	TP62 0.9-1.0 944318 08/04/2008
Test/Reference	PQL	Unit					
Copper	2	mg/kg	-	14	-	-	-
Lead	2	mg/kg	-	14	-	-	-
Nickel	2	mg/kg	-	11	-	-	-
Zinc	2	mg/kg	-	22	-	-	-
Inorganics							
Test/Reference	PQL	Unit					
4000 pH in Soil	0.1	pН	-	7.5	-	-	-
Miscellaneous Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	-	4	-	-	-

Customer Sample ID Amdel Sample Number			TP62 1.9-2.0 944319	TP63 0-0.1 944320	TP63 0.2-0.3 944321	TP63 0.4-0.5 944322	QC19A 944323
Date Sampled			08/04/2008	08/04/2008	08/04/2008	08/04/2008	08/04/2008
voc							
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&	T.						
Benzene	0.2	mg/kg	-	-	<0.2	-	-
Ethylbenzene	1	mg/kg	-	-	<1	-	-
Meta- & Para- Xylene	2	mg/kg	-	-	<2	-	-
Ortho-Xylene	1	mg/kg	-	-	<1	-	-
Toluene	1	mg/kg	-	-	<1	-	-
Total Xylenes	3	mg/kg	-	-	<3	-	-
C6-C9 Fraction	5	mg/kg	-	-	<5	-	-
4-Bromofluorobenzene - Surrogate	-	%	-	-	94	-	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	ECD						
a-BHC	0.5	mg/kg	-	-	<0.5	-	-
a-Chlordane	0.5	mg/kg	-	-	<0.5	-	-
a-Endosulfan	0.5	mg/kg	-	-	<0.5	-	-
Aldrin	0.5	mg/kg	-	-	<0.5	-	-
b-BHC	0.5	mg/kg	-	-	<0.5	-	-
b-Endosulfan	0.5	mg/kg	-	-	<0.5	-	-
d-BHC	0.5	mg/kg	-	-	<0.5	-	-
DDD	0.5	mg/kg	-	-	<0.5	-	-
DDE	0.5	mg/kg	-	-	<0.5	-	-
DDT	0.5	mg/kg	-	-	<0.5	-	-
Dieldrin	0.5	mg/kg	-	-	<0.5	-	-
Endosulfan sulfate	0.5	mg/kg	-	-	<0.5	-	-
Endrin	0.5	mg/kg	-	-	<0.5	-	-
Endrin Aldehyde	0.5	mg/kg	-	-	<0.5	-	-
g-BHC	0.5	mg/kg	-	-	<0.5	-	-
g-Chlordane	0.5	mg/kg	_	-	<0.5	_	_



Customer Sample ID Amdel Sample Number Date Sampled			TP62 1.9-2.0 944319 08/04/2008	TP63 0-0.1 944320 08/04/2008	TP63 0.2-0.3 944321 08/04/2008	TP63 0.4-0.5 944322 08/04/2008	QC19A 944323 08/04/2008
SVOC Test/Reference	PQL	Unit					
Heptachlor	0.5	mg/kg	-	-	<0.5	_	-
Heptachlor epoxide	0.5	mg/kg	-	-	<0.5	_	-
Hexachlorobenzene (HCB)	0.5	mg/kg	-	-	<0.5	-	-
Methoxychlor	0.5	mg/kg	-	-	<0.5	-	-
Oxychlordane	0.5	mg/kg	-	-	<0.5	-	-
2.4.5.6-tetrachloro-m-xylene-SURROG ATE	1	%	-	-	90	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	-	<0.5	-	-
Acenaphthylene	0.5	mg/kg	-	-	<0.5	-	-
Anthracene	0.5	mg/kg	-	-	<0.5	-	-
Benz(a)anthracene	0.5	mg/kg	-	-	<0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	-	-	<0.5	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	<1	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	<0.5	-	-
Chrysene	0.5	mg/kg	-	-	<0.5	-	-
Dibenz(ah)anthracene	0.5	mg/kg	-	-	<0.5	-	-
Fluoranthene	0.5	mg/kg	-	-	<0.5	-	-
Fluorene	0.5	mg/kg	-	-	<0.5	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	-	-	<0.5	-	-
Naphthalene	0.5	mg/kg	-	-	<0.5	-	-
Phenanthrene	0.5	mg/kg	-	-	<0.5	-	-
Pyrene	0.5	mg/kg	-	-	<0.5	-	-
Sum of PAHs	0.5	mg/kg	-	-	<0.5	-	-
2-Fluorobiphenyl - Surrogate	-	%	-	-	82	-	-
p-Terphenyl-D14 - Surrogate	-	%	-	-	97	-	-
Anthracene-d10 - Surrogate	-	%	-	-	90	-	-
<b>2000 TPH (C10 - C36) in Soil by GC</b> C10-C14 Fraction	10	mg/kg	-	-	<10	-	-
C15-C28 Fraction	20	mg/kg	-	-	<20	-	-
C29-C36 Fraction	20	mg/kg	-	-	<20	-	-
Metals							
Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS		,,			•		
Arsenic	2	mg/kg	-	-	<2	-	-
Cadmium	2	mg/kg	-	-	<2	-	-
Conner	2	mg/kg	-	-	15	-	-
Copper	2	mg/kg	-	-	6.2	-	-
Lead	2	mg/kg	-	-	5.8	-	-
Nickel	2	mg/kg	-	-	5.5	-	-
Zinc	2	mg/kg	-	-	8.7	-	-
Inorganics Test/Reference	PQL	Unit					
<b>4000 pH in Soil</b> pH	0.1	рН	-	-	7.5	-	-
<b>Miscellaneous</b> Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	-	-	4	-	-



Customer Sample ID Amdel Sample Number Date Sampled			TP63 0.9-1.0 944324 08/04/2008	TP63 1.9-2.0 944325 08/04/2008	TP64 0-0.1 944326 08/04/2008	TP64 0.2-0.3 944332 08/04/2008	TP64 0.4-0.5 944333 08/04/2008
voc							
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&T							
Benzene	0.2	mg/kg	-	-	<0.2	-	-
Ethylbenzene	1	mg/kg	-	-	<1	-	-
Meta- & Para- Xylene	2	mg/kg	-	-	<2	-	-
Ortho-Xylene	1	mg/kg	-	-	<1	-	-
Toluene	1	mg/kg	-	-	<1	-	-
Total Xylenes	3	mg/kg	-	-	<3	-	-
C6-C9 Fraction	5	mg/kg	-	-	<5	-	-
4-Bromofluorobenzene - Surrogate	-	%	-	-	74	-	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-E	CD						
a-BHC	0.5	mg/kg	-	-	<0.5	-	-
a-Chlordane	0.5	mg/kg	-	-	<0.5	-	-
a-Endosulfan	0.5	mg/kg	-	-	<0.5	-	-
Aldrin	0.5	mg/kg	-	-	<0.5	-	-
o-BHC	0.5	mg/kg	-	-	<0.5	-	-
o-Endosulfan	0.5	mg/kg	-	-	<0.5	-	-
d-BHC	0.5	mg/kg	-	-	<0.5	-	-
ODD	0.5	mg/kg	-	-	<0.5	-	-
DDE	0.5	mg/kg	-	-	<0.5	-	-
ODT	0.5	mg/kg	-	-	<0.5	-	-
Dieldrin	0.5	mg/kg	-	-	<0.5	-	-
Endosulfan sulfate	0.5	mg/kg	-	-	<0.5	-	_
Endrin	0.5	mg/kg	-	-	<0.5	-	_
Endrin Aldehyde	0.5	mg/kg	-	_	<0.5	-	_
g-BHC	0.5	mg/kg	-	_	<0.5	-	_
g-Chlordane	0.5	mg/kg	-	_	<0.5	_	_
Heptachlor	0.5	mg/kg	_	_	<0.5	_	_
Heptachlor epoxide	0.5	mg/kg	_	_	<0.5	_	_
Hexachlorobenzene (HCB)	0.5	mg/kg	_	_	<0.5	_	_
Methoxychlor	0.5	mg/kg	_	_	<0.5	_	_
Oxychlordane	0.5	mg/kg	_	_	<0.5	_	
2.4.5.6-tetrachloro-m-xylene-SURROG	1	//////////////////////////////////////	-	-	92	-	-
ATE	'	70	-	-	92	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	-	<0.5	-	-
Acenaphthylene	0.5	mg/kg	-	-	<0.5	-	-
Anthracene	0.5	mg/kg	-	-	<0.5	-	-
Benz(a)anthracene	0.5	mg/kg	-	-	<0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	-	-	<0.5	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	<1	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	<0.5	-	-
Chrysene	0.5	mg/kg	-	-	<0.5	-	-
Dibenz(ah)anthracene	0.5	mg/kg	-	-	<0.5	-	-
Fluoranthene	0.5	mg/kg	-	-	<0.5	-	-
Fluorene	0.5	mg/kg	-	-	<0.5	-	-
ndeno(123-cd)pyrene	0.5	mg/kg	-	-	<0.5	_	_



Customer Sample ID Amdel Sample Number Date Sampled			TP63 0.9-1.0 944324 08/04/2008	TP63 1.9-2.0 944325 08/04/2008	TP64 0-0.1 944326 08/04/2008	TP64 0.2-0.3 944332 08/04/2008	TP64 0.4-0.5 944333 08/04/2008
<b>SVOC</b> Test/Reference	PQL	Unit					
Naphthalene	0.5	mg/kg	-	-	<0.5	-	-
Phenanthrene	0.5	mg/kg	-	-	<0.5	-	-
Pyrene	0.5	mg/kg	-	-	<0.5	-	-
Sum of PAHs	0.5	mg/kg	-	-	<0.5	-	-
2-Fluorobiphenyl - Surrogate	-	%	-	-	84	-	-
p-Terphenyl-D14 - Surrogate	-	%	-	-	100	-	-
Anthracene-d10 - Surrogate	-	%	-	-	94	-	-
2000 TPH (C10 - C36) in Soil by G0							
C10-C14 Fraction	10	mg/kg	-	-	<10	-	-
C15-C28 Fraction	20	mg/kg	-	-	<20	-	-
C29-C36 Fraction	20	mg/kg	-	-	<20	-	-
Metals Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/M	ıs						
Arsenic	2	mg/kg	-	-	3.2	-	-
Cadmium	2	mg/kg	-	-	<2	-	-
Chromium	2	mg/kg	-	-	49	-	-
Copper	2	mg/kg	-	-	23	-	-
Lead	2	mg/kg	-	-	9.3	-	-
Nickel	2	mg/kg	-	-	19	-	-
Zinc	2	mg/kg	-	-	32	-	-
Inorganics							
Test/Reference	PQL	Unit					
4000 pH in Soil							
рН	0.1	pН	-	-	8.4	-	-
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content							
% Moisture	1	%	-	-	17	-	-

Customer Sample ID			TP64 0.9-1.0	QC20A	TP64 1.9-2.0	TP65 0-0.1	TP65 0.2-0.3
Amdel Sample Number			944335 08/04/2008	944337 08/04/2008	944338 08/04/2008	944339 08/04/2008	944340 08/04/2008
Date Sampled VOC			00/04/2000	06/04/2006	06/04/2006	06/04/2006	00/04/2006
Test/Reference	PQL	Unit					
1100 MAH(BTEX & C6-C9) in Soil	P&T						
Benzene	0.2	mg/kg	-	-	-	<0.2	-
Cumene	0.5	mg/kg	-	-	-	<0.5	-
Ethylbenzene	1	mg/kg	-	-	-	<1	-
Meta- & Para- Xylene	2	mg/kg	-	-	-	<2	-
Ortho-Xylene	1	mg/kg	-	-	-	<1	-
Styrene	0.5	mg/kg	-	-	-	<0.5	-
Toluene	1	mg/kg	-	-	-	<1	-
Total Xylenes	3	mg/kg	-	-	-	<3	-
C6-C9 Fraction	5	mg/kg	-	-	-	<5	-
4-Bromofluorobenzene - Surrogate	-	%	-	-	-	91	-
svoc							

30 008 127 802 Telephone: (03) 9538 2277 Facsimile: (03) 9538 2278 Final Report Number: 295554



Customer Sample ID Amdel Sample Number			TP64 0.9-1.0 944335	QC20A 944337	TP64 1.9-2.0 944338	TP65 0-0.1 944339	TP65 0.2-0.3 944340
Date Sampled			08/04/2008	08/04/2008	08/04/2008	08/04/2008	08/04/2008
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-E	CD						
a-BHC	0.5	mg/kg	-	-	-	<0.5	-
a-Chlordane	0.5	mg/kg	-	-	-	<0.5	-
a-Endosulfan	0.5	mg/kg	-	-	-	<0.5	_
Aldrin	0.5	mg/kg	-	-	-	<0.5	-
o-BHC	0.5	mg/kg	-	-	-	<0.5	-
o-Endosulfan	0.5	mg/kg	-	-	-	<0.5	-
d-BHC	0.5	mg/kg	-	-	-	<0.5	-
ODD	0.5	mg/kg	-	-	-	<0.5	-
DDE	0.5	mg/kg	-	-	-	<0.5	_
ODT	0.5	mg/kg	-	-	-	<0.5	_
Dieldrin	0.5	mg/kg	-	-	-	<0.5	_
Endosulfan sulfate	0.5	mg/kg	-	-	-	<0.5	-
Endrin	0.5	mg/kg	-	-	-	<0.5	_
Endrin Aldehyde	0.5	mg/kg	-	-	-	<0.5	-
g-BHC	0.5	mg/kg	-	-	-	<0.5	_
g-Chlordane	0.5	mg/kg	-	_	_	<0.5	_
Heptachlor	0.5	mg/kg	-	_	_	<0.5	_
Heptachlor epoxide	0.5	mg/kg	_	_	_	<0.5	_
Hexachlorobenzene (HCB)	0.5	mg/kg	-	_	_	<0.5	_
Methoxychlor	0.5	mg/kg	_	_	_	<0.5	_
Dxychlordane	0.5	mg/kg	-	_	_	<0.5	_
2.4.5.6-tetrachloro-m-xylene-SURROG	1	%	-	-	-	88	-
ATE							
2100 PAH in Soil by GC Acenaphthene	0.5	mg/kg		_	_	<0.5	_
Acenaphthylene	0.5	mg/kg	_	_	_	<0.5	_
Anthracene	0.5	mg/kg		_	_	<0.5	_
Benz(a)anthracene	0.5	mg/kg mg/kg	_	_	_	<0.5	_
Benzo(a)pyrene	0.5	mg/kg	-	_	-	<0.5	_
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	-	<1	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	_	-	<0.5	_
	0.5		-	-	-	<0.5	-
Chrysene		mg/kg	-	-	-		-
Dibenz(ah)anthracene Fluoranthene	0.5 0.5	mg/kg mg/kg	-	-	-	<0.5 <0.5	-
Fluorene			-	-	-		-
	0.5	mg/kg	-	-	-	<0.5 <0.5	-
ndeno(123-cd)pyrene	0.5	mg/kg	-	-	-		-
Naphthalene	0.5	mg/kg	-	-	-	<0.5	-
Phenanthrene	0.5	mg/kg	-	-	-	<0.5	-
Pyrene	0.5	mg/kg	-	-	-	<0.5	-
Sum of PAHs	0.5	mg/kg	-	-	-	<0.5	-
2-Fluorobiphenyl - Surrogate	-	%	-	-	-	84	-
o-Terphenyl-D14 - Surrogate	-	%	-	-	-	96	-
Anthracene-d10 - Surrogate	-	%	-	-	-	90	-
2600 PCBs in Soil by GC	0.5	malka				<0.F	
Aroclor 1016DB	0.5	mg/kg	-	-	-	<0.5	-
Aroclor 1221DB	0.5	mg/kg	-	-	-	<0.5	-
Aroclor 1232 and 1242 as totalDB	1	mg/kg	-	-	-	<1	-
Aroclor 1248 and 1254 as totalDB	1	mg/kg	-	-	-	<1	-
Aroclor 1260DB	0.5	mg/kg	-	-	-	<0.5	-



Customer Sample ID Amdel Sample Number			TP64 0.9-1.0 944335 08/04/2008	QC20A 944337 08/04/2008	TP64 1.9-2.0 944338	TP65 0-0.1 944339	TP65 0.2-0.3 944340 08/04/2008
Date Sampled SVOC			08/04/2008	08/04/2008	08/04/2008	08/04/2008	08/04/2008
Test/Reference	PQL	Unit					
Total Polychlorinated biphenylsDB	1	mg/kg	-	-	-	<1	-
Decachlorobiphenyl - PCB surrogate	1	%	-	-	-	80	-
2000 TPH (C10 - C36) in Soil by GC							
C10-C14 Fraction	10	mg/kg	-	-	-	<10	-
C15-C28 Fraction	20	mg/kg	-	-	-	<20	-
C29-C36 Fraction	20	mg/kg	-	-	-	22	-
Metals							
Test/Reference	PQL	Unit					
3400 Mercury in Soil by FIMS							
Mercury	0.01	mg/kg	-	-	-	0.01	-
3100 Total Metals in Soil By ICP/MS							
Antimony	2	mg/kg	-	-	-	<2	-
Arsenic	2	mg/kg	-	-	-	2.2	-
Barium	2	mg/kg	-	-	-	67	-
Beryllium	2	mg/kg	-	-	-	<2	-
Boron	2	mg/kg	-	-	-	21	-
Cadmium	2	mg/kg	-	-	-	<2	-
Chromium	2	mg/kg	-	-	-	31	-
Cobalt	2	mg/kg	-	-	-	9.7	-
Copper	2	mg/kg	-	-	-	17	-
ead	2	mg/kg	-	-	-	12	-
Manganese	2	mg/kg	-	-	-	380	-
Molybdenum	2	mg/kg	-	-	-	<2	-
lickel	2	mg/kg	-	-	-	13	-
Selenium	2	mg/kg	-	-	-	<2	-
- Tin	2	mg/kg	-	-	-	<2	-
/anadium	2	mg/kg	-	-	-	44	-
Zinc	2	mg/kg	-	-	-	23	-
norganics							
Test/Reference	PQL	Unit					
1300 Anions in Soil by IC Fluoride (Soluble)	2	mg/kg	-	-	-	<2	-
1270 Total Cyanide in Soil Colourme ⁻otal Cyanide	<b>etric</b> 0.1	mg/kg	_		_	0.5	_
1000 pH in Soil	0.1	mg/ng				0.0	
<b>нооо рн III зон</b> эн	0.1	рН	-	-	-	7.4	-
1850 Total Phenolics in Soil by SFA Fotal Phenolics	0.1	mg/kg	-	-	-	0.1	-
<b>Miscellaneous</b> Fest/Reference	PQL	Unit					
5000 Moisture Content							
% Moisture	1	%	-	-	-	3	-
Customor Sample ID			TP65 0 4-0 5	TP65 0 9-1 0	TD65 1 Q_2 0	TP66 0-0 1	OC21A

Customer Sample ID			TP65 0.4-0.5	TP65 0.9-1.0	TP65 1.9-2.0	TP66 0-0.1	QC21A
Amdel Sample Number			944341	944342	944343	944344	944345
Date Sampled			08/04/2008	08/04/2008	08/04/2008	08/04/2008	08/04/2008
voc							
Test/Reference	PQL	Unit					



Customer Sample ID Amdel Sample Number			TP65 0.4-0.5 944341	TP65 0.9-1.0 944342	TP65 1.9-2.0 944343	TP66 0-0.1 944344	QC21A 944345
Date Sampled			08/04/2008	08/04/2008	08/04/2008	08/04/2008	08/04/2008
VOC	DOL	1.124					
Test/Reference	PQL	Unit					
I100 BTEX &(C6-C9) in Soil by P&T							
Benzene	0.2	mg/kg	-	-	-	<0.2	-
Ethylbenzene	1	mg/kg	-	-	-	<1	-
Meta- & Para- Xylene	2	mg/kg	-	-	-	<2	-
Ortho-Xylene	1	mg/kg	-	-	-	<1	-
Toluene	1	mg/kg	-	-	-	<1	-
Total Xylenes	3	mg/kg	-	-	-	<3	-
C6-C9 Fraction	5	mg/kg	-	-	-	<5	-
4-Bromofluorobenzene - Surrogate	-	%	-	-	-	98	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-E	CD						
a-BHC	0.5	mg/kg	-	-	-	<0.5	-
a-Chlordane	0.5	mg/kg	-	-	-	<0.5	-
a-Endosulfan	0.5	mg/kg	-	-	-	<0.5	-
Aldrin	0.5	mg/kg	-	-	-	<0.5	_
o-BHC	0.5	mg/kg	_	_	_	<0.5	_
o-Endosulfan	0.5	mg/kg	_	_	_	<0.5	_
d-BHC	0.5	mg/kg	_	_	_	<0.5	_
DDD	0.5	mg/kg mg/kg	_	_	_	<0.5	_
DDE	0.5	mg/kg mg/kg	-	_	_	<0.5	-
DDT	0.5		-	-	-	<0.5	-
		mg/kg	-		-		-
Dieldrin	0.5	mg/kg	-	-	-	<0.5	-
Endosulfan sulfate	0.5	mg/kg	-	-	-	<0.5	-
Endrin	0.5	mg/kg	-	-	-	<0.5	-
Endrin Aldehyde	0.5	mg/kg	-	-	-	<0.5	-
g-BHC	0.5	mg/kg	-	-	-	<0.5	-
g-Chlordane	0.5	mg/kg	-	-	-	<0.5	-
Heptachlor	0.5	mg/kg	-	-	-	<0.5	-
Heptachlor epoxide	0.5	mg/kg	-	-	-	<0.5	-
Hexachlorobenzene (HCB)	0.5	mg/kg	-	-	-	<0.5	-
Methoxychlor	0.5	mg/kg	-	-	-	<0.5	-
Oxychlordane	0.5	mg/kg	-	-	-	<0.5	-
2.4.5.6-tetrachloro-m-xylene-SURROG ATE	1	%	-	-	-	94	-
2100 PAH in Soil by GC	<u></u>					.0.5	
Acenaphthene	0.5	mg/kg	-	-	-	<0.5	-
Acenaphthylene	0.5	mg/kg	-	-	-	<0.5	-
Anthracene	0.5	mg/kg	-	-	-	<0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	-	<0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	-	<0.5	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	-	<1	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	<0.5	-
Chrysene	0.5	mg/kg	-	-	-	<0.5	-
Dibenz(ah)anthracene	0.5	mg/kg	-	-	-	<0.5	-
Fluoranthene	0.5	mg/kg	-	-	-	<0.5	-
Fluorene	0.5	mg/kg	-	-	-	<0.5	-
ndeno(123-cd)pyrene	0.5	mg/kg	-	-	-	<0.5	-
Naphthalene	0.5	mg/kg	-	-	-	<0.5	-
Phenanthrene	0.5	mg/kg	-	-	_	<0.5	_



Customer Sample ID Amdel Sample Number Date Sampled SVOC			TP65 0.4-0.5 944341 08/04/2008	TP65 0.9-1.0 944342 08/04/2008	TP65 1.9-2.0 944343 08/04/2008	TP66 0-0.1 944344 08/04/2008	QC21A 944345 08/04/2008
Test/Reference	PQL	Unit					
Pyrene	0.5	mg/kg	-	-	-	<0.5	-
Sum of PAHs	0.5	mg/kg	-	-	-	<0.5	-
2-Fluorobiphenyl - Surrogate	-	%	-	-	-	88	-
p-Terphenyl-D14 - Surrogate	-	%	-	-	-	104	-
Anthracene-d10 - Surrogate	-	%	-	-	-	97	-
2000 TPH (C10 - C36) in Soil by (	GC						
C10-C14 Fraction	10	mg/kg	-	-	-	<10	-
C15-C28 Fraction	20	mg/kg	-	-	-	<20	-
C29-C36 Fraction	20	mg/kg	-	-	-	<20	-
Metals							
Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP	MS						
Arsenic	2	mg/kg	-	-	-	2.2	-
Cadmium	2	mg/kg	-	-	-	<2	-
Chromium	2	mg/kg	-	-	-	36	-
Copper	2	mg/kg	-	-	-	20	-
Lead	2	mg/kg	-	-	-	12	-
Nickel	2	mg/kg	-	-	-	15	-
Zinc	2	mg/kg	-	-	-	20	-
Inorganics							
Test/Reference	PQL	Unit					
4000 pH in Soil							
рН	0.1	рН	-	-	-	7.1	-
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content							
% Moisture	1	%	-	-	-	3	-

Customer Sample ID Amdel Sample Number Date Sampled VOC	DOL	11:24	TP67 0.2-0.3 944351 08/04/2008	TP67 0.4-0.5 944352 08/04/2008	TP67 0.9-1.0 944353 08/04/2008	TP67 1.9-2.0 944354 08/04/2008	TP68 0-0.1 944355 08/04/2008
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&	T						
Benzene	0.2	mg/kg	<0.2	-	-	-	-
Ethylbenzene	1	mg/kg	<1	-	-	-	-
Meta- & Para- Xylene	2	mg/kg	<2	-	-	-	-
Ortho-Xylene	1	mg/kg	<1	-	-	-	-
Toluene	1	mg/kg	<1	-	-	-	-
Total Xylenes	3	mg/kg	<3	-	-	-	-
C6-C9 Fraction	5	mg/kg	<5	-	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	86	-	-	-	-
1100 MAH(BTEX & C6-C9) in Soil I	P&T						
Benzene	0.2	mg/kg	-	-	-	-	<0.2
Cumene	0.5	mg/kg	-	-	-	-	<0.5
Ethylbenzene	1	mg/kg	-	-	-	-	<1
Meta- & Para- Xylene	2	mg/kg	-	-	-	-	<2



Customer Sample ID Amdel Sample Number Date Sampled	_	_	TP67 0.2-0.3 944351 08/04/2008	TP67 0.4-0.5 944352 08/04/2008	TP67 0.9-1.0 944353 08/04/2008	TP67 1.9-2.0 944354 08/04/2008	TP68 0-0.1 944355 08/04/2008
voc							
Test/Reference	PQL	Unit					
Ortho-Xylene	1	mg/kg	-	-	-	-	<1
Styrene	0.5	mg/kg	-	-	-	-	<0.5
Toluene	1	mg/kg	-	-	-	-	<1
Total Xylenes	3	mg/kg	-	-	-	-	<3
C6-C9 Fraction	5	mg/kg	-	-	-	-	<5
4-Bromofluorobenzene - Surrogate	_	%	-	-	-	-	107
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-E	:CD						
a-BHC	0.5	mg/kg	<0.5	-	-	-	<0.5
a-Chlordane	0.5	mg/kg	<0.5	-	-	-	<0.5
a-Endosulfan	0.5	mg/kg	<0.5	-	-	-	<0.5
Aldrin	0.5	mg/kg	<0.5	-	-	-	<0.5
b-BHC	0.5	mg/kg	<0.5	-	-	-	<0.5
b-Endosulfan	0.5	mg/kg	<0.5	-	-	-	<0.5
d-BHC	0.5	mg/kg	<0.5	-	-	-	<0.5
ODD	0.5	mg/kg	<0.5	-	-	-	<0.5
DDE	0.5	mg/kg	<0.5	-	-	-	<0.5
ODT	0.5	mg/kg	<0.5	-	-	-	<0.5
Dieldrin	0.5	mg/kg	<0.5	-	-	-	<0.5
Endosulfan sulfate	0.5	mg/kg	<0.5	-	-	-	<0.5
Endrin	0.5	mg/kg	<0.5	-	-	-	<0.5
Endrin Aldehyde	0.5	mg/kg	<0.5	-	-	-	<0.5
g-BHC	0.5	mg/kg	<0.5	-	-	-	<0.5
g-Chlordane	0.5	mg/kg	<0.5	-	-	-	<0.5
- Heptachlor	0.5	mg/kg	<0.5	-	-	-	<0.5
Heptachlor epoxide	0.5	mg/kg	<0.5	-	-	-	<0.5
Hexachlorobenzene (HCB)	0.5	mg/kg	<0.5	-	-	-	<0.5
Methoxychlor	0.5	mg/kg	<0.5	-	-	-	<0.5
Oxychlordane	0.5	mg/kg	<0.5	-	-	-	<0.5
2.4.5.6-tetrachloro-m-xylene-SURROG	1	%	88	-	-	-	90
ATE							
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	<0.5	-	-	-	<0.5
Acenaphthylene	0.5	mg/kg	<0.5	-	-	-	<0.5
Anthracene	0.5	mg/kg	<0.5	-	-	-	<0.5
Benz(a)anthracene	0.5	mg/kg	<0.5	-	-	-	<0.5
Benzo(a)pyrene	0.5	mg/kg	<0.5	-	-	-	<0.5
Benzo(b)&(k)fluoranthene	1	mg/kg	<1	-	-	-	<1
Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	-	-	-	<0.5
Chrysene	0.5	mg/kg	<0.5	-	-	-	<0.5
Dibenz(ah)anthracene	0.5	mg/kg	<0.5	-	-	-	<0.5
Fluoranthene 	0.5	mg/kg	<0.5	-	-	-	<0.5
Fluorene	0.5	mg/kg	<0.5	-	-	-	<0.5
ndeno(123-cd)pyrene	0.5	mg/kg	<0.5	-	-	-	<0.5
Naphthalene	0.5	mg/kg	<0.5	-	-	-	<0.5
Phenanthrene	0.5	mg/kg	<0.5	-	-	-	<0.5
Pyrene	0.5	mg/kg	<0.5	-	-	-	<0.5
Sum of PAHs	0.5	mg/kg	<0.5	-	-	-	<0.5
2-Fluorobiphenyl - Surrogate	-	%	82	-	-	-	88



Customer Sample ID Amdel Sample Number Date Sampled			TP67 0.2-0.3 944351 08/04/2008	TP67 0.4-0.5 944352 08/04/2008	TP67 0.9-1.0 944353 08/04/2008	TP67 1.9-2.0 944354 08/04/2008	TP68 0-0.1 944355 08/04/2008
SVOC	DOL	1.124					
Test/Reference	PQL	Unit					
p-Terphenyl-D14 - Surrogate	-	%	94	-	-	-	100
Anthracene-d10 - Surrogate	-	%	89	-	-	-	92
2600 PCBs in Soil by GC							
Aroclor 1016DB	0.5	mg/kg	-	-	-	-	<0.5
Aroclor 1221DB	0.5	mg/kg	-	-	-	-	<0.5
Aroclor 1232 and 1242 as totalDB	1	mg/kg	-	-	-	-	<1
Aroclor 1248 and 1254 as totalDB	1	mg/kg	-	-	-	-	<1
Aroclor 1260DB	0.5	mg/kg	-	-	-	-	<0.5
Total Polychlorinated biphenylsDB	1	mg/kg	-	-	-	-	<1
Decachlorobiphenyl - PCB surrogate	1	%	-	-	-	-	86
2000 TPH (C10 - C36) in Soil by GC							
C10-C14 Fraction	10	mg/kg	<10	-	-	-	<10
C15-C28 Fraction	20	mg/kg	<20	-	-	-	<20
C29-C36 Fraction	20	mg/kg	<20	-	-	-	<20
Metals							
Test/Reference	PQL	Unit					
3400 Mercury in Soil by FIMS Mercury	0.01	mg/kg	-	-	-	-	<0.01
3100 Total Metals in Soil By ICP/MS	S						
Antimony	2	mg/kg	-	-	-	-	<2
Arsenic	2	mg/kg	<2	-	-	-	<2
Barium	2	mg/kg	-	-	-	-	11
Beryllium	2	mg/kg	-	-	-	-	<2
Boron	2	mg/kg	-	-	-	-	5.7
Cadmium	2	mg/kg	<2	-	-	-	<2
Chromium	2	mg/kg	32	-	-	-	8.9
Cobalt	2	mg/kg	-	-	-	-	<2
Copper	2	mg/kg	19	-	-	_	5.1
Lead	2	mg/kg	9.3	-	_	_	2.5
Manganese	2	mg/kg	-	-	-	-	37
Molybdenum	2	mg/kg	_	_	_	_	<2
Nickel	2	mg/kg	17	_	_	_	2.9
Selenium	2	mg/kg	-	_	_	_	<2
Tin	2	mg/kg	_	_	_	_	<2
Vanadium	2	mg/kg	_	_	_	_	11
Zinc	2	mg/kg	- 19	_	_	_	4.6
	2	mg/ng	19				7.0
Inorganics Test/Reference	PQL	Unit					
4300 Anions in Soil by IC							
Fluoride (Soluble)	2	mg/kg	-	-	-	-	6
<b>4270 Total Cyanide in Soil Colourn</b> Total Cyanide	<b>netric</b> 0.1	mg/kg	-	-	-	-	0.1
4000 pH in Soil							
pH	0.1	pН	8.6	-	-	-	8.3
<b>4850 Total Phenolics in Soil by SF</b> Total Phenolics	<b>A</b> 0.1	mg/kg	-	-	-	-	<0.1
<b>Miscellaneous</b> Test/Reference	PQL	Unit					



Customer Sample ID			TP67 0.2-0.3	TP67 0.4-0.5	TP67 0.9-1.0	TP67 1.9-2.0	TP68 0-0.1
Amdel Sample Number			944351	944352	944353	944354	944355
Date Sampled			08/04/2008	08/04/2008	08/04/2008	08/04/2008	08/04/2008
Miscellaneous							
Test/Reference	PQL	Unit					
% Moisture	1	%	6	-	-	-	1

## Sample History

First Reported: 17 April 2008

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Extracted	Analysed
1100 BTEX &(C6-C9) in Soil by P&T	11/04/2008	17/04/2008
1100 MAH(BTEX & C6-C9) in Soil P&T	11/04/2008	17/04/2008
2000 TPH (C10 - C36) in Soil by GC	11/04/2008	14/04/2008
2100 PAH in Soil by GC	11/04/2008	15/04/2008
2300 OC Pesticides in Soil by GC-ECD	11/04/2008	15/04/2008
2600 PCBs in Soil by GC	11/04/2008	15/04/2008
3100 Total Metals in Soil By ICP/MS	17/04/2008	18/04/2008
3400 Mercury in Soil by FIMS	17/04/2008	18/04/2008
4000 pH in Soil		14/04/2008
4270 Total Cyanide in Soil Colourmetric		16/04/2008
4300 Anions in Soil by IC	11/04/2008	14/04/2008
4850 Total Phenolics in Soil by SFA		16/04/2008
5000 Moisture Content		11/04/2008

Date Printed: 18 April 2008 ABN: 30 008 127 802 Telephone: (03) 9538 2277 Facsimile: (03) 9538 2278 Final Report Number: 295554



## **Amdel Internal Quality Control Review**

#### General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples
  are included in this QC report where applicable. Additional QC data may be available on request.
- 2. Amdel QC Acceptance/Rejection criteria are available on request.
- 3. Proficiency trial results are available on request.
- 4. Actual PQLs are matrix dependant. Quotes PQLs may be raised where sample extracts are diluted due to interferences.
- 5. Results are uncorrected for matrix spike or surrogate recoveries.
- 6. Test samples duplicated or spiked, are for this job only and are identified in the following QC report.
- 7. SVOC analyses on waters are performed on homogenized, unfiltered sample, unless noted otherwise.
- 8. When individual results are qualified in the body of a report, refer to the qualifier descriptions that follow.

### **Holding Times**

Please refer to 'Sampling and Preservation Chart for Soils & Waters' for holding times. (Form LM-FOR-ADM-020)

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgement.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitablity qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

\*\*NOTE: pH duplicates are reported as a range NOT an RPD

### **Quality Control Results**

### Laboratory: EN\_METALS

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
955180 [ Method Blank ]	_		•				
3400 Mercury in Soil by FIMS							
Mercury	mg/kg	<0.01			< 0.01	Т	
955426 [ Method Blank ]			•			•	
3100 Metals in Soil - As Received							
Antimony	mg/kg	<2			< 2	Т	
Arsenic	mg/kg	<2			< 2	Т	
Barium	mg/kg	<2			< 2	Т	
Beryllium	mg/kg	<2			< 2	Т	
Cadmium	mg/kg	<2			< 2	Т	
Chromium	mg/kg	<2			< 2	Т	
Cobalt	mg/kg	<2			< 2	Т	
Copper	mg/kg	<2			< 2	Т	
Lead	mg/kg	<2			< 2	Т	
Manganese	mg/kg	<2			< 2	Т	
Molybdenum	mg/kg	<2			< 2	Т	
Nickel	mg/kg	<2			< 2	Т	
Selenium	mg/kg	<2			< 2	Т	
Tin	mg/kg	<2			< 2	Т	
Vanadium	mg/kg	<2			< 2	Т	
Zinc	mg/kg	<2			< 2	Т	
955181 [ Laboratory Control Sample ]							
3400 Mercury in Soil by FIMS			Expected Value	Percent Recovery			
Mercury	mg/kg	9.3	10.0	93	80-120 %	Т	



## Laboratory: EN\_METALS

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
955427 [ Laboratory Control Sample ]			ļ		LIIIIIIS	Lillius	Codes
3100 Metals in Soil - As Received			Expected Value	Percent Recovery			
Antimony	mg/kg	97	100.0	97	70-130 %	Т	1
Arsenic	mg/kg	98	100.0	98	70-130 %	<del>                                     </del>	
Barium	mg/kg	100	100.0	102	70-130 %	<del>                                     </del>	
Beryllium	mg/kg	90	100.0	90	70-130 %	<del> </del>	
Boron	mg/kg	89	100.0	89	70-130 %	T	
Cadmium	mg/kg	100	100.0	100	70-130 %	T T	
Chromium	mg/kg	100	100.0	105	70-130 %	Т	
Cobalt	mg/kg	110	100.0	108	70-130 %	Т	
Copper	mg/kg	110	100.0	112	70-130 %	Т	
Lead	mg/kg	92	100.0	92	70-130 %	Т	
Manganese	mg/kg	110	100.0	105	70-130 %	Т	
Molybdenum	mg/kg	120	100.0	116	70-130 %	Т	
Selenium	mg/kg	93	100.0	93	70-130 %	Т	
Tin	mg/kg	110	100.0	108	70-130 %	Т	
Vanadium	mg/kg	100	100.0	103	70-130 %	Т	
Zinc	mg/kg	98	100.0	98	70-130 %	Т	
944534 [ Duplicate of 944304 ]	•		•			•	
3100 Total Metals in Soil By ICP/MS			Result 2	RPD			
Arsenic	mg/kg	<2	<2	<1	0-30 %	Т	
Cadmium	mg/kg	<2	<2	<1	0-30 %	Т	
Chromium	mg/kg	28	29	7	0-30 %	Т	
Copper	mg/kg	15	16	9	0-30 %	Т	
Lead	mg/kg	11	12	14	0-30 %	Т	
Nickel	mg/kg	12	12	5	0-30 %	Т	
Zinc	mg/kg	21	22	5	0-30 %	Т	
944540 [ Spike of 944311 ]	•			•			
3100 Total Metals in Soil By ICP/MS			Spike Value	Percent Recovery			
Arsenic	mg/kg	110	100.0	103	70-130 %	Т	
Cadmium	mg/kg	100	100.0	105	70-130 %	Т	
Chromium	mg/kg	130	100.0	107	70-130 %	Т	
Copper	mg/kg	130	100.0	113	70-130 %	Т	
Lead	mg/kg	110	100.0	100	70-130 %	Т	
Nickel	mg/kg	130	100.0	120	70-130 %	Т	
Zinc	mg/kg	110	100.0	95	70-130 %	Т	
Laboratory: <b>EN_SVOC</b>	•	•	•			•	•
Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
944998 [ Method Blank ]			•	-			1
2000 TPH (C10 - C36) in Soil by GC							
C10-C14 Fraction	mg/kg	<10			< 10	Т	
C15-C28 Fraction	mg/kg	<20			< 20	Т	
C29-C36 Fraction	mg/kg	<20			< 20	Т	



## Laboratory: EN\_SVOC

First Reported: 17 April 2008

Date Printed: 18 April 2008

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
945000 [ Method Blank ]	+		ļ	ļ	LIIIIIIS	Limits	coues
2100 PAH in Soil by GC							
Acenaphthene	mg/kg	<0.5			< 0.5	Т	
Acenaphthylene	mg/kg	<0.5			< 0.5	<del>  '</del>	
Anthracene	mg/kg	<0.5			< 0.5	<del>  '</del>	
Benz(a)anthracene	mg/kg	<0.5			< 0.5	<del>                                     </del>	
Benzo(a)pyrene	mg/kg	<0.5			< 0.5	<del>                                     </del>	
Benzo(b)&(k)fluoranthene	mg/kg	<1			< 1	<del>                                     </del>	
Benzo(g.h.i)perylene	mg/kg	<0.5			< 0.5	<del>                                     </del>	
Chrysene	mg/kg	<0.5			< 0.5	T	
Dibenz(ah)anthracene	mg/kg	<0.5			< 0.5	<del>                                     </del>	
Fluoranthene	mg/kg	<0.5			< 0.5	T T	
Fluorene	mg/kg	<0.5			< 0.5	T	
Indeno(123-cd)pyrene	mg/kg	<0.5			< 0.5	T	
Naphthalene	mg/kg	<0.5			< 0.5	<del>                                     </del>	
Phenanthrene	mg/kg	<0.5			< 0.5	<del>  '</del>	
Pyrene	mg/kg	<0.5			< 0.5	<del>  '</del>	
Sum of PAHs	mg/kg	<0.5			< 0.5	<del>  '</del>	
2-Fluorobiphenyl - Surrogate	%	100			70-130 %	<del>  '</del>	
Anthracene-d10 - Surrogate	%	106			70-130 %	T	
p-Terphenyl-D14 - Surrogate	%	110			70-130 %	T	
	,,,	110			70 100 70	<u> </u>	
2300 OC Pesticides in Soil by GC-ECD a-BHC	ma/ka	<0.5			< 0.5	Т	
	mg/kg				< 0.5	<del>  '</del>	
a-Chlordane	mg/kg	<0.5				'   T	
a-Endosulfan	mg/kg	<0.5			< 0.5	+	
Aldrin	mg/kg	<0.5			< 0.5	T	
b-BHC	mg/kg	<0.5			< 0.5 < 0.5	'   T	
b-Endosulfan	mg/kg	<0.5			< 0.5	<del>  '</del>	
d-BHC DDD	mg/kg	<0.5 <0.5			< 0.5	<del>  '</del>	
DDE	mg/kg	<0.5			< 0.5	<del>  '</del>	
DDT	mg/kg					<del>  '</del>	
Dieldrin	mg/kg	<0.5 <0.5			< 0.5 < 0.5	<del>  '</del>	
Endosulfan sulfate	mg/kg mg/kg	<0.5			< 0.5	<del>  '</del>	
Endosulari surrate Endrin		<0.5			< 0.5	<del>  '</del>	
	mg/kg	<0.5			< 0.5	<del>  '</del>	
Endrin Aldehyde g-BHC	mg/kg	<0.5			< 0.5	<del>  '</del>	
g-Chlordane	mg/kg	<0.5			< 0.5	<del>  '</del>	
•	mg/kg	<0.5			< 0.5	+	
Heptachlor	mg/kg	<0.5			< 0.5	T	
Heptachlor epoxide  Hexachlorobenzene (HCB)	mg/kg	<0.5			< 0.5	<del>  '</del>	
Methoxychlor	mg/kg	<0.5 <0.5			< 0.5	'   T	
Oxychlordane	mg/kg mg/kg	<0.5			< 0.5	<del>  '</del>	
2.4.5.6-tetrachloro-m-xylene-SURROGATE	// // // // // // // // // // // // //	102			70-130 %	<del>  '</del>	
· · · · · · · · · · · · · · · · · · ·	70	102			70-130 70	+-	
2600 PCBs in Soil by GC		.0.5			-05	1 -	
Aroclor 1016	mg/kg	<0.5			< 0.5	T T	
Aroclor 1221	mg/kg	<0.5			< 0.5	T	
Aroclor 1232 and 1242 as total	mg/kg	<1			<1	T	
Aroclor 1248 and 1254 as total	mg/kg	<1			<1	T	
Aroclor 1260	mg/kg	<0.5			< 0.5	T	
Total Polychlorinated biphenyls	mg/kg	<1			< 1	T	
Decachlorobiphenyl - PCB surrogate	%	94			70-130 %	T	
944999 [ Laboratory Control Sample ]			1				
2000 TPH (C10 - C36) in Soil by GC	_		Expected Value	Percent Recovery			
C10-C14 Fraction	mg/kg	110	125.0	87	70-130 %	T	
C15-C28 Fraction	mg/kg	110	125.0	89	70-130 %	T	
C29-C36 Fraction	mg/kg	110	125.0	90	70-130 %	Т	



## Laboratory: EN\_SVOC

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyin Codes
944535 [ Duplicate of 944304 ]	+		-		-	+	
2300 OC Pesticides in Soil by GC-ECD			Result 2	RPD			
a-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
a-Chlordane	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
a-Endosulfan	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Aldrin	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
b-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
b-Endosulfan	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
d-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
DDD	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
DDE	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
DDT	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Dieldrin	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Endosulfan sulfate	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Endrin	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Endrin Aldehyde	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
g-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
g-Chlordane	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Heptachlor	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Heptachlor epoxide	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Hexachlorobenzene (HCB)	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Methoxychlor	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Oxychlordane	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
2.4.5.6-tetrachloro-m-xylene-SURROGATE	%	92			70-130 %	Т	
944536 [ Duplicate of 944304 ]	•		•	•	•	•	
2100 PAH in Soil by GC			Result 2	RPD			
Acenaphthene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Acenaphthylene	mg/kg	<0.5	<0.5	<1	0-30 %	T T	
Anthracene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Benz(a)anthracene							
	ma/ka	< 0.5	< 0.5	<1	0-30 %		
Benzo(a)pyrene	mg/kg mg/ka	<0.5 <0.5	<0.5 <0.5	<1 <1	0-30 % 0-30 %	Т	
Benzo(a)pyrene  Benzo(b)&(k)fluoranthene	mg/kg	<0.5	<0.5	<1	0-30 %	T	
Benzo(b)&(k)fluoranthene	mg/kg mg/kg	<0.5 <1	<0.5 <1	<1 <1	0-30 % 0-30 %	T T	
Benzo(b)&(k)fluoranthene Benzo(g.h.i)perylene	mg/kg mg/kg mg/kg	<0.5 <1 <0.5	<0.5 <1 <0.5	<1 <1 <1	0-30 % 0-30 % 0-30 %	T T T	
Benzo(b)&(k)fluoranthene Benzo(g.h.i)perylene Chrysene	mg/kg mg/kg mg/kg mg/kg	<0.5 <1 <0.5 <0.5	<0.5 <1 <0.5 <0.5	<1 <1 <1 <1	0-30 % 0-30 % 0-30 % 0-30 %	T T T T	
Benzo(b)&(k)fluoranthene Benzo(g.h.i)perylene Chrysene Dibenz(ah)anthracene	mg/kg mg/kg mg/kg mg/kg mg/kg	<0.5 <1 <0.5 <0.5 <0.5	<0.5 <1 <0.5 <0.5 <0.5	<1 <1 <1 <1 <1	0-30 % 0-30 % 0-30 % 0-30 % 0-30 %	T T T T T	
Benzo(b)&(k)fluoranthene Benzo(g.h.i)perylene Chrysene Dibenz(ah)anthracene Fluoranthene	mg/kg mg/kg mg/kg mg/kg mg/kg	<0.5 <1 <0.5 <0.5 <0.5 <0.5	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 %	T T T T T T T	
Benzo(b)&(k)fluoranthene Benzo(g.h.i)perylene Chrysene Dibenz(ah)anthracene Fluoranthene Fluorene	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 %	T T T T T T T T T T T T T T T T T T T	
Benzo(b)&(k)fluoranthene Benzo(g.h.i)perylene Chrysene Dibenz(ah)anthracene Fluoranthene Fluorene Indeno(123-cd)pyrene	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 %	T T T T T T T T T T T T T T T T T T T	
Benzo(b)&(k)fluoranthene Benzo(g.h.i)perylene Chrysene Dibenz(ah)anthracene Fluoranthene Fluorene Indeno(123-cd)pyrene Naphthalene	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1<	0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 %	T T T T T T T T T T T T T T T T T T T	
Benzo(b)&(k)fluoranthene Benzo(g.h.i)perylene Chrysene Dibenz(ah)anthracene Fluoranthene Fluorene Indeno(123-cd)pyrene Naphthalene Phenanthrene	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	41 41<	0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 %	T T T T T T T T T T T T T T T T T T T	
Benzo(b)&(k)fluoranthene Benzo(g.h.i)perylene Chrysene Dibenz(ah)anthracene Fluoranthene Fluorene Indeno(123-cd)pyrene Naphthalene Phenanthrene Pyrene	mg/kg	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1<	0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 %	T T T T T T T T T T T T T T T T T T T	
Benzo(b)&(k)fluoranthene Benzo(g.h.i)perylene Chrysene Dibenz(ah)anthracene Fluoranthene Fluorene Indeno(123-cd)pyrene Naphthalene Phenanthrene Pyrene Sum of PAHs	mg/kg	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	41 41<	0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 %	T T T T T T T T T T T T T T T T T T T	
Benzo(b)&(k)fluoranthene Benzo(g.h.i)perylene Chrysene Dibenz(ah)anthracene Fluoranthene Fluorene Indeno(123-cd)pyrene Naphthalene Phenanthrene Pyrene Sum of PAHs 2-Fluorobiphenyl - Surrogate	mg/kg	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1<	0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 %	T T T T T T T T T T T T T T T T T T T	
Benzo(b)&(k)fluoranthene Benzo(g.h.i)perylene Chrysene Dibenz(ah)anthracene Fluoranthene Fluorene Indeno(123-cd)pyrene Naphthalene Phenanthrene Pyrene Sum of PAHs 2-Fluorobiphenyl - Surrogate Anthracene-d10 - Surrogate	mg/kg	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1<	0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 70-130 %	T T T T T T T T T T T T T T T T T T T	
Benzo(b)&(k)fluoranthene Benzo(g.h.i)perylene Chrysene Dibenz(ah)anthracene Fluoranthene Fluorene Indeno(123-cd)pyrene Naphthalene Phenanthrene Pyrene Sum of PAHs 2-Fluorobiphenyl - Surrogate Anthracene-d10 - Surrogate p-Terphenyl-D14 - Surrogate	mg/kg	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1<	0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 %	T T T T T T T T T T T T T T T T T T T	
Benzo(b)&(k)fluoranthene Benzo(g.h.i)perylene Chrysene Dibenz(ah)anthracene Fluoranthene Fluorene Indeno(123-cd)pyrene Naphthalene Phenanthrene Pyrene Sum of PAHs 2-Fluorobiphenyl - Surrogate Anthracene-d10 - Surrogate p-Terphenyl-D14 - Surrogate 944538 [ Duplicate of 944304 ]	mg/kg	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1<	0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 70-130 %	T T T T T T T T T T T T T T T T T T T	
Benzo(b)&(k)fluoranthene Benzo(g.h.i)perylene Chrysene Dibenz(ah)anthracene Fluoranthene Fluorene Indeno(123-cd)pyrene Naphthalene Phenanthrene Pyrene Sum of PAHs 2-Fluorobiphenyl - Surrogate Anthracene-d10 - Surrogate p-Terphenyl-D14 - Surrogate 944538 [ Duplicate of 944304 ]	mg/kg	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1<	0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 70-130 % 70-130 %	T T T T T T T T T T T T T T T T T T T	
Benzo(b)&(k)fluoranthene Benzo(g.h.i)perylene Chrysene Dibenz(ah)anthracene Fluoranthene Fluorene Indeno(123-cd)pyrene Naphthalene Phenanthrene Pyrene Sum of PAHs 2-Fluorobiphenyl - Surrogate Anthracene-d10 - Surrogate	mg/kg	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <1 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1<	0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 0-30 % 70-130 %	T T T T T T T T T T T T T T T T T T T	



## Laboratory: EN\_SVOC

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyin Codes
944541 [ Spike of 944311 ]	•			+		-	
2300 OC Pesticides in Soil by GC-ECD			Spike Value	Percent Recovery			
a-BHC	mg/kg	1.8	2.0	89	70-130 %	Т	
a-Chlordane	mg/kg	2.0	2.0	99	70-130 %	Т	
a-Endosulfan	mg/kg	1.8	2.0	92	70-130 %	Т	
Aldrin	mg/kg	1.6	2.0	82	70-130 %	Т	
b-BHC	mg/kg	1.7	2.0	82	70-130 %	Т	
b-Endosulfan	mg/kg	1.6	2.0	82	70-130 %	Т	
d-BHC	mg/kg	1.8	2.0	92	70-130 %	Т	
DDD	mg/kg	1.6	2.0	82	70-130 %	Т	
DDE	mg/kg	1.8	2.0	91	70-130 %	Т	
DDT	mg/kg	1.2	N/A	N/A	N/A	N/A	
Dieldrin	mg/kg	1.7	2.0	86	70-130 %	Т	
Endosulfan sulfate	mg/kg	1.5	2.0	75	70-130 %	Т	
Endrin	mg/kg	1.4	2.0	70	70-130 %	Т	
Endrin Aldehyde	mg/kg	1.7	2.0	86	70-130 %	Т	
g-BHC	mg/kg	1.6	2.0	82	70-130 %	T	
g-Chlordane	mg/kg	1.8	2.0	89	70-130 %	<del>                                     </del>	
Heptachlor	mg/kg	1.4	N/A	N/A	N/A	N/A	
Heptachlor epoxide	mg/kg	1.7	2.0	86	70-130 %	T	
Hexachlorobenzene (HCB)	mg/kg	2.0	2.0	99	70-130 %	<del>  '</del>	
Methoxychlor		1.2	-	N/A	N/A	N/A	
· · · · · · · · · · · · · · · · · · ·	mg/kg	<0.5	N/A N/A	N/A N/A	N/A	N/A	
Oxychlordane	mg/kg	91	IN/A	IN/A		T T	
2.4.5.6-tetrachloro-m-xylene-SURROGATE	%	91			70-130 %	+ '	
944542 [ Spike of 944311 ]				1			Q13
2100 PAH in Soil by GC	_		Spike Value	Percent Recovery			L
Acenaphthene	mg/kg	1.8	2.0	91	70-130 %	Т	
Acenaphthylene	mg/kg	2.0	2.0	100	70-130 %	Т	
Anthracene	mg/kg	2.0	2.0	98	70-130 %	Т	
Benz(a)anthracene	mg/kg	1.8	2.0	90	70-130 %	Т	
Benzo(a)pyrene	mg/kg	1.6	2.0	81	70-130 %	Т	
Benzo(b)&(k)fluoranthene	mg/kg	<1	N/A	N/A	N/A	N/A	
Benzo(g.h.i)perylene	mg/kg	1.8	2.0	92	70-130 %	Т	
Chrysene	mg/kg	1.7	2.0	86	70-130 %	Т	
Dibenz(ah)anthracene	mg/kg	1.8	2.0	88	70-130 %	Т	
Fluoranthene	mg/kg	2.0	2.0	98	70-130 %	Т	
Fluorene	mg/kg	2.0	2.0	101	70-130 %	Т	
Indeno(123-cd)pyrene	mg/kg	1.8	2.0	89	70-130 %	Т	
Naphthalene	mg/kg	2.1	2.0	106	70-130 %	Т	
Phenanthrene	mg/kg	2.0	2.0	102	70-130 %	Т	
Pyrene	mg/kg	1.9	2.0	96	70-130 %	Т	
Sum of PAHs	mg/kg	26	32.0	82	70-130 %	Т	
2-Fluorobiphenyl - Surrogate	%	87			70-130 %	Т	
Anthracene-d10 - Surrogate	%	92			70-130 %	Т	
p-Terphenyl-D14 - Surrogate	%	100			70-130 %	Т	
944543 [ Spike of 944311 ]	•		•	+ +		•	
2000 TPH (C10 - C36) in Soil by GC			Spike Value	Percent Recovery			
C10-C14 Fraction	mg/kg	100	125.0	80	70-130 %	Т	
C15-C28 Fraction	mg/kg	100	125.0	81	70-130 %	T T	
C29-C36 Fraction	mg/kg	110	125.0	85	70-130 %	<del>  '</del>	$\vdash \vdash$
aboratory: EN_VOC	ilig/kg	110	123.0	1 33 1	70-130 /0	+ '-	<u> </u>
	1		1	<del>                                     </del>	Acceptance	Pass	Qualifyi
Sample, Test, Result Reference	Units	Result 1		1	Limits	Limits	Codes



## Laboratory: EN\_VOC

Sample, Test, Result Reference	Units	Result 1			Acceptance	Pass	Qualifyin
• • •	Office	TCSuit 1	<u> </u>		Limits	Limits	Codes
946314 [ Method Blank ]			1				-
1100 BTEX in Soil by P&T	<del></del>	1					
Benzene	mg/kg	<0.2			< 0.2	Т	
C6-C9 Fraction	mg/kg	<5.0			< 5	T	
Ethylbenzene	mg/kg	<1.0			< 1	Т	
Meta- & Para- Xylene	mg/kg	<2.0			< 2	Т	
Ortho-Xylene	mg/kg	<1.0			< 1	Т	
Toluene	mg/kg	<1.0			< 1	Т	
Total Xylenes	mg/kg	<3.0			< 3	Т	
4-Bromofluorobenzene - Surrogate	%	79			70-130 %	Т	
946316 [ Laboratory Control Sample ]							
1100 BTEX in Soil by P&T			Expected Value	Percent Recovery			
Benzene	mg/kg	4.2	5.0	84	70-130 %	Т	
C6-C9 Fraction	mg/kg	43	50.0	86	70-130 %	Т	
Ethylbenzene	mg/kg	4.1	5.0	82	70-130 %	Т	
Meta- & Para- Xylene	mg/kg	8.1	10.0	81	70-130 %	Т	
Ortho-Xylene	mg/kg	4.3	5.0	86	70-130 %	Т	
Toluene	mg/kg	4.2	5.0	84	70-130 %	Т	
Total Xylenes	mg/kg	12	N/A	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	%	85			70-130 %	Т	
944533 [ Duplicate of 944304 ]							
1100 BTEX &(C6-C9) in Soil by P&T			Result 2	RPD			
Benzene	mg/kg	<0.2	<0.2	<1	0-30 %	Т	
C6-C9 Fraction	mg/kg	<5	<5	<1	0-30 %	T	
Ethylbenzene	mg/kg	<1	<1	<1	0-30 %	T T	
Meta- & Para- Xylene	mg/kg	<2	<2	<1	0-30 %	T	
Ortho-Xylene	mg/kg	<1	<1	<1	0-30 %	T T	
Toluene	mg/kg	<1	<1	<1	0-30 %	T	
Total Xylenes	mg/kg	<3	<3	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	%	93	1	1	70-130 %	Т Т	
944539 [ Spike of 944311 ]	<del></del>		+	-		+	<del></del>
1100 BTEX &(C6-C9) in Soil by P&T			Spika Valua	Percent Recovery			<u> </u>
Benzene	mg/kg	5.0	Spike Value 5.0	100	70-130 %	Т	
C6-C9 Fraction	mg/kg	48	50.0	97	70-130 %	+ +	
		5.1	5.0		70-130 %	<del>  '</del>	
Ethylbenzene	mg/kg	10	10.0	102 102	70-130 %	<del>  '</del>	
Meta- & Para- Xylene	mg/kg		5.0	102	70-130 %	+ +	-
Ortho-Xylene	mg/kg	5.2					-
Sample Weight	-	9.2	N/A	N/A	N/A	N/A	
Toluene	mg/kg	5.0	5.0	100	70-130 %	T	-
Total Xylenes	mg/kg	15	N/A	N/A	N/A	N/A	-
4-Bromofluorobenzene - Surrogate	%	107			70-130 %	Т	
_aboratory: EN_WATERS							
Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyir Codes
945778 [ Method Blank ]	•	•					
4300 Anions in Soil by IC							
Bromide (Soluble)	mg/kg	<2			< 2	Т	
Chloride (Soluble)	mg/kg	<2			< 2	Т	
Fluoride (Soluble)	mg/kg	<2			< 2	Т	
Nitrate (Soluble)	mg/kg	<2			< 2	Т	
Nitrite (Soluble)	mg/kg	<2			< 2	Т	
Orthophosphorus (Soluble)	mg/kg	<2			< 2	Т	
Sulphate (Soluble)	mg/kg	<2			< 2	Т	
947824 [ Method Blank ]	<del></del>	<b>-</b>	+	-			
4270 Total Cyanide in Soil Colourmetric							
Total Cyanide III Soil Colourmetric	mg/kg	<0.1			< 0.1	Т	
	Hilly/kg	~0.1	+	1	<b>~</b> U. I	<del></del>	<del>                                     </del>
949939 [ Method Blank ]			1				
4850 Total Phenolics in Soil by SFA						T =	—

<0.1

mg/kg

Total Phenolics

< 0.1



### Laboratory: EN\_WATERS

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
945780 [ Laboratory Control Sample ]	•	•	•	•		•	
4300 Anions in Soil by IC			Expected Value	Percent Recovery			
Bromide (Soluble)	mg/kg	550	500.0	110	75-125 %	Т	
Chloride (Soluble)	mg/kg	540	500.0	108	75-125 %	Т	
Fluoride (Soluble)	mg/kg	520	500.0	104	75-125 %	Т	
Nitrate (Soluble)	mg/kg	580	500.0	116	75-125 %	Т	
Nitrite (Soluble)	mg/kg	530	500.0	106	75-125 %	Т	
Orthophosphorus (Soluble)	mg/kg	490	500.0	98	75-125 %	Т	
Sulphate (Soluble)	mg/kg	510	500.0	102	75-125 %	Т	
947827 [ Laboratory Control Sample ]	•	•	•			•	
4270 Total Cyanide in Soil Colourmetric			Expected Value	Percent Recovery			
Total Cyanide	mg/kg	0.5	N/A	N/A	N/A	N/A	
949927 [ Laboratory Control Sample ]		•	•			•	
4000 pH in Soil			Expected Value	Percent Recovery			
pH	pН	7.4	N/A	N/A	N/A	N/A	
949941 [ Laboratory Control Sample ]	•					•	
4850 Total Phenolics in Soil by SFA			Expected Value	Percent Recovery			
Total Phenolics	mg/kg	0.6	0.5	110	70-130 %	Т	
944537 [ Duplicate of 944304 ]	•	•	•			•	
4000 pH in Soil			Result 2	RPD			
pH	pН	7.9	8.0	0.1	0-0.5 pH	Т	

#### Sample Integrity

Attempt to Chill was evident Yes
Samples correctly preserved Yes
Organic samples had Teflon liners Yes
Samples received with Zero Headspace Yes
Samples received within HoldingTime Yes
Some samples have been subcontracted No

# **Qualifier Codes/Comments**

Code Description

Q13 Some individual compounds for this analysis have failed. However the QC sample is considered acceptable if 80% of the compounds meet Acceptance Criteria.

#### **Authorised By**

Alex Petridis Senior Analyst - SVOC Ruth Callander Client Services Officer Mark Herbstreit Senior Analyst - Metals Accreditation Number: 1645 Helen Lei Senior Analyst - Waters Accreditation Number: 1645 Khoa Pham Analyst - VOC Accreditation Number: 1645 Analyst - SVOC Accreditation Number: 1645 Olga Alieva

**Laboratory Manager** 

Anthony Crane Operations Manager

Final Report

- Indicates Not Requested \* Indicates NATA accreditation does not cover the performance of this service

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The samples were not collected by Amdel staff.

First Reported: 17 April 2008 Date Printed: 18 April 2008



Accreditation Number: 1645



# CONNELL WAGNER (SA) PTY LTD 55 Grenfell St ADELAIDE SA 5000

Attention: April Freeman

Project 08ENME0008929

Client Reference 31495

**Buckland Park** 

Received Date 10/04/2008 09:00:00 AM

Customer Sample ID Amdel Sample Number Date Sampled			TP69 0-0.1 944106 09/04/2008	TP69 0.2-0.3 944107 09/04/2008	TP69 0.4-0.5 944108 09/04/2008	TP69 0.9-1.0 944109 09/04/2008	TP69 1.9-2.0 944110 09/04/2008
voc							
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&1	Г						
Benzene	0.2	mg/kg	<0.2	-	-	-	-
Ethylbenzene	1	mg/kg	<1	-	-	-	-
Meta- & Para- Xylene	2	mg/kg	<2	-	-	-	-
Ortho-Xylene	1	mg/kg	<1	-	-	-	-
Toluene	1	mg/kg	<1	-	-	-	-
Total Xylenes	3	mg/kg	<3	-	-	-	-
C6-C9 Fraction	5	mg/kg	<5	-	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	90	-	-	-	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-E	CD						
a-BHC	0.5	mg/kg	<0.5	-	-	-	-
a-Chlordane	0.5	mg/kg	<0.5	-	-	-	-
a-Endosulfan	0.5	mg/kg	<0.5	-	-	-	-
Aldrin	0.5	mg/kg	<0.5	-	-	-	-
b-BHC	0.5	mg/kg	<0.5	-	-	-	-
b-Endosulfan	0.5	mg/kg	<0.5	-	-	-	-
d-BHC	0.5	mg/kg	<0.5	-	-	-	-
DDD	0.5	mg/kg	<0.5	-	-	-	-
DDE	0.5	mg/kg	<0.5	-	-	-	-
DDT	0.5	mg/kg	<0.5	-	-	-	-
Dieldrin	0.5	mg/kg	<0.5	-	-	-	-
Endosulfan sulfate	0.5	mg/kg	<0.5	-	-	-	-
Endrin	0.5	mg/kg	<0.5	-	-	-	-
Endrin Aldehyde	0.5	mg/kg	<0.5	-	-	-	-
g-BHC	0.5	mg/kg	<0.5	-	-	-	-
g-Chlordane	0.5	mg/kg	<0.5	-	-	-	-
Heptachlor	0.5	mg/kg	<0.5	-	-	-	-
Heptachlor epoxide	0.5	mg/kg	<0.5	-	-	-	-
Hexachlorobenzene (HCB)	0.5	mg/kg	<0.5	-	-	-	-
Methoxychlor	0.5	mg/kg	<0.5	-	-	-	-
Oxychlordane	0.5	mg/kg	<0.5	-	-	-	-
2.4.5.6-tetrachloro-m-xylene-SURROG ATE	1	%	96	-	-	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	<0.5	-	-	-	-
Acenaphthylene	0.5	mg/kg	<0.5	-	-	-	-

Date Printed: 21 April 2008



Customer Sample ID Amdel Sample Number			TP69 0-0.1 944106	TP69 0.2-0.3 944107	TP69 0.4-0.5 944108	TP69 0.9-1.0 944109	TP69 1.9-2.0 944110
Date Sampled			09/04/2008	09/04/2008	09/04/2008	09/04/2008	09/04/2008
SVOC	DOL	l lmi4					
Test/Reference	PQL	Unit					
Anthracene	0.5	mg/kg	<0.5	-	-	-	-
Benz(a)anthracene	0.5	mg/kg	<0.5	-	-	-	-
Benzo(a)pyrene	0.5	mg/kg	<0.5	-	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	<1	-	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	-	-	-	-
Chrysene	0.5	mg/kg	<0.5	-	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	<0.5	-	-	-	-
Fluoranthene	0.5	mg/kg	<0.5	-	-	-	-
Fluorene	0.5	mg/kg	<0.5	-	-	-	-
ndeno(123-cd)pyrene	0.5	mg/kg	<0.5	-	-	-	-
laphthalene	0.5	mg/kg	<0.5	-	-	-	-
Phenanthrene	0.5	mg/kg	<0.5	-	-	-	-
Pyrene	0.5	mg/kg	<0.5	-	-	-	-
Sum of PAHs	0.5	mg/kg	<0.5	-	-	-	-
2-Fluorobiphenyl - Surrogate	-	%	82	-	-	-	-
o-Terphenyl-D14 - Surrogate	-	%	76	-	-	-	-
2000 TPH (C10 - C36) in Soil by GC							
C10-C14 Fraction	10	mg/kg	<10	-	-	-	-
C15-C28 Fraction	20	mg/kg	21	-	-	-	-
C29-C36 Fraction	20	mg/kg	38	-	-	-	-
Metals Fest/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS							
Arsenic	2	mg/kg	5.3	-	-	-	-
Cadmium	2	mg/kg	<2	-	-	-	-
Chromium	2	mg/kg	27	-	-	-	-
Copper	2	mg/kg	1100	-	-	-	-
Lead	2	mg/kg	9.1	-	-	-	-
Nickel	2	mg/kg	16	-	-	-	-
Zinc	2	mg/kg	32	-	-	-	-
norganics							
Test/Reference	PQL	Unit					
<b>1000 pH in Soil</b> ⊳H	0.1	nН	7.8	_	_	_	
	0.1	pН	1.0	-	-	-	-
Miscellaneous Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	4	_	_	_	_
% Moisture	ı	<b>%</b> 0	4	-	-	-	-
Customer Sample ID Amdel Sample Number Date Sampled			TP70 0-0.1 944111 09/04/2008	TP70 0.2-0.3 944112 09/04/2008	TP70 0.4-0.5 944113 09/04/2008	TP70 0.9-1.0 944114 09/04/2008	TP70 1.9-2.0 944115 09/04/2008
, voc							
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&T							
Benzene	0.2	mg/kg	-	<0.2	-	-	-



Customer Sample ID Amdel Sample Number			TP70 0-0.1 944111	TP70 0.2-0.3 944112	TP70 0.4-0.5 944113	TP70 0.9-1.0 944114	TP70 1.9-2.0 944115
Date Sampled			09/04/2008	09/04/2008	09/04/2008	09/04/2008	09/04/2008
VOC							
Test/Reference	PQL	Unit					
Meta- & Para- Xylene	2	mg/kg	-	<2	-	-	-
Ortho-Xylene	1	mg/kg	-	<1	-	-	-
Toluene	1	mg/kg	-	<1	-	-	-
Total Xylenes	3	mg/kg	-	<3	-	-	-
C6-C9 Fraction	5	mg/kg	-	<5	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	-	103	-	-	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-E	CD						
a-BHC	0.5	mg/kg	-	<0.5	-	-	-
a-Chlordane	0.5	mg/kg	-	<0.5	-	-	-
a-Endosulfan	0.5	mg/kg	-	<0.5	-	-	-
Aldrin	0.5	mg/kg	-	<0.5	-	-	-
b-BHC	0.5	mg/kg	-	<0.5	-	-	-
b-Endosulfan	0.5	mg/kg	_	<0.5	_	_	_
d-BHC	0.5	mg/kg	-	<0.5	-	_	_
DDD	0.5	mg/kg	_	<0.5	_	_	_
DDE	0.5	mg/kg	_	<0.5	_	_	_
DDT	0.5	mg/kg	-	<0.5	_	_	_
Dieldrin	0.5		-	<0.5	-	-	-
		mg/kg	-		-	-	-
Endosulfan sulfate	0.5	mg/kg	-	<0.5	-	-	-
Endrin	0.5	mg/kg	-	<0.5	-	-	-
Endrin Aldehyde	0.5	mg/kg	-	<0.5	-	-	-
g-BHC	0.5	mg/kg	-	<0.5	-	-	-
g-Chlordane	0.5	mg/kg	-	<0.5	-	-	-
Heptachlor	0.5	mg/kg	-	<0.5	-	-	-
Heptachlor epoxide	0.5	mg/kg	-	<0.5	-	-	-
Hexachlorobenzene (HCB)	0.5	mg/kg	-	<0.5	-	-	-
Methoxychlor	0.5	mg/kg	-	<0.5	-	-	-
Oxychlordane	0.5	mg/kg	-	<0.5	-	-	-
2.4.5.6-tetrachloro-m-xylene-SURROG ATE	1	%	-	100	-	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	<0.5	-	-	-
Acenaphthylene	0.5	mg/kg	-	<0.5	-	-	-
Anthracene	0.5	mg/kg	-	<0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	-	<0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	-	<0.5	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	<1	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	<0.5	-	-	_
Chrysene	0.5	mg/kg	-	<0.5	-	_	_
Dibenz(ah)anthracene	0.5	mg/kg	-	<0.5	_	_	_
Fluoranthene	0.5	mg/kg	_	<0.5	_	_	_
Fluorene	0.5	mg/kg	_	<0.5	_	_	_
	0.5		_	<0.5	_	_	
Indeno(123-cd)pyrene		mg/kg	-	<0.5 <0.5	-	-	-
Naphthalene	0.5	mg/kg	-		-	-	-
Phenanthrene	0.5	mg/kg	-	<0.5	-	-	-
Pyrene	0.5	mg/kg	-	<0.5	-	-	-
Sum of PAHs	0.5	mg/kg	-	<0.5	-	-	-
2-Fluorobiphenyl - Surrogate	-	%	-	90	-	-	-



Customer Sample ID Amdel Sample Number Date Sampled			TP70 0-0.1 944111 09/04/2008	TP70 0.2-0.3 944112 09/04/2008	TP70 0.4-0.5 944113 09/04/2008	TP70 0.9-1.0 944114 09/04/2008	TP70 1.9-2.0 944115 09/04/2008
svoc							
Test/Reference	PQL	Unit					
p-Terphenyl-D14 - Surrogate	-	%	-	110	-	-	-
Anthracene-d10 - Surrogate	-	%	-	97	-	-	-
<b>2000 TPH (C10 - C36) in Soil by GC</b> C10-C14 Fraction	10	ma/ka		<10			
C10-C14 Fraction C15-C28 Fraction	20	mg/kg mg/kg	-	<20	-	-	-
C15-C26 Fraction C29-C36 Fraction	20	• •	-	<20	-	-	-
	20	mg/kg	-	<20	-	-	-
Metals Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS							
Arsenic	2	mg/kg	-	3.2	-	-	-
Cadmium	2	mg/kg	-	<2	-	-	-
Chromium	2	mg/kg	-	42	-	-	-
Copper	2	mg/kg	-	22	-	-	-
Lead	2	mg/kg	-	9.0	-	-	-
Nickel	2	mg/kg	-	26	-	-	-
Zinc	2	mg/kg	-	20	-	-	-
Inorganics							
Test/Reference	PQL	Unit					
4000 pH in Soil							
pH	0.1	pН	-	9.0	-	-	-
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	-	11	-	-	-
Customer Comple ID			TD71 0 0 1	OC33V	TD74 0 2 0 2	TD71 0 4 0 5	TD71 0 0 1 0

Customer Sample ID Amdel Sample Number			TP71 0-0.1 944116	QC23A 944117	TP71 0.2-0.3 944118	TP71 0.4-0.5 944119	TP71 0.9-1.0 944120
Date Sampled			09/04/2008	09/04/2008	09/04/2008	09/04/2008	09/04/2008
VOC							
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&	T.						
Benzene	0.2	mg/kg	<0.2	-	-	-	-
Ethylbenzene	1	mg/kg	<1	-	-	-	-
Meta- & Para- Xylene	2	mg/kg	<2	-	-	-	-
Ortho-Xylene	1	mg/kg	<1	-	-	-	-
Toluene	1	mg/kg	<1	-	-	-	-
Total Xylenes	3	mg/kg	<3	-	-	-	-
C6-C9 Fraction	5	mg/kg	<5	-	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	93	-	-	-	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	ECD						
a-BHC	0.5	mg/kg	<0.5	<0.5	-	-	-
a-Chlordane	0.5	mg/kg	<0.5	<0.5	-	-	-
a-Endosulfan	0.5	mg/kg	<0.5	<0.5	-	-	-
Aldrin	0.5	mg/kg	<0.5	<0.5	-	-	-

Date Printed: 21 April 2008



Customer Sample ID Amdel Sample Number			TP71 0-0.1 944116	QC23A 944117	TP71 0.2-0.3 944118	TP71 0.4-0.5 944119	TP71 0.9-1.0 944120
Date Sampled			09/04/2008	09/04/2008	09/04/2008	09/04/2008	09/04/2008
SVOC							
Test/Reference	PQL	Unit					
b-BHC	0.5	mg/kg	<0.5	<0.5	-	-	-
b-Endosulfan	0.5	mg/kg	<0.5	<0.5	-	-	-
d-BHC	0.5	mg/kg	<0.5	<0.5	-	-	_
DDD	0.5	mg/kg	<0.5	<0.5	-	-	_
DDE	0.5	mg/kg	<0.5	<0.5	_	-	_
DDT	0.5	mg/kg	<0.5	<0.5	_	_	_
Dieldrin	0.5	mg/kg	<0.5	<0.5	_	-	_
Endosulfan sulfate	0.5	mg/kg	<0.5	<0.5	_	_	_
Endrin	0.5	mg/kg	<0.5	<0.5	_	_	_
Endrin Aldehyde	0.5	mg/kg	<0.5	<0.5	_	_	_
g-BHC	0.5	mg/kg	<0.5	<0.5	_	_	_
g-Chlordane	0.5	mg/kg	<0.5	<0.5	_	_	_
Heptachlor	0.5	mg/kg	<0.5	<0.5	_	_	_
Heptachlor epoxide	0.5	mg/kg	<0.5	<0.5	_	_	_
Hexachlorobenzene (HCB)	0.5	mg/kg	<0.5	<0.5	_	_	
Methoxychlor	0.5	mg/kg	<0.5	<0.5	-	_	_
Oxychlordane	0.5		<0.5	<0.5	-	-	-
2.4.5.6-tetrachloro-m-xylene-SURROG	1	mg/kg %	96	84	-	-	-
ATE	ı	70	90	04	-	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	<0.5	-	-	-	-
Acenaphthylene	0.5	mg/kg	<0.5	-	-	-	-
Anthracene	0.5	mg/kg	<0.5	-	-	-	-
Benz(a)anthracene	0.5	mg/kg	<0.5	-	-	-	-
Benzo(a)pyrene	0.5	mg/kg	<0.5	-	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	<1	-	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	<0.5	-	-	-	-
Chrysene	0.5	mg/kg	<0.5	-	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	<0.5	-	-	-	-
Fluoranthene	0.5	mg/kg	<0.5	-	-	-	-
Fluorene	0.5	mg/kg	<0.5	-	-	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	<0.5	-	-	-	-
Naphthalene	0.5	mg/kg	<0.5	-	-	-	-
Phenanthrene	0.5	mg/kg	<0.5	-	-	-	-
Pyrene	0.5	mg/kg	<0.5	-	-	-	-
Sum of PAHs	0.5	mg/kg	<0.5	-	-	-	-
2-Fluorobiphenyl - Surrogate	-	%	88	-	-	-	-
p-Terphenyl-D14 - Surrogate	-	%	106	-	-	-	-
Anthracene-d10 - Surrogate	-	%	94	-	-	-	-
<b>2000 TPH (C10 - C36) in Soil by GC</b> C10-C14 Fraction	10	mg/kg	<10		_		
C15-C28 Fraction	20	mg/kg	<20	_	_	_	_
C29-C36 Fraction	20	mg/kg	59	_	_	_	_
	20	mg/ng	J9				
Metals Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS							
Arsenic	2	mg/kg	<2	<2	-	-	-
Cadmium	2	mg/kg	<2	<2	-	-	-
Chromium	2	mg/kg	12	14	-	-	-
Copper	2	mg/kg	10	12	-	-	-



Customer Semple ID			TP71 0-0.1	QC23A	TP71 0.2-0.3	TP71 0.4-0.5	TP71 0.9-1.0
Customer Sample ID  Amdel Sample Number			944116	944117	944118	944119	944120
Date Sampled			09/04/2008	09/04/2008	09/04/2008	09/04/2008	09/04/2008
Metals							
Test/Reference	PQL	Unit					
Lead	2	mg/kg	4.6	5.6	-	-	-
Nickel	2	mg/kg	4.8	5.9	-	-	-
Zinc	2	mg/kg	21	26	-	-	-
Inorganics							
Test/Reference	PQL	Unit					
4000 pH in Soil							
pH	0.1	рН	8.1	-	-	-	-
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content							
% Moisture	1	%	9	11	-	-	-

Customer Sample ID Amdel Sample Number			TP71 1.9-2.0 944121	TP72 0-0.1 944122	TP72 0.2-0.3 944123	TP72 0.4-0.5 944124	QC24A 944125
Date Sampled			09/04/2008	09/04/2008	09/04/2008	09/04/2008	09/04/2008
VOC	DOL						
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&	Т						
Benzene	0.2	mg/kg	-	<0.2	-	-	-
Ethylbenzene	1	mg/kg	-	<1	-	-	-
Meta- & Para- Xylene	2	mg/kg	-	<2	-	-	-
Ortho-Xylene	1	mg/kg	-	<1	-	-	-
Toluene	1	mg/kg	-	<1	-	-	-
Total Xylenes	3	mg/kg	-	<3	-	-	-
C6-C9 Fraction	5	mg/kg	-	<5	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	-	99	-	-	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	ECD						
a-BHC	0.5	mg/kg	-	<0.5	-	-	-
a-Chlordane	0.5	mg/kg	-	<0.5	-	-	-
a-Endosulfan	0.5	mg/kg	-	<0.5	-	-	-
Aldrin	0.5	mg/kg	-	<0.5	-	-	-
b-BHC	0.5	mg/kg	-	<0.5	-	-	-
b-Endosulfan	0.5	mg/kg	-	<0.5	-	-	-
d-BHC	0.5	mg/kg	-	<0.5	-	-	-
DDD	0.5	mg/kg	-	<0.5	-	-	-
DDE	0.5	mg/kg	-	<0.5	-	-	-
DDT	0.5	mg/kg	-	<0.5	-	-	-
Dieldrin	0.5	mg/kg	-	<0.5	-	-	-
Endosulfan sulfate	0.5	mg/kg	-	<0.5	-	-	-
Endrin	0.5	mg/kg	-	<0.5	-	-	-
Endrin Aldehyde	0.5	mg/kg	-	<0.5	-	-	-
g-BHC	0.5	mg/kg	-	<0.5	-	-	-
g-Chlordane	0.5	mg/kg	-	<0.5	-	-	-
- Heptachlor	0.5	mg/kg	-	<0.5	-	-	_



Customer Sample ID Amdel Sample Number Date Sampled			TP71 1.9-2.0 944121 09/04/2008	TP72 0-0.1 944122 09/04/2008	TP72 0.2-0.3 944123 09/04/2008	TP72 0.4-0.5 944124 09/04/2008	QC24A 944125 09/04/2008
SVOC			09/04/2006	09/04/2006	09/04/2008	09/04/2006	09/04/2000
Test/Reference	PQL	Unit					
Heptachlor epoxide	0.5	mg/kg	-	<0.5	-	-	-
Hexachlorobenzene (HCB)	0.5	mg/kg	-	<0.5	-	-	_
Methoxychlor	0.5	mg/kg	-	<0.5	-	-	_
Oxychlordane	0.5	mg/kg	-	<0.5	-	-	_
2.4.5.6-tetrachloro-m-xylene-SURROG	1	%	-	98	-	-	-
ATE							
2100 PAH in Soil by GC Acenaphthene	0.5	mg/kg	-	<0.5	-	-	-
Acenaphthylene	0.5	mg/kg	-	<0.5	-	-	-
Anthracene	0.5	mg/kg	-	<0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	-	<0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	-	<0.5	-	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	<1	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	<0.5	-	-	-
Chrysene	0.5	mg/kg	-	<0.5	-	-	-
Dibenz(ah)anthracene	0.5	mg/kg	-	<0.5	-	-	-
Fluoranthene	0.5	mg/kg	-	<0.5	-	-	-
Fluorene	0.5	mg/kg	-	<0.5	-	-	_
ndeno(123-cd)pyrene	0.5	mg/kg	-	<0.5	-	-	_
Naphthalene	0.5	mg/kg	-	<0.5	-	-	_
· Phenanthrene	0.5	mg/kg	-	<0.5	-	-	_
Pyrene	0.5	mg/kg	-	<0.5	-	-	_
Sum of PAHs	0.5	mg/kg	-	<0.5	-	-	_
2-Fluorobiphenyl - Surrogate	-	%	-	88	-	-	_
o-Terphenyl-D14 - Surrogate	-	%	-	105	-	-	_
Anthracene-d10 - Surrogate	-	%	-	93	-	-	_
2000 TPH (C10 - C36) in Soil by GC							
C10-C14 Fraction	10	mg/kg	-	<10	-	-	-
C15-C28 Fraction	20	mg/kg	-	<20	-	-	-
C29-C36 Fraction	20	mg/kg	-	21	-	-	-
Metals							
Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICP/MS							
Arsenic	2	mg/kg	-	2.2	-	-	-
Cadmium	2	mg/kg	-	<2	-	-	-
Chromium	2	mg/kg	-	32	-	-	-
Copper	2	mg/kg	-	18	-	-	-
Lead	2	mg/kg	-	8.3	-	-	-
Nickel	2	mg/kg	-	17	-	-	-
Zinc	2	mg/kg	-	25	-	-	-
Inorganics Test/Reference	PQL	Unit					
4000 pH in Soil pH	0.1	рН	-	8.5	-	-	-
<b>Miscellaneous</b> Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%		10	_		_



Customer Sample ID Amdel Sample Number Date Sampled			TP72 0.9-1.0 944126 09/04/2008	TP72 1.9-2.0 944127 09/04/2008	TP73 0-0.1 944128 09/04/2008	TP73 0.2-0.3 944129 09/04/2008	TP73 0.4-0.5 944130 09/04/2008
VOC Test/Reference	PQL	Unit					
		Offic					
1100 BTEX &(C6-C9) in Soil by P&T Benzene		ma/ka				-0.0	
	0.2	mg/kg	-	-	-	<0.2	-
Ethylbenzene Meta & Bara Yulana	1	mg/kg	-	-	-	<1	-
Meta- & Para- Xylene	2	mg/kg	-	-	-	<2	-
Ortho-Xylene	1	mg/kg	-	-	-	<1	-
Toluene	1	mg/kg	-	-	-	<1	-
Total Xylenes	3	mg/kg	-	-	-	<3	-
C6-C9 Fraction	5	mg/kg	-	-	-	<5	-
4-Bromofluorobenzene - Surrogate	-	%	-	-	-	99	-
SVOC	501						
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-E						40 F	
a-BHC	0.5	mg/kg	-	-	-	<0.5	-
a-Chlordane	0.5	mg/kg	-	-	-	<0.5	-
a-Endosulfan	0.5	mg/kg	-	-	-	<0.5	-
Aldrin	0.5	mg/kg	-	-	-	<0.5	-
b-BHC	0.5	mg/kg	-	-	-	<0.5	-
b-Endosulfan	0.5	mg/kg	-	-	-	<0.5	-
d-BHC	0.5	mg/kg	-	-	-	<0.5	-
DDD	0.5	mg/kg	-	-	-	<0.5	-
DDE	0.5	mg/kg	-	-	-	<0.5	-
DDT	0.5	mg/kg	-	-	-	<0.5	-
Dieldrin	0.5	mg/kg	-	-	-	<0.5	-
Endosulfan sulfate	0.5	mg/kg	-	-	-	<0.5	-
Endrin	0.5	mg/kg	-	-	-	<0.5	-
Endrin Aldehyde	0.5	mg/kg	-	-	-	<0.5	-
g-BHC	0.5	mg/kg	-	-	-	<0.5	-
g-Chlordane	0.5	mg/kg	-	-	-	<0.5	-
Heptachlor	0.5	mg/kg	-	-	-	<0.5	-
Heptachlor epoxide	0.5	mg/kg	-	-	-	<0.5	-
Hexachlorobenzene (HCB)	0.5	mg/kg	-	-	-	<0.5	-
Methoxychlor	0.5	mg/kg	-	-	-	<0.5	-
Oxychlordane	0.5	mg/kg	-	-	-	<0.5	-
2.4.5.6-tetrachloro-m-xylene-SURROG ATE	1	%	-	-	-	100	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	-	-	<0.5	-
Acenaphthylene	0.5	mg/kg	-	-	-	<0.5	-
Anthracene	0.5	mg/kg	-	-	-	<0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	-	<0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	-	<0.5	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	-	<1	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	<0.5	-
Chrysene	0.5	mg/kg	-	-	-	<0.5	-
Dibenz(ah)anthracene	0.5	mg/kg	-	-	-	<0.5	-
Fluoranthene	0.5	mg/kg	-	-	_	<0.5	_
Fluorene	0.5	mg/kg	-	-	_	<0.5	_
Indeno(123-cd)pyrene	0.5	mg/kg mg/kg				<0.5	



Customer Sample ID Amdel Sample Number Date Sampled			TP72 0.9-1.0 944126 09/04/2008	TP72 1.9-2.0 944127 09/04/2008	TP73 0-0.1 944128 09/04/2008	TP73 0.2-0.3 944129 09/04/2008	TP73 0.4-0.5 944130 09/04/2008
SVOC Test/Reference	PQL	Lloit					
rest/Reference	PQL	Unit					
Naphthalene	0.5	mg/kg	-	-	-	<0.5	-
Phenanthrene	0.5	mg/kg	-	-	-	<0.5	-
Pyrene	0.5	mg/kg	-	-	-	<0.5	-
Sum of PAHs	0.5	mg/kg	-	-	-	<0.5	-
2-Fluorobiphenyl - Surrogate	-	%	-	-	-	90	-
p-Terphenyl-D14 - Surrogate	-	%	-	-	-	108	-
Anthracene-d10 - Surrogate	-	%	-	-	-	98	-
2000 TPH (C10 - C36) in Soil by	GC						
C10-C14 Fraction	10	mg/kg	-	-	-	<10	-
C15-C28 Fraction	20	mg/kg	-	-	-	<20	-
C29-C36 Fraction	20	mg/kg	-	-	-	<20	-
Metals							
Test/Reference	PQL	Unit					
3100 Total Metals in Soil By ICF	P/MS						
Arsenic	2	mg/kg	-	-	-	<2	-
Cadmium	2	mg/kg	-	-	-	<2	-
Chromium	2	mg/kg	-	-	-	26	-
Copper	2	mg/kg	-	-	-	15	-
Lead	2	mg/kg	-	-	-	11	-
Nickel	2	mg/kg	-	-	-	12	-
Zinc	2	mg/kg	-	-	-	17	-
Inorganics							
Test/Reference	PQL	Unit					
4000 pH in Soil							
pH	0.1	рН	-	-	-	8.6	-
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content							
% Moisture	1	%	-	-	-	9	-

Customer Sample ID Amdel Sample Number Date Sampled VOC	DOI	11-:4	TP73 0.9-1.0 944131 09/04/2008	TP73 1.9-2.0 944132 09/04/2008	TP74 0-0.1 944133 09/04/2008	TP74 0.2-0.3 944134 09/04/2008	TP74 0.4-0.5 944135 09/04/2008
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&T							
Benzene	0.2	mg/kg	-	-	<0.2	-	-
Ethylbenzene	1	mg/kg	-	-	<1	-	-
Meta- & Para- Xylene	2	mg/kg	-	-	<2	-	-
Ortho-Xylene	1	mg/kg	-	-	<1	-	-
Toluene	1	mg/kg	-	-	<1	-	-
Total Xylenes	3	mg/kg	-	-	<3	-	-
C6-C9 Fraction	5	mg/kg	-	-	<5	-	-
4-Bromofluorobenzene - Surrogate	-	%	-	-	102	-	-
svoc							
Test/Reference	PQL	Unit					



Customer Sample ID Amdel Sample Number			TP73 0.9-1.0 944131	TP73 1.9-2.0 944132	TP74 0-0.1 944133	TP74 0.2-0.3 944134	TP74 0.4-0.5 944135
Date Sampled			09/04/2008	09/04/2008	09/04/2008	09/04/2008	09/04/2008
SVOC					00.0 2000		
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-E	CD						
a-BHC	0.5	mg/kg	-	-	<0.5	-	-
a-Chlordane	0.5	mg/kg	-	-	<0.5	-	-
a-Endosulfan	0.5	mg/kg	-	-	<0.5	-	-
Aldrin	0.5	mg/kg	-	-	<0.5	-	-
b-BHC	0.5	mg/kg	-	-	<0.5	-	-
b-Endosulfan	0.5	mg/kg	-	-	<0.5	-	-
d-BHC	0.5	mg/kg	-	-	<0.5	-	-
DDD	0.5	mg/kg	-	-	<0.5	-	-
DDE	0.5	mg/kg	-	-	<0.5	-	-
DDT	0.5	mg/kg	-	-	<0.5	-	-
Dieldrin	0.5	mg/kg	-	-	<0.5	-	-
Endosulfan sulfate	0.5	mg/kg	-	-	<0.5	-	-
Endrin	0.5	mg/kg	-	-	<0.5	-	-
Endrin Aldehyde	0.5	mg/kg	-	-	<0.5	-	-
g-BHC	0.5	mg/kg	-	-	<0.5	-	-
g-Chlordane	0.5	mg/kg	-	-	<0.5	-	-
Heptachlor	0.5	mg/kg	-	-	<0.5	-	-
Heptachlor epoxide	0.5	mg/kg	-	-	<0.5	-	-
Hexachlorobenzene (HCB)	0.5	mg/kg	-	-	<0.5	-	-
Methoxychlor	0.5	mg/kg	-	-	<0.5	-	-
Oxychlordane	0.5	mg/kg	-	-	<0.5	-	-
2.4.5.6-tetrachloro-m-xylene-SURROG ATE	1	%	-	-	100	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	-	<0.5	-	-
Acenaphthylene	0.5	mg/kg	-	-	<0.5	-	-
Anthracene	0.5	mg/kg	-	-	<0.5	-	-
Benz(a)anthracene	0.5	mg/kg	-	-	<0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	-	-	<0.5	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	<1	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	<0.5	-	-
Chrysene	0.5	mg/kg	-	-	<0.5	-	-
Dibenz(ah)anthracene	0.5	mg/kg	-	-	<0.5	-	-
Fluoranthene	0.5	mg/kg	-	-	<0.5	-	-
Fluorene	0.5	mg/kg	-	-	<0.5	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	-	-	<0.5	-	-
Naphthalene	0.5	mg/kg	-	-	<0.5	-	-
Phenanthrene	0.5	mg/kg	-	-	<0.5	-	-
Pyrene	0.5	mg/kg	-	_	<0.5	-	-
Sum of PAHs	0.5	mg/kg	-	_	<0.5	-	-
2-Fluorobiphenyl - Surrogate	_	%	-	_	90	-	-
p-Terphenyl-D14 - Surrogate	-	%	-	-	106	-	-
Anthracene-d10 - Surrogate	-	%	-	-	96	-	-
2000 TPH (C10 - C36) in Soil by GC							
C10-C14 Fraction	10	mg/kg	-	-	<10	-	-
C15-C28 Fraction	20	mg/kg	-	-	<20	-	-
C29-C36 Fraction	20	mg/kg	-	-	25	-	-
Metals		. <del>.</del>					
Test/Reference	PQL	Unit					



Customer Sample ID Amdel Sample Number Date Sampled Metals Test/Reference	PQL	Unit	TP73 0.9-1.0 944131 09/04/2008	TP73 1.9-2.0 944132 09/04/2008	TP74 0-0.1 944133 09/04/2008	TP74 0.2-0.3 944134 09/04/2008	TP74 0.4-0.5 944135 09/04/2008
3100 Total Metals in Soil By ICP/M	//S						
Arsenic	2	mg/kg	-	-	<2	-	-
Cadmium	2	mg/kg	-	-	<2	-	-
Chromium	2	mg/kg	-	-	9.8	-	-
Copper	2	mg/kg	-	-	3.2	-	-
Lead	2	mg/kg	-	-	3.8	-	-
Nickel	2	mg/kg	-	-	2.6	-	-
Zinc	2	mg/kg	-	-	7.1	-	-
Inorganics							
Test/Reference	PQL	Unit					
4000 pH in Soil							
рН	0.1	pН	-	-	7.8	-	-
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	-	-	3	-	-

Customer Sample ID Amdel Sample Number Date Sampled VOC			TP74 0.9-1.0 944136 09/04/2008	TP74 1.9-2.0 944137 09/04/2008	TP75 0-0.1 944138 09/04/2008	TP75 0.2-0.3 944139 09/04/2008	TP75 0.4-0.5 944140 09/04/2008
Test/Reference	PQL	Unit					
1100 MAH(BTEX & C6-C9) in Soil	P&T						
Benzene	0.2	mg/kg	-	-	<0.2	-	-
Cumene	0.5	mg/kg	-	-	<0.5	-	-
Ethylbenzene	1	mg/kg	-	-	<1	-	-
Meta- & Para- Xylene	2	mg/kg	-	-	<2	-	-
Ortho-Xylene	1	mg/kg	-	-	<1	-	-
Styrene	0.5	mg/kg	-	-	<0.5	-	-
Toluene	1	mg/kg	-	-	<1	-	-
Total Xylenes	3	mg/kg	-	-	<3	-	-
C6-C9 Fraction	5	mg/kg	-	-	<5	-	-
4-Bromofluorobenzene - Surrogate	-	%	-	-	92	-	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	-ECD						
a-BHC	0.5	mg/kg	-	-	<0.5	-	-
a-Chlordane	0.5	mg/kg	-	-	<0.5	-	-
a-Endosulfan	0.5	mg/kg	-	-	<0.5	-	-
Aldrin	0.5	mg/kg	-	-	<0.5	-	-
b-BHC	0.5	mg/kg	-	-	<0.5	-	-
b-Endosulfan	0.5	mg/kg	-	-	<0.5	-	-
d-BHC	0.5	mg/kg	-	-	<0.5	-	-
DDD	0.5	mg/kg	-	-	<0.5	-	-
DDE	0.5	mg/kg	-	-	<0.5	-	-
DDT	0.5	mg/kg	-	-	<0.5	-	-
Dieldrin	0.5	mg/kg	-	-	<0.5	-	-

First Reported: 17 April 2008 Date Printed: 21 April 2008 Amdel Ltd 1868 Dandenong Rd Clayton VIC Australia 3168 ABN: 30 008 127 802 Telephone: (03) 9538 2277 Facsimile: (03) 9538 2278

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Customer Sample ID Amdel Sample Number			TP74 0.9-1.0 944136	TP74 1.9-2.0 944137	TP75 0-0.1 944138	TP75 0.2-0.3 944139	TP75 0.4-0.5 944140
Date Sampled			09/04/2008	09/04/2008	09/04/2008	09/04/2008	09/04/2008
SVOC							
Test/Reference	PQL	Unit					
Endosulfan sulfate	0.5	mg/kg	-	-	<0.5	-	-
Endrin	0.5	mg/kg	-	-	<0.5	-	-
Endrin Aldehyde	0.5	mg/kg	-	-	<0.5	-	-
g-BHC	0.5	mg/kg	-	-	<0.5	-	-
g-Chlordane	0.5	mg/kg	-	-	<0.5	-	-
Heptachlor	0.5	mg/kg	-	-	<0.5	-	-
Heptachlor epoxide	0.5	mg/kg	-	-	<0.5	-	-
Hexachlorobenzene (HCB)	0.5	mg/kg	-	-	<0.5	-	-
Methoxychlor	0.5	mg/kg	-	-	<0.5	-	-
Oxychlordane	0.5	mg/kg	-	-	<0.5	-	-
2.4.5.6-tetrachloro-m-xylene-SURROG ATE	1	%	-	-	121	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	-	<0.5	-	-
Acenaphthylene	0.5	mg/kg	-	-	<0.5	-	-
Anthracene	0.5	mg/kg	-	-	<0.5	-	-
Benz(a)anthracene	0.5	mg/kg	-	-	<0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	-	-	<0.5	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	<1	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	<0.5	-	-
Chrysene	0.5	mg/kg	-	-	<0.5	-	-
Dibenz(ah)anthracene	0.5	mg/kg	-	-	<0.5	-	-
Fluoranthene	0.5	mg/kg	-	-	<0.5	-	-
Fluorene	0.5	mg/kg	-	-	<0.5	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	-	-	<0.5	-	-
Naphthalene	0.5	mg/kg	-	-	<0.5	-	-
Phenanthrene	0.5	mg/kg	-	-	<0.5	-	-
Pyrene	0.5	mg/kg	-	-	<0.5	-	-
Sum of PAHs	0.5	mg/kg	-	-	<0.5	-	-
2-Fluorobiphenyl - Surrogate	-	%	-	-	110	-	-
p-Terphenyl-D14 - Surrogate	-	%	-	-	130	-	-
Anthracene-d10 - Surrogate	-	%	-	-	116	-	-
2600 PCBs in Soil by GC							
Aroclor 1016DB	0.5	mg/kg	-	-	<0.5	-	-
Aroclor 1221DB	0.5	mg/kg	-	-	<0.5	-	-
Aroclor 1232 and 1242 as totalDB	1	mg/kg	-	-	<1	-	-
Aroclor 1248 and 1254 as totalDB	1	mg/kg	-	-	<1	-	-
Aroclor 1260DB	0.5	mg/kg	-	-	<0.5	-	-
Total Polychlorinated biphenylsDB	1	mg/kg	-	-	<1	-	-
Decachlorobiphenyl - PCB surrogate	1	%	-	-	104	-	-
<b>2000 TPH (C10 - C36) in Soil by GC</b> C10-C14 Fraction	10	mg/kg	-	-	<10	-	-
C15-C28 Fraction	20	mg/kg	-	-	<20	-	-
C29-C36 Fraction	20	mg/kg	-	-	35	-	-
Metals Test/Reference	PQL	Unit					
3400 Mercury in Soil by FIMS Mercury	0.01	mg/kg	-	-	0.01	-	-
3100 Total Metals in Soil By ICP/MS Antimony	2	mg/kg	-	-	<2	-	-



Customer Sample ID Amdel Sample Number Date Sampled			TP74 0.9-1.0 944136 09/04/2008	TP74 1.9-2.0 944137 09/04/2008	TP75 0-0.1 944138 09/04/2008	TP75 0.2-0.3 944139 09/04/2008	TP75 0.4-0.5 944140 09/04/2008
Metals Test/Reference	PQL	Unit					
Arsenic	2	mg/kg	-	-	<2	-	-
Barium	2	mg/kg	-	-	63	-	-
Beryllium	2	mg/kg	-	-	<2	-	-
Boron	2	mg/kg	-	-	12	-	-
Cadmium	2	mg/kg	-	-	<2	-	-
Chromium	2	mg/kg	-	-	26	-	-
Cobalt	2	mg/kg	-	-	8.0	-	-
Copper	2	mg/kg	-	-	17	-	-
Lead	2	mg/kg	-	-	15	-	-
Manganese	2	mg/kg	-	-	280	-	-
Molybdenum	2	mg/kg	-	-	<2	-	-
Nickel	2	mg/kg	-	-	13	-	-
Selenium	2	mg/kg	-	-	<2	-	-
Tin	2	mg/kg	-	-	<2	-	-
Vanadium	2	mg/kg	-	-	27	-	-
Zinc	2	mg/kg	-	-	26	-	-
Inorganics	DOL	11-34					
Test/Reference	PQL	Unit					
<b>4300 Anions in Soil by IC</b> Fluoride (Soluble)	2	mg/kg	-	-	4	-	-
4270 Total Cyanide in Soil Col	ourmetric						
Total Cyanide	0.1	mg/kg	-	-	0.4	-	-
4000 pH in Soil							
pH	0.1	pН	-	-	7.8	-	-
<b>4850 Total Phenolics in Soil by</b> Total Phenolics	<b>/ SFA</b> 0.1	mg/kg	-	-	<0.1	-	-
Miscellaneous Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	-	-	5	-	-

Customer Sample ID Amdel Sample Number Date Sampled VOC			TP75 0.9-1.0 944141 09/04/2008	TP75 1.9-2.0 944142 09/04/2008	TP76 0-0.1 944143 09/04/2008	QC26A 944144 09/04/2008	TP76 0.2-0.3 944145 09/04/2008
Test/Reference	PQL	Unit					
1100 BTEX &(C6-C9) in Soil by P&	T						
Benzene	0.2	mg/kg	-	-	<0.2	-	-
Ethylbenzene	1	mg/kg	-	-	<1	-	-
Meta- & Para- Xylene	2	mg/kg	-	-	<2	-	-
Ortho-Xylene	1	mg/kg	-	-	<1	-	-
Toluene	1	mg/kg	-	-	<1	-	-
Total Xylenes	3	mg/kg	-	-	<3	-	-
C6-C9 Fraction	5	mg/kg	-	-	<5	-	-
4-Bromofluorobenzene - Surrogate	-	%	-	-	98	-	-
svoc							
Test/Reference	PQL	Unit					



Customer Sample ID Amdel Sample Number			TP75 0.9-1.0 944141	TP75 1.9-2.0 944142	TP76 0-0.1 944143	QC26A 944144	TP76 0.2-0.3 944145
Date Sampled			09/04/2008	09/04/2008	09/04/2008	09/04/2008	09/04/2008
SVOC							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	ECD						
a-BHC	0.5	mg/kg	-	-	<0.5	-	-
a-Chlordane	0.5	mg/kg	-	-	<0.5	-	-
a-Endosulfan	0.5	mg/kg	-	-	<0.5	-	-
Aldrin	0.5	mg/kg	-	-	<0.5	-	-
b-BHC	0.5	mg/kg	-	-	<0.5	-	-
b-Endosulfan	0.5	mg/kg	-	-	<0.5	-	-
d-BHC	0.5	mg/kg	-	-	<0.5	-	-
DDD	0.5	mg/kg	-	-	<0.5	-	-
DDE	0.5	mg/kg	-	-	<0.5	-	-
DDT	0.5	mg/kg	-	-	<0.5	-	-
Dieldrin	0.5	mg/kg	-	-	<0.5	-	-
Endosulfan sulfate	0.5	mg/kg	-	-	<0.5	-	-
Endrin	0.5	mg/kg	=	-	<0.5	-	-
Endrin Aldehyde	0.5	mg/kg	-	-	<0.5	-	-
g-BHC	0.5	mg/kg	-	-	<0.5	-	-
g-Chlordane	0.5	mg/kg	-	-	<0.5	-	-
Heptachlor	0.5	mg/kg	-	-	<0.5	-	-
Heptachlor epoxide	0.5	mg/kg	-	-	<0.5	-	-
Hexachlorobenzene (HCB)	0.5	mg/kg	-	-	<0.5	-	-
Methoxychlor	0.5	mg/kg	-	_	<0.5	-	-
Oxychlordane	0.5	mg/kg	-	-	<0.5	-	-
2.4.5.6-tetrachloro-m-xylene-SURROG ATE	1	%	-	-	124	-	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	-	<0.5	-	-
Acenaphthylene	0.5	mg/kg	-	-	<0.5	-	-
Anthracene	0.5	mg/kg	-	-	<0.5	-	-
Benz(a)anthracene	0.5	mg/kg	-	-	<0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	-	-	<0.5	-	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	<1	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	<0.5	-	-
Chrysene	0.5	mg/kg	-	-	<0.5	-	-
Dibenz(ah)anthracene	0.5	mg/kg	-	-	<0.5	-	-
Fluoranthene	0.5	mg/kg	-	-	<0.5	-	-
Fluorene	0.5	mg/kg	-	-	<0.5	-	-
Indeno(123-cd)pyrene	0.5	mg/kg	-	-	<0.5	-	-
Naphthalene	0.5	mg/kg	-	-	<0.5	-	-
Phenanthrene	0.5	mg/kg	-	-	<0.5	-	-
Pyrene	0.5	mg/kg	-	-	<0.5	-	-
Sum of PAHs	0.5	mg/kg	-	-	<0.5	-	-
2-Fluorobiphenyl - Surrogate	_	%	-	_	112	-	-
p-Terphenyl-D14 - Surrogate	-	%	-	-	110	-	-
Anthracene-d10 - Surrogate	-	%	-	-	120	-	-
2000 TPH (C10 - C36) in Soil by GC	:						
C10-C14 Fraction	10	mg/kg	-	-	<10	-	-
C15-C28 Fraction	20	mg/kg	=	-	<20	-	-
C29-C36 Fraction	20	mg/kg	-	-	<20	-	-
Metals							
Test/Reference	PQL	Unit					



Customer Sample ID Amdel Sample Number Date Sampled Metals Test/Reference	PQL	Unit	TP75 0.9-1.0 944141 09/04/2008	TP75 1.9-2.0 944142 09/04/2008	TP76 0-0.1 944143 09/04/2008	QC26A 944144 09/04/2008	TP76 0.2-0.3 944145 09/04/2008
3100 Total Metals in Soil By ICI Arsenic	<b>P/IVIS</b> 2	mg/kg	_	_	<2	_	_
Cadmium	2	mg/kg	-	_	- <2	_	_
Chromium	2	mg/kg	-	-	9.5	-	_
Copper	2	mg/kg	-	-	4.0	-	_
Lead	2	mg/kg	-	-	<2	-	_
Nickel	2	mg/kg	-	-	3.3	-	-
Zinc	2	mg/kg	-	-	5.1	-	-
Inorganics							
Test/Reference	PQL	Unit					
4000 pH in Soil							
рН	0.1	pН	-	-	6.5	-	-
Miscellaneous							
Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	-	-	1	-	-

Customer Sample ID Amdel Sample Number Date Sampled VOC			TP76 0.4-0.5 944146 09/04/2008	TP76 0.9-1.0 944147 09/04/2008	TP76 1.9-2.0 944148 09/04/2008	TP77 0-0.1 944149 09/04/2008	TP77 0.2-0.3 944150 09/04/2008
Test/Reference	PQL	Unit					
1100 MAH(BTEX & C6-C9) in Soil	P&T						
Benzene	0.2	mg/kg	-	-	-	<0.2	-
Cumene	0.5	mg/kg	-	-	-	<0.5	-
Ethylbenzene	1	mg/kg	-	-	-	<1	-
Meta- & Para- Xylene	2	mg/kg	-	-	-	<2	-
Ortho-Xylene	1	mg/kg	-	-	-	<1	-
Styrene	0.5	mg/kg	-	-	-	<0.5	-
Toluene	1	mg/kg	-	-	-	<1	-
Total Xylenes	3	mg/kg	-	-	-	<3	-
C6-C9 Fraction	5	mg/kg	-	-	-	<5	-
4-Bromofluorobenzene - Surrogate	-	%	-	-	-	89	-
SVOC							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Soil by GC-	-ECD						
a-BHC	0.5	mg/kg	-	-	-	<0.5	-
a-Chlordane	0.5	mg/kg	-	-	-	<0.5	-
a-Endosulfan	0.5	mg/kg	-	-	-	<0.5	-
Aldrin	0.5	mg/kg	-	-	-	<0.5	-
b-BHC	0.5	mg/kg	-	-	-	<0.5	-
b-Endosulfan	0.5	mg/kg	-	-	-	<0.5	-
d-BHC	0.5	mg/kg	-	-	-	<0.5	-
DDD	0.5	mg/kg	-	-	-	<0.5	-
DDE	0.5	mg/kg	-	-	-	<0.5	-
DDT	0.5	mg/kg	-	-	-	<0.5	-
Dieldrin	0.5	mg/kg	-	-	-	<0.5	-



Customer Sample ID Amdel Sample Number			TP76 0.4-0.5 944146	TP76 0.9-1.0 944147	TP76 1.9-2.0 944148	TP77 0-0.1 944149	TP77 0.2-0.3 944150
Date Sampled			09/04/2008	09/04/2008	09/04/2008	09/04/2008	09/04/2008
SVOC Test/Reference	PQL	Unit					
1 est/Reference	FQL	Offic					
Endosulfan sulfate	0.5	mg/kg	-	-	-	<0.5	-
Endrin	0.5	mg/kg	-	-	-	<0.5	-
Endrin Aldehyde	0.5	mg/kg	-	-	-	<0.5	-
g-BHC	0.5	mg/kg	-	-	-	<0.5	-
g-Chlordane	0.5	mg/kg	-	-	-	<0.5	-
Heptachlor	0.5	mg/kg	-	-	-	<0.5	-
Heptachlor epoxide	0.5	mg/kg	-	-	-	<0.5	-
Hexachlorobenzene (HCB)	0.5	mg/kg	-	-	-	<0.5	-
Methoxychlor	0.5	mg/kg	-	-	-	<0.5	-
Oxychlordane	0.5	mg/kg	-	-	-	<0.5	-
2.4.5.6-tetrachloro-m-xylene-SURROG ATE	1	%	-	-	-	99	-
2100 PAH in Soil by GC							
Acenaphthene	0.5	mg/kg	-	-	-	<0.5	-
Acenaphthylene	0.5	mg/kg	=	-	-	<0.5	-
Anthracene	0.5	mg/kg	-	-	-	<0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	-	<0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	-	<0.5	-
Benzo(b)&(k)fluoranthene	1	mg/kg	-	-	-	<1	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	<0.5	-
Chrysene	0.5	mg/kg	-	-	-	<0.5	-
Dibenz(ah)anthracene	0.5	mg/kg	-	-	-	<0.5	-
Fluoranthene	0.5	mg/kg	-	-	-	<0.5	-
Fluorene	0.5	mg/kg	-	-	-	<0.5	-
Indeno(123-cd)pyrene	0.5	mg/kg	-	-	-	<0.5	-
Naphthalene	0.5	mg/kg	-	-	-	<0.5	-
Phenanthrene	0.5	mg/kg	-	-	-	<0.5	-
Pyrene	0.5	mg/kg	-	-	-	<0.5	-
Sum of PAHs	0.5	mg/kg	-	-	-	<0.5	-
2-Fluorobiphenyl - Surrogate	-	%	-	-	-	90	-
p-Terphenyl-D14 - Surrogate	-	%	-	-	-	108	-
Anthracene-d10 - Surrogate	-	%	-	-	-	94	-
2600 PCBs in Soil by GC							
Aroclor 1016DB	0.5	mg/kg	-	-	-	<0.5	-
Aroclor 1221DB	0.5	mg/kg	-	-	-	<0.5	-
Aroclor 1232 and 1242 as totalDB	1	mg/kg	-	-	-	<1	-
Aroclor 1248 and 1254 as totalDB	1	mg/kg	-	-	-	<1	-
Aroclor 1260DB	0.5	mg/kg	-	-	-	<0.5	-
Total Polychlorinated biphenylsDB	1	mg/kg	-	-	-	<1	-
Decachlorobiphenyl - PCB surrogate	1	%	-	-	-	84	-
<b>2000 TPH (C10 - C36) in Soil by GC</b> C10-C14 Fraction	10	mg/kg	-	-	-	<10	_
C15-C28 Fraction	20	mg/kg	-	_	_	<20	_
C29-C36 Fraction	20	mg/kg mg/kg	-	-	-	<20	-
Metals		5 5					
Test/Reference	PQL	Unit					
3400 Mercury in Soil by FIMS	0.01	malka				<0.01	
Mercury 3100 Total Metals in Soil By ICP/MS	0.01	mg/kg	-	-	-	<b>~</b> U.U1	-
Antimony	2	mg/kg	-	-	-	<2	-



Customer Sample ID Amdel Sample Number Date Sampled			TP76 0.4-0.5 944146 09/04/2008	TP76 0.9-1.0 944147 09/04/2008	TP76 1.9-2.0 944148 09/04/2008	TP77 0-0.1 944149 09/04/2008	TP77 0.2-0.3 944150 09/04/2008
Metals Test/Reference	PQL	Unit					
Arsenic	2	mg/kg	-	-	-	<2	-
Barium	2	mg/kg	-	-	-	28	-
Beryllium	2	mg/kg	-	-	-	<2	-
Boron	2	mg/kg	-	-	-	9.0	-
Cadmium	2	mg/kg	-	-	-	<2	-
Chromium	2	mg/kg	-	-	-	20	-
Cobalt	2	mg/kg	-	-	-	5.5	-
Copper	2	mg/kg	-	-	-	11	-
Lead	2	mg/kg	-	-	-	7.3	-
Manganese	2	mg/kg	-	-	-	190	-
Molybdenum	2	mg/kg	-	-	-	<2	-
Nickel	2	mg/kg	-	-	-	8.6	-
Selenium	2	mg/kg	-	-	-	<2	-
Tin	2	mg/kg	-	-	-	<2	-
Vanadium	2	mg/kg	-	-	-	22	-
Zinc	2	mg/kg	-	-	-	12	-
Inorganics							
Test/Reference	PQL	Unit					
4300 Anions in Soil by IC Fluoride (Soluble)	2	mg/kg	_	_	_	4	_
4270 Total Cyanide in Soil Colou		9.1.9				·	
Total Cyanide	0.1	mg/kg	-	-	-	0.4	-
4000 pH in Soil		0 0					
pH	0.1	pН	-	-	-	7.8	-
<b>4850 Total Phenolics in Soil by S</b> Total Phenolics	FA 0.1	mg/kg	-	-	-	<0.1	-
<b>Miscellaneous</b> Test/Reference	PQL	Unit					
5000 Moisture Content % Moisture	1	%	-	-	-	2	-
O 1 - 112 - 4							

# Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Extracted	Analysed
1100 BTEX &(C6-C9) in Soil by P&T	11/04/2008	17/04/2008
1100 MAH(BTEX & C6-C9) in Soil P&T	11/04/2008	17/04/2008
2000 TPH (C10 - C36) in Soil by GC	11/04/2008	14/04/2008
2100 PAH in Soil by GC	11/04/2008	15/04/2008
2300 OC Pesticides in Soil by GC-ECD	11/04/2008	15/04/2008
2600 PCBs in Soil by GC	11/04/2008	15/04/2008
3100 Total Metals in Soil By ICP/MS	17/04/2008	18/04/2008
3400 Mercury in Soil by FIMS	17/04/2008	18/04/2008
4000 pH in Soil		14/04/2008
4270 Total Cyanide in Soil Colourmetric		16/04/2008
4300 Anions in Soil by IC	11/04/2008	14/04/2008
4850 Total Phenolics in Soil by SFA		16/04/2008
5000 Moisture Content		11/04/2008



# **Amdel Internal Quality Control Review**

#### General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples
  are included in this QC report where applicable. Additional QC data may be available on request.
- 2. Amdel QC Acceptance/Rejection criteria are available on request.
- 3. Proficiency trial results are available on request.
- 4. Actual PQLs are matrix dependant. Quotes PQLs may be raised where sample extracts are diluted due to interferences.
- 5. Results are uncorrected for matrix spike or surrogate recoveries.
- 6. Test samples duplicated or spiked, are for this job only and are identified in the following QC report.
- 7. SVOC analyses on waters are performed on homogenized, unfiltered sample, unless noted otherwise.
- 8. When individual results are qualified in the body of a report, refer to the qualifier descriptions that follow.

#### **Holding Times**

Please refer to 'Sampling and Preservation Chart for Soils & Waters' for holding times. (Form LM-FOR-ADM-020)

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgement.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitablity qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

\*\*NOTE: pH duplicates are reported as a range NOT an RPD

#### **Quality Control Results**

#### Laboratory: EN\_METALS

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
955190 [ Method Blank ]	•		•			•	
3400 Mercury in Soil by FIMS							
Mercury	mg/kg	<0.01			< 0.01	Т	
955437 [ Method Blank ]	•		•	,		•	
3100 Metals in Soil - As Received							
Antimony	mg/kg	<2			< 2	Т	
Arsenic	mg/kg	<2			< 2	Т	
Barium	mg/kg	<2			< 2	Т	
Beryllium	mg/kg	<2			< 2	Т	
Cadmium	mg/kg	<2			< 2	Т	
Chromium	mg/kg	<2			< 2	Т	
Cobalt	mg/kg	<2			< 2	Т	
Copper	mg/kg	<2			< 2	Т	
Lead	mg/kg	<2			< 2	Т	
Manganese	mg/kg	<2			< 2	Т	
Molybdenum	mg/kg	<2			< 2	Т	
Nickel	mg/kg	<2			< 2	Т	
Selenium	mg/kg	<2			< 2	Т	
Tin	mg/kg	<2			< 2	Т	
Vanadium	mg/kg	<2			< 2	Т	
Zinc	mg/kg	<2			< 2	Т	
955191 [ Laboratory Control Sample ]	•						
3400 Mercury in Soil by FIMS			Expected Value	Percent Recovery			
Mercury	mg/kg	9.3	10.0	93	80-120 %	Т	



# Laboratory: EN\_METALS

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
955438 [ Laboratory Control Sample ]			1	·		1	
3100 Metals in Soil - As Received			Expected Value	Percent Recovery			
Antimony	mg/kg	100	100.0	100	70-130 %	Т	
Arsenic	mg/kg	100	100.0	102	70-130 %	T T	
Barium	mg/kg	100	100.0	104	70-130 %	Т	
Beryllium	mg/kg	98	100.0	98	70-130 %	Т	
Boron	mg/kg	110	100.0	112	70-130 %	Т	
Cadmium	mg/kg	100	100.0	104	70-130 %	Т	
Chromium	mg/kg	100	100.0	103	70-130 %	Т	
Cobalt	mg/kg	110	100.0	111	70-130 %	Т	
Copper	mg/kg	110	100.0	114	70-130 %	Т	
Lead	mg/kg	94	100.0	94	70-130 %	Т	
Manganese	mg/kg	110	100.0	113	70-130 %	Т	
Molybdenum	mg/kg	120	100.0	116	70-130 %	Т	
Nickel	mg/kg	120	100.0	116	70-130 %	Т	
Selenium	mg/kg	89	100.0	89	70-130 %	Т	
Tin	mg/kg	110	100.0	114	70-130 %	Т	
Vanadium	mg/kg	100	100.0	104	70-130 %	Т	
Zinc	mg/kg	95	100.0	95	70-130 %	Т	
944207 [ Duplicate of 944106 ]	•		•			•	1
3100 Total Metals in Soil By ICP/MS			Result 2	RPD			
Arsenic	mg/kg	5.6	5.3	5	0-30 %	Т	
Cadmium	mg/kg	<2	<2	<1	0-30 %	Т	
Chromium	mg/kg	28	27	5	0-30 %	Т	
Copper	mg/kg	1100	1100	1	0-30 %	Т	
Lead	mg/kg	9.7	9.1	7	0-30 %	Т	
Nickel	mg/kg	16	16	<1	0-30 %	Т	
Zinc	mg/kg	35	32	10	0-30 %	Т	
944213 [ Spike of 944112 ]	•						
3100 Total Metals in Soil By ICP/MS			Spike Value	Percent Recovery			
Arsenic	mg/kg	100	100.0	100	70-130 %	Т	
Cadmium	mg/kg	100	100.0	103	70-130 %	Т	
Chromium	mg/kg	150	100.0	112	70-130 %	Т	
Copper	mg/kg	130	100.0	113	70-130 %	Т	
Lead	mg/kg	110	100.0	97	70-130 %	Т	
Nickel	mg/kg	150	100.0	125	70-130 %	Т	
Zinc	mg/kg	120	100.0	100	70-130 %	Т	
Laboratory: EN_SVOC	+		•	•		•	•
Sample, Test, Result Reference	Units	Result 1			Acceptance	Pass	Qualifying
944954 [ Method Blank ]		1 toodit 1		ļ	Limits	Limits	Codes

Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
944954 [ Method Blank ]						
2000 TPH (C10 - C36) in Soil by GC						
C10-C14 Fraction	mg/kg	<10		< 10	Т	
C15-C28 Fraction	mg/kg	<20		< 20	T	
C29-C36 Fraction	mg/kg	<20		< 20	Т	·



# Laboratory: EN\_SVOC

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
944956 [ Method Blank ]	+		1		Lillio	1	
2100 PAH in Soil by GC				1			
Acenaphthene	mg/kg	<0.5			< 0.5	Т	
Acenaphthylene	mg/kg	<0.5			< 0.5	T	
Anthracene	mg/kg	<0.5			< 0.5	T	
Benz(a)anthracene	mg/kg	<0.5			< 0.5	T	
Benzo(a)pyrene	mg/kg	<0.5			< 0.5	T	
Benzo(b)&(k)fluoranthene	mg/kg	<1			< 1	T	
Benzo(g.h.i)perylene	mg/kg	<0.5			< 0.5	T	
Chrysene	mg/kg	<0.5			< 0.5	T	
Dibenz(ah)anthracene	mg/kg	<0.5			< 0.5	T	
Fluoranthene	mg/kg	<0.5			< 0.5	T	
Fluorene	mg/kg	<0.5			< 0.5	T .	
Indeno(123-cd)pyrene	mg/kg	<0.5			< 0.5	<del>                                     </del>	
Naphthalene	mg/kg	<0.5			< 0.5	<del>  '</del>	
Phenanthrene	mg/kg	<0.5			< 0.5	<del>  '</del>	
Pyrene	mg/kg	<0.5			< 0.5	<del>                                     </del>	
Sum of PAHs	mg/kg	<0.5			< 0.5	T	
2-Fluorobiphenyl - Surrogate	%	104			70-130 %	<del>  '</del>	
Anthracene-d10 - Surrogate	%	110			70-130 %	<del>                                     </del>	
p-Terphenyl-D14 - Surrogate	%	124			70-130 %	<del>                                     </del>	
	70	12-1			70 100 70	<u> </u>	
2300 OC Pesticides in Soil by GC-ECD		10.5			.05	Т	
a-BHC	mg/kg	<0.5			< 0.5	+	
a-Chlordane	mg/kg	<0.5			< 0.5	T	
a-Endosulfan	mg/kg	<0.5			< 0.5	T	
Aldrin	mg/kg	<0.5			< 0.5	T	
b-BHC	mg/kg	<0.5			< 0.5	T T	
b-Endosulfan	mg/kg	<0.5			< 0.5	T	
d-BHC	mg/kg	<0.5			< 0.5	T T	
DDD	mg/kg	<0.5			< 0.5	T T	
DDE	mg/kg	<0.5			< 0.5	T	
DDT	mg/kg	<0.5			< 0.5	T T	
Dieldrin	mg/kg	<0.5			< 0.5	T T	
Endosulfan sulfate	mg/kg	<0.5			< 0.5	T	
Endrin	mg/kg	<0.5			< 0.5	T	
Endrin Aldehyde	mg/kg	<0.5			< 0.5	T	
g-BHC	mg/kg	<0.5			< 0.5	T	
g-Chlordane	mg/kg	<0.5			< 0.5	T T	
Heptachlor	mg/kg	<0.5			< 0.5	T	
Heptachlor epoxide	mg/kg	<0.5			< 0.5	T	
Hexachlorobenzene (HCB)	mg/kg	<0.5			< 0.5	T -	
Methoxychlor	mg/kg	<0.5			< 0.5	T T	
Oxychlordane	mg/kg	<0.5			< 0.5	T	
2.4.5.6-tetrachloro-m-xylene-SURROGATE	%	116	ļ		70-130 %	T	
944955 [ Laboratory Control Sample ]							
2000 TPH (C10 - C36) in Soil by GC		•	Expected Value	Percent Recovery			
C10-C14 Fraction	mg/kg	140	125.0	113	70-130 %	Т	
· · · · · · · · · · · · · · · · · · ·							
C15-C28 Fraction	mg/kg	160	125.0	126	70-130 %	Т	



# Laboratory: EN\_SVOC

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyin Codes
944208 [ Duplicate of 944106 ]	_		ļ		Littiits	LIIIIIIS	Codes
2300 OC Pesticides in Soil by GC-ECD			Result 2	RPD	1		
a-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
a-Chlordane	mg/kg	<0.5	<0.5	<1	0-30 %	T	
a-Endosulfan	mg/kg	<0.5	<0.5	<1	0-30 %	† <del>'</del>	
Aldrin	mg/kg	<0.5	<0.5	<1	0-30 %	† †	
b-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	T	
b-Endosulfan	mg/kg	<0.5	<0.5	<1	0-30 %	† <del>'</del>	
d-BHC	mg/kg	<0.5	<0.5	<1	0-30 %	† †	
DDD	mg/kg	<0.5	<0.5	<1	0-30 %	<del>                                     </del>	
DDE	mg/kg	<0.5	<0.5	<1	0-30 %	<del>                                     </del>	
DDT	mg/kg	<0.5	<0.5	<1	0-30 %	<del>  '</del>	
Dieldrin	mg/kg	<0.5	<0.5	<1	0-30 %	T .	
Endosulfan sulfate	mg/kg	<0.5	<0.5	<1	0-30 %	+ +	
	mg/kg	<0.5	<0.5	<1	0-30 %	<del>  '</del>	
Endrin Aldebude			<0.5			'   T	
Endrin Aldehyde	mg/kg	<0.5		<1	0-30 %	<del>  '</del>	
g-BHC	mg/kg	<0.5	<0.5	<1	0-30 %		
g-Chlordane	mg/kg	<0.5	<0.5	<1	0-30 %	T	
Heptachlor	mg/kg	<0.5	<0.5	<1	0-30 %	T -	
Heptachlor epoxide	mg/kg	<0.5	<0.5	<1	0-30 %	T	
Hexachlorobenzene (HCB)	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Methoxychlor	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Oxychlordane	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
2.4.5.6-tetrachloro-m-xylene-SURROGATE	%	100			70-130 %	Т	
944209 [ Duplicate of 944106 ]							
2100 PAH in Soil by GC			Result 2	RPD			
Acenaphthene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Acenaphthylene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Anthracene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Benz(a)anthracene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Benzo(a)pyrene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Benzo(b)&(k)fluoranthene	mg/kg	<1	<1	<1	0-30 %	Т	
Benzo(g.h.i)perylene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Chrysene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Dibenz(ah)anthracene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Fluoranthene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Fluorene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Indeno(123-cd)pyrene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Naphthalene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Phenanthrene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Pyrene	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
Sum of PAHs	mg/kg	<0.5	<0.5	<1	0-30 %	Т	
2-Fluorobiphenyl - Surrogate	%	90			70-130 %	Т	
p-Terphenyl-D14 - Surrogate	%	82			70-130 %	Т	
944211 [ Duplicate of 944106 ]	-				+		
2000 TPH (C10 - C36) in Soil by GC			Result 2	RPD	1		
C10-C14 Fraction	mg/kg	<10	<10	<1	0-30 %	Т	
010 017 (100001	ilig/kg	110	110	- 1	0-00 /0	_ ' _	
C15-C28 Fraction	mg/kg	<20	21	5	0-30 %	Т	



# Laboratory: EN\_SVOC

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyin Codes
944214 [ Spike of 944112 ]	•			+ +		-	
2300 OC Pesticides in Soil by GC-ECD			Spike Value	Percent Recovery			
a-BHC	mg/kg	1.6	2.0	79	70-130 %	Т	
a-Chlordane	mg/kg	1.6	2.0	81	70-130 %	Т	
a-Endosulfan	mg/kg	2.0	2.0	98	70-130 %	Т	
Aldrin	mg/kg	1.5	2.0	74	70-130 %	Т	
b-BHC	mg/kg	1.5	2.0	71	70-130 %	Т	
b-Endosulfan	mg/kg	1.8	2.0	92	70-130 %	Т	
d-BHC	mg/kg	1.7	2.0	84	70-130 %	Т	
DDD	mg/kg	1.8	2.0	90	70-130 %	Т	
DDE	mg/kg	2.0	2.0	96	70-130 %	Т	
DDT	mg/kg	1.4	2.0	70	70-130 %	Т	
Dieldrin	mg/kg	1.9	2.0	96	70-130 %	Т	
Endosulfan sulfate	mg/kg	1.3	2.0	66	70-130 %	F	
Endrin	mg/kg	1.6	2.0	82	70-130 %	Т	
Endrin Aldehyde	mg/kg	1.7	2.0	85	70-130 %	Т	
g-BHC	mg/kg	1.6	2.0	78	70-130 %	T	
g-Chlordane	mg/kg	1.7	2.0	84	70-130 %	T	
Heptachlor	mg/kg	1.3	2.0	65	70-130 %	F	
Heptachlor epoxide	mg/kg	1.9	2.0	94	70-130 %	T T	
Hexachlorobenzene (HCB)	mg/kg	1.7	2.0	86	70-130 %	<del>                                     </del>	
Methoxychlor	mg/kg	1.4	2.0	69	70-130 %	F	
Oxychlordane	mg/kg	<0.5	N/A	N/A	N/A	N/A	
2.4.5.6-tetrachloro-m-xylene-SURROGATE	%	98	IV/A	IV/A	70-130 %	T T	
•	70	90	ļ	+ +	70-130 /0	+ '-	_
944215 [ Spike of 944112 ]				1 1			-
2100 PAH in Soil by GC			Spike Value	Percent Recovery			-
Acenaphthene	mg/kg	1.8	2.0	92	70-130 %	T	
Acenaphthylene	mg/kg	1.7	2.0	85	70-130 %	T	
Anthracene	mg/kg	1.8	2.0	92	70-130 %	Т	
Benz(a)anthracene	mg/kg	1.8	2.0	90	70-130 %	Т	
Benzo(a)pyrene	mg/kg	1.8	2.0	89	70-130 %	T	
Benzo(b)&(k)fluoranthene	mg/kg	3.5	4.0	87	70-130 %	Т	
Benzo(g.h.i)perylene	mg/kg	1.8	2.0	91	70-130 %	Т	
Chrysene	mg/kg	1.8	2.0	90	70-130 %	Т	
Dibenz(ah)anthracene	mg/kg	1.8	2.0	91	70-130 %	Т	
Fluoranthene	mg/kg	2.0	2.0	100	70-130 %	Т	
Fluorene	mg/kg	1.7	2.0	86	70-130 %	Т	<u> </u>
Indeno(123-cd)pyrene	mg/kg	1.8	2.0	91	70-130 %	Т	<u> </u>
Naphthalene	mg/kg	1.8	2.0	91	70-130 %	Т	
Phenanthrene	mg/kg	1.8	2.0	92	70-130 %	Т	
Pyrene	mg/kg	1.9	2.0	96	70-130 %	Т	
Sum of PAHs	mg/kg	29	32.0	91	70-130 %	Т	
2-Fluorobiphenyl - Surrogate	%	90			70-130 %	Т	
Anthracene-d10 - Surrogate	%	96			70-130 %	Т	
p-Terphenyl-D14 - Surrogate	%	106			70-130 %	Т	
944216 [ Spike of 944112 ]			-	-			
2000 TPH (C10 - C36) in Soil by GC			Spike Value	Percent Recovery			
C10-C14 Fraction	mg/kg	120	125.0	97	70-130 %	Т	
C15-C28 Fraction	mg/kg	120	125.0	99	70-130 %	Т	
C29-C36 Fraction	mg/kg	120	125.0	96	70-130 %	Т	
aboratory: EN_VOC	+		1	+		1	1
Sample, Test, Result Reference	Units	Result 1			Acceptance	Pass	Qualifyi
Sample, Test, Result Reference	Ullits	IVEOUIT I	1	1	Limits	Limits	Codes



# Laboratory: EN\_VOC

Sample, Test, Result Reference	Units	Result 1			Acceptance		Qualifying
• • • •	Office	result			Limits	Limits	Codes
946314 [ Method Blank ]			1	1			1
1100 BTEX in Soil by P&T		10.0			100	Т	<del> </del>
Benzene	mg/kg	<0.2			< 0.2		<u> </u>
C6-C9 Fraction	mg/kg	<5.0			< 5	T	<del> </del>
Ethylbenzene	mg/kg	<1.0			< 1	T	<u> </u>
Meta- & Para- Xylene	mg/kg	<2.0			< 2	T T	<del> </del>
Ortho-Xylene	mg/kg	<1.0			<1	T	+
Toluene	mg/kg	<1.0			< 1 < 3	T	<del> </del>
Total Xylenes	mg/kg	<3.0					<del> </del>
4-Bromofluorobenzene - Surrogate	%	79			70-130 %	T	<del> </del>
946316 [ Laboratory Control Sample ]			1	1			<u> </u>
1100 BTEX in Soil by P&T			Expected Value	Percent Recovery			ļ
Benzene	mg/kg	4.2	5.0	84	70-130 %	T	ļ
C6-C9 Fraction	mg/kg	43	50.0	86	70-130 %	T	<u> </u>
Ethylbenzene	mg/kg	4.1	5.0	82	70-130 %	T	
Meta- & Para- Xylene	mg/kg	8.1	10.0	81	70-130 %	T	
Ortho-Xylene	mg/kg	4.3	5.0	86	70-130 %		<u> </u>
Toluene	mg/kg	4.2	5.0	84	70-130 %	T	
Total Xylenes	mg/kg	12	N/A	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	%	85			70-130 %	T	<del> </del>
944200 [ Duplicate of 944106 ]							
1100 BTEX &(C6-C9) in Soil by P&T			Result 2	RPD			ļ
Benzene	mg/kg	<0.2	<0.2	<1	0-30 %	Т	
C6-C9 Fraction	mg/kg	<5	<5	<1	0-30 %	Т	
Ethylbenzene	mg/kg	<1	<1	<1	0-30 %	Т	
Meta- & Para- Xylene	mg/kg	<2	<2	<1	0-30 %	Т	
Ortho-Xylene	mg/kg	<1	<1	<1	0-30 %	T	
Toluene	mg/kg	<1	<1	<1	0-30 %	Т	
Total Xylenes	mg/kg	<3	<3	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	%	89			70-130 %	Т	
944212 [ Spike of 944112 ]							
1100 BTEX &(C6-C9) in Soil by P&T			Spike Value	Percent Recovery			
Benzene	mg/kg	4.1	5.0	82	70-130 %	Т	
C6-C9 Fraction	mg/kg	39	50.0	75	70-130 %	Т	
Ethylbenzene	mg/kg	4.0	5.0	81	70-130 %	Т	
Meta- & Para- Xylene	mg/kg	8.0	10.0	80	70-130 %	Т	
Ortho-Xylene	mg/kg	4.2	5.0	84	70-130 %	Т	
Sample Weight	-	9.3	N/A	N/A	N/A	N/A	
Toluene	mg/kg	4.3	5.0	86	70-130 %	Т	
Total Xylenes	mg/kg	12	N/A	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	%	86			70-130 %	Т	
Laboratory: EN_WATERS	-	•	•	-		-	+
					Acceptance	Pass	Qualifying
Sample, Test, Result Reference	Units	Result 1			Limits	Limits	Codes
945778 [ Method Blank ]	-						
4300 Anions in Soil by IC							
Bromide (Soluble)	mg/kg	<2			< 2	Т	1
Chloride (Soluble)	mg/kg	<2			< 2	Т	
Fluoride (Soluble)	mg/kg	<2			< 2	Т	
Nitrate (Soluble)	mg/kg	<2	1		< 2	Т	<b>†</b>
Nitrite (Soluble)	mg/kg	<2	1		< 2	Т	
Orthophosphorus (Soluble)	mg/kg	<2	1		< 2	T	†
Sulphate (Soluble)	mg/kg	<2	1		< 2	T	<del>                                     </del>
947824 [ Method Blank ]		<del></del>	+	-		+	<u> </u>
							<del>                                     </del>
4270 Total Cyanide in Soil Colourmetric  Total Cyanide	ma/l/a	-0.1	+	+	-01	Т	<del>                                     </del>
· · · · · · · · · · · · · · · · · · ·	mg/kg	<0.1	1		< 0.1	<del></del>	+
949939 [ Method Blank ]							-
4850 Total Phenolics in Soil by SFA		_	1		_	<del></del>	-
Total Phenolics	mg/kg	<0.1	<u> </u>		< 0.1	Т	ــــــ

Date Printed: 21 April 2008 Final Report Number: 295703



#### Laboratory: EN\_WATERS

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
945780 [ Laboratory Control Sample ]			•	•		•	
4300 Anions in Soil by IC			Expected Value	Percent Recovery			
Bromide (Soluble)	mg/kg	550	500.0	110	75-125 %	Т	
Chloride (Soluble)	mg/kg	540	500.0	108	75-125 %	Т	
Fluoride (Soluble)	mg/kg	520	500.0	104	75-125 %	Т	
Nitrate (Soluble)	mg/kg	580	500.0	116	75-125 %	Т	
Nitrite (Soluble)	mg/kg	530	500.0	106	75-125 %	Т	
Orthophosphorus (Soluble)	mg/kg	490	500.0	98	75-125 %	Т	
Sulphate (Soluble)	mg/kg	510	500.0	102	75-125 %	Т	
947827 [ Laboratory Control Sample ]		-	•			•	
4270 Total Cyanide in Soil Colourmetric			Expected Value	Percent Recovery			
Total Cyanide	mg/kg	0.5	N/A	N/A	N/A	N/A	
949852 [ Laboratory Control Sample ]						•	
4000 pH in Soil			Expected Value	Percent Recovery			
pH	pН	7.4	N/A	N/A	N/A	N/A	
949941 [ Laboratory Control Sample ]						•	
4850 Total Phenolics in Soil by SFA			Expected Value	Percent Recovery			
Total Phenolics	mg/kg	0.6	0.5	110	70-130 %	Т	
944210 [ Duplicate of 944106 ]	•					•	
4000 pH in Soil			Result 2	RPD			
pH	pН	8.0	7.8	0.2	0-0.5 pH	Т	

#### Sample Integrity

Attempt to Chill was evident Yes Samples correctly preserved Yes Organic samples had Teflon liners Yes Samples received with Zero Headspace Yes Samples received within HoldingTime Yes Some samples have been subcontracted No

# **Authorised By**

Ruth Callander Client Services Officer Alex Petridis Senior Analyst - SVOC Accreditation Number: 1645 Mark Herbstreit Senior Analyst - Metals Accreditation Number: 1645 Helen Lei Senior Analyst - Waters Accreditation Number: 1645 Khoa Pham Analyst - VOC Accreditation Number: 1645

### **Laboratory Manager**

**Anthony Crane Operations Manager** 

Final Report

- Indicates Not Requested \* Indicates NATA accreditation does not cover the performance of this service

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The samples were not collected by Amdel staff.

# Appendix D

Chain of Custody Forms - Soil

# **Appendix D**



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South Australia 5000 Australia 1

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	Laboratory name, address & fa: Contact Person:	xno. Labmark						E SPECIFY)					E SPECIFY	In.Hg,Zn Cr		<b>1</b>		# <del>1001 K</del>	4 OC	Ť	Sul Phi	LOR 0.001	Si D HOK	S. R. BON (418)	
UAB#_	Courier name, address, ph o Contact Person:						GE	ER (PLEASI	COMPOSITE		HNO3/HCI	UNPRESERVED	OTHER (PLEASI	As.,B.Be.Cd.Cu,Mn,Hg,Zn	TPH; MA-30	PAH; <del>LOR 3.0 µg/L</del>	OCP; Brinking Water	PCB; <del>LOR 8:301 µg/t</del>	TDS; APHA 254 OC	рН;АРНА 4500 Н≯	Sourfale Southous	BTEX, Benzene: LOR 0.001 mg/L	Premony Acid reredicides	د دله	
W 1927	Sample ID	Container	Sam Ďate	pling Time	WATER	SOIL	SLUDGE	OTHER	COM	ICE	ÖNE	UNP	OTHE	As.B	TPH	PAH	ပ္ပ	PCB	TDS	A;Hq	<b>₹</b>	BTEX	8	5	F
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JOBH 8035990 31495 Sheet 2 of CHAIN OF CUSTODY FORM Job No Date Required Investigator (ounell Sample Matrix Sample Preservation **Analysis** name, address, ph & fax nos Freeman Contact Person: 8 Phenoxy Acid Harbici 5 ٥٩ SPECIFY) OTHER (PLEASE SPECIFY) SCABON Laboratory PCB; LOR <del>9:801 pgf.</del> name, address & fax no. **TDS; APHA 254 OC** PH:APHA 4500 H+ Contact Person: OTHER (PLEASE JNPRESERVED Courier \$ TPH; MA-30 name, address, ph & fax nos, 4NO3/HCI SLUDGE Contact Person: WATER Sample ID Container Sampling SOL SE Date Time 1 3 8222 1784 0.05-0.15 Wass 13/01/08 138123 QC3 13824TP4 04-05 10 1.5 13825 TP5 0-0X-015 ١, 13 \_ 138240 TPS 0-2-0-25 14 138227 1PS 04 05 . . 1.1 13828 QC4 13829 QC5 13830 TP5 0.9-1.0 13831 TP6 0.05-0.15 13832 TP6 0.4-0.5 1.5 11 1.1 ٠, ~ 7.6 11 1.1 1. ~ 138233176 09-10 1. ١. 7.0 (print and signature) Investigator: Lattest that the proper field sampling procedures were used during the Samplers Name: (Date) 18/01/08 April Freeman collection of these samples (print and signature) Relinguished by: (print and signature) Time Received by: Time 22/1/08 12:00 23/1 deservan Ola Lahmann Freeman 11 amTime Received by: (print and signature) Date Time Relinquished by: (print and signature) 24/1108 leanne Far

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JOB# ED35-990 31495 CHAIN OF CUSTODY FORM Job No. Date Required Sheet 3 of Investigator Connell Wagner Sample Preservation name, address, ph & fax nos Sample Matrix Analysis Freeman ADA! Contact Person: ₽ D parmony Acids Konchicia **%** ক Buckland SPECIFY) OTHER (PLEASE SPECIFY) Laboratory Labmark SC4-82 name, address & fax no. TDS; APHA 254 OC oH;APHA 4500 H+ Contact Person: OTHER (PLEASE Courier MA-30 COMPOSITE name, address, ph & fax nos. ≨ HN03/HCI SLUDGE Contact Person: MATER Sample iD Container Sampling Date Time TP70-9-1.0 18/01/08 Gla-38237 197 19-20 138238 1740910 11 13 138239 TP8 005 015 21/01/08 4 066 28 240 1 \$ 28241 3824217805-0.b 1.1 138243 17809-10 ٠, 138244 TP8 1-9-2-0 1.1 138245 1990-05-015 8.7 138246 TP9 0.4-05 1. ٠. 138 247 TP9 09-1-0 ν χ ٠, 138248 1710005-015 138249 P1004-05 Investigator: Samplers Name: (print and signature) I attest that the proper field sampling procedures were used during the (Date) 18/01/08 April Freemain deserman collection of these samples Relinquished by: (print and signature). Time Received by: (print and signature) Time Hort Flerman 22/1/08 12.00 23/1 LanMark Ola 11 am (print and signature) Relinguished by: (print and signature) Date Time Received by: Date Time Ceame. 241 8am

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Connell Wagner

	CHAIN OF CU	STODY FORM			Job N	o.	314	95		Date R	Requir	ed					Sheet	4tof	7					
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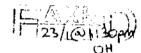
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CHAIN OF CUS	TODY FORM			Job No	ю,	314	95		Date F	Require	ed					Sheet	<u>5</u> of	7					
Investigator ( ) name, address, ph & Contact Person:	April Freew	ran			Sam	ple Ma	ıtrix		Sami	ple Pre	eserva	ition					Α	Analysi	s			દ	
Site Bucklar	nd Park	•							}				. & Pb			कु				ا ا	16	E.	<b>%</b> 3.3.5
Laboratory name, address & fax Contact Person:	/ ~   ~ ~						E SPECIFY)					E SPECIFY)	۸n,Hg.Zn Cr		AGA.		JJ mg/L	A 00 C	±	Sovere (refer attached)	Benzene, ŁOK (JUD) mgrk	Ab derajoi	SCLOTA
Courier name, address, ph & Contact Person:	k fax nos.			ی ا		GE	OTHER (PLEASE	COMPOSITE		HC	UNPRESERVED	OTHER (PLEASE	B.Be.Cd.Cu.Mn.Hg.Zn	TPH; MA-30	PAH; L <del>OR 3.9 µg/l</del>	OCP; Brinking Water	PCB; LOR 0.001, ug/L	TDS; APHA 254 OC	рн;АРНА 4500 Н+	デモル (algor)	Benzene	PHEMOXY ACID	48
Sample ID	Container	Sam Date	ipling Time	WATER	SOIL	SLUDGE	OTHE	COME	ICE	HN03/HC	UNPR	OTHE	As.,B.	TPH	PAH	00 00	PCB	TDS	PH;A	\$ <u>\$</u>	втех	14 E	γC
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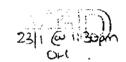
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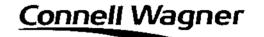
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	CHAIN OF CUS	TODY FORM			Job N	o. <b>.</b>	316	t95	`	Date F	Requir	ed					Sheet	<u>6</u> of	7					
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nam	oratory e, address & f tact Person;	fax no. Labouarh						SPECIFY)					SPECIFY	In Hg.Zn Cr		707	۰.	4 to 4	4 OC		Γ. ¥	TOR 6 881	Ac0 (	
Cont	rier e, address, ph tact Person:	n & fax nos.		4		GE	OTHER (PLEASE	COMPOSITE		HC	UNPRESERVED	OTHER (PLEASE SPECIFY	As., B. Be, Cd. Cu, Mn, Hg. Zn	TPH; MA-30	2AH; EOR 3.0 40/L	OCP; Deinking-Wate	PCB; L <del>OR 0.084 µg/</del>	TDS, APHA 254 OC	PH;APHA 4500 H+	Solvents (refer attac	TEG Penzene: LOR o 991 mg/	Pitenoxy		
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E036019

CHAIN OF CUSTODY FORM	Job N	o.	31	49	5	Date	Requir	red					Sheet	_of	5					
Investigator Matt Eygenacon 82379754 name, address, ph & fax nos. Connell Wagner		Sam	ıple M	atrix		Sam	ple Pr	eserva	ation					ļ	Analys	is				
Euckland Park Laboratory name, address & fax no.				SPECIFY)					PECIFY)	lg,Zn Cr & Pb		P.	1 OPP	400	00	-	5.41 p. 4.4.	K 6:007 ng/L	Acid c>	anh
Contact Person: Labmark Courier name, address, ph & fax nos. Contact Person:	ER		JGE	OTHER (PLEASE S	COMPOSITE		HNO3/HCI	UNPRESERVED	OTHER (PLEASE SPECIFY)	B.Be,Cd,Cu,Mn,Hg,Zn	TPH; MA-30	PAH; <del>LOR 3:0 µg/L</del>	OCP; Brimking Wate	8; LUK 0.834 µg4	TDS; APHA 254 OC	pH;APHA 4500 H+	Solvents treferent	one, E	No.	\$ 00 A
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CHAIN OF CUSTODY FORM		Job N	lo.	31	495	<b>&gt;</b> ,.	Date	Requir	ed					Sheet	t <u><b>1</b></u> of	5					
Investigator Mult Englercom name, address, ph & fax nos. Contact Person: Contact Wagner 825. Site	79754		San	nple Ma	atrix		Sam	ple Pr	eserva	ition					f	Analys	is				
Ruldand Pwk Laboratory name, address & fax no. Contact Person: Labonar K Courier name, address, ph & fax nos. Contact Person:	mpling   ⊺ime	WATER	SOIL	stubge	OTHER (PLEASE SPECIFY)	COMPOSITE	ICE	HN03/HCI	UNPRESERVED	OTHER (PLEASE SPECIFY)	As., B, Be, Cd, Cu, Mn, Hg, Zn Cr & Pb	ТРН; МА-30	PAH; LOR 3:0 pg/L	OCP, Britishing Water	PCB; <del>LOR 0.381 pg/L</del>	TDS; APHA 254 OC	pH;APHA 4500 H+	Salfa Fe , Sul phu	\$	Prespect Actor	الرافض عدرودن طرط
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Connell Wagner

CO36019 CHAIN OF CUSTODY FORM Job No. 21495 Date Required Sheet 3of Investigator Mult Eygenraam name, address, ph & fax nos Contact Person: Con ell Wagner 82379754 Sample Matrix Sample Preservation Analysis Buckland Park Cr& F Laboratory Aş.,B.Be,Cd,Cu,Mn,Hg,Zn name, address & fax no. PCB; tok 0.001 pg pH;APHA 4500 H+ Labmark Contact Person: TDS; APHA 254 OTHER (PLEASE Courier **IPH; MA-30** name, address, ph & fax nos. PAH; <del>LOR</del> OCP: Pri SLUDGE Contact Person: WATER Sample ID Container Sampling SOIL Date Time 7730 0.05-0.15 1730 0.4-01C hrs0 o.a-1 1731 0.05-d15 1731 0.4-0.5 1931 0.4-1 TP31 1-9-2  $\gamma \nu$ 33889 22 17932 0.05-0/15 V TP32 0.4-0.5 7P32 0.9-1 WG QC14 JW1386947711 ✓ V V TP33 0.05-0.15 SW JON 37694111 QC15 Mara SUBMIT QC16 DECONDANA LAB Samplers Name: (print and signature) Investigator: I attest that the proper field sampling procedures were used during the (Date) Mult Eygenruch (print and s 25/1/08 collection of these samples (print and signature) Relinquished by: (print and signature) Time Time 29/1108 23/1/08 Nult Pygeriam My C Relinquished by: (print and signature) eanne Received by: (print and signature) Time Date Time

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Adelaide South Australia 5000 Australia Connell Wagner

E036019

CHAIN OF CUSTODY FORM	Job N	٥.	उ	49	5	Date I	Requir	ed				***********	Sheet	<b>4</b> of	2					
Investigator Matt Eygeram  name, address, ph & fax nos.  Contact Person: Concl. Wagner 82379154  Site		San	ple M	atrix		Sam	ple Pre	eserva	ition					A	lnalys	is	<b>`</b>			
Site  Ruckand Park  Laboratory  name, address & fax no.  Contact Person: Laborark				SPECIFY)					SPECIFY)	ı,Hg,Zn Cr & Pb		#5	Water of t	भ <u>म्म</u> ुकीट	90	±	Tacher P	OR 8,881 mg/L	Act 8	200
Courier name, address, ph & fax nos. Contact Person:  Sample ID Container Sampling	TER T		SLUDGE	OTHER (PLEASE	COMPOSITE		HNO3/HCI	UNPRESERVED	OTHER (PLEASE SPECIFY)	As,,B,Be,Cd,Cu,Mn,Hg,Zn	TPH; MA-30	PAH; LOK 3:0 pg#	OCP; Drinking Water of	PCS <del>, LOR-8.904 pg/</del>	TDS; APHA 254 OC	pH;APHA 4500 H+	Solvenia from attac	STEX, <del>Denzone, L</del>	Phenoxy	0000 0000
Date Time	WATER	SOIL	ระบ	Ė	Ś	핑	포	š	늉	∜ 4	Ê	₽A∄	8	5	Ĕ	H.	<b>7</b> 3	87	\$	2
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E036012. Sheet 5 of 5 CHAIN OF CUSTODY FORM Job No. 51495 Date Required Investigator MH Eugerracm 82379754 Sample Matrix Sample Preservation Analysis Contact Person: Consell Wagner & Pb SPECIFY) As, B, Be, Cd, Cu, Mn, Hg, Zn Cr Laboratory name, address & fax no. TDS; APHA 254 OC PCB;<del>-LOK'0.001 pg</del> ropwork Contact Person: (PLEASE Courier UNPRESERVED TPH; MA-30 OCP; Brinki name, address, ph & fax nos. HN03/HCI Contact Person: OTHER ( Sample ID Container Sampling SOIL Date Time 23 1 TP37 0.05-0.15 JOV 1795/10 23 1 -70 138711 1737 0.4-0.5 23 1 hp37 0-9-1 Samplers Name: attest that the proper field sampling procedures were used during the (print and signature) (Date) Investigator: 25/108 r. (pfint and signature) collection of these samples Mapa Relinquished by: (print and signature) Received by: Date Time MCH Eugencon A Relinquished by: (print and signature) 29/1108 23/1/08 reune Received by: (print and signature) Time

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Investigator (a) name, address, ph & Contact Person:	April Freeman	1			Sam	ple M		.,		ple Pre		ation					<del></del>	\nalys	is			<del>77</del>	
Site Buchlan	nd Pork	•											<del>P</del>								16		
Laboratory name, address & fa Contact Person:							SPECIFY)			-		SPECIFY)	Hg,Zn,Cr8	150 BCH	# 	ater	μg/L		<u>+</u>	tached)	7R 0.001 m		-4-
Courier name, address, ph Contact Person:	& fax nos.			WATER		SLUDGE	OTHER (PLEASE SPECIFY)	SITE		ᅙ	UNPRESERVED	OTHER (PLEASE SPECIFY)	As., B. Be, Cut, Cut, WM, Hg, Zn, Cr. & Pb M. C. 7 (12.5 M. 7	ТРН; М <del>А=30-</del>	LOR 3.0 µg/L	OCP; Brinking-Water	PCB; LOR 0.001 µg/L	TDS; APHA 254 OC	pH;APHX-4500-H+-	Solvents (refer attached)	BTEX, Benzener-toR 0:001 mg/t	Can	VIC EPPE
Sample ID	Date Ti						OTHEF	COMPOSITE	CE	HNO3/HCI	JNPRE	THER	# ≥ G 9	PH.	PAH; E	CP; ₽	CB; L	DS; A	Ť	olvent	EX.B	8	5
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Investigator () name, address, ph & Contact Person:	nnell Wag April Fre-	ner eman			Sam	ple Ma	trix		Samı	ole Pre	eserva	tion					Α	nalysi	S					
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Laboratory name, address & fa Contact Person:	x no. Aundel						E SPECIFY)					OTHER (PLEASE SPECIFY)	Becachining Zn Cr & Pb	だりーツ	PAH; LOR-3:0 pg/L	OCP; Drinking-Water	PCB; LOR 0.001 µg/L	TDS; APHA 254 OC	pH;APHA.4500 PF	Solvents (refer attached)	BTEX, Benzene; LOR 9-994-mg/L			
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name, address, ph	& fax nos.					]	PLE	21.5		- 5	ER	핕	16	7	4	₹	) K	Ϋ́	4	(re	624	5		
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Investigator Connell Wagner name, address, ph & fax nos. Contact Person: April Freeman Site Buchland Park		San	ıple M				ple Pre		tion						nalysi	is					
Site Buchland Park										3					·		T	76	ГТ		
Laboratory name, address & fax no. Avnde\ Contact Person:				SPECIFY)					SPECIFY)	"B.Bercarca, wa. hig. zn. cr & Pb Met (m. S M. Z	Je - ( 3)	- <del>}/</del> €-	ater	µg/L	20	4	fached)	Benzene, LOR 0.001 Mg/L			
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CHAIN OF CUSTODY	PAIN OF CUSTODY FORM						496		Date F	Requir	ed	-				Sheet	<b>4</b> of	7	**************************************					1
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name, address, ph & fax nos.							EAS	μ		1	ŠE	EAS	85	g.	ا ا	cing	0.0	4 2:	150	efer	<b>₽</b>	(D)		
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Laboratory name, address & fa Contact Person: Courier	xno. Amde	_\						SE SPECIFY)				Ω	OTHER (PLEASE SPECIFY)	B.Be.Cd.Cu.Mn.Hg.Zn.Cr.&.Pb to A. T. T. T. M. 7	357-97	1	OCP; D <del>rinking Water.</del>	PCB; LOR 0.001 µg/L	54 OC	0.44	Solvents (refer attached)	3TEX, <u>Benzene: LOR 0.001</u> -m	at.	
name, address, ph Contact Person;	& fax nos.							PLEA	SITE			ERVE	PLEA	186	-30	B 3 (	in King	R 0.0	HA 2	450	(refe	nzene	E Co	
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CHAIN OF CUSTODY	FORM			Job N	0.	314	95		Date I	Requir	ed	************	7.4-7.1.4.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.		***************************************	Sheet	<u>)</u> of	5	ACCORDED SHOUL	***************************************	-		
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CHAIN OF CUSTODY FORM	Job N	10.	314	195	******	Date I	Requir	ed	-		Crista Actorisado	***************************************	Sheet	्रदेश '	S	<del></del>		· · · · · · · · · · · · · · · · · · ·		
Investigator Conell Jagner name, address, ph & fax nos. Contact Person: April Free man		Sam	ple M	atrix		Sam	ple Pre	eserva	ition					p	Inalysi	is			<del>51-y</del>	
Buckland Park										2 H.2								T/6u		
Laboratory name, address & fax no. Contact Person:				: SPECIFY)					SPECIFY)	S MY	6-(36	1g/L	vater	1 µg/L	) 00 †	4	attached)	-OR 0.0017	at .	
Courier name, address, ph & fax nos. Contact Person: Sample ID Container Sampling			JGE	OTHER (PLEASE SPECIFY)	COMPOSITE		HNO3/HCI	UNPRESERVED	OTHER (PLEASE SPECIFY)	AS., B.B. Bod. SurMn, 18,2n Cr	трн; м <del>л-30. (6</del> С36	РАН; L <del>OR 3.0 µg/L</del>	OCP; Drinking Water	PCB; LOR 0.001 µg/L	TDS; APHA 254 OC	pH; <del>XPHA 4500 H+</del>	Solvents (refer attached)	BTEX, Benzene, LOR 0.001 mg/l.	MC COR	
Sample ID Container Sampling Date Tin	vA TER	SOIL	SLUDGE	OTH	00 00 00 00	핑	ONH	UNP	ОТН	As, b	표	PAH	90 P	PCB	TDS	pH;A	Solve	BTEX		
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CHAIN OF CUS	STODY FORM		į	Job No	٥.	3)4	95		Date F	Requir	ed	.,				Sheet	<u>3</u> of '	5					
Investigator () name, address, ph & Contact Person:	andll Wagne 8 tax nos. April Frelma	n			Sam	ple Ma	trix		Sam	ple Pro	eserva	ıtion					А	ınalysi	is				
Site Buckla	nd Park						۲					ς.	न्त ४ प्र	Ž						t)	1 mg/L		
	xno. Andel						E SPECIFY)					E SPECIF	AN HOZO	3	μg/L	Water	01 µg/L	34 OC	  ± 	attachec	LOR 0.00	CA.	
Courier name, address, ph o Contact Person:	& fax nos.			WATER		SLUDGE	OTHER (PLEASE	COMPOSITE		HNO3/HCI	UNPRESERVED	OTHER (PLEASE SPECIFY)	AS, B. Be Cd Cy Mar Hg Zn Cr. & Pb	TPH; MA-30	PAH; LOR 3.0 µg/L	OCP, <del>Drinking Water</del>	PCB; LOR 0.001 µg/L	TDS; APHA 254 OC	5H;AP114 4500 H+	Solvents (refer attached)	ВТЕХ, Велгеле, <u>LOR 0.001 m</u> g/L	UC	
Sample ID	Date Tim						OTHE	COM	ICE	HNO	UNPE	ОТНЕ	As B	TPH	PAH	OC D	PCB	TDS	A.Ha	Nos	BTE		
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CHAIN OF CUSTODY FORM 31495 Job No. Date Required Sheet <u>식</u>of S Investigator (annell Wagner name, address, ph & fax nos. Contact Person: Sample Matrix Sample Preservation Analysis Freeman Benzene; LOR 0.001 mg/ SPECIFY) Laboratory Solvents (refer attached) name, address & fax no. PCB; LOR 0.001 µg/L TDS; APHA 254 OC PAH; L<del>OR 3:0 µg/L</del> Contact Person; pH;APHA 4500 H± \$ OTHER (PLEASE Courier UNPRESERVED name, address, ph & fax nos. Contact Person: 3 Sample ID Container Sampling BTEX, SOIL SE Date Time TP560-0.1 Glass Tar 07/04 TP560-2-03 11 TP56 0.4-0.5 C 1 TPS6 0-9-1-0 TP56 1-9-20 TP570-0-1 11 2:150~ 11 Q(15A TP570-2-02 2:15,00 ٠, TP570-4-09 TP570.91.0 15 P571.9-2.0 ۲. پر ( ) TP58 0-0.1 3,,~ 1. PS802-0-3 Investigator: I attest that the proper field sampling procedures were used during the (print and signature)
MK-20Man Şamplers Name: (Date) 07/04/08 collection of these samples April Freeman Relinquished by: (print and signature) Date Time Received by: (print and signature) Time Mult Eygenrowm Mage
Relinquished by: (print and signature) Milreal 8 4 08 Date Michael 9/4/08 9:00 Time Received by: (print and signature)

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# Connell Wagner

**CHAIN OF CUSTODY FORM** 31495 Job No. Date Required Sheet Sof S Investigator onnell name, address, ph & fax nos. Sample Matrix Sample Preservation **Analysis** Freeman Contact Person: Aoril site Buckland 3 SPECIFY) OTHER (PLEASE SPECIFY) Laboratory Solvents (refer attached) μg/L name, address & fax no. **TDS; APHA 254 OC** B Contact Person: PCB; LOR 0.001 OTHER (PLEASE Courier UNPRESERVED name, address, ph & fax nos. HNO3/HCI Contact Person: 5 Sample ID OCP; Container Sampling SOff SE Date Time Q(16A Glass 07/04 TW FP5804-05 1.1 3000 18804-10 ٠. ١ 1. 18581420 • 1 U P590-0-1 6 4 Ì, 18902-03 € 6 N 1 TP5904-0-5 1259 0.9-1-0 . . ٠. P59 19-20 € 8 Investigator: I attest that the proper field sampling procedures were used during the (print and signature) (Date) 07/04/08 Samplers Name: collection of these samples And topman Relinquished by: (print and signature) Time Received by: (print and signature) Date Time 8468 Date 9/4/08 Michae 9:00 Mott Eyopraam ME Relinquished by (print and signature) (print and signature) Time Received by: Time

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Connell Wagner Pty Ltd ABN 54 005 139 873 55 Grenfell Street Adelaide South Australia 5000 Australia

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Investigator	onnell Wagn	श		Job N	10,	510	195		Date	Requi	red					Shee	et <u>2</u> of	4			~	
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Investigator (ount) Wagner Sample Matrix  Sample Matrix  Sample Preservation  Sample Preservation  Analysis  Sample Preservation  Laboratory name, address & fax no. Contact Person:  Contact Person:  Contact Person:  Contact Person:  Sample ID  Container  Sample ID	V/C 674
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CHAIN OF CUSTODY FORM Job No. 3)495 Sheet 4of /L Date Required name, address, ph & fax nos. Sample Matrix Sample Preservation Analysis Contact Person: April Freelman SPECIFY) Laboratory Amdel Benzana; LOR 0.001 name, address & fax no. РСВ; L<mark>OR 0.001 <sub>µ9</sub>4</mark>. Keles OCP; <del>Drinking Wate</del>r TDS; APHA-254 OC PAH, LOR 3.0 µg/L Contact Person: pH;ABHA 4500 H± Courier name, address, ph & fax nos. 2 Contact Person: SLUDGE OTHER ( Sample ID Container Sampling SOIL Date Time TP67 0.4-0.5 6lass 08/04 SIM 71670.9-1-0 19671-9-20 1. . . 1768 0-0.1 \* ( 30 . . TP68 02-03 ١, acara ŧ, 60 TOUR 0.4-05 41 ۲, TP68 0-9-10 4. 4 TP68 1.9.10 • 1 investigator: I attest that the proper field sampling procedures were used during the (Date) 08/04/08 (print and signature) Samplers-Name: collection of these samples Haril Helman Relinquished by: (print and signature) Date Time Received by: (print and signature) Date Time MUST EUGENCOCO MENGE Relinquished by (print and signature) 9/4/02 Cassidy 10/4/08 9:00 (print and signature) Time Received by: Date Time

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CHAIN OF CUSTODY FORM	Job N	lo.	314	49	5	Date I	Require	ed			**************************************		Sheet	<u>\</u> of	<b>G</b>		<del></del>	<del></del>		
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CHAIN OF CUSTODY FORM			Job No	).	3)4	95		Date F	equire	ed	·	**********			Sheet	<u>2</u> of	Y		<del></del>			
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CHAIN OF CUS		٠		Job N	ο,	31	49	5	Date I	Requir	ed					Sheet	<u>S</u> of4				······			i
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Connell Wagner

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# Appendix E

**Quality Control Analysis - Soil** 

## **Appendix E**



		Inter-lab	oratory Triplicate		Inter-lab	oratory Triplicate	
Analyte (mg/kg)	Units	QC2	TP 2 (0.05-0.15)	RPD%	QC16	TP33 (0.05 -0.15)	RPD%
Metals							
Arsenic		<5	2	0	2.1	2	4.9
Beryllium		<1	<1		< 2	<1	
Boron		<50	<5		16	6	90.9
Cadmium		<1	<0.1		< 0.5	<0.1	
Chromium		18	14	25	13	12	8
Copper		9	7	25	5.8	6	3.4
Lead		8	8	0	< 5	6	
Manganese		137	131	4.5	54	71	27.2
Mecury		0.2	<0.05		< 0.1	<0.05	
Zinc		11	10	9.5	7.4	10	29.9
Organochlorine Pesticides (OC)							
alpha-BHC		<0.05	<0.05		< 0.05	<0.05	
Hexachlorobenzene (HCB)		<0.05	< 0.05		< 0.05	<0.05	
beta-BHC		< 0.05	<0.05		< 0.05	<0.05	
gamma-BHC		<0.05	<0.05		< 0.05	<0.05	
delta-BHC		<0.05	<0.05		< 0.05	<0.05	
Heptachlor		<0.05	<0.05		< 0.05	<0.05	
Aldrin		<0.05	<0.05		< 0.05	<0.05	
Heptachlor epoxide		< 0.05	<0.05		< 0.05	<0.05	
trans-Chlordane		< 0.05	<0.05		< 0.1	<0.05	
alpha-Endosulfan		< 0.05	<0.05		< 0.05	<0.05	
cis-Chlordane		< 0.05	<0.05			<0.05	
Dieldrin		< 0.05	<0.05		< 0.05	<0.05	
4.4'-DDE		<0.05	<0.05		< 0.05	<0.05	
Endrin		< 0.05	<0.05		< 0.05	<0.05	
beta-Endosulfan		< 0.05	<0.05		< 0.05	<0.05	
4.4'-DDD		<0.05	<0.05		< 0.05	<0.05	
Endrin aldehyde		<0.05			< 0.05		
Endosulfan sulfate		<0.05	<0.05		< 0.05	<0.05	
4.4'-DDT		<0.2	<0.2		< 0.05	<0.2	
Endrin ketone		< 0.05			< 0.05		
Methoxychlor		<0.2	<0.2		< 0.05	<0.2	
EP068B: Organophosphorus Pesticides (OP)							
Dichlorvos		<0.05	<0.5		< 0.2	<0.5	
Demeton-S-methyl		< 0.05	<1		< 0.2	<0.5	
Monocrotophos		<0.2	<0.5				
Dimethoate		< 0.05	<0.5			<0.5	
Diazinon		<0.05	<0.5		< 0.2	<0.5	
Chlorpyrifos-methyl		<0.05	<0.5			<0.5	
Parathion-methyl		<0.2	<0.5			<0.5	
Malathion		<0.05	<0.5			<0.5	
Fenthion		<0.05	<0.5		< 0.2	<0.5	
Chlorpyrifos		<0.05			< 0.2	<0.5	
Parathion		<0.2	<0.5		< 0.2		
Pirimphos-ethyl		<0.05					
Chlorfenvinphos		<0.05					
Bromophos-ethyl		<0.05					
Fenamiphos Prothiofos		<0.05 <0.05	<0.5			<0.5	
			<0.5 <0.5			<0.5	
Ethion		<0.05	<0.5		< 0.2		
Carbophenothion		<0.05 <0.05	<0.5		< 0.2	<0.5	
Azinphos Methyl Speciated Chromium		<0.05	<0.5		< 0.2	<0.0	
Hexavalent Chromium			-	-	- 1	-	-
		-	-	-	< 1	-	-
Trivalent Chromium		-	<del>-</del>	-		•	

denotes RPD >50%

		Intra-lab	oratory Duplicate		Intra-lab	oratory Duplicate		Intra-lak	oratory Duplicate		Intra-lab	oratory Duplicate	
Analyte (mg/kg)	Units	QC1		RPD%	QC9		RPD%	QC13	TP28 (0.05-0.15)	RPD%	QC15	TP33 (0.05-0.15)	RPD%
Metals													
Arsenic	mg/Kg	2	2	0	2	2	0	1	1	0	2	2	0
Beryllium	mg/Kg	<1	<1		<1	<1		<1	<1		<1	<1	
Boron	mg/Kg	<5	<5		12	8	40	<5	<5		<5	6	
Cadmium	mg/Kg	<0.1	<0.1		<0.1	<0.1		<0.1	<0.1		<0.1	<0.1	
Chromium	mg/Kg	17	14	19.4	20	16	22.2	9	10	10.5	12	12	0
Cobalt	mg/Kg												
Copper	mg/Kg	8	7	13.3	11	9	20	4	4	0	5	6	18.2
Lead	mg/Kg	9	8	11.8	5	5	0	4	5	22.2	6	6	0
Manganese	mg/Kg	143	131	8.8	155	152	2	97	116	17.8	66	71	7.3
Molybdenum	mg/Kg									17.0			
Nickel													
	mg/Kg												
Selenium	mg/Kg												
Tin	mg/Kg									04.0			40.5
Zinc	mg/Kg	11	10	9.5	15	12	22.2	11	8	31.6	9	10	10.5
Organochlorine Pesticides		0.05	0.05		0.05	0.05		0.05	0.05		0.05	0.05	
a-BHC	mg/Kg	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05	
Hexachlorobenzene	mg/Kg	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05	
b-BHC	mg/Kg	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05	
g-BHC (Lindane)	mg/Kg	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05	
d-BHC	mg/Kg	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05	
Heptachlor	mg/Kg	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05	
Aldrin	mg/Kg	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05	-
Heptachlor epoxide	mg/Kg	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05	
trans-chlordane	mg/Kg	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		< 0.05	<0.05	
Endosulfan I	mg/Kg	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05	
cis-chlordane	mg/Kg	< 0.05	<0.05		<0.05	<0.05		< 0.05	<0.05		<0.05	<0.05	
Dieldrin	mg/Kg	< 0.05	<0.05		< 0.05	<0.05		< 0.05	<0.05		<0.05	<0.05	
4,4-DDE	mg/Kg	<0.05	<0.05		<0.05	<0.05		< 0.05	<0.05		<0.05	<0.05	
Endrin	mg/Kg	< 0.05	<0.05		< 0.05	<0.05		< 0.05	<0.05		<0.05	<0.05	
Endosulfan II	mg/Kg	< 0.05	<0.05		< 0.05	<0.05		< 0.05	<0.05		< 0.05	<0.05	
4,4-DDD	mg/Kg	< 0.05	<0.05		< 0.05	<0.05		< 0.05	<0.05		< 0.05	<0.05	
Endosulfan sulphate	mg/Kg	< 0.05	<0.05		< 0.05	<0.05		< 0.05	<0.05		< 0.05	<0.05	
4,4-DDT	mg/Kg	<0.2	<0.2		<0.2	<0.2		<0.2	<0.2		<0.2	<0.2	
Methoxychlor	mg/Kg	<0.2	<0.2		<0.2	<0.2		<0.2	<0.2		<0.2	<0.2	
Organophosphorus Pestici	des (OP)												
Dichlorvos	mg/Kg	< 0.5	<0.5		<0.5	<0.5		< 0.5	<0.5		<0.5	<0.5	
Mevinphos (Phosdrin)	mg/Kg	< 0.5	<0.5		<0.5	<0.5		< 0.5	<0.5		<0.5	<0.5	
Demeton (total)	mg/Kg	<1	<1		<1	<1		<1	<1		<1	<1	
Ethoprop	mg/Kg	< 0.5	<0.5		< 0.5	<0.5		< 0.5	<0.5		< 0.5	<0.5	
Monocrotophos	mg/Kg	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Phorate	mg/Kg	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Dimethoate	mg/Kg	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Diazinon	mg/Kg	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Disulfoton	mg/Kg	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Methyl parathion	mg/Kg	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Ronnel	mg/Kg	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Fenitrothion	mg/Kg	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Malathion	mg/Kg	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Chlorpyrifos	mg/Kg	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Fenthion	mg/Kg	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Parathion	mg/Kg	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Stirofos	mg/Kg	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Prothiofos	mg/Kg	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Azinophos methyl	mg/Kg	<0.5	<0.5			<0.5		<0.5	<0.5		<0.5	<0.5	
Coumaphos  Speciated Chromium	mg/Kg	<0.5	<0.5	-	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Speciated Chromium	ma/1/~	4	.4		4	4		.4	4			.4	
Hexavalent Chromium	mg/Kg	<1	<1		<1	<1		<1	<1		<1	<1	
Trivalent Chromium	mg/Kg	16	13	20.7	20	35	54.5	8	9	11.8	11	11	0

	Intra-la	boratory Dupli	cate	Intra-lak	oratory Dupli	cate		ooratory Dupli			boratory Dupli	cate
Analyte (mg/kg)	QC2A	TP39 (0-0.1)	RPD%	QC15A	TP57 (0-0.1)	RPD%	QC17	TP60 (0-0.1)	RPD%	QC23	TP71 (0-0.1)	RPD%
Metals				•	•	•		•	•	-		•
Arsenic	<2	2.2	-	<2	<2	-	<2	<2	-	<2	<2	-
Beryllium	-	-	-	-	-	-	-	-	-			-
Boron	-	-	-	-	-	-	-	-	-			-
Cadmium	<2	<2	-	<2	<2	-	<2	<2	-	<2	<2	-
Chromium	22	32	37	13	12	8	31	29	6.7	14	12	15.4
Cobalt	-	-	-	-	-	-	-	-	-			-
Copper	9.3	13	33.2	5.7	5	13.1	16	16	0	12	10	18.2
Lead	8.4	11	26.8	5.9	5.4	8.8	13	12	8	5.6	4.6	19.6
Manganese	-	-	-	-	-	-	-	-	-			-
Molybdenum	-	-	-	-	-	-	-	-	-			-
Nickel	7.1	11	43.1	4.3	3.9	9.8	13	12	8	5.9	4.6	24.8
Selenium	-	-	-	-	-	-	-	-	-			-
Tin	-	-	-	-	-	-	-	-	-			-
Zinc	12	17	34.5	9.1	8.5	6.8	24	22	8.7	26	21	21.3
Organochlorine Pesticides (OC)		•		•	•		•	•	•	•	•	
a-BHC	< 0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-	< 0.5	<0.5	-
a - Chlordane	< 0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-	< 0.5	<0.5	-
a - Endosulfan	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-
Aldrin	< 0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-	< 0.5	<0.5	-
b-BHC	< 0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-
b-Endosulfan	< 0.5	<0.5	-	< 0.5	<0.5	-	< 0.5	<0.5	-	< 0.5	<0.5	-
d-BHC	< 0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-
DDD	< 0.5	<0.5	-	< 0.5	<0.5	-	< 0.5	<0.5	-	< 0.5	<0.5	-
DDE	< 0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-
DDT	< 0.5	<0.5	-	< 0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-
Dieldrin	< 0.5	<0.5	-	< 0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-
Endosulfan sulfate	< 0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-
Endrin	< 0.5	<0.5	-	< 0.5	<0.5	-	<0.5	< 0.5	-	< 0.5	<0.5	-
Endrin Aldehyde	< 0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-
g-BHC	< 0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-
g-Chlordane	< 0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-
Heptachlor	< 0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
Heptachlor epoxide	< 0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
Hexachlorobenzene (HCB)	< 0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
Methoxychlor	< 0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
Oxychlordane	< 0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-

	Inter-labora	tory Triplicate		Inter-lab	oratory Triplicate		Inter-lab	oratory Triplica	ite
Analyte (mg/kg)	QC6A	TP44 (0-0.1)	RPD%	QC18A	TP61(0.2-0.3)	RPD%	QC25A	TP74 (0-0.1)	RPD%
Metals	•							•	
Arsenic	< 2	<2	-	<2	2.5	-	<2	<2	-
Beryllium	-	-	-	-	-	-	-	-	-
Boron	-	-	-	-	-	-	-	-	-
Cadmium	< 0.5	<2	-	<0.5	<2	-	<0.5	<2	-
Chromium	20	20	0	30	30	0	11	8.9	21.1
Copper	10	12	18.2	13	15	14.3	<5	3.2	-
Lead	<5	6.4	-	10	11	9.5	<5	3.8	-
Manganese	-	-	-	-	-	-	-	-	-
Mecury	<0.1	-	-	-	-	-	-	-	-
Nickle	7.1	8	11.9	13	13	0	<5	2.6	-
Zinc	20	19	5.1	21	17	21.1	8.1	7.1	13.2
Organochlorine Pesticides (OC)									
a-BHC	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
a - Chlordane	< 0.1	<0.5	-	< 0.1	<0.5	-	< 0.1	<0.5	-
a - Endosulfan	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Aldrin	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
b-BHC	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
b-Endosulfan	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
d-BHC	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
DDD	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
DDE	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
DDT	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Dieldrin	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Endosulfan sulfate	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Endrin	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	< 0.5	-
Endrin Aldehyde	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	< 0.5	-
g-BHC	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
g-Chlordane	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Heptachlor	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Heptachlor epoxide	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Hexachlorobenzene (HCB)	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Methoxychlor	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Oxychlordane	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-

	Intra-la	boratory Duplic	cate	Intra-la	oratory Duplic	cate	Intra-lak	oratory Dupli	cate	Intra-la	boratory Dupli	cate
Analyte (mg/kg)	QC2A	TP39 (0-0.1)	RPD%	QC15A	TP57 (0-0.1)	RPD%	QC17	TP60 (0-0.1)	RPD%	QC23	TP71 (0-0.1)	RPD%
Metals	•			-								
Arsenic	<2	2.2	-	<2	<2	-	<2	<2	-	<2	<2	-
Beryllium	-	-	-	-	-	-	-	-	-			-
Boron	-	-	-	-	-	-	-	-	-			-
Cadmium	<2	<2	-	<2	<2	-	<2	<2	-	<2	<2	-
Chromium	22	32	37	13	12	8	31	29	6.7	14	12	15.4
Cobalt	-	-	-	-	-	-	-	-	-			-
Copper	9.3	13	33.2	5.7	5	13.1	16	16	0	12	10	18.2
Lead	8.4	11	26.8	5.9	5.4	8.8	13	12	8	5.6	4.6	19.6
Manganese	-	-	-	-	-	-	-	-	-			-
Molybdenum	-	-	-	-	-	-	-	-	-			-
Nickel	7.1	11	43.1	4.3	3.9	9.8	13	12	8	5.9	4.6	24.8
Selenium	-	-	-	-	-	-	-	-	-			-
Tin	-	-	-	-	-	-	-	-	-			-
Zinc	12	17	34.5	9.1	8.5	6.8	24	22	8.7	26	21	21.3
Organochlorine Pesticides (OC)		•			•							
a-BHC	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
a - Chlordane	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
a - Endosulfan	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
Aldrin	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-
b-BHC	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
b-Endosulfan	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-
d-BHC	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
DDD	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-
DDE	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
DDT	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-
Dieldrin	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
Endosulfan sulfate	< 0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-
Endrin	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
Endrin Aldehyde	< 0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	< 0.5	<0.5	-
g-BHC	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
g-Chlordane	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
Heptachlor	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
Heptachlor epoxide	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
Hexachlorobenzene (HCB)	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
Methoxychlor	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-
Oxychlordane	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-

· · · · · · · · · · · · · · · · · · ·			Inter-laboratory Triplicate			Inter-laboratory Triplicate			
Analyte (mg/kg)	QC6A	TP44 (0-0.1)	RPD%	QC18A	TP61(0.2-0.3)	RPD%	QC25A	TP74 (0-0.1)	RPD%
Metals	_								
Arsenic	< 2	<2	-	<2	2.5	-	<2	<2	-
Beryllium	-	-	-	-	-	-	-	-	-
Boron	-	-	-	-	-	-	-	-	-
Cadmium	< 0.5	<2	-	<0.5	<2	-	<0.5	<2	-
Chromium	20	20	0	30	30	0	11	8.9	21.1
Copper	10	12	18.2	13	15	14.3	<5	3.2	-
Lead	<5	6.4	-	10	11	9.5	<5	3.8	-
Manganese	-	-	-	-	-	-	-	-	-
Mecury	<0.1	-	-	-	-	-	-	-	-
Nickle	7.1	8	11.9	13	13	0	<5	2.6	-
Zinc	20	19	5.1	21	17	21.1	8.1	7.1	13.2
Organochlorine Pesticides (OC)									
a-BHC	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
a - Chlordane	< 0.1	<0.5	-	< 0.1	<0.5	-	< 0.1	<0.5	-
a - Endosulfan	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Aldrin	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
b-BHC	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
b-Endosulfan	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
d-BHC	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
DDD	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
DDE	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
DDT	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Dieldrin	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Endosulfan sulfate	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Endrin	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Endrin Aldehyde	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
g-BHC	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
g-Chlordane	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Heptachlor	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Heptachlor epoxide	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Hexachlorobenzene (HCB)	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Methoxychlor	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-
Oxychlordane	< 0.05	<0.5	-	< 0.05	<0.5	-	< 0.05	<0.5	-

# Appendix F

Site Sampling Locations – Groundwater

## **Appendix F**



# Appendix G

**Groundwater Monitoring Well Gauge and Purge Sheet** 

## Appendix G





Job Name	Buckland Park			
Job Number	31495			
Sampler	ME			
Well	GW1			
Date	6/5/2008			
Time	12:00			
Purging Method	Bailer			
Depth to GW before	ore purging (m)	3.51		
Depth to GW after	r purging (m)	5.61		
Depth to bottom	of well (m)	5.48		

Height (m) = Depth to bottom of well - depth to GW 1.91

Well volume (L) =  $\pi$  r<sup>2</sup> h 6.11

Total water purged (L) = Well volume x total well purges

Water Quality

Cumulative Volume						
Purged (L)	DO (ppm)	EC (mS)	рН	ReDox (mV)	Temp (°C)	
6.5	4.1	3.47	8.16	108	19.9	
13	2.89	3.53	8.16	71	18.9	
19.5	2.61	3.52	8.11	55	18.9	
26	2.4	3.34	8.11	65	18.9	
32.5	2.38	3.55	8.11	71	18.9	
39	2.35	3.55	8.11	70	18.9	

## Water Quality Description (colour, turbidity, odour, sheen)

Light Brown, lighter with bailing

## Well Location and Condition

Standpipe

Back of Greenhouse

#### Comments

VIC EPA



Job Name	Buckland Park			
Job Number	31495			
Sampler	ME			
Well	GW2			
Date	6/5/2008			
Time	10:30			
Purging Method	Bailer			
Depth to GW before	ore purging (m)	3.525		
Depth to GW after	r purging (m)	3.53		
Depth to bottom	of well (m)	4.65		

Height (m) = Depth to bottom of well - depth to GW 1.4

Well volume (L) =  $\pi$  r<sup>2</sup> h 4.48

Total water purged (L) = Well volume x total well purges

Water Quality

<b>Cumulative Volu</b>	me			_	
Purged (L)	DO (ppm)	EC (mS)	рН	ReDox (mV)	Temp (°C)
14		4.91	8.21	17	20.8
28	2.65	4.62	8.26	50	20.9
33	2.59	4.63	8.36	50	20.5
39	2.58	4.62	8.34	47	20.5

## Water Quality Description (colour, turbidity, odour, sheen)

Brown, lighter brown when bailed, no odour, no sheen

## Well Location and Condition

Stand pipe

#### Comments

Metals, PAM, OCP



Job Name	Buckland Park			
Job Number	31495			
Sampler	ME			
Well	GW3			
Date	6/5/2008			
Time	3:08			
Purging Method	Bailer			
Depth to GW before	ore purging (m)	2.55		
Depth to GW after	r purging (m)	6.23		
Depth to bottom	of well (m)	6.23		

Height (m) = Depth to bottom of well - depth to GW 3.78

Well volume (L) =  $\pi$  r<sup>2</sup> h 12.1

Total water purged (L) = Well volume x total well purges

**Water Quality** 

Cumulative Volume						
Purged (L)	DO (ppm)	EC (mS)	рН	ReDox (mV)	Temp (°C)	
12.5	3.23	55.6	7.35	145	20.7	
25	2.94	54.4	7.39	118	20.4	
37.5	1.8	53.8	7.33	103	20.3	
50	1.7	55.8	7.34	89	20.3	
62.5	1.95	54.8	7.32	145	20.3	
72	1.94	56.4	7.36	86	20.1	
87.5	1.94	56.5	7.36	85	20.1	

Water Quality Description (colour, turbidity, odour, sheen)

Light Brown

## Well Location and Condition

## Comments

Metals, PAH, OCD, QC1, QC2



Job Name	Buckland Park				
Job Number	31495				
Sampler	ME				
Well	GW4				
Date	8/5/2008				
Time	10:00				
Purging Method	Bailer				
Depth to GW before	ore purging (m)	3.4			
Depth to GW afte	r purging (m)	3.5			
Depth to bottom	of well (m)	4.58			

Height (m) = Depth to bottom of well - depth to GW 1.2

Well volume (L) =  $\pi$  r<sup>2</sup> h 2.4

Total water purged (L) = Well volume x total well purges

**Water Quality** 

Cumulative Volui	me				
Purged (L)	DO (ppm)	EC (mS)	pH	ReDox (mV)	Temp (°C)
5	3.21	54.3	7.45	118	20.9
8	2.59	52.5	7.51	86	20.9
11	2.58	53	7.43	85	21

Water Quality Description (colour, turbidity, odour, sheen)

Light brown, no odour or sheen

## Well Location and Condition

#### Comments

Metals, PAH, OCP



Job Name	Buckland Park					
Job Number	31495					
Sampler	ME					
Well	GW5	V5				
Date						
Time						
Purging Method		_				
Depth to GW before	ore purging (m)	3.05				
Depth to GW afte	r purging (m)	3.05				
Depth to bottom	of well (m)	5.43				

Height (m) = Depth to bottom of well - depth to GW 2.38

Well volume (L) =  $\pi$  r<sup>2</sup> h 4.7

Total water purged (L) = Well volume x total well purges

**Water Quality** 

Cumulative Volume						
Purged (L)	DO (ppm)	EC (mS)	рН	ReDox (mV)	Temp (°C)	
	5 3.49	11.39	7.52	136	19	
1	0 2.63	11.21	7.33	152	19.6	
1	5 2.65	10.91	6.88	161	19.7	
2	20 2.54	10.71	7.01	162	19.7	

Water Quality Description (colour, turbidity, odour, sheen)

## Well Location and Condition

274505 6162057

#### Comments

Metals, DAH, OCP



Job Name	Buckland Park		
Job Number	31495		
Sampler	ME		
Well	GW6		
Date	7/5/2008		
Time	2.38		
Purging Method	Bailers		
Depth to GW before	ore purging (m)	3.65	
Depth to GW afte	r purging (m)	5.255	
Depth to bottom	of well (m)	6.85	

Height (m) = Depth to bottom of well - depth to GW 3.2

Well volume (L) =  $\pi$  r<sup>2</sup> h 6.3

Total water purged (L) = Well volume x total well purges

**Water Quality** 

<b>Cumulative Volume</b>	)				
Purged (L) D	O (ppm)	EC (mS)	рН	ReDox (mV)	Temp (°C)
7	4.1	16.11	7.44	146	21.7
13.5	4.23	15.57	7.57	117	20.5
	4.65	15.27	7.64	148	19.8
	4.16	15.53	7.62	68	20.3
	3.4	14.36	7.53	94	20.4
	3.59	14.27	7.64	63	20.5
	3.49	14.34	7.62	64	20.4

## Water Quality Description (colour, turbidity, odour, sheen)

Clear when bailed No sheen or odour

## Well Location and Condition

## Comments

Slow recharge, metals, OCP, DAH



Job Name	Buckland Park			
Job Number	31495			
Sampler	ME			
Well	GW7			
Date	5/508			
Time	1:00			
Purging Method				
Depth to GW before	ore purging (m)	3.25		
Depth to GW afte	r purging (m)	3.275		
Depth to bottom	of well (m)	5.7		

Height (m) = Depth to bottom of well - depth to GW 2.5

Well volume (L) =  $\pi$  r<sup>2</sup> h 4.9

Total water purged (L) = Well volume x total well purges

Water Quality

<b>Cumulative Vo</b>	Cumulative Volume							
Purged (L)	D	O (ppm)	EC (mS)	рН	ReDox (mV)	Temp (°C)		
	5	1.84	7.44	7.79	146	21.7		
	10	1.77	7.43	7.88	63	21.9		
	15	1.72	7.45	7.92	59	21.9		

Water Quality Description (colour, turbidity, odour, sheen)

Light brown, no odour or sheen

## Well Location and Condition

#### Comments

TDS, pH, Metals, PAH, OCR



Job Name	Buckland Park			
Job Number	31495			
Sampler	ME			
Well	GW8			
Date	15/5/08			
Time	10:55			
Purging Method				
Depth to GW before	ore purging (m)	3.86		
Depth to GW afte	r purging (m)	3.86		
Depth to bottom	of well (m)	5.25		
0 1 1 1				

Height (m) = Depth to bottom of well - depth to GW 1.39

Well volume (L) =  $\pi$  r<sup>2</sup> h 2.7

Total water purged (L) = Well volume x total well purges

**Water Quality** 

<b>Cumulative Volu</b>	me				
Purged (L)	DO (ppm)	EC (mS)	рН	ReDox (mV)	Temp (°C)
3	2.86	9.01	7.03	240	21.8
6	3.56	9.14	7.2	206	21.8
Ç	3.61	9.11	7.21	208	21.4

Water Quality Description (colour, turbidity, odour, sheen)

VIC EPA

## Well Location and Condition

Comments



Job Name	Buckland Park				
Job Number	31495				
Sampler	ME				
Well	GW9				
Date	8/5/2008				
Time	11:37				
Purging Method					
Depth to GW before	ore purging (m)	3.83			
Depth to GW afte	r purging (m)	3.98			
Depth to bottom	of well (m)	6.445			

Height (m) = Depth to bottom of well - depth to GW 2.6

Well volume (L) =  $\pi$  r<sup>2</sup> h 5.1

Total water purged (L) = Well volume x total well purges

**Water Quality** 

<b>Cumulative Vo</b>	lume				
Purged (L)	DO (ppm)	EC (mS)	рН	ReDox (mV)	Temp (°C)
	5 1.84	10.26	6.89	179	20.2
	1.34	9.3	7.34	50	19.7
	1.24	8.91	7.36	22	19.6
	1.14	8.63	7.33	20	19.6
	1.64	8.43	7.34	22	19.6

Water Quality Description (colour, turbidity, odour, sheen)

## Well Location and Condition

## Comments

Slow recharge



Job Name	Buckland Park		
Job Number	31495		
Sampler	ME		
Well	GW10		
Date	15/5/08		
Time	2:00		
Purging Method			
Depth to GW before	ore purging (m)	4.422	
Depth to GW afte	r purging (m)	4.3	
Depth to bottom	of well (m)	5.5	

Height (m) = Depth to bottom of well - depth to GW 0.88

Well volume (L) =  $\pi$  r<sup>2</sup> h 1.72

Total water purged (L) = Well volume x total well purges

Water Quality

<b>Cumulative Vol</b>	Cumulative Volume							
Purged (L)	DO (ppm)	EC (mS)	рН	ReDox (mV)	Temp (°C)			
	2 2.25	6.21	6.82	282	21.3			
	4 2.45	5.68	7.16	224	20.7			
	6 2.5	5.45	7.3	222	20.5			
	8 3.4	5.42	7.45	222	20.5			

Water Quality Description (colour, turbidity, odour, sheen)

## Well Location and Condition

## Comments

Slow recharge



Job Name	Buckland Park				
Job Number	31495				
Sampler	ME				
Well	GW11				
Date	7/5/2008				
Time	4:58				
Purging Method					
Depth to GW before	ore purging (m)	2.26			
Depth to GW afte	r purging (m)	2.425			
Depth to bottom	of well (m)	4.85			
0 1 1 1	•	•	•	 	

Height (m) = Depth to bottom of well - depth to GW 2.59

Well volume (L) =  $\pi$  r<sup>2</sup> h 5.1

Total water purged (L) = Well volume x total well purges

Water Quality

Cumulative Volume								
Purged (L)	DO (ppm)	EC (mS)	рН	ReDox (mV)	Temp (°C)			
	5.45	28.7	7.42	140	19.2			
	2.05	26.8	7.36	66	20			
	1.84	25.9	7.47	49	20.2			
	1.85	25.3	7.5	47	20.2			

## Water Quality Description (colour, turbidity, odour, sheen)

Clear on top

Light brown recharge

## Well Location and Condition

## Comments

pH, TDS, Metals, PAH, OCP



Job Name	Buckland Park				
Job Number	31495				
Sampler	ME				
Well	GW12				
Date	15/5/08				
Time	12:30				
Purging Method					
Depth to GW before	ore purging (m)	7.45			
Depth to GW after	er purging (m)	7.96			
Depth to bottom	of well (m)	9.96			
			•	•	

Height (m) = Depth to bottom of well - depth to GW 2.51

Well volume (L) =  $\pi$  r<sup>2</sup> h 4.9

Total water purged (L) = Well volume x total well purges

Water Quality

Cumulative Volume						
Purged (L)	DO (ppm)	EC (mS)	рН	ReDox (mV)	Temp (°C)	
	5 0.1	1	5.92	212	20.1	
	0.1	0.2	6.25	230	18.7	
	2.79	12.59	6.41	235	18.7	
	2.69	12.53	6.52	228	18.7	

Water Quality Description (colour, turbidity, odour, sheen)

## Well Location and Condition

## Comments

pH, TDS, Metals, AAH, OCP



Job Name	Buckland Park			
Job Number	31495			
Sampler	ME			
Well	GW13			
Date	7/5/2008			
Time	10:00			
Purging Method	Bailer			
Depth to GW bef	ore purging (m)	3.37		
Depth to GW after purging (m)		3.38		
Depth to bottom of well (m)		4.85		

Height (m) = Depth to bottom of well - depth to GW 4.85-3.37=1.48 (1.48x.00196)=2.9008

Well volume (L) =  $\pi$  r<sup>2</sup> h 2.9

Total water purged (L) = Well volume x total well purges

Water Quality

Cumulative Volume						
Purged (L)	DO (ppm)	EC (mS)	рН	ReDox (mV)	Temp (°C)	
3	3.67	25.9	7.55	125	20.3	
6	1.53	26.3	7.6	66	20.6	
9	2.8	26.3	7.74	48	20.4	
12	1.85	26.2	7.61	66	20.7	
15	2.95	24.3	7.67	80	20.6	
18	1.66	26.9	7.66	45	20.7	
21	1.65	26.9	7.65	45	20.6	

Water Quality Description (colour, turbidity, odour, sheen)

Light brown, no sheen or odour

## Well Location and Condition

## Comments

pH, TDS, PAH, OCP, Metals



Job Name	Buckland Park	
Job Number	31495	
Sampler	ME	
Well	GW14	
Date	7/5/2008	
Time	12.04	
<b>Purging Method</b>		
Depth to GW before purging (m)		2.61
Depth to GW after purging (m)		2.65
Depth to bottom of well (m)		5m

Height (m) = Depth to bottom of well - depth to GW 2.39

Well volume (L) =  $\pi$  r<sup>2</sup> h 4.7

Total water purged (L) = Well volume x total well purges

**Water Quality** 

<b>Cumulative Volu</b>	me				
Purged (L)	DO (ppm)	EC (mS)	рН	ReDox (mV)	Temp (°C)
5	2.12	29.4	7.15	155	20.8
10	1.8	30.4	7.23	82	20.4
15	1.86	29.1	7.31	70	20.3
20	1.22	27.7	7.31	62	20.6
25	2.05	27.8	7.36	70	20.6
30	2.05	27.4	7.29	70	20.6

Water Quality Description (colour, turbidity, odour, sheen)

Light brown, clearer w/bailing No odour

## Well Location and Condition

#### Comments

VIC EPA pH TDS



Job Name	Buckland Park				
Job Number	31495				
Sampler	ME				
Well	GW15				
Date					
Time					
<b>Purging Method</b>					
Depth to GW before	ore purging (m)	2.54			
Depth to GW after purging (m)		3.36			
Depth to bottom	of well (m)	3.8			
0 1 1 4	· ·	•	•	•	

Height (m) = Depth to bottom of well - depth to GW 1.26

Well volume (L) =  $\pi$  r<sup>2</sup> h 2.5

Total water purged (L) = Well volume x total well purges

Water Quality

Cumulative Volume							
Purged (L)	DO (ppm)	EC (mS)	рН	ReDox (mV)	Temp (°C)		
(	3.85	7.02	7.57	297	20.8		
(	3.83	7.18	7.7	225	20.8		
(	3.9	7.38	7.77	225	20.8		

Water Quality Description (colour, turbidity, odour, sheen)

Lots of sediment

## Well Location and Condition

## Comments

Slow recharge, QC4, QC5

# **Appendix H**

Laboratory Analysis Certificates - Groundwater

## **Appendix H**





Accreditation Number: 1645



CONNELL WAGNER (SA) PTY LTD 55 Grenfell St ADELAIDE SA 5000

Attention: Matt Eygenraamm

Project 08ENME0011740

Client Reference 31495

**Buckland Park** 

Received Date 09/05/2008 09:00:00 AM

Customer Sample ID Amdel Sample Number Date Sampled			GW13 989678 07/05/2008	<sup>Q10</sup> GW14 989679 07/05/2008	QC3 989680 07/05/2008	GW6 989681 07/05/2008	GW11 989682 08/05/2008
VOC Test/Reference	PQL	Unit					
1300 VHCs in Water by P&T 1,1,1,2-Tetrachloroethane	5	μg/L	-	<5.0	-	-	_
1,1,1-Trichloroethane	5	μg/L	-	<5.0	-	-	_
1,1,2,2-Tetrachloroethane	5	μg/L	-	<5.0	-	-	-
1,1,2-Trichloroethane	5	μg/L	-	<5.0	-	-	-
1,1-Dichloroethane	30	μg/L	-	<30.0	-	-	-
1,1-Dichloroethene	5	μg/L	-	<5.0	-	-	-
1,2,3-Trichlorobenzene	5	μg/L	-	<5.0	-	-	-
1,2,4-Trichlorobenzene	5	μg/L	-	<5.0	-	-	-
1,2-Dichlorobenzene	5	μg/L	-	<5.0	-	-	-
1,2-Dichloropropane	5	μg/L	-	<5.0	-	-	-
1,2-Dichloroethane	5	μg/L	-	<5.0	-	-	-
1,3-Dichlorobenzene	5	μg/L	-	<5.0	-	-	-
I,3-Dichloropropane	5	μg/L	-	<5.0	-	-	-
,4-Dichlorobenzene	5	μg/L	-	<5.0	-	-	-
2-Chlorotoluene	5	μg/L	-	<5.0	-	-	-
-Chlorotoluene	5	μg/L	-	<5.0	-	-	-
Bromochloromethane	5	μg/L	-	<5.0	-	-	-
Bromodichloromethane	5	μg/L	-	<5.0	-	-	-
Bromoform	5	μg/L	-	<5.0	-	-	-
Carbon Tetrachloride	5	μg/L	-	<5.0	-	-	-
Chlorobenzene	5	μg/L	-	<5.0	-	-	-
Chloroethane	5	μg/L	-	<5.0	-	-	-
Chloroform	10	μg/L	-	<10.0	-	-	-
cis-1,2-Dichloroethene	5	μg/L	-	<5.0	-	-	-
cis-1,3-Dichloropropene	5	μg/L	-	<5.0	-	-	-
Dibromomethane	5	μg/L	-	<5.0	-	-	-
Dibromochloromethane	5	μg/L	-	<5.0	-	-	-
Hexachlorobutadiene	5	μg/L	-	<5.0	-	-	-
Hexachloroethane	5	μg/L	-	<5.0	-	-	-
Methylene Chloride	10	μg/L	-	<10.0	-	-	-
Pentachloroethane	5	μg/L	-	<5.0	-	-	-
etrachloroethene	5	μg/L	-	<5.0	-	-	-
rans-1,2-Dichloroethene	5	μg/L	-	<5.0	-	-	-
rans-1,3-Dichloropropene	5	μg/L	-	<5.0	-	-	-
Frichloroethene	5	μg/L	-	<5.0	-	-	-
Trichlorofluoromethane	5	μg/L	-	<5.0	-	-	-
/inyl chloride	5	μg/L	-	<5.0	_	_	-

First Reported: 19 May 2008 Date Printed: 13 June 2008 Amdel Ltd 1868 Dandenong Rd Clayton VIC Australia 3168 ABN: 30 008 127 802 Telephone: (03) 9538 2277 Facsimile: (03) 9538 2278

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Customer Sample ID Amdel Sample Number			GW13 989678 07/05/2008	<sup>Q10</sup> GW14 989679 07/05/2008	QC3 989680	GW6 989681 07/05/2008	GW11 989682 08/05/2008
Date Sampled VOC			07/05/2006	07/05/2008	07/05/2008	07/05/2006	06/05/2006
Test/Reference	PQL	Unit					
Pentafluorobenzene-Surrogate	1	%	-	94	-	-	-
Toluene-D8 - Surrogate	1	%	-	94	-	_	-
4-Bromofluorobenzene - Surrogate	1	%	-	92	-	-	-
1100 MAH(BTEX & C6-C9) in Water	r P&T						
Benzene	0.5	μg/L	-	<0.5	-	-	-
Cumene	1	μg/L	-	<1.0	-	-	-
Ethylbenzene	1	μg/L	-	<1.0	-	-	-
Meta- & Para- Xylene	2	μg/L	-	<2.0	-	-	-
Ortho-Xylene	1	μg/L	-	<1.0	-	-	-
Styrene	1	μg/L	-	<1.0	-	-	-
Гoluene	1	μg/L	-	<1.0	-	-	-
Total Xylenes	3	μg/L	-	<3.0	-	-	-
C6-C9 Fraction	20	μg/L	-	<20.0	-	-	-
1-Bromofluorobenzene - Surrogate	-	%	-	72	-	-	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Water by G	C-ECD						
a-BHC	1	μg/L	<1	<1	<1	<10	<10
a-Chlordane	1	μg/L	<1	<1	<1	<10	<10
a-Endosulphan	1	μg/L	<1	<1	<1	<10	<10
Aldrin	1	μg/L	<1	<1	<1	<10	<10
o-BHC	2	μg/L	<2	<2	<2	<20	<20
o-Endosulphan	1	μg/L	<1	<1	<1	<10	<10
d-BHC	1	μg/L	<1	<1	<1	<10	<10
DDD	1	μg/L	<1	<1	<1	<10	<10
DDE	1	μg/L	<1	<1	<1	<10	<10
DDT	1	μg/L	<1	<1	<1	<10	<10
Dieldrin	1	μg/L	<1	<1	<1	<10	<10
Endosulfan sulfate	1	μg/L	<1	<1	<1	<10	<10
Endrin	1	μg/L	<1	<1	<1	<10	<10
Endrin Aldehyde	2	μg/L	<2	<2	<2	<20	<20
g-BHC Lindane	1	μg/L	<1	<1	<1	<10	<10
g-Chlordane	1	μg/L	<1	<1	<1	<10	<10
Heptachlor	1	μg/L	<1	<1	<1	<10	<10
Heptachlor epoxide	1	μg/L	<1	<1	<1	<10	<10
Hexachlorobenzene (HCB)	1	μg/L	<1	<1	<1	<10	<10
Methoxychlor	2	μg/L	<2	<2	<2	<20	<20
Oxychlordane	1	μg/L	<1	<1	<1	<10	<10
2.4.5.6-tetrachloro-m-xylene-SURROG	1	%	100	74	87	102	101
2100 PAH in Water by GC							
Acenaphthene	1	μg/L	<1	<1	-	<1	<1
Acenaphthylene	1	μg/L	<1	<1	-	<1	<1
Anthracene	1	μg/L	<1	<1	-	<1	<1
Benz(a)anthracene	1	μg/L	<1	<1	-	<1	<1
Benzo(a)pyrene	1	μg/L	<1	<1	-	<1	<1
Benzo(b)&(k)fluoranthene	2	μg/L	<2	<2	-	<2	<2
Benzo(ghi)perylene	1	μg/L	<1	<1	-	<1	<1
Dibenz(ah)anthracene	1	μg/L	<1	<1	-	<1	<1
Chrysene	1	μg/L	<1	<1	-	<1	<1

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Customer Sample ID Amdel Sample Number Date Sampled			GW13 989678 07/05/2008	<sup>Q10</sup> GW14 989679 07/05/2008	QC3 989680 07/05/2008	GW6 989681 07/05/2008	GW11 989682 08/05/2008
SVOC			01700/2000	0170072000	01700/2000	01700/2000	00/00/2000
Test/Reference	PQL	Unit					
Naphthalene	1	μg/L	<1	<1	-	<1	<1
Fluoranthene	1	μg/L	<1	<1	-	<1	<1
Fluorene	1	μg/L	<1	<1	-	<1	<1
Indeno(123-cd)pyrene	1	μg/L	<1	<1	-	<1	<1
Phenanthrene	1	μg/L	<1	<1	-	<1	<1
Pyrene	1	μg/L	<1	<1	-	<1	<1
Sum of PAHs	1	μg/L	<1	<1	-	<1	<1
2-Fluorobiphenyl - Surrogate	_	%	95	78	-	80	77
Anthracene-D10 - Surrogate	_	%	107	-	-	85	72
p-Terphenyl-D14 - Surrogate	_	%	100	82	-	86	80
2600 PCBs in Water by GCMS Aroclor 1016	1	μg/L	_	<1		_	_
Aroclor 1221	1	μg/L	_	<1	_	_	_
Aroclor 1221 Aroclor 1232 and 1242 as total	2	μg/L μg/L	-	<2	_	_	-
Aroclor 1232 and 1242 as total	2	μg/L μg/L	-	<2	-	-	-
Aroclor 1260	1		-	<1	=	-	-
Arocior 1260  Total Polychlorinated biphenyls	1	μg/L μα/l	-	<1	-	-	-
Decachlorobiphenyl - PCB surrogate	1	μg/L %	-	105	-	-	-
· · ·		/0	-	100	-	-	-
2800 Individual Phenols in Water by 2,3,4,6-Tetrachlorophenol	<b>y GC</b> 10	μg/L	_	<10	_	_	_
2,3,4-Trichlorophenol	10	μg/L	_	<10	_	_	
2,3,5,6-Tetrachlorophenol	10	μg/L	_	<10	_	_	
2,3,5-Trichlorophenol	10	μg/L	_	<10	_	_	
2,3,6-Trichlorophenol	10	μg/L μg/L	-	<10	_	_	-
2,3-Dichlorophenol	20	μg/L	_	<20	_	_	
2,4&2,5-Dichlorophenol	40	μg/L		<40			
2,4,6-Trichlorophenol	10	μg/L	-	<10	_	_	_
2,6-Dichlorophenol	10	μg/L μg/L	-	<10	_	_	_
2-Chlorophenol	10	μg/L	_	<10	_	_	_
2-Methylphenol	10	μg/L	-	<10	_	_	-
3,4-Dichlorophenol	20	μg/L	_	<20	_	_	_
3,5-Dichlorophenol	20	μg/L	-	<20	-	-	-
3-Chlorophenol & 4-Chlorophenol	10		-	<10	=	-	-
3-Chiorophenoi & 4-Chiorophenoi 3-Methylphenol & 4-Methylphenoi	10	μg/L	-	<10	-	-	-
3-Methylphenol & 4-Methylphenol 4-Chloro-3-methylphenol	10	μg/L μα/l	-	<10	-	-	-
Pentachlorophenol	30	μg/L	-	<30	-	-	-
Phenol	10	μg/L μα/l	-	<10	-	-	-
nenoi 2,4,6-Tribromophenol-Surrogate	-	μg/L %	-	68	-	-	-
		/0	-	00	-	-	-
<b>2000 TPH (C10 - C36) in Water by G</b> C10-C14 Fraction	40	μg/L	-	50	-	-	_
C15-C28 Fraction	100	μg/L	-	<100	-	-	_
C29-C36 Fraction	100	μg/L	-	<100	-	-	_
Metals	100	r3					
Test/Reference	PQL	Unit					
3100 Dissolved Metals in Water By Antimony	ICP/MS	μg/L	_	1.4	_	_	_
Arsenic	5	μg/L μg/L	- <5	<5	- <5	- <5	- <5
Barium	5 5	μg/L μg/L	-	46	-	-	-
Beryllium	5 5		-	46 <5	=	-	-
o i Amini II	5	μg/L	-	<b>\</b> 0	-	-	-

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Cobalt         5         μg/L         -           Copper         5         μg/L         6.9           Lead         5         μg/L         <5           Manganese         5         μg/L         -           Molybdenum         5         μg/L         -           Nickel         5         μg/L         -           Selenium         5         μg/L         -           Silver         5         μg/L         -           Tin         5         μg/L         -           Vanadium         5         μg/L         -           Zinc         5         μg/L         -           3400 Dissolved Mercury in Water by FIMS         Mercury         0.1         μg/L         -           Inorganics         Test/Reference         PQL         Unit         -           4230 Total Hexavalent Chromium in Water         Chromium (VI)         0.02         mg/L         -	<2 - <5 7.2 <5 400 15 <5 62 <5 16 <5	<2 <5 - <5 <5 <5 <5	<2 9.6 - 5.1 <5 <5 16	<2 17 - 5.4 <5 <5 <5
Chromium         5         μg/L         15           Cobalt         5         μg/L         -           Copper         5         μg/L         6.9           Lead         5         μg/L         -5           Manganese         5         μg/L         -           Molybdenum         5         μg/L         -           Nickel         5         μg/L         -           Selenium         5         μg/L         -           Silver         5         μg/L         -           Tin         5         μg/L         -           Vanadium         5         μg/L         -           Zinc         5         μg/L         -           3400 Dissolved Mercury in Water by FIMS         -         -           Mercury         0.1         μg/L         -           Inorganics         -         -         -           Test/Reference         PQL         Unit         -	- <5 7.2 <5 400 15 <5 62 <5 <5	<5 - <5 - - - <5 - -	9.6 - 5.1 <5 <5 <5	17 - 5.4 <5 <5
Cobalt         5         μg/L         -           Copper         5         μg/L         6.9           Lead         5         μg/L         -5           Manganese         5         μg/L         -           Molybdenum         5         μg/L         -           Nickel         5         μg/L         -           Selenium         5         μg/L         -           Silver         5         μg/L         -           Tin         5         μg/L         -           Vanadium         5         μg/L         -           Zinc         5         μg/L         -           34400 Dissolved Mercury in Water by FIMS         -         -           Mercury         0.1         μg/L         -           Inorganics         -         -         -           Test/Reference         PQL         Unit         -           4230 Total Hexavalent Chromium in Water         -         -         -	<5 7.2 <5 400 15 <5 62 <5 <5 16	- <5 <5 - - <5 - -	- 5.1 <5 - - <5 - -	- 5.4 <5 - - <5 - -
Copper       5       μg/L       6.9         Lead       5       μg/L       <5	7.2 <5 400 15 <5 62 <5 <5 16	<5 <5 - - <5 - - -	5.1 <5 - - <5 - -	5.4 <5 - - <5 - -
Lead 5 μg/L <5  Manganese 5 μg/L -  Molybdenum 5 μg/L -  Nickel 5 μg/L -  Selenium 5 μg/L -  Silver 5 μg/L -  Tin 5 μg/L -  Vanadium 5 μg/L -  Vanadium 5 μg/L -  Zinc 5 μg/L -  Zinc 5 μg/L -  Janoba Selenium 5 μg/L -  Elenium 5 μg/L -  Vanadium 5 μg/L -  Vanadium 5 μg/L -  Zinc 5 μg/L -  Silver -  Tin 9 μg/L -  Vanadium 5 μg/L -  Zinc 5 μg/L -  Silver -  Vanadium 5 μg/L -  Silver -  Vanadium 5 μg/L -  Silver -  Vanadium 5 μg/L -  Silver -  Vanadium 5 μg/L -  Silver -  Vanadium 5 μg/L -  Silver -  Vanadium 5 μg/L -  Silver -  Vanadium 5 μg/L -  Silver -  Vanadium 5 μg/L -  Silver -  Silver -  Vanadium 5 μg/L -  Silver -  Silver -  Vanadium 5 μg/L -  Silver -  Silver -  Vanadium 5 μg/L -  Silver -  Silver -  Vanadium 6 μg/L -  Silver -  Silver -  Vanadium 6 μg/L -  Silver -  Silver -  Vanadium 6 μg/L -  Silver -  Silver -  Vanadium 6 μg/L -  Silver -  Silver -  Vanadium 6 μg/L -  Silver -  Silver -  Vanadium 6 μg/L -  Silver -  Silver -  Vanadium 6 μg/L -  Silver -  Silver -  Vanadium 6 μg/L -  Silver -  Silver -  Silver -  Silver -  Silver -  On 1 μg/L -  Silver -  Silv	<5 400 15 <5 62 <5 <5 16	<5 - - <5 - - -	<5 - - <5 - - -	<5 - - <5 - - -
Manganese 5 μg/L -  Molybdenum 5 μg/L -  Nickel 5 μg/L -  Selenium 5 μg/L -  Silver 5 μg/L -  Tin 5 μg/L -  Vanadium 5 μg/L -  Zinc 5 μg/L -  3400 Dissolved Mercury in Water by FIMS  Mercury 0.1 μg/L -  Inorganics  Test/Reference PQL Unit  4230 Total Hexavalent Chromium in Water  Chromium (VI) 0.02 mg/L -	400 15 <5 62 <5 <5	- - <5 - - -	- - <5 - - -	- - <5 - - -
Molybdenum   5	15 <5 62 <5 <5	- <5 - - -	- <5 - - -	- <5 - - -
Nickel         5 μg/L         <5	<5 62 <5 <5	<5 - - -	<5 - - - -	<5 - - - -
Selenium   5 μg/L   -	62 <5 <5 16	- - -	- - -	- - -
Silver   5 μg/L   -	<5 <5 16	- - -	- - -	- - -
Tin 5 μg/L - Vanadium 5 μg/L - Zinc 5 μg/L -  3400 Dissolved Mercury in Water by FIMS Mercury 0.1 μg/L -  Inorganics Test/Reference PQL Unit  4230 Total Hexavalent Chromium in Water Chromium (VI) 0.02 mg/L -	<5 16	-	-	-
Vanadium 5 μg/L - Zinc 5 μg/L -  3400 Dissolved Mercury in Water by FIMS  Mercury 0.1 μg/L -  Inorganics  Test/Reference PQL Unit  4230 Total Hexavalent Chromium in Water  Chromium (VI) 0.02 mg/L -	16	-	-	-
Zinc 5 µg/L <5  3400 Dissolved Mercury in Water by FIMS  Mercury 0.1 µg/L -  Inorganics  Test/Reference PQL Unit  4230 Total Hexavalent Chromium in Water  Chromium (VI) 0.02 mg/L -				- <5
3400 Dissolved Mercury in Water by FIMS  Mercury 0.1 µg/L -  Inorganics  Test/Reference PQL Unit  4230 Total Hexavalent Chromium in Water  Chromium (VI) 0.02 mg/L -	<5	6.2	16	<5
Mercury	•			
Inorganics Test/Reference PQL Unit  4230 Total Hexavalent Chromium in Water Chromium (VI) 0.02 mg/L -				
Test/Reference PQL Unit  4230 Total Hexavalent Chromium in Water Chromium (VI) 0.02 mg/L -	<0.1	-	-	-
4230 Total Hexavalent Chromium in Water Chromium (VI) 0.02 mg/L -				
Chromium (VI) 0.02 mg/L -				
	<0.02			
4270 Total Cyanide in Water Colournetric	10.02			
Total Cyanide 0.005 mg/L -	<0.005	-	-	-
<b>4000 pH in Water</b> pH 0.1 pH 7.6	6.1	_	_	7.6
4110 Dissolved Solids in Water	• • • • • • • • • • • • • • • • • • • •			
Total Dissolved Solids 5 mg/L 550		-	-	4500
<b>4300 Anions in Water by IC</b> Fluoride 0.5 mg/L -	1700			

Customer Sample ID			GW4	GW9	GW7	GW2	GW1
Amdel Sample Number			989683	989684	989685	989686	989687
Date Sampled			08/05/2008	08/05/2008	08/05/2008	06/05/2008	06/05/2008
VOC							
Test/Reference	PQL	Unit					
1300 VHCs in Water by P&T							
1,1,1,2-Tetrachloroethane	5	μg/L	-	<5.0	-	-	<5.0
1,1,1-Trichloroethane	5	μg/L	-	<5.0	-	-	<5.0
1,1,2,2-Tetrachloroethane	5	μg/L	-	<5.0	-	-	<5.0
1,1,2-Trichloroethane	5	μg/L	-	<5.0	-	-	<5.0
1,1-Dichloroethane	30	μg/L	-	<30.0	-	-	<30.0
1,1-Dichloroethene	5	μg/L	-	<5.0	-	-	<5.0
1,2,3-Trichlorobenzene	5	μg/L	-	<5.0	-	-	<5.0
1,2,4-Trichlorobenzene	5	μg/L	-	<5.0	-	-	<5.0
1,2-Dichlorobenzene	5	μg/L	-	<5.0	-	-	<5.0
1,2-Dichloropropane	5	μg/L	-	<5.0	-	-	<5.0
1,2-Dichloroethane	5	μg/L	-	<5.0	-	-	<5.0
1,3-Dichlorobenzene	5	μg/L	-	<5.0	-	-	<5.0
1,3-Dichloropropane	5	μg/L	-	<5.0	-	-	<5.0
1,4-Dichlorobenzene	5	μg/L	-	<5.0	-	-	<5.0

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Customer Sample ID Amdel Sample Number Date Sampled			GW4 989683 08/05/2008	GW9 989684 08/05/2008	GW7 989685 08/05/2008	GW2 989686 06/05/2008	GW1 989687 06/05/2008
VOC			06/05/2006	06/05/2006	06/05/2006	06/05/2006	06/05/2006
Test/Reference	PQL	Unit					
2-Chlorotoluene	5	μg/L	-	<5.0	-	-	<5.0
4-Chlorotoluene	5	μg/L	-	<5.0	-	-	<5.0
Bromochloromethane	5	μg/L	-	<5.0	-	-	<5.0
Bromodichloromethane	5	μg/L	-	<5.0	-	-	<5.0
Bromoform	5	μg/L	-	<5.0	-	-	<5.0
Carbon Tetrachloride	5	μg/L	-	<5.0	-	-	<5.0
Chlorobenzene	5	μg/L	-	<5.0	-	-	<5.0
Chloroethane	5	μg/L	-	<5.0	-	-	<5.0
Chloroform	10	μg/L	-	<10.0	-	-	<10.0
cis-1,2-Dichloroethene	5	μg/L	-	<5.0	-	-	<5.0
cis-1,3-Dichloropropene	5	μg/L	-	<5.0	-	-	<5.0
Dibromomethane	5	μg/L	-	<5.0	-	-	<5.0
Dibromochloromethane	5	μg/L	-	<5.0	-	-	<5.0
Hexachlorobutadiene	5	μg/L	-	<5.0	-	-	<5.0
Hexachloroethane	5	μg/L	-	<5.0	-	-	<5.0
Methylene Chloride	10	μg/L	-	<10.0	-	_	<10.0
Pentachloroethane	5	μg/L	-	<5.0	-	_	<5.0
Tetrachloroethene	5	μg/L	-	<5.0	-	_	<5.0
trans-1,2-Dichloroethene	5	μg/L	-	<5.0	_	_	<5.0
trans-1,3-Dichloropropene	5	μg/L	-	<5.0	-	_	<5.0
Trichloroethene	5	μg/L	-	<5.0	_	_	<5.0
Trichlorofluoromethane	5	μg/L	-	<5.0	-	_	<5.0
Vinyl chloride	5	μg/L	-	<5.0	_	_	<5.0
Pentafluorobenzene-Surrogate	1	% %	-	86	_	_	85
Toluene-D8 - Surrogate	1	%	_	104	_	_	104
4-Bromofluorobenzene - Surrogate	1	%	_	87	_	_	96
1100 MAH(BTEX & C6-C9) in Wate		μg/L		<0.5	_	_	<0.5
Cumene	1			<1.0			<1.0
Ethylbenzene	1	μg/L	-	<1.0	-	-	<1.0
•		μg/L	-		-	-	
Meta- & Para- Xylene Ortho-Xylene	2 1	μg/L	-	<2.0 <1.0	-	-	<2.0 <1.0
•		μg/L	-	<1.0	-	-	<1.0
Styrene Toluene	1	μg/L	-		-	-	
roluene Total Xylenes	1	μg/L	-	<1.0	-	-	<1.0
•	3	μg/L	-	<3.0	-	-	<3.0
C6-C9 Fraction	20	μg/L <sub>0/</sub>	-	<20.0	-	-	<20.0
4-Bromofluorobenzene - Surrogate	-	%	-	82	-	-	84
SVOC Test/Reference	PQL	Unit					
2300 OC Pesticides in Water by G	C-ECD						
a-BHC	1	μg/L	<1	<1	<1	<1	<1
a-Chlordane	1	μg/L	<1	<1	<1	<1	<1
a-Endosulphan	1	μg/L	<1	<1	<1	<1	<1
Aldrin	1	μg/L	<1	<1	<1	<1	<1
b-BHC	2	μg/L	<2	<2	<2	<2	<2
b-Endosulphan	1	μg/L	<1	<1	<1	<1	<1
d-BHC	1	μg/L	<1	<1	<1	<1	<1
DDD	1	μg/L	<1	<1	<1	<1	<1
DDE	1	μg/L	<1	<1	<1	<1	<1

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Customer Sample ID Amdel Sample Number			GW4 989683	GW9 989684	GW7 989685	GW2 989686	GW1 989687
Date Sampled			08/05/2008	08/05/2008	08/05/2008	06/05/2008	06/05/200
svoc							
Test/Reference	PQL	Unit					
DDT	1	μg/L	<1	<1	<1	<1	<1
Dieldrin	1	μg/L	<1	<1	<1	<1	<1
Endosulfan sulfate	1	μg/L	<1	<1	<1	<1	<1
Endrin	1	μg/L	<1	<1	<1	<1	<1
Endrin Aldehyde	2	μg/L	<2	<2	<2	<2	<2
g-BHC Lindane	1	μg/L	<1	<1	<1	<1	<1
g-Chlordane	1	μg/L	<1	<1	<1	<1	<1
leptachlor	1	μg/L	<1	<1	<1	<1	<1
leptachlor epoxide	1	μg/L	<1	<1	<1	<1	<1
lexachlorobenzene (HCB)	1	μg/L	<1	<1	<1	<1	<1
Methoxychlor	2	μg/L	<2	<2	<2	<2	<2
Dxychlordane	1	μg/L	<1	<1	<1	<1	<1
.4.5.6-tetrachloro-m-xylene-SURROG	1	%	10	81	88	77	74
2100 PAH in Water by GC							
Acenaphthene	1	μg/L	<1	<1	<1	<1	<1
Acenaphthylene	1	μg/L	<1	<1	<1	<1	<1
Anthracene	1	μg/L	<1	<1	<1	<1	<1
Benz(a)anthracene	1	μg/L	<1	<1	<1	<1	<1
Benzo(a)pyrene	1	μg/L	<1	<1	<1	<1	<1
lenzo(b)&(k)fluoranthene	2	μg/L	<2	-	<2	<2	<2
Benzo(ghi)perylene	1	μg/L	<1	<1	<1	<1	<1
Dibenz(ah)anthracene	1	μg/L	<1	<1	<1	<1	<1
Chrysene	1	μg/L	<1	<1	<1	<1	<1
laphthalene	1	μg/L	<1	<1	<1	<1	<1
Fluoranthene	1	μg/L	<1	<1	<1	<1	<1
Fluorene	1	μg/L	<1	<1	<1	<1	<1
ndeno(123-cd)pyrene	1	μg/L	<1	<1	<1	<1	<1
Phenanthrene	1	μg/L	<1	<1	<1	<1	<1
Pyrene	1	μg/L	<1	<1	<1	<1	<1
Sum of PAHs	1	μg/L	<1	-	<1	<1	<1
-Fluorobiphenyl - Surrogate	-	%	80	81	83	74	73
Anthracene-D10 - Surrogate	-	%	88	87	91	81	76
o-Terphenyl-D14 - Surrogate	_	%	92	91	96	85	84
2600 PCBs in Water by GCMS							
Aroclor 1016	1	μg/L	-	<1	-	-	<1
Aroclor 1221	1	μg/L	-	<1	-	-	<1
Aroclor 1232 and 1242 as total	2	μg/L	-	<2	-	-	<2
Aroclor 1248 and 1254 as total	2	μg/L	-	<2	-	-	<2
Aroclor 1260	1	μg/L	-	<1	-	-	<1
otal Polychlorinated biphenyls	1	μg/L	-	<1	-	-	<1
ecachlorobiphenyl - PCB surrogate	1	%	-	84	-	-	80
800 Individual Phenols in Water by ,3,4,6-Tetrachlorophenol	<b>, GC</b>	μg/L	-	<10	-	-	<10
,3,4-Trichlorophenol	10	μg/L	-	<10	-	-	<10
,3,5,6-Tetrachlorophenol	10	μg/L	-	<10	-	-	<10
2,3,5-Trichlorophenol	10	μg/L	-	<10	-	_	<10
2,3,6-Trichlorophenol	10	μg/L	-	<10	-	_	<10
2,3-Dichlorophenol	20	μg/L	_	<20	_	_	<20
2,4&2,5-Dichlorophenol	40	μg/L		<40			<40

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Customer Sample ID Amdel Sample Number Date Sampled			GW4 989683 08/05/2008	GW9 989684 08/05/2008	GW7 989685 08/05/2008	GW2 989686 06/05/2008	GW1 989687 06/05/2008
SVOC Test/Reference	PQL	Unit					
2,4,6-Trichlorophenol	10	μg/L		<10			<10
•		· <del>-</del>	-		-	-	
2,6-Dichlorophenol	10	μg/L	-	<10	-	-	<10
2-Chlorophenol	10	μg/L	-	<10	-	-	<10
2-Methylphenol	10	μg/L	-	<10	-	-	<10
3,4-Dichlorophenol	20	μg/L	-	<20	-	-	<20
3,5-Dichlorophenol	20	μg/L	-	<20	-	-	<20
3-Chlorophenol & 4-Chlorophenol	10	μg/L	-	<10	-	-	<10
3-Methylphenol & 4-Methylphenol	10	μg/L	-	<10	-	-	<10
4-Chloro-3-methylphenol	10	μg/L	-	<10	-	-	<10
Pentachlorophenol	30	μg/L	-	<30	-	-	<30
Phenol	10	μg/L	-	<10	-	-	<10
2,4,6-Tribromophenol-Surrogate	-	%	-	81	-	-	50
2000 TPH (C10 - C36) in Water by							
C10-C14 Fraction	40	μg/L	-	<40	-	-	<40
C15-C28 Fraction	100	μg/L	-	<100	-	-	<100
C29-C36 Fraction	100	μg/L	-	<100	-	-	<100
<b>Metals</b> Test/Reference	PQL	Unit					
3100 Dissolved Metals in Water By	/ ICP/MS						
Antimony	1	μg/L	-	<1	-	-	<1
Arsenic	5	μg/L	<5	<5	<5	<5	<5
Barium	5	μg/L	-	43	-	-	24
Beryllium	5	μg/L	-	<5	_	-	<5
Boron	5	μg/L	-	1900	-	_	2600
Cadmium	2	μg/L	<2	<2	<2	<2	<2
Chromium	5	μg/L	14	_	11	16	-
Cobalt	5	μg/L	-	<5	_	-	<5
Copper	5	μg/L	15	<5	<5	<5	<5
	5			<5 <5	<5 <5	<5	<5
Lead		μg/L	<5		<5		
Manganese	5	μg/L	-	230	-	-	<5 44
Molybdenum	5	μg/L	-	5.1	-	-	41
Nickel	5	μg/L	7.0	<5	<5	13	<5
Selenium	5	μg/L	-	24	-	-	13
Silver	5	μg/L	-	<5	-	-	<5
Tin	5	μg/L	-	<5	-	-	<5
Vanadium	5	μg/L	-	9.3	-	-	20
Zinc	5	μg/L	5.1	5.4	<5	16	<5
3400 Dissolved Mercury in Water I Mercury	<b>by FIMS</b> 0.1	μg/L	-	<0.1	-	-	<0.1
norganics Test/Reference	PQL	Unit					
4230 Total Hexavalent Chromium Chromium (VI)	in Water 0.02	mg/L	_	<0.02	-	-	<0.02
4270 Total Cyanide in Water Color Fotal Cyanide	urmetric 0.005	-	-	<0.005	-	-	<0.005
4000 pH in Water							
oH	0.1	рН	-	7.4	7.9	-	-
4110 Dissolved Solids in Water Total Dissolved Solids	5	mg/L	_	7700	1300	-	-

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Customer Sample ID			GW4	GW9	GW7	GW2	GW1
Amdel Sample Number			989683	989684	989685	989686	989687
Date Sampled			08/05/2008	08/05/2008	08/05/2008	06/05/2008	06/05/2008
Inorganics							
Test/Reference	PQL	Unit					
Fluoride	0.5	mg/L	-	1.3	-	-	2.6

Customer Sample ID Amdel Sample Number Date Sampled			GW3 989688 06/05/2008	QC1 989689 06/05/2008	QC2 989690 06/05/2008	
<b>SVOC</b> Test/Reference	PQL	Unit				
2300 OC Pesticides in Water by GC	-ECD					
a-BHC	1	μg/L	<10	<10	<1	
a-Chlordane	1	μg/L	<10	<10	<1	
a-Endosulphan	1	μg/L	<10	<10	<1	
Aldrin	1	μg/L	<10	<10	<1	
b-BHC	2	μg/L	<20	<20	<2	
b-Endosulphan	1	μg/L	<10	<10	<1	
d-BHC	1	μg/L	<10	<10	<1	
DDD	1	μg/L	<10	<10	<1	
DDE	1	μg/L	<10	<10	<1	
DDT	1	μg/L	<10	<10	<1	
Dieldrin	1	μg/L	<10	<10	<1	
Endosulfan sulfate	1	μg/L	<10	<10	<1	
Endrin	1	μg/L	<10	<10	<1	
Endrin Aldehyde	2	μg/L	<20	<20	<2	
g-BHC Lindane	1	μg/L	<10	<10	<1	
g-Chlordane	1	μg/L	<10	<10	<1	
Heptachlor	1	μg/L	<10	<10	<1	
Heptachlor epoxide	1	μg/L	<10	<10	<1	
Hexachlorobenzene (HCB)	1	μg/L	<10	<10	<1	
Methoxychlor	2	μg/L	<20	<20	<2	
Oxychlordane	1	μg/L	<10	<10	<1	
2.4.5.6-tetrachloro-m-xylene-SURROG ATE	1	%	95	77	9	
2100 PAH in Water by GC						
Acenaphthene	1	μg/L	<1	<1	<1	
Acenaphthylene	1	μg/L	<1	<1	<1	
Anthracene	1	μg/L	<1	<1	<1	
Benz(a)anthracene	1	μg/L	<1	<1	<1	
Benzo(a)pyrene	1	μg/L	<1	<1	<1	
Benzo(b)&(k)fluoranthene	2	μg/L	<2	<2	<2	
Benzo(ghi)perylene	1	μg/L	<1	<1	<1	
Dibenz(ah)anthracene	1	μg/L	<1	<1	<1	
Chrysene	1	μg/L	<1	<1	<1	
Naphthalene	1	μg/L	<1	<1	<1	
Fluoranthene	1	μg/L	<1	<1	<1	
Fluorene	1	μg/L	<1	<1	<1	
Indeno(123-cd)pyrene	1	μg/L	<1	<1	<1	
Phenanthrene	1	μg/L	<1	<1	<1	
Pyrene	1	μg/L	<1	<1	<1	
Sum of PAHs	1	μg/L	<1	<1	<1	

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Customer Sample ID Amdel Sample Number Date Sampled SVOC			GW3 989688 06/05/2008	QC1 989689 06/05/2008	QC2 989690 06/05/2008	
Test/Reference	PQL	Unit				
2-Fluorobiphenyl - Surrogate	-	%	74	70	8	
Anthracene-D10 - Surrogate	-	%	75	75	10	
p-Terphenyl-D14 - Surrogate	-	%	83	77	10	
Metals						
Test/Reference	PQL	Unit				
3100 Dissolved Metals in Water	By ICP/MS					
Arsenic	5	μg/L	<5	<5	<5	
Cadmium	2	μg/L	<2	<2	<2	
Chromium	5	μg/L	16	15	13	
Copper	5	μg/L	17	19	21	
Lead	5	μg/L	<5	<5	<5	
Nickel	5	μg/L	6.4	6.6	6.9	
Zinc	5	μg/L	7.5	8.0	9.5	

## Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Extracted	Analysed
1100 MAH(BTEX & C6-C9) in Water P&T	15/05/2008	16/05/2008
1300 VHCs in Water by P&T	13/05/2008	16/05/2008
2000 TPH (C10 - C36) in Water by GC	14/05/2008	15/05/2008
2100 PAH in Water by GC	14/05/2008	16/05/2008
2300 OC Pesticides in Water by GC-ECD	14/05/2008	16/05/2008
2600 PCBs in Water by GCMS	14/05/2008	16/05/2008
2800 Individual Phenols in Water by GC	14/05/2008	16/05/2008
3100 Dissolved Metals in Water By ICP/MS	13/05/2008	16/05/2008
3400 Dissolved Mercury in Water by FIMS	13/05/2008	13/05/2008
4000 pH in Water		16/05/2008
4110 Dissolved Solids in Water		15/05/2008
4230 Total Hexavalent Chromium in Water	13/05/2008	13/05/2008
4270 Total Cyanide in Water Colourmetric	12/05/2008	16/05/2008
4300 Anions in Water by IC	12/05/2008	14/05/2008

Test Description 4000 pH in Water

Ideally pH should be determined in the field, therefore this test will not be measured for compliance to Holding Times



#### **Amdel Internal Quality Control Review**

#### General

- 1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
- 2. Amdel QC Acceptance/Rejection criteria are available on request.
- 3. Proficiency trial results are available on request.
- 4. Actual PQLs are matrix dependant. Quotes PQLs may be raised where sample extracts are diluted due to interferences.
- 5. Results are uncorrected for matrix spike or surrogate recoveries.
- 6. Test samples duplicated or spiked, are for this job only and are identified in the following QC report.
- 7. SVOC analyses on waters are performed on homogenized, unfiltered sample, unless noted otherwise.
- 8. When individual results are qualified in the body of a report, refer to the qualifier descriptions that follow.

#### **Holding Times**

Please refer to 'Sampling and Preservation Chart for Soils & Waters' for holding times. (Form LM-FOR-ADM-020)

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgement. If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues,

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

\*\*NOTE: pH duplicates are reported as a range NOT an RPD

suitablity qualified results may still be reported.

#### **Quality Control Results**

## Laboratory: EN\_METALS

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
993754 [ Method Blank ]				<del>                                     </del>	Lillius	LIIIIIIS	Codes
3400 Dissolved Mercury in Water by FIMS			1				
Mercury	ug/l	<0.1			< 0.1	Тт	<del>                                     </del>
	μg/L	<b>~</b> 0.1			<b>\ 0.1</b>	<del>-   '</del> -	<del>                                     </del>
994264 [ Method Blank ]			1				
3100 Dissolved Metals in Water By ICP/MS	_						
Antimony	μg/L	<1			< 1	T	
Arsenic	μg/L	<5			< 5	Т	
Barium	μg/L	<5			< 5	Т	
Beryllium	μg/L	<5			< 5	Т	
Boron	μg/L	<5			< 5	Т	
Cadmium	μg/L	<2			< 2	Т	
Chromium	μg/L	<5			< 5	Т	
Cobalt	μg/L	<5			< 5	Т	
Copper	μg/L	<5			< 5	Т	
Lead	μg/L	<5			< 5	Т	
Manganese	μg/L	<5			< 5	Т	
Molybdenum	μg/L	<5			< 5	Т	
Nickel	μg/L	<5			< 5	Т	
Selenium	μg/L	<5			< 5	Т	
Tin	μg/L	<5			< 5	Т	
Vanadium	μg/L	<5			< 5	Т	
Zinc	μg/L	<5			< 5	Т	
993755 [ Laboratory Control Sample ]	-	+	•	•		•	
3400 Dissolved Mercury in Water by FIMS			Expected Value	Percent Recovery			
Mercury	μg/L	9.8	10.0	98	80-120 %	Т	

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## Laboratory: EN\_METALS

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyin Codes
994265 [ Laboratory Control Sample ]	-		1		Lime	Liiiillo	00000
3100 Dissolved Metals in Water By ICP/MS			Expected Value	Percent Recovery			
Antimony	μg/L	97	100.0	97	80-120 %	Т	
Arsenic	μg/L	110	100.0	106	80-120 %	<del>Т</del> т	
Barium	μg/L	99	100.0	99	80-120 %	Т Т	
Beryllium	μg/L	110	100.0	106	80-120 %	T	
Boron	μg/L	120	100.0	117	80-120 %	T	
Cadmium	μg/L	100	100.0	102	80-120 %	Т	
Chromium	μg/L	99	100.0	99	80-120 %	Т	
Cobalt	μg/L	100	100.0	100	80-120 %	Т	
Copper	μg/L	100	100.0	105	80-120 %	Т	
Lead	μg/L	100	100.0	102	80-120 %	Т	
Manganese	μg/L	99	100.0	99	80-120 %	Т	
Molybdenum	μg/L	120	100.0	115	80-120 %	Т	
Nickel	μg/L	100	100.0	102	80-120 %	Т	
Selenium	μg/L	110	100.0	106	80-120 %	Т	
Tin	μg/L	100	100.0	102	80-120 %	Т	
Vanadium	μg/L	100	100.0	100	80-120 %	Т	
Zinc	μg/L	110	100.0	106	80-120 %	Т	
993172 [ Duplicate of 989678 ]	•	•	1	<del>'</del>			
3100 Dissolved Metals in Water By ICP/MS			Result 2	RPD			
Arsenic	μg/L	<5	<5	<1	0-10 %	Т	
Cadmium	μg/L	<2	<2	<1	0-10 %	Т	
Lead	μg/L	<5	<5	<1	0-10 %	T	
Nickel	μg/L	<5	<5	<1	0-10 %	Т	
993173 [ Duplicate of 989679 ]	+	•	•	•		1	
3100 Dissolved Metals in Water By ICP/MS			Result 2	RPD			
Antimony	μg/L	<1	1.4	<1	0-10 %	Т	
Arsenic	μg/L	<5	<5	<1	0-10 %	Т	
Barium	μg/L	46	46	1	0-10 %	Т	
Beryllium	μg/L	<5	<5	<1	0-10 %	Т	
Boron	μg/L	7300	7000	4	0-10 %	Т	
Cadmium	μg/L	<2	<2	<1	0-10 %	Т	
Cobalt	μg/L	<5	<5	<1	0-10 %	Т	
Copper	μg/L	7.9	7.2	10	0-10 %	Т	
Lead	μg/L	<5	<5	<1	0-10 %	Т	
Manganese	μg/L	400	400	1	0-10 %	Т	
Molybdenum	μg/L	16	15	6	0-10 %	Т	
Nickel	μg/L	<5	<5	<1	0-10 %	Т	
Selenium	μg/L	68	62	8	0-10 %	Т	
Silver	μg/L	<5	<5	<1	0-10 %	Т	
Tin	μg/L	<5	<5	<1	0-10 %	Т	
Vanadium	μg/L	16	16	5	0-10 %	Т	
Zinc	μg/L	<5	<5	<1	0-10 %	Т	
993184 [ Spike of 989681 ]							
3100 Dissolved Metals in Water By ICP/MS			Spike Value	Percent Recovery			
Cadmium	μg/L	93	100.0	93	80-120 %	Т	
Chromium	μg/L	110	100.0	97	80-120 %	Т	
Copper	μg/L	97	100.0	92	80-120 %	Т	
Lead	μg/L	95	100.0	95	80-120 %	Т	
Nickel	μg/L	93	100.0	89	80-120 %	Т	
Zinc	μg/L	110	100.0	89	80-120 %	Т	
aboratory: EN_SVOC	-		1	-		•	
		1		<del>                                     </del>	Acceptance	Pass	Qualifyir
Sample, Test, Result Reference	Units	Result 1	1	1	, toooptaile	1. 433	l saamiyii

· · · · · · · · · · · · · · · · · ·						
Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
993292 [ Method Blank ]	•		•		•	
2000 TPH (C10 - C36) in Water by GC						
C10-C14 Fraction	μg/L	<40		< 40	T	
C15-C28 Fraction	μg/L	<100		< 100	T	
C29-C36 Fraction	μg/L	<100		< 100	Т	



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyir Codes
994692 [ Method Blank ]	-	!	1			1	
2100 PAH in Water by GC							
Acenaphthene	μg/L	<1			< 1	Т	
Acenaphthylene	μg/L	<1			< 1	Т	
Anthracene	μg/L	<1			< 1	Т	
Benz(a)anthracene	μg/L	<1			< 1	Т	
Benzo(a)pyrene	μg/L	<1			< 1	Т	
Benzo(b)&(k)fluoranthene	μg/L	<2			< 2	Т	
Benzo(ghi)perylene	μg/L	<1			< 1	Т	
Chrysene	μg/L	<1			< 1	T	
Dibenz(ah)anthracene	μg/L	<1			< 1	T T	
Fluoranthene	μg/L	<1			< 1	Т	
Fluorene	μg/L	<1			< 1	T	
Indeno(123-cd)pyrene	μg/L	<1			< 1	T	
Naphthalene	μg/L	<1			< 1	Т	
Phenanthrene	μg/L	<1			< 1	Т	
Pyrene	μg/L	<1			< 1	T	
Sum of PAHs	μg/L	<1			< 1	T	
2-Fluorobiphenyl - Surrogate	%	88			70-130 %	<del>  '</del>	
Anthracene-D10 - Surrogate	%	95			70-130 %	<del>  '</del>	
p-Terphenyl-D14 - Surrogate	%	100			70-130 %	<del>  '</del>	
	70	100			70 100 70	<del></del>	$\vdash$
2300 OC Pesticides in Water by GC-ECD	/!				< 1	Т	-
a-BHC	μg/L	<1				'   T	
a-Chlordane	μg/L	<1			<1	'   T	
a-Endosulphan	μg/L	<1			< 1		
Aldrin	μg/L	<1			< 1	T	
b-BHC	μg/L	<2			< 2	T	
b-Endosulphan	μg/L	<1			< 1	T	
d-BHC	μg/L	<1			< 1	T	-
DDD	μg/L	<1			< 1	T	-
DDE	μg/L	<1			< 1	T	-
DDT	μg/L	<1			< 1	T	
Dieldrin	μg/L	<1			< 1	T	-
Endosulfan sulfate	μg/L	<1			< 1	T	
Endrin	μg/L 	<1			< 1	T	
Endrin Aldehyde	μg/L	<2			< 2	T	
g-BHC Lindane	μg/L	<1	-		< 1	T	<u> </u>
g-Chlordane	μg/L	<1			< 1	T	<u> </u>
Heptachlor	μg/L	<1			< 1	T	<u> </u>
Heptachlor epoxide	μg/L	<1			< 1	Т	<u> </u>
Hexachlorobenzene (HCB)	μg/L	<1			< 1	T	
Methoxychlor	μg/L	<2			< 2	Т	
Oxychlordane	μg/L	<1			< 1	Т	
2.4.5.6-tetrachloro-m-xylene-SURROGATE	%	89	ļ		70-130 %	Т	<u> </u>
993293 [ Laboratory Control Sample ]							
2000 TPH (C10 - C36) in Water by GC			Expected Value	Percent Recovery			
C10-C14 Fraction	μg/L	210	200.0	103	70-130 %	Т	
C15-C28 Fraction	μg/L	229	200.0	114	70-130 %	Т	
C29-C36 Fraction	μg/L	227	200.0	114	70-130 %	Т	



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
994693 [ Laboratory Control Sample ]	+		+			+	
2100 PAH in Water by GC			Expected Value	Percent Recovery			
Acenaphthene	μg/L	4.5	4.0	113	70-130 %	Т	
Acenaphthylene	μg/L	4.7	4.0	116	70-130 %	Т	
Anthracene	μg/L	4.6	4.0	116	70-130 %	Т	
Benz(a)anthracene	μg/L	4.9	4.0	122	70-130 %	Т	
Benzo(a)pyrene	μg/L	4.9	4.0	121	70-130 %	Т	
Benzo(b)&(k)fluoranthene	μg/L	9.7	8.0	122	70-130 %	Т	
Benzo(ghi)perylene	μg/L	4.8	4.0	121	70-130 %	Т	
Chrysene	μg/L	4.9	4.0	123	70-130 %	Т	
Dibenz(ah)anthracene	μg/L	4.9	4.0	121	70-130 %	Т	
Fluoranthene	μg/L	5.0	4.0	124	70-130 %	Т	
Fluorene	μg/L	4.7	4.0	119	70-130 %	Т	
Indeno(123-cd)pyrene	μg/L	4.9	4.0	123	70-130 %	Т	
Naphthalene	μg/L	4.6	4.0	116	70-130 %	Т	
Phenanthrene	μg/L	4.9	4.0	123	70-130 %	Т	
Pyrene	μg/L	4.8	4.0	119	70-130 %	Т	
Sum of PAHs	μg/L	77	64.0	120	70-130 %	Т	
2-Fluorobiphenyl - Surrogate	%	96			70-130 %	Т	
Anthracene-D10 - Surrogate	%	99			70-130 %	Т	
p-Terphenyl-D14 - Surrogate	%	105			70-130 %	Т	
2300 OC Pesticides in Water by GC-ECD	-		Expected Value	Percent Recovery		•	
a-BHC	μg/L	4.5	4.0	111	70-130 %	Т	
a-Chlordane	μg/L	4.6	4.0	115	70-130 %	Т	
a-Endosulphan	μg/L	4.7	4.0	118	70-130 %	Т	
Aldrin	μg/L	4.6	4.0	116	70-130 %	Т	
b-BHC	μg/L	4.4	4.0	110	70-130 %	Т	
b-Endosulphan	μg/L	4.7	4.0	118	70-130 %	Т	
d-BHC	μg/L	4.8	4.0	119	70-130 %	Т	
DDD	μg/L	4.5	4.0	112	70-130 %	Т	
DDE	μg/L	4.5	4.0	113	70-130 %	Т	
DDT	μg/L	5.0	4.0	124	70-130 %	Т	
Dieldrin	μg/L	4.5	4.0	112	70-130 %	Т	
Endosulfan sulfate	μg/L	4.5	4.0	113	70-130 %	Т	
Endrin	μg/L	4.8	4.0	120	70-130 %	Т	
Endrin Aldehyde	μg/L	4.3	4.0	108	70-130 %	Т	
g-BHC Lindane	μg/L	4.6	4.0	114	70-130 %	Т	
g-Chlordane	μg/L	4.4	4.0	110	70-130 %	Т	
Heptachlor	μg/L	4.2	4.0	105	70-130 %	Т	
Heptachlor epoxide	μg/L	4.1	4.0	102	70-130 %	Т	
Methoxychlor	μg/L	4.7	4.0	118	70-130 %	Т	
2.4.5.6-tetrachloro-m-xylene-SURROGATE	%	96			70-130 %	Т	



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits		Qualifyir Codes
993175 [ Duplicate of 989678 ]			1	1	Limits	Limits	Codes
2300 OC Pesticides in Water by GC-ECD			Result 2	RPD			
a-BHC	μg/L	<1	<1	<1	0-20 %	Т	<b>-</b>
a-Chlordane	μg/L	<1	<1	<1	0-20 %	T .	
a-Endosulphan	μg/L	<1	<1	<1	0-20 %	T	
Aldrin	μg/L	<1	<1	<1	0-20 %	† <u>†</u>	
b-BHC	µg/L	<2	<2	<1	0-20 %	T	
b-Endosulphan	μg/L	<1	<1	<1	0-20 %	T	
d-BHC	μg/L	<1	<1	<1	0-20 %	† <u>†</u>	<b>—</b>
DDD	µg/L	<1	<1	<1	0-20 %	T .	<u> </u>
DDE	μg/L	<1	<1	<1	0-20 %	† † T	
DDT	μg/L	<1	<1	<1	0-20 %	'   T	-
Dieldrin	<b>-</b>	<1	<1	<1	0-20 %	† †	
Endosulfan sulfate	µg/L	<1	<1	<1	0-20 %	† † T	<del>                                     </del>
Endrin	μg/L	<1	<1	<1	0-20 %	'   T	-
	μg/L	<2	<2	<1	0-20 %	'   T	
g-BHC Lindane	μg/L	<1	<1	<1	0-20 %	'   T	
•	μg/L	<1	<1	<1	0-20 %	'   T	
g-Chlordane	µg/L	<1		<1		'   T	
Heptachlor	µg/L	<1	<1 <1	<1	0-20 % 0-20 %	'   T	
Heptachlor epoxide	μg/L	<1	<1	<1	0-20 %	'   T	
Hexachlorobenzene (HCB)	μg/L						
Methoxychlor	μg/L	<2	<2	<1	0-20 %	T	
Oxychlordane	μg/L	<1	<1	<1	0-20 %		-
2.4.5.6-tetrachloro-m-xylene-SURROGATE	%	90	ļ	ļ	70-130 %	Т	
993177 [ Duplicate of 989679 ]			Decut 0	DDD	1		
2300 OC Pesticides in Water by GC-ECD		1	Result 2	RPD	0.00.0/	1 -	-
a-BHC	µg/L	<1	<1	<1	0-20 %	T	
a-Chlordane	μg/L	<1	<1	<1	0-20 %	T T	<b></b>
a-Endosulphan	μg/L	<1	<1	<1	0-20 %		-
Aldrin	μg/L	<1	<1	<1	0-20 %	T	
b-BHC	μg/L	<2	<2	<1	0-20 %	T	-
b-Endosulphan	μg/L	<1	<1	<1	0-20 %	T	-
d-BHC	μg/L	<1	<1	<1	0-20 %	T	-
DDD	μg/L	<1	<1	<1	0-20 %	T	-
DDE	μg/L 	<1	<1	<1	0-20 %	T	-
DDT	μg/L 	<1	<1	<1	0-20 %	T	
Dieldrin	μg/L 	<1	<1	<1	0-20 %	T	
Endosulfan sulfate	μg/L 	<1	<1	<1	0-20 %	T	
Endrin	μg/L	<1	<1	<1	0-20 %	T -	
Endrin Aldehyde	μg/L 	<2	<2	<1	0-20 %	T	
g-BHC Lindane	μg/L	<1	<1	<1	0-20 %	T	
g-Chlordane	μg/L	<1	<1	<1	0-20 %	T	<u> </u>
Heptachlor	μg/L	<1	<1	<1	0-20 %	T	<u> </u>
Heptachlor epoxide	μg/L	<1	<1	<1	0-20 %	T	<u> </u>
Hexachlorobenzene (HCB)	μg/L	<1	<1	<1	0-20 %	Т	
Methoxychlor	μg/L	<2	<2	<1	0-20 %	Т	
Oxychlordane	μg/L	<1	<1	<1	0-20 %	Т	<u> </u>
2.4.5.6-tetrachloro-m-xylene-SURROGATE	%	91			70-130 %	Т	<u> </u>



First Reported: 19 May 2008

Date Printed: 13 June 2008

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
993179 [ Duplicate of 989678 ]	-		<u> </u>		Lillio	Liiiillo	Coucs
2100 PAH in Water by GC			Result 2	RPD			
Acenaphthene	μg/L	<1	<1	<1	0-20 %	Тт	
Acenaphthylene	µg/L	<1	<1	<1	0-20 %	+ +	
Anthracene	µg/L	<1	<1	<1	0-20 %	† †	
Benz(a)anthracene	µg/L	<1	<1	<1	0-20 %	<del>                                     </del>	
Benzo(a)pyrene	μg/L	<1	<1	<1	0-20 %	<del>                                     </del>	
Benzo(b)&(k)fluoranthene	µg/L	<2	<2	<1	0-20 %	<del>                                     </del>	
Benzo(ghi)perylene	μg/L	<1	<1	<1	0-20 %	<del>                                     </del>	
Chrysene	μg/L	<1	<1	<1	0-20 %	† <sub>T</sub>	
Dibenz(ah)anthracene	μg/L	<1	<1	<1	0-20 %	T T	
Fluoranthene	μg/L	<1	<1	<1	0-20 %	<del>                                     </del>	
Fluorene	μg/L	<1	<1	<1	0-20 %	† <sub>T</sub>	
Indeno(123-cd)pyrene	µg/L	<1	<1	<1	0-20 %	T	
Naphthalene	μg/L	<1	<1	<1	0-20 %	T	
Phenanthrene	μg/L	<1	<1	<1	0-20 %	† <sub>T</sub>	
Pyrene	μg/L	<1	<1	<1	0-20 %	<del> </del>	
Sum of PAHs	µg/L	<1	<1	N/A	N/A	N/A	
2-Fluorobiphenyl - Surrogate	%	87			70-130 %	† <sub>T</sub>	
Anthracene-D10 - Surrogate	%	99			70-130 %	† †	
p-Terphenyl-D14 - Surrogate	%	90			70-130 %	<del>                                     </del>	
993181 [ Duplicate of 989679 ]	1		<del>!</del>	<u> </u>	1		
2100 PAH in Water by GC			Result 2	RPD			
Acenaphthene	μg/L	<1	<1	<1	0-20 %	Тт	
Acenaphthylene	μg/L	<1	<1	<1	0-20 %	† <del>.</del>	
Anthracene	μg/L	<1	<1	<1	0-20 %	<del>                                     </del>	
Benz(a)anthracene	µg/L	<1	<1	<1	0-20 %	<del>                                     </del>	
Benzo(a)pyrene	µg/L	<1	<1	<1	0-20 %	† <del>.</del>	
Benzo(b)&(k)fluoranthene	μg/L	<2	<2	<1	0-20 %	<del>                                     </del>	
Benzo(ghi)perylene	μg/L	<1	<1	<1	0-20 %	† <sub>T</sub>	
Chrysene	µg/L	<1	<1	<1	0-20 %	† †	
Dibenz(ah)anthracene	μg/L	<1	<1	<1	0-20 %	<del>                                     </del>	
Fluoranthene	μg/L	<1	<1	<1	0-20 %	<del>                                     </del>	
Fluorene	µg/L	<1	<1	<1	0-20 %	† †	
Indeno(123-cd)pyrene	μg/L	<1	<1	<1	0-20 %	<del>                                     </del>	
Naphthalene	μg/L	<1	<1	<1	0-20 %	<del>                                     </del>	
Phenanthrene	μg/L	<1	<1	<1	0-20 %	<del>                                     </del>	
Pyrene	μg/L	<1	<1	<1	0-20 %	<del>                                     </del>	
Sum of PAHs	μg/L	<1	<1	N/A	N/A	N/A	
2-Fluorobiphenyl - Surrogate	μg/L %	86		14/75	70-130 %	T T	
Anthracene-D10 - Surrogate	%	100			70-130 %	† <u>†</u>	
Anunacene-Dio - Sunogale	%	100	1		70-130 /0		



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
993185 [ Spike of 989681 ]	+		1	<del>                                     </del>	Lillio	Liiiilo	Coucs
2300 OC Pesticides in Water by GC-ECD			Spike Value	Percent Recovery			
a-BHC	μg/L	3.5	4.0	87	70-130 %	Т	
a-Chlordane	μg/L	3.6	4.0	90	70-130 %	Т	
a-Endosulphan	μg/L	3.9	4.0	97	70-130 %	Т	
Aldrin	μg/L	3.3	4.0	82	70-130 %	Т	
b-BHC	μg/L	3.7	4.0	93	70-130 %	Т	
b-Endosulphan	μg/L	3.6	4.0	90	70-130 %	Т	
d-BHC	μg/L	3.7	4.0	93	70-130 %	Т	
DDD	μg/L	3.5	4.0	87	70-130 %	Т	
DDE	μg/L	3.6	4.0	90	70-130 %	Т	
DDT	μg/L	3.5	4.0	88	70-130 %	Т	
Dieldrin	μg/L	3.6	4.0	91	70-130 %	Т	
Endosulfan sulfate	μg/L	3.2	4.0	79	70-130 %	Т	
Endrin	μg/L	3.6	4.0	90	70-130 %	Т	
Endrin Aldehyde	μg/L	3.4	4.0	84	70-130 %	Т	
g-BHC Lindane	μg/L	3.5	4.0	88	70-130 %	Т	
g-Chlordane	μg/L	3.5	4.0	88	70-130 %	Т	
Heptachlor	μg/L	2.7	N/A	N/A	N/A	N/A	
Heptachlor epoxide	μg/L	3.3	4.0	82	70-130 %	Т	
Hexachlorobenzene (HCB)	μg/L	3.6	N/A	N/A	N/A	N/A	
Methoxychlor	μg/L	3.3	4.0	81	70-130 %	Т	
Oxychlordane	μg/L	<1	N/A	N/A	N/A	N/A	
2.4.5.6-tetrachloro-m-xylene-SURROGATE	%	84			70-130 %	Т	
_aboratory: EN_VOC	•	•	•			•	•
Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes

First Reported: 19 May 2008 Date Printed: 13 June 2008



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyii Codes
994209 [ Method Blank ]	+	<del> </del>	+	•		+	
1300 VOCs in Water by P&T							
1,1,1,2-Tetrachloroethane	μg/L	<5.0			< 5	Т	
1,1,1-Trichloroethane	μg/L	<5.0			< 5	Т	
1,1,2,2-Tetrachloroethane	μg/L	<5.0			< 5	Т	
1,1,2-Trichloroethane	μg/L	<5.0			< 5	Т	
1,1-Dichloroethane	μg/L	<30.0			< 30	Т	
1,1-Dichloroethene	μg/L	<5.0			< 5	Т	
1,1-Dichloropropylene	μg/L	<5.0			< 5	Т	
1,2,3-Trichloropropane	μg/L	<5.0			< 5	Т	
1,2,4-Trimethylbenzene	μg/L	<5.0			< 5	Т	
1,2-Dibromoethane	μg/L	<5.0			< 5	Т	
1,2-Dichlorobenzene	μg/L	<5.0			< 5	Т	
1,2-Dichloroethane	μg/L	<5.0			< 5	Т	
1,2-Dichloropropane	μg/L	<5.0			< 5	Т	
1,3,5-Trimethylbenzene	μg/L	<5.0			< 5	Т	
1,3-Dichlorobenzene	μg/L	<5.0			< 5	Т	
1,3-Dichloropropane	μg/L	<5.0			< 5	Т	
1,4-Dichlorobenzene	μg/L	<5.0			< 5	Т	
2,2-Dichloropropane	μg/L	<30.0			< 30	Т	
2-butanone	μg/L	<50.0			< 50	Т	
2-Chlorotoluene	μg/L	<5.0			< 5	Т	
4-Chlorotoluene	μg/L	<5.0			< 5	Т	
4-methyl-2-pentanone	μg/L	<50.0			< 50	Т	
Benzene	μg/L	<0.5			< 0.5	Т	
Bromobenzene	μg/L	<5.0			< 5	Т	
Bromochloromethane	μg/L	<5.0			< 5	Т	
Bromodichloromethane	μg/L	<5.0			< 5	T	
Bromoform	μg/L	<5.0			< 5	T T	
Bromomethane	μg/L	<5.0			< 5	Т	
Carbon Tetrachloride	μg/L	<5.0			< 5	Т	
Chlorobenzene	μg/L	<5.0			< 5	Т	
Chloroethane	μg/L	<5.0			< 5	Т	
Chloroform	μg/L	<10.0			< 10	Т	
Chloromethane	μg/L	<5.0			< 5	Т	
cis-1,2-Dichloroethene	μg/L	<5.0			< 5	Т	
cis-1,3-Dichloropropene	μg/L	<5.0			< 5	Т	
Dibromochloromethane	μg/L	<5.0			< 5	Т	
Dibromomethane	μg/L	<5.0			< 5	Т	
Dichlorodifluoromethane	μg/L	<5.0			< 5	Т	
Ethylbenzene	μg/L	<1.0			< 1	Т	
Isopropylbenzene	μg/L	<5.0			< 5	Т	
Meta- & Para- Xylene	μg/L	<2.0			< 2	Т	
Methylene Chloride	μg/L	<10.0			< 10	Т	
n-Butylbenzene	μg/L	<5.0			< 5	Т	
n-Propylbenzene	μg/L	<5.0			< 5	Т	
Ortho-Xylene	μg/L	<1.0			< 1	Т	
Pentachloroethane	μg/L	<5.0			< 5	Т	
p-Isopropyltoluene	μg/L	<5.0			< 5	Т	
sec-Butylbenzene	μg/L	<5.0			< 5	Т	
Styrene	μg/L	<5.0			< 5	Т	
tert-Butylbenzene	μg/L	<5.0			< 5	Т	
Tetrachloroethene	μg/L	<5.0			< 5	Т	
Toluene	μg/L	<1.0			< 1	Т	
Total Xylenes	μg/L	<3.0			< 3	T	
trans-1,2-Dichloroethene	µg/L	<5.0			< 5	Т	
trans-1,3-Dichloropropene	μg/L	<5.0			< 5	Т	
Trichloroethene	µg/L	<5.0			< 5	T	
Trichlorofluoromethane	µg/L	<5.0			< 5	T	
Vinyl chloride	µg/L	<5.0			< 5	<del>  '</del>	
4-Bromofluorobenzene - Surrogate	% %	71	1		70-130 %	<del>  '</del>	

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Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
994209 [ Method Blank ]	+			Lillits	Lilling	Codes
1300 VOCs in Water by P&T						
Pentafluorobenzene-Surrogate	%	111		70-130 %	Т	
Toluene-D8 - Surrogate	%	91		70-130 %	Т	
998059 [ Method Blank ]	•		•		•	
1100 MAH(BTEX & C6-C9) in Water P&T						
Benzene	μg/L	<0.5		< 0.5	Т	
C6-C9 Fraction	μg/L	<20.0		< 20	Т	
Ethylbenzene	μg/L	<1.0		< 1	Т	
Meta- & Para- Xylene	μg/L	<2.0		< 2	Т	
Ortho-Xylene	μg/L	<1.0		< 1	Т	
Toluene	μg/L	<1.0		< 1	Т	
Total Xylenes	μg/L	<3.0		< 3	Т	
4-Bromofluorobenzene - Surrogate	%	92		70-130 %	Т	



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyi Codes
994211 [ Laboratory Control Sample ]	+	ļ	1			1=	2000
300 VOCs in Water by P&T			Expected Value	Percent Recovery			
1,1,1,2-Tetrachloroethane	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,1,1-Trichloroethane	μg/L	21	25.0	84	70-130 %	Т	
1,1,2,2-Tetrachloroethane	μg/L	15	N/A	N/A	N/A	N/A	
1,1,2-Trichloroethane	μg/L	19	25.0	74	70-130 %	Т	
1,1-Dichloroethane	μg/L	<30.0	25.0	86	70-130 %	T	
1,1-Dichloroethene	μg/L	17	N/A	N/A	N/A	N/A	
1,1-Dichloropropylene	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,2,3-Trichlorobenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,2,3-Trichloropropane	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,2,4-Trimethylbenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,2-Dibromo-3-chloropropane	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,2-Dibromoethane	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,2-Dichlorobenzene	μg/L	19	25.0	76	70-130 %	Т	
1,2-Dichloroethane	μg/L	21	25.0	84	70-130 %	Т	
1,2-Dichloropropane	μg/L	19	25.0	77	70-130 %	Т	
1,3,5-Trimethylbenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,3-Dichlorobenzene	μg/L	21	25.0	84	70-130 %	Т	
1,3-Dichloropropane	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,4-Dichlorobenzene	μg/L	22	25.0	87	70-130 %	Т	
2,2-Dichloropropane	μg/L	<30.0	N/A	N/A	N/A	N/A	
2-butanone	μg/L	<50.0	N/A	N/A	N/A	N/A	
2-Chlorotoluene	μg/L	<5.0	N/A	N/A	N/A	N/A	
4-Chlorotoluene	μg/L	<5.0	N/A	N/A	N/A	N/A	
4-methyl-2-pentanone	μg/L	<50.0	N/A	N/A	N/A	N/A	
Benzene	μg/L	20	25.0	80	70-130 %	Т	
Bromobenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
Bromochloromethane	μg/L	<5.0	N/A	N/A	N/A	N/A	
Bromodichloromethane	μg/L	21	25.0	82	70-130 %	Т	
Bromoform	μg/L	19	25.0	76	70-130 %	Т	
Bromomethane	μg/L	<5.0	N/A	N/A	N/A	N/A	
Carbon Tetrachloride	μg/L	20	25.0	78	70-130 %	Т	
Chlorobenzene	μg/L	19	25.0	75	70-130 %	Т	
Chloroethane	μg/L	<5.0	N/A	N/A	N/A	N/A	
Chloroform	μg/L	21	25.0	83	70-130 %	Т	
Chloromethane	μg/L	<5.0	N/A	N/A	N/A	N/A	
cis-1,2-Dichloroethene	μg/L	<5.0	N/A	N/A	N/A	N/A	
cis-1,3-Dichloropropene	μg/L	19	25.0	76	70-130 %	Т	
Dibromochloromethane	μg/L	18	25.0	73	70-130 %	Т	
Dibromomethane	μg/L	<5.0	N/A	N/A	N/A	N/A	
Dichlorodifluoromethane	μg/L	<5.0	N/A	N/A	N/A	N/A	
Ethylbenzene	μg/L	20	25.0	78	70-130 %	Т	
Hexachlorobutadiene	μg/L	<5.0	N/A	N/A	N/A	N/A	
Hexachloroethane	μg/L	<5.0	N/A	N/A	N/A	N/A	
Isopropylbenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
Meta- & Para- Xylene	μg/L	<2.0	N/A	N/A	N/A	N/A	
Methylene Chloride	μg/L	16	N/A	N/A	N/A	N/A	
Naphthalene	μg/L	<5.0	N/A	N/A	N/A	N/A	
n-Butylbenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
n-Propylbenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
Ortho-Xylene	μg/L	<1.0	N/A	N/A	N/A	N/A	
Pentachloroethane	μg/L	<5.0	N/A	N/A	N/A	N/A	
p-Isopropyltoluene	μg/L	<5.0	N/A	N/A	N/A	N/A	
sec-Butylbenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
Styrene	μg/L	<5.0	N/A	N/A	N/A	N/A	
tert-Butylbenzene	µg/L	<5.0	N/A	N/A	N/A	N/A	
Tetrachloroethene	μg/L	18	25.0	73	70-130 %	Т	
Toluene	μg/L	20	25.0	80	70-130 %	Т	
	<u> </u>		1				

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Laboratory. Liv_voo	1	<u> </u>	1		Acceptance	Pass	Qualifying
Sample, Test, Result Reference	Units	Result 1			Limits	Limits	Codes
994211 [ Laboratory Control Sample ]	·	•					
1300 VOCs in Water by P&T			Expected Value	Percent Recovery			
trans-1,2-Dichloroethene	μg/L	20	25.0	80	70-130 %	Т	
trans-1,3-Dichloropropene	μg/L	18	25.0	73	70-130 %	Т	
Trichloroethene	μg/L	20	25.0	80	70-130 %	Т	
Trichlorofluoromethane	μg/L	<5.0	N/A	N/A	N/A	N/A	
Vinyl chloride	μg/L	<5.0	N/A	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	%	79			70-130 %	T	
Pentafluorobenzene-Surrogate	%	102			70-130 %	Т	
Toluene-D8 - Surrogate	%	95		<u> </u>	70-130 %	Т	ļ
998060 [ Laboratory Control Sample ]							
1100 MAH(BTEX & C6-C9) in Water P&T			Expected Value	Percent Recovery		,	
Benzene	μg/L	10	10.0	103	70-130 %	T	
C6-C9 Fraction	μg/L	120	140.0	82	70-130 %	T	
Ethylbenzene	μg/L	9.6	10.0	96	70-130 %	Т	
Meta- & Para- Xylene	μg/L	19	20.0	95	70-130 %	Т	
Ortho-Xylene	μg/L	9.2	10.0	92	70-130 %	Т	<b> </b>
Toluene	μg/L	10	10.0	100	70-130 %	Т	
Total Xylenes	μg/L	28	N/A	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	%	108		<u> </u>	70-130 %	Т	
Laboratory: <b>EN_WATERS</b>							
Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
990563 [ Method Blank ]	•	•	•	•		•	
4270 Total Cyanide in Water Colourmetric							
Total Cyanide	mg/L	<0.005			< 0.005	Т	
991357 [ Method Blank ]	•	•	•	•		•	1
4110 Dissolved Solids in Water							
Total Dissolved Solids	mg/L	<5			< 5	Т	
991559 [ Method Blank ]	•	•	•	•		•	
4300 Anions in Water by IC							
Bromide	mg/L	<0.5			< 0.5	Т	
Chloride	mg/L	<0.5			< 0.5	T T	
Fluoride	mg/L	<0.5			< 0.5	T	
Nitrate	mg/L	<0.5			< 0.5	T	
Nitrite	mg/L	<0.5			< 0.5	T	
Orthophosphate as P	mg/L	<0.5			< 0.5	Т	
Sulphate	mg/L	<0.5			< 0.5	Т	
995917 [ Method Blank ]	•	•	•	1		•	
4110 Dissolved Solids in Water							
Total Dissolved Solids	mg/L	<5			< 5	Т	
990566 [ Laboratory Control Sample ]	<del>'</del>		+	<del> </del>		+	
4270 Total Cyanide in Water Colourmetric			Expected Value	Percent Recovery			
Total Cyanide	mg/L	0.11	0.1	105	75-125 %	Т	
991263 [ Laboratory Control Sample ]	1.5	+	+	+		+	
4000 pH in Water			Expected Value	Percent Recovery			
pH	pH	7.4	7.4	100	95-105 %	Т	
991269 [ Laboratory Control Sample ]	+ P11	· · · ·	7.7		55 100 /0	+ '	
			Exported Value	Boroont Books			-
4000 pH in Water	pH	7.4	Expected Value 7.4	Percent Recovery	95-105 %	Т	
pH 001259 [ Laboratory Control Sample ]	<b>I</b> γ⊓	1.4	1.4	100	90-100 70	+ '	-
991358 [ Laboratory Control Sample ]			1 =	1			
4110 Dissolved Solids in Water		4000	Expected Value	Percent Recovery	00.440.0/	1 -	-
Total Dissolved Solids	mg/L	1000	1000.0	105	90-110 %	Т	



## Laboratory: EN\_WATERS

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
991563 [ Laboratory Control Sample ]	+	!	ļ		LIIIIIG	Liiillo	Codes
4300 Anions in Water by IC			Expected Value	Percent Recovery			
Bromide	mg/L	95	100.0	95	80-120 %	Т	
Chloride	mg/L	98	100.0	98	80-120 %	Т	
Fluoride	mg/L	93	100.0	93	80-120 %	Т	
Nitrate	mg/L	100	100.0	103	80-120 %	Т	
Nitrite	mg/L	93	100.0	93	80-120 %	Т	
Orthophosphate as P	mg/L	91	100.0	91	80-120 %	Т	
Sulphate	mg/L	94	100.0	94	80-120 %	Т	
994930 [ Laboratory Control Sample ]	•		•			•	
4000 pH in Water			Expected Value	Percent Recovery			
pH	pН	7.4	N/A	N/A	N/A	N/A	
995918 [ Laboratory Control Sample ]	•	•				•	
4110 Dissolved Solids in Water			Expected Value	Percent Recovery			
Total Dissolved Solids	mg/L	1000	1000.0	100	90-110 %	Т	
993182 [ Duplicate of 989678 ]	•	•	•			•	
4000 pH in Water			Result 2	RPD			
pH	pН	7.6	7.6	0.0	0-0.2 pH	Т	
993183 [ Duplicate of 989678 ]	•	•	+	•		1	
4110 Dissolved Solids in Water			Result 2	RPD			
Total Dissolved Solids	mg/L	570	550	4	0-10 %	Т	
<del> </del>							

#### Sample Integrity

Custody Seals Intact (if used)

Attempt to Chill was evident

Samples correctly preserved

Organic samples had Teflon liners

N/A

Samples received with Zero Headspace

Samples received within HoldingTime

Yes

Some samples have been subcontracted

N/A

#### **Qualifier Codes/Comments**

Code Description

Q10 The Surrogate recovery is outside of the recommended acceptance criteria. Insufficent sample remains to perform re-analysis.

### **Authorised By**

Ruth Callander Client Services Officer

Alex Petridis Senior Analyst - SVOC Accreditation Number: 1645

Mark Herbstreit Senior Analyst - Metals Accreditation Number: 1645

Helen Lei Senior Analyst - Waters Accreditation Number: 1645

Khoa Pham Analyst - VOC Accreditation Number: 1645

## **Laboratory Manager**

Anthony Crane Operations Manager

Amended Report: To replace Report 302202. A transcription error had occured in the OCP results for Sample QC3. These were corrected.

- Indicates Not Requested \* Indicates NATA accreditation does not cover the performance of this service

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The samples were not collected by Amdel staff.

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Accreditation Number: 1645



## CONNELL WAGNER (SA) PTY LTD 55 Grenfell St ADELAIDE SA 5000

Attention: Matt Eygenraamm

Project 08ENME0012531

Client Reference 31495

**Buckland Park** 

Received Date 16/05/2008 10:00:00 AM

Customer Sample ID Amdel Sample Number Date Sampled			GW5 1001368 15/05/2008	GW8 1001369 15/05/2008	GW12 1001370 15/05/2008	GW10 1001371 15/05/2008	GW15 1001372 15/05/2008
<b>VOC</b> Test/Reference	PQL	Unit					
1300 VHCs in Water by P&T							
1,1,1,2-Tetrachloroethane	5	μg/L	-	<5.0	-	-	-
1,1,1-Trichloroethane	5	μg/L	-	<5.0	-	-	-
1,1,2,2-Tetrachloroethane	5	μg/L	-	<5.0	-	-	-
1,1,2-Trichloroethane	5	μg/L	-	<5.0	-	-	-
1,1-Dichloroethane	30	μg/L	-	<30.0	-	-	-
1,1-Dichloroethene	5	μg/L	-	<5.0	-	-	-
1,2,3-Trichlorobenzene	5	μg/L	-	<5.0	-	-	-
1,2,4-Trichlorobenzene	5	μg/L	-	<5.0	-	-	-
1,2-Dichlorobenzene	5	μg/L	-	<5.0	-	-	-
1,2-Dichloropropane	5	μg/L	-	<5.0	-	-	-
1,2-Dichloroethane	5	μg/L	-	<5.0	-	-	-
1,3-Dichlorobenzene	5	μg/L	-	<5.0	-	-	-
1,3-Dichloropropane	5	μg/L	-	<5.0	-	-	-
,4-Dichlorobenzene	5	μg/L	-	<5.0	-	-	-
2-Chlorotoluene	5	μg/L	-	<5.0	-	-	-
1-Chlorotoluene	5	μg/L	-	<5.0	-	-	-
Bromochloromethane	5	μg/L	-	<5.0	-	-	-
Bromodichloromethane	5	μg/L	-	<5.0	-	-	-
Bromoform	5	μg/L	-	<5.0	-	-	-
Carbon Tetrachloride	5	μg/L	-	<5.0	-	-	-
Chlorobenzene	5	μg/L	-	<5.0	-	-	-
Chloroethane	5	μg/L	-	<5.0	-	-	-
Chloroform	10	μg/L	-	<10.0	-	-	-
cis-1,2-Dichloroethene	5	μg/L	-	<5.0	-	-	-
cis-1,3-Dichloropropene	5	μg/L	-	<5.0	-	-	-
Dibromomethane	5	μg/L	-	<5.0	-	-	-
Dibromochloromethane	5	μg/L	-	<5.0	-	-	-
Hexachlorobutadiene	5	μg/L	-	<5.0	-	-	-
Hexachloroethane	5	μg/L	-	<5.0	_	_	-
Methylene Chloride	10	μg/L	-	<10.0	_	_	-
Pentachloroethane	5	μg/L	_	<5.0	_	_	_
Tetrachloroethene	5	μg/L	-	<5.0	-	-	_
rans-1,2-Dichloroethene	5	μg/L	_	<5.0	-	-	_
rans-1,3-Dichloropropene	5	μg/L	_	<5.0	-	-	_
Frichloroethene	5	μg/L	_	<5.0	_	_	_
Frichlorofluoromethane	5	μg/L μg/L	_	<5.0	_	_	_
/inyl chloride	5	μg/L μg/L		<5.0 <5.0			

Date Printed: 26 May 2008

Amdel Ltd 1868 Dandenong Rd Clayton VIC Australia 3168 ABN: 30 008 127 802 Telephone: (03) 9538 2277 Facsimile: (03) 9538 2278 Page 1 of 17



Customer Sample ID Amdel Sample Number Date Sampled			GW5 1001368 15/05/2008	GW8 1001369 15/05/2008	GW12 1001370 15/05/2008	GW10 1001371 15/05/2008	GW15 1001372 15/05/2008
voc							
Test/Reference	PQL	Unit					
Pentafluorobenzene-Surrogate	1	%	-	103	-	=	-
Toluene-D8 - Surrogate	1	%	-	89	-	-	-
4-Bromofluorobenzene - Surrogate	1	%	-	84	-	-	-
1100 MAH(BTEX & C6-C9) in Water	P&T						
Benzene	0.5	μg/L	-	<0.5	-	-	-
Cumene	1	μg/L	-	<1	-	-	-
Ethylbenzene	1	μg/L	-	<1	-	-	-
Meta- & Para- Xylene	2	μg/L	-	<2	-	-	-
Ortho-Xylene	1	μg/L	-	<1	-	-	-
Styrene	1	μg/L	-	<1	-	-	-
Toluene	1	μg/L	-	<1	-	-	-
Total Xylenes	3	μg/L	-	<3	-	-	-
C6-C9 Fraction	20	μg/L	-	<20	-	-	-
4-Bromofluorobenzene - Surrogate	-	%	-	90	-	-	-
svoc							
Test/Reference	PQL	Unit					
2300 OC Pesticides in Water by GC	:-FCD						
a-BHC	1	μg/L	<1	<1	<1	<1	<1
a-Chlordane	1	μg/L	<1	<1	<1	<1	<1
a-Endosulphan	1	μg/L	<1	<1	<1	<1	<1
Aldrin	1	μg/L	<1	<1	<1	<1	<1
b-BHC	2	μg/L	<2	<2	<2	<2	<2
b-Endosulphan	1	μg/L	<1	<1	<1	<1	<1
d-BHC	1	μg/L	<1	<1	<1	<1	<1
DDD	1	μg/L	<1	<1	<1	<1	<1
DDE	1	μg/L	<1	<1	<1	<1	<1
DDT	1	μg/L	<1	<1	<1	<1	<1
Dieldrin	1	μg/L	<1	<1	<1	<1	<1
Endosulfan sulfate	1	μg/L	<1	<1	<1	<1	<1
Endrin	1	μg/L	<1	<1	<1	<1	<1
Endrin Aldehyde	2	μg/L	<2	<2	<2	<2	<2
g-BHC Lindane	1	μg/L	<1	<1	<1	<1	<1
g-Chlordane	1	μg/L	<1	<1	<1	<1	<1
Heptachlor	1	μg/L	<1	<1	<1	<1	<1
Heptachlor epoxide	1	μg/L	<1	<1	<1	<1	<1
Hexachlorobenzene (HCB)	1	μg/L	· <1	<1	· <1	<1	<1
Methoxychlor	2	μg/L	<2	<2	<2	<2	<2
Oxychlordane	1	μg/L	<1	<1	<1	<1	<1
2.4.5.6-tetrachloro-m-xylene-SURROG ATE	1	%	84	125	84	77	75
2100 PAH in Water by GC							
Acenaphthene	1	μg/L	<1	<1	<1	<1	<1
Acenaphthylene	1	μg/L	<1	<1	<1	<1	<1
Anthracene	1	μg/L	<1	<1	<1	<1	<1
Benz(a)anthracene	1	μg/L	<1	<1	<1	<1	<1
Benzo(a)pyrene	1	μg/L	<1	<1	<1	<1	<1
Benzo(b)&(k)fluoranthene	2	μg/L	<2	<2	<2	<2	<2
Benzo(ghi)perylene	1	μg/L	<1	<1	<1	<1	<1
Dibenz(ah)anthracene	1	μg/L	<1	<1	<1	<1	<1
Chrysene	1	μg/L	<1	<1	<1	<1	<1



Customer Sample ID Amdel Sample Number			GW5 1001368	GW8 1001369	GW12 1001370	GW10 1001371	GW15 1001372
Date Sampled			15/05/2008	15/05/2008	15/05/2008	15/05/2008	15/05/2008
SVOC							
Γest/Reference	PQL	Unit					
Naphthalene	1	μg/L	<1	<1	<1	<1	<1
Fluoranthene	1	μg/L	<1	<1	<1	<1	<1
Fluorene	1	μg/L	<1	<1	<1	<1	<1
ndeno(123-cd)pyrene	1	μg/L	<1	<1	<1	<1	<1
Phenanthrene	1	μg/L	<1	<1	<1	<1	<1
Pyrene	1	μg/L	<1	<1	<1	<1	<1
Sum of PAHs	1	μg/L	<1	<1	<1	<1	<1
2-Fluorobiphenyl - Surrogate	-	%	85	76	83	74	82
Anthracene-D10 - Surrogate	-	%	96	82	94	85	80
o-Terphenyl-D14 - Surrogate	_	%	86	81	83	74	74
2600 PCBs in Water by GCMS Aroclor 1016	1	μg/L	_	<1	_	_	_
Aroclor 1221	1	μg/L	_	<1	_	_	_
Aroclor 1232 and 1242 as total	2	μg/L μg/L	-	<2	_	_	-
Aroclor 1232 and 1242 as total  Aroclor 1248 and 1254 as total	2		-	<2 <2	-	-	-
Arocior 1248 and 1254 as total  Aroclor 1260	1	μg/L	-	<2 <1	-	-	-
Arocior 1260 Fotal Polychlorinated biphenyls	1	μg/L	-	<1 <1	-	-	-
Decachlorobiphenyl - PCB surrogate	1	μg/L %	-	73	-	-	-
• •		70	-	73	-	-	-
2800 Individual Phenols in Water b 2,3,4,6-Tetrachlorophenol	10	μg/L	_	<10	_	_	_
2,3,4-Trichlorophenol	10	μg/L	_	<10	_	_	_
2,3,5,6-Tetrachlorophenol	10	μg/L	_	<10	_	_	_
2,3,5-Trichlorophenol	10	μg/L	_	<10	_	_	_
2,3,6-Trichlorophenol	10	μg/L	_	<10	_	_	_
2,3-Dichlorophenol	20	μg/L	_	<20	_	_	_
2,4&2,5-Dichlorophenol	40	μg/L	_	<40	_	_	_
2,4,6-Trichlorophenol	10	μg/L	_	<10	_		_
2,6-Dichlorophenol	10	μg/L	_	<10	_		_
2-Chlorophenol	10	μg/L	_	<10	_		_
2-Methylphenol	10	μg/L	_	<10	_		_
3,4-Dichlorophenol	20	μg/L	-	<20	_	_	_
3,5-Dichlorophenol	20	μg/L μg/L	-	<20	-	_	_
3-Chlorophenol & 4-Chlorophenol	10	μg/L μg/L	_	<10	_	_	_
3-Methylphenol & 4-Methylphenol	10	μg/L μg/L	-	<10	-	-	-
1-Chloro-3-methylphenol	10	μg/L	_	<10	_	_	_
Pentachlorophenol	30	μg/L μg/L	-	<30	-	-	-
Phenol	10	μg/L μg/L	_	<10	_	_	_
2,4,6-Tribromophenol-Surrogate	-	μg/L %	-	76	_	-	-
•		/0	-	70	-	-	=
<b>2000 TPH (C10 - C36) in Water by</b> ( C10-C14 Fraction	40	μg/L	-	<40	-	-	_
C15-C28 Fraction	100	μg/L	-	<100	-	-	-
C29-C36 Fraction	100	μg/L	-	<100	-	-	_
Metals	.00	ra		. 50			
Test/Reference	PQL	Unit					
3100 Dissolved Metals in Water By				-1			
Antimony	1	μg/L	- -E	<1	- -	- -E	- -E
Arsenic	5	μg/L	<5	<5 00	<5	<5	<5
Barium	5 5	μg/L μg/L	-	66 <5	-	-	-
Beryllium							



Customer Sample ID			GW5 1001368	GW8 1001369	GW12 1001370	GW10 1001371	GW15 1001372
Amdel Sample Number Date Sampled			15/05/2008	15/05/2008	15/05/2008	15/05/2008	15/05/2008
Metals			10/00/2000	10/00/2000	13/03/2000	10/00/2000	10/00/2000
Test/Reference	PQL	Unit					
Cadmium	2	μg/L	<2	<2	<2	<2	<2
Chromium	5	μg/L	19	_	20	12	17
Cobalt	5	μg/L	-	<5	-	-	-
Copper	5	μg/L	8.4	<5	5.4	<5	9.7
Lead	5	μg/L	<5	<5	<5	<5	<5
Manganese	5	μg/L	-	26	-	-	-
Molybdenum	5	μg/L	_	18	_	_	
Nickel	5	μg/L	17	<5	8.2	- <5	9.4
Selenium	5	· <del>-</del>	-	65	0.2	-	ਰ. <del>ਪ</del>
		μg/L	-		-	-	-
Silver	5 5	μg/L	-	<5 <5	-	-	-
Tin		μg/L "	-	<5	-	-	-
Vanadium 	5	μg/L 	-	11	-		
Zinc	5	μg/L	7.7	<5	6.2	<5	<5
3400 Dissolved Mercury in Water b	-	,,		0.4			
Mercury	0.1	μg/L	-	<0.1	-	-	-
Inorganics							
Test/Reference	PQL	Unit					
4230 Total Hexavalent Chromium i	n Water						
Chromium (VI)	0.02	mg/L	-	<0.02	-	-	-
4270 Total Cyanide in Water Colou							
Total Cyanide	0.005	mg/L	-	<0.005	-	-	-
4000 pH in Water							
pH	0.1	pН	-	7.7	7.0	7.6	8.0
<b>4110 Dissolved Solids in Water</b> Total Dissolved Solids	5	mg/L	-	680	5600	5900	2300
4300 Anions in Water by IC							
Fluoride	0.5	mg/L	-	2.4	-	-	-
Customer Sample ID			QC4	QC6			
Amdel Sample Number			1001373	1001374			
Date Sampled			15/05/2008	15/05/2008			
svoc							
Test/Reference	PQL	Unit					

Customer Sample ID Amdel Sample Number Date Sampled SVOC			QC4 1001373 15/05/2008	QC6 1001374 15/05/2008	
Test/Reference	PQL	Unit			
2300 OC Pesticides in Water b	y GC-ECD				
a-BHC	1	μg/L	<1	<1	
a-Chlordane	1	μg/L	<1	<1	
a-Endosulphan	1	μg/L	<1	<1	
Aldrin	1	μg/L	<1	<1	
b-BHC	2	μg/L	<2	<2	
b-Endosulphan	1	μg/L	<1	<1	
d-BHC	1	μg/L	<1	<1	
DDD	1	μg/L	<1	<1	
DDE	1	μg/L	<1	<1	
DDT	1	μg/L	<1	<1	
Dieldrin	1	μg/L	<1	<1	
Endosulfan sulfate	1	μg/L	<1	<1	
Endrin	1	μg/L	<1	<1	
Endrin Aldehyde	2	μg/L	<2	<2	



Customer Sample ID			QC4	QC6 1001374	
Amdel Sample Number Date Sampled			1001373 15/05/2008	1001374 15/05/2008	
SVOC			10/00/2000	15/100/2000	
Test/Reference	PQL	Unit			
g-BHC Lindane	1	μg/L	<1	<1	
g-Chlordane	1	μg/L	<1	<1	
Heptachlor	1	μg/L	<1	<1	
Heptachlor epoxide	1	μg/L	<1	<1	
Hexachlorobenzene (HCB)	1	μg/L	<1	<1	
Methoxychlor	2	μg/L	<2	<2	
Oxychlordane	1	μg/L	- <1	- <1	
2.4.5.6-tetrachloro-m-xylene-SURROG	1	%	75	82	
ATE	-	,,		<del>-</del>	
2100 PAH in Water by GC					
Acenaphthene	1	μg/L	<1	-	
Acenaphthylene	1	μg/L	<1	-	
Anthracene	1	μg/L	<1	-	
Benz(a)anthracene	1	μg/L	<1	-	
Benzo(a)pyrene	1	μg/L	<1	-	
Benzo(b)&(k)fluoranthene	2	μg/L	<2	-	
Benzo(ghi)perylene	1	μg/L	<1	-	
Dibenz(ah)anthracene	1	μg/L	<1	-	
Chrysene	1	μg/L	<1	-	
Naphthalene	1	μg/L	<1	-	
Fluoranthene	1	μg/L	<1	-	
Fluorene	1	μg/L	<1	-	
Indeno(123-cd)pyrene	1	μg/L	<1	-	
Phenanthrene	1	μg/L	<1	-	
Pyrene	1	μg/L	<1	-	
Sum of PAHs	1	μg/L	<1	-	
2-Fluorobiphenyl - Surrogate	_	%	82	-	
Anthracene-D10 - Surrogate	_	%	82	_	
p-Terphenyl-D14 - Surrogate	_	%	75	_	
		,0	70		
Metals Test/Reference	PQL	Unit			
- Testifice	I QL	Onit			
3100 Dissolved Metals in Water By	ICP/MS				
Arsenic	5	μg/L	<5	<5	
Cadmium	2	μg/L	<2	<2	
Chromium	5	μg/L	18	<5	
Copper	5	μg/L	9.3	52	
Lead	5	μg/L	<5	<5	
Nickel	5	μg/L	9.2	<5	
Zinc	5	μg/L	<5	<5	
Inorganics					
Test/Reference	PQL	Unit			
4000 pH in Water					
рН	0.1	рН	8.0	-	
4110 Dissolved Solids in Water					
Total Dissolved Solids	5	mg/L	5400	-	



## Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

Description	Extracted	Analysed
1100 MAH(BTEX & C6-C9) in Water P&T		26/05/2008
1300 VHCs in Water by P&T	20/05/2008	23/05/2008
2000 TPH (C10 - C36) in Water by GC	20/05/2008	21/05/2008
2100 PAH in Water by GC	20/05/2008	23/05/2008
2300 OC Pesticides in Water by GC-ECD	20/05/2008	21/05/2008
2600 PCBs in Water by GCMS	20/05/2008	23/05/2008
2800 Individual Phenols in Water by GC	20/05/2008	21/05/2008
3100 Dissolved Metals in Water By ICP/MS	20/05/2008	21/05/2008
3400 Dissolved Mercury in Water by FIMS	20/05/2008	21/05/2008
4000 pH in Water		20/05/2008
4110 Dissolved Solids in Water		21/05/2008
4230 Total Hexavalent Chromium in Water	22/05/2008	22/05/2008
4270 Total Cyanide in Water Colourmetric	19/05/2008	20/05/2008
4300 Anions in Water by IC	19/05/2008	21/05/2008

Test Description 4000 pH in Water

Ideally pH should be determined in the field, therefore this test will not be measured for compliance to Holding Times



## **Amdel Internal Quality Control Review**

#### General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples
  are included in this QC report where applicable. Additional QC data may be available on request.
- 2. Amdel QC Acceptance/Rejection criteria are available on request.
- 3. Proficiency trial results are available on request.
- 4. Actual PQLs are matrix dependant. Quotes PQLs may be raised where sample extracts are diluted due to interferences.
- 5. Results are uncorrected for matrix spike or surrogate recoveries.
- 6. Test samples duplicated or spiked, are for this job only and are identified in the following QC report.
- 7. SVOC analyses on waters are performed on homogenized, unfiltered sample, unless noted otherwise.
- 8. When individual results are qualified in the body of a report, refer to the qualifier descriptions that follow.

#### **Holding Times**

Please refer to 'Sampling and Preservation Chart for Soils & Waters' for holding times. (Form LM-FOR-ADM-020)

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Acknowledgement.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitablity qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

\*\*NOTE: pH duplicates are reported as a range NOT an RPD

#### **Quality Control Results**

#### Laboratory: EN\_METALS

Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
1005677 [ Method Blank ]	•	•			•	
3100 Dissolved Metals in Water By ICP/MS						
Antimony	μg/L	<1		< 1	Т	
Arsenic	μg/L	<5		< 5	Т	
Barium	μg/L	<5		< 5	Т	
Beryllium	μg/L	<5		< 5	Т	
Boron	μg/L	<5		< 5	Т	
Cadmium	μg/L	<2		< 2	Т	
Chromium	μg/L	<5		< 5	Т	
Cobalt	μg/L	<5		< 5	Т	
Copper	μg/L	<5		< 5	Т	
Lead	μg/L	<5		< 5	Т	
Manganese	μg/L	<5		< 5	Т	
Molybdenum	μg/L	<5		< 5	Т	
Nickel	μg/L	<5		< 5	Т	
Selenium	μg/L	<5		< 5	Т	
Tin	μg/L	<5		< 5	Т	
Vanadium	μg/L	<5		< 5	Т	
Zinc	μg/L	<5		< 5	Т	
1007309 [ Method Blank ]	•		•			
3400 Dissolved Mercury in Water by FIMS						
Mercury	μg/L	<0.1		< 0.1	Т	
1007359 [ Method Blank ]						
3400 Dissolved Mercury in Water by FIMS						
Mercury	μg/L	<0.1		< 0.1	Т	



## Laboratory: EN\_METALS

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyin Codes
1005678 [ Laboratory Control Sample ]	-		-	!		-	
3100 Dissolved Metals in Water By ICP/MS			Expected Value	Percent Recovery			
Antimony	μg/L	100	100.0	103	80-120 %	Т	
Arsenic	μg/L	98	100.0	98	80-120 %	Т	
Barium	μg/L	110	100.0	107	80-120 %	Т	
Beryllium	μg/L	88	100.0	88	80-120 %	Т	
Boron	μg/L	90	100.0	90	80-120 %	T	
Cadmium	μg/L	100	100.0	104	80-120 %	Т	
Chromium	μg/L	98	100.0	98	80-120 %	Т	
Cobalt	μg/L	93	100.0	93	80-120 %	Т	
Copper	μg/L	98	100.0	98	80-120 %	Т	
Lead	μg/L	110	100.0	105	80-120 %	Т	
Manganese	μg/L	92	100.0	92	80-120 %	Т	
Molybdenum	μg/L	110	100.0	112	80-120 %	Т	
Nickel	μg/L	94	100.0	94	80-120 %	Т	
Selenium	µg/L	100	100.0	101	80-120 %	T	
Tin	µg/L	100	100.0	102	80-120 %	T	
Vanadium	µg/L	89	100.0	89	80-120 %	T	
Zinc	µg/L	98	100.0	98	80-120 %	T	
1007360 [ Laboratory Control Sample ]	P9-2	<del>                                     </del>		- "	00 120 70	+ -	
3400 Dissolved Mercury in Water by FIMS			Expected Value	Percent Recovery			
Mercury Mercury	ug/l	10.0	10.0	100	80-120 %	Т	-
	μg/L	10.0	10.0	100	80-120 %	+ '	-
1003317 [ Duplicate of 1001369 ]			1				
3100 Dissolved Metals in Water By ICP/MS	1		Result 2	RPD	0.40.0/	1 -	-
Antimony	μg/L	<1	<1	<1	0-10 %	T	-
Arsenic	μg/L	<5	<5	<1	0-10 %	T	
Barium	μg/L	65	66	2	0-10 %	T T	
Beryllium	μg/L 	<5	<5	<1	0-10 %	T _	
Boron	μg/L	2900	2900	1	0-10 %	T	
Cadmium	μg/L 	<2	<2	<1	0-10 %	T	ļ
Cobalt	μg/L	<5	<5	<1	0-10 %	T	
Copper	μg/L	<5	<5	<1	0-10 %	Т	
Lead	μg/L	<5	<5	<1	0-10 %	T	
Manganese	μg/L	26	26	2	0-10 %	Т	
Molybdenum	μg/L	20	18	10	0-10 %	Т	
Nickel	μg/L	<5	<5	<1	0-10 %	T	
Selenium	μg/L	66	65	1	0-10 %	T	
Silver	μg/L	<5	<5	<1	0-10 %	Т	
Tin	μg/L	<5	<5	<1	0-10 %	Т	
Vanadium	μg/L	11	11	<1	0-10 %	T	
Zinc	μg/L	<5	<5	<1	0-10 %	Т	
1003322 [ Spike of 1001368 ]							
3100 Dissolved Metals in Water By ICP/MS	_		Spike Value	Percent Recovery			
Cadmium	μg/L	100	100.0	100	80-120 %	Т	
Chromium	μg/L	120	100.0	97	80-120 %	Т	
Copper	μg/L	98	100.0	90	80-120 %	Т	
Lead	μg/L	110	100.0	106	80-120 %	Т	
Nickel	μg/L	100	100.0	87	80-120 %	Т	
Zinc	μg/L	99	100.0	92	80-120 %	Т	
aboratory: EN_SVOC	+	•	1			-	-
Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyi
			1				



First Reported: 26 May 2008

Date Printed: 26 May 2008

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
1003400 [ Method Blank ]	•	•	•	•		•	
2100 PAH in Water by GC							
Acenaphthene	μg/L	<1			< 1	Т	
Acenaphthylene	μg/L	<1			< 1	Т	
Anthracene	μg/L	<1			< 1	Т	
Benz(a)anthracene	μg/L	<1			< 1	Т	
Benzo(a)pyrene	μg/L	<1			< 1	Т	
Benzo(b)&(k)fluoranthene	μg/L	<2			< 2	Т	
Benzo(ghi)perylene	μg/L	<1			< 1	Т	
Chrysene	μg/L	<1			< 1	Т	
Dibenz(ah)anthracene	μg/L	<1			< 1	Т	
Fluoranthene	μg/L	<1			< 1	Т	
Fluorene	μg/L	<1			< 1	Т	
Indeno(123-cd)pyrene	μg/L	<1			< 1	Т	
Naphthalene	μg/L	<1			< 1	Т	
Phenanthrene	μg/L	<1			< 1	Т	
Pyrene	μg/L	<1			< 1	Т	
Sum of PAHs	μg/L	<1			< 1	Т	
2-Fluorobiphenyl - Surrogate	%	76			70-130 %	Т	
Anthracene-D10 - Surrogate	%	90			70-130 %	Т	
p-Terphenyl-D14 - Surrogate	%	91			70-130 %	Т	
2600 PCBs in Water by GCMS	•						
Aroclor 1016	μg/L	<1			< 1	Т	
Aroclor 1221	μg/L	<1			< 1	Т	
Aroclor 1232 and 1242 as total	μg/L	<2			< 2	Т	
Aroclor 1248 and 1254 as total	μg/L	<2			< 2	Т	
Aroclor 1260	μg/L	<1			< 1	Т	
Total Polychlorinated biphenyls	μg/L	<1			< 1	Т	
Decachlorobiphenyl - PCB surrogate	%	80			70-130 %	Т	
1003975 [ Method Blank ]	•	•				•	
2000 TPH (C10 - C36) in Water by GC							
C10-C14 Fraction	μg/L	<40			< 40	Т	
C15-C28 Fraction	μg/L	<100			< 100	Т	
C29-C36 Fraction	μg/L	<100			< 100	Т	
1003976 [ Laboratory Control Sample ]	•	•	•	•		-	
2000 TPH (C10 - C36) in Water by GC			Expected Value	Percent Recovery			
C10-C14 Fraction	μg/L	150	200.0	75	70-130 %	Т	
C15-C28 Fraction	μg/L	184	200.0	92	70-130 %	T	
C29-C36 Fraction	μg/L	185	200.0	92	70-130 %	<del>Т</del> т	



First Reported: 26 May 2008

Date Printed: 26 May 2008

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
1003978 [ Laboratory Control Sample ]	•		•	•		•	
2100 PAH in Water by GC			Expected Value	Percent Recovery			
Acenaphthene	μg/L	3.7	4.0	93	70-130 %	Т	
Acenaphthylene	μg/L	3.5	4.0	87	70-130 %	Т	
Anthracene	μg/L	3.8	4.0	94	70-130 %	Т	
Benz(a)anthracene	μg/L	3.4	4.0	85	70-130 %	Т	
Benzo(a)pyrene	μg/L	3.4	4.0	84	70-130 %	Т	
Benzo(b)&(k)fluoranthene	μg/L	6.7	8.0	84	70-130 %	Т	
Benzo(ghi)perylene	μg/L	3.4	4.0	84	70-130 %	Т	
Chrysene	μg/L	3.3	4.0	83	70-130 %	Т	
Dibenz(ah)anthracene	μg/L	3.2	4.0	81	70-130 %	Т	
Fluoranthene	μg/L	3.5	4.0	87	70-130 %	Т	
Fluorene	μg/L	3.7	4.0	93	70-130 %	Т	
Indeno(123-cd)pyrene	μg/L	3.4	4.0	84	70-130 %	Т	
Naphthalene	μg/L	3.6	4.0	90	70-130 %	Т	
Phenanthrene	μg/L	3.8	4.0	94	70-130 %	Т	
Pyrene	μg/L	3.4	4.0	86	70-130 %	Т	
Sum of PAHs	μg/L	56	64.0	87	70-130 %	Т	
2-Fluorobiphenyl - Surrogate	%	91			70-130 %	Т	
Anthracene-D10 - Surrogate	%	105			70-130 %	Т	
p-Terphenyl-D14 - Surrogate	%	97			70-130 %	Т	
2300 OC Pesticides in Water by GC-ECD	-	•	Expected Value	Percent Recovery			
a-BHC	μg/L	4.3	4.0	108	70-130 %	Т	
a-Chlordane	μg/L	4.2	4.0	106	70-130 %	Т	
a-Endosulphan	μg/L	3.9	4.0	97	70-130 %	Т	
Aldrin	μg/L	4.3	4.0	107	70-130 %	Т	
b-BHC	μg/L	4.5	4.0	113	70-130 %	Т	
b-Endosulphan	μg/L	4.2	4.0	104	70-130 %	Т	
d-BHC	μg/L	4.5	4.0	111	70-130 %	Т	
DDD	μg/L	4.0	4.0	100	70-130 %	Т	
DDE	μg/L	4.0	4.0	100	70-130 %	Т	
DDT	μg/L	4.4	4.0	109	70-130 %	Т	
Dieldrin	μg/L	4.0	4.0	100	70-130 %	Т	
Endosulfan sulfate	μg/L	5.0	4.0	125	70-130 %	Т	
Endrin	μg/L	4.2	4.0	106	70-130 %	Т	
Endrin Aldehyde	μg/L	3.9	4.0	98	70-130 %	Т	
g-BHC Lindane	μg/L	4.4	4.0	109	70-130 %	Т	
g-Chlordane	μg/L	4.2	4.0	106	70-130 %	Т	
Heptachlor	μg/L	4.2	4.0	104	70-130 %	Т	
Heptachlor epoxide	μg/L	3.8	4.0	95	70-130 %	Т	
Methoxychlor	μg/L	4.2	4.0	106	70-130 %	Т	
2.4.5.6-tetrachloro-m-xylene-SURROGATE	%	93		<u>                                       </u>	70-130 %	Т	<u> </u>



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyin Codes
1003318 [ Duplicate of 1001369 ]	•	•	•		•	•	
2300 OC Pesticides in Water by GC-ECD			Result 2	RPD			
a-BHC	μg/L	<1	<1	<1	0-20 %	Т	
a-Chlordane	μg/L	<1	<1	<1	0-20 %	Т	
a-Endosulphan	μg/L	<1	<1	<1	0-20 %	Т	
Aldrin	μg/L	<1	<1	<1	0-20 %	T	
b-BHC	μg/L	<2	<2	<1	0-20 %	T	
b-Endosulphan	μg/L	<1	<1	<1	0-20 %	T T	
d-BHC	μg/L	<1	<1	<1	0-20 %	Т	
DDD	μg/L	<1	<1	<1	0-20 %	Т	
DDE	μg/L	<1	<1	<1	0-20 %	T	
DDT	μg/L	<1	<1	<1	0-20 %	Т	
Dieldrin	μg/L	<1	<1	<1	0-20 %	T	
Endosulfan sulfate	μg/L	<1	<1	<1	0-20 %	T	
Endrin	μg/L	<1	<1	<1	0-20 %	Т	
Endrin Aldehyde	μg/L	<2	<2	<1	0-20 %	T	
g-BHC Lindane	μg/L	<1	<1	<1	0-20 %	T T	
g-Chlordane	μg/L	<1	<1	<1	0-20 %	Т	
Heptachlor	μg/L	<1	<1	<1	0-20 %	T	
Heptachlor epoxide	µg/L	<1	<1	<1	0-20 %	T	
Hexachlorobenzene (HCB)	μg/L	<1	<1	<1	0-20 %	Т	
Methoxychlor	μg/L	<2	<2	<1	0-20 %	T	
Oxychlordane	μg/L	<1	<1	<1	0-20 %	T	
2.4.5.6-tetrachloro-m-xylene-SURROGATE	%	70			70-130 %	Т	
1003319 [ Duplicate of 1001369 ]	+	ļ	<del>                                     </del>		+		
2100 PAH in Water by GC			Result 2	RPD	1		
Acenaphthene	μg/L	<1	<1 <1	<1	0-20 %	Т	
Acenaphthylene	µg/L	<1	<1	<1	0-20 %	T	
Anthracene	µg/L	<1	<1	<1	0-20 %	<del>  '</del>	
Benz(a)anthracene	µg/L	<1	<1	<1	0-20 %	<del>                                     </del>	
Benzo(a)pyrene	µg/L	<1	<1	<1	0-20 %	<del>  '</del>	
Benzo(b)&(k)fluoranthene	µg/L	<2	<2	N/A	N/A	N/A	
Benzo(ghi)perylene	µg/L	<1	<1	<1	0-20 %	T T	
Chrysene	µg/L	<1	<1	<1	0-20 %	<del>  '</del>	
Dibenz(ah)anthracene	µg/L	<1	<1	<1	0-20 %	<del>  '</del>	
Fluoranthene	µg/L	<1	<1	<1	0-20 %	<del>                                     </del>	
Fluorene	µg/L	<1	<1	<1	0-20 %	<del>  '</del>	
Indeno(123-cd)pyrene	µg/L	<1	<1	<1	0-20 %	T	
Naphthalene	µg/L	<1	<1	<1	0-20 %	<del>                                     </del>	
Phenanthrene	μg/L	<1	<1	<1	0-20 %	<del>  '</del>	
Pyrene	μg/L	<1	<1	<1	0-20 %	'   T	
Sum of PAHs	μg/L	<1	<1	N/A	N/A	N/A	
Anthracene-D10 - Surrogate	μg/L %	79	~1	IN/A	70-130 %	T T	
, and adoctio-D to - outrogate	/0	19			7 0 - 130 70	_ '	<b> </b>



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
1003323 [ Spike of 1001368 ]	+		1	<b>!</b>		-	
2300 OC Pesticides in Water by GC-ECD			Spike Value	Percent Recovery			
a-BHC	μg/L	3.8	4.0	95	70-130 %	Т	
a-Chlordane	μg/L	3.9	4.0	99	70-130 %	Т	
a-Endosulphan	μg/L	3.6	4.0	90	70-130 %	Т	
Aldrin	μg/L	3.5	4.0	86	70-130 %	Т	
b-BHC	μg/L	3.8	4.0	94	70-130 %	Т	
b-Endosulphan	μg/L	3.6	4.0	89	70-130 %	Т	
d-BHC	μg/L	3.9	4.0	97	70-130 %	Т	
DDD	μg/L	3.4	4.0	86	70-130 %	Т	
DDE	μg/L	3.5	4.0	88	70-130 %	Т	
DDT	μg/L	3.5	4.0	87	70-130 %	Т	
Dieldrin	μg/L	3.4	4.0	86	70-130 %	Т	
Endosulfan sulfate	μg/L	2.9	4.0	73	70-130 %	Т	
Endrin	μg/L	4.1	4.0	102	70-130 %	Т	
Endrin Aldehyde	μg/L	3.2	4.0	81	70-130 %	Т	
g-BHC Lindane	μg/L	3.8	4.0	95	70-130 %	Т	
g-Chlordane	μg/L	3.7	4.0	93	70-130 %	Т	
Heptachlor	μg/L	2.7	N/A	N/A	N/A	N/A	
Heptachlor epoxide	μg/L	3.3	4.0	82	70-130 %	Т	
Hexachlorobenzene (HCB)	μg/L	3.9	N/A	N/A	N/A	N/A	
Methoxychlor	μg/L	3.4	4.0	84	70-130 %	Т	
Oxychlordane	μg/L	<1	N/A	N/A	N/A	N/A	
2.4.5.6-tetrachloro-m-xylene-SURROGATE	%	74			70-130 %	Т	
_aboratory: EN_VOC	•					•	

0 1 7 1 8 11 8 1		- u		Acceptance	Pass	Qualifying
Sample, Test, Result Reference	Units	Result 1		Limits	Limits	Codes



Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyir Codes
1006090 [ Method Blank ]	-	<b>!</b>	+	-		1=	
1300 VOCs in Water by P&T							
1,1,1,2-Tetrachloroethane	μg/L	<5.0			< 5	Т	
1,1,1-Trichloroethane	µg/L	<5.0			< 5	Т	
1,1,2,2-Tetrachloroethane	μg/L	<5.0			< 5	Т	
1,1,2-Trichloroethane	μg/L	<5.0			< 5	Т	
1,1-Dichloroethane	μg/L	<30.0			< 30	Т	
1,1-Dichloroethene	μg/L	<5.0			< 5	Т	
1,1-Dichloropropylene	μg/L	<5.0			< 5	Т	
1,2,3-Trichlorobenzene	μg/L	<5.0			< 5	Т	
1,2,3-Trichloropropane	μg/L	<5.0			< 5	Т	
1,2,4-Trichlorobenzene	μg/L	<5.0			< 5	Т	
1,2,4-Trimethylbenzene	μg/L	<5.0			< 5	Т	
1,2-Dibromo-3-chloropropane	μg/L	<5.0			< 5	Т	
1,2-Dibromoethane	μg/L	<5.0			< 5	Т	
1,2-Dichlorobenzene	μg/L	<5.0			< 5	Т	
1,2-Dichloroethane	μg/L	<5.0			< 5	Т	
1,2-Dichloropropane	μg/L	<5.0			< 5	Т	
1,3,5-Trimethylbenzene	μg/L	<5.0			< 5	Т	
1,3-Dichlorobenzene	μg/L	<5.0			< 5	Т	
1,3-Dichloropropane	μg/L	<5.0			< 5	Т	
1,4-Dichlorobenzene	μg/L	<5.0			< 5	Т	
2,2-Dichloropropane	μg/L	<30.0			< 30	Т	
2-butanone	μg/L	<50.0			< 50	Т	
2-Chlorotoluene	μg/L	<5.0			< 5	Т	
4-Chlorotoluene	μg/L	<5.0			< 5	Т	
4-methyl-2-pentanone	μg/L	<50.0			< 50	Т	
Benzene	μg/L	<0.5			< 0.5	Т	
Bromobenzene	μg/L	<5.0			< 5	Т	
Bromochloromethane	μg/L	<5.0			< 5	Т	
Bromodichloromethane	μg/L	<5.0			< 5	Т	
Bromoform	μg/L	<5.0			< 5	Т	
Bromomethane	μg/L	<5.0			< 5	Т	
Carbon Tetrachloride	μg/L	<5.0			< 5	Т	
Chlorobenzene	μg/L	<5.0			< 5	Т	
Chloroethane	μg/L	<5.0			< 5	Т	
Chloroform	μg/L	<10.0			< 10	Т	
Chloromethane	μg/L	<5.0			< 5	Т	
cis-1,2-Dichloroethene	μg/L	<5.0			< 5	Т	
cis-1,3-Dichloropropene	μg/L	<5.0			< 5	Т	
Dibromochloromethane	μg/L	<5.0			< 5	Т	
Dibromomethane	μg/L	<5.0			< 5	Т	
Dichlorodifluoromethane	μg/L	<5.0			< 5	Т	
Ethylbenzene	μg/L	<1.0			< 1	Т	
Hexachlorobutadiene	μg/L	<5.0			< 5	Т	
Hexachloroethane	μg/L	<5.0			< 5	Т	
Isopropylbenzene	μg/L	<5.0			< 5	Т	
Meta- & Para- Xylene	μg/L	<2.0			< 2	Т	
Methylene Chloride	μg/L	<10.0			< 10	Т	
Naphthalene	μg/L	<5.0			< 5	Т	
n-Butylbenzene	μg/L	<5.0			< 5	Т	
n-Propylbenzene	μg/L	<5.0			< 5	Т	
Ortho-Xylene	μg/L	<1.0			< 1	Т	
Pentachloroethane	μg/L	<5.0			< 5	Т	
p-Isopropyltoluene	μg/L	<5.0			< 5	Т	
sec-Butylbenzene	μg/L	<5.0	1		< 5	Т	
Styrene	μg/L	<5.0			< 5	Т	
tert-Butylbenzene	μg/L	<5.0			< 5	Т	
Tetrachloroethene	μg/L	<5.0			< 5	T	
Toluene	μg/L	<1.0	1		< 1	Т	
Total Xylenes	μg/L	<3.0			< 3	Т	



#### Laboratory: EN\_VOC

Sample, Test, Result Reference	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Codes
1006090 [ Method Blank ]	•			•	•	
1300 VOCs in Water by P&T						
trans-1,2-Dichloroethene	μg/L	<5.0		< 5	Т	
trans-1,3-Dichloropropene	μg/L	<5.0		< 5	Т	
Trichloroethene	μg/L	<5.0		< 5	Т	
Trichlorofluoromethane	μg/L	<5.0		< 5	Т	
Vinyl chloride	μg/L	<5.0		< 5	Т	
4-Bromofluorobenzene - Surrogate	%	88		70-130 %	Т	
Pentafluorobenzene-Surrogate	%	109		70-130 %	Т	
Toluene-D8 - Surrogate	%	91		70-130 %	Т	
1011215 [ Method Blank ]	•		•			
1100 MAH(BTEX & C6-C9) in Water P&T						
Benzene	μg/L	<0.5		< 0.5	Т	
C6-C9 Fraction	μg/L	<20.0		< 20	Т	
Ethylbenzene	μg/L	<1.0		< 1	Т	
Meta- & Para- Xylene	μg/L	<2.0		< 2	Т	
Ortho-Xylene	μg/L	<1.0		< 1	Т	
Toluene	μg/L	<1.0		< 1	Т	
Total Xylenes	μg/L	<3.0		< 3	Т	
4-Bromofluorobenzene - Surrogate	%	103		70-130 %	Т	



#### Laboratory: EN\_VOC

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifyir Codes
1006092 [ Laboratory Control Sample ]	-	-	+	<del> </del>		+	
1300 VOCs in Water by P&T			Expected Value	Percent Recovery			
1,1,1,2-Tetrachloroethane	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,1,1-Trichloroethane	μg/L	24	25.0	97	70-130 %	Т	
1,1,2,2-Tetrachloroethane	µg/L	24	25.0	94	70-130 %	T T	
1,1,2-Trichloroethane	μg/L	23	25.0	94	70-130 %	Т	
1,1-Dichloroethane	µg/L	<30.0	25.0	95	70-130 %	<del>                                     </del>	
1.1-Dichloroethene	µg/L	21	25.0	86	70-130 %	T T	
1,1-Dichloropropylene	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,2,3-Trichlorobenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,2,3-Trichloropropane	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,2,4-Trimethylbenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,2-Dibromo-3-chloropropane	µg/L	<5.0	N/A	N/A	N/A	N/A	
1,2-Dibromoethane	µg/L	<5.0	N/A	N/A	N/A	N/A	
1,2-Dichlorobenzene	µg/L	22	25.0	90	70-130 %	T T	
1.2-Dichloroethane	μg/L	23	25.0	92	70-130 %	<del>                                     </del>	
1,2-Dichloropropane	μg/L	22	25.0	87	70-130 %	<u>'</u>	
1,3,5-Trimethylbenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
1,3-Dichlorobenzene	μg/L μg/L	24	25.0	97	70-130 %	T IN/A	
1,3-Dichloropropane	μg/L μg/L	<5.0	N/A	N/A	70-130 % N/A	N/A	
1,4-Dichlorobenzene		24	25.0	97	70-130 %	T IN/A	<b>—</b>
2,2-Dichloropropane	μg/L μg/L	<30.0	25.0 N/A	97 N/A	70-130 % N/A	N/A	<b>—</b>
		<50.0	N/A	N/A	N/A	N/A	
2-butanone	μg/L					_	<del>                                     </del>
2-Chlorotoluene	μg/L	<5.0	N/A	N/A	N/A	N/A	<b>-</b>
4-Chlorotoluene	μg/L	<5.0	N/A	N/A	N/A	N/A	<del>                                     </del>
4-methyl-2-pentanone	μg/L	<50.0	N/A	N/A	N/A	N/A	<del>                                     </del>
Benzene	μg/L	23	25.0	93	70-130 %	T	<del>                                     </del>
Bromobenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	<b></b>
Bromochloromethane	μg/L	<5.0	N/A	N/A	N/A	N/A	-
Bromodichloromethane	μg/L	24	25.0	96	70-130 %	T	<b></b>
Bromoform	μg/L	22	25.0	90	70-130 %	T	<b></b>
Bromomethane	μg/L 	<5.0	N/A	N/A	N/A	N/A	<b></b>
Carbon Tetrachloride	μg/L	25	25.0	99	70-130 %	T	<b> </b>
Chlorobenzene	μg/L	22	25.0	88	70-130 %	T	<b></b>
Chloroethane	μg/L	<5.0	N/A	N/A	N/A	N/A	<b></b>
Chloroform	μg/L	25	25.0	101	70-130 %	T	<b></b>
Chloromethane	μg/L	<5.0	N/A	N/A	N/A	N/A	<b></b>
cis-1,2-Dichloroethene	μg/L	<5.0	N/A	N/A	N/A	N/A	<b></b>
cis-1,3-Dichloropropene	μg/L 	19	25.0	78	70-130 %	T	<u> </u>
Dibromochloromethane	μg/L	24	25.0	95	70-130 %	Т	
Dibromomethane	μg/L	<5.0	N/A	N/A	N/A	N/A	<u> </u>
Dichlorodifluoromethane	μg/L	<5.0	N/A	N/A	N/A	N/A	
Ethylbenzene	μg/L	21	25.0	83	70-130 %	Т	
Hexachlorobutadiene	μg/L	<5.0	N/A	N/A	N/A	N/A	
Hexachloroethane	μg/L	<5.0	N/A	N/A	N/A	N/A	
Isopropylbenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
Meta- & Para- Xylene	μg/L	<2.0	N/A	N/A	N/A	N/A	
Methylene Chloride	μg/L	22	25.0	88	70-130 %	Т	
Naphthalene	μg/L	<5.0	N/A	N/A	N/A	N/A	
n-Butylbenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
n-Propylbenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
Ortho-Xylene	μg/L	<1.0	N/A	N/A	N/A	N/A	
Pentachloroethane	μg/L	<5.0	N/A	N/A	N/A	N/A	
p-Isopropyltoluene	μg/L	<5.0	N/A	N/A	N/A	N/A	
sec-Butylbenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
Styrene	μg/L	<5.0	N/A	N/A	N/A	N/A	
tert-Butylbenzene	μg/L	<5.0	N/A	N/A	N/A	N/A	
Tetrachloroethene	μg/L	22	25.0	89	70-130 %	Т	
Toluene	μg/L	22	25.0	89	70-130 %	Т	
Total Xylenes	μg/L	<3.0	N/A	N/A	N/A	N/A	i



#### Laboratory: EN\_VOC

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
1006092 [ Laboratory Control Sample ]	+		+	<del> </del>		+	
1300 VOCs in Water by P&T			Expected Value	Percent Recovery			
trans-1,2-Dichloroethene	μg/L	21	25.0	83	70-130 %	Т	
trans-1,3-Dichloropropene	μg/L	20	25.0	79	70-130 %	Т	
Trichloroethene	μg/L	24	25.0	96	70-130 %	Т	
Trichlorofluoromethane	μg/L	<5.0	N/A	N/A	N/A	N/A	
Vinyl chloride	μg/L	<5.0	N/A	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	%	90			70-130 %	Т	
Pentafluorobenzene-Surrogate	%	96			70-130 %	Т	
Toluene-D8 - Surrogate	%	96			70-130 %	Т	
1011217 [ Laboratory Control Sample ]	•		•	•			
1100 MAH(BTEX & C6-C9) in Water P&T			Expected Value	Percent Recovery			
Benzene	μg/L	9.1	10.0	91	70-130 %	Т	
C6-C9 Fraction	μg/L	120	140.0	86	70-130 %	Т	
Ethylbenzene	μg/L	9.6	10.0	96	70-130 %	Т	
Meta- & Para- Xylene	μg/L	20	20.0	98	70-130 %	Т	
Ortho-Xylene	μg/L	9.7	10.0	97	70-130 %	Т	
Toluene	μg/L	9.8	10.0	98	70-130 %	Т	
Total Xylenes	μg/L	29	N/A	N/A	N/A	N/A	
4-Bromofluorobenzene - Surrogate	%	113			70-130 %	Т	
_aboratory: EN_WATERS	•		•			•	
Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
1001676 [ Method Blank ]	-		-	<del>                                     </del>	Lime	12	00000
4270 Total Cyanide in Water Colourmetric							
Total Cyanide	mg/L	<0.005			< 0.005	Т	
1001712 [ Method Blank ]	•		•	<del>'</del>		•	
4300 Anions in Water by IC			1				
Bromide	mg/L	<0.5			< 0.5	Т	
Chloride	mg/L	<0.5			< 0.5	Т	
Fluoride	mg/L	<0.5			< 0.5	Т	
Nitrate	mg/L	<0.5			< 0.5	Т	
Nitrite	mg/L	<0.5			< 0.5	Т	
Orthophosphate as P	mg/L	<0.5			< 0.5	Т	
Sulphate	mg/L	<0.5			< 0.5	Т	
1002219 [ Method Blank ]	+		+	!		•	
4110 Dissolved Solids in Water							
Total Dissolved Solids	mg/L	<5			< 5	Т	
1007610 [ Method Blank ]	13-2	-			•	-	
4110 Dissolved Solids in Water							
Total Dissolved Solids	mg/L	<5			< 5	Т	
1008524 [ Method Blank ]	•					•	
4230 Dissolved Hexavalent Chromium, mg/L							
Chromium (VI)	mg/L	<0.02			< 0.02	Т	
1001679 [ Laboratory Control Sample ]	•		•	·		•	
4270 Total Cyanide in Water Colourmetric			Expected Value	Percent Recovery			
Total Cyanide	mg/L	0.09	0.1	92	75-125 %	Т	
1001714 [ Laboratory Control Sample ]	+	· · · · · · · · · · · · · · · · · · ·	+			+	
4300 Anions in Water by IC			Expected Value	Percent Recovery			
Bromide	mg/L	95	100.0	95	80-120 %	Т	
Chloride	mg/L	95	100.0	95	80-120 %	† ·	
Fluoride	mg/L	94	100.0	94	80-120 %	† †	
Nitrate	mg/L	100	100.0	105	80-120 %	<del>  '</del>	
Nitrite	mg/L	89	100.0	89	80-120 %	<del>  '</del>	
Orthophosphate as P	1	89	100.0	89	80-120 %	<del>  '</del>	
Sulphate	mg/L mg/L	100	100.0	102	80-120 %	'   T	
1002091 [ Laboratory Control Sample ]	my/L	100	100.0	102	00-120 70	+ '	
			1 E 1 1111	I D			
4000 pH in Water	1	<b>-</b> .	Expected Value	Percent Recovery	<b></b>	1	
pH	pН	7.4	N/A	N/A	N/A	N/A	I



#### Laboratory: EN\_WATERS

Sample, Test, Result Reference	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Codes
1002220 [ Laboratory Control Sample ]			•			•	
4110 Dissolved Solids in Water			Expected Value	Percent Recovery		_	
Total Dissolved Solids	mg/L	1000	1000.0	101	90-110 %	Т	
1004171 [ Laboratory Control Sample ]			_			•	
4000 pH in Water		_	Expected Value	Percent Recovery			
рН	рН	7.4	N/A	N/A	N/A	N/A	
1007611 [ Laboratory Control Sample ]		_				•	
4110 Dissolved Solids in Water			Expected Value	Percent Recovery		_	
Total Dissolved Solids	mg/L	960	1000.0	96	90-110 %	Т	
1008525 [ Laboratory Control Sample ]		•				•	
4230 Dissolved Hexavalent Chromium, mg/L			Expected Value	Percent Recovery			
Chromium (VI)	mg/L	0.21	0.2	104	85-115 %	Т	
1003320 [ Duplicate of 1001369 ]		•				•	
4000 pH in Water			Result 2	RPD			
рН	рН	7.7	7.7	0.0	0-0.2 pH	Т	
1003321 [ Duplicate of 1001369 ]			·				
4110 Dissolved Solids in Water			Result 2	RPD			
Total Dissolved Solids	mg/L	710	680	4	0-10 %	Т	

#### Sample Integrity

Custody Seals Intact (if used)

Attempt to Chill was evident

Samples correctly preserved

Organic samples had Teflon liners

Samples received with Zero Headspace

Samples received within HoldingTime

Yes

Some samples have been subcontracted

No

#### **Authorised By**

Ruth Callander Client Services Officer Alex Petridis Senior Analyst - SVOC Accreditation Number: 1645 Barry Blythman Senior Analyst - VOC Accreditation Number: 1645 Mark Herbstreit Senior Analyst - Metals Accreditation Number: 1645 Helen Lei Senior Analyst - Waters Accreditation Number: 1645 Khoa Pham Analyst - VOC Accreditation Number: 1645

#### **Laboratory Manager**

Anthony Crane Operations Manager

Final Report

- Indicates Not Requested \* Indicates NATA accreditation does not cover the performance of this service

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The samples were not collected by Amdel staff.

# Appendix I

**Chain of Custody Forms - Groundwater** 

# Appendix I





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Document Number: AS-FOR-ADM-021

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Issue date: 7 June 2007

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Issue date: 7 June 2007

# **Appendix J**

Quality Control Analysis – Groundwater

# **Appendix J**



RPD calculations for Inter lab quality control samples

RPD calculations for inter lab qual	ity conti	Inter lab Q			Inter lab Q	C	
 Analyte	Units	QC1	GW3	RPD%	QC4	GW15	RPD%
2300 OC Pesticides in Water by GO		QO1	0113	IXI D /0	401	O1113	IXI D /0
a-BHC		<10	<10		-1	-1	
a-Chlordane	μg/L	<10	<10	-	<1 <1	<1 <1	-
	<mark>μg/L</mark> μg/L	<10	<10	-	<1	<1	-
a-Endosulphan Aldrin		<10	<10	-	<1	<1	-
b-BHC	μg/L	<20	<20	-	<2	<2	-
b-Endosulphan	μg/L	<10	<10	-	<1	<1	-
d-BHC	μg/L	<10	<10	-	<1	<1	-
DDD	μg/L	<10	<10	-	<1	<1	-
DDE	μg/L	<10	<10	-		<1	-
DDT	μg/L			-	<1 <1		-
	μg/L	<10	<10	-		<1	-
Dieldrin	µg/L	<10	<10	-	<1	<1	-
Endosulfan sulfate	μg/L	<10	<10	-	<1	<1	-
Endrin Aldebude	μg/L	<10	<10	-	<1	<1	-
Endrin Aldehyde	μg/L	<20	<20	-	<2	<2	-
g-BHC Lindane	μg/L	<10	<10	-	<1	<1	-
g-Chlordane	μg/L	<10	<10	-	<1	<1	-
Heptachlor	μg/L	<10	<10	-	<1	<1	-
Heptachlor epoxide	μg/L	<10	<10	-	<1	<1	-
Hexachlorobenzene (HCB)	μg/L	<10	<10	-	<1	<1	-
Methoxychlor	μg/L	<20	<20	-	<2	<2	-
Oxychlordane	μg/L	<10	<10	-	<1	<1	-
2100 PAH in Water by GC						I	
Acenaphthene	μg/L	<1	<1	-	<1	<1	-
Acenaphthylene	μg/L	<1	<1	-	<1	<1	-
Anthracene	μg/L	<1	<1	-	<1	<1	-
Benz(a)anthracene	μg/L	<1	<1	-	<1	<1	-
Benzo(a)pyrene	μg/L	<1	<1	-	<1	<1	-
Benzo(b)&(k)fluoranthene	μg/L	<2	<2	-	<2	<2	-
Benzo(ghi)perylene	μg/L	<1	<1	-	<1	<1	-
Dibenz(ah)anthracene	μg/L	<1	<1	-	<1	<1	-
Chrysene	μg/L	<1	<1	-	<1	<1	-
Naphthalene	μg/L	<1	<1	-	<1	<1	-
Fluoranthene	μg/L	<1	<1	-	<1	<1	-
Fluorene	μg/L	<1	<1	-	<1	<1	-
Indeno(123-cd)pyrene	μg/L	<1	<1	-	<1	<1	-
Phenanthrene	μg/L	<1	<1	-	<1	<1	-
Pyrene	μg/L	<1	<1	-	<1		-
Sum of PAHs	μg/L	<1	<1	-	<1	<1	-
3100 Dissolved Metals in Water By	ICP/MS						
Arsenic	μg/L	<5	<5	-	<5	<5	-
Cadmium	μg/L	<2	<2	-	<2	<2	-
Chromium	μg/L	15	16		18		5.7
Copper	μg/L	19	17	11.1	9.3	9.7	4.2
Lead	μg/L	<5	<5	-	<5	<5	-
Nickel	μg/L	6.6	6.4	3.1	9.2	9.4	2.2
Zinc	μg/L	8	7.5	6.5	<5	<5	-
рН	pН	-	-	-	8	8	0
Total Dissolved Solids	mg/L	-	-	-	5400	2300	80.5

Notes - Denotes not analysed RPD over 50%

RPD calculations for Intra lab quality control samples

		Intra lab C	C	
Analyte	Units	QC5	GW15	RDP%
2300 OC Pesticides in Water by G		1400	I.	
a-BHC	μg/L	< 0.1	<1	-
a-Chlordane (µg/L)	μg/L	< 1	<1	
a-Endosulphan (µg/L)	μg/L	< 0.1	<1	_
Aldrin (µg/L)	μg/L	< 0.1	<1	_
b-BHC (μg/L)	μg/L	< 0.1	<2	_
b-Endosulphan (µg/L)	μg/L	< 0.1	<1	_
d-BHC (µg/L)	μg/L	< 0.1	<1	_
DDD (µg/L)	μg/L	< 0.1	<1	_
DDE (µg/L)	μg/L	< 0.1	<1	_
DDT (µg/L)	μg/L	< 0.1	<1	_
Dieldrin (μg/L)	μg/L	< 0.1	<1	
Endosulfan sulfate (µg/L)	μg/L	< 0.1	<1	
Endrin (µg/L)	μg/L μg/L	< 0.1	<1	
Endrin Aldehyde (µg/L)	μg/L μg/L	< 0.1	<2	
g-BHC Lindane (µg/L)	μg/L	< 0.1	<1	
g-Chlordane (µg/L)	_	< 0.1	<1	-
Heptachlor (µg/L)	μg/L	< 0.1	<1	
1 (10 /	μg/L	< 0.1	<1	-
Heptachlor epoxide (µg/L)	μg/L	_		-
Hexachlorobenzene (HCB) (µg/L)	μg/L	< 0.1	<1	-
Methoxychlor (μg/L)  Oxychlordane (μg/L)	μg/L	< 0.1 < 0.1	<2 <1	-
2100 PAH in Water by GC	μg/L	< 0.1	<1	-
	/1	.4		
Acenaphthene (µg/L)	μg/L	<1	<1	-
Acenaphthylene (µg/L)	μg/L	<1	<1	-
Anthracene (µg/L)	μg/L	<1	<1	-
Benz(a)anthracene (µg/L)	μg/L	<1	<1	-
Benzo(a)pyrene (μg/L)	μg/L	<1	<1	-
Benzo(b)&(k)fluoranthene (µg/L)	μg/L	<1	<2	-
Benzo(ghi)perylene (µg/L)	μg/L	<1	<1	-
Dibenz(ah)anthracene (μg/L)	μg/L	<1	<1	-
Chrysene (µg/L)	μg/L	<1	<1	-
Naphthalene (µg/L)	μg/L	<1	<1	-
Fluoranthene (µg/L)	μg/L	<1	<1	-
Fluorene (µg/L)	μg/L	<1	<1	-
Indeno(123-cd)pyrene (µg/L)	μg/L	<1	<1	-
Phenanthrene (µg/L)	μg/L	<1	<1	-
Pyrene (µg/L)	μg/L	<1	<1	-
Sum of PAHs (μg/L)	μg/L	<1	<1	-
3100 Dissolved Metals in Water B			_	
Arsenic (µg/L)	μg/L	3		
Cadmium (µg/L)	μg/L	< 0.2		
Chromium (µg/L)	μg/L	3		
Copper (µg/L)	μg/L	6		
Lead (µg/L)	μg/L	< 1	<5	
Nickel (μg/L)	μg/L	9	9.4	
Zinc (µg/L)	μg/L	2		
рН	рН	7.9		
Total Dissolved Solids	mg/L	4600	2300	66.7

- Denotes not analysed RPD over 50%

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# Site History Investigation Buckland Park Proposal Walker Corporation / DayCorp

3 November 2008 Reference 31495 Revision 4



#### **Document Control**



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0	17 Dec. 07	Draft	MJE/ACF	MJE / ACF	JAP	NP
1	10 Jan 08	Draft	MJE/ACF	MJE/ACF	JAP	NP
2	15 Feb. 08	Draft	MJE/ACF	MJE/ACF	JAP	NP
3	24 June 08	Draft	MJE	MJE	HL	NP
4	3 Nov. 08	Final	MJE	MJE	HL	NP

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#### Appendix A

Historical Aerial Photographs

Table 5-5- Site Sector Risk Summary

Table 5-4: Summary of potentially contaminating activities

#### Appendix B

**High Contamination Risk Maps** 

#### Appendix C

**Detailed Aerial Photography** 

### Appendix D

Certificates of Title

## Appendix E

Section 7 Enquiry



# Limitations of this Report

The discussions within this report are limited to information available for the activities associated with the nominated scope of works only. This report does not detail or define the full extent or otherwise of contamination on the property lot under investigation, but rather has been prepared to generally indicate whether contamination may be present within the investigation area. Should further information become available regarding the conditions at the site, including previously unknown likely sources of contamination, Connell Wagner reserves the right to review the report in the context of the additional information.

This report has been prepared for the use of the client and in part is based on information provided by them. Connell Wagner takes no responsibility and disclaims all liability whatsoever for any loss or damage that the client may suffer as a result of using or relying on any such information or recommendations contained in this report, except to the extent where Connell Wagner expressly indicates in this report that it has verified the information to its satisfaction.

It should be noted that this report does not provide a complete assessment of the environmental status of the site and it is limited to the scope defined herein.



# **Abbreviations**

ANZECC	Australian and New Zealand Environment and Conservation Council			
AS	Australian Standard			
CT	Certificate of Title			
Connell Wagner	Connell Wagner Pty Ltd			
DWLBC	Department of Water, Land and Biodiversity Conservation			
ESA	Environmental Site Assessment			
GW	Groundwater Well			
ha	Hectares			
ID	Identification			
NATA	National Association of Testing Authorities			
NEPC	National Environmental Protection Council			
NEPM	National Environmental Protection Measure			
QA	Quality Assurance			
QC	Quality Control			
SHI	Site History Investigation			
SB	Soil Bore			
SA EPA	South Australian Environment Protection Authority			
SKM	Sinclair Knight Merz Pty Ltd			
SOP	Standard Operating Procedure			
SWL	Standing Water Level			
TD	Total Depth			
VIC EPA	Environment Protection Authority Victoria			



# 1. Executive Summary

Joint Venture partners Walker Corporation and DayCorp have commissioned Connell Wagner to prepare a site history investigation (SHI) as part of the Environmental Impact Statement (EIS) for a proposal at Buckland Park. The site has an area of approximately 1,308 hectares and is located 32 kilometers from the Adelaide CBD. The site has been used for agricultural purposes for many decades. It is currently undeveloped, as illustrated in the site plan.

For the purpose of this report the site has been split into seven sectors being:

- North Sector East (approx. 390ha) bounded by the Gawler River to the north, Tippets Bridge Road to the west, Legoe Road to the south and the site boundary to the east.
- North Sector West (approx. 240ha) bounded by the Gawler River to the north, Tippets Bridge Road to the east, Legoe Road to the south and the site boundary to the west boundary
- Central Sector (approx. 100ha) bounded by Tippets Bridge Road to the east, Legoe Road to the north, Beagle Hole Road to the west and Park Road to the south.
- South Sector West (approx. 260ha) bounded by Park Road to the north, Penrice salt fields to the west, Tippets Bridge Road to the east and the site boundary to the south.
- South Sector East (approx. 50ha) –bounded by Tippets Bridge Road to the west, Legoe Road to the north, Park Road and Thompson Road to the south, Port Wakefield Road and Brooks Road to the east
- South Sector (approx. 200ha) bounded by Brooks Road to the east, Thompson Road to the South and Legoe Road to the North. Borders the Central Sector and South Sector West, to the west.
- East Sector (approx. 90ha) bounded by Port Wakefield Road to the East, Buckland Road to the West, and the site boundary to the South and North.

In compiling the site history investigation, reference has been made to the following sources:

- Information gathered through site inspection
- Anecdotal information
- Interviews with site land owners
- South Australia Land Titles Office
- South Australia Department of Environment and Heritage: Mapland

This report has been prepared with the intention of identifying activities that have, or may reasonably be inferred to have, been carried out, on or near the site and that had potential to cause site contamination. The scope of the investigation was necessarily limited by the information sourced at the time of the investigation.

The site history investigation suggests that the primary use of the site has been for grazing and therefore there is a low potential risk of contamination. Cropping of this land for barley has occurred rotationally over time, with a correspondingly low to moderate risk of contamination. In both cases, any contamination would be broad and diffuse over a large portion of the site decreasing associated risks.

Some localised contamination may have occurred in the Central Sector due to market gardening activities, however this has only occurred in the last ten years hence the risk of contamination is moderate, due to the more benign nature of chemicals likely to be in use.

Land reshaping was noted to have occurred in the Thompson Creek area on the eastern boundary of North Sector West. This land reshaping may have required fill to be imported but is more likely to have consisted of grading of the existing landform.



Very localised contamination may have occurred in the tractor maintenance compound at the northern end of Buckland Road in North Sector East, however the risk of contamination is not considered to be high.

The site history investigation suggests that a significant proportion of the land within and surrounding South Sector East, East Sector, and the top portion of South Sector (predominantly north of Park Road) has been in use for market gardening since the 1950s, with a proportionally moderate to high risk. The balance of the site has been in use for grazing and broad acre cropping. In any case, these activities (due to extent and chemical application methods) would result in contamination diffused over a large portion of the site. Localised soil (and potentially groundwater) contamination may have occurred in association with a drainage line along Park Road in the South Sector.

These conclusions are provided to guide the preliminary site contamination assessment prepared by Connell Wager.



# 2. Site Information Summary

Property Street Address	Buckland Park, SA
Current Title References	CT 5868/766 CT 5868/767 CT 5868/768 CT 5868/769 CT 5868/770 CT 5868/771 CT 5868/772 CT 5868/773 CT 5868/774 CT 5868/775 CT 5868/776 CT 5868/777 CT 5868/778 CT 5868/779 CT 5868/780 CT 5868/781 CT 5868/782 CT 5868/783 CT 5868/784 CT 5868/785 CT 5875/910 CT 5399/96 CT 5399/95 CT 5424/348 CT 5228/167 CT 5763/970 CT 5755/199 CT 5303/891 CT 5916/60 CT 5916/61 CT 5251/815 CT 5251/814 CT 5251/813 CT 5759/187 CT 5916/62 CT 5916/59 CT 5144/148 CT 5144/147 CT 5916/63 CT 5883/980 CT 5883/979 CT 5883/978 CT 5864/499 CT 5909/379CT 5760/605 CT 5447/579 CT 54447/581CT 5447/585 CT 5909/380
Property Description	Agricultural
Local Government Authority	City of Playford
Existing Land Use	Rural
Proposed Land Use	Major Development: Residential, commercial, infrastructure, recreational
Land Area	1308 ha



### 3. Introduction

Joint Venture partners Walker Corporation and DayCorp have commissioned Connell Wagner to prepare a site history investigation (SHI) as part of the Environmental Impact Statement (EIS) for a proposal at Buckland Park. The site has an area of approximately 1,308 hectares and is located 32 kilometers from the Adelaide CBD. The site has been used for agricultural purposes for many decades. It is currently undeveloped, as illustrated in the site plan. This is displayed in Figure 3-1.

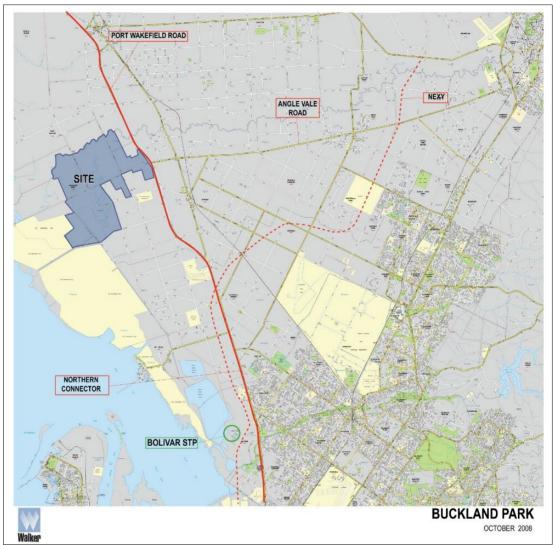


Figure 3-1: Locality Plan

## 3.1 The Proposal

The proposal comprises:

- Up to 12,000 residential allotments
- Schools
- Community facilities
- Recreational facilities
- A district centre
- Local shopping precincts
- Open space



Stormwater management facilities

For the purpose of this report the site has been split into seven sectors being:

- North Sector East (approx. 390ha) bounded by the Gawler River to the north, Tippets Bridge Road to the west, Legoe Road to the south and the site boundary to the east.
- North Sector West (approx. 240ha) bounded by the Gawler River to the north, Tippets Bridge Road to the east, Legoe Road to the south and the site boundary to the west boundary
- Central Sector (approx. 100ha) bounded by Tippets Bridge Road to the east, Legoe Road to the north, Beagle Hole Road to the west and Park Road to the south.
- South Sector West (approx. 260ha) bounded by Park Road to the north, Penrice salt fields to the west, Tippets Bridge Road to the east and the site boundary to the south.
- South Sector East (approx. 50ha) –bounded by Tippets Bridge Road to the west, Legoe Road to the north, Park Road and Thompson Road to the south, Port Wakefield Road and Brooks Road to the east
- South Sector (approx. 200ha) bounded by Brooks Road to the east, Thompson Road to the South and Legoe Road to the North. Borders the Central Sector and South Sector West, to the west.
- East Sector (approx. 90ha) bounded by Port Wakefield Road to the East, Buckland Road to the West, and the site boundary to the South and North.

These sectors are illustrated in Figure 3-2.

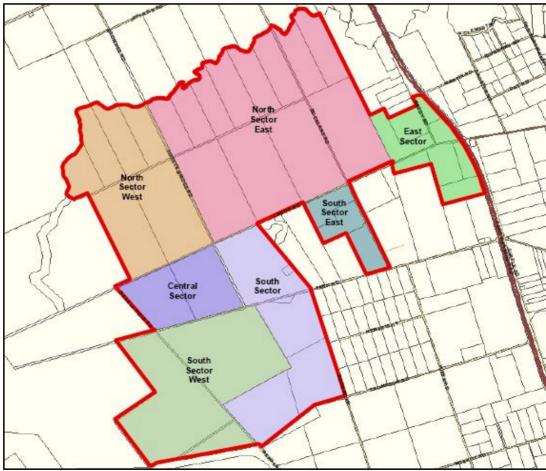


Figure 3-2: Site Sector Map

In compiling the site history investigation, reference has been made to the following sources:

Information gathered through site inspection



- Anecdotal information
- South Australia Land Titles Office
- Interviews with site land owners
- South Australia Department of Environment and Heritage: Mapland

This report has been prepared with the intention of identifying activities that have, or may reasonably be inferred to have, been carried out, on or near the site and that had potential to cause site contamination. This report has been prepared in line with *Advisory Notice, Planning: 20* that was issued in 2001 to assist in the interpretation of the *Development Act 1993* as well as the New Zealand Risk Based Screening System for Contaminated Land Management, 2004. The scope of the investigation was necessarily limited by the information sourced at the time of the investigation.



### 4. Site Information

#### 4.1 Site Inspection

Connell Wagner undertook a site inspection on 13 December 2007. Photographs taken during this site inspection are included below in Figure 4-2 to Figure 4-11.

The site lies within the City of Playford Council area and is bounded by the Gawler River to the north, Port Wakefield Road to the east, and private allotments to the west, east, and south. Figure 4-1 illustrates the site.



Figure 4-1: Site Plan

It was noted during the inspection of the site that the majority of land use within North Sector West, North Sector East and South Sector West is grazing use (cattle), and is covered by dry grass. Some areas were cropped with barley for feed purposes.

No significant infrastructure was noted, with all former infrastructure associated with grazing located north of the Gawler River, where the original Buckland Park homestead is located. No homesteads or other significant structures were noted on the site.

Cattle holding yards were noted immediately west of the Buckland Road entrance in North Sector West. No associated chemical dip was present.

A shipping container located within a fenced compound on the northern end of Buckland Road in North Sector West (adjoining Gawler River) was used to store vehicle maintenance equipment and small quantities of oil (Figure 4-2, Figure 4-4, Figure 4-6, Figure 4-7, and Figure 4-8. Vehicles (tractors) were stored in this area and some oil staining was noted on the ground (Figure 4-7). A functional production water bore feeding a concrete tank (for animal watering) was noted to in this compound. A septic tank was also noted in this area.



A shearing shed and associated cattle holding yards were noted immediately west of Tippets Bridge Road (Figure 4-11). No associated chemical dip was present.

The Central Sector of land was noted to be in agricultural use with large portions of it being farmed for potatoes. The north-east corner of this sector was occupied by glass-houses. A dam reportedly used to store treated Bolivar water for the Virginia pipeline and associated pump house were located on the southern portion of this land parcel.

Olive groves were noted off site to the west of North Sector West. A small off-site area in this location was noted to be used for storage of chemical drums (Figure 4-8). No notable features were observed south of Park Road within South Sector or South Sector West. This land is used for grazing.

The majority of land between Tippets Bridge Road, Legoe Road and Park Road, including South Sector East and the top portion of South Sector, was or has been recently used for agriculture. Large, mostly disused glass houses are located along Park Road, some within the South Sector and others off site adjacent the South Sector. A drainage line was noted along Park Road where potentially transporting water from agricultural activities up-gradient of the subject site.

Indications of potential contamination or of potentially contaminating activities noted while on site include:

- Pesticide application in cropped and glass house areas (the barley cropping activities are not considered to pose a significant risk); and
- Localised potential contamination in the vehicle maintenance compound.

The following photographs were taken during the site inspection on 13th December 2007:



Figure 4-2: Southern view of the shipping container located within the North Sector East





Figure 4-3: View of the north-east corner of the fenced compound within the North Sector East



Figure 4-4: View south of the fenced compound within the North Sector East



Figure 4-5: View east along Gawler River from the fenced compound within the North Sector East



Figure 4-6: View west along Gawler River from the fenced compound within the North Sector East



Figure 4-7: East view of the fenced compound within the North Sector East



Figure 4-8: South-west view of the west boundary of North Sector West, adjacent to an olive grove



Figure 4-9: North-east view along Gawler River on the north boundary of North Sector West



Figure 4-10: Failed irrigation system south of Gawler River, mid-way along the northern boundary of North Sector East



Figure 4-11: Small shearing shed and cattle yards immediately west of Tippets Bridge Road

# 5. Site History

#### 5.1 Historical Aerial Photography

Historical aerial photographs were obtained from Mapland for the years 1949, 1959, 1969, 1979, 1989, 1999, and 2005 and are attached in Appendix A. These photographs were reviewed with the purpose of identifying historical land uses of the site.

Table 5-1 details observations that were noted during review of these historical aerial photographs. Land uses identified during the review that were considered to pose a potential medium to high contamination risk are presented in Figures 1 and 2 in Appendix B.

Table 5-3 also provides detailed description on the land uses identified as high risk (detailed photographs and location map are presented in Appendix C). Degrees of risk are based on the New Zealand Risk Based Screening System for Contaminated Land Management, 2004, and general knowledge of potential contamination issues on agricultural land and market gardens. Risk rankings are as follows:

High	Contaminants from activity have a high potential to cause harm to receptors including ecosystems and humans
	ecosystems and numans
Moderate	Contaminants from activity have a moderate potential to cause harm to receptors
	including ecosystems and humans
Low	Contaminants from activity have a low potential to cause harm to receptors including
	ecosystems and humans

The following paragraphs provide a brief overview of land uses observed for the proposed site.

Review of the aerial photographs indicated that North Sector West, North Sector East, South Sector, South Sector West and Central Sector were primarily used for grazing from 1949 to 2005. Additional land uses recorded throughout this period included broad scale cropping, market garden cropping and glasshouse construction. Possible fill importation to an eroded creek bed (Thompson Creek) in North Sector West between 1949 and 1959 may also have occurred.

Potential broad scale cropping was observed in Central Sector in 1959 (Photos 9220 and 9228) and appeared to continue until at least 1969 (Photos 689 and 832). This area was reverted back to grazing between 1969 and 1979 (Photo 16). Also during the 1969-1979 time period, broad scale cropping may have been introduced in South Sector and South Sector West (Photo 16). This appeared to develop into circular cropping between 1979 and 1989. Possible broad scale cropping was also established in the northern end of the site during the 1979-1989 time period (Photo 130, 143 and 144).

This is consistent with a site interview (detailed in section 5.3) that Connell Wagner undertook with land owners Stan and John Gerovasilis on 13 December 2007, which identified that broad scale cropping of barley for cattle feed purposes has occurred in North Sector West, North Sector East, South Sector, South Sector West and Central Sector in the past. This broad scale cropping was not apparent in the 1999 photographs, with the exception of along the east border of North Sector East (Photo 258).

Cropping appears to have been reintroduced in Central Sector between 1989 and 1999. This time the cropping appeared to be in a market garden style and also potentially included the construction of glasshouses (Photo 458). Market gardening in Central Sector appeared to continue through to 2005 (Photo 128). Potential broad scale cropping was observed in North Sector West in 2005 (Photo 115), as was circular cropping within South Sector and South Sector West (Photo 128).

Aerial photographs for historical land uses in and around South Sector East, East Sector and top portions of South Sector indicated that the land has been used for a combination of grazing, broad



scale cropping, market garden cropping, glasshouse construction and shed construction. Possible broad scale cropping was initially observed in 1949 at the southern end of South Sector (Photo 6). This land use was also observed in 1959 (Photos 9228 and 2036). Possible market cropping was initially observed in 1959 off site, directly south of East Sector (Photo 2036). Market cropping in this area increased to include activity within the East Sector along with and also the construction of shed groups and glasshouses in 1969 (Photos 664 and 667). Market cropping in and around East Sector was also observed in 1979, 1989, 1999 and 2005 (Photos 14, 16, 130, 113 and 128). Groups of sheds were also observed in 1989 (Photos 130, 143 and 144), 1999 (Photo 258) and 2005 (Photos 113 and 128).

Possible broad scale cropping was observed in South Sector in 1979 (Photo 16). This increased to circular cropping in 1989 and also expanded to include the mid section of the site (Photo 130). Circular cropping off site, south of the South Sector was also observed in 1999 and 2005 (Photos 458 and 128). Aside from the specific land use descriptions identified above areas, South Sector East, East Sector and top portions of South Sector have been used for grazing purposes.

A detailed description of potentially contaminating activities can be found in Table 5-4.

Table 5-1: Review of the historical aerial photographs for the proposed Buckland Park site

				onolographis for the proposed buckland Park site
Photo		Date	Year	Sector Comments
4	1:15800	19 January	1949	Image not zoomed in enough to clearly see the landscape.
6	1:15800	19 January	1949	Grazing land in South Sector and South Sector West
				Grazing land in Central Sector
				Possible broad scale cropping in the south of South Sector
49	1:15800	19 January	1949	Grazing land in North Sector East
				Eroded creek bed perpendicular to the Gawler River in North
			ļ	Sector East
				Grazing land in and around East Sector
51	1:15800	19 January	1949	Grazing land in the North Sector West
9218	1:16000	3 January	1959	Grazing land in the South West Sector
9220	1:16000	3 January	1959	Grazing land in North Sector West
				Potential cropping in Central Sector
9222	1:16000	3 January	1959	Grazing land in North Sector West
9224	1:16000	3 January	1959	Grazing land in North Sector East
9226	1:16000	3 January	1959	Grazing land in North Sector East
				Eroded creek bed perpendicular to the Gawler River in North
			ļ	Sector East (creek bed is less eroded than the 1949 photo)
				Grazing land in and around East Sector and South Sector
				East
9228	1:16000	3 January	1959	Potential cropping in Central Sector
				Potential broad scale cropping in and around South Sector
				Grazing land in South Sector West
2036	1:56000	10 March	1959	Potential cropping in Central Sector
				Potential broad scale cropping South Sector
				Grazing land in South Sector West
				Grazing land in and around East Sector and South Sector
				East
				Potential broad scale cropping in and around South Sector
				East
				Grazing land in north portion of South Sector
				Grazing land in North Sector West and North Sector West
662	1:15800	9 January	1969	Cropping in the south of East Sector
				Grazing land East Sector
				Shed group west of the intersection of Port Wakefield Road
				and Park Road.



Photo	Scale	Date	Year	Sector Comments
				Shed group south of the intersection of Legoe Road and Buckland Road.
664	1:15800	9 January	1969	Grazing land in North Sector East
				Potential cropping and glasshouses in East Sector
				Shed group adjacent to glasshouses in East Sector
				Potential cropping south of East Sector
				Shed group west of the intersection of Reedy Road and Legoe Road
				Shed group south of the intersection of Legoe Road and
	4.4-000		1000	Buckland Road
687	1:15800	9 January	1969	Grazing land in North Sector East with slightly eroded creek bed.
				Potential cropping and glass houses in East Sector
689	1:15800	9 January	1969	Potential cropping in Central Sector
				Grazing land in South Sector West and South Sector
				Grazing land in and around South Sector East
691	1:15800	9 January	1969	Grazing land in bottom of North Sector East
				Grazing land in South Sector
830	1:14000	9 January	1969	Grazing land in South West Sector
832	1:14000	9 January	1969	Grazing land in North Sector West
				Grazing land in South Sector West
				Potential cropping in Central Sector
22.1	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		1000	Grazing land in top portion of South Sector
834	1:14000	9 January	1969	Grazing land in North Sector West
89 14	1:16000 1:16000	19 March	1979	Grazing land in North Sector West
14	1.16000	19 January	1979	Grazing land in North Sector East  Potential cropping in and around East Sector
				Shed group south of the intersection of Legoe Road and
			†	Buckland Road
10	1 10000	40.1	4070	Shed group on Legoe Road
16	1:16000	19 January	1979	Grazing land in South Sector West
				Grazing/broad-scale cropping in South Sector West.  Grazing land in Central Sector
				Grazing land in and around South Sector East and top
				portion of South Sector
				Potential cropping in and around East Sector
				Grazing/broad-scale cropping in South Sector
				Shed group south of the intersection of Legoe Road and
				Buckland Road.
130	1:20000	28	1989	Circular cropping in South Sector West
		September		Circular cropping in South Sector
				Potential cropping (possibly smaller market gardens) in and around East Sector
				Grazing land in top portion of South Sector
				Grazing land in Central Sector
				Grazing land in North Sector East
				Potential broad-scale cropping (possibly barley) in North
				Sector West
				Shed group on Legoe Road
				Shed group south of the intersection of Legoe Road and



Photo	Scale	Date	Year	Sector Comments
Hoto	Ocale	Date	I Gai	Buckland Road
143	1:20000	28 September	1989	Shed groups north and south of the intersection of Reedy Road and Legoe Road  Potential broad-scale cropping (possibly barley) in North Sector East  Grazing land in North Sector East  Shed group south of the intersection of Legoe Road and Buckland Road
144	1:20000	28 September	1989	Potential broad-scale cropping (possibly barley) in North Sector East Grazing land in North Sector East Potential cropping in and around East Sector Shed groups north and south of the intersection of Reedy Road and Legoe Road Small shed group near intersection of Reedy Road and Reedy Road Shed group on Legoe Road Shed group south of the intersection of Buckland Road and Legoe Road Shed group west of intersection of Port Wakefield Road and Park Road Possible shed group and dam outside East Sector
256	1:20000	20 September	1999	Possible cropping (possible market gardens) in East Sector Grazing land in North Sector West
258	1:20000	20 September	1999	Grazing land in North Sector East  Possible broad-scale cropping (possibly barley) along east border of North Sector East  Possible cropping (possible market gardens) in and around East Sector  Grazing land west of East Sector  Shed groups north and south of the intersection of Reedy Road and Legoe Road  Shed group on Legoe Road  Small shed group near intersection of Reedy Road and Reedy Road  Two shed groups and a dam south of the intersection of Buckland Road and Legoe Road  Possible tank group and dam outside East Sector
458	1:20000	6 October	1999	Grazing land in North Sector East  Possible cropping (possible market gardens), glasshouses and 2 dams in Central Sector  Grazing land in South Sector West  Possible glass houses and dam west of East Sector  Circular cropping in South Sector  Grazing land in East Sector  Possible cropping (possible market gardens) in and around East Sector
113	1:20000	24 January	2005	Grazing land in North Sector East  Possible small shed in North Sector East on the Gawler River



Die	Carlo	Dete	V	Contour Community
Photo	Scale	Date	Year	Sector Comments
				Possible cropping (possible market gardens) in and around East Sector
				Grazing land west of East Sector
				Small shed group near the intersection of Reedy Road and
				Reedy Road
				Shed groups north and south of the intersection of Reedy
				Road and Legoe Road
				Possible dam also south of the intersection of Reedy Road
				and Legoe Road
				Shed group on Legoe Road
				Two shed groups and a dam south of the intersection of Legoe Road and Buckland Road
				Small shed group outside East Sector near Port Wakefield Road
115	1:20000	24 January	2005	Grazing land in North Sector West
		j		Possible broad-scale cropping in North Sector West
128	1:20000	24 January	2005	Possible circular cropping in South Sector West
		,		Grazing land in South Sector West
				Possible cropping (possible market gardens?) in Central
				Sector
				Possible glass houses and 2 dams in Central Sector
				Grazing land in North Sector East
				Possible circular cropping in the south of South Sector
				Possible glass houses and dam in the top portion of South Sector
				Possible cropping (possible market gardens) in and around East Sector
				Shed group north and south of the intersection of Reedy
				Road and Legoe Road  Possible dam also south of the intersection of Reedy Road
				and Legoe Road
				Shed group on Legoe Road
				Two shed groups and a dam south of the intersection of
				Legoe Road and Buckland Road
				Large shed group south of East Sector near intersection of
				Port Wakefield Road and Park Road
				Possible glasshouse groups or dams in and around East Sector
				Small shed group near the intersection of Buckland Road and Park Road
				Possible glasshouse group or dam on Park Road near the intersection with Buckland Road

Table 5-2: Detailed description of high risk land uses identified in historical aerial photographs of site

Image	High Risk Land Use	Location	Description	Age of Infrastructure
A	Glasshouse groups, Sheds and intensive cropping	Central Sector	7 glasshouse groups (~3300m², 1600m², 1800m², 3500m², 3800m², 3500m² and 1600m²) 5 Sheds (~60m², 150m², 100m², 60m² and 50m²) Intensive cropping (~21500m²)	1999-2005



Image	High Risk Land	Location	Description	Age of
В	Use Dams and shed	Central Sector	2 dams (~4000m² and 3000m²) Shed (~200m²)	Infrastructure 1999-2005
С	Glasshouses, sheds and dam	Top portion of South Sector	3 glasshouse groups (~21000m², 21000m² and 21000m²) 2 sheds (~500m² and 700m²) Dam (~14500m²)	1999-2005
D	Glasshouse groups, intensive cropping and a dam	Between South Sector and South Sector East	4 glasshouse groups (~6400m², 3800m², 3400m² and 4600m²) 3 intensive cropping gardens (~6500m², 5800m² and 3500m²) Dam (~340m²)	2005
E	Shed	Between South Sector and South Sector East	Single shed (~130m²)	2005
F	House	North of the intersection of Park Road and Buckland Road in South Sector East	House and gardens (~2000m²)	2005
G	Nursery	North of intersection of Park Road and Port Wakefield Road south outside of East Sector	Intensive farming area including glasshouse groups and open planting trays (~36700m²)  2 shed groups (~1200m² and 180m²)  2 houses and gardens (~5500m² and 6500m²)	Initial shed group in 1969 although the nursery existed from 1989- 2005
Н	Sheds, tanks and dams	North of the intersection of Park Road and Port Wakefield Road south outside of East Sector	Shed group (~120m²) 3 Tanks (~10m, 10m and 6m in diameter) 2 Dams (~2000m² and 2000m²)	1999-2005
I	Houses, shed groups, tank, orchard and dam	South of intersection of Legoe Road and Reedy Road outside East Sector	2 Houses with small tanks (~350m² and 350m²) 3 Sheds (~650m², 140m² and 150m²) Tank (~10m diameter) Orchard (~3000m²) Dam (~1500m²)	1969-2005
J	House and shed group	North of intersection of Legoe Road and Reedy Road in East Sector	House (~490m²) 7 sheds (~75m², 80m², 70m², 65m², 45m², 40m² and 55m²)	1989-2005
K	Glasshouse group, Shed groups and intensive cropping	Near intersection of Reedy Road and Martin Road in East	6 Sheds (~250m², 30m², 60m², 25m², 40m² and 35m²) Glasshouse group (~5500m²) Intensive cropping area (~700m²)	1969-2005 (the glasshouse group only existed in the 1969 aerial



Image	High Risk Land Use	Location	Description	Age of Infrastructure
		Sector		photograph)
L	Shed groups	On Legoe Road in outisde of East Sector	4 shed groups (~320m², 250m², 25m² and 20m²) and 10 shed groups (~10m² each)	1969-2005
M	House, sheds and orchard	South of intersection of Buckland Road and Legoe Road outside of South Sector East	House (~950m²) 4 Sheds (~750m², 45m², 40m² and 20m²) Orchard- possibly olive trees (~42000m²)	1969-2005
N	Shed and dam	South of intersection of Buckland Road and Legoe Road outside of South Sector East	Shed (~220m²) Dam (~3500m²)	1999-2005
0	Shed and dam	On Park Road, east of the intersection with Buckland Road outside of South Sector East	Shed (~50m²) Dam (~7500m²)	2005
Р	Possible Acid Sulphate Soils	Thompson Creek south of Park Road	~120000m²	
Q	Market gardening	Mid section of Central Sector	Market gardening (~905,000m²)	1999-2005
R	Market gardening	East Sector	Market gardens (~575,500m²)	1969-2005
S	Market gardening	East Sector	Market gardens (~1,630,000m²)	1989-2005
T	Market gardens	South Sector East	Market gardens (~180,000m²)	1999-2005
U	Market gardens	South Sector East	Market gardens (~115,000m²)	2005
V	Camp Area	North Sector East	Shed, tank and area filled with tractors etc. (~1400m²)	2005



### 5.2 Ownership search – Certificate of Title Summary

A Certificate of Title search was undertaken to identify previous owners of allotments within the site. The current owners and leasers appear to be businesses and / or business owners.

Certificate of Title history indicated the majority of land within the 1,308 ha site has been used for grazing since the late 1800's and early 1900's, the earliest title, a farm dated 1871. Common occupants of previous titles include farmers, graziers and pastoralists. Exceptions to these occupations are included within Table 5-3. Previous Certificates of Title can be found in Appendix D.

Table 5-3: Certificates of Title for the site, other than farmers, graziers and pastoralists

Name/Occupation/Organisation	Previous CTs	Year	Affected CTs
Nacho Nacev, market gardener	2099/148	1948	5424/348
	2003/185		
	2005/76		
	2657/15		
	3050/44		
Jordan Evanoff, market gardener	2099/148	1948	5424/348
	2099/147		
	2005/76		
Stephan Ivanov, market gardener	2099/148	1948	5424/348
	2099/147		
	2005/76		
Thotcho Ganeff, Market gardener	2577/161	1958	5424/348
Guiseppe Trimboli, Domenica Trimboli,	3357/43	1965	5916/60
market gardener	3357/46		5916/59
			5916/63
Domenic Trimboli, market gardener	3489/165	1978	5916/60
	3567/57		
Palo Musolino, market gardener	3485/41	1967	5916/61
	3570/13	1968	5251/813
	3570/14		5251/814
			5759/187
Van Quan Tean, market gardner	2741/119	1987	5424/348
-	2741/118		
Lea Van Liem, market gardener	2657/14	1989	5424/348
Geza Debreceni, builder	3849/104	1972	5477/581
Charles Gross, Chemist	563/3	1892	5864/500
			5864/501
			5864/499
Frederick and Alfred Cane, butchers	1547/29	1929	5755/199 et al

## 5.3 Anecdotal / Site Inspection Information

Connell Wagner undertook interviews with current site owners (of North Sector West, North Sector East, Central Sector and South Sector West) Stan and John Gerovasilis on 13 December 2007. Additional Sectors could not be accessed or discussed during this inspection however general observation over site boundaries was undertaken. Stan and John indicated that the majority of land in these sectors is used for grazing of cattle. They have agisted cattle on the site for the last 30 years and confirmed that the land had been in use for this purpose since initial colonisation of the land.

The proposed site had been part of a larger (20,000ha) property extending north of the Gawler River and all infrastructure associated with the grazing use (such as chemical dips, landfills, fuel storage) had been located north of the river.



The cattle holding yards noted immediately west of the Buckland Road entrance in the south of the site were built 5 years ago and the shearing shed and associated cattle holding yards noted immediately west of Tippets Bridge Road were built 1 year ago. No associated chemical dips were present.

The shipping container located within the fenced compound on the northern end of Buckland Road (adjoining Gawler River) was built 4 years ago.

The parcel of land bounded by Legoe Road to the north, Beagle Hole Road to the west and Park Road to the south was not actually in the ownership of the Gerovasilis family at this time.

#### **Section 7 Searches** 5.4

#### 5.4.1 **EPA Section 7 Enquiry**

A Section 7 Enguiry was formally requested from the EPA. Information gathered from the Section 7 Enquiry included:

- The EPA are aware of non active licence for activities of:
  - Chemical Storage and Warehouse Facilities and:
  - Chemical Works on land parcel CT 5875/910
- The former Waste Management Commission under the repealed Waste Management Act 1987 have record of waste (within the meaning of that Act) being deposited on the land parcel CT 5447/585 between 1 January 1983 and 30 April 1995, details of which are on the public register

The information gathered from the Section 7 Enquiry does not present any major concern for the site. Given the agricultural nature of the site it is not unusual to find details of chemical storage and waste licences.

Section 7 Documents are included in Appendix E.

#### 5.4.2 City of Playford Section 7 Enquiry

A Section 7 Enquiry was formally requested from the Playford City Council and no results were found in regards to potential contamination issues.

Section 7 Documents are included in Appendix E.

#### **Summary of Site History – Potentially Contaminating Activities** 5.5

#### 5.5.1 Discussion

Potentially contaminating activities identified in the site history investigation are summarised along with their significance in Table 5-4. Degrees of significance are based on general knowledge of potential contamination issues on agricultural land and market gardens and are defined as follows:

High	Contaminants from activity have a high potential to cause harm to receptors including ecosystems and humans
	ecosystems and numans
Moderate	Contaminants from activity have a moderate potential to cause harm to receptors
	including ecosystems and humans
Low	Contaminants from activity have a low potential to cause harm to receptors including
	ecosystems and humans

This preliminary site contamination investigation was conducted based on general knowledge of potential contamination issues on agricultural land and market gardens and the requirement to assess potential significant risks associated with the proposal. It is intended only to identify potential constraints to the uses proposed in the Masterplan, and to identify additional investigations required should the proposal be approved and proceed



Table 5-4: Summary of notentially contaminating activities

Potentially contaminating activity	Potential contaminants	Likely locations	Persistence / mobility in soils, toxicity	Chemical analytes	Likely significance
Market gardens - glasshouses, sheds, importation of fill and possible minor landfill	Application of herbicides, pesticides, insecticides and/or fertilisers, metals	Central Sector and north of Park Road on South Sector East	Variable persistence and mobility in soils. Generally low toxicity to humans.	Glyphosate, triazines and arsesnic, organochlorine and organophosphate pesticides, metals	Moderate to high. Localised. Minor significance in soils if modern organic herbicides have been used. However, if arsenic-based herbicides or chlorinated organics were used historically the risk profile may be higher.
Importation of fill – unknown source(s)	Bitumen, oil, metals, arsenic, pesticides, acid/caustic substances	Over whole site (unlikely), potentially at Thompson Creek area Northern Sector West	Various levels of mobility, persistence and toxicity.	Hydrocarbons (PAH¹ and TPH²), arsenic and heavy metals, pH, pesticides	Low. Only of major significance should levels in soil prove to be elevated. Extent likely to be localised. Grading (reshaping of natural) likely to have occurred rather than importation.
Broad scale farming (barley for feed)	Pesticide/herbicide Application	Whole site at different times, not extensive duration at any particular location (rotational)	Various levels of mobility, persistence and toxicity.	Glyphosate, triazines and arsesnic, organochlorine and organophosphate pesticides	Low. Minor potential contamination particularly if modern organic herbicides or no pesticides and herbicides have been used.
Grazing	Pesticide/herbicide Application	Whole site at different times, not extensive duration at any particular location (rotational)	Various levels of mobility, persistence and toxicity.	Glyphosate, triazines and arsesnic, organochlorine and organophosphate pesticides	Low. Minor potential contamination particularly if modern organic herbicides or no pesticides and herbicides have been used.
Vehicle service compound	Petroleum Hydrocarbons, metals	North Sector West - Northern end of Buckland Road	Medium to high persistence and low mobility in soil.	TPH <sup>2</sup> , PAH <sup>1</sup> , metals	Low to moderate. Small area (approximately 400 square metres)
Drainage line, Park Road	Contaminated agricultural wastewater Herbicides, pesticides, nutrients, metals	South Sector East, southern boundary	Various levels of mobility, persistence and toxicity.	organochlorine and organophosphate pesticides, metals, nutrients	Low to moderate. Localised, dilute contaminants.
Olive groves close to western boundary (offsite)	Pesticide/herbicide Application	North Sector West – western boundary	Various levels of mobility, persistence and toxicity.	Glyphosate, triazines and arsesnic, organochlorine and organophosphate pesticides	Low. Localised potential impact. Minor potential contamination particularly as modern organic chemicals or no pesticides and herbicides have been used.



A summary of the potential contamination risks to the site sectors is outlined in Table 5-5 and displayed in Figure 5-1. These risk rankings are based on the New Zealand Risk Based Screening System for Contaminated Land Management, 2004.

Table 5-5- Site Sector Risk Summary

Table 5-5- Site Sector	r Risk Summary	
Sector	Comments	Potential contamination risk
North Sector West	Primary use for grazing, rotational use for barley cropping. Any contamination from both activities would be broad and diffuse over a large portion of these site sectors. Land reshaping has occurred in the Thompson Creek area on the eastern boundary of the sector. Fill may have been imported here, but it is more likely to have consisted of grading of the existing landform.	Low to moderate
North Sector East	Primary use for grazing, rotational use for barley cropping. Any contamination from both activities would be broad and diffuse over a large portion of these site sectors. Very localised contamination may have occurred in the tractor maintenance compound at the northern end of Buckland Road with the risk of contamination likely to be low	Low to moderate
South Sector West	Primary use for grazing, rotational use for barley cropping. Any contamination from both activities would be broad and diffuse over a large portion of these site sectors	Low to moderate
Central Sector	Some localised contamination may have occurred due to market gardening activities. This has only occurred in this sector for the last ten years and the risk of contamination is moderate, due to the more benign nature of chemicals likely to be in use. Soil within the drainage ditch noted along Park Road may have been contaminated by chemicals in waste-water discharged from agricultural activities outside and within the site.	Moderate
South Sector East	A significant proportion of the land within and surrounding this sector has been used for market gardening since the 1950s. The balance of the sector has been used for grazing and broad acre cropping.	Moderate to high
South Sector	A significant proportion of the land within and surrounding the top portion of this sector (predominantly north of Park Road) has been used for market gardening since the 1950s. Soil within the drainage ditch noted along Park Road may have been contaminated by chemicals in waste-water discharged from agricultural activities outside and within the site. The balance of the sector has been used for grazing and broad acre cropping.	Moderate to high
East Sector	A significant proportion of the land within and surrounding this sector has been used for market gardening since the 1950s. The balance of the sector has been used for grazing and broad acre cropping.	Moderate to high



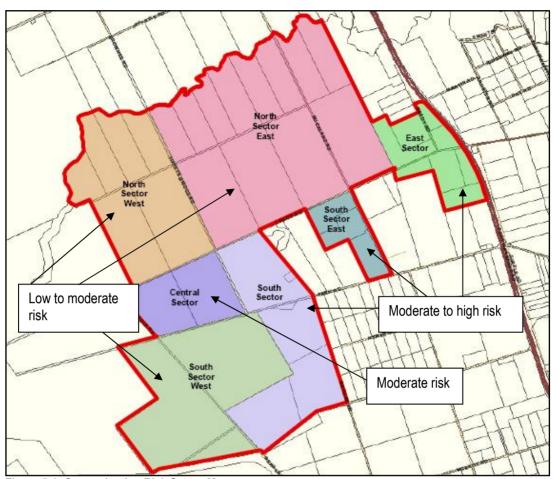


Figure 5-1: Contamination Risk Sector Map

It was also noted during the investigation:

- Potential contamination "hot spots" (point sources) associated with agricultural and grazing
  activities including landfills and sheep and cattle dips, were not identified during the site history
  investigation.
- Soil within the storage dam for the Virginia pipeline treated wastewater (from the Bolivar Sewage treatment plant) may have been contaminated by chemicals within the wastewater however this us unlikely.

The site history investigation suggests that the primary use of the site has been for grazing and broad acre cropping (barley for stock feed) rotating over the majority of the site at different times. In both cases, any contamination would be broad and diffuse over a large portion of the site reducing associated contamination risks. The most significant risk areas are in the South Sector East, East Sector, and the top portion of the South Sector (predominantly north of Park Road) where a significant proportion of the land within and surrounding these sectors has been used for market gardening since the 1950s.



### **Conclusions**

The site history investigation suggests that the primary use of the site has been for grazing and therefore there is a low potential risk of contamination. Cropping of this land for barley has occurred rotationally over time, with a correspondingly low to moderate risk of contamination. In both cases, any contamination would be broad and diffuse over a large portion of the site reducing associated risks.

Some localised contamination may have occurred in the Central Sector due to market gardening activities, however this has only occurred in the last ten years hence the risk of contamination is moderate, due to the more benign nature of chemicals likely to be in use.

Land reshaping was noted to have occurred in the Thompson Creek area on the eastern boundary of North Sector West. This land reshaping may have required fill importation but is more likely to have consisted of grading of the existing landform.

Very localised contamination may have occurred in the tractor maintenance compound at the northern end of Buckland Road in North Sector East, however the risk of contamination is not considered to be high.

The site history investigation suggests that a significant proportion of the land within and surrounding South Sector East, East Sector, and the top portion of South Sector (predominantly north of Park Road) has been in use for market gardening since the 1950s, with a proportionally moderate to high risk. The balance of the site has been in use for grazing and broad acre cropping. In any case, these activities (due to extent and chemical application methods) would result in contamination diffused over a large portion of the site. Localised soil (and potentially groundwater) contamination may have occurred in association with a drainage line along Park Road in the South Sector.

These conclusions are provided to guide the preliminary site contamination assessment prepared by Connell Wager.



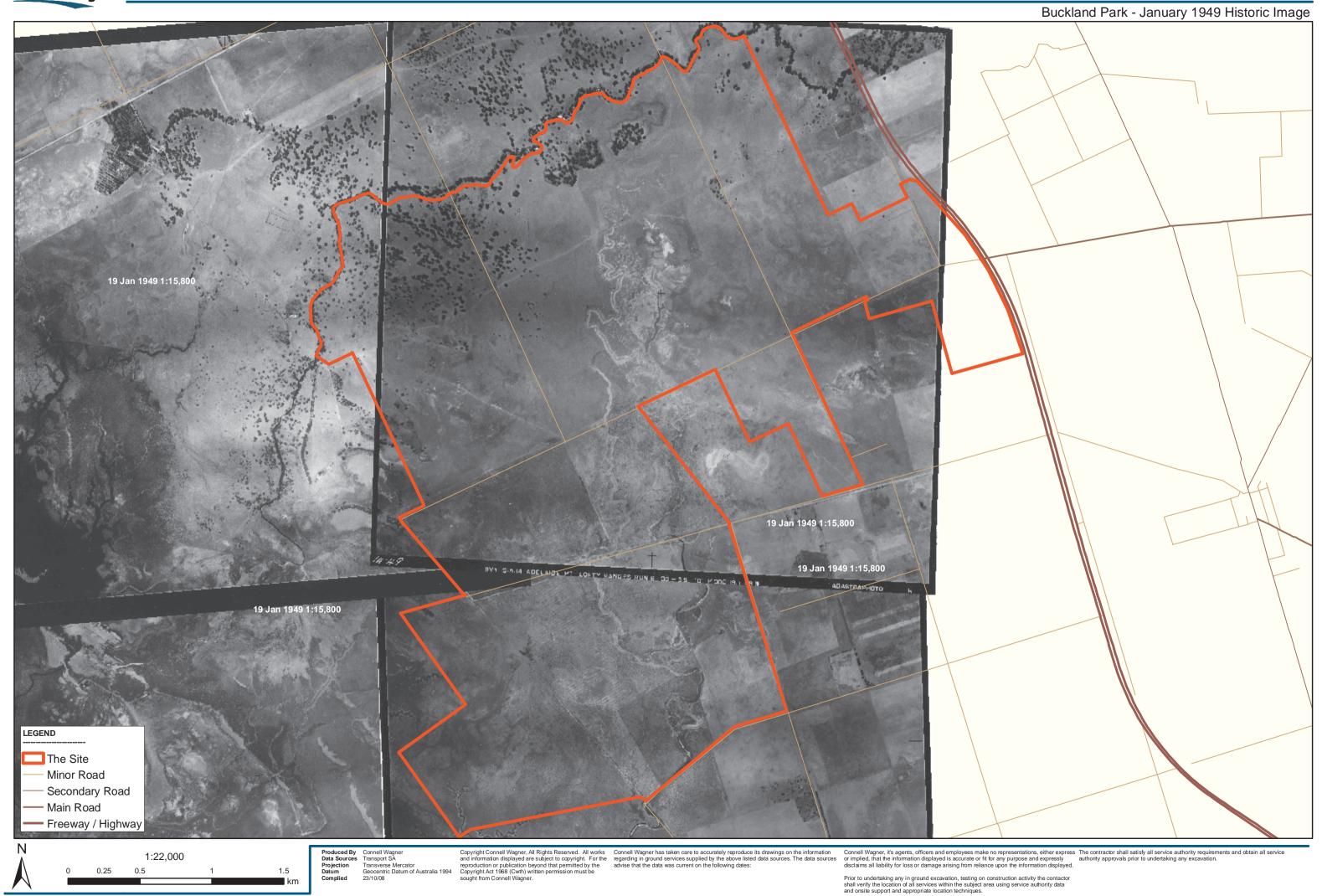
# **Appendix A**

**Historical Aerial Photographs** 



# Appendix A





Buckland Park - January/March 1959 Historic Image



LEGEND

The Site

Minor Road Secondary Road

- Main Road

3 Jan 1959 1:16,000

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# **Appendix B**

**High Contamination Risk Maps** 

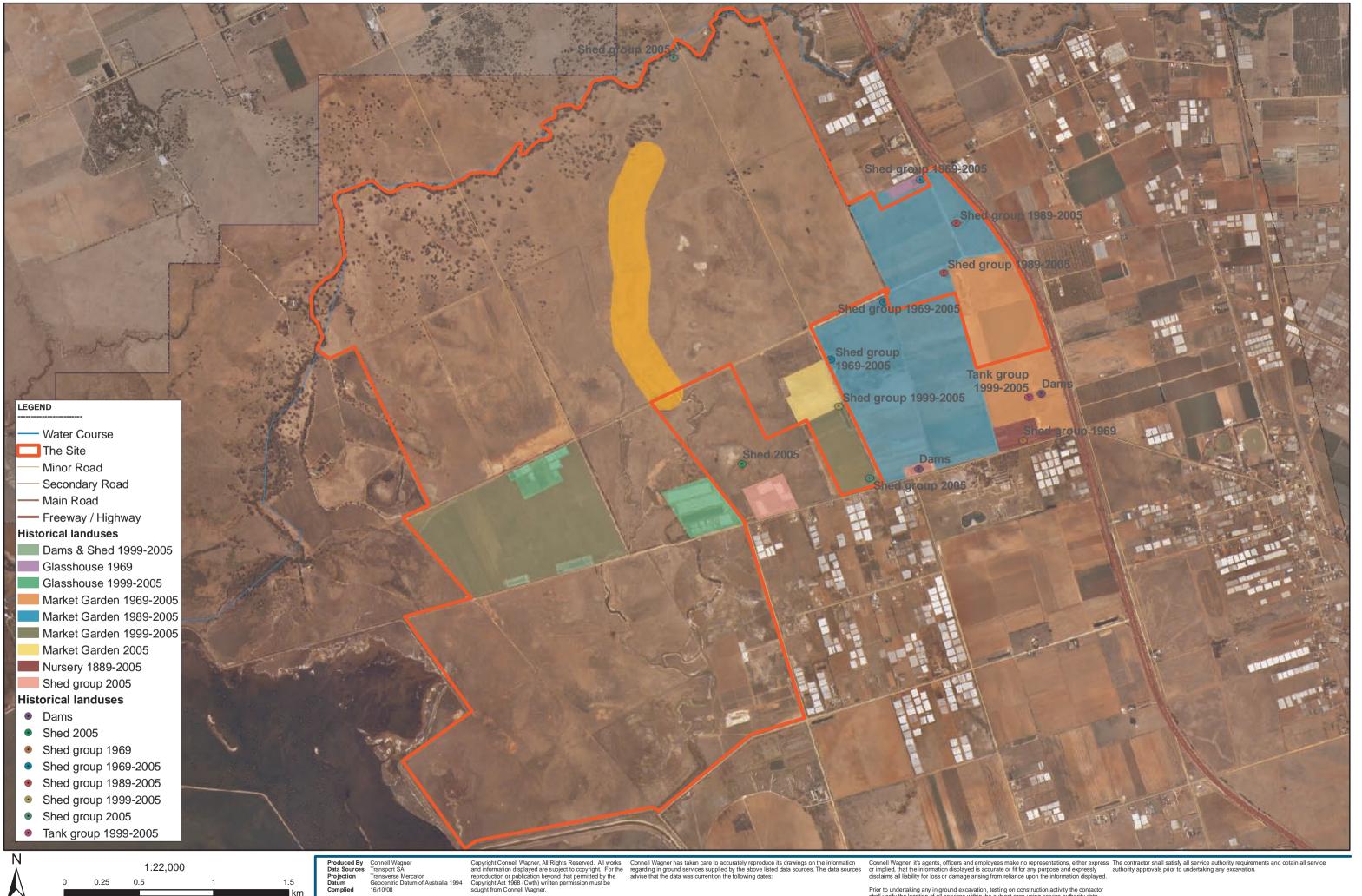


# Appendix B



Figure 1: Buckland Park - High Risk Contamination Sites

Prior to undertaking any in ground excavation, testing on construction activity the contactor shall verify the location of all services within the subject area using service authority data and onsite support and appropriate location techniques.



0.25



Prior to undertaking any in ground excavation, testing on construction activity the contactor shall verify the location of all services within the subject area using service authority data and onsite support and appropriate location techniques.

# **Appendix C**

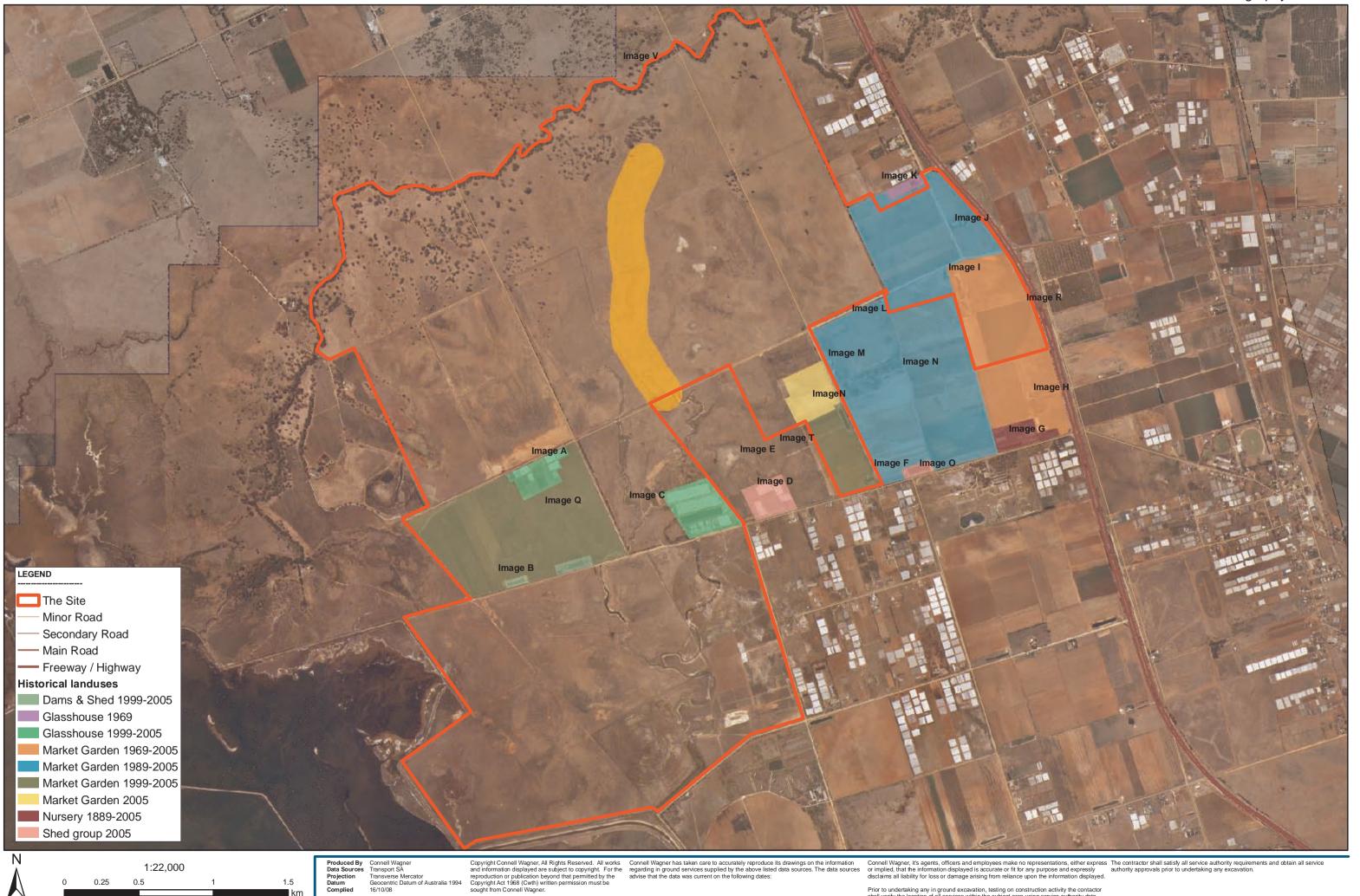
**Detailed Aerial Photography** 



# **Appendix C**



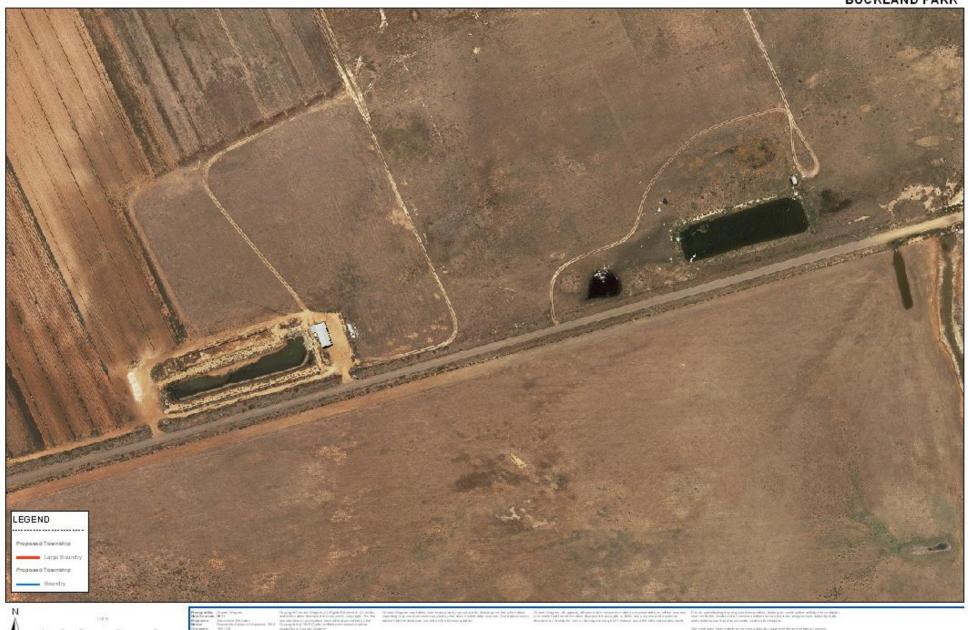
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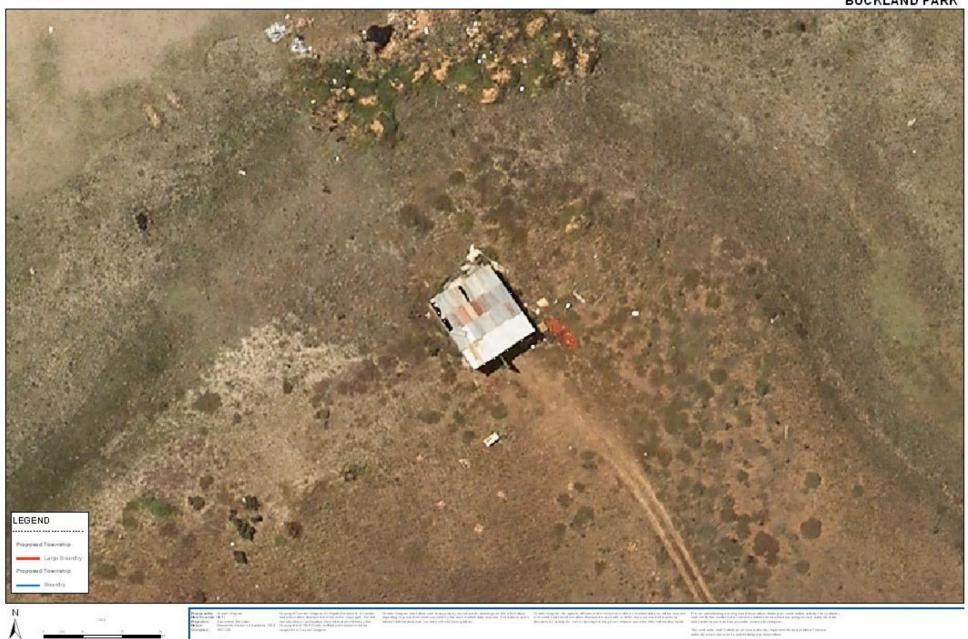








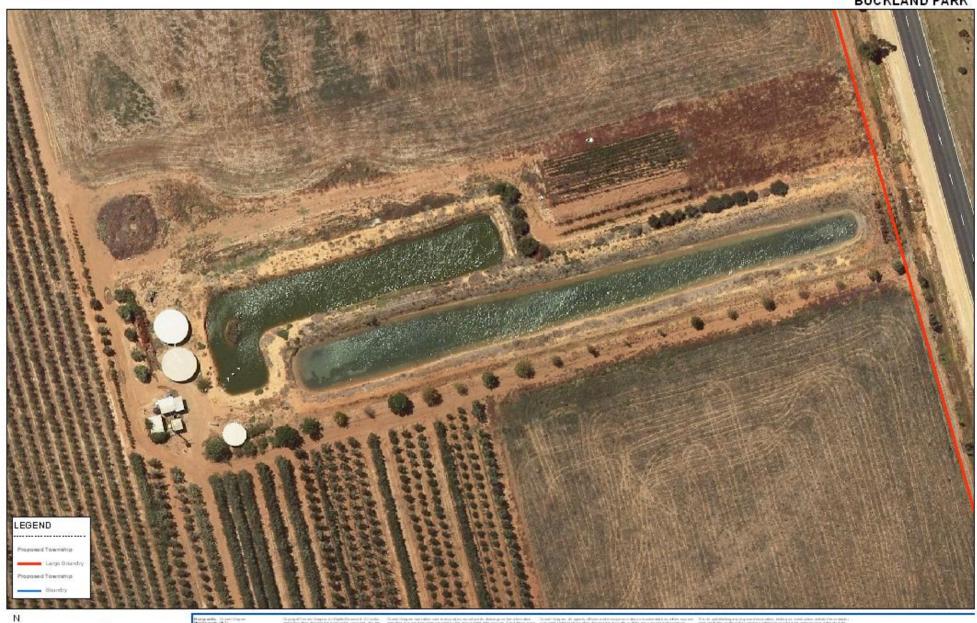














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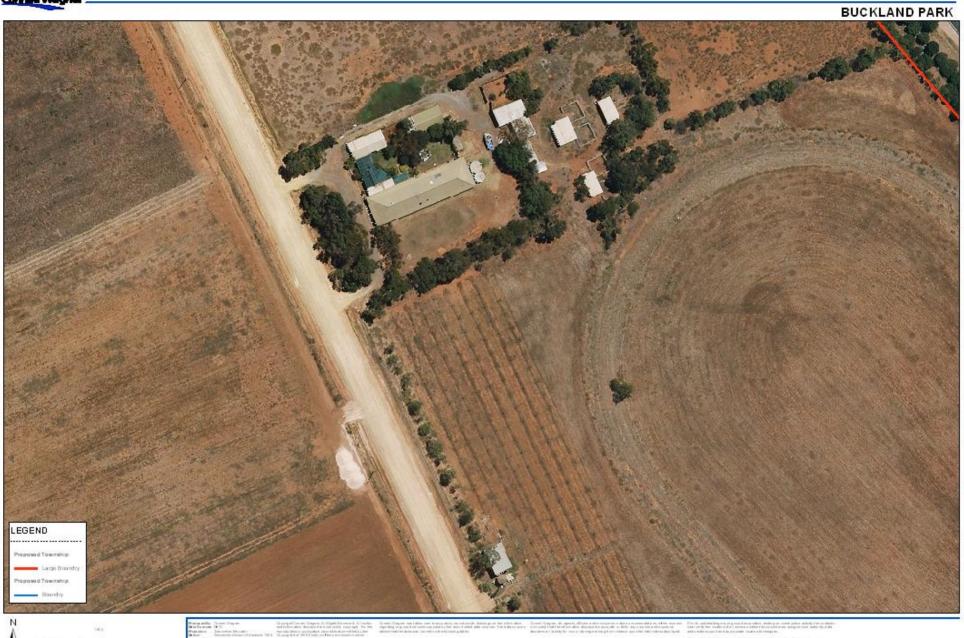
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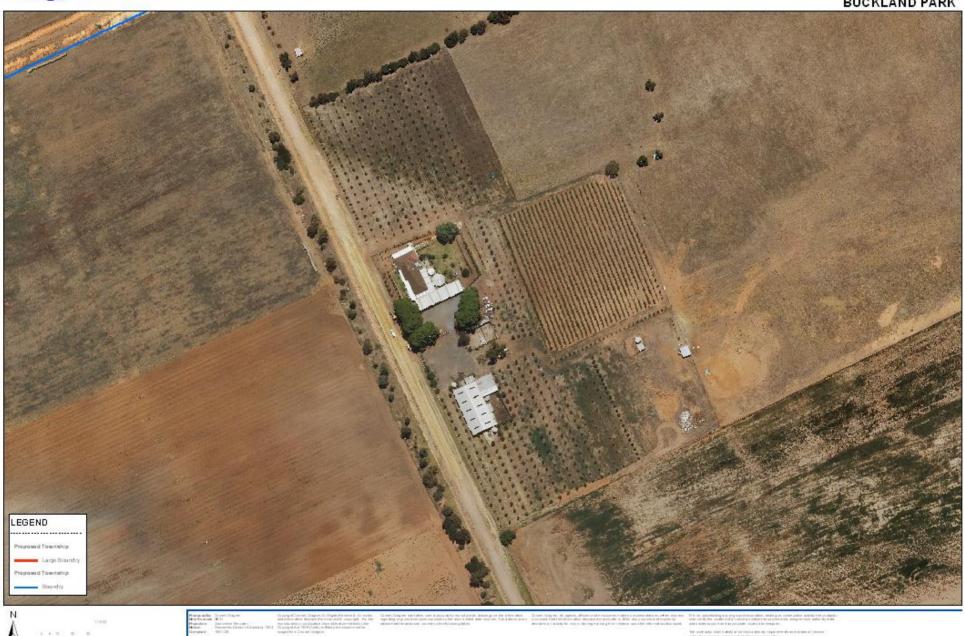








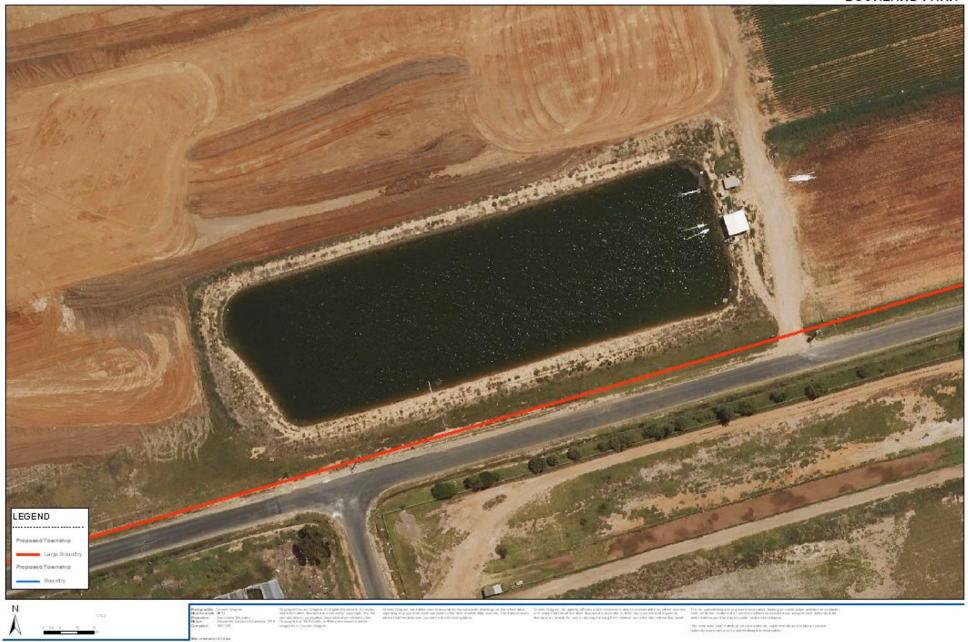




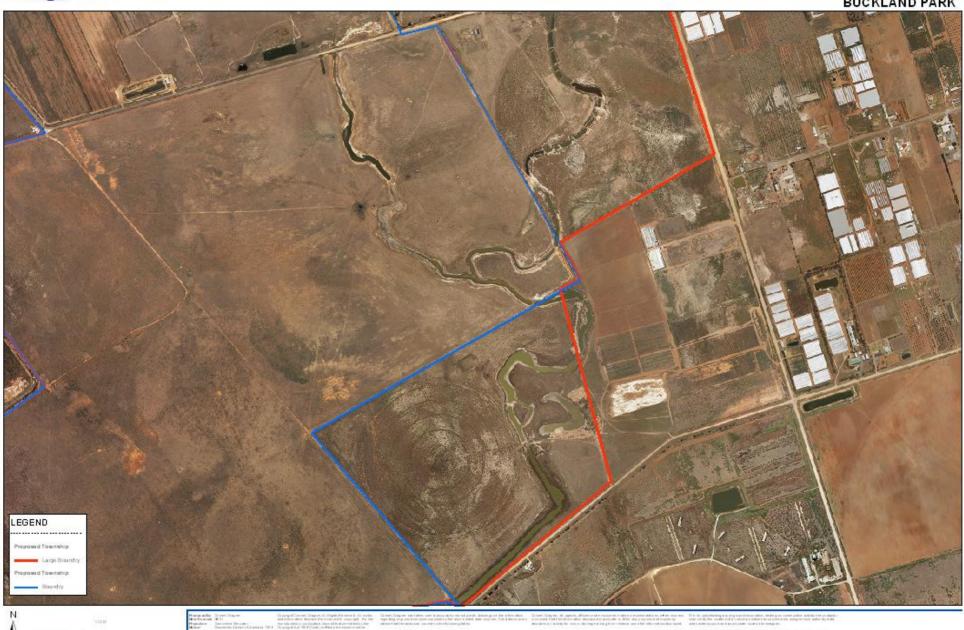














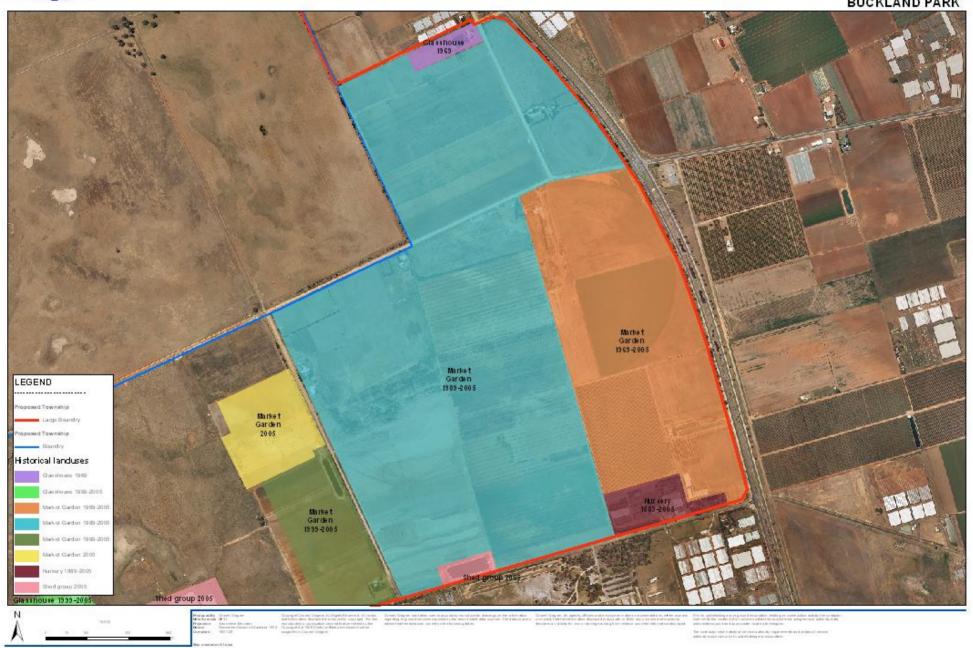






















# **Appendix D**

**Certificates of Title** 



# **Appendix D**





#### (CERTIFICATE OF TITLE.)

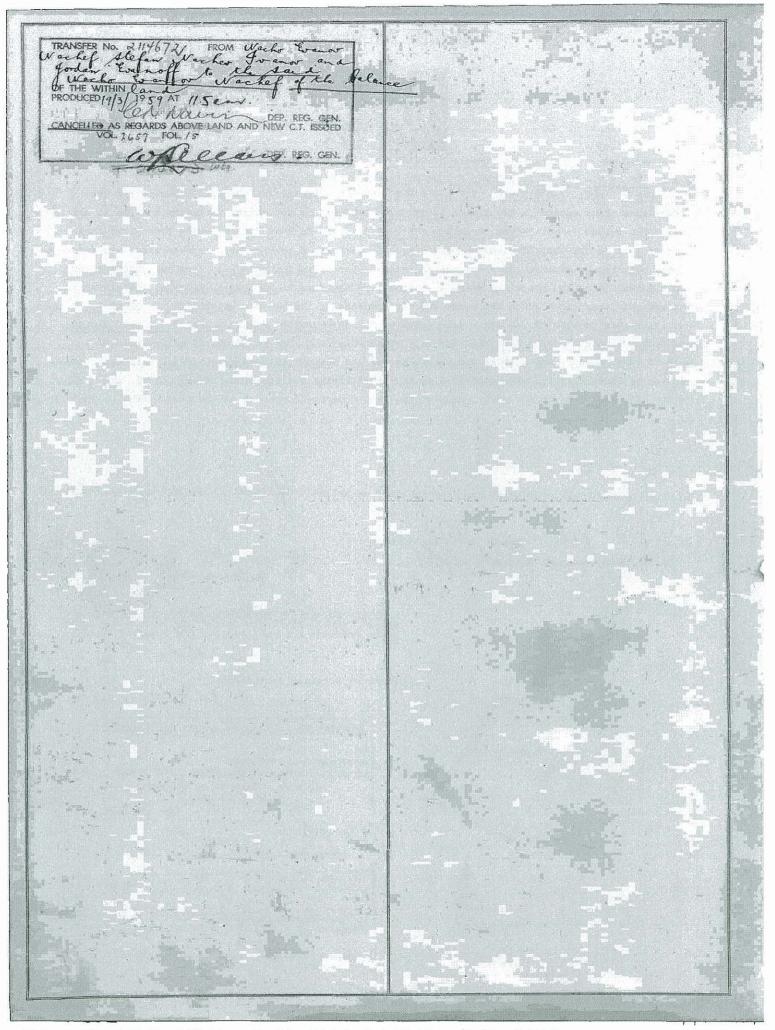
Register Book, Vol. 2099 Folio 148

Balance Certificate of Title from Vol.2005 Folio 76

NACHO EVANOV NACHEP of Marion Road Marion STEFAN NACHEV

IVANOV and JORDAN EVANOFF both of Virginia all Market Gardeners are the proprietors of an estate in fee simple AS TENANTS IN COMMON in the shares following that is to say the said Nacho Evanov Nachef IN TWO UNDIVIDED FOURTH PARTS and the said Stefan Nachev Ivanov and Jordan Evanoff EACH IN ONE UNDIVIDED FOURTH PART subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT PIECE of land being PORTION OF BLOCK Q containing two acres and seventeen perches or thereabouts PORTION OF BLOCK 71 containing one hundred and forty eight acres two roads and five perches or thereabouts and PORTION OF BLOCK 57 of the subdivision of Section 49 and other land situated in the HUNDREDS OF PORT ADELAIDE AND PORT GAWLER COUNTIES OF ADELAIDE AND GAWLER laid out as BUCKLAND PARK and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green WHICH said Blocks are bounded as appears in the plan deposited in the Lands Titles Registration Office No.1671 WHICH said Section is delineated in the public maps of the said Hundreds deposited in the Land Office at Adelaide

day of Leptember 1950 In witness whereof I have hereunto signed my name and affixed my seal this first ned the 1st day of September, 1950, in the presence of Illo Knispel) Signed the Registrar-General. Mortgage No. 1521.545 from Nacho Evanov Nachef Nachev Ivanov and Jordan Evanoff to Bank of I Nachev Ivanov and Jordan Evenoff to Bank of Wales Produced for registration the 6 day of 1948 January at noon Reg. Genl. 58 Power of Attorney No. 1581850 Reg. Genl. DISCHARGE OF THE WITHIN MORTGAGE 1334345 BY KNOOMSCHOOT THERBON 70 DEP. REO. GENT. P/ANO. 1666279 20 Chs CANCELED ABOVE LAND AND NEW C.T. OVER



Volume 2099 Folio 148 Page 2 of 2 (Printed at 13:59 on 17/Dec/2007)



#### (CERTIFICATE OF TITLE.)

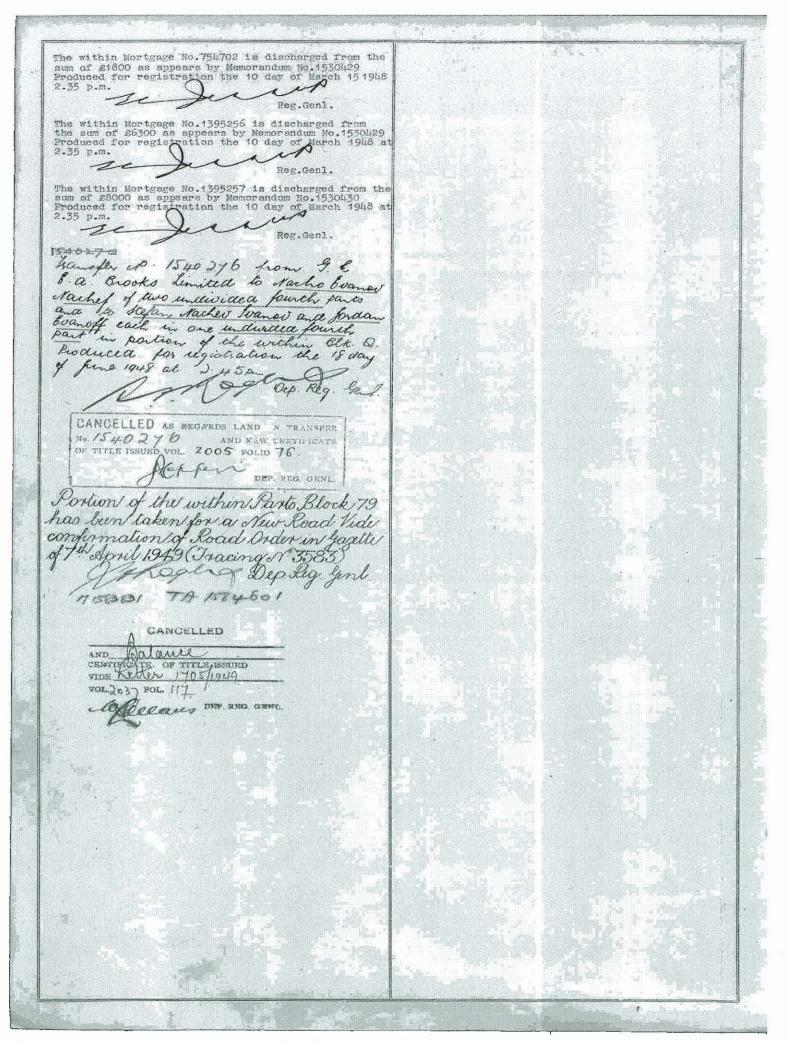
Register Book,

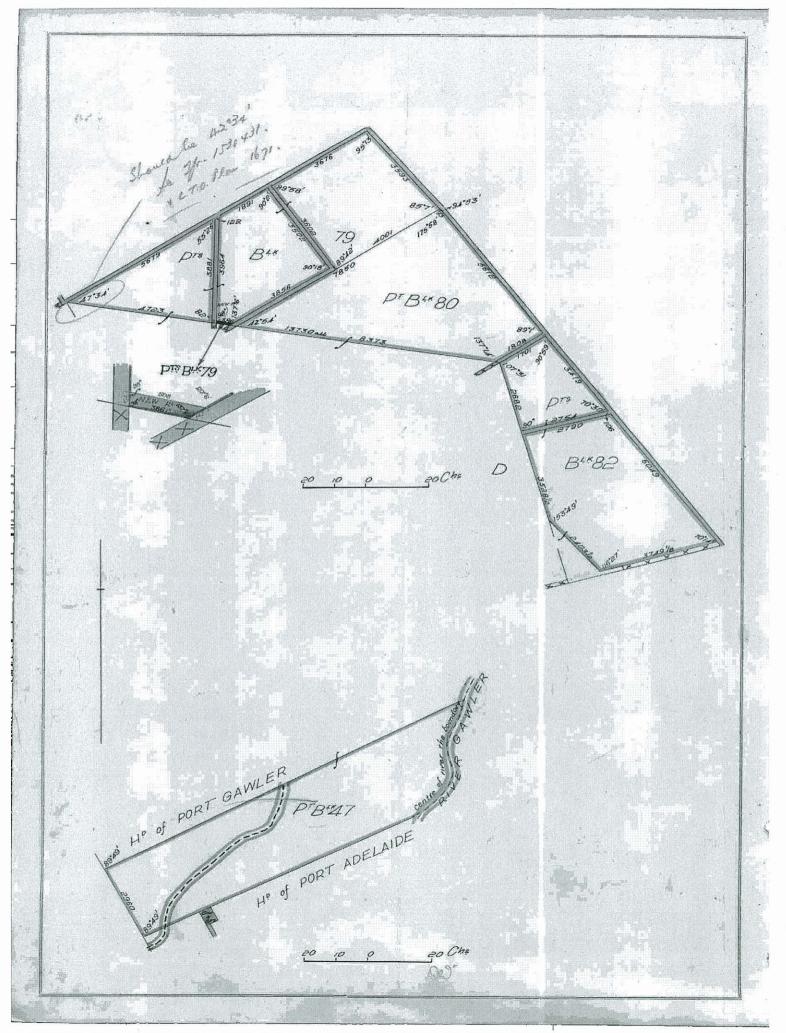
Vol. 2003

Folio 185

to Memorandum of Transfer No.1540275 Registered on Vol.876 Folio 83 Balance Certificate of Title from Vol.1529 Folio 192

whose registered office is situated at Brookman Buildings BROOKS Grenfell Street Adelaide the proprietor of an estate in fee simple in subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THOSE PIECES of land being the BLOCKS 29.30.31.32.38.39.40.44.58.584.59.594.60.604.61.614.62.624.63. 63A.64.65.66.67.68.69.70.74.75.76.77.78.9.R and S PORTIONS OF BLOCK 79 containing together three hundred and thirty seven acres and ten perches or thereabouts PORTION OF BLOCK 80 containing two hundred and seventy five acres two roods and three perches or thereabouts PORTIONS OF BLOCK 82 containing together two hundred and seventy acres three roods and five perches or theresbouts and PORTION OF BLOCK 47 of the subdivision of Section 49 and other land situated in the HUNDREDS OF PORT ADELAIDE AND PORT GAWLER COUNTIES OF ADELAIDE AND GAWLER Isid out as BUCKLAND PARK WHICH said portions of Blocks 47.79.80 and 82 are more perticularly delineated and bounded as appears in the plan in the margin hereof and therein colored green WHICH said Blocks are bounded as appears in the plan deposited in the Lends Titles Registration Office No. 1671 Except portion of the within land taken for New Load deposited in the Land Which said Sections delineated in the public maps of the said Hundreds Office at Adelaide. day of Vecember 1948 In witness whereof I have hereunto signed my name and affixed my seal this sourch g. W. Davis Signed the 1948, in the presence of Registrar-General. Mortgage No.754702 from George Brooks to The Savings Bank of South Australia of the within land except Blocks Q.R and S Produced for registration the 2 day July 1920 at 12.50 p.m. oncluding other land) Reg.Genl. Mortgage No. 1395256 from G. & E.A. Brooks Limited to The Savings Bank of South Australia of the within land except Blooks G.F and S Produced for registration the 16 day of September 1943 at 2.30 p.m. (Including other land) Reg. Genl. Mortgage No.1395257 from G. & B.A.Brooks Limited to Ada Jane Rundle Hilds Elsie Davey May Victoria Smith and Eliza Emma Thomson AS TENANTS IN COMMON of the within land except Blocks Q.R and & Produced for registration the 16 day of September 19 3 at 2.30 p.m. (Including (Including other land) Reg.Genl. The within Mortrage No.1395256 is discharged from the sum of £1500 as appears by Memorandum No.1523295 Produced for registration he 18 day of becomer 1947 at 11.45 a.m. Reg. Genl.





Volume 2003 Folio 185 Page 4 of 4 (Printed at 12:26 on 14/Dec/2007)



#### (CERTIFICATE OF TITLE)

Register Book,

vol. 2005

Folio 76

Pursuant to Memoranda of Transfer Nod.1523295 and 1540276 Registered on Vol.1529 Folio 192 and Vol.2003 Folio 185

NACHO EVANOV NACHEF STEFAN NACHEV IVANOV and JORDAN
EVANOFF all of Marion Road Marion Market Gardeners are the proprietors of an estate in fee
simple AS TENANTS IN COMMON in the shares following that is to say the said Nacho Evanov Nachef in
TWO UNDIVIDED FOURTH PARTS and the said Stefan Nachev Ivanov and Jordan Evanoff EACH IN ONE UNDIVIDED
POURTH PART subject nevertheless to such encumbrances liens and interests as are notified by memorial
underwritten or endorsed hereon in THAT PIECE of land being the BLOCKS 57 and 71 and PORTION OF BLOCK Q
of the subdivision of Section 49 and other land situated in the HUNDREDS OF PORT ADELAIDE AND PORT
GAWLER COUNTIES OF ADELAIDE AND GAWLER laid out as BUCKLAND PARK WHICH said portion of Block Q
contains two acres two roods and thirty seven perches or thereabouts and is more particularly
delineated and bounded as appears in the plan in the margin hereof and therein colored green WHICH
said Blocks are bounded as appears in the plan deposited in the Lands Titles Registration Office No.
1671 WHICH said Sections are delineated in the public maps of the said Hundreds deposited in the Land
Office at Adelaide —

In witness whereof I have bereunto signed my name and affixed my seal this twentieth day of December 1943

Signed the Lock day of December 1948, in the presence of J. W. Danio

MORTGAGE No. 1524 3 4 5 FROM Nacho Evanor Nachef. Stafan Evanor and Jordan Evanof to Bank of New South Hales PRODUCED FOR REGISTRATION THE 6 DAY OF January 1948 ST LOOM.

Registrar-General.

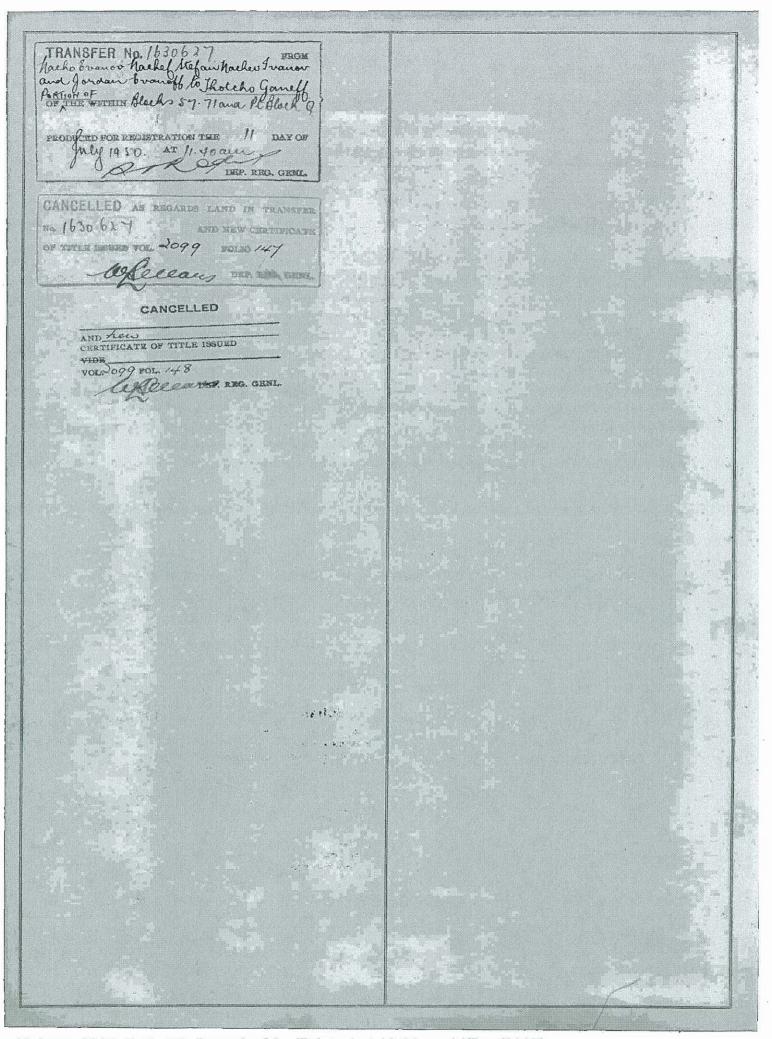
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DEP. REG. CHIME.

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# (CERTIFICATE OF TITLE.)

Register Book,

vol. 2657 Folio 15

Pursuant to Memorandum of Transfer No.2114672 Registered on Vol.2099 Folio 148

NACHO EVANOV NACHEF of Marion Road Marion Gardener

is the proprietor of an estate in fee simple

subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT PIECE of land being PORTION OF BLOCK Q containing two acres and seventeen perches or thereabouts PORTION OF BLOCK 71 containing forty four acres one rood and seven perches or thereabouts and PORTION OF BLOCK 57 of the subdivision of Section 49 and other land situated in the HUNDREDS OF PORT ADELAIDE AND PORT GAWLER COUNTIES OF ADELAIDE AND GAWLER laid out as BUCKLAND PARK and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green WHICH said Blocks are bounded as appears in the plan deposited in the Lands Titles Registration Office No.1671

Which said Section 1s delineated in the public maps of the said Hundreds deposited in the Land Office at Adelaide.

In witness whereof I have hereunto signed my name and affixed my seal this Ascond day of april 1959

Signed the 2nd day of April

1959, in the presence of L. cv. Hacking.

Registrar-General.

Registrar-General.

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FROMKED 19/3/ 1959 AT 1/ EL.

DIP, REG. GEN.

TRANSTER No. 2295024.

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PROBLEM DEP, REG. GEN.

CANCELLED AS REGARDS ABOVE LAND AND NEW C.T. ISSUED

VOL. 3050 FOL. 43

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DEP. REG. GEN.

5/ 1021/4



#### (CERTIFICATE OF TITLE)

Register Book, 3050

EVANOV NACHEF and NICHOLAS NACHEF EVANOFF both of Marion Road Marion Gardeners

the proprietor s of an estate in fee simple AS TENANTS IN COMMON subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT PIECE of land being PORTION OF BLOCK Q containing two acres and seventeen perches or thereabouts PORTION OF BLOCK 71 containing twenty two acres three roods and twenty five perches or thereabouts and PORTION OF BLOCK 57 of the subdivision of Section 49 and other land situated in the HUNDREDS OF PORT ADELAIDE AND PORT GAWLER COUNTIES OF ADELAIDE AND GAWLER laid out as BUCKLAND PARK and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green WHICH said Blocks are bounded as appears in the plan deposited in the Lands Titles Registration Office No.1671

Which said Section

delineated in the public mapsof the said Hundreds

deposited in the Land

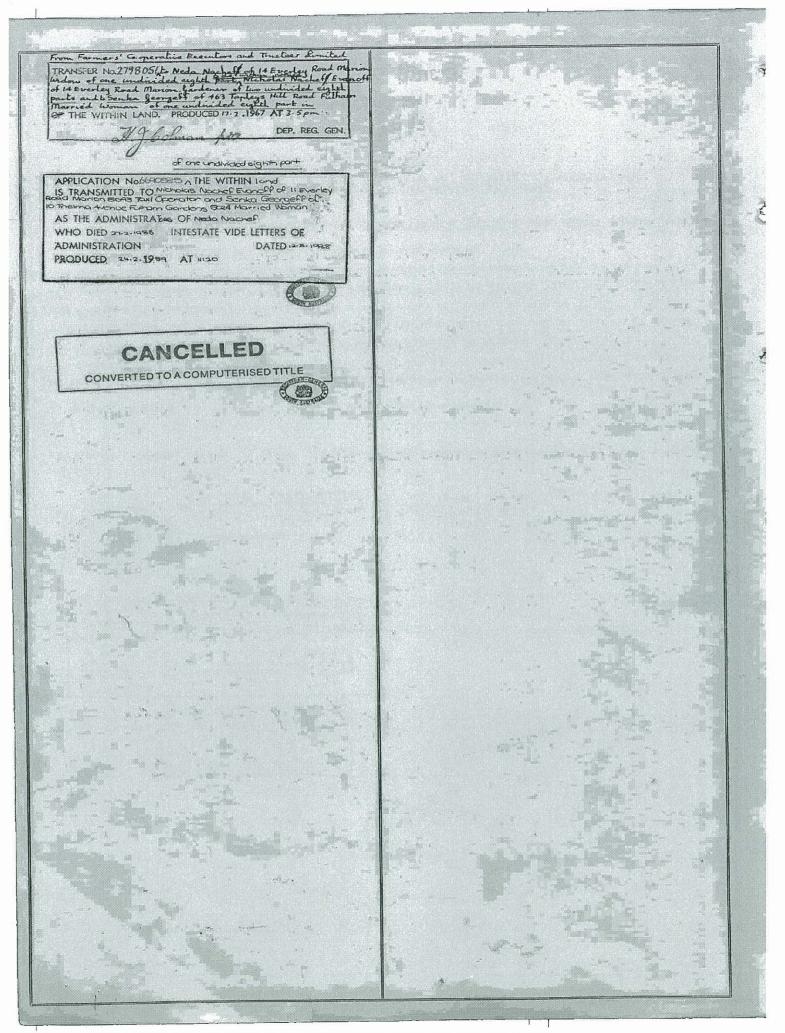
Office at Adelaide.

In witness whereof I have hereunto signed my name and affixed my seal this

20 ck day of

19 62

Signed the 1962, in the presence of Registrar-General. TRANSMITTED TO FALMEN DEP. REG. GEN. PT 57 58 70 to CHS



Volume 3050 Folio 44 Page 2 of 2 (Printed at 13:58 on 17/Dec/2007)



#### (CERTIFICATE OF TITLE.)

Register Book,

vot. 2099

Folio 147

Pursuant to Memorandum of Transfer No.1630627 Registered on Vol.2005 Folio 76

THOTOHO GANEFF of Virginia Market Gardener

is the proprietor of an estate in fee simple

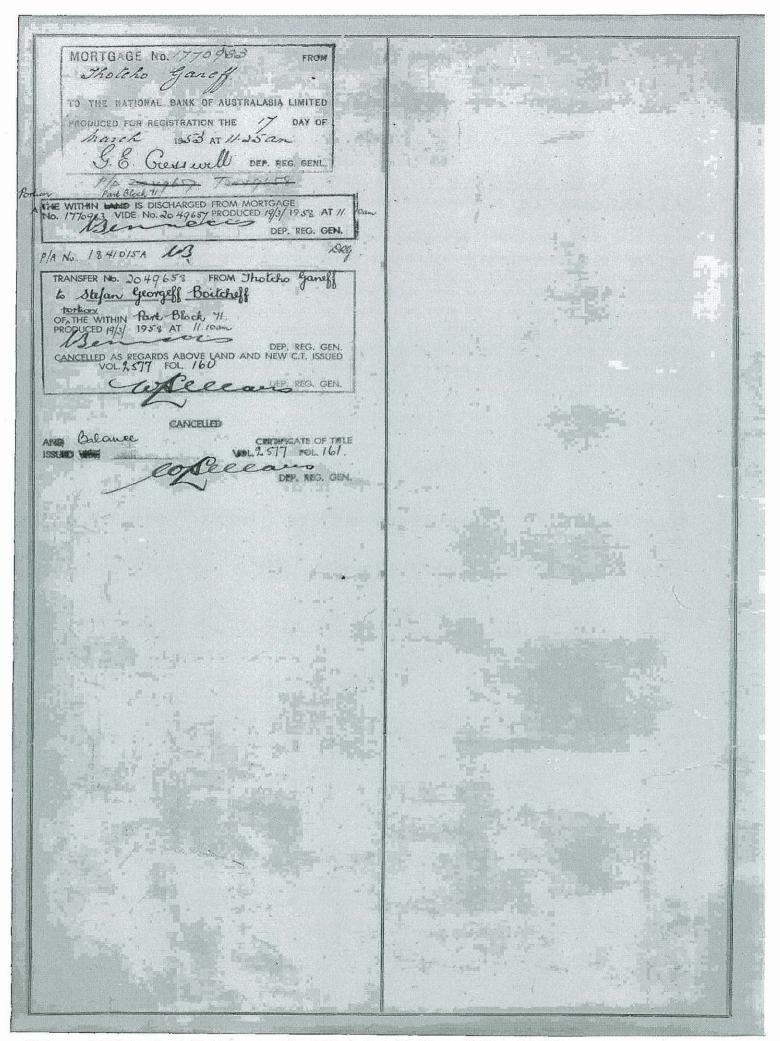
subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT PIECE of land being PORTION OF BLOCK Q containing two roods and twenty perches or thereabouts

PORTION OF BLOCK 71 containing seven acres and seventeen perches or thereabouts and PORTION OF BLOCK 57

of the aubdivision of Section 49 and other land situated in the HUNDREDS OF PORT ADELAIDE and PORT

GAWLER COUNTIES OF ADELAIDE AND GAWLER laid out as BUCKLAND PARK and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green WHICH said Blocks are bounded as appears in the plan deposited in the Lands Titles Registration Office No.1671

deposited in the Land delineated in the public maps of the said Hundreds Which said Section Office at Adelaide. first day of Leptember 1950 In witness whereof I have hereunto signed my name and affixed my seal this 1950, in the presence of sellablu division Approved under Registrar-General. 15. T.P. Act 1945 of 1929 Vid 1630028 MORTGAGE No. /630 62 Thotcho Yanes PT 57 DISCHARGE OF THE WITHIN MORTGAGE Sec. 7565 1630628 IN ENDORSEMENT THEREON DEP, REG. GENL 500 LK9 500



Volume 2099 Folio 147 Page 2 of 2 (Printed at 13:58 on 17/Dec/2007)



#### (CERTIFICATE OF TITLE)

Register Book,

Vol. 2577 Folio 161

Balance Certificate of Title from Vol. 2099 Folio 147

G A N E F F of Virginia Market Gardener

the proprietor of an estate in fee simple

subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT PIECE of land being PORTION OF BLOCK Q containing two roods and twenty perchas or thereabouts PORTION OF BLOCK 71 containing three acres one rood and thirty nine perches or thereabouts and PORTION OF BLOCK 57 of the subdivision of Section 49 and other land situated in the HUNDREDS OF PORT ADELAIDE AND PORT GAWLER COUNTIES OF ADELAIDE AND GAWLER laid out as BUCKLAND PARK and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green WHICH said Blocks are bounded as appears in the plan deposited in the Lands Titles Registration Office No. 1671

Which said Section delineated in the public maps of the said Hundreds Office at Adelaide.

deposited in the Land

Reg.Genl.

DRS

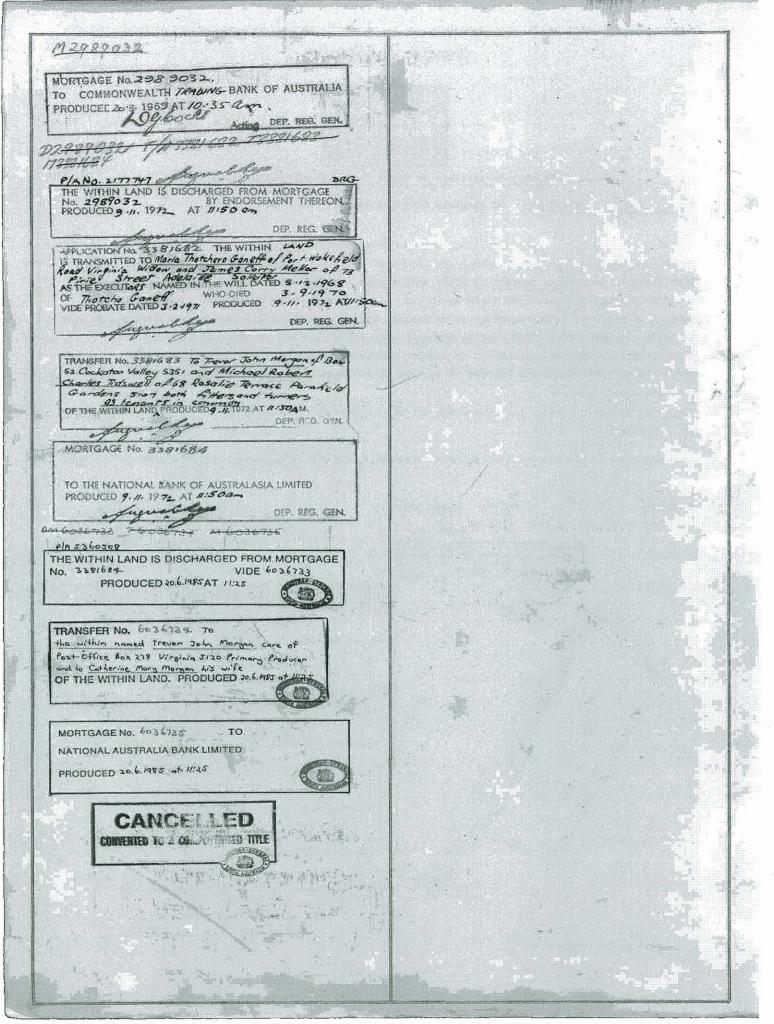
Avet

In witness whereof I have hereunto signed my name and affixed my seal this third day of colfaril

Signed the 1958, in the presence of

Registrar-General.







# (CERTIFICATE OF TITLE)

Register Book, Vol. 3357 Folio 43

Pursuant to Memorandum of Transfer No.2636971 Registered on Vol.1538 Folio 104 and Vol.3263 Folio 133

GUISEPPE TRIMBOLI of Box 21 Virginia Market Gardener and DOMENICA TRIMBOLI his wife

are the proprietor s of an estate in fee simple

subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT PIECE of land situated in the HUNDRED OF PORT ADELAIDE COUNTY OF ADELAIDE being the SECTION 7560 containing seventy five acres one rood and twenty perches or thereabouts and PORTION OF SECTION 7556 containing twelve acres two roods and thirty five perches or thereabouts and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green

Which said Sections are

delineated in the public map of the said

Hundred

deposited in the Land

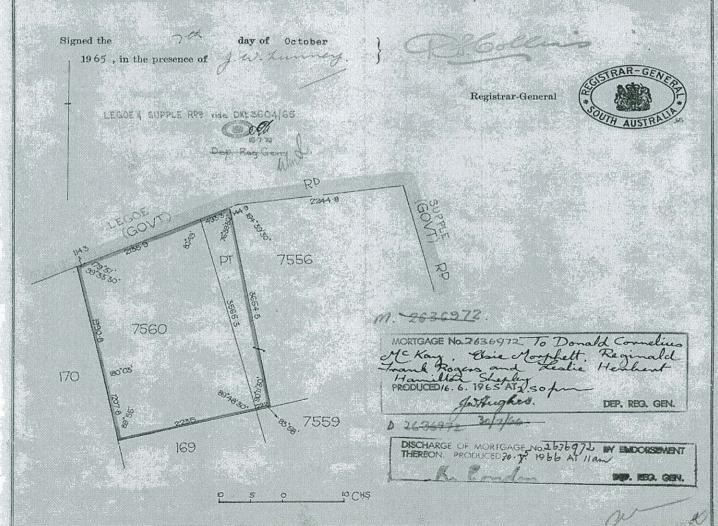
Office at Adelaide.

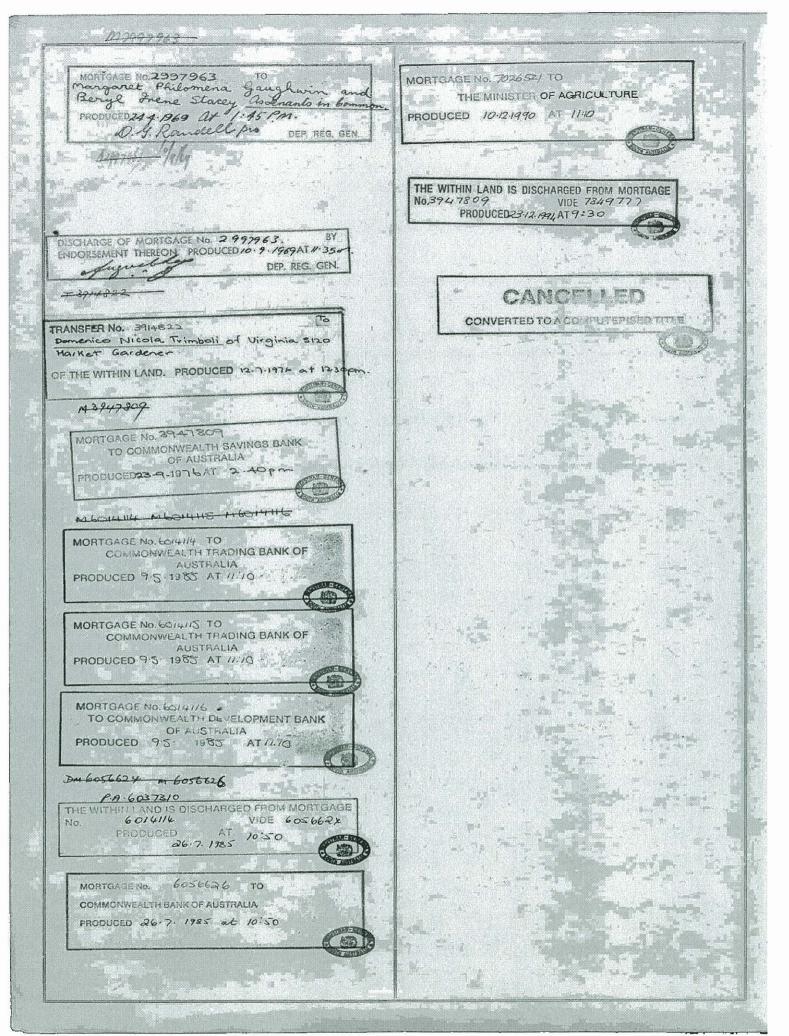
In witness whereof I have hereunto signed my name and affixed my seal this

noth.

av of October

19 65







# (CERTIFICATE OF TITLE)

Register Book,

Vol. 3357

rolla 46

Pursuant to Memorandum of Transfer No.2645783 Registered on Vol.3263 Folio 133

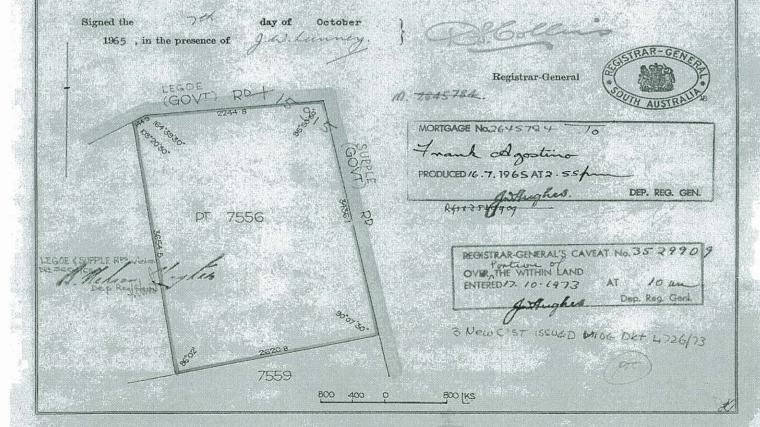
GUISEPPE TRIMBOLI of Box 21 Virginia Market Gardener and DOMENICA TRIMBOLI his wife

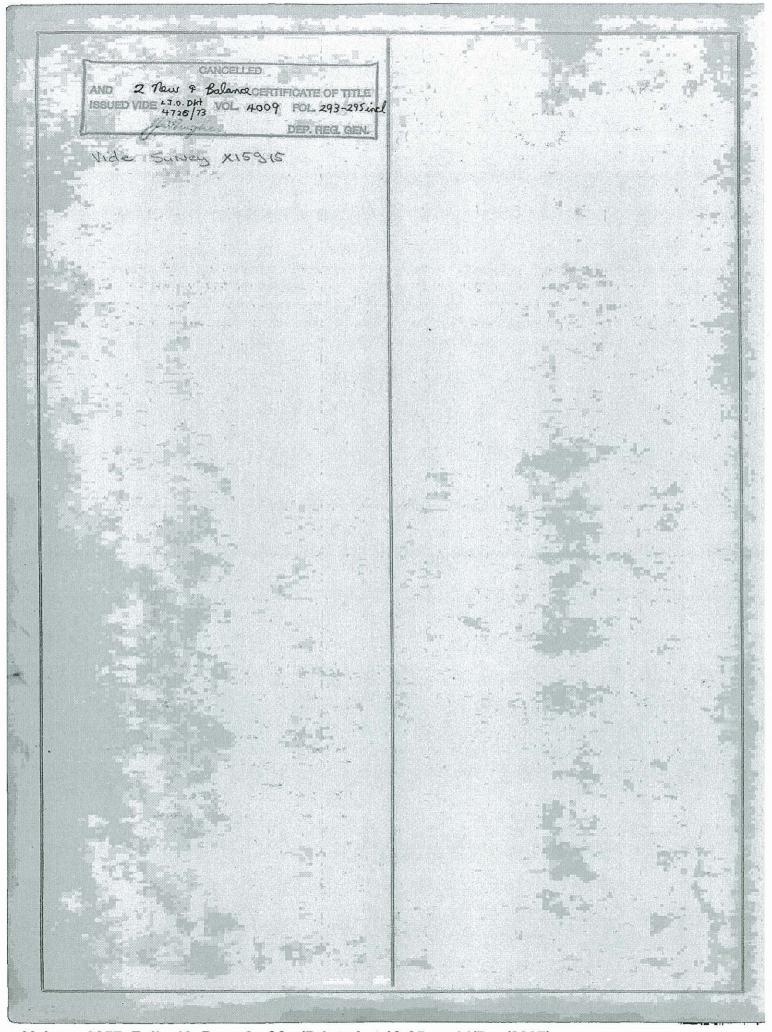
are the proprietors of an estate in fee simple

subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT piece of land situate in the HUNDRED of PORT ADELAIDE COUNTY of ADELAIDE being PORTION OF SECTION 7556 containing eighty nine acres or thereabouts and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green

Which said Section 1s delineated in the public map of the said Hundred deposited in the Land Office at Adelaide,

In witness whereof I have hereunto signed my name and affixed my seal this





Volume 3357 Folio 46 Page 2 of 2 (Printed at 12:25 on 14/Dec/2007)



# (CERTIFICATE OF TITLE)

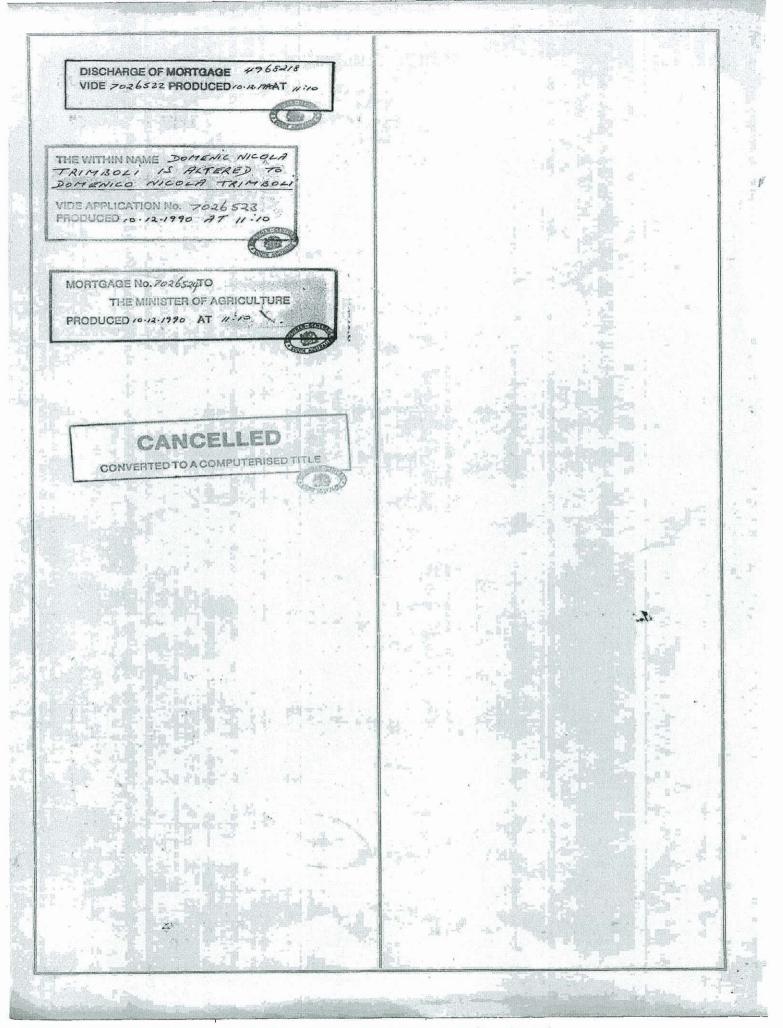
Register Book,
Vol. 3567 Folio 57

#### Balance Certificate of Title from Vol.3489 Folio 165

PATRICK JAMES SHEEDY and BRIAN JOSEPH SHEEDY both of Virginia 5120 Farmers

are the proprietors of an estate in fee simple AS TENANTS IN COMMON subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT SECTION of land containing sixty three acres or thereabouts situated in the HUNDRED OF PORT ADELAIDE COUNTY OF ADELAIDE NOD.169 and bounded as appears in the plan in the margin hereof

Which said Section is delineated in the public map of the said Hundred deposited in the Land Office at Adelaide. In witness whereof I have hereunto signed my name and affixed my seal this 1948 Signed the 195%, in the presence of Registrar-General JA197127 TRANSFER No. 4197127 Domenic Nicola Trimboli of Legoe Road Virginia 5120 Harket Gardener and Maria Trimboli his wife OF THE WITHIN LAND, PRODUCED 9-5. 7560 MORTGAGE No. 4197128 TO Patrick James Sheed Brian Joseph Sheedy 7559 169 PRODUCED 9.5.1978 AT 119m 170 INCLUDING OTHER LAND DM4247803 DISCHARGE OF MORTGAGE No. 4/97/28 VIDE No. 7803 PRODUCED 16-8 1978AT A 4968218 MORTGAGE No.4968218 TO THE MINISTER OF AGRICULTURE PRODUCED 16.11.1982



Volume 3567 Folio 57 Page 2 of 2 (Printed at 12:25 on 14/Dec/2007)

# (CERTIFICATE OF TITLE)



Register Book,
Vol. 3485 Folio 41

Pursuant to Memorandum of Transfer No. 2809742 Registered on Vol. 114 Folio 204

D. & P. MUSOLINO PTY. LTD. of 270 Wright Street Adelaide

is the proprietor

of an estate in fee simple

subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT piece of land situate in the HUNDRED of PORT ADELAIDE COUNTY of ADELAIDE being PORTION OF SECTION 7559 containing forty acres or thereabouts and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green

Which said Section is delineated in the public map of the said Hundred deposited in the Land Office at Adelaide.

In witness whereof I have hereunto signed my name and affixed my seal this

27th day of april

7017

Signed the

28th

day of Opril

Resubdivision approved under the Planting and Development Act 1966-67

1967, in the presence of

Registrar-General

COSTRAIN STATE

MORTGAGE No. 2809743
Patrick James Meedy and
Meedy as Tenant in com

PRODUCED 3-4-1967 AT 3-201

23 OF 1968) Las BEEN VESTED FOR ROAD

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OF THE PLANNING AND DEVELOPMENT ACT 1966-1967

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Volume 3485 Folio 41 Page 2 of 2 (Printed at 12:25 on 14/Dec/2007)



# (CERTIFICATE OF TITLE)

Register Book,
Vol. 3570 Folio 14

New Certificate of Title for portion of the Land in Vol.3485 Folio 41

D. & P. MUSOLINO PTY. LTD. of 270 Wright Street Adelaide 5000

1s the proprietor of an estate in fee simple

subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT PIECE of land containing thirty nine acres and two roods or thereabouts situated in the HUNDRED OF PORT ADELAIDE COUNTY OF ADELAIDE being PORTION OF SECTION 7559 more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green

deposited in the Land Which said Section delineated in the public map of the said ... Hundred Office at Adelaide. In witness whereof I have hereunto signed my name and affixed my seal this Signed the 1968 , in the presence of Registrar-General Mortgage No. 2809745 to Patrick James Sheedy and Brian Joseph Sheedy AS TENANTS IN COMMON Produced 3.4.196 2809743BY ENDORSEMENT 7556 DEP. REG. GEN. RESISTRAR-GENERAL'S CAVENT No.35/9038 OVER THE WITHIN LAND

ACQUISITION No. 3606196 WHEREBY portion of. CANCELLED AS REGARDS LAND IN ACQUISITION NO. 3606796 AND NEW CERTIFICATE OF TITLE ISSUED VOL. 4018
FOLIO 853 DEP. REG. (F.N. CANCELLED AND Balance CERTIFICATE OF TITLE FOL.566 ISSUED VIDEASAIGOS VOL 4168

## South Australia



## (CERTIFICATE OF TITLE)

Register Book, T. 13

Pursuant to Memorandum of Transfer No.2924381 Registered on Vol.3485 Folio 41

PAGLO TOMASO MUSOLINO of Parks Road Virginia 5120 Market Gardener and TERESA MUSOLINO his wife

are the proprietor s of an estate in fee simple

7559

subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in

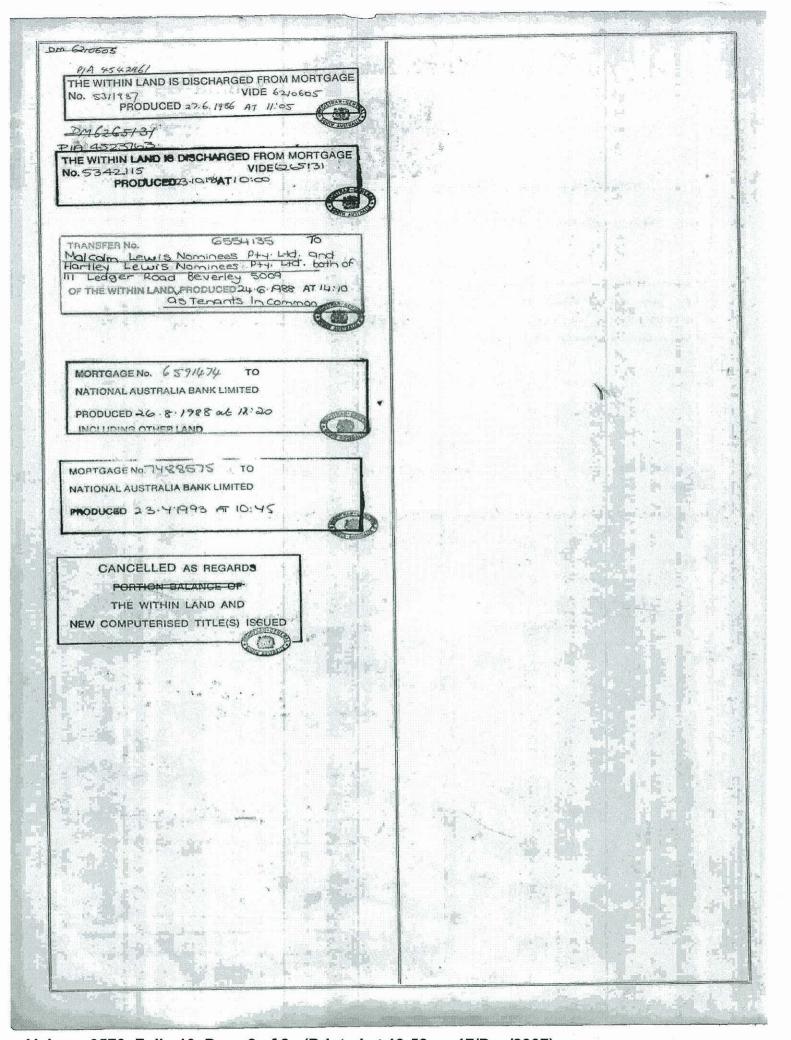
THAT piece of land situate in the HUNDRED OF PORT ADELAIDE

more particularly delineated and bounded as appears in the plan in

the margin hereof and therein coloured green

being PORTION OF SECTION

deposited in the Land Office at Which said Section 1s delineated in the public map of the said Hundred Adelaide. 15 day of 19 68 In witness whereof I have bereunto signed my name and affixed my seal this day of July Signed the 1966 , in the presence of Registrar-General Sap. Reg. Gen 72835 MORTGAGE No. 2924382 TO AUSTRALIA AND NEW ZEALAND, BANK LIMITED. PRODUCED 26 6 1968 AT 2 30 P-DEP. REG. CON. WITHIN LAND IS DISCHARGED FROM MORNEY AQ 24382 BY ENDORSEMENT THEREON DEP. REG. GEN. 7559 M5311987 MORTGAGE No. 5311987 TO Esanda Limited RP. GOVT PRODUCED 3. 10.1984 at 11.50 MORTGAGE No. 5342115 ipolks. AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED PRODUCED 23-11-1934AT II a.m



Volume 3570 Folio 13 Page 2 of 2 (Printed at 13:58 on 17/Dec/2007)

## South Australia



## (CERTIFICATE OF TITLE)

Register Book,

Vol. 2741 Folio 118

Pursuant to Memorandum of Transfer No.2183956 Registered on Vol.2657 Folio 14

JORDAN EVANOFF of Virginia Market Gardener

is the proprietor of an estate in fee simple

subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT PIECE of land being PORTION OF BLOCK 71 containing forty two acres and nineteen perches or thereabouts of the subdivision of Section 49 and other land situated in the HUNDREDS OF PORT ADELAIDE and PORT GAWLER COUNTIES OF ADELAIDE and GAWLER laid out as BUCKLAND PARK and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green WHICH said Block is bounded as appears in the plan deposited in the Lands Titles Registration Office No.1671

deposited in the Land Which said Section delineated in the public map of the said Hundred is Office at Adelaide. In witness whereof I have hereunto signed my name and affixed my seal this two ty second day of March 19 60 day of March Signed the 22 1960, in the presence of J. Hildyard Resubdivision approved under the Planning and Development Act 1966-67 T 3765158 M3765159 Vide Dki. J153 of 1971 TRANSFER No. 3765156 40 Micolon 1 portion OF THE WITHIN Land PRODUCED 9.7.1975 AT 3 pm 1810

CANCELLED AS REGARDS ABOVE LAND AND NEW CT. ISSUED VOL. 4047 FOL. 265

OANGELLED

AND BOLLANCE CERTIFICATE OF TITLE ISSUED VOL. 4047 FOL. 265

800 400 0 800[XS

## South Australia



### (CERTIFICATE OF TITLE)

Register Book,

Vol. 2741 Folio 119

Pursuant to Memorandum of Transfer No. 2183957 Registered on Vol. 2657 Polio 14

STEFAN NACHEF IVANOV of Virginia Market Gardener

is the proprietor of an estate in fee simple

subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT PIECE of land being PORTION OF BLOCK 71 containing sixty two scres and nineteen perches or theresbouts of the subdivision of Section 49 and other land situated in the HUNDREDS OF PORT ADELAIDE AND PORT GAWLER COUNTIES OF ADELAIDE AND GAWLER laid out as BUCKLAND PARK and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green WHICH said Block is bounded as appears in the plan deposited in the Lands Titles Registration Office No.1671

Which said Section delineated in the public map of the said Hundred deposited in the Land Office at Adelaide. In witness whereof I have hereunto signed my name and affixed my seal this twenty sandday of march 1960 Signed the day of Mar 1960, in the presence of J. Meldy Resubclivision approved under the Planning and Development Act 1966-67 Vide Dk 1185 of 1968 OF THE WITHIN LAND L'D' IN DOCKET No. UBS OF 1968) Has BEEN VESTED FOR ROAD 3. IN THE DISTRICT COUNCIL OF MUNNO PARA. VIDE SEC. 48 80.58 OF THE PLANNING AND DEVELOPMENT ART 1966-1967. 30% DEP. REG. GENL PI DEP. REG. GEN. AND NEW C.T. ISSUED ISSUED 44DE

800

800L 8

## South Australia.



## (CERTIFICATE OF TITLE.)

Register Book,

vol. 2657 Folio 14

Pursuant to Memorandum of Transfer No.2114671 Registered on Vol.2099 Polio 148

STEFAN NACHEF IVANOV and JORDAN EVANOFF both of Virginia Market Gardeners

are the proprietors of an estate in fee simple AS TENANTS IN COMMON subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT PIECE of land being PORTION OF BLOCK 71 containing one hundred and four acres and thirty eight perches or thereabouts of the subdivision of Section 49 and other land situated in the HUNDREDS OF PORT ADELAIDE AND PORT GAWLER COUNTIES OF ADELAIDE AND GAWLER laid out as BUCKLAND PARK and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green WHICH said Block is bounded as appears in the plan deposited in the Lands Titles Registration Office No.1671

Which said Section is delineated in the public maps of the said Hundreds deposited in the Land Office at Adelaide.

In witness whereof I have hereunto signed my name and affixed my seal this Second day of april 1959

Signed the 2nd day of april

1957, in the presence of \$2.0% blocking.

TRANSFER No. 2.3 2 St. From and governor of the same of

# **Appendix E**

**Section 7 Enquiry** 



# **Appendix E**

Please see accompanying detail in Table 5-3



8 May 2008

**SEARCH NO: 14178** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXED Hayford

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

LOT 65 DP 1671 HD OF PORT ADELAIDE

**PROPERTY ADDRESS:** 

LOT 65 LEGOE ROAD, BUCKLAND PARK SA

5120

TITLE:

CT-5868/772

VALUATION NO: ASSESSMENT NO:

2900371893 112939

OWNER:

**VOSPOROS PTY LTD** 

In response to your enquiry, I supply the following information:

## PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$1,065.95	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
Current fines	\$0.00	
Arrears	\$0.00	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Lévy	\$24.65	
Payments/Adjustment	\$-818.60	
TOTAL OUTSTANDING	\$272.00	

### **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession

NO

<u>Please note:</u> The above information is supplied for the purposes of Section 7 of the Land & Business (Sale and Conveyancing) Act 1994 and relates only to matters in which council has an interest.

### Lot 65 Legoe Road **BUCKLAND PARK SA 5120**

Horticulture West HW Current zoning: NO Local Heritage Listing / Registered item under the Development Act NO Heritage Listing / Registered item under the SA Heritage Act NO Subject to a Development Consent / Conditions which continue to apply SEE ATTACHED Plan Amendment Report submitted to Minister **SUMMARY** NO Has Minister prepared PAR for public consultation NO Development Act / Public & Environmental Health Act Notices SEE BELOW IF There are obligations to maintain a Septic Tank System **APPLICABLE** SEE CERTIFICATE Proclamations / Agreements OF TITLE

Please note: Where Section 34 of the Building Work Contractors Act 1995 requires that building indemnity insurance be taken out in respect of certain types of domestic building work commenced after 1st May 1987, intending purchasers of this property should contact the Council's Building Section for information on whether an insurance policy exists in respect of any building erected on this land.

You should contact the S A Housing Trust, Riverside Centre, North Tce, Adelaide 5000 for information regarding Housing Improvement Act 1940 notices.

You should contact the Adelaide & Mount Lofty Ranges Natural Resource Management, 205 Greenhill Road, Eastwood 5063 for information regarding the Animal and Plant Control Act 1986. Ph. 8273 9100

For Chief Executive Officer

Flood Plain Area

PLEASE TAKE NOTE: Various areas within the Council are at risk of flooding. The Council is not required by Section 7 of the Land and Business (Sale and Conveyancing) Act 1994 to provide information in relation to whether this property is within a flood risk area or the possible extent of any flood risk as part of this Statement. Nevertheless, the Council can inform you that it has received a report by the Department for Transport, Energy & Infrastructure containing new hydrological data for the Gawler River Flood Plain area which may result in the boundaries of the flood risk area being amended. Flood mapping and modelling has been undertaken using this new hydrological data.

The Floodplain Mapping Report is available at the following website:

http://fredpedler.com/public/content/default.asp?xcid=399

#### **Development Applications**

Nil

# DEVELOPMENT PLAN AMENDMENTS SUMMARY

Pursuant to Section 24 of the Development Act 1993, several investigations are being undertaken in respect to amending Development Plan policies (e.g. land use zones) that may affect areas within the City of Playford.

As of a change to the Development Act gazetted on the 27th September 2007 all new amendments to the Development Plan will be implemented under a new Development Plan Amendment (DPA) process. However existing amendments to the Development Plan initiated before this time will be finalised under the Plan Amendment Report (PAR) process.

Investigations which have reached the stage of an agreed 'Statement of Intent' associated with either the PAR or DPA process include:

## Townships and Environs PAR

A Townships and Environs PAR Statement of Intent has been agreed between Council and the Minister for Planning and Urban Development, and is currently being investigated and drafted. It affects the Townships of Virginia, Angle Vale and One Tree Hill and includes the following considerations:

- Policies to guide the future growth of townships and promote the enhancement of their identity and character:
- The role of townships;
- Retail activity in nearby horticultural areas;
- How horticultural retail impacts on existing centres and value adding to horticultural production;
- Encourage the appropriate development of cellar door sales, restaurants and wineries;
- Tourist accommodation;
- Appropriate transport;
- Design and appearance enhancement to facilitate identity and character;
- Ecologically sensitive design;
- Arts and culture;
- Infrastructure provision; and
- Sustainable growth to facilitate regeneration of surrounding areas.

Minor amendments to the Angle Vale township are being considered to address anomalies, with no additional land for housing being included.

#### Munno Para District Centre PAR

A Munno Para District Centre PAR has been prepared by Council and has undertaken public consultation from 25th January 2006 to 27th March 2006. A revised PAR, as a result of consultation, has been approved by Council and is now with the Minister for Urban Development and Planning for consideration.

The PAR impacts on the following development issues:

- The relationship of Munno Para District Centre and Smithfield Township within the hierarchy of all centres within the City of Playford;
- How the Development Plan can assist in developing Munno Para District Centre and Smithfield Township complementary to the rezoned and redeveloped Elizabeth Regional Centre;
- Design and land use policies to promote appropriate activities and facilitate complementary opportunities;
- Integration of centres with transport infrastructure, especially the Smithfield Train Station and other public transport facilities;
- Appropriate shopping, community facilities and mixed land uses and development to meet the needs of the community and the District Centre role;
- Ecologically sustainable design;
- Arts and cultural expression to reflect community values;
- The possibility for higher density housing in proximity to the centre;
- Infrastructure provision, including storm water and bandwidth;
- Open space/landscaping, pedestrian links, car parking and signage to improve function, identity and character;

- development of public assets; and
- The relationship of Munno Para District Centre and Smithfield Township to Main North Road and Anderson Walk.

#### Munno Para Environs Plan Amendment Report

A PAR is currently being finalised for the area surrounding the Munno Para District Centre and will be available for public consultation in the near future.

The Study Area includes the land around the District Centre Zone, which totals 232 hectares, bounded by:

- Curtis Road to the north;
- Main North to the east:
- the southern boundary of the vacant Commonwealth Defence land; and
- Coventry Road to the west.

The study area does not include the Munno Para District Centre Zone.

The PAR will include considerations on the following issues:

- Integration of the locality with transport infrastructure, especially the Smithfield Train
- Station and other public transport facilities;
- Appropriate land uses and development to meet the needs of the community and the
- District Centre role based on appropriate performance criteria;
- Ecologically sustainable design;
- Arts and cultural expression to reflect community values;
- Infrastructure provision, including storm water;
- Open space/landscaping, pedestrian links and signage to improve function, identity and
- character:
- Site contamination and noise impact considerations; and
- Development of public assets.

A new Structure Plan will be introduced to optimise opportunities presented by recent and potential development. Particular elements of the draft structure plan will include:

- Increased medium density residential development opportunities in the immediate
- locality;
- Improving connections and relationships to Smithfield Township and Train Station:
- Reinforcing a desired future character for Anderson Walk and the Smithfield township;
- Improving land use mix, function and amenity around the District Centre through the
- inclusion of performance criteria;
- Improvement of transportation movement (especially heavy vehicles), including
- · gateway identification and appropriate buffers; and
- Incorporating and defining the Smith Creek open space network.

#### Better Development Plan Development Plan Amendment

The City of Playford proposes to review and amend the policies of the City of Playford Development Plan in order to adopt the policy modules, structure and format for Development Plans promoted by Planning SA as part of the Better Development Plans (BDP) project.

In adopting the BDP approach, council will ensure the resulting Development Plan will suitably implement the State Planning Strategy, as well as carry clearly defined local policy directions.

Council expects that the overall understanding of its Development Plan will be improved by adopting the new BDP form and structure. This will represent an improvement on the current Development Plan, making it easier to navigate and comprehend by addressing the clarity and readability issues that have developed over time with the current plan.

The investigations will ensure:

the DPA identifies how all included Desired Character Statements have been derived from the existing text or Objectives/Principles of Development Control of the current Development Plan.

- the DPA identifies the existing policy that forms the basis of all included 'local addition' Objectives/Principles of Development Control.
- the policy referred to as 'local additions' does not undertake or encompass new policy directions.
- all appropriate BDP modules covering the range of issues and land uses pertinent to the council area are taken up and included as the policy core of the new Development Plan.
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#### Neighbourhood Centres Development Plan Amendment

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- The role and hierarchy of centres;
- Integration with transport infrastructure, especially public transport;
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- Higher density housing adjacent centres;
- Design and appearance enhancement including landscaping and maintenance of properties, to facilitate identity and character;
- Ecologically sustainable design;
- Arts and culture:
- Infrastructure provision; and
- Sustainable growth to facilitate regeneration of surrounding areas.

The primary aim of the Neighbourhood Activity Centres DPA is to review the appropriateness of the nominated centres and identify opportunities for improvement and rationalisation. This process includes investigating the potential for the accommodation of mixed use development which is considered one way of reversing the decline in viability and vibrancy of the centres.

A Neighbourhood Activity Centres DPA Statement of Intent has been prepared and is currently with the Minister for Planning and Urban Development for his consideration.

## The following Neighbourhood Centres will be the focus of the DPA:

- Elizabeth Park
- Elizabeth Grove
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- Elizabeth Vale
- Elizabeth East
- Elizabeth North

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Investigations into the neighbourhood centres in the process of preparing the DPA are underway and will be considered by Council in the second half of 2008.

If you have any queries regarding any of the above Plan Amendment Reports, please contact Stephen Yarwood, Principal Policy Planner on 8256 0345 (direct).

8 May 2008

**SEARCH NO: 14179** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXE Dayford

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

LOT 1-4 FP 40207 HD OF PORT ADELAIDE

PROPERTY ADDRESS:

LOT 1-4 BEAGLE HOLE ROAD, BUCKLAND

**PARK SA 5120** 

TITLE:

CT-5875/910

VALUATION NO:

290037105\*

ASSESSMENT NO:

10089

OWNER:

**VOSPOROS PTY LTD** 

In response to your enquiry, I supply the following information:

## PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$1,797.70	LAST DAY TO PAY 03/09/07
Rebate/Remissions Current fines Arrears Legal Fees Property related debts	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00	
NRM Levy	\$54.90	
Payments/Adjustment TOTAL OUTSTANDING	\$-1389.60 <b>\$463.00</b>	

#### **OTHER MATTERS**

Legal action taken

NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession

NO

<u>Please note:</u> The above information is supplied for the purposes of Section 7 of the Land & Business (Sale and Conveyancing) Act 1994 and relates only to matters in which council has an interest.

#### Lot 1-4 Beagle Hole Road BUCKLAND PARK SA 5120

Horticulture West HW Current zoning: NO Local Heritage Listing / Registered item under the Development Act NO Heritage Listing / Registered item under the SA Heritage Act Subject to a Development Consent / Conditions which continue to apply YES See Attached Document SEE ATTACHED Plan Amendment Report submitted to Minister SUMMARY NO Has Minister prepared PAR for public consultation Development Act / Public & Environmental Health Act Notices NO SEE BELOW IF There are obligations to maintain a Septic Tank System **APPLICABLE** SEE CERTIFICATE Proclamations / Agreements OF TITLE

Please note: Where Section 34 of the Building Work Contractors Act 1995 requires that building indemnity insurance be taken out in respect of certain types of domestic building work commenced after 1st May 1987, intending purchasers of this property should contact the Council's Building Section for information on whether an insurance policy exists in respect of any building erected on this land.

You should contact the S A Housing Trust, Riverside Centre, North Tce, Adelaide 5000 for information regarding Housing Improvement Act 1940 notices.

You should contact the Adelaide & Mount Lofty Ranges Natural Resource Management, 205 Greenhill Road, Eastwood 5063 for information regarding the Animal and Plant Control Act 1986. Ph. 8273 9100

PLEASE TAKE NOTE: Various areas within the Council are at risk of flooding. The Council is not required by Section 7 of the Land and Business (Sale and Conveyancing) Act 1994 to provide information in relation to whether this property is within a flood risk area or the possible extent of any flood risk as part of this Statement. Nevertheless, the Council can inform you that it has received a report by the Department for Transport, Energy & Infrastructure containing new hydrological data for the Gawler River Flood Plain area which may result in the boundaries of the flood risk area being amended. Flood mapping and modelling has been undertaken using this new hydrological data.

The Floodplain Mapping Report is available at the following website:

http://fredpedler.com/public/content/default.asp?xcid=399

#### **Development Applications**

292/D-25/1996 Land

Land Division (2 into 2) for purpose of rural living

Date of Decision: 24-Oct-1996 Authority: Council

No Continuing Condition(s)

292/261/1997 IMPLEMENT SHED

Date of Decision: 14-Apr-1997 Authority: Council

Continuing Condition(s)

1. The building shall not be used for commercial or industrial purposes.

2. The building shall not be used for human habitation.

292/140/1998 IMPLEMENT SHED

Date of Decision: 31-Mar-1998 Authority: Council

No Continuing Condition(s)

Date of Decision: 28-Apr-1999 Authority: Council

No Continuing Condition(s)

292/257/2002 GREENHOUSE AND SHED WITH OFFICES AND TOILETS.

Date of Decision: 14-May-2002 Authority: Council

Continuing Condition(s)

- 1. DISABLED TOILET The passageway leading to the door of the disabled persons' toilet must be increased in size to 1350mm by moving the partition wall towards the irrigation and fertilisation shed. Grad rails and other fittings on the entrance door and in the compartment must be provided to comply with AS1428. It should be noted that if the entrance door swings inwards, it must be removable from the outside in an emergency, alternatively this door may be a sliding door.
- 2. Floor grades, linings, tiling and waterproofing of the toilet areas shall comply with the requirements of the Building Code of Australia ie: Minister's Specification F1.7
- 3. The office floor must be designed by an engineer. A copy of the engineer's report showing slab thickness, reinforcement, edge thickening and waterproofing must be provided to the Council before commencement of that work.
- 4. Details showing the size and design of framework to support all internal wall and ceiling linings must be provided to the Council prior to the commencement of work.
- 5. Portable fire extinguishers suitable for the type of materials being stored in the shed and office shall be provided near the exits to comply with Part E of the Building Code of Australia.
- 6. If the framework of the office is timber, the building must be protected against attack by termites in accordance with AS3660.
- 7. All existing conditions of approval placed on Development Application 292/1255/99 are binding and ongoing.

AW/17/2002 Aerobic Wastewater Treatment System

Date of Decision: 22-May-2002 Authority: Council

No Continuing Condition(s)

#### Septic/Aerobic Conditions:

Where it is not practical to terminate the top of the septic tank at surface level it will be necessary to provide access shafts fitted with access covers and an inspection opening finishing at surface level.

The shafts shall be effectively sealed to prevent the ingress or egress of water or gas.

- The access cover shall be fixed with non ferrous child proof fixings and shall be gas and water tight and removable for maintenance.
- All under floor plumbing shall be inspected prior to back fill by the independent technical expert. A copy of the certificate of inspection shall be provided to Council prior to operation of plumbing.
- The aerobic waste water system shall be inspected prior to back fill of the system by the independent technical expert. A copy of the certificate of inspection shall be provided to Council prior to operation of the system.
- Effluent disposal area and aerobic waste water treatment systems shall not be located under or next to vehicular traffic areas.
- The septic tank should be pumped out every 4 years to remove sludge. This must be carried out by a licensed waste disposal contractor.

## DEVELOPMENT PLAN AMENDMENTS SUMMARY

Pursuant to Section 24 of the Development Act 1993, several investigations are being undertaken in respect to amending Development Plan policies (e.g. land use zones) that may affect areas within the City of Playford.

As of a change to the Development Act gazetted on the 27th September 2007 all new amendments to the Development Plan will be implemented under a new Development Plan Amendment (DPA) process. However existing amendments to the Development Plan initiated before this time will be finalised under the Plan Amendment Report (PAR) process.

Investigations which have reached the stage of an agreed 'Statement of Intent' associated with either the PAR or DPA process include:

#### **Townships and Environs PAR**

A Townships and Environs PAR Statement of Intent has been agreed between Council and the Minister for Planning and Urban Development, and is currently being investigated and drafted. It affects the Townships of Virginia, Angle Vale and One Tree Hill and includes the following considerations:

- Policies to guide the future growth of townships and promote the enhancement of their identity and character:
- The role of townships;
- Retail activity in nearby horticultural areas;
- How horticultural retail impacts on existing centres and value adding to horticultural production;
- Encourage the appropriate development of cellar door sales, restaurants and wineries;
- Tourist accommodation:
- Appropriate transport;
- Design and appearance enhancement to facilitate identity and character:
- Ecologically sensitive design;
- Arts and culture:
- Infrastructure provision; and
- Sustainable growth to facilitate regeneration of surrounding areas.

Minor amendments to the Angle Vale township are being considered to address anomalies, with no additional land for housing being included.

#### **Munno Para District Centre PAR**

A Munno Para District Centre PAR has been prepared by Council and has undertaken public consultation from 25th January 2006 to 27th March 2006. A revised PAR, as a result of consultation, has been approved by Council and is now with the Minister for Urban Development and Planning for consideration.

The PAR impacts on the following development issues:

- The relationship of Munno Para District Centre and Smithfield Township within the hierarchy of all centres within the City of Playford:
- How the Development Plan can assist in developing Munno Para District Centre and Smithfield Township complementary to the rezoned and redeveloped Elizabeth Regional Centre;
- Design and land use policies to promote appropriate activities and facilitate complementary opportunities;
- Integration of centres with transport infrastructure, especially the Smithfield Train Station and other public transport facilities;
- Appropriate shopping, community facilities and mixed land uses and development to meet the needs of the community and the District Centre role;
- Ecologically sustainable design;
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- The possibility for higher density housing in proximity to the centre;
- Infrastructure provision, including storm water and bandwidth;
- Open space/landscaping, pedestrian links, car parking and signage to improve function, identity and character;

- development of public assets; and
- The relationship of Munno Para District Centre and Smithfield Township to Main North Road and Anderson Walk.

## Munno Para Environs Plan Amendment Report

A PAR is currently being finalised for the area surrounding the Munno Para District Centre and will be available for public consultation in the near future.

The Study Area includes the land around the District Centre Zone, which totals 232 hectares, bounded by:

- Curtis Road to the north;
- Main North to the east;
- the southern boundary of the vacant Commonwealth Defence land; and
- Coventry Road to the west.

The study area does not include the Munno Para District Centre Zone.

The PAR will include considerations on the following issues:

- Integration of the locality with transport infrastructure, especially the Smithfield Train
- Station and other public transport facilities;
- Appropriate land uses and development to meet the needs of the community and the
- District Centre role based on appropriate performance criteria;
- Ecologically sustainable design;
- Arts and cultural expression to reflect community values;
- Infrastructure provision, including storm water;
- Open space/landscaping, pedestrian links and signage to improve function, identity and
- character:
- Site contamination and noise impact considerations; and
- Development of public assets.

A new Structure Plan will be introduced to optimise opportunities presented by recent and potential development. Particular elements of the draft structure plan will include:

- Increased medium density residential development opportunities in the immediate
- locality:
- Improving connections and relationships to Smithfield Township and Train Station;
- Reinforcing a desired future character for Anderson Walk and the Smithfield township;
- Improving land use mix, function and amenity around the District Centre through the
- inclusion of performance criteria;
- Improvement of transportation movement (especially heavy vehicles), including
- gateway identification and appropriate buffers; and
- Incorporating and defining the Smith Creek open space network.

#### Better Development Plan Development Plan Amendment

The City of Playford proposes to review and amend the policies of the City of Playford Development Plan in order to adopt the policy modules, structure and format for Development Plans promoted by Planning SA as part of the Better Development Plans (BDP) project.

In adopting the BDP approach, council will ensure the resulting Development Plan will suitably implement the State Planning Strategy, as well as carry clearly defined local policy directions.

Council expects that the overall understanding of its Development Plan will be improved by adopting the new BDP form and structure. This will represent an improvement on the current Development Plan, making it easier to navigate and comprehend by addressing the clarity and readability issues that have developed over time with the current plan.

The investigations will ensure:

the DPA identifies how all included Desired Character Statements have been derived from the existing text or Objectives/Principles of Development Control of the current Development Plan.

- the DPA identifies the existing policy that forms the basis of all included 'local addition' Objectives/Principles of Development Control.
- the policy referred to as 'local additions' does not undertake or encompass new policy directions.
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- Ecologically sustainable design;
- Arts and culture;
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- Sustainable growth to facilitate regeneration of surrounding areas.

The primary aim of the Neighbourhood Activity Centres DPA is to review the appropriateness of the nominated centres and identify opportunities for improvement and rationalisation. This process includes investigating the potential for the accommodation of mixed use development which is considered one way of reversing the decline in viability and vibrancy of the centres.

A Neighbourhood Activity Centres DPA Statement of Intent has been prepared and is currently with the Minister for Planning and Urban Development for his consideration.

#### The following Neighbourhood Centres will be the focus of the DPA:

- Elizabeth Park
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Andrews Farm Local Centre was also reviewed as part of the project, considering an immediate need to support development in the area.

Investigations into the neighbourhood centres in the process of preparing the DPA are underway and will be considered by Council in the second half of 2008.

If you have any queries regarding any of the above Plan Amendment Reports, please contact Stephen Yarwood, Principal Policy Planner on 8256 0345 (direct).



8 May 2008

**SEARCH NO: 14180** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXED CITY OF Playford

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

LOT 5 SEC 7509 FP 40170 HD OF PORT

**ADELAIDE** 

**PROPERTY ADDRESS:** 

LOT 5 LEGOE ROAD, BUCKLAND PARK SA

5120

TITLE:

CT-5424/348

VALUATION NO: ASSESSMENT NO:

2900383501

OWNER:

10090 MRS B KANEV

In response to your enquiry, I supply the following information:

### PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

\$969.65	LAST DAY TO PAY 03/09/07
\$0.00	
\$0.00	
\$0.00 \$0.00	
\$20.65	
\$-743.30 <b>\$247.00</b>	
	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$20.65

#### **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession

NO

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#### Lot 5 Legoe Road BUCKLAND PARK SA 5120

Current zoning: Horticulture West HW	
Local Heritage Listing / Registered item under the Development Act	NO
Heritage Listing / Registered item under the SA Heritage Act	NO
Subject to a Development Consent / Conditions which continue to apply	NO
Plan Amendment Report submitted to Minister	SEE ATTACHED SUMMARY
Has Minister prepared PAR for public consultation	NO
Development Act / Public & Environmental Health Act Notices	NO

There are obligations to maintain a Septic Tank System

Proclamations / Agreements
Flood Plain Preq

SEE BELOW IF APPLICABLE SEE CERTIFICATE OF TITLE

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**Development Applications** 

Nil

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8 May 2008

**SEARCH NO: 14181** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000

CITY OF

City of Playford Civic Centre 10 Playford Boulevard ELIZABETH Mailing Address: 12 Bishopstone Road DAVOREN PARK SA 5113 Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

LOT 4 SEC 7509 FP 40170 HD OF PORT

ADELAIDE, LOT 4 SEC 7520 FP 40170 HD OF

PORT ADELAIDE

**PROPERTY ADDRESS:** 

LOT 4 REEDY ROAD, BUCKLAND PARK SA

5120

TITLE:

CT-5228/167

**VALUATION NO:** 

2900384002

ASSESSMENT NO:

10618

OWNER:

TRIMCO NOMINEES PTY LTD

In response to your enquiry, I supply the following information:

### PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$921.50	LAST DAY TO PAY 03/09/07
Rebate/Remissions Current fines	\$0.00 \$0.00	
Arrears Legal Fees	\$0.00 \$0.00	
Property related debts	\$0.00	
NRM Levy	\$18.70	
Payments/Adjustment TOTAL OUTSTANDING	\$-705.20 <b>\$235.00</b>	

## **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession NO

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#### Lot 4 Reedy Road BUCKLAND PARK SA 5120

Current zoning: Horticulture West HW	
Local Heritage Listing / Registered item under the Development Act	NO
Heritage Listing / Registered item under the SA Heritage Act	NO
Subject to a Development Consent / Conditions which continue to apply	NO
Plan Amendment Report submitted to Minister	SEE ATTACHED SUMMARY
Has Minister prepared PAR for public consultation	NO
Development Act / Public & Environmental Health Act Notices	NO
There are obligations to maintain a Septic Tank System  Proclamations / Agreements	SEE BELOW IF APPLICABLE SEE CERTIFICATE

Please note: Where Section 34 of the Building Work Contractors Act 1995 requires that building indemnity insurance be taken out in respect of certain types of domestic building work commenced after 1st May 1987, intending purchasers of this property should contact the Council's Building Section for information on whether an insurance policy exists in respect of any building erected on this land.

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For Chief Executive Officer

Flood Plain Area

OF TITLE

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#### **Development Applications**

Nil

## DEVELOPMENT PLAN AMENDMENTS SUMMARY

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#### Munno Para District Centre PAR

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The PAR impacts on the following development issues:

- The relationship of Munno Para District Centre and Smithfield Township within the hierarchy of all centres within the City of Playford;
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#### Munno Para Environs Plan Amendment Report

A PAR is currently being finalised for the area surrounding the Munno Para District Centre and will be available for public consultation in the near future.

The Study Area includes the land around the District Centre Zone, which totals 232 hectares, bounded by:

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If you have any queries regarding any of the above Plan Amendment Reports, please contact Stephen Yarwood, Principal Policy Planner on 8256 0345 (direct).

8 May 2008

**SEARCH NO: 14182** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000

CITY OF

City of Playford Civic Centre 10 Playford Boulevard ELIZABETH Mailing Address: 12 Bishopstone Road DAVOREN PARK SA 5113 Ph 8256 0333 Fax 8256 0578

ALLOTMENT: LOT 133 SEC 7551 FP 162482 HD OF PORT

ADELAIDE

PROPERTY ADDRESS: LOT 133 REEDY ROAD, BUCKLAND PARK

**SA 5120** 

TITLE: CT-5763/970

VALUATION NO: 2900380001

ASSESSMENT NO: 10617

OWNER: MR G BERGLIAVAZ AND MRS M

**BERGLIAVAZ** 

In response to your enquiry, I supply the following information:

#### <u>PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES</u>

Current rates declared on 26 June 2007

Current rates	\$842.55	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
Current fines	\$0.00	
Arrears	\$0.00	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$15.40	
Payments/Adjustment	\$-857.95	
TOTAL OUTSTANDING	\$0.00	

## **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999 YES RATES

Easement, Right of Way, Restricted covenant, Lien REFER TO TITLE or caveat in which council has an interest

Pensioner Concession NO

Please note: The above information is supplied for the purposes of Section 7 of the Land & Business (Sale and Conveyancing) Act 1994 and relates only to matters in which council has an interest.

#### Lot 133 Reedy Road BUCKLAND PARK SA 5120

HW Horticulture West Current zoning: NO Local Heritage Listing / Registered item under the Development Act NO Heritage Listing / Registered item under the SA Heritage Act NO Subject to a Development Consent / Conditions which continue to apply SEE ATTACHED Plan Amendment Report submitted to Minister SUMMARY NO Has Minister prepared PAR for public consultation Development Act / Public & Environmental Health Act Notices NO SEE BELOW IF There are obligations to maintain a Septic Tank System **APPLICABLE** 

Please note: Where Section 34 of the Building Work Contractors Act 1995 requires that building indemnity insurance be taken out in respect of certain types of domestic building work commenced after 1st May 1987, intending purchasers of this property should contact the Council's Building Section for information on whether an insurance policy exists in respect of any building erected on this land.

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For Chief Executive Officer

Proclamations / Agreements

Flood Plain Area

SEE CERTIFICATE

OF TITLE

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PLEASE TAKE NOTE: Various areas within the Council are at risk of flooding. The Council is not required by Section 7 of the Land and Business (Sale and Conveyancing) Act 1994 to provide information in relation to whether this property is within a flood risk area or the possible extent of any flood risk as part of this Statement. Nevertheless, the Council can inform you that it has received a report by the Department for Transport, Energy & Infrastructure containing new hydrological data for the Gawler River Flood Plain area which may result in the boundaries of the flood risk area being amended. Flood mapping and modelling has been undertaken using this new hydrological data.

The Floodplain Mapping Report is available at the following website:

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## **Development Applications**

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# DEVELOPMENT PLAN AMENDMENTS SUMMARY

Pursuant to Section 24 of the Development Act 1993, several investigations are being undertaken in respect to amending Development Plan policies (e.g. land use zones) that may affect areas within the City of Playford.

As of a change to the Development Act gazetted on the 27th September 2007 all new amendments to the Development Plan will be implemented under a new Development Plan Amendment (DPA) process. However existing amendments to the Development Plan initiated before this time will be finalised under the Plan Amendment Report (PAR) process.

Investigations which have reached the stage of an agreed 'Statement of Intent' associated with either the PAR or DPA process include:

### Townships and Environs PAR

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8 May 2008

**SEARCH NO: 14192** 

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:

CITY OF

12 Bishopstone Road DAVOREN PARK SA 5113 Ph 8256 0333 Fax 8256 0578

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000

ALLOTMENT: LOT 101 SEC 170 DP 36246 HD OF PORT

**ADELAIDE** 

PROPERTY ADDRESS: LOT 101 LEGOE ROAD, BUCKLAND PARK

SA 5120

TITLE: CT-5144/148

VALUATION NO: 2900381258 ASSESSMENT NO: 10082

OWNER: MRS S B MERCORELLA

In response to your enquiry, I supply the following information:

# PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$988.90	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$-190.00	
Current fines	\$9.80	
Arrears	\$0.00	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$21.45	
Payments/Adjustment	\$-625.15	
TOTAL OUTSTANDING	\$205.00	

#### **OTHER MATTERS**

Legal action taken

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien REFER TO TITLE or caveat in which council has an interest

Pensioner Concession YES

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## **Development Applications**

292/60/1992 Land Division realignment of boundry (2 into 2) exist dwelling and

improvement on each

Date of Decision: 17-Nov-1992 Authority: Council

No Continuing Condition(s)

292/746/1993 Stables and Hayshed

Date of Decision: 04-Aug-1993 Authority: Council

No Continuing Condition(s)

292/1343/2006 Dependent Accommodation

Date of Decision: 18-Dec-2006 Authority: Council

Continuing Condition(s)

1. Except where minor amendments may be required by other relevant Acts, or by conditions imposed by this application, the development shall be established in strict accordance with the details and plans submitted in this development application.

ST/80/2006 Septic Tank System

Date of Decision: 15-Dec-2006 Authority: Council

Continuing Condition(s)

#### Septic/Aerobic Conditions:

The septic tank system within the 100 year Gawler River Flood Plain shall be installed with the top of the tank at the same height as the top of the finished floor level of the house (this will meet the requirement to be at least 300mm above the ADH level of the 1:100 year ARI flood of the Gawler River)

The floor waste gullies and the inspection openings shall be installed such that they are also located at the same height as the top of the finished floor level of the house.

All internal flood waste gully trap risers be fitted with grate valves to prevent overflow in the event of flooding.

The external flood gully overflow point should be at least 50mm below the lowest floor waste gully trap situated within the building.

The shafts shall be effectively sealed to prevent the ingress or egress of water or gas.

The access cover shall be fixed with non ferrous child proof fixings and shall be gas and water tight and removable for maintenance.

The raised inspection opening to the soakage trench shall be 100mm above finished ground level.

- Trenches should be operated 1 at a time in rotation for between 6 and 12 months to allow the soil to recover. This will require a manually operated diversion valve to allow flow diversion.
- The 2.5 m wide strips between the trenches should be closely planted with water seeking native shrubs or tree varieties such as melaleuca or callistemon species. Specific advice should be obtained from a nursery.

Trenches be backfilled with loose friable soil to surface level.

- All under floor plumbing shall be inspected prior to back fill by the independent technical expert. A copy of the certificate of inspection shall be provided to Council prior to operation of plumbing.
- The septic tank system including soakage trench shall be inspected prior to back fill of the system by the independent technical expert. A copy of the certificate of inspection shall be provided to Council prior to operation of the system.
- Soakage trenches and septic tank shall not be located under or next to vehicular traffic areas.
- The septic tank should be pumped out every 4 years to remove sludge. This must be carried out by a licensed waste disposal contractor.

# CERTIFICATE OF INSURANCE DETAILS

CERTIFICATE NO.:	3333/2003
IN FAVOUR OF:	S B Mercorella
IN RESPECT OF:	Dwelling
AT:	Lot 170 Legoe Road Virginia
TO BE CARRIED OUT BY:	Construction Services Australia
BUILDER'S LICENCE NO.:	G 8969
DATE:	09-Oct-2006
TYPE OF COVER:	Statutory
INSURER:	HIA Insurance Services Pty Ltd

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8 May 2008

**SEARCH NO: 14193** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXE Playford

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT: LOT 100 SEC 170 DP 36246 HD OF PORT

**ADELAIDE** 

PROPERTY ADDRESS: LOT 100 LEGOE ROAD, BUCKLAND PARK

SA 5120

TITLE: CT-5144/147 VALUATION NO: 2900381506

ASSESSMENT NO: 10081

OWNER: MR L SEMAK

In response to your enquiry, I supply the following information:

# PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates \$1,258.50 LAST DAY TO PAY 03/09/07

 Rebate/Remissions
 \$-190.00

 Current fines
 \$0.00

 Arrears
 \$0.00

 Legal Fees
 \$0.00

 Property related debts
 \$0.00

 NRM Levy
 \$32.60

Payments/Adjustment \$-1101.10 **TOTAL OUTSTANDING** \$0.00

#### **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien REFER TO TITLE or caveat in which council has an interest

Pensioner Concession YES

<u>Please note:</u> The above information is supplied for the purposes of Section 7 of the Land & Business (Sale and Conveyancing) Act 1994 and relates only to matters in which council has an interest.

# Lot 100 Legoe Road BUCKLAND PARK SA 5120

HW Horticulture West Current zoning: Local Heritage Listing / Registered item under the Development Act NO NO Heritage Listing / Registered item under the SA Heritage Act YES Subject to a Development Consent / Conditions which continue to apply See Attached Document SEE ATTACHED Plan Amendment Report submitted to Minister **SUMMARY** NO Has Minister prepared PAR for public consultation Development Act / Public & Environmental Health Act Notices NO There are obligations to maintain a Septic Tank System SEE BELOW IF **APPLICABLE** SEE CERTIFICATE Proclamations / Agreements OF TITLE Flood Plain Area

Please note: Where Section 34 of the Building Work Contractors Act 1995 requires that building indemnity insurance be taken out in respect of certain types of domestic building work commenced after 1st May 1987, intending purchasers of this property should contact the Council's Building Section for information on whether an insurance policy exists in respect of any building erected on this land.

You should contact the S A Housing Trust, Riverside Centre, North Tce, Adelaide 5000 for information regarding Housing Improvement Act 1940 notices.

You should contact the Adelaide & Mount Lofty Ranges Natural Resource Management, 205 Greenhill Road, Eastwood 5063 for information regarding the Animal and Plant Control Act 1986. Ph. 8273 9100

PLEASE TAKE NOTE: Various areas within the Council are at risk of flooding. The Council is not required by Section 7 of the Land and Business (Sale and Conveyancing) Act 1994 to provide information in relation to whether this property is within a flood risk area or the possible extent of any flood risk as part of this Statement. Nevertheless, the Council can inform you that it has received a report by the Department for Transport, Energy & Infrastructure containing new hydrological data for the Gawler River Flood Plain area which may result in the boundaries of the flood risk area being amended. Flood mapping and modelling has been undertaken using this new hydrological data.

The Floodplain Mapping Report is available at the following website:

http://fredpedler.com/public/content/default.asp?xcid=399

## **Development Applications**

292/60/1992 Land Division re-arrangement of boundry (2 into 2) exist dwelling

and improvement on each

Date of Decision: 17-Nov-1992 Authority: Council

No Continuing Condition(s)

292/565/1999 Verandah

Date of Decision: 20-May-1999 Authority: Council

Continuing Condition(s)

1. The verandah shall not be enclosed without the prior written consent of Council.

292/1300/2003 Dwelling Addition

Date of Decision: 10-May-2004 Authority: Council

Continuing Condition(s)

- Detail of timber trusses to be submitted to the Council and receive consent prior to the trusses being erected (B1.3 of BCA).
- The builder shall at all times provide and maintain a waste receptacle to the reasonable satisfaction of Council on the site in which and at all times all builders waste shall be contained for the duration of the dwelling's construction and such receptacle shall be emptied as required and removed upon completion to licensed waste disposal depot.
- 3. The dwelling extension shall not be separately let or occupied by a separate household.
- 4. The site is to be kept in an orderly condition to the satisfaction of Council.
- 5. All external surfaces to be of colours & materials to match the existing dwelling.

# DEVELOPMENT PLAN AMENDMENTS SUMMARY

Pursuant to Section 24 of the Development Act 1993, several investigations are being undertaken in respect to amending Development Plan policies (e.g. land use zones) that may affect areas within the City of Playford.

As of a change to the Development Act gazetted on the 27th September 2007 all new amendments to the Development Plan will be implemented under a new Development Plan Amendment (DPA) process. However existing amendments to the Development Plan initiated before this time will be finalised under the Plan Amendment Report (PAR) process.

Investigations which have reached the stage of an agreed 'Statement of Intent' associated with either the PAR or DPA process include:

# **Townships and Environs PAR**

A Townships and Environs PAR Statement of Intent has been agreed between Council and the Minister for Planning and Urban Development, and is currently being investigated and drafted. It affects the Townships of Virginia, Angle Vale and One Tree Hill and includes the following considerations:

- Policies to guide the future growth of townships and promote the enhancement of their identity and character;
- The role of townships;
- Retail activity in nearby horticultural areas;
- How horticultural retail impacts on existing centres and value adding to horticultural production;
- Encourage the appropriate development of cellar door sales, restaurants and wineries;
- Tourist accommodation:
- Appropriate transport;
- Design and appearance enhancement to facilitate identity and character;
- Ecologically sensitive design;
- Arts and culture:
- Infrastructure provision; and
- Sustainable growth to facilitate regeneration of surrounding areas.

Minor amendments to the Angle Vale township are being considered to address anomalies, with no additional land for housing being included.

# Munno Para District Centre PAR

A Munno Para District Centre PAR has been prepared by Council and has undertaken public consultation from 25th January 2006 to 27th March 2006. A revised PAR, as a result of consultation, has been approved by Council and is now with the Minister for Urban Development and Planning for consideration.

The PAR impacts on the following development issues:

- The relationship of Munno Para District Centre and Smithfield Township within the hierarchy of all centres within the City of Playford;
- How the Development Plan can assist in developing Munno Para District Centre and Smithfield Township complementary to the rezoned and redeveloped Elizabeth Regional Centre;
- Design and land use policies to promote appropriate activities and facilitate complementary opportunities;
- Integration of centres with transport infrastructure, especially the Smithfield Train Station and other public transport facilities;
- Appropriate shopping, community facilities and mixed land uses and development to meet the needs of the community and the District Centre role;
- Ecologically sustainable design;
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- The possibility for higher density housing in proximity to the centre;
- Infrastructure provision, including storm water and bandwidth;
- Open space/landscaping, pedestrian links, car parking and signage to improve function, identity and character;

- development of public assets; and
- The relationship of Munno Para District Centre and Smithfield Township to Main North Road and Anderson Walk.

### Munno Para Environs Plan Amendment Report

A PAR is currently being finalised for the area surrounding the Munno Para District Centre and will be available for public consultation in the near future.

The Study Area includes the land around the District Centre Zone, which totals 232 hectares, bounded by:

- Curtis Road to the north;
- Main North to the east;
- the southern boundary of the vacant Commonwealth Defence land; and
- Coventry Road to the west.

The study area does not include the Munno Para District Centre Zone.

The PAR will include considerations on the following issues:

- Integration of the locality with transport infrastructure, especially the Smithfield Train
- Station and other public transport facilities;
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- District Centre role based on appropriate performance criteria;
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- character:
- Site contamination and noise impact considerations; and
- Development of public assets.

A new Structure Plan will be introduced to optimise opportunities presented by recent and potential development. Particular elements of the draft structure plan will include:

- Increased medium density residential development opportunities in the immediate
- locality;
- Improving connections and relationships to Smithfield Township and Train Station:
- Reinforcing a desired future character for Anderson Walk and the Smithfield township;
- Improving land use mix, function and amenity around the District Centre through the
- inclusion of performance criteria:
- Improvement of transportation movement (especially heavy vehicles), including
- · gateway identification and appropriate buffers; and
- Incorporating and defining the Smith Creek open space network.

#### Better Development Plan Development Plan Amendment

The City of Playford proposes to review and amend the policies of the City of Playford Development Plan in order to adopt the policy modules, structure and format for Development Plans promoted by Planning SA as part of the Better Development Plans (BDP) project.

In adopting the BDP approach, council will ensure the resulting Development Plan will suitably implement the State Planning Strategy, as well as carry clearly defined local policy directions.

Council expects that the overall understanding of its Development Plan will be improved by adopting the new BDP form and structure. This will represent an improvement on the current Development Plan, making it easier to navigate and comprehend by addressing the clarity and readability issues that have developed over time with the current plan.

The investigations will ensure:

the DPA identifies how all included Desired Character Statements have been derived from the existing text or Objectives/Principles of Development Control of the current Development Plan.

- the DPA identifies the existing policy that forms the basis of all included 'local addition' Objectives/Principles of Development Control.
- the policy referred to as 'local additions' does not undertake or encompass new policy directions.
- all appropriate BDP modules covering the range of issues and land uses pertinent to the council area are taken up and included as the policy core of the new Development Plan.
- the DPA identifies all locally relevant Ministerial policy not directly addressed by the BDP module policy and demonstrates its continued inclusion in the new BDP Development Plan.

## Neighbourhood Centres Development Plan Amendment

The 2003 City of Playford Development Plan Review identified Centres as a hight development policy priority. It included recommendations identifying the need to consider:

- How the Development Plan can assist in redevelopment, including design and land use issues to promote complementary facilities;
- The role and hierarchy of centres;
- Integration with transport infrastructure, especially public transport;
- Shopping and community facilities;
- Higher density housing adjacent centres;
- Design and appearance enhancement including landscaping and maintenance of properties, to facilitate identity and character;
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- Arts and culture:
- Infrastructure provision; and
- Sustainable growth to facilitate regeneration of surrounding areas.

The primary aim of the Neighbourhood Activity Centres DPA is to review the appropriateness of the nominated centres and identify opportunities for improvement and rationalisation. This process includes investigating the potential for the accommodation of mixed use development which is considered one way of reversing the decline in viability and vibrancy of the centres.

A Neighbourhood Activity Centres DPA Statement of Intent has been prepared and is currently with the Minister for Planning and Urban Development for his consideration.

## The following Neighbourhood Centres will be the focus of the DPA:

- Elizabeth Park
- Elizabeth Grove
- Elizabeth Downs
- Elizabeth South
- Craigmore (Yorketown Road)
- Elizabeth Vale
- Elizabeth East
- Elizabeth North

Andrews Farm Local Centre was also reviewed as part of the project, considering an immediate need to support development in the area.

Investigations into the neighbourhood centres in the process of preparing the DPA are underway and will be considered by Council in the second half of 2008.

If you have any queries regarding any of the above Plan Amendment Reports, please contact Stephen Yarwood, Principal Policy Planner on 8256 0345 (direct).

8 May 2008

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**SEARCH NO: 14194** 

CITY OF

FAXE Delayford

City of Playford

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000

ALLOTMENT:

LOT 5 SEC PT 169 DP 63928 HD OF PORT

**ADELAIDE** 

**PROPERTY ADDRESS:** 

LOT 5 LEGOE ROAD, BUCKLAND PARK SA

5120

TITLE:

CT-5916/63

VALUATION NO: ASSESSMENT NO:

290037404\* 10002112

OWNER:

V S RASCHELLA NOMINEES PTY LTD

In response to your enquiry, I supply the following information:

# **PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES**

Current rates declared on 26 June 2007

Current rates	\$1,431.85	LAST DAY <b>T</b> O PA <b>Y</b> 03/09/07
Rebate/Remissions Current fines Arrears Legal Fees Property related debts NRM Levy	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$39.80	
Payments/Adjustment TOTAL OUTSTANDING	\$-1104.65 <b>\$367.00</b>	

# **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession

NO

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# Lot 5 Legoe Road BUCKLAND PARK SA 5120

Current zoning: Horticulture West HW	
Local Heritage Listing / Registered item under the Development Act	NO
Heritage Listing / Registered item under the SA Heritage Act	NO
Subject to a Development Consent / Conditions which continue to apply	NO
Plan Amendment Report submitted to Minister	SEE ATTACHED SUMMARY
Has Minister prepared PAR for public consultation	NO
Development Act / Public & Environmental Health Act Notices	NO

OF TITLE

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For Chief Executive Officer

Proclamations / Agreements

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SEE BELOW IF

APPLICABLE SEE CERTIFICATE

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## **Development Applications**

Nil

# DEVELOPMENT PLAN AMENDMENTS SUMMARY

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8 May 2008

**SEARCH NO: 14195** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXE Playford

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

LOT 18 SEC 171 DP 60145 HD OF PORT

**ADELAIDE** 

**PROPERTY ADDRESS:** 

LOT 18 PARK ROAD, BUCKLAND PARK SA

5120

TITLE:

CT-5883/980

VALUATION NO: ASSESSMENT NO:

2900373995 117461

OWNER:

MR D P SERGI

In response to your enquiry, I supply the following information:

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NRM Levy	\$39.80	
Payments/Adjustment	\$-1471.65	
TOTAL OUTSTANDING	\$0.00	

#### **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession

NO

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# Lot 18 Park Road BUCKLAND PARK SA 5120

ΉW Horticulture West Current zoning: NO Local Heritage Listing / Registered item under the Development Act NO Heritage Listing / Registered item under the SA Heritage Act YES Subject to a Development Consent / Conditions which continue to apply See Attached Document SEE ATTACHED Plan Amendment Report submitted to Minister SUMMARY NO Has Minister prepared PAR for public consultation NO Development Act / Public & Environmental Health Act Notices SEE BELOW IF There are obligations to maintain a Septic Tank System **APPLICABLE** 

OF TITLE

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Proclamations / Agreements

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## **Development Applications**

292/3/2002 **DWELLING** 

Date of Decision: 01-Feb-2002 Authority: Council

Continuing Condition(s)

- The builder shall at all times provide and maintain a waste receptacle to the reasonable satisfaction of Council on the site, in which and at all times all builder's waste shall be contained for the duration of the dwelling's construction and such receptacle shall be emptied as required and removed upon completion to a licensed waste disposal depot.
- 2. Operation of WC doors to comply with SA Housing Code Appendix G1.1.
- 3. Structural engineer's design and calculations for the T beams supporting brickwork over garage openings shall be submitted for Council approval.
- 4. Details of either a registered building work supervisor or private certifier supervising the building work shall be submitted to Council prior to commencement of building work.
- 5. Roof stormwater to be discharged a minimum of five (5) metres away from the building (SAHC C1.12.2)

292/1528/2003 GARAGE VERANDAH

Date of Decision: 08-Oct-2003 Authority: Council

Continuing Condition(s)

- The verandah shall not be enclosed without the prior written consent of Council.
- Roof stormwater to be connected to the street water-table or stormwater easement if available. (SAHC C1.12.2)
- 3. Copy of Building Indemnity Insurance Certificate / CITB Levy Form shall be submitted to Council prior to commencement of building work as per SA Housing Code 1.2.11.

# DEVELOPMENT PLAN AMENDMENTS SUMMARY

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A new Structure Plan will be introduced to optimise opportunities presented by recent and potential development. Particular elements of the draft structure plan will include:

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- Reinforcing a desired future character for Anderson Walk and the Smithfield township;
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- improvement of transportation movement (especially heavy vehicles), including
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- Incorporating and defining the Smith Creek open space network.

#### Better Development Plan Development Plan Amendment

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In adopting the BDP approach, council will ensure the resulting Development Plan will suitably implement the State Planning Strategy, as well as carry clearly defined local policy directions.

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- Design and appearance enhancement including landscaping and maintenance of properties, to facilitate identity and character;
- Ecologically sustainable design;
- Arts and culture:
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- Sustainable growth to facilitate regeneration of surrounding areas.

The primary aim of the Neighbourhood Activity Centres DPA is to review the appropriateness of the nominated centres and identify opportunities for improvement and rationalisation. This process includes investigating the potential for the accommodation of mixed use development which is considered one way of reversing the decline in viability and vibrancy of the centres.

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## The following Neighbourhood Centres will be the focus of the DPA:

- Elizabeth Park
- Elizabeth Grove
- Elizabeth Downs
- Elizabeth South
- Craigmore (Yorketown Road)
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- Elizabeth East
- Elizabeth North

Andrews Farm Local Centre was also reviewed as part of the project, considering an immediate need to support development in the area.

Investigations into the neighbourhood centres in the process of preparing the DPA are underway and will be considered by Council in the second half of 2008.

If you have any queries regarding any of the above Plan Amendment Reports, please contact Stephen Yarwood, Principal Policy Planner on 8256 0345 (direct).

8 May 2008

**SEARCH NO: 14196** 

FAXED Hayford

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

Connell Wagner (SA) Pty Ltd 55 Grenfell Street

C.....

ADELAIDE SA 5000

ALLOTMENT: LOT 17 SEC 171 DP 60145 HD OF PORT

**ADELAIDE** 

PROPERTY ADDRESS: LOT 17 PARK ROAD, BUCKLAND PARK SA

5120

TITLE: CT-5883/979 VALUATION NO: 2900373979

ASSESSMENT NO: 117460

OWNER: MR D P SERGI AND MR A MARANDO AND MRS M MARANDO AND MR V MARANDO

AND MR L MARANDO AND OTHERS.

4000 05 I 40T DAY TO DAY 60/00/07

In response to your enquiry, I supply the following information:

# PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$902.25	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
Current fines	\$0.00	
Arrears	\$0.00	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$17.90	
Payments/Adjustment	\$-920.15	
TOTAL OUTSTANDING	\$0.00	

## **OTHER MATTERS**

Legal action taken

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien REFER TO TITLE or caveat in which council has an interest

Pensioner Concession NO

<u>Please note:</u> The above information is supplied for the purposes of Section 7 of the Land & Business (Sale and Conveyancing) Act 1994 and relates only to matters in which council has an interest.

Current zoning: Horticulture West HW
--------------------------------------

Local Heritage Listing / Registered item under the Development Act NO

Heritage Listing / Registered item under the SA Heritage Act NO

Subject to a Development Consent / Conditions which continue to apply NO

Plan Amendment Report submitted to Minister SEE ATTACHED SUMMARY

Has Minister prepared PAR for public consultation NO

Development Act / Public & Environmental Health Act Notices NO

There are obligations to maintain a Septic Tank System

Proclamations / Agreements

SEE BELOW IF APPLICABLE SEE CERTIFICATE OF TITLE

Please note: Where Section 34 of the Building Work Contractors Act 1995 requires that building indemnity insurance be taken out in respect of certain types of domestic building work commenced after 1st May 1987, intending purchasers of this property should contact the Council's Building Section for information on whether an insurance policy exists in respect of any building erected on this land.

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You should contact the Adelaide & Mount Lofty Ranges Natural Resource Management, 205 Greenhill Road, Eastwood 5063 for information regarding the Animal and Plant Control Act 1986. Ph. 8273 9100

PLEASE TAKE NOTE: Various areas within the Council are at risk of flooding. The Council is not required by Section 7 of the Land and Business (Sale and Conveyancing) Act 1994 to provide information in relation to whether this property is within a flood risk area or the possible extent of any flood risk as part of this Statement. Nevertheless, the Council can inform you that it has received a report by the Department for Transport, Energy & Infrastructure containing new hydrological data for the Gawler River Flood Plain area which may result in the boundaries of the flood risk area being amended. Flood mapping and modelling has been undertaken using this new hydrological data. The Floodplain Mapping Report is available at the following website:

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# **Development Applications**

Nil

# DEVELOPMENT PLAN AMENDMENTS SUMMARY

Pursuant to Section 24 of the Development Act 1993, several investigations are being undertaken in respect to amending Development Plan policies (e.g. land use zones) that may affect areas within the City of Playford.

As of a change to the Development Act gazetted on the 27th September 2007 all new amendments to the Development Plan will be implemented under a new Development Plan Amendment (DPA) process. However existing amendments to the Development Plan initiated before this time will be finalised under the Plan Amendment Report (PAR) process.

Investigations which have reached the stage of an agreed 'Statement of Intent' associated with either the PAR or DPA process include:

# Townships and Environs PAR

A Townships and Environs PAR Statement of Intent has been agreed between Council and the Minister for Planning and Urban Development, and is currently being investigated and drafted. It affects the Townships of Virginia, Angle Vale and One Tree Hill and includes the following considerations:

- Policies to guide the future growth of townships and promote the enhancement of their identity and character;
- The role of townships;
- Retail activity in nearby horticultural areas;
- How horticultural retail impacts on existing centres and value adding to horticultural production;
- Encourage the appropriate development of cellar door sales, restaurants and wineries;
- Tourist accommodation;
- Appropriate transport;
- Design and appearance enhancement to facilitate identity and character;
- Ecologically sensitive design;
- Arts and culture;
- Infrastructure provision; and
- Sustainable growth to facilitate regeneration of surrounding areas.

Minor amendments to the Angle Vale township are being considered to address anomalies, with no additional land for housing being included.

# Munno Para District Centre PAR

A Munno Para District Centre PAR has been prepared by Council and has undertaken public consultation from 25th January 2006 to 27th March 2006. A revised PAR, as a result of consultation, has been approved by Council and is now with the Minister for Urban Development and Planning for consideration.

The PAR impacts on the following development issues:

- The relationship of Munno Para District Centre and Smithfield Township within the hierarchy of all centres within the City of Playford;
- How the Development Plan can assist in developing Munno Para District Centre and Smithfield Township complementary to the rezoned and redeveloped Elizabeth Regional Centre;
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- Appropriate shopping, community facilities and mixed land uses and development to meet the needs of the community and the District Centre role;
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- The possibility for higher density housing in proximity to the centre;
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- Open space/landscaping, pedestrian links, car parking and signage to improve function, identity and character:

- development of public assets; and
- The relationship of Munno Para District Centre and Smithfield Township to Main North Road and Anderson Walk.

### Munno Para Environs Plan Amendment Report

A PAR is currently being finalised for the area surrounding the Munno Para District Centre and will be available for public consultation in the near future.

The Study Area includes the land around the District Centre Zone, which totals 232 hectares, bounded by:

- Curtis Road to the north:
- Main North to the east:
- the southern boundary of the vacant Commonwealth Defence land; and
- Coventry Road to the west.

The study area does not include the Munno Para District Centre Zone.

The PAR will include considerations on the following issues:

- Integration of the locality with transport infrastructure, especially the Smithfield Train
- Station and other public transport facilities;
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- District Centre role based on appropriate performance criteria;
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# The following Neighbourhood Centres will be the focus of the DPA:

- Elizabeth Park
- Elizabeth Grove
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Investigations into the neighbourhood centres in the process of preparing the DPA are underway and will be considered by Council in the second half of 2008.

If you have any queries regarding any of the above Plan Amendment Reports, please contact Stephen Yarwood, Principal Policy Planner on 8256 0345 (direct).

8 May 2008

**SEARCH NO: 14197** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXEDRAYFORD

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

LOT 2 SEC 171 DP 60145 HD OF PORT

**ADELAIDE** 

PROPERTY ADDRESS:

LOT 2 BUCKLAND ROAD, BUCKLAND PARK

SA 5120

TITLE:

CT-5883/978

**VALUATION NO:** 

2900381602

ASSESSMENT NO:

117462

OWNER:

MR D P SERGI AND MR A MARANDO AND MRS M MARANDO AND MR V MARANDO AND MR L MARANDO AND OTHERS.

In response to your enquiry, I supply the following information:

# PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$931.15	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
Current fines	\$0.00	
Arrears	\$0.00	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$19.10	
Payments/Adjustment	\$-950.25	
TOTAL OUTSTANDING	\$0.00	

## **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession

NO

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# Lot 2 Buckland Road BUCKLAND PARK SA 5120

Current zoning: Horticulture West HW	
Local Heritage Listing / Registered item under the Development	Act NO
Heritage Listing / Registered item under the SA Heritage Act	NO
Subject to a Development Consent / Conditions which continue t	o apply NO
Plan Amendment Report submitted to Minister	SEE ATTACHED SUMMARY
Has Minister prepared PAR for public consultation	NO
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8 May 2008

**SEARCH NO: 14187** 

Connell Wagner (SA) Ptv Ltd 55 Grenfell Street ADELAIDE SA 5000

City of Playford Civic Centre 10 Playford Boulevard **ELIZABETH** Mailing Address: 12 Bishopstone Road DAVOREN PARK SA 5113 Ph 8256 0333 Fax 8256 0578

**ALLOTMENT:** 

LOT 3 SEC 7559 DP 41548 HD OF PORT

ADELAIDE, LOT 249 SEC 7559 FP 163217 HD

OF PORT ADELAIDE

PROPERTY ADDRESS:

**LOT 3 PARK ROAD, VIRGINIA SA 5120** 

TITLE:

OWNER:

CT-5251/815, CT-5759/187

VALUATION NO:

2900375026

ASSESSMENT NO:

25197 MALCOLM LEWIS NOMINEES PTY LTD AND

HARTLEY LEWIS NOMINEES PTY LTD

In response to your enquiry, I supply the following information:

# **PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES**

Current rates declared on 26 June 2007

Current rates	\$1,662.90	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
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NRM Levy	\$49.35	
Payments/Adjustment	\$-1712.25	
TOTAL OUTSTANDING	\$0.00	

# **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession NO

Please note: The above information is supplied for the purposes of Section 7 of the Land & Business (Sale and Conveyancing) Act 1994 and relates only to matters in which council has an interest.

## Lot 3 Park Road VIRGINIA SA 5120

HW Current zoning: Horticulture West NO Local Heritage Listing / Registered item under the Development Act NO Heritage Listing / Registered item under the SA Heritage Act YES Subject to a Development Consent / Conditions which continue to apply See Attached Document SEE ATTACHED Plan Amendment Report submitted to Minister SUMMARY NO Has Minister prepared PAR for public consultation Development Act / Public & Environmental Health Act Notices NO SEE BELOW IF There are obligations to maintain a Septic Tank System **APPLICABLE** SEE CERTIFICATE Proclamations / Agreements

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For Chief Executive Officer

Land Management Agreement

OF TITLE

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## **Development Applications**

292/1161/2005

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Carport

Date of Decision:

07-Jul-2005

Authority: Council

Continuing Condition(s)

- 1. Except where minor amendments may be required by other relevant Acts, or by conditions imposed by this application, the development shall be established in strict accordance with the details and plans submitted in this development application.
- 2. The carport shall not be enclosed without the prior written consent of Council.
- 3. All metal clad external surfaces are to be of a suitable factory colour-coated material and in natural colours to Council's satisfaction, or, the whole external surface of the proposed building shall be painted so as to be unobtrusive and minimise any visual intrusion within 28 days of construction.
- 4. Roof stormwater must be connected to the street water table, or stormwater easement if available in accordance with AS3550.3 (F1.1 of BCA).

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## Munno Para District Centre PAR

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- development of public assets; and
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## Munno Para Environs Plan Amendment Report

A PAR is currently being finalised for the area surrounding the Munno Para District Centre and will be available for public consultation in the near future.

The Study Area includes the land around the District Centre Zone, which totals 232 hectares, bounded by:

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- Coventry Road to the west.

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A Neighbourhood Activity Centres DPA Statement of Intent has been prepared and is currently with the Minister for Planning and Urban Development for his consideration.

The following Neighbourhood Centres will be the focus of the DPA:

- Elizabeth Park
- Elizabeth Grove
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- Elizabeth South
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- Elizabeth East
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If you have any queries regarding any of the above Plan Amendment Reports, please contact Stephen Yarwood, Principal Policy Planner on 8256 0345 (direct).

8 May 2008

**SEARCH NO: 14188** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000

City of Playford Civic Centre 10 Playford Boulevard **ELIZABETH** Mailing Address: 12 Bishopstone Road DAVOREN PARK SA 5113 Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

LOT 2 SEC 7559 DP 41548 HD OF PORT

**ADELAIDE** 

PROPERTY ADDRESS:

**LOT 2 PARK ROAD, VIRGINIA SA 5120** 

TITLE:

CT-5251/814

VALUATION NO: ASSESSMENT NO: 2900376758

26933

OWNER:

MR H R LEWIS AND MRS R M LEWIS

In response to your enquiry, I supply the following information:

# PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$992.45	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
Current fines	\$5.15	
Arrears	\$0.00	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Lévy	\$20.65	
Payments/Adjustment	\$-765.25	
TOTAL OUTSTANDING	\$253.00	

# **OTHER MATTERS**

Legal action taken

NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession

NO

Please note: The above information is supplied for the purposes of Section 7 of the Land & Business (Sale and Conveyancing) Act 1994 and relates only to matters in which council has an interest.

# Lot 2 Park Road VIRGINIA SA 5120

Current zoning: Horticulture West HW		
Local Heritage Listing / Registered item under the Development Act	NO	
Heritage Listing / Registered item under the SA Heritage Act	NO	
Subject to a Development Consent / Conditions which continue to apply	YES See Attached Document	
Plan Amendment Report submitted to Minister	SEE ATTACHED SUMMARY	
Has Minister prepared PAR for public consultation	NO	
Development Act / Public & Environmental Health Act Notices	NO	
There are obligations to maintain a Septic Tank System  Proclamations / Agreements	SEE BELOW IF APPLICABLE SEE CERTIFICATE OF TITLE	
Please note: Where Section 34 of the Building Work Contractors Act 1995 requires that building indemnity insurance be taken out in respect of certain types of domestic building work commenced after 1st May 1987, intending purchasers of this property should contact the Council's Building Section for information on whether an insurance policy exists in respect of any building erected on this land.		
You should contact the S A Housing Trust, Riverside Centre, North Tce, Adelaide 5000 for information regarding Housing Improvement Act 1940 notices.		
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	/	

PLEASE TAKE NOTE: Various areas within the Council are at risk of flooding. The Council is not required by Section 7 of the Land and Business (Sale and Conveyancing) Act 1994 to provide information in relation to whether this property is within a flood risk area or the possible extent of any flood risk as part of this Statement. Nevertheless, the Council can inform you that it has received a report by the Department for Transport, Energy & Infrastructure containing new hydrological data for the Gawler River Flood Plain area which may result in the boundaries of the flood risk area being amended. Flood mapping and modelling has been undertaken using this new hydrological data.

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## **Development Applications**

292/1058/2005

-1

Garage

Date of Decision:

16-Sep-2005

Authority: Council

Continuing Condition(s)

- 1. Except where minor amendments may be required by other relevant Acts, or by conditions imposed by this application, the development shall be established in strict accordance with the details and plans submitted in this development application.
- The building shall only be used for storage of vehicles and / or other domestic storage purposes. Any proposal to use the building for human habitation (ie rumpus room) or industrial or commercial purposes shall be first approved by Council.
- 3. No sound shall be emitted from any machinery, equipment or device or from any other source on the subject land which would contravene the Environment Protection Act 1993 and any relevant Environment Protection Policies thereunder and any legislation or policies subsequently passed or made in substitution thereof.
- 4. Roof stormwater to be discharged a minimum of five (5) metres away from the building. (SA Housing Code 12.2)

# DEVELOPMENT PLAN AMENDMENTS SUMMARY

Pursuant to Section 24 of the Development Act 1993, several investigations are being undertaken in respect to amending Development Plan policies (e.g. land use zones) that may affect areas within the City of Playford.

As of a change to the Development Act gazetted on the 27th September 2007 all new amendments to the Development Plan will be implemented under a new Development Plan Amendment (DPA) process. However existing amendments to the Development Plan initiated before this time will be finalised under the Plan Amendment Report (PAR) process.

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## Townships and Environs PAR

A Townships and Environs PAR Statement of Intent has been agreed between Council and the Minister for Planning and Urban Development, and is currently being investigated and drafted. It affects the Townships of Virginia, Angle Vale and One Tree Hill and includes the following considerations:

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1

8 May 2008

**SEARCH NO: 14189** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXE Hayford

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

LOT 1 SEC 7559 DP 41548 HD OF PORT

**ADELAIDE** 

**PROPERTY ADDRESS:** 

**LOT 1 PARK ROAD, VIRGINIA SA 5120** 

TITLE:

CT-5251/813

VALUATION NO: ASSESSMENT NO:

2900376512 25196

OWNER:

MALCOLM LEWIS NOMINEES PTY LTD AND

HARTLEY LEWIS NOMINEES PTY LTD

In response to your enquiry, I supply the following information:

# PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$932.05	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
Current fines	\$0.00	
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Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$18.30	
Payments/Adjustment	\$-950.35 \$0.00	

#### OTHER MATTERS

Legal action taken NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession

NO

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## Lot 1 Park Road VIRGINIA SA 5120

Current zoning: Horticulture West HW NO Local Heritage Listing / Registered item under the Development Act NO Heritage Listing / Registered item under the SA Heritage Act YES Subject to a Development Consent / Conditions which continue to apply See Attached Document SEE ATTACHED Plan Amendment Report submitted to Minister SUMMARY NO Has Minister prepared PAR for public consultation NO Development Act / Public & Environmental Health Act Notices SEE BELOW IF There are obligations to maintain a Septic Tank System **APPLICABLE** SEE CERTIFICATE Proclamations / Agreements OF TITLE Flood Plain Area

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## **Development Applications**

#### 292/292/2003 GREENHOUSE SIGN

Date of Decision: 20-Nov-2003 Authority: Council

Continuing Condition(s)

- 1. The greenhouse must not be positioned closer than 3 metres to the site boundary.
- 2. All stormwater run-off from roofed areas, sheds and or other forms of impervious surfaces or structures shall be determined such that:
  - a) the total volume of run-off entering natural drainage lines and/or public stormwater system is not increased; and
  - b) the quality of run-off water entering natural drainage lines and/or public stormwater system is not reduced. This is achieved by
  - c) providing stormwater detention areas
  - d) separating clean and contaminated stormwater; and
  - e) incorporating stormwater storage and re-use systems.
- 3. The site is to be kept in an orderly condition to the satisfaction of Council.

## DEVELOPMENT PLAN AMENDMENTS SUMMARY

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8 May 2008

**SEARCH NO: 14190** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXE Hayford

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT: LOT 4 SEC PT 169 DP 63928 HD OF PORT

**ADELAIDE** 

PROPERTY ADDRESS: LOT 4 LEGOE ROAD, BUCKLAND PARK SA

5120

TITLE: CT-5916/62 VALUATION NO: 2900374541 ASSESSMENT NO: 10002113

OWNER: V S RASCHELLA NOMINEES PTY LTD

In response to your enquiry, I supply the following information:

TOTAL OUTSTANDING

# PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$1,913.25	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
Current fines	\$0.00	
Arrears	\$0.00	
Legai Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$59.70	
Payments/Adjustment	\$-1479.95	

\$493.00

## **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999 YES RATES

Easement, Right of Way, Restricted covenant, Lien REFER TO TITLE or caveat in which council has an interest

Pensioner Concession NO

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## Lot 4 Legoe Road BUCKLAND PARK SA 5120

Current zoning: Horticulture West HW		
Local Heritage Listing / Registered item under the Development Act	NO	
Heritage Listing / Registered item under the SA Heritage Act	NO	
Subject to a Development Consent / Conditions which continue to apply	NO	
Plan Amendment Report submitted to Minister	SEE ATTACHED SUMMARY	
Has Minister prepared PAR for public consultation	NO	
Development Act / Public & Environmental Health Act Notices	NO	
There are obligations to maintain a Septic Tank System	SEE BELOW IF	
Proclamations / Agreements	SEE CERTIFICATE OF TITLE	
Please note: Where Section 34 of the Building Work Contractors Act 1995 requires that building indemnity insurance be taken out in respect of certain types of domestic building work commenced after 1st May 1987, intending purchasers of this property should contact the Council's Building Section for information on whether an insurance policy exists in respect of any building erected on this land.		

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You should contact the Adelaide & Mount Lofty Ranges Natural Resource Management, 205 Greenhill Road, Eastwood 5063 for information regarding the Animal and Plant Control Act 1986. Ph. 8273 9100

For Chief Executive Officer -----

PLEASE TAKE NOTE: Various areas within the Council are at risk of flooding. The Council is not required by Section 7 of the Land and Business (Sale and Conveyancing) Act 1994 to provide information in relation to whether this property is within a flood risk area or the possible extent of any flood risk as part of this Statement. Nevertheless, the Council can inform you that it has received a report by the Department for Transport, Energy & Infrastructure containing new hydrological data for the Gawler River Flood Plain area which may result in the boundaries of the flood risk area being amended. Flood mapping and modelling has been undertaken using this new hydrological data.

The Floodplain Mapping Report is available at the following website:

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## **Development Applications**

Nil

# DEVELOPMENT PLAN AMENDMENTS SUMMARY

Pursuant to Section 24 of the Development Act 1993, several investigations are being undertaken in respect to amending Development Plan policies (e.g. land use zones) that may affect areas within the City of Playford.

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Investigations which have reached the stage of an agreed 'Statement of Intent' associated with either the PAR or DPA process include:

## Townships and Environs PAR

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- The role of townships;
- Retail activity in nearby horticultural areas;
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#### Munno Para District Centre PAR

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The PAR impacts on the following development issues:

- The relationship of Munno Para District Centre and Smithfield Township within the hierarchy of all centres within the City of Playford;
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- Integration of centres with transport infrastructure, especially the Smithfield Train Station and other public transport facilities;
- Appropriate shopping, community facilities and mixed land uses and development to meet the needs of the community and the District Centre role;
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- development of public assets; and
- The relationship of Munno Para District Centre and Smithfield Township to Main North Road and Anderson Walk.

#### Munno Para Environs Plan Amendment Report

A PAR is currently being finalised for the area surrounding the Munno Para District Centre and will be available for public consultation in the near future.

The Study Area includes the land around the District Centre Zone, which totals 232 hectares, bounded by:

- Curtis Road to the north:
- Main North to the east;
- the southern boundary of the vacant Commonwealth Defence land; and
- Coventry Road to the west.

The study area does not include the Munno Para District Centre Zone.

The PAR will include considerations on the following issues:

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#### Neighbourhood Centres Development Plan Amendment

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8 May 2008

**SEARCH NO: 14191** 

Connell Wagner (SA) Pty Ltd 55 Grenfeil Street ADELAIDE SA 5000 FAXE DARWFORD

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

LOT 1 SEC PT169 DP 63928 HD OF PORT

**ADELAIDE** 

**PROPERTY ADDRESS:** 

LOT 1 LEGOE ROAD, BUCKLAND PARK SA

5120

TITLE:

CT-5916/59

VALUATION NO:

2900377849 10002806

ASSESSMENT NO: OWNER:

MR D N TRIMBOLI AND MR D N TRIMBOLI

AND MRS M TRIMBOLI

In response to your enquiry, I supply the following information:

# **PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES**

Current rates declared on 26 June 2007

Current rates	\$883.00	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
Current fines	\$8.80	
Arrears	\$210.50	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$17.10	
Payments/Adjustment	\$-894.40	
TOTAL OUTSTANDING	\$225.00	

## **OTHER MATTERS**

Legal action taken

NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession

NO

<u>Please note:</u> The above information is supplied for the purposes of Section 7 of the Land & Business (Sale and Conveyancing) Act 1994 and relates only to matters in which council has an interest.

## Lot 1 Legoe Road BUCKLAND PARK SA 5120

Current zoning: Horticulture West HW	
Local Heritage Listing / Registered item under the Development Act	NO
Heritage Listing / Registered item under the SA Heritage Act	NO
Subject to a Development Consent / Conditions which continue to apply	NO
Plan Amendment Report submitted to Minister	SEE ATTACHED SUMMARY
Has Minister prepared PAR for public consultation	NO
Development Act / Public & Environmental Health Act Notices	NO
There are obligations to maintain a Septic Tank System  Proclamations / Agreements	SEE BELOW IF APPLICABLE SEE CERTIFICATE OF TITLE

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## **Development Applications**

Nil

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## Munno Para District Centre PAR

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Investigations into the neighbourhood centres in the process of preparing the DPA are underway and will be considered by Council in the second half of 2008.

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8 May 2008

**SEARCH NO: 14183** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXE Playford

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

LOT 134 SEC 7553 FP 162483 HD OF PORT

ADELAIDE, LOT 134 SEC 7551 FP 162483 HD

OF PORT ADELAIDE

PROPERTY ADDRESS:

LOT 134 REEDY ROAD, BUCKLAND PARK

SA 5120

TITLE:

CT-5755/199

VALUATION NO:

2900379000

**ASSESSMENT NO:** 

10091

OWNER:

MR M ALLOUCHE AND MR T SUKKAR AND

MR M O ALLOUCHE

In response to your enquiry, I supply the following information:

### PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

\$1,297.05	LAST DAY TO PAY 03/09/07
\$0.00	
\$34.75	
\$0.00	
\$271.50	
\$0.00	
\$34.20	
\$-335.25	
\$1302.25	
	\$0.00 \$34.75 \$0.00 \$271.50 \$0.00 \$34.20 \$-335.25

#### **OTHER MATTERS**

Legal action taken YES

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien REFER TO TITLE or caveat in which council has an interest

Pensioner Concession NO

<u>Please note:</u> The above information is supplied for the purposes of Section 7 of the Land & Business (Sale and Conveyancing) Act 1994 and relates only to matters in which council has an interest.

For Chief Executive Officer

# Lot 134 Reedy Road **BUCKLAND PARK SA 5120**

HW Horticulture West Current zoning: Local Heritage Listing / Registered item under the Development Act Heritage Listing / Registered item under the SA Heritage Act Subject to a Development Consent / Conditions which continue to apply See attached Document SEE ATTACHED Plan Amendment Report submitted to Minister **SUMMARY** Has Minister prepared PAR for public consultation Development Act / Public & Environmental Health Act Notices

SEE BELOW IF There are obligations to maintain a Septic Tank System **APPLICABLE** SEE CERTIFICATE Proclamations / Agreements OF TITLE Flood Plain Area

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For Chief Executive Officer

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NO

YES

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#### **Development Applications**

292/688/1991 Stables (6) Harness Shed and Shed Date of Decision: 16-Jan-1992 Authority: Council No Continuing Condition(s)

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8 May 2008

**SEARCH NO: 14184** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000

CITY OF

City of Playford Civic Centre 10 Playford Boulevard ELIZABETH Mailing Address: 12 Bishopstone Road DAVOREN PARK SA 5113 Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

LOT 267 SEC 7556 FP 163235 HD OF PORT

**ADELAIDE** 

PROPERTY ADDRESS:

LOT 267 LEGOE ROAD, BUCKLAND PARK

**SA 5120** 

TITLE:

CT-5303/891

**VALUATION NO:** 

2900378008

ASSESSMENT NO:

10084

OWNER:

MR G TRIMBOLI AND MRS D TRIMBOLI

In response to your enquiry, I supply the following information:

# PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$842.55	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
Current fines	\$8.45	
Arrears	\$199.00	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$15.40	
Payments/Adjustment	\$-851.40	
TOTAL OUTSTANDING	\$214.00	

#### **OTHER MATTERS**

Legal action taken

NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession

NO

Please note: The above information is supplied for the purposes of Section 7 of the Land & Business (Sale and Conveyancing) Act 1994 and relates only to matters in which council has an interest.

For Chief Executive Officer

# Lot 267 Legoe Road BUCKLAND PARK SA 5120

Current zoning: Horticulture West HW	
Local Heritage Listing / Registered item under the Development Act	NO
Heritage Listing / Registered item under the SA Heritage Act	NO
Subject to a Development Consent / Conditions which continue to apply	y NO
Plan Amendment Report submitted to Minister	SEE ATTACHED SUMMARY
Has Minister prepared PAR for public consultation	NO
Development Act / Public & Environmental Health Act Notices	NO
There are obligations to maintain a Septic Tank System	SEE BELOW IF

Please note: Where Section 34 of the Building Work Contractors Act 1995 requires that building indemnity insurance be taken out in respect of certain types of domestic building work commenced after 1st May 1987, intending purchasers of this property should contact the Council's Building Section for information on whether an insurance policy exists in respect of any building erected on this land.

You should contact the S A Housing Trust, Riverside Centre, North Tce, Adelaide 5000 for information regarding Housing Improvement Act 1940 notices.

You should contact the Adelaide & Mount Lofty Ranges Natural Resource Management, 205 Greenhill Road, Eastwood 5063 for information regarding the Animal and Plant Control Act 1986. Ph. 8273 9100

For Chief Executive Officer

Proclamations / Agreements

Flood Plain Area

APPLICABLE SEE CERTIFICATE

OF TITLE

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http://fredpedler.com/public/content/default.asp?xcid=399

# **Development Applications**

Nil

# DEVELOPMENT PLAN AMENDMENTS SUMMARY

Pursuant to Section 24 of the Development Act 1993, several investigations are being undertaken in respect to amending Development Plan policies (e.g. land use zones) that may affect areas within the City of Playford.

As of a change to the Development Act gazetted on the 27th September 2007 all new amendments to the Development Plan will be implemented under a new Development Plan Amendment (DPA) process. However existing amendments to the Development Plan initiated before this time will be finalised under the Plan Amendment Report (PAR) process.

Investigations which have reached the stage of an agreed 'Statement of Intent' associated with either the PAR or DPA process include:

# Townships and Environs PAR

A Townships and Environs PAR Statement of Intent has been agreed between Council and the Minister for Planning and Urban Development, and is currently being investigated and drafted. It affects the Townships of Virginia, Angle Vale and One Tree Hill and includes the following considerations:

- Policies to guide the future growth of townships and promote the enhancement of their identity and character;
- The role of townships;
- Retail activity in nearby horticultural areas;
- How horticultural retail impacts on existing centres and value adding to horticultural production;
- Encourage the appropriate development of cellar door sales, restaurants and wineries;
- Tourist accommodation;
- Appropriate transport;
- Design and appearance enhancement to facilitate identity and character;
- Ecologically sensitive design;
- Arts and culture;
- Infrastructure provision; and
- Sustainable growth to facilitate regeneration of surrounding areas.

Minor amendments to the Angle Vale township are being considered to address anomalies, with no additional land for housing being included.

#### Munno Para District Centre PAR

A Munno Para District Centre PAR has been prepared by Council and has undertaken public consultation from 25th January 2006 to 27th March 2006. A revised PAR, as a result of consultation, has been approved by Council and is now with the Minister for Urban Development and Planning for consideration.

The PAR impacts on the following development issues:

- The relationship of Munno Para District Centre and Smithfield Township within the hierarchy of all centres within the City of Playford;
- How the Development Plan can assist in developing Munno Para District Centre and Smithfield Township complementary to the rezoned and redeveloped Elizabeth Regional Centre;
- Design and land use policies to promote appropriate activities and facilitate complementary opportunities;
- Integration of centres with transport infrastructure, especially the Smithfield Train Station and other public transport facilities;
- Appropriate shopping, community facilities and mixed land uses and development to meet the needs of the community and the District Centre role;
- Ecologically sustainable design;
- Arts and cultural expression to reflect community values;
- The possibility for higher density housing in proximity to the centre;
- Infrastructure provision, including storm water and bandwidth;
- Open space/landscaping, pedestrian links, car parking and signage to improve function, identity and character;

- development of public assets; and
- The relationship of Munno Para District Centre and Smithfield Township to Main North Road and Anderson Walk.

#### Munno Para Environs Plan Amendment Report

A PAR is currently being finalised for the area surrounding the Munno Para District Centre and will be available for public consultation in the near future.

The Study Area includes the land around the District Centre Zone, which totals 232 hectares, bounded by:

- Curtis Road to the north;
- Main North to the east;
- the southern boundary of the vacant Commonwealth Defence land; and
- Coventry Road to the west.

The study area does not include the Munno Para District Centre Zone.

The PAR will include considerations on the following issues:

- Integration of the locality with transport infrastructure, especially the Smithfield Train
- Station and other public transport facilities;
- Appropriate land uses and development to meet the needs of the community and the
- District Centre role based on appropriate performance criteria;
- Ecologically sustainable design:
- Arts and cultural expression to reflect community values:
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- character;
- Site contamination and noise impact considerations; and
- Development of public assets.

A new Structure Plan will be introduced to optimise opportunities presented by recent and potential development. Particular elements of the draft structure plan will include:

- Increased medium density residential development opportunities in the immediate
- locality;
- Improving connections and relationships to Smithfield Township and Train Station;
- Reinforcing a desired future character for Anderson Walk and the Smithfield township:
- Improving land use mix, function and amenity around the District Centre through the
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- Improvement of transportation movement (especially heavy vehicles), including
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- Incorporating and defining the Smith Creek open space network.

#### Better Development Plan Development Plan Amendment

The City of Playford proposes to review and amend the policies of the City of Playford Development Plan in order to adopt the policy modules, structure and format for Development Plans promoted by Planning SA as part of the Better Development Plans (BDP) project.

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The investigations will ensure:

the DPA identifies how all included Desired Character Statements have been derived from the existing text or Objectives/Principles of Development Control of the current Development Plan.

- the DPA identifies the existing policy that forms the basis of all included 'local addition' Objectives/Principles of Development Control.
- the policy referred to as 'local additions' does not undertake or encompass new policy directions.
- all appropriate BDP modules covering the range of issues and land uses pertinent to the council area are taken up and included as the policy core of the new Development Plan.
- the DPA identifies all locally relevant Ministerial policy not directly addressed by the BDP module policy and demonstrates its continued inclusion in the new BDP Development Plan.

### Neighbourhood Centres Development Plan Amendment

The 2003 City of Playford Development Plan Review identified Centres as a hight development policy priority. It included recommendations identifying the need to consider:

- How the Development Plan can assist in redevelopment, including design and land use issues to promote complementary facilities;
- The role and hierarchy of centres;
- Integration with transport infrastructure, especially public transport;
- Shopping and community facilities;
- Higher density housing adjacent centres;
- Design and appearance enhancement including landscaping and maintenance of properties, to facilitate identity and character;
- Ecologically sustainable design;
- Arts and culture:
- Infrastructure provision; and
- Sustainable growth to facilitate regeneration of surrounding areas.

The primary aim of the Neighbourhood Activity Centres DPA is to review the appropriateness of the nominated centres and identify opportunities for improvement and rationalisation. This process includes investigating the potential for the accommodation of mixed use development which is considered one way of reversing the decline in viability and vibrancy of the centres.

A Neighbourhood Activity Centres DPA Statement of Intent has been prepared and is currently with the Minister for Planning and Urban Development for his consideration.

#### The following Neighbourhood Centres will be the focus of the DPA:

- Elizabeth Park
- Elizabeth Grove
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Andrews Farm Local Centre was also reviewed as part of the project, considering an immediate need to support development in the area.

Investigations into the neighbourhood centres in the process of preparing the DPA are underway and will be considered by Council in the second half of 2008.

If you have any queries regarding any of the above Plan Amendment Reports, please contact Stephen Yarwood, Principal Policy Planner on 8256 0345 (direct).

8 May 2008

**SEARCH NO: 14185** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXED Playford

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

**LOT 2 SEC PT 169 DP 63928 HD OF PORT** 

**ADELAIDE** 

**PROPERTY ADDRESS:** 

LOT 2 LEGOE ROAD, BUCKLAND PARK SA

5120

TITLE:

CT-5916/60

VALUATION NO: ASSESSMENT NO:

2900377443

OWNER:

10002159

MR D N TRIMBOLI AND MR D N TRIMBOLI

AND MRS M TRIMBOLI

In response to your enquiry, I supply the following information:

# PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$1,547.35	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
Current fines	\$15.90	
Arrears	\$396.30	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$44.55	
Payments/Adjustment	\$-1607.05	
TOTAL OUTSTANDING	\$397.05	

#### **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession

NO

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For Chief Executive Officer

### Lot 2 Legoe Road BUCKLAND PARK SA 5120

HW Horticulture West Current zoning: NO Local Heritage Listing / Registered item under the Development Act NO Heritage Listing / Registered item under the SA Heritage Act YES Subject to a Development Consent / Conditions which continue to apply See Attached Document SEE ATTACHED Plan Amendment Report submitted to Minister **SUMMARY** Has Minister prepared PAR for public consultation NO NO Development Act / Public & Environmental Health Act Notices

OF TITLE

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For Chief Executive Officer

Proclamations / Agreements

respect of any building erected on this land.

SEE BELOW IF

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#### **Development Applications**

292/1949/2004

Garage

Date of Decision: 2

23-Nov-2004

Authority: Council

Continuing Condition(s)

- 1. Except where minor amendments may be required by other relevant Acts, or by conditions imposed by this application, the development shall be established in strict accordance with the details and plans submitted in this development application.
- The building shall only be used for storage of vehicles and / or other domestic storage purposes. Any proposal to use the building for human habitation (ie rumpus room) or industrial or commercial purposes shall be first approved by Council.
- 3. Roof stormwater to be discharged a minimum of five (5) metres away from the building. (SA Housing Code 12.2)

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8 May 2008

**SEARCH NO: 14186** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXED Playford

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

LOT 3 SEC PT 169 DP 63928 HD OF PORT

**ADELAIDE** 

**PROPERTY ADDRESS:** 

LOT 3 LEGOE ROAD, BUCKLAND PARK SA

5120

TITLE:

CT-5916/61

VALUATION NO:

2900377048

ASSESSMENT NO:

10002158

OWNER:

MR D N TRIMBOLI AND MR D N TRIMBOLI

AND MRS M TRIMBOLI

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Arrears	\$233.45	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$19.90	
Payments/Adjustment	\$-971.35	
TOTAL OUTSTANDING	\$242.00	

# **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession

NO

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For Chief Executive Officer

### Lot 3 Legoe Road BUCKLAND PARK SA 5120

Current zoning: Horticulture West HW	
Local Heritage Listing / Registered item under the Development Act	NO
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Subject to a Development Consent / Conditions which continue to apply	NO
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# Neighbourhood Centres Development Plan Amendment

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- How the Development Plan can assist in redevelopment, including design and land use issues to promote complementary facilities;
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- Integration with transport infrastructure, especially public transport;
- Shopping and community facilities;
- Higher density housing adjacent centres;
- Design and appearance enhancement including landscaping and maintenance of properties, to facilitate identity and character;
- Ecologically sustainable design;
- Arts and culture;
- Infrastructure provision; and
- Sustainable growth to facilitate regeneration of surrounding areas.

The primary aim of the Neighbourhood Activity Centres DPA is to review the appropriateness of the nominated centres and identify opportunities for improvement and rationalisation. This process includes investigating the potential for the accommodation of mixed use development which is considered one way of reversing the decline in viability and vibrancy of the centres.

A Neighbourhood Activity Centres DPA Statement of Intent has been prepared and is currently with the Minister for Planning and Urban Development for his consideration.

# The following Neighbourhood Centres will be the focus of the DPA:

- Elizabeth Park
- Elizabeth Grove
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- Elizabeth South
- Craigmore (Yorketown Road)
- Elizabeth Vale
- Elizabeth East
- Elizabeth North

Andrews Farm Local Centre was also reviewed as part of the project, considering an immediate need to support development in the area.

Investigations into the neighbourhood centres in the process of preparing the DPA are underway and will be considered by Council in the second half of 2008.

If you have any queries regarding any of the above Plan Amendment Reports, please contact Stephen Yarwood, Principal Policy Planner on 8256 0345 (direct).

8 May 2008

**SEARCH NO: 14198** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXEQuatord

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

LOT 1 SEC 171 DP 60145 HD OF PORT

**ADELAIDE** 

PROPERTY ADDRESS:

LOT 1 LEGOE ROAD, BUCKLAND PARK SA

5120

TITLE:

CT-5883/977

VALUATION NO: ASSESSMENT NO:

2900381805 117463

OWNER:

MRS D AZZURRO AND MR F AZZURRO

In response to your enquiry, I supply the following information:

# PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$921.50	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
Current fines	\$0.00	
Arrears	\$0.00	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$18.70	
Payments/Adjustment	\$-940.20	
TOTAL OUTSTANDING	\$0.00	

# **OTHER MATTERS**

Legal action taken

NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession

NO

<u>Please note:</u> The above information is supplied for the purposes of Section 7 of the Land & Business (Sale and Conveyancing) Act 1994 and relates only to matters in which council has an interest.

For Chief Executive Officer

# Lot 1 Legoe Road BUCKLAND PARK SA 5120

Current zoning: Horticulture West HW	
Local Heritage Listing / Registered item under the Development Act	NO
Heritage Listing / Registered item under the SA Heritage Act	NO
Subject to a Development Consent / Conditions which continue to apply	NO
Plan Amendment Report submitted to Minister	SEE ATTACHED SUMMARY
Has Minister prepared PAR for public consultation	NO
Development Act / Public & Environmental Health Act Notices	NO

Please note: Where Section 34 of the Building Work Contractors Act 1995 requires that building indemnity insurance be taken out in respect of certain types of domestic building work commenced after 1st May 1987, intending purchasers of this property should contact the Council's Building Section for information on whether an insurance policy exists in respect of any building erected on this land.

There are obligations to maintain a Septic Tank System

You should contact the S A Housing Trust, Riverside Centre, North Tce, Adelaide 5000 for information regarding Housing Improvement Act 1940 notices.

You should contact the Adelaide & Mount Lofty Ranges Natural Resource Management, 205 Greenhill Road, Eastwood 5063 for information regarding the Animal and Plant Control Act 1986. Ph. 8273 9100

For Chief Executive Officer

Proclamations / Agreements

SEE BELOW IF

APPLICABLE SEE CERTIFICATE

OF TITLE

PLEASE TAKE NOTE: Various areas within the Council are at risk of flooding. The Council is not required by Section 7 of the Land and Business (Sale and Conveyancing) Act 1994 to provide information in relation to whether this property is within a flood risk area or the possible extent of any flood risk as part of this Statement. Nevertheless, the Council can inform you that it has received a report by the Department for Transport, Energy & Infrastructure containing new hydrological data for the Gawler River Flood Plain area which may result in the boundaries of the flood risk area being amended. Flood mapping and modelling has been undertaken using this new hydrological data. The Floodplain Mapping Report is available at the following website:

http://fredpedler.com/public/content/default.asp?xcid=399

# **Development Applications**

Nil

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# DEVELOPMENT PLAN AMENDMENTS SUMMARY

Pursuant to Section 24 of the Development Act 1993, several investigations are being undertaken in respect to amending Development Plan policies (e.g. land use zones) that may affect areas within the City of Playford.

As of a change to the Development Act gazetted on the 27th September 2007 all new amendments to the Development Plan will be implemented under a new Development Plan Amendment (DPA) process. However existing amendments to the Development Plan initiated before this time will be finalised under the Plan Amendment Report (PAR) process.

Investigations which have reached the stage of an agreed 'Statement of Intent' associated with either the PAR or DPA process include:

### Townships and Environs PAR

A Townships and Environs PAR Statement of Intent has been agreed between Council and the Minister for Planning and Urban Development, and is currently being investigated and drafted. It affects the Townships of Virginia, Angle Vale and One Tree Hill and includes the following considerations:

- Policies to guide the future growth of townships and promote the enhancement of their identity and character;
- The role of townships;
- Retail activity in nearby horticultural areas;
- How horticultural retail impacts on existing centres and value adding to horticultural production;
- Encourage the appropriate development of cellar door sales, restaurants and wineries;
- Tourist accommodation;
- Appropriate transport;
- Design and appearance enhancement to facilitate identity and character;
- Ecologically sensitive design;
- Arts and culture:
- Infrastructure provision; and
- Sustainable growth to facilitate regeneration of surrounding areas.

Minor amendments to the Angle Vale township are being considered to address anomalies, with no additional land for housing being included.

# Munno Para District Centre PAR

A Munno Para District Centre PAR has been prepared by Council and has undertaken public consultation from 25th January 2006 to 27th March 2006. A revised PAR, as a result of consultation, has been approved by Council and is now with the Minister for Urban Development and Planning for consideration.

The PAR impacts on the following development issues:

- The relationship of Munno Para District Centre and Smithfield Township within the hierarchy of all centres within the City of Playford;
- How the Development Plan can assist in developing Munno Para District Centre and Smithfield Township complementary to the rezoned and redeveloped Elizabeth Regional Centre;
- Design and land use policies to promote appropriate activities and facilitate complementary opportunities;
- Integration of centres with transport infrastructure, especially the Smithfield Train Station and other public transport facilities;
- Appropriate shopping, community facilities and mixed land uses and development to meet the needs of the community and the District Centre role;
- Ecologically sustainable design;
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- Open space/landscaping, pedestrian links, car parking and signage to improve function, identity and character;

- development of public assets; and
- The relationship of Munno Para District Centre and Smithfield Township to Main North Road and Anderson Walk.

#### Munno Para Environs Plan Amendment Report

A PAR is currently being finalised for the area surrounding the Munno Para District Centre and will be available for public consultation in the near future.

The Study Area includes the land around the District Centre Zone, which totals 232 hectares, bounded by:

- Curtis Road to the north;
- Main North to the east:
- the southern boundary of the vacant Commonwealth Defence land; and
- Coventry Road to the west.

The study area does not include the Munno Para District Centre Zone.

The PAR will include considerations on the following issues:

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- character:
- Site contamination and noise impact considerations; and
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A new Structure Plan will be introduced to optimise opportunities presented by recent and potential development. Particular elements of the draft structure plan will include:

- Increased medium density residential development opportunities in the immediate
- locality;
- Improving connections and relationships to Smithfield Township and Train Station;
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- inclusion of performance criteria:
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- Arts and culture;
- Infrastructure provision; and
- Sustainable growth to facilitate regeneration of surrounding areas.

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- Elizabeth Grove
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Investigations into the neighbourhood centres in the process of preparing the DPA are underway and will be considered by Council in the second half of 2008.

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8 May 2008

**SEARCH NO: 14199** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXE Playford

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

LOT 5 SEC 172 DP 58107 HD OF PORT

**ADELAIDE** 

PROPERTY ADDRESS:

LOT 5 LEGOE ROAD, BUCKLAND PARK SA

5120

TITLE:

CT-5864/500

VALUATION NO: ASSESSMENT NO:

2900373960 113809

OWNER:

MR T CHAO AND MR M KONG AND MR E

CHAN AND MR C YAU AND MR C Y EANG

AND MR S CHAN

In response to your enquiry, I supply the following information:

### PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$931.15	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
Current fines	\$0.00	
Arrears	\$0.00	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$19.10	
Payments/Adjustment	\$-950.25	
TOTAL OUTSTANDING	\$0.00	

#### **OTHER MATTERS**

Legal action taken

NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession

NO

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For Chief Executive Officer

# Lot 5 Legoe Road BUCKLAND PARK SA 5120

Current zoning:

Horticulture West

HW

Local Heritage Listing / Registered item under the Development Act

NO

Heritage Listing / Registered item under the SA Heritage Act

NO

Subject to a Development Consent / Conditions which continue to apply

YES See Attached Document

Plan Amendment Report submitted to Minister

SEE ATTACHED SUMMARY

Has Minister prepared PAR for public consultation

NO

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NO

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### **Development Applications**

292/1547/2006

Storage Shed 19-Oct-2006

Date of Decision:

Authority: Council

Continuing Condition(s)

- 1. Except where minor amendments may be required by other relevant Acts, or by conditions imposed by this application, the development shall be established in strict accordance with the details and plans submitted in this development application.
- Roof stormwater is to be discharged a minimum of five (5) metres away from the 2. building (F1.1 of BCA).
- The finished floor level shall be a minimum of 5.55m AHD. 3.

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- Shopping and community facilities;
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- Elizabeth North

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Investigations into the neighbourhood centres in the process of preparing the DPA are underway and will be considered by Council in the second half of 2008.

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8 May 2008

4.3

**SEARCH NO: 14200** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXED CITY OF Hayford

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

LOT 4 SEC 172 DP 58107 HD OF PORT

ADELAIDE, LOT 4 SEC 502 DP 58107 HD OF

PORT ADELAIDE

**PROPERTY ADDRESS:** 

LOT 4 LEGOE ROAD, BUCKLAND PARK SA

5120

TITLE:

CT-5864/501

VALUATION NO:

2900373944

ASSESSMENT NO:

113808

OWNER:

CITY OF PLAYFORD

In response to your enquiry, I supply the following information:

# PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$0.00	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
Current fines	\$0.00	
Arrears	\$0.00	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$0.00	
Payments/Adjustment	\$0.00	
TOTAL OUTSTANDING	\$0.00	

# OTHER MATTERS THIS PROPERTY IS CURRENTLY NON-RATEABLE AS IT IS COUNCIL OWNED BUT UPON SALE THIS WILL NO LONGER APPLY

Legal action taken

NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

**REFER TO TITLE** 

or cavear in which council has an interes

Pensioner Concession

NO

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#### Lot 4 Legoe Road BUCKLAND PARK SA 5120

Current zoning:

Horticulture West

HW

Local Heritage Listing / Registered item under the Development Act

NO

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Subject to a Development Consent / Conditions which continue to apply

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Plan Amendment Report submitted to Minister

SEE ATTACHED SUMMARY

Has Minister prepared PAR for public consultation

NO

Development Act / Public & Environmental Health Act Notices

NO

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Proclamations / Agreements

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For Chief Executive Officer

00020829.DOC

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## **Development Applications**

Nil

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- The possibility for higher density housing in proximity to the centre;
- Infrastructure provision, including storm water and bandwidth;
- Open space/landscaping, pedestrian links, car parking and signage to improve function, identity and character:

- · development of public assets; and
- The relationship of Munno Para District Centre and Smithfield Township to Main North Road and Anderson Walk.

#### Munno Para Environs Plan Amendment Report

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The Study Area includes the land around the District Centre Zone, which totals 232 hectares, bounded by:

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- Main North to the east:
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The PAR will include considerations on the following issues:

- Integration of the locality with transport infrastructure, especially the Smithfield Train
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- character
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### The following Neighbourhood Centres will be the focus of the DPA:

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- Elizabeth Grove
- Elizabeth Downs
- Elizabeth South
- Craigmore (Yorketown Road)
- Elizabeth Vale
- Elizabeth East
- Elizabeth North

Andrews Farm Local Centre was also reviewed as part of the project, considering an immediate need to support development in the area.

Investigations into the neighbourhood centres in the process of preparing the DPA are underway and will be considered by Council in the second half of 2008.

If you have any queries regarding any of the above Plan Amendment Reports, please contact Stephen Yarwood, Principal Policy Planner on 8256 0345 (direct).

8 May 2008

**SEARCH NO: 14201** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXED CITY OF Flayford

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

PART LOT 1 SEC 172 DP 58107 HD OF PORT ADELAIDE, PART LOT 2 SEC 172 DP 58107 HD OF PORT ADELAIDE BART LOT 3 SEC

HD OF PORT ADELAIDE, PART LOT 3 SEC 172 DP 58107 HD OF PORT ADELAIDE

**PROPERTY ADDRESS:** 

PART LOT 1 BROOKS ROAD, BUCKLAND

PARK SA 5120

TITLE:

CT-5864/499

VALUATION NO:

2900373928

ASSESSMENT NO: OWNER:

113810 MR V H TRUONG AND N TRAN

In response to your enquiry, I supply the following information:

## **PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES**

Current rates declared on 26 June 2007

Current rates	\$873.35	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
Current fines	\$0.00	
Arrears	\$0.00	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$16.70	
Payments/Adjustment	\$-668.05	
TOTAL OUTSTANDING	\$222.00	

## **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien REFER TO TITLE or caveat in which council has an interest

Pensioner Concession NO

<u>Please note:</u> The above information is supplied for the purposes of Section 7 of the Land & Business (Sale and Conveyancing) Act 1994 and relates only to matters in which council has an interest.

## Part Lot 1 Brooks Road BUCKLAND PARK SA 5120

Current zoning: Horticulture West HW	
Local Heritage Listing / Registered item under the Development Act	NO
Heritage Listing / Registered item under the SA Heritage Act	NO
Subject to a Development Consent / Conditions which continue to apply	NO
Plan Amendment Report submitted to Minister	SEE ATTACHED SUMMARY
Has Minister prepared PAR for public consultation	NO
Development Act / Public & Environmental Health Act Notices	NO
There are obligations to maintain a Septic Tank System	SEE BELOW IF APPLICABLE

Please note: Where Section 34 of the Building Work Contractors Act 1995 requires that building indemnity insurance be taken out in respect of certain types of domestic building work commenced after 1st May 1987, intending purchasers of this property should contact the Council's Building Section for information on whether an insurance policy exists in respect of any building erected on this land.

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You should contact the Adelaide & Mount Lofty Ranges Natural Resource Management, 205 Greenhill Road, Eastwood 5063 for information regarding the Animal and Plant Control Act 1986. Ph. 8273 9100

For Chief Executive Officer

Proclamations / Agreements

SEE CERTIFICATE

OF TITLE

PLEASE TAKE NOTE: Various areas within the Council are at risk of flooding. The Council is not required by Section 7 of the Land and Business (Sale and Conveyancing) Act 1994 to provide information in relation to whether this property is within a flood risk area or the possible extent of any flood risk as part of this Statement. Nevertheless, the Council can inform you that it has received a report by the Department for Transport, Energy & Infrastructure containing new hydrological data for the Gawler River Flood Plain area which may result in the boundaries of the flood risk area being amended. Flood mapping and modelling has been undertaken using this new hydrological data.

The Floodplain Mapping Report is available at the following website:

http://fredpedler.com/public/content/default.asp?xcid=399

# **Development Applications**

Nil

# DEVELOPMENT PLAN AMENDMENTS SUMMARY

Pursuant to Section 24 of the Development Act 1993, several investigations are being undertaken in respect to amending Development Plan policies (e.g. land use zones) that may affect areas within the City of Playford.

As of a change to the Development Act gazetted on the 27th September 2007 all new amendments to the Development Plan will be implemented under a new Development Plan Amendment (DPA) process. However existing amendments to the Development Plan initiated before this time will be finalised under the Plan Amendment Report (PAR) process.

Investigations which have reached the stage of an agreed 'Statement of Intent' associated with either the PAR or DPA process include:

## Townships and Environs PAR

A Townships and Environs PAR Statement of Intent has been agreed between Council and the Minister for Planning and Urban Development, and is currently being investigated and drafted. It affects the Townships of Virginia, Angle Vale and One Tree Hill and includes the following considerations:

- Policies to guide the future growth of townships and promote the enhancement of their identity and character;
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Minor amendments to the Angle Vale township are being considered to address anomalies, with no additional land for housing being included.

## Munno Para District Centre PAR

A Munno Para District Centre PAR has been prepared by Council and has undertaken public consultation from 25th January 2006 to 27th March 2006. A revised PAR, as a result of consultation, has been approved by Council and is now with the Minister for Urban Development and Planning for consideration.

The PAR impacts on the following development issues:

- The relationship of Munno Para District Centre and Smithfield Township within the hierarchy of all centres within the City of Playford;
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8 May 2008

**SEARCH NO: 14203** 

City of Playford

Civic Centre 10 Playford Boulevard ELIZABETH Mailing Address: 12 Bishopstone Road DAVOREN PARK SA 5113 Ph 8256 0333 Fax 8256 0578

CITY OF

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000

> ALLOTMENT: **PROPERTY ADDRESS:**

SEC 504 H 105800 HD OF PORT ADELAIDE PARK ROAD, BUCKLAND PARK SA 5120

TITLE:

CR-5760/605 2900370006

VALUATION NO: **ASSESSMENT NO:** 

10399

OWNER:

THE CROWN

In response to your enquiry, I supply the following information:

## PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$0.00	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
Current fines	\$0.00	
Arrears	\$0.00	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$0.00	
Payments/Adjustment	\$0.00	
TOTAL OUTSTANDING	\$0.00	

## OTHER MATTERS THIS PROPERTY IS CURRENTLY NON-RATEABLE ASOWNED BY THE CROWN BUT UPON SALE THIS WILL NOT APPLY

Legal action taken NO

Notice issued under the Local Government Act 1999 YES RATES

Easement, Right of Way, Restricted covenant, Lien REFER TO TITLE or caveat in which council has an interest

Pensioner Concession NO

Please note: The above information is supplied for the purposes of Section 7 of the Land & Business (Sale and Conveyancing) Act 1994 and relates only to matters in which council has an interest.

## Park Road BUCKLAND PARK SA 5120

Current zoning:

Horticulture West

HW

Local Heritage Listing / Registered item under the Development Act

NO

Heritage Listing / Registered item under the SA Heritage Act

NO

Subject to a Development Consent / Conditions which continue to apply

NO

Plan Amendment Report submitted to Minister

SEE ATTACHED SUMMARY

Has Minister prepared PAR for public consultation

NO

Development Act / Public & Environmental Health Act Notices

NO

There are obligations to maintain a Septic Tank System

SEE BELOW IF APPLICABLE SEE CERTIFICATE OF TITLE

Proclamations / Agreements Flood Plain Area

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8 May 2008

SEARCH NO: 14204

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXED Hayford

\$146

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT: LOT 5 SEC 166 FP 16853 HD OF PORT

**ADELAIDE** 

PROPERTY ADDRESS: LOT 5 BROOKS ROAD, BUCKLAND PARK

SA 5120

TITLE: CT-5447/579 VALUATION NO: 2900334136

ASSESSMENT NO: 114715

OWNER: MR P S KING AND MS C B CHEW

In response to your enquiry, I supply the following information:

## PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

 Current rates
 \$1,085.20
 LAST DAY TO PAY 03/09/07

 Rebate/Remissions
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 Current fines
 \$10.15

 Arrears
 \$0.00

 Legal Fees
 \$0.00

 Property related debts
 \$0.00

 NRM Levy
 \$25.45

Payments/Adjustment \$-556.65 TOTAL OUTSTANDING \$564.15

#### **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien REFER TO TITLE or caveat in which council has an interest

Pensioner Concession NO

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## Lot 5 Brooks Road BUCKLAND PARK SA 5120

Horticulture West HW Current zoning: NO Local Heritage Listing / Registered item under the Development Act NO Heritage Listing / Registered item under the SA Heritage Act YES Subject to a Development Consent / Conditions which continue to apply See Attached Document SEE ATTACHED Plan Amendment Report submitted to Minister SUMMARY Has Minister prepared PAR for public consultation NO NO Development Act / Public & Environmental Health Act Notices SEE BELOW IF There are obligations to maintain a Septic Tank System **APPLICABLE** SEE CERTIFICATE Proclamations / Agreements OF TITLE

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## **Development Applications**

292/1557/2005

**Dwelling** 

Date of Decision:

15-Dec-2005

Authority: Council

Continuing Condition(s)

- 1. Except where minor amendments may be required by other relevant Acts, or by conditions imposed by this application, the development shall be established in strict accordance with the details and plans submitted in this development application.
- The applicant shall, within a period of 3 months of construction of the building, enclose
  the base thereof with brick or other suitable material to Council's satisfaction so as to
  improve the external appearance of the building and prevent the entry of vermin.
- 3. The builder shall at all times provide and maintain a waste receptacle to the reasonable satisfaction of Council on the site in which and at all times all builders waste shall be contained for the duration of the dwelling's construction and such receptacle shall be emptied as required and removed upon completion to licensed waste disposal depot.
- 4. The site is to be kept in an orderly condition to the satisfaction of Council.
- 5. The filling shall be placed as controlled filling in accordance with AS 2870 1996 Residential slabs and footings and AS 3798 and be certified by a qualified engineer and brought up to a level of 4.9m AHD.
- 6. Roof stormwater to be discharged a minimum of five (5) metres away from the building. (SA Housing Code 12.2)

## **CERTIFICATE OF INSURANCE DETAILS**

CERTIFICATE NO.:	1222/2003
IN FAVOUR OF:	P King & C Chew
IN RESPECT OF:	Dwelling
AT:	Lot 5 Brooks Road, BUCKLAND PARK SA 5120
TO BE CARRIED OUT BY:	Summerplace Holdings Pty Ltd
BUILDER'S LICENCE NO.:	Dwelling
DATE:	05-Dec-2005
TYPE OF COVER:	Statutory
INSURER:	Vero Insurance Ltd

AW/73/2005 Aerobic Wastewater Treatment System

Date of Decision: 28-Jun-2006 Authority: Council

Continuing Condition(s)

### Septic/Aerobic Conditions:

Where it is not practical to terminate the top of the septic tank at surface level it will be necessary to provide access shafts fitted with access covers and an inspection opening finishing at surface level.

The shafts shall be effectively sealed to prevent the ingress or egress of water or gas.

The access cover shall be fixed with non ferrous child proof fixings and shall be gas and water tight and removable for maintenance.

- All under floor plumbing shall be inspected prior to back fill by the independent technical expert. A copy of the certificate of inspection shall be provided to Council prior to operation of plumbing.
- The aerobic waste water system shall be inspected prior to back fill of the system by the independent technical expert. A copy of the certificate of inspection shall be provided to Council prior to operation of the system.
- Effluent disposal area and aerobic waste water treatment systems shall not be located under or next to vehicular traffic areas.
- The septic tank should be pumped out every 4 years to remove sludge. This must be carried out by a licensed waste disposal contractor.

# DEVELOPMENT PLAN AMENDMENTS SUMMARY

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### **Townships and Environs PAR**

A Townships and Environs PAR Statement of Intent has been agreed between Council and the Minister for Planning and Urban Development, and is currently being investigated and drafted. It affects the Townships of Virginia, Angle Vale and One Tree Hill and includes the following considerations:

- Policies to guide the future growth of townships and promote the enhancement of their identity and character:
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- Ecologically sensitive design;
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The PAR impacts on the following development issues:

- The relationship of Munno Para District Centre and Smithfield Township within the hierarchy of all centres within the City of Playford;
- How the Development Plan can assist in developing Munno Para District Centre and Smithfield Township complementary to the rezoned and redeveloped Elizabeth Regional Centre;
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- The relationship of Munno Para District Centre and Smithfield Township to Main North Road and Anderson Walk.

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- Curtis Road to the north:
- Main North to the east:
- the southern boundary of the vacant Commonwealth Defence land; and
- Coventry Road to the west.

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- Station and other public transport facilities;
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- locality:
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## Neighbourhood Centres Development Plan Amendment

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- Elizabeth Grove
- Elizabeth Downs
- Elizabeth South
- Craigmore (Yorketown Road)
- Elizabeth Vale
- Elizabeth East
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Andrews Farm Local Centre was also reviewed as part of the project, considering an immediate need to support development in the area.

Investigations into the neighbourhood centres in the process of preparing the DPA are underway and will be considered by Council in the second half of 2008.

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8 May 2008

**SEARCH NO: 14205** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000

CITY OF

City of Playford Civic Centre 10 Playford Boulevard ELIZABETH Mailing Address: 12 Bishopstone Road DAVOREN PARK SA 5113 Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

LOT 4 SEC 158 FP 16853 HD OF PORT

ADELAIDE

PROPERTY ADDRESS:

LOT 4 BROOKS ROAD, BUCKLAND PARK

**SA 5120** 

TITLE:

CT-5447/581

**VALUATION NO: ASSESSMENT NO:**  2900334152

119918

OWNER:

MR T T Q LE AND MS C N NGUYEN

In response to your enquiry, I supply the following information:

## PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$969.65	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
Current fines	\$0.00	
Arrears	\$0.00	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$20.65	
Payments/Adjustment	\$-743.30	
TOTAL OUTSTANDING	\$247.00	

#### **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

Pensioner Concession

NO

Please note: The above information is supplied for the purposes of Section 7 of the Land & Business (Sale and Conveyancing) Act 1994 and relates only to matters in which council has an interest.

## Lot 4 Brooks Road BUCKLAND PARK SA 5120

Current zoning: Horticulture West HW	
Local Heritage Listing / Registered item under the Development Act	NO
Heritage Listing / Registered item under the SA Heritage Act	NO
Subject to a Development Consent / Conditions which continue to apply	NO
Plan Amendment Report submitted to Minister	SEE ATTACHED SUMMARY
Has Minister prepared PAR for public consultation	NO
Development Act / Public & Environmental Health Act Notices	NO
There are obligations to maintain a Septic Tank System  Proclamations / Agreements	SEE BELOW IF APPLICABLE SEE CERTIFICATE OF TITLE

Please note: Where Section 34 of the Building Work Contractors Act 1995 requires that building indemnity insurance be taken out in respect of certain types of domestic building work commenced after 1st May 1987, intending purchasers of this property should contact the Council's Building Section for information on whether an insurance policy exists in respect of any building erected on this land.

You should contact the S A Housing Trust, Riverside Centre, North Tce, Adelaide 5000 for information regarding Housing Improvement Act 1940 notices.

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PLEASE TAKE NOTE: Various areas within the Council are at risk of flooding. The Council is not required by Section 7 of the Land and Business (Sale and Conveyancing) Act 1994 to provide information in relation to whether this property is within a flood risk area or the possible extent of any flood risk as part of this Statement. Nevertheless, the Council can inform you that it has received a report by the Department for Transport, Energy & Infrastructure containing new hydrological data for the Gawler River Flood Plain area which may result in the boundaries of the flood risk area being amended. Flood mapping and modelling has been undertaken using this new hydrological data. The Floodplain Mapping Report is available at the following website:

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## **Development Applications**

Nil

# DEVELOPMENT PLAN AMENDMENTS SUMMARY

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#### Munno Para District Centre PAR

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8 May 2008

**SEARCH NO: 14206** 

Connell Wagner (SA) Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 FAXE Hayford

City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT: LOT 6 SEC 252 FP 16853 HD OF PORT

**ADELAIDE** 

PROPERTY ADDRESS: LOT 6 THOMPSON ROAD, BUCKLAND PARK

SA 5120

TITLE: CT-5447/585
VALUATION NO: 2900334179
ASSESSMENT NO: 115913

OWNER: MR M J M MAYBANK

In response to your enquiry, I supply the following information:

## PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$844.50	LAST DAY TO PAY 03/09/07
Rebate/Remissions	\$0.00	
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Arrears	\$0.00	
Legal Fees	\$0.00	
Property related debts	\$0.00	
NRM Levy	\$15.50	
Payments/Adjustment	\$-860.00	
TOTAL OUTSTANDING	\$4.30	

#### **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999 YES RATES

Easement, Right of Way, Restricted covenant, Lien REFER TO TITLE or caveat in which council has an interest

Pensioner Concession NO

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## Lot 6 Thompson Road BUCKLAND PARK SA 5120

Horticulture West HW Current zoning: NO Local Heritage Listing / Registered item under the Development Act NO Heritage Listing / Registered item under the SA Heritage Act Subject to a Development Consent / Conditions which continue to apply NO SEE ATTACHED Plan Amendment Report submitted to Minister **SUMMARY** NO Has Minister prepared PAR for public consultation Development Act / Public & Environmental Health Act Notices NO SEE BELOW IF There are obligations to maintain a Septic Tank System

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For Chief Executive Officer

Proclamations / Agreements

Flood Plain Area

APPLICABLE SEE CERTIFICATE

OF TITLE

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8 May 2008

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City of Playford
Civic Centre
10 Playford Boulevard
ELIZABETH
Mailing Address:
12 Bishopstone Road
DAVOREN PARK SA 5113
Ph 8256 0333 Fax 8256 0578

ALLOTMENT:

SEC 173 H 105800 HD OF PORT ADELAIDE,

SEC 503 H 105800 HD OF PORT ADELAIDE

PROPERTY ADDRESS:

LEGOE ROAD, BUCKLAND PARK SA 5120

TITLE:

CT-5909/379, CT-5909/380

VALUATION NO:

2900373856

**ASSESSMENT NO:** 

105552

OWNER:

HYDROPONICS FARM PTY LTD

In response to your enquiry, I supply the following information:

# PARTICULARS OF COUNCIL RATES & OTHER LAWFUL CHARGES

Current rates declared on 26 June 2007

Current rates	\$1,220.00	LAST DAY TO PAY 03/09/07
Rebate/Remissions Current fines Arrears	\$0.00 \$0.00 \$0.00	
Legal Fees Property related debts	\$0.00 \$0.00	
NRM Levy	\$31.00	
Payments/Adjustment TOTAL OUTSTANDING	\$-939.00 <b>\$312.00</b>	

## **OTHER MATTERS**

Legal action taken NO

Notice issued under the Local Government Act 1999

YES RATES

Easement, Right of Way, Restricted covenant, Lien or caveat in which council has an interest

REFER TO TITLE

or caveat in willon council has all inteles

**Pensioner Concession** 

NO

<u>Please note:</u> The above information is supplied for the purposes of Section 7 of the Land & Business (Sale and Conveyancing) Act 1994 and relates only to matters in which council has an interest.

For Chief Executive Officer

# Legoe Road BUCKLAND PARK SA 5120

HW Horticulture West Current zoning: NO Local Heritage Listing / Registered item under the Development Act NO Heritage Listing / Registered item under the SA Heritage Act YES Subject to a Development Consent / Conditions which continue to apply See Attached Document SEE ATTACHED Plan Amendment Report submitted to Minister SUMMARY NO Has Minister prepared PAR for public consultation NO Development Act / Public & Environmental Health Act Notices There are obligations to maintain a Septic Tank System SEE BELOW IF **APPLICABLE** 

Please note: Where Section 34 of the Building Work Contractors Act 1995 requires that building indemnity insurance be taken out in respect of certain types of domestic building work commenced after 1st May 1987, intending purchasers of this property should contact the Council's Building Section for information on whether an insurance policy exists in respect of any building erected on this land.

You should contact the S A Housing Trust, Riverside Centre, North Tce, Adelaide 5000 for information regarding Housing Improvement Act 1940 notices.

You should contact the Adelaide & Mount Lofty Ranges Natural Resource Management, 205 Greenhill Road, Eastwood 5063 for information regarding the Animal and Plant Control Act 1986. Ph. 8273 9100

For Chief Executive Officer

Proclamations / Agreements

SEE CERTIFICATE

OF TITLE

PLEASE TAKE NOTE: Various areas within the Council are at risk of flooding. The Council is not required by Section 7 of the Land and Business (Sale and Conveyancing) Act 1994 to provide information in relation to whether this property is within a flood risk area or the possible extent of any flood risk as part of this Statement. Nevertheless, the Council can inform you that it has received a report by the Department for Transport, Energy & Infrastructure containing new hydrological data for the Gawler River Flood Plain area which may result in the boundaries of the flood risk area being amended. Flood mapping and modelling has been undertaken using this new hydrological data.

The Floodplain Mapping Report is available at the following website:

http://fredpedler.com/public/content/default.asp?xcid=399

## **Development Applications**

292/404/2006 Storage Shed

Date of Decision: 04-Sep-2006 Authority: Council

Continuing Condition(s)

- 1. Except where minor amendments may be required by other relevant Acts, or by conditions imposed by this application, the development shall be established in strict accordance with the details and plans submitted in this development application.
- The building shall not be used for human habitation.
- 3. Roof stormwater is to be discharged a minimum of five (5) metres away from the building (F1.1 of BCA).
- 4. The proposed storage shed shall be separated from the existing building by a minimum of 3.0m as per the amended plan received by council on 4/9/2006.

# DEVELOPMENT PLAN AMENDMENTS SUMMARY

Pursuant to Section 24 of the Development Act 1993, several investigations are being undertaken in respect to amending Development Plan policies (e.g. land use zones) that may affect areas within the City of Playford.

As of a change to the Development Act gazetted on the 27th September 2007 all new amendments to the Development Plan will be implemented under a new Development Plan Amendment (DPA) process. However existing amendments to the Development Plan initiated before this time will be finalised under the Plan Amendment Report (PAR) process.

Investigations which have reached the stage of an agreed 'Statement of Intent' associated with either the PAR or DPA process include:

## Townships and Environs PAR

A Townships and Environs PAR Statement of Intent has been agreed between Council and the Minister for Planning and Urban Development, and is currently being investigated and drafted. It affects the Townships of Virginia, Angle Vale and One Tree Hill and includes the following considerations:

- Policies to guide the future growth of townships and promote the enhancement of their identity and character;
- The role of townships;
- Retail activity in nearby horticultural areas;
- How horticultural retail impacts on existing centres and value adding to horticultural production;
- Encourage the appropriate development of cellar door sales, restaurants and wineries;
- Tourist accommodation;
- Appropriate transport;
- Design and appearance enhancement to facilitate identity and character;
- Ecologically sensitive design;
- Arts and culture:
- Infrastructure provision; and
- Sustainable growth to facilitate regeneration of surrounding areas.

Minor amendments to the Angle Vale township are being considered to address anomalies, with no additional land for housing being included.

# Munno Para District Centre PAR

A Munno Para District Centre PAR has been prepared by Council and has undertaken public consultation from 25th January 2006 to 27th March 2006. A revised PAR, as a result of consultation, has been approved by Council and is now with the Minister for Urban Development and Planning for consideration.

The PAR impacts on the following development issues:

- The relationship of Munno Para District Centre and Smithfield Township within the hierarchy of all centres within the City of Playford;
- How the Development Plan can assist in developing Munno Para District Centre and Smithfield Township complementary to the rezoned and redeveloped Elizabeth Regional Centre;
- Design and land use policies to promote appropriate activities and facilitate complementary opportunities;
- Integration of centres with transport infrastructure, especially the Smithfield Train Station and other public transport facilities;
- Appropriate shopping, community facilities and mixed land uses and development to meet the needs of the community and the District Centre role;
- Ecologically sustainable design;
- Arts and cultural expression to reflect community values;
- The possibility for higher density housing in proximity to the centre;
- Infrastructure provision, including storm water and bandwidth;
- Open space/landscaping, pedestrian links, car parking and signage to improve function, identity and character;

- development of public assets; and
- The relationship of Munno Para District Centre and Smithfield Township to Main North Road and Anderson Walk.

## Munno Para Environs Plan Amendment Report

A PAR is currently being finalised for the area surrounding the Munno Para District Centre and will be available for public consultation in the near future.

The Study Area includes the land around the District Centre Zone, which totals 232 hectares, bounded by:

- Curtis Road to the north:
- Main North to the east;
- the southern boundary of the vacant Commonwealth Defence land; and
- Coventry Road to the west.

The study area does not include the Munno Para District Centre Zone.

The PAR will include considerations on the following issues:

- Integration of the locality with transport infrastructure, especially the Smithfield Train
- Station and other public transport facilities;
- Appropriate land uses and development to meet the needs of the community and the
- District Centre role based on appropriate performance criteria;
- Ecologically sustainable design;
- Arts and cultural expression to reflect community values;
- Infrastructure provision, including storm water;
- Open space/landscaping, pedestrian links and signage to improve function, identity and
- character:
- Site contamination and noise impact considerations; and
- Development of public assets.

A new Structure Plan will be introduced to optimise opportunities presented by recent and potential development. Particular elements of the draft structure plan will include:

- Increased medium density residential development opportunities in the immediate
- locality.
- Improving connections and relationships to Smithfield Township and Train Station;
- Reinforcing a desired future character for Anderson Walk and the Smithfield township;
- Improving land use mix, function and amenity around the District Centre through the
- inclusion of performance criteria;
- Improvement of transportation movement (especially heavy vehicles), including
- gateway identification and appropriate buffers; and
- Incorporating and defining the Smith Creek open space network.

### Better Development Plan Development Plan Amendment

The City of Playford proposes to review and amend the policies of the City of Playford Development Plan in order to adopt the policy modules, structure and format for Development Plans promoted by Planning SA as part of the Better Development Plans (BDP) project.

In adopting the BDP approach, council will ensure the resulting Development Plan will suitably implement the State Planning Strategy, as well as carry clearly defined local policy directions.

Council expects that the overall understanding of its Development Plan will be improved by adopting the new BDP form and structure. This will represent an improvement on the current Development Plan, making it easier to navigate and comprehend by addressing the clarity and readability issues that have developed over time with the current plan.

The investigations will ensure:

 the DPA identifies how all included Desired Character Statements have been derived from the existing text or Objectives/Principles of Development Control of the current Development Plan.

- the DPA identifies the existing policy that forms the basis of all included 'local addition' Objectives/Principles of Development Control.
- the policy referred to as 'local additions' does not undertake or encompass new policy directions.
- all appropriate BDP modules covering the range of issues and land uses pertinent to the council area are taken up and included as the policy core of the new Development Plan.
- the DPA identifies all locally relevant Ministerial policy not directly addressed by the BDP module policy and demonstrates its continued inclusion in the new BDP Development Plan.

### Neighbourhood Centres Development Plan Amendment

The 2003 City of Playford Development Plan Review identified Centres as a hight development policy priority. It included recommendations identifying the need to consider:

- How the Development Plan can assist in redevelopment, including design and land use issues to promote complementary facilities;
- The role and hierarchy of centres;
- Integration with transport infrastructure, especially public transport;
- Shopping and community facilities;
- Higher density housing adjacent centres;
- Design and appearance enhancement including landscaping and maintenance of properties, to facilitate identity and character;
- Ecologically sustainable design;
- Arts and culture;
- Infrastructure provision; and
- Sustainable growth to facilitate regeneration of surrounding areas.

The primary aim of the Neighbourhood Activity Centres DPA is to review the appropriateness of the nominated centres and identify opportunities for improvement and rationalisation. This process includes investigating the potential for the accommodation of mixed use development which is considered one way of reversing the decline in viability and vibrancy of the centres.

A Neighbourhood Activity Centres DPA Statement of Intent has been prepared and is currently with the Minister for Planning and Urban Development for his consideration.

## The following Neighbourhood Centres will be the focus of the DPA:

- Elizabeth Park
- Elizabeth Grove
- Elizabeth Downs
- Elizabeth South
- Craigmore (Yorketown Road)
- Elizabeth Vale
- Elizabeth East
- Elizabeth North

Andrews Farm Local Centre was also reviewed as part of the project, considering an immediate need to support development in the area.

Investigations into the neighbourhood centres in the process of preparing the DPA are underway and will be considered by Council in the second half of 2008.

If you have any queries regarding any of the above Plan Amendment Reports, please contact Stephen Yarwood, Principal Policy Planner on 8256 0345 (direct).



Connell Wagner Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

# Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5399 Folio 96

Address

**E**2

Section 174, Park Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

JJ.	that is registered in relation to the land.	NC
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the Iand.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NΩ

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NO

NO

NO

NO

### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act; or
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

### Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South

Australian Waste Management Commission Act 1979, a record of which is on the Public Register?

Register?

- (2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register? NO
- (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

(4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

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page 2 of 3





4. (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5399 Folio 96

page 3 of 3



Connell Wagner Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5399 Folio 95

Address

Section 179, Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NO

CT Volume 5399 Folio 95

page 1 of 3



NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### Environmental assessments

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

# Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?
  - Register?
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register? NO
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act*1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

## Production of certain waste

- 4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979
  ever issued for the production of waste of a prescribed kind (within the meaning of that Act)
  on the land, a record of which is on the Public Register?

  NO
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

CT Volume 5399 Folio 95

**Environment Protection Authority** 



4. (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed Waste Management Act 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5399 Folio 95

page 3 of 3



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Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 780

Address

Allotment 92, Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO

CT Volume 5868 Folio 780

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NO

NO

NO

NO

### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

### Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed

    Waste Management Act 1987, a record of which is on the Public Register?

    NO
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

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page 2 of 3





4. (3) Is an environmental authorisation currently in force under the Environment Protection Act 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 780

page 3 of 3





Connell Wagner Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 781

Address

Block S (D1671), Legoe Road, BUCKLAND PARK SA 5120

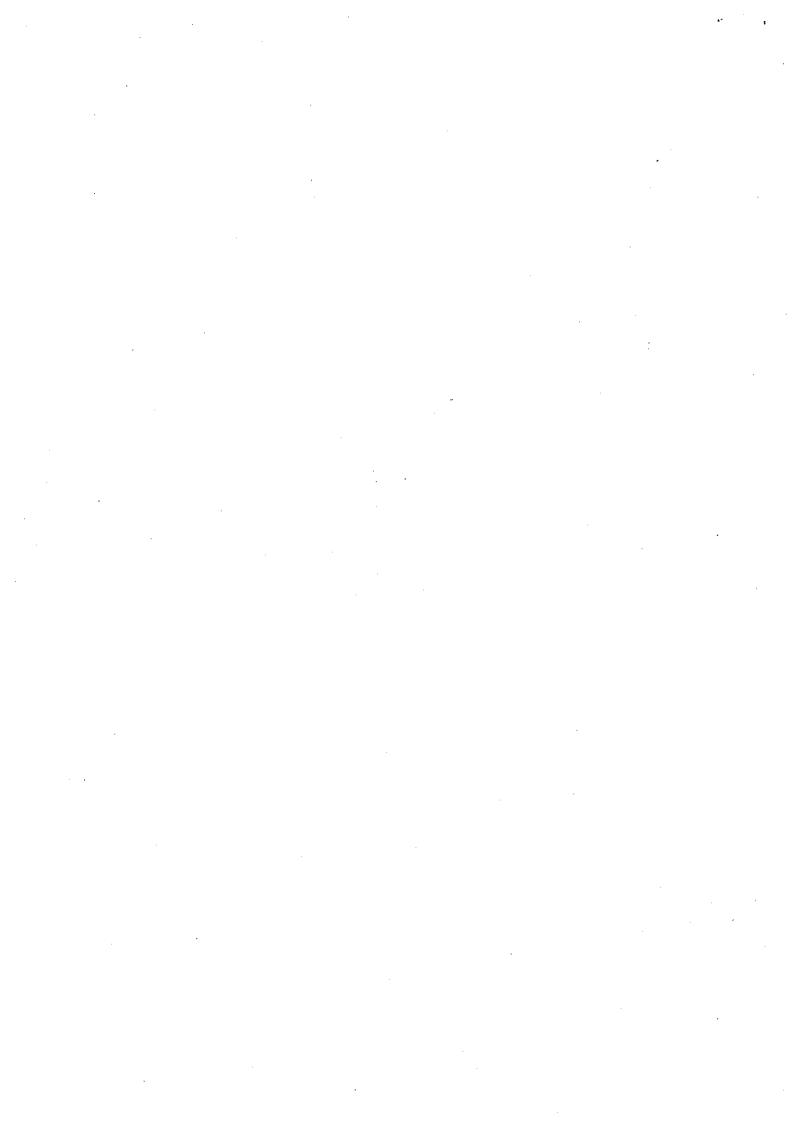
I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NO

CT Volume 5868 Folio 781

page 1 of 3





#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### Environmental assessments

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
  - by a Contaminated Site Auditor recognised by the Environment Protection Authority for the (c) purposes of carrying out such an assessment?

## Waste depots

Was a licence to operate a waste depot on the land ever issued under the repealed South 3. (1) Australian Waste Management Commission Act 1979, a record of which is on the Public Register?

NO

Was a licence to operate a waste depot on the land ever issued under the repealed (2)Waste Management Act 1987, a record of which is on the Public Register?

NO

NO

(3)Is an environmental authorisation currently in force under the Environment Protection Act 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

NO

(4)Was an environmental authorisation ever issued under the Environment Protection Act 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

## Production of certain waste

4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(2)Was a licence under the repealed Waste Management Act 1987 ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

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page 2 of 3

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4. (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on Iand

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 781

page 3 of 3





Connell Wagner Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 777

Address

Block 62 (D1671), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

;	that is registered in relation to the land.	NC
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NΩ

CT Volume 5868 Folio 777

page 1 of 3





NO

NO

NO

# PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
  - by a Contaminated Site Auditor recognised by the Environment Protection Authority for the (c) purposes of carrying out such an assessment?

## Waste depots

Was a licence to operate a waste depot on the land ever issued under the repealed South 3. (1) Australian Waste Management Commission Act 1979, a record of which is on the Public Register?

NO

Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register? NO

(3)Is an environmental authorisation currently in force under the Environment Protection Act 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

(4)Was an environmental authorisation ever issued under the Environment Protection Act 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

Production of certain waste

4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register? NO

(2)Was a licence under the repealed Waste Management Act 1987 ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the

Public Register? NO

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NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 777





Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 771

Address .

Allotment 93, Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NO

CT Volume 5868 Folio 771





NO

NO

NO

NO

### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
     or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South

  Australian Waste Management Commission Act 1979, a record of which is on the Public Register?
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

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page 2 of 3

**Environment Protection Authority** 





NO.

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 771



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 776

Address

Allotment 94, Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO

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#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?

NO

(2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?

NO

NO

(3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

NO.

(4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Production of certain waste

4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act 1979* ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

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. . 



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 776

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Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5399 Folio 96

Address

Section 174, Park Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

<i>55.</i>	that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the <i>Environment Protection Act 1993</i> that is registered in relation to the land.	NO

CT Volume 5399 Folio 96



NO

NO

NO

NO

## PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act; or
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

### Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South

  Australian Waste Management Commission Act 1979, a record of which is on the Public Register?
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate **a** waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

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NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

Delegate for

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5399 Folio 96



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5399 Folio 95

Address

Section 179, Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
<b>54.</b>	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NO

CT Volume 5399 Folio 95



NO

NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South

Australian Waste Management Commission Act 1979, a record of which is on the Public

Register?

Waste Management Act 1987, a record of which is on the Public Register?

- (2) Was a licence to operate a waste depot on the land ever issued under the repealed
- (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
- (4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

## Production of certain waste

- 4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979
  ever issued for the production of waste of a prescribed kind (within the meaning of that Act)
  on the land, a record of which is on the Public Register?

  NO
  - (2) Was a licence under the repealed Waste Management Act 1987 ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

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NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5399 Folio 95



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 780

Address

Allotment 92, Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NΟ

CT Volume 5868 Folio 780



NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South Australian Waste Management Commission Act 1979, a record of which is on the Public Register?
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed

    Waste Management Act 1987, a record of which is on the Public Register?

    NO
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979
  ever issued for the production of waste of a prescribed kind (within the meaning of that Act)
  on the land, a record of which is on the Public Register?

  NO
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

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NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

Delegate for

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 780



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 781

Address

Block S (D1671), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

## PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NΟ

CT Volume 5868 Folio 781



### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South

  Australian Waste Management Commission Act 1979, a record of which is on the Public Register?
  - NO
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?
- NO

NO

- (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
- NO
- (4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

## NO

#### Production of certain waste

4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

CT Volume 5868 Folio 781



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act*1987 have any record of waste (within the meaning of that Act) being deposited on the land
between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

Delegate for

**ENVIRONMENT PROTECTION AUTHORITY** 

CT Volume 5868 Folio 781



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 777

Address

Block 62 (D1671), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

## PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NO

CT Volume 5868 Folio 777



NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
  - by a Contaminated Site Auditor recognised by the Environment Protection Authority for the (c) purposes of carrying out such an assessment?

## Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South Australian Waste Management Commission Act 1979, a record of which is on the Public Register?

NO

Was a licence to operate a waste depot on the land ever issued under the repealed (2)Waste Management Act 1987, a record of which is on the Public Register? NO

Is an environmental authorisation currently in force under the Environment Protection Act (3)1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register? NO

(4)Was an environmental authorisation ever issued under the Environment Protection Act 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

Production of certain waste

- 4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register? NO
  - (2)Was a licence under the repealed Waste Management Act 1987 ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register? NO

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page 2 of 3

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NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 777



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 771

Address

Allotment 93, Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NO

CT Volume 5868 Folio 771



NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time
  - by or on behalf of the owner or occupier of the land -(a)
    - pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993:
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - by the Environment Protection Authority (whether alone or jointly with another authority); (b)
  - by a Contaminated Site Auditor recognised by the Environment Protection Authority for the (c) purposes of carrying out such an assessment?

## Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South Australian Waste Management Commission Act 1979, a record of which is on the Public Register?

NO

- Was a licence to operate a waste depot on the land ever issued under the repealed (2)Waste Management Act 1987, a record of which is on the Public Register? NO
- Is an environmental authorisation currently in force under the Environment Protection Act (3)1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
- (4)Was an environmental authorisation ever issued under the Environment Protection Act 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

## Production of certain waste

- 4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register? NO
  - (2)Was a licence under the repealed Waste Management Act 1987 ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register? NO

CT Volume 5868 Folio 771



.NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed Waste Management Act 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

Delegate for ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 771



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 776

Address

Allotment 94, Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO

CT Volume 5868 Folio 776

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NO

NO

NO.

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?

(2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?

(3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

(4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

CT Volume 5868 Folio 776



NO

(4) Was an environmental authoristation ever issued under the Environment Protection Act 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

Did the former Waste Management Commission under the repealed Waste Management Act 5. 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 776



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 784

Address

Block 63 (D1671), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

55.	that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NΩ

CT Volume 5868 Folio 784



NO

NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## Environmental assessments

- Does the Environment Protection Authority hold a copy of a report on any environmental 2. (3) assessment of the land or a part of the land carried out at any time
  - by or on behalf of the owner or occupier of the land -(a)
    - pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - by the Environment Protection Authority (whether alone or jointly with another authority); (b)
  - by a Contaminated Site Auditor recognised by the Environment Protection Authority for the (c) purposes of carrying out such an assessment?

# Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South Australian Waste Management Commission Act 1979, a record of which is on the Public Register?
  - (2)Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register? NO
  - Is an environmental authorisation currently in force under the Environment Protection Act (3)1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the Environment Protection Act 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- Was a licence under the repealed South Australian Waste Management Commission Act 1979 4. (1) ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register? NO
  - (2)Was a licence under the repealed Waste Management Act 1987 ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register? NO

CT Volume 5868 Folio 784

page 2 of 3

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NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 784



Connell Wagner Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 783

Address

Block 61 (D1671), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NO

CT Volume 5868 Folio 783



# PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act; or
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

### Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act* 1979, a record of which is on the Public Register?

NO

(2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?

NO

NO

(3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

NO

(4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

# Production of certain waste

4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act 1979*ever issued for the production of waste of a prescribed kind (within the meaning of that Act)
on the land, a record of which is on the Public Register?

NO

(2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

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NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 783



Connell Wagner Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 766

Address

Block 68 (D1671), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

<i>33.</i>	that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NΟ

CT Volume 5868 Folio 766



### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## **Environmental assessments**

2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -

(a) by or on behalf of the owner or occupier of the land -

- (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
- (ii) for the purposes of a notification given under section 83 of that Act; or
- (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
- (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

### Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act* 1979, a record of which is on the Public Register?

NO

NO

(2) Was a licence to operate a waste depot on the land ever issued under the repealed *Waste Management Act 1987*, a record of which is on the Public Register?

NO

(3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

NO

(4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

# Production of certain waste

4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

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CT Volume 5868 Folio 766



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act*1987 have any record of waste (within the meaning of that Act) being deposited on the land
between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 766



Connell Wagner Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 772

Address

Block 65 (D1671), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NΟ

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### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?

NO

(2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?

NO

NO

(3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

NO

(4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

# Production of certain waste

4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

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NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 772



Connell Wagner Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 778

Address

Block 66 (D1671), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NΟ

CT Volume 5868 Folio 778



NO

NO

NO

NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

### Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?

Waste Management Act 1987, a record of which is on the Public Register?

(2) Was a licence to operate a waste depot on the land ever issued under the repealed

(3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

(4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

## Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

CT Volume 5868 Folio 778

page 2 of 3

**Environment Protection Authority** 



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed Waste Management Act 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 778



Connell Wagner Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 767

Address

Block 67 (D1671), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NO

CT Volume 5868 Folio 767



## PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

# **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the *Environment Protection Act* 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
     or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

# Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?

NO

(2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?

NO

NO

(3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

NO

(4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

# Production of certain waste

4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

CT Volume 5868 Folio 767

page 2 of 3

T (08) 8204 2000 | F (08) 8204 2020 | 1800 623 445 (country areas) | www.epa.sa.gov.au



NO

(4)Was an environmental authoristation ever issued under the Environment Protection Act 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed Waste Management Act 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 767



Connell Wagner Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 770

Address

Block 59 (D1671), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
<b>54.</b>	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NΟ

CT Volume 5868 Folio 770



NO

NO

NO

### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act; or
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

# Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South Australian Waste Management Commission Act 1979, a record of which is on the Public Register?
  - Register?

    (2) Was a licence to operate a waste depot on the land ever issued under the repealed
  - Waste Management Act 1987, a record of which is on the Public Register?

    NO

    (3) Is an environmental authorisation currently in force under the Environment Protection Act
  - 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979
  ever issued for the production of waste of a prescribed kind (within the meaning of that Act)
  on the Iand, a record of which is on the Public Register?

  NO
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

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NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on Iand

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

Delegate for

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 770



Receipt No

Admin No

: 28727 (4376)

File Reference: EPA/1540; EPA/15079

Connell Wagner Pty Ltd 55 Grenfell Street ADELAIDE SA 5000

Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5875 Folio 910

Address

Pieces 1-4, Beagle Hole Road, BUCKLAND PARK SA 5120

I advise as follows:

## PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NO

CT Volume 5875 Folio 910



NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land
    - pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993:
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - by the Environment Protection Authority (whether alone or jointly with another authority); (b)
  - by a Contaminated Site Auditor recognised by the Environment Protection Authority for the (c) purposes of carrying out such an assessment?

## Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South Australian Waste Management Commission Act 1979, a record of which is on the Public Register?

NO

(2)Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register? NO

Is an environmental authorisation currently in force under the Environment Protection Act (3)1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

(4)Was an environmental authorisation ever issued under the Environment Protection Act 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

Production of certain waste

- 4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register? NO
  - (2)Was a licence under the repealed Waste Management Act 1987 ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register? NO

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NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

A summary of the activities relating to wastes may be appended. Should you require any further information regarding this land (outside the Public Register details) please contact the Environment Protection Authority to make necessary arrangements.

Details and/or copies of environmental assessments, licences and records on the Public Register may be obtained from the Environment Protection Authority on payment of the prescribed fee.

Prior to arranging an examination and/or copies of the required above information please telephone (08) 8204 9128 to contact the Public Register Administrator to ensure the required details are available upon arrival.

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

Delegate for

**ENVIRONMENT PROTECTION AUTHORITY** 

CT Volume 5875 Folio 910



#### NOTE

#### General

Although the answers to questions 3(4) and 4(4) are "NO", the Environment Protection Authority is aware of a non active licence for the activitues of 1) Chemical Storage and Warehousing Facilities and 2) Chemical Works on this land. This information may be available by contacting the Public Register Administrator on telephone number 8204 9128 (a prescribed fee will apply).

NOTE

#### General

Although the answers to questions 3(3) and 4(3) are "NO", the Environment Protection Authority is aware of a current licence for the activities of 1) Chemical Storage and Warehousing Facilities and 2) Chemical Works on this land. This information may be available by contacting the Public Register Administrator on telephone number 8204 9128 (a prescribed fee will apply).

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page 4 of 4



Connell Wagner Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

#### Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 785

Address

Block 58 (D1671), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	ŅO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NΟ

CT Volume 5868 Folio 785



NO

NO

NO

NO

NO

NO

## PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South Australian Waste Management Commission Act 1979, a record of which is on the Public Register?
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

## Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

CT Volume 5868 Folio 785



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection-Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 785



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

Connell Wagner Pty Ltd 55 Grenfell Street ADELAIDE SA 5000

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 782

Address

Block 60 (D1671), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NO

CT Volume 5868 Folio 782



NO

NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the *Environment Protection Act 1993*;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South

Australian Waste Management Commission Act 1979, a record of which is on the Public

Register?

(2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?

(3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

(4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act 1979*ever issued for the production of waste of a prescribed kind (within the meaning of that Act)
on the land, a record of which is on the Public Register?

NO

(2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

CT Volume 5868 Folio 782



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

Delegate for

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 782

page 3 of 3

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Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

Connell Wagner Pty Ltd-55 Grenfell Street ADELAIDE SA 5000

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 779

Address

Allotment 91 (F174402), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NΟ

CT Volume 5868 Folio 779



NO

NO

NO

NO

NO

NO

NO

## PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?



NO

— (4) — Was an environmental authoristation ever issued under the *Environment Protection Act* 1993—in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 779



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

Connell-Wagner Pty Ltd 55 Grenfell Street ADELAIDE SA 5000

07 April, 2008

Dear Sir/Madam,

### Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 769

Address

Allotment 91 (F163644), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53:	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NΟ

CT Volume 5868 Folio 769



## PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## **Environmental assessments**

Does the Environment Protection Authority hold a copy of a report on any environmental 2. (3) assessment of the land or a part of the land carried out at any time -(a) by or on behalf of the owner or occupier of the land -(i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993; (ii) for the purposes of a notification given under section 83 of that Act; (b) by the Environment Protection Authority (whether alone or jointly with another authority); (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment? NO Waste depots 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South Australian Waste Management Commission Act 1979, a record of which is on the Public Register? NO Was a licence to operate a waste depot on the land ever issued under the repealed (2)Waste Management Act 1987, a record of which is on the Public Register? NO (3)Is an environmental authorisation currently in force under the Environment Protection Act 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register? NO Was an environmental authorisation ever issued under the Environment Protection Act 1993 in (4)the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register? NO Production of certain waste 4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register? NO (2)Was a licence under the repealed Waste Management Act 1987 ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register? NO

CT Volume 5868 Folio 769



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 769



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

-Connell-Wagner Pty Ltd-55 Grenfell Street ADELAIDE SA 5000

07 April, 2008

Dear Sir/Madam,

### Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 774

Address

Allotment 91 (F174425), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO

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#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### Environmental assessments

2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -(a) by or on behalf of the owner or occupier of the land pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993; (ii) for the purposes of a notification given under section 83 of that Act; (b) by the Environment Protection Authority (whether alone or jointly with another authority); by a Contaminated Site Auditor recognised by the Environment Protection Authority for the (c) purposes of carrying out such an assessment? NO Waste depots Was a licence to operate a waste depot on the land ever issued under the repealed South 3. (1) Australian Waste Management Commission Act 1979, a record of which is on the Public Register? NO (2)Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register? NO (3)Is an environmental authorisation currently in force under the Environment Protection Act 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register? NO Was an environmental authorisation ever issued under the Environment Protection Act 1993 in (4)the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register? NO Production of certain waste 4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register? NO (2)Was a licence under the repealed Waste Management Act 1987 ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register? NO

CT Volume 5868 Folio 774



· NO

(4) Was an environmental authoristation ever issued under the Environment Protection Act 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 774



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Connell-Wagner-Pty-Ltd-55 Grenfell Street ADELAIDE SA 5000

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5868 Folio 773

Address

Allotment 91 (F174403), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

## PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	: NO

CT Volume 5868 Folio 773

page 1 of 3.

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#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### Environmental assessments

2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time by or on behalf of the owner or occupier of the land -(a) (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993; (ii) for the purposes of a notification given under section 83 of that Act; by the Environment Protection Authority (whether alone or jointly with another authority); (b) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the (c) purposes of carrying out such an assessment? NO Waste depots Was a licence to operate a waste depot on the land ever issued under the repealed South 3. (1) Australian Waste Management Commission Act 1979, a record of which is on the Public Register? NO Was a licence to operate a waste depot on the land ever issued under the repealed (2)Waste Management Act 1987, a record of which is on the Public Register? NO (3)Is an environmental authorisation currently in force under the Environment Protection Act 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register? NO (4)Was an environmental authorisation ever issued under the Environment Protection Act 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register? NO Production of certain waste Was a licence under the repealed South Australian Waste Management Commission Act 1979 4. (1) ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register? NO

CT Volume 5868 Folio 773

Public Register?

(2)

Was a licence under the repealed Waste Management Act 1987 ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the

page 2 of 3

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NO



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

Delegate for

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5868 Folio 773



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section 7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5916 Folio 60

Address

Allotment 2 (D63928), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

## PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NΙΟ

CT Volume 5916 Folio 60



#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## Environmental assessments

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
  - by a Contaminated Site Auditor recognised by the Environment Protection Authority for the (c) purposes of carrying out such an assessment?

## Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South Australian Waste Management Commission Act 1979, a record of which is on the Public Register?

NO

(2)Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?

NO

NO

Is an environmental authorisation currently in force under the Environment Protection Act (3)1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

NO

(4)Was an environmental authorisation ever issued under the Environment Protection Act 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

· NO

### Production of certain waste

Was a licence under the repealed South Australian Waste Management Commission Act 1979 4. (1) ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(2)Was a licence under the repealed Waste Management Act 1987 ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

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CT Volume 5916 Folio 60



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5916 Folio 60



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5916 Folio 61

Address

Allotment 3 (D63928), Virginia Bypass, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NO

CT Volume 5916 Folio 61



NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the *Environment Protection Act* 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
     or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South Australian Waste Management Commission Act 1979, a record of which is on the Public Register?
  - Register?
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register? NO
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act*1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

    NO
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act 1979*ever issued for the production of waste of a prescribed kind (within the meaning of that Act)
  on the land, a record of which is on the Public Register?

  NO
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

CT Volume 5916 Folio 61



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act*1987 have any record of waste (within the meaning of that Act) being deposited on the land
between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5916 Folio 61



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5251 Folio 815

Address

Allotment 3 (D41548), Park Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

<b>5</b> 5.	that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NO

CT Volume 5251 Folio 815



NO

NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South

  Australian Waste Management Commission Act 1979, a record of which is on the Public

  Register?
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act 1979*ever issued for the production of waste of a prescribed kind (within the meaning of that Act)
  on the land, a record of which is on the Public Register?

  NO
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

CT Volume 5251 Folio 815



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5251 Folio 815



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

#### Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5251 Folio 814

Address

Allotment 2 (D41548), Park Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NO

CT Volume 5251 Folio 814



#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time
  - by or on behalf of the owner or occupier of the land -(a)
    - pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - by the Environment Protection Authority (whether alone or jointly with another authority); (b)
  - by a Contaminated Site Auditor recognised by the Environment Protection Authority for the (c) purposes of carrying out such an assessment?

#### Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South Australian Waste Management Commission Act 1979, a record of which is on the Public Register?

NO

(2)Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?

NO

NO

(3)Is an environmental authorisation currently in force under the Environment Protection Act 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

NO

(4)Was an environmental authorisation ever issued under the Environment Protection Act 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

### Production of certain waste

4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(2)Was a licence under the repealed Waste Management Act 1987 ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

CT Volume 5251 Folio 814



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act*1987 have any record of waste (within the meaning of that Act) being deposited on the land
between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

Delegate for

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5251 Folio 814



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

### Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5251 Folio 813

Address

Allotment 1 (D41548), Park Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NO

CT Volume 5251 Folio 813



NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act; or
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?
  - Register?

    (2) Was a licence to operate a waste depot on the land ever issued under the repealed
  - Waste Management Act 1987, a record of which is on the Public Register?

    NO
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979
  ever issued for the production of waste of a prescribed kind (within the meaning of that Act)
  on the land, a record of which is on the Public Register?

  NO
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

CT Volume 5251 Folio 813



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5251 Folio 813



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5759 Folio 187

Address

Allotment 249, Park Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO

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page 1 of 3

**Environment Protection Authority** 



#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
     or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act* 1979, a record of which is on the Public Register?

NO

(2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?

NO

NO

(3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

NO

(4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

## Production of certain waste

4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

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NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

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Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

### Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5916 Folio 62

Address

Allotment 4 (D63928), Park Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NO

CT Volume 5916 Folio 62



ÑΟ

NO

NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed

    Waste Management Act 1987, a record of which is on the Public Register?

    NO
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

### Production of certain waste

- 4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

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NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5916 Folio 62



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

### Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5916 Folio 59

Address

Allotment 1 (D63928), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NΟ

CT Volume 5916 Folio 59



NO

NO

NO

NO

NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

### Environmental assessments

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?

(2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?

(3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

(4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

## Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

CT Volume 5916 Folio 59



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5916 Folio 59



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

l refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5144 Folio 148

Address

Allotment 101, Legoe Road, BUCKLAND PARK SA 5120

l advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NC
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NC
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NC
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NO

CT Volume 5144 Folio 148



NO

NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

### Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South

Australian Waste Management Commission Act 1979, a record of which is on the Public

Register?

(2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?

(3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

(4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979
  ever issued for the production of waste of a prescribed kind (within the meaning of that Act)
  on the land, a record of which is on the Public Register?

  NO
  - (2) Was a licence under the repealed Waste Management Act 1987 ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

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NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act*1987 have any record of waste (within the meaning of that Act) being deposited on the land
between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

Delegate for

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5144 Folio 148

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Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

### Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5144 Folio 147

Address

Allotment 100, Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NO

CT Volume 5144 Folio 147



NO

NO

NO

NO

NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

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NO

(4) Was an environmental authoristation ever issued under the Environment Protection Act 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed Waste Management Act 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

IRONMENT PROTECTION AUTHORITY

CT Volume 5144 Folio 147



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5916 Folio 63

Address

Allotment 5 (D63928), Park Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

55.	that is registered in relation to the land.	NC
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NC
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NC
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NO

CT Volume 5916 Folio 63



NO

NO

## PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### Environmental assessments

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the *Environment Protection Act 1993*;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

# Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?
  - Register?

    NO

    Was a licence to operate a waste depot on the land ever issued under the repealed
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register? NO
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act*1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act 1979*ever issued for the production of waste of a prescribed kind (within the meaning of that Act)
  on the land, a record of which is on the Public Register?

  NO
  - (2) Was a licence under the repealed Waste Management Act 1987 ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?
    NO

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NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5916 Folio 63



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section 7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5883 Folio 980

Address

Allotment 18, Park Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NΟ

CT Volume 5883 Folio 980



#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act* 1979, a record of which is on the Public Register?

NO

(2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?

NO

NO

(3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

NO

(4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

# Production of certain waste

4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

CT Volume 5883 Folio 980



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act 1993* in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act*1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5883 Folio 980



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

# Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5883 Folio 979

Address

Allotment 17, Park Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NO.

CT Volume 5883 Folio 979



#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994. The answers to the following questions are shown:

## **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
     or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?

NO

(2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?

NO

NO

(3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

NO

(4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

# Production of certain waste

4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

CT Volume 5883 Folio 979



NO

(4) Was an environmental authoristation ever issued under the Environment Protection Act 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5883 Folio 979



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

# Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5883 Folio 978

Address

Allotment 2 (D60145), Buckland Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

	that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO

CT Volume 5883 Folio 978



NO

NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act; or
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

### Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?

(2) Was a licence to operate a waste depot on the land ever issued under the repealed

Waste Management Act 1987, a record of which is on the Public Register?

NO

- (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
- (4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

## Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

CT Volume 5883 Folio 978



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

Delegate for

**ENVIRONMENT PROTECTION AUTHORITY** 

CT Volume 5883 Folio 978



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5883 Folio 977

Address

Allotment 1 (D60145), Buckland Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO

CT Volume 5883 Folio 977



#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act; or
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

# Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South Australian Waste Management Commission Act 1979, a record of which is on the Public Register?
  - NO
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?
- NO

NO

- (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
- NO
- (4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

# Production of certain waste

4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

CT Volume 5883 Folio 977



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5883 Folio 977



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5864 Folio 500

Address

Allotment 5 (D58107), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	that is registered in relation to the land.	NC
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NC
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NC
56.	Clean-up authorisation issued under section 100 of the <i>Environment Protection Act 1993</i> that is registered in relation to the land.	NO

CT Volume 5864 Folio 500



NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act; or
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
     or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

### Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register? NO
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

## Production of certain waste

- 4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

CT Volume 5864 Folio 500



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5864 Folio 500

page 3 of 3

**Environment Protection Authority** 



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5864 Folio 501

Address

Allotment 4 (D58107), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NIO

CT Volume 5864 Folio 501



NO

NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act; or
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

### Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South

Australian Waste Management Commission Act 1979, a record of which is on the Public

Register?

(2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register? NO

(3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

(4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

CT Volume 5864 Folio 501



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act*1987 have any record of waste (within the meaning of that Act) being deposited on the land
between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5864 Folio 501



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5864 Folio 499

Address

Pieces 1-3 (D58107), Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NΩ

CT Volume 5864 Folio 499



NO

NO

NO

# PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

### Environmental assessments

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed

    Waste Management Act 1987, a record of which is on the Public Register?

    NO
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

## Production of certain waste

- 4. (1) Was a licence under the repealed South Australian Waste Management Commission Act 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

CT Volume 5864 Folio 499



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on Iand

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5864 Folio 499



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5909 Folio 379

Address

Section 173, Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NΩ

CT Volume 5909 Folio 379



#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

# Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?

NO

(2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?

NO

NO

(3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

NO

(4) Was an environmental authorisation ever issued under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

# Production of certain waste

4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

(2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

CT Volume 5909 Folio 379



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

Delegate for

**ENVIRONMENT PROTECTION AUTHORITY** 

CT Volume 5909 Folio 379



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CR Volume 5760 Folio 605

Address

Section 504, Park Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NO

CR Volume 5760 Folio 605



NO

NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time .
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
     or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

# Waste depots

3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South

Australian Waste Management Commission Act 1979, a record of which is on the Public

Register?

(2) Was a licence to operate a waste depot on the land ever issued under the repealed

Waste Management Act 1987, a record of which is on the Public Register?

NO

(3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?

(4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

CR Volume 5760 Folio 605



NO

(4) Was an environmental authoristation ever issued under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CR Volume 5760 Folio 605



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5447 Folio 579

Address

Allotment 5 (F16853), Brooks Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the Environment Protection Act 1993 that is registered in relation to the land.	NC
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NC
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NC
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NIC

CT Volume 5447 Folio 579



NO

NO

NO

NO

NO

## PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

## **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed *South Australian Waste Management Commission Act 1979*, a record of which is on the Public Register?
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed Waste Management Act 1987, a record of which is on the Public Register?
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to operate a waste depot on the land, a record of which is on the Public Register?
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act* 1979 ever issued for the production of waste of a prescribed kind (within the meaning of that Act) on the land, a record of which is on the Public Register?
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

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page 2 of 3

**Environment Protection Authority** 



NO

Was an environmental authoristation ever issued under the Environment Protection Act 1993 (4)in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, being a licence that is no longer in force and a record of which is on the Public Register?

NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed Waste Management Act 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5447 Folio 579



Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

## Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5447 Folio 581

Address

Allotment 4 (F16853), Brooks Road, BUCKLAND PARK SA 5120

I advise as follows:

# PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is registered in relation to the land.	NO

CT Volume 5447 Folio 581



NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

#### **Environmental assessments**

- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act;
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority);
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

## Waste depots

- 3. (1) Was a licence to operate a waste depot on the land ever issued under the repealed South

  Australian Waste Management Commission Act 1979, a record of which is on the Public

  Register?
  - (2) Was a licence to operate a waste depot on the land ever issued under the repealed

    \*\*Waste Management Act 1987, a record of which is on the Public Register?

    NO
  - (3) Is an environmental authorisation currently in force under the *Environment Protection Act*1993 in the form of a licence to operate a waste depot on the land, a record of which is on the
    Public Register?

    NO
  - (4) Was an environmental authorisation ever issued under the *Environment Protection Act 1993* in the form of a licence to operate a waste depot on the land, being a licence that is no longer in force and a record of which is on the Public Register?

#### Production of certain waste

- 4. (1) Was a licence under the repealed *South Australian Waste Management Commission Act 1979*ever issued for the production of waste of a prescribed kind (within the meaning of that Act)
  on the land, a record of which is on the Public Register?

  NO
  - (2) Was a licence under the repealed *Waste Management Act 1987* ever issued for the production of prescribed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

CT Volume 5447 Folio 581



NO

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NO

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ENVIRONMENT PROTECTION AUTHORITY

CT Volume 5447 Folio 581



Receipt No

Admin No

: 4189 (4412)

File Reference:

Connell Wagner Pty Ltd 55 Grenfell Street ADELAIDE SA 5000

Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

#### Section7 - Land and Business (Sale and Conveyancing) Act 1994

1 refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5447 Folio 585

Address

Allotment 6 (F16853), Thompson Road, BUCKLAND PARK SA 5120

I advise as follows:

Summary of land use:

Land on which Waste was Deposited NEC

#### PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
56.	Clean-up authorisation issued under section 100 of the Environment Protection Act 1993 that is	NO

CT Volume 5447 Folio 585

page 1 of 4



NO

NO

NO

NO

NO

NO

NO

#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

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- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
  - (a) by or on behalf of the owner or occupier of the land -
    - (i) pursuant to an authorisation, agreement or order under section 52(1)(b), 59, 93, 99, or 100 of the Environment Protection Act 1993;
    - (ii) for the purposes of a notification given under section 83 of that Act; or
  - (b) by the Environment Protection Authority (whether alone or jointly with another authority); or
  - (c) by a Contaminated Site Auditor recognised by the Environment Protection Authority for the purposes of carrying out such an assessment?

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CT Volume 5447 Folio 585

page 2 of 4



4. (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

NO

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NO

#### Waste on land

5. Did the former Waste Management Commission under the repealed *Waste Management Act* 1987 have any record of waste (within the meaning of that Act) being deposited on the land between 1 January 1983 and 30 April 1995, details of which are on the Public Register?

YES

A summary of the activities relating to wastes may be appended. Should you require any further information regarding this land (outside the Public Register details) please contact the Environment Protection Authority to make necessary arrangements.

Details and/or copies of environmental assessments, licences and records on the Public Register may be obtained from the Environment Protection Authority on payment of the prescribed fee.

Prior to arranging an examination and/or copies of the required above information please telephone (08) 8204 9128 to contact the Public Register Administrator to ensure the required details are available upon arrival.

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete and therefore the EPA connot confirm the accuracy of the historical information provided.

Delegate for

**ENVIRONMENT PROTECTION AUTHORITY** 

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#### NOTE -

This parcel of land was used for the deposition of waste without being licensed or controlled by the South Austalian Waste Management Commission.

Type Of Waste Received

Demolition, Building And Construction Wastes

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Connell Wagner Pty Ltd 55 Grenfell Street ADELAIDE SA 5000 Contact: Rosslyn Farquharson Telephone: (08)8204 2179

Contact: Gayle Brookshaw Telephone: (08)8204 1112 Fax: (08)8124 4672

07 April, 2008

Dear Sir/Madam,

#### Section7 - Land and Business (Sale and Conveyancing) Act 1994

I refer to your enquiry concerning the parcel of land comprised in

Title Reference

CT Volume 5909 Folio 380

Address

Section 503, Legoe Road, BUCKLAND PARK SA 5120

I advise as follows:

### PARTICULARS OF MORTGAGES, CHARGES & PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

53.	Environment performance agreement under section 59 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
54.	Environment protection order issued under section 93 of the <i>Environment Protection Act</i> 1993 that is registered in relation to the land.	NO
55.	Clean-up order issued under section 99 of the Environment Protection Act 1993 that is registered in relation to the land.	NO
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page 1 of 3



#### PARTICULARS RELATING TO ENVIRONMENT PROTECTION

Section 7 - Land and Business (Sale and Conveyancing) Act 1994 The answers to the following questions are shown:

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- 2. (3) Does the Environment Protection Authority hold a copy of a report on any environmental assessment of the land or a part of the land carried out at any time -
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NO

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page 2 of 3

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4. (3) Is an environmental authorisation currently in force under the *Environment Protection Act* 1993 in the form of a licence to carry out an activity that produces listed waste (within the meaning of that Act) on the land, a record of which is on the Public Register?

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Delegate for

**ENVIRONMENT PROTECTION AUTHORITY** 

CT Volume 5909 Folio 380

page 3 of 3

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# Mosquitoes at Buckland Park, South Australia

An analysis of mosquito communities, future nuisance and disease threats, potential management strategies, and the impact of climate change

Dr Craig Williams PhD
Dr Michael Kokkinn PhD
Oct 29, 2008



Mosquito and Plant Research Group Sansom Institute University of South Australia GPO Box 2471, Adelaide SA 5001





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#### 1. INTRODUCTION

Joint venture partners Walker Corporation and Daycorp are proposing the creation of a new urban area on a site of 1,308 hectares at Buckland Park within Playford City area, north of Adelaide.

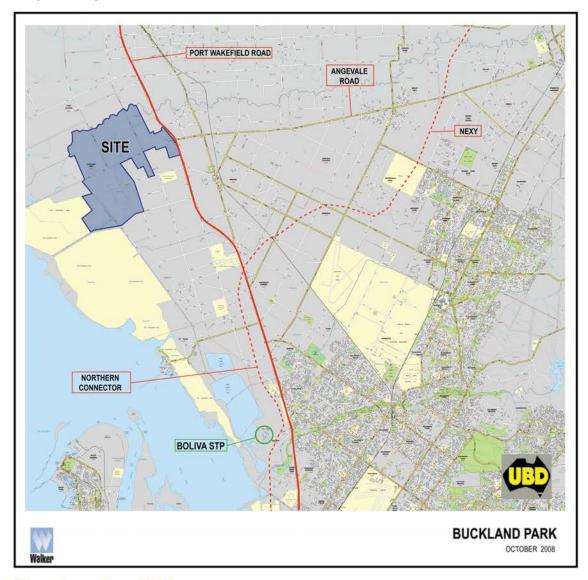


Figure 1: Locality Plan

The site is currently undeveloped. It is bounded by the Gawler River to the north, and Port Wakefield Road to the east.

It is located approximately 2 kilometres from the Gulf St Vincent coast. The area between the site and the coast is characterised by samphire and mangrove communities. These communities provide for a range of native invertebrates, the ecology of which is heavily influenced by tidal action.

Cheetham's salt pans are located between the coast and the site.

A site plan is overleaf.



Figure 2: Site Plan

The proposal comprises 12,000 residential allotments, with supporting commercial, retail, community and open space facilities. The proposal is illustrated in the Masterplan below.

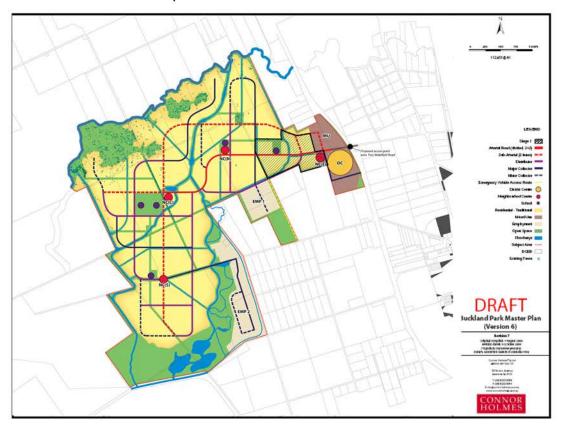
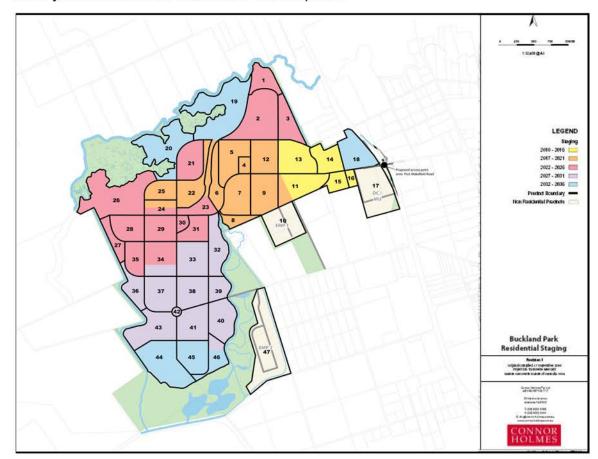


Figure 3: Masterplan
BUCKLAND PARK MOSQUITO ASSESSMENT



#### A 25 year construction time frame is anticipated.

Figure 4: Staging Plan

The University of South Australia has been briefed to assess the future likely scale and impacts of mosquitoes on the site and proposal, and to recommend appropriate monitoring and management techniques that may be implemented.

In August 2008, the Development Assessment Commission issued revised guidelines for the environmental impact assessment of the proposal.

Of relevance to this assessment are the following guidelines.

- **4.3.19** Describe measures that may be undertaken to control mosquitoes in and near the site to reduce the possible health risks.
- **4.3.20** Describe how the mosquito control measures will impact on species that require insects for food.
- **4.3.21** Describe the impact of insect control measures on recreational fishing and local ecology.

In November 2007, Walker Corporation briefed University of South Australia to undertake the necessary assessment. The main tasks in that brief were as follows.

- Determine the size of the mosquito population on the site, and any risks to human health associated with this population, by desktop study and field work.
- Evaluate potential public health risk associated with mosquitoes and mosquito borne diseases, considering potential changes associated with global and local climatic change.
- Identify monitoring and control measures to be implemented.
- Describe how proposed mosquito control measures will impact on indigenous fish and fauna in the locality that rely on mosquitoes for food. In particular, the potential impacts on recreational fishing and local ecology should be considered.

This assessment addresses the EIS Guidelines and the tasks listed above.

# 2. NATURE AND SCALE OF MOSQUITO COMMUNITIES

#### 2.1 INTRODUCTION

Mosquitoes usually occur as communities; namely groups of populations of different species. Each species may vary in the nature of the ecological niche it occupies, resulting in variable habitat and climate requirements. For this reason, each mosquito species in a given location will vary in terms of when it is abundant and the extent of nuisance and disease risk it poses to humans.

Furthermore, because the environmental conditions (including weather) will vary from year to year, so will the size of mosquito populations. So, the 'mosquito population' at a particular site is actually a diverse community of species that is spatially and temporally dynamic.

Only by studying mosquito communities over several years at a location can we hope to fully understand it. Thankfully, much is known about nearby mosquito communities in the region of the site, along the coast north of Adelaide, meaning that with a small amount of data collection a great deal about mosquitoes in Buckland Park and its environs can be surmised.

Two types of risks to human well-being are posed by mosquitoes: nuisance biting and disease. Although disease is always considered serious, the problem of nuisance biting cannot be discounted, as it may impact on lifestyle and community morale.

The nature of mosquito risks to human well-being is dependent upon the composition of the mosquito community; i.e. what species of mosquitoes are present and in what numbers.

Within urban areas there are two major sources of mosquitoes capable of causing a nuisance and transmitting disease.

**Urbanised species**, which could breed within the site.

#### Rangeland species, such as:

- Coastal mosquitoes, which may move into the site from the west;
- Peri-urban mosquitoes which may move into the site from adjacent areas (horticulture, compost production, horse agistment etc.).
- Mosquitoes which move into the site under the influence of regional phenomena, for example long distance transport (trucks and trains).

The direction of these potential incursions by rangeland species is shown at Figure 7 below.

#### 2.1.2 Urbanised communities

Urbanised species can breed in habitats unwittingly provided by humans. Such habitats include drains, artificial containers, and roof gutters that

become filled with water. There are particular mosquito species that are adapted to these habitats.

**Aedes notoscriptus** is a native species distributed throughout Australia. It breeds well in natural water-filled tree holes and phytotelmata, and has made a successful shift into urban environments as a result of the ability to exploit artificial containers for breeding.

It is the major rainwater tank-breeding species in Adelaide, and colonises blocked gutters, self-watering pots and other containers.

It is likely that with a residential development at Buckland Park, there will be an increase in *Ae. notoscriptus* numbers.

However, we estimate that the nuisance and disease risk posed by *Ae. notoscriptus* would not be any greater at Buckland Park than for any other residential area in Adelaide.

**Culex quinquefasciatus and Culex molestus** are cosmopolitan species that breed in a variety of artificial containers, drains, tanks and groundpools. They prefer eutrophic water, so are well suited to nutrient-rich conditions such as septic tanks and run-off from well-fertilized areas.

As with *Ae. notoscriptus*, the disease and nuisance risk posed by these species in a Buckland Park development should be no greater than for any other residential area in Adelaide.

*Culex globocoxitus* and *Tripteroides atripes* may increase in abundance as a result of the proposal.

#### 2.1.3 Rangeland communities

Rangeland species can breed in naturally occurring habitat, that may be fresh, brackish or saline. These habitats include water-filled tree holes and ground pools. Ground pools may be filled by rainfall, groundwater or tidal action.

Mosquitoes breeding in brackish and saline habitat in low lying marshy areas can breed in enormous numbers and create nuisance and disease risks of significant magnitude.

Although they do not originate in urban areas, rangeland species may breed in nearby habitat and fly into them.

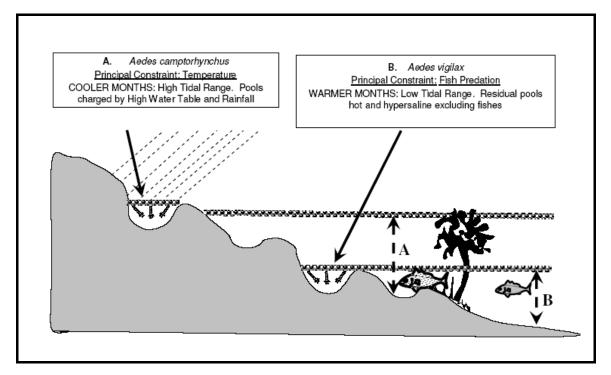
In Australia, non-urban mosquitoes are responsible for the majority of vectorborne disease. At particular risk are communities at the fringes of urban areas, as these tend to be closer to non-urban mosquito breeding grounds.

Furthermore, suitable habitats may be provided in suburban areas; for instance by run-off from drains into grassy depressions.

In any proposed housing development near the coast, the risk of incursions from coastal mosquitoes must be considered.

The figure below shows the likely breeding places for these mosquitoes within the site's environs. It illustrates the role of tide height, temperature and fish predation on the population dynamics of these coastal mosquitoes.

Figure 5: Profile of the niches of the two dominant coastal mosquitoes west of Buckland Park



Samphire and mangrove forest are located to the immediate west of the site (Fig. 6). Given the proximity of the site and proposal to extensive samphire swamp, it is considered likely that coastal mosquitoes may pose a risk to humans.

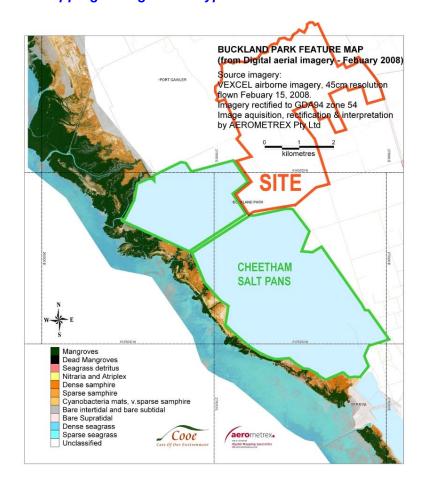


Figure 6: Mapping of vegetation types in the Buckland Park environs.

Southern Australia is home to two important coastal species. The northern salt marsh mosquito (*Aedes vigilax*) and southern salt marsh mosquito (*Aedes camptorhynchus*). They are both competent vectors of arboviruses and can episodically occur in very high numbers.

Both species are known to be responsible for Ross River virus transmission throughout Australia (Ballard & Marshall 1986; Mackenzie et al. 1998).

However, the role of these species as disease vectors in South Australia (SA) is unclear.

Both types are well recognised as pest species in areas north of Adelaide (Williams et al. 2001), and are known to be capable of dispersing several kilometres from breeding grounds (Lee et al. 1984).

They are therefore a potential concern for the Buckland Park proposal.

**Aedes camptorhynchus**, is a large, vicious biter that breeds in brackish ground pools in both coastal and inland areas.

In SA it is most adundant in spring and early summer and is common in lowlying areas with some ground salinity. *Aedes camptorhynchus* breeds particularly well amongst inundated samphire, which can be found to the west of the site (Fig. 6). Abundance of this species is determined particularly by rainfall and cooler temperatures.

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Aedes camptorhynchus is known to fly several kilometres from breeding sites (Lee et al. 1984, M. Lindsay WA Dept Health, pers. comm. 2007) and thus may make incursions into the proposal's future residential areas causing nuisance and disease impacts.

**Aedes vigilax**, is a medium-sized vicious biter that breeds in brackish, saline and hypersaline groundpools. It breeds in inundated samphire and in pools amongst mangrove forest (see Figure 6).

In SA it is most abundant in mid-late Summer and Autumn. Abundance of this species is determined particularly by tidal action and higher temperatures. This species is known to fly up to 50 kilometres from breeding sites (Lee et al. 1984) and thus may make incursions into the proposal's future residential areas causing nuisance and disease impacts.

The abundance of *Ae. vigilax* is unlikely to be greatly affected by the proposal. However, poor drainage and movement of stormwater into adjacent undeveloped areas may create breeding habitat for *Ae. camptorhynchus*, particularly after rainfall in spring and early summer.

Both *Ae. camptorhynchus* and *Ae. vigilax* will make seasonal incursion into the site from coastal areas to the west, as illustrated in Figure 7, creating a risk of nuisance and disease in spring and early summer.

Any recommendations for management should focus on these species and these times of the year.

#### 2.3 STUDY METHOD

Our initial aim was to characterise the composition of the mosquito community at Buckland Park, through analysis of previous data and literature and new field investigations. With this information we then aimed to analyse the community for its potential risks posed to human health and well-being in the event that a population of many thousands of people become resident there.

We used two modes of investigation.

#### 2.3.1 Analysis of historical records for northern Adelaide mosquitoes

In-house records of the Mosquito and Plant Research Laboratory at University of South Australia (UniSA) were analysed. These records comprise mosquito collection data from coastal areas north of Adelaide from 1997 onwards. A large number of records were from suburban areas in the City of Salisbury, particularly Globe Derby Park (approx. 10km south of the site), which is adjacent to several freshwater wetlands, samphire swamp and mangrove forest. The conditions at Globe Derby Park are extremely similar to those in Buckland Park in terms of nearby vegetation.

Records of *ad hoc* collections from the St Kilda region and Buckland Park estate were also examined. Mosquito collection records from Torrens Island and nearby samphire swamp areas were obtained from the SA Department of Health and analysed. Previous publications concerning mosquitoes in

Adelaide (Williams et al. 1999, 2001; Williams and Proctor 2002) were consulted to determine species that could plausibly occur at Buckland Park.

#### 2.4.1 Mosquito survey of Buckland Park and environs

Collections of mosquitoes were made at the proposal's site and nearby environs during Jan-Feb 2008. Carbon dioxide baited light traps (EVS type, Rohe and Fall 1979) were used.

These devices collect adult female mosquitoes that are searching for bloodmeal hosts, meaning that this form of sampling gives a good representation of the species likely to be posing the greatest nuisance or disease risk.

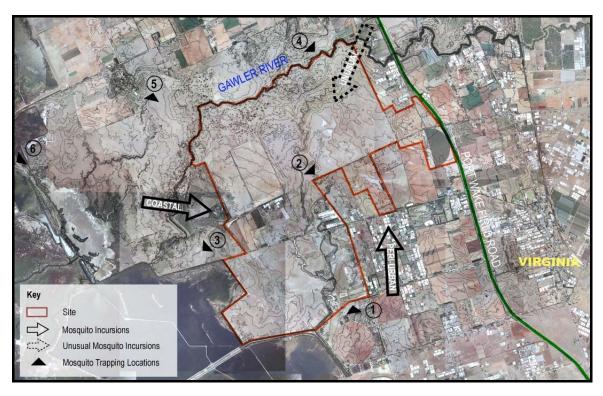


Figure 7: Mosquito Trapping Locations and Anticipated Direction of Incursions.

#### 2.4 RESULTS

#### 2.4.1 The mosquito community

We found mosquitoes at Buckland Park from within the urban and rangeland communities.

#### 2.4.2 Urban mosquitoes

Urban mosquitoes were present in only small numbers during our survey. This was expected due to the lack of current development at the site.

#### 2.4.3 Rangeland mosquitoes

Rangeland mosquitoes were abundant during our survey, especially *Ae.* camptorhynchus and *Ae.* vigilax. The latter was most abundant, at a level far exceeding the generally accepted 'nuisance threshold' of 100 per trap per night (165 per trap were collected during survey work in Jan-Feb 2008).

#### 2.4.4 Predicted seasonality and abundance of major mosquito species

Systematic longitudinal studies of mosquito communities over several years at nearby coastal areas were available.

Our analysis of historical data enabled us to construct seasonality curves of major species which we have confirmed as occurring at Buckland Park. Of particular interest are the rangeland *Ae. camptorhynchus* and *Ae. vigilax*.

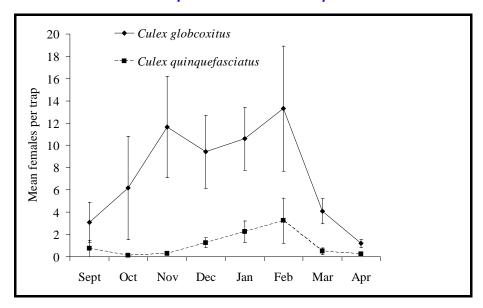
Given the close proximity of these previous studies, we expect very similar or identical seasonal patterns to apply at Buckland Park. The situation at Globe Derby Park is extremely similar to that proposed Buckland Park in many respects. It consists of a residential development built on low elevation land immediately to the east of samphire swamp and mangrove forest. Such proximity between residential development and mosquito habitat can be seen at various points along the South Australian coastline. Townships such as Whyalla, Pt Pirie, Pt Broughton and Cowell all suffer from periodic mosquito nuisance due to the close proximity of coastal mosquito breeding habitat.

**Urban Species**: Informative seasonality data was available for *Cx. globocoxitus* and *Cx. quinquefasciatus*. Abundance of *Cx. quinquefasciatus*, a prolific urban species, peaked in late summer (Fig. 8). By contrast, *Cx. globocoxitus* was more common from late spring until the start of autumn.

In general, the abundance of both species at Globe Derby Park did not exceed 20 mosquitoes per trap per night, a level well below typical 'nuisance biting' thresholds (approx. 100 per trap per night).

There is no cause to suspect a greatly different seasonal pattern for *Culex* species at the site.

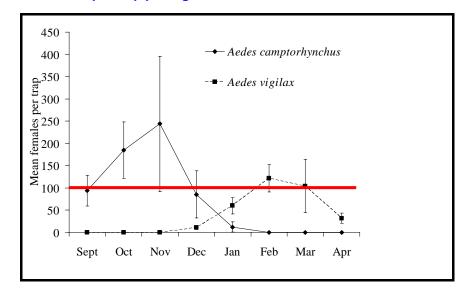
Figure 8: Seasonality of Culex globocoxitus and Culex quinquefasciatus for the period 2000-2007 at coastal Adelaide sites approx. 10km south of Buckland Park. Mean trap collection +/- SEM is presented



Rangeland coastal Aedes mosquitoes: both Ae. camptorhynchus and Ae. vigilax demonstrated strong seasonality (Fig. 9). The abundance of both species was consistently above threshold nuisance levels of 100 per trap per night, with Ae. camptorhynchus a major pest from September to December, and Ae. vigilax a pest after the new year.

We would expect similar seasonal patterns and nuisance biting problems at Buckland Park.

Figure 9 Seasonality of Aedes camptorhynchus and Aedes vigilax for the period 2000-2007 at coastal Adelaide sites approx. 10km south of Buckland Park. Mean trap collection +/- SEM is presented. The nuisance threshold of 100 per trap per night is also shown.



#### 2.5 CONCLUSION

The most abundant members of the mosquito community at Buckland Park are rangeland coastal mosquitoes that breed in samphire and mangrove swamps to the west. At comparable sites nearby, such mosquitoes are present at nuisance levels (i.e. > 100 per trap per night) for much of the period from September to April. In particular, we would expect *Ae. camptorhynchus* to be a nuisance from Sep-Dec, and *Ae. vigilax* from Feb-Mar. While some variation to this timing would be expected, our analysis reveals a reasonable amount of predictability to such nuisance. With the development of human habitation and infrastructure, it is likely that some increased abundance of urban breeding mosquitoes in the area will occur.

(Table 1 below summarises the mosquito community composition and the risks posed by each member species).

Table 1: Mosquito species that occur (or are likely to occur) at Buckland Park. Asterisk denotes collection during 2008 survey.

SPECIES	SEASONALITY	HABITAT	LIKELY NUISANCE RATING	LIKELY VECTOR STATUS
Aedes australis	Summer months	Coastal saline	Low	-
Aedes camptorhynchus	Spring, early summer	Coastal brackish	High	Ross River virus, Barmah Forest virus
Aedes notoscriptus*	Summer, Autumn	Urban / sylvan	High	Ross River virus
Aedes vigilax*	Mid-late Summer and autumn	Coastal saline	High	Ross River virus
Anopheles annulipes*	Summer	Non-urban groundpools	Low	-
Culex annulirostris*	Summer	Non-urban groundpools	Medium	Ross River virus
Culex australicus	Summer	Non-urban groundpools	Low	-
Culex globocoxitus*	Spring, summer, autumn	Urban and non- urban goundpools and drains	Low	-
Culex molestus*	Spring, summer, autumn	Urban drains, tanks and sumps	High	-
Culex quinquefasciatus*	Spring, summer, autumn	Urban drains, tanks and sumps	High	-
Tripteroides atripes	Spring, Autumn	Urban/sylvan	Low	-

#### 3. DISEASE RISK POSED BY MOSQUITOES

Following the characterisation of the local mosquito fauna and given knowledge of the disease vector status of each species, we provide the following risk assessment for potential mosquito-borne disease at Buckland Park.

#### 3.1 ROSS RIVER AND BARMAH FOREST VIRUSES

Ross River and Barmah Forest viruses are the most likely vector-borne diseases to cause human infection at Buckland Park.

There are regular human notifications of locally acquired infections for both viruses throughout metropolitan Adelaide. Notification data for Ross River virus infection for the period Jan 1 – Dec 31 2007 in the nearby Salisbury local government area revealed an infection rate of 7.2 per 100,000 population (source, SA Department of Health, Communicable Disease Control Branch).

Likely local vectors of these viruses are the abundant rangeland coastal mosquitoes, *Ae. camptorhynchus* and *Ae. vigilax*, making these species an important focus for management in Buckland Park.

### 3.2 MURRAY VALLEY ENCEPHALITIS, WEST NILE AND KUNJIN VIRUSES

The risk posed by the flaviviruses, Murray Valley Encephalitis virus, West Nile virus / Kunjin virus, is predicted to be very low for Buckland Park.

While local mosquitoes may be competent vectors of these pathogens, there is little recorded transmission of these viruses in SA. The reasons for the absence of transmission in SA is not well understood. However, it is likely to be related to the behaviour and ecology of the reservoir viral hosts (such as waterfowl).

The last recorded human Murray Valley Encephalitis infection in SA was in 2000, in the far north west of the state (Conan Liu, Office of Health Protection, Dept. of Health and Ageing, pers. comm. July 2008).

There is no reason to believe the risk of infection at Buckland Park posed by these viruses is any different to that elsewhere in metropolitan Adelaide.

#### 3.3 DENGUE AND CHIKUNGUNYA VIRUSES

There is little to no perceived risk of local Dengue or Chikungunya transmission at Buckland Park, as there is a complete absence of known competent mosquito vectors there (*Aedes aegypti* and *Aedes albopictus*).

#### 3.4 MALARIA

Despite the presence of a potential malaria vector at Buckland Park, Anopheles annulipes, the risk of local malaria transmission is extremely small. The abundance of *An. annulipes* is extremely low.

The low frequency of malaria-positive people in SA supports the conclusion that infection with malaria will present only a low risk to future Buckland Park

residents. Virtually all malaria in Australia is brought in by travellers returning from overseas (Liu et al. 2006).

#### 3.5 CONCLUSION

It is likely that some transmission of Ross River virus will occur at Buckland Park in the future. Ross River virus transmission regularly occurs in metropolitan Adelaide. De-identified notification data for Ross River virus infection for the period Jan 1 – Dec 31 2007 in the nearby Salisbury local government area, revealed an infection rate of 7.2 per 100,000 population (source, SA Department of Health, Communicable Disease Control Branch). This was during a non-epidemic year, and may be considered a typical baseline transmission level. If such a level of transmission was maintained, it would be reasonable to expect 1 notified case per annum in a Buckland Park population of 15,000 people, and approximately 2 cases per annum in 30,000 people. Predicting the exact amount of future transmission is not possible, although it would be reasonable to state that some years no transmission would occur, while in others there may be several cases.

# 4. POTENTIAL IMPACT OF GLOBAL AND LOCAL CLIMATIC CHANGE

#### 4.1 INTRODUCTION

Mosquito abundance is determined largely by local climate and ecology. Thus, any changes to local climate are likely to have some influence on mosquito abundance, and therefore nuisance and disease risk. While it is impossible to predict these changes with a high level of confidence, we can make some broad predictions of likely mosquito fauna changes as a result of a changed climate.

Changes in global and regional climates over the 21st century are predicted due to the history of, and ongoing human-induced, greenhouse gas and sulphate aerosol emissions (CSIRO 2001) altering atmospheric composition (McInnes et al. 2003). An altered radiative balance caused by such emissions has lead to increasing air temperatures, which in turn influences the global hydrological cycle, causing changes in rainfall patterns (Preston & Jones 2006). There is evidence to suggest these altered rainfall patterns, combined with low pressure systems and associated storm surges, can contribute to sea level rise (McInnes et al. 2000). Predictions of climate changes for the Adelaide region have been compiled with the use of various global and regional climate models (McInnes et al. 2003; CSIRO 2001).

#### 4.2 CLIMATE CHANGE PREDICTIONS FOR ADELAIDE REGION

#### 4.2.1 Temperature Changes

On average, the Earth has warmed by 0.6 ± 0.2°C since 1900 (CSIRO 2001; Preston & Jones 2006). Between 1910 and 2001, Australia's average temperature rose by 0.08°C per decade. Australia's minimum temperature increased by 0.11°C, while the maximum temperature increased by 0.06°C per decade. Between 1950 and 2003, SA's maximum temperature has increased more rapidly than national trends, at a rate of 0.17°C per decade, while the minimum has increased at a rate of 0.18°C per decade. The average temperature increase for SA has been 0.17°C per decade (McInnes et al. 2003).

Predicted temperature increases for the Adelaide region, relative to 1990 averages are detailed in Appendix One.

#### 4.2.2 Rainfall Changes

Between 1950 and 2001, Australia's average annual rainfall generally decreased, however, there is regional and climatic variability (drier and wetter periods) (McInnes et al. 2003). Predicted rainfall decreases for the Adelaide region relative to 1990 averages are detailed in Appendix One.

#### 4.2.3 Predicted quantitative effects of temperature and rainfall changes

In the light of the predicted changes to Adelaide's rainfall and temperature in a future climate, some variations to the composition and abundance of the local

mosquito fauna are predicted. These can only be discussed only in general terms, given the current understanding of local mosquito ecology.

There are, however, some more precise predictions that may be made with respect to the locally abundant coastal mosquitoes, *Ae. camptorhynchus* and *Ae. vigilax*.

**Aedes vigilax:** We have developed a logistic regression model that describes the probability of *Ae. vigilax* population spikes in response to environmental variables.

This model has been developed from seven years of historic mosquito surveillance data in the northern Adelaide coastal region. The formulation used STATA statistical software (Ver. 9.2) and locally available meteorological data.

The resultant model identifies the key predictive drivers for *Ae. vigilax* in northern Adelaide and enables the calculation of spike probabilities. In this case we define a population spike as abundance over 100 female mosquitoes per trap (Rohe & Fall 1979) per night. This figure is a good correlate with abundance required to create noticeable nuisance biting in nearby human residences. The methods used and the resultant algorithm describing *Ae. vigilax* population spike probability is given in Appendix One.

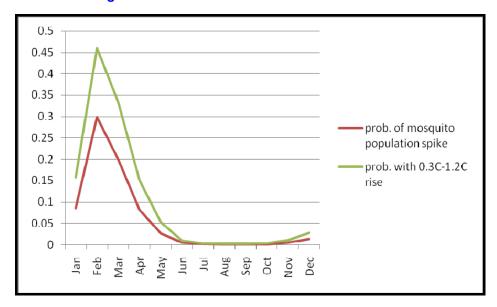
To calculate predicted climate change impacts for the year 2030, 0.3°C was added to the monthly average daily minima temperatures, and 1.2°C was added to the average daily maxima.

The result is an increased probability of *Ae. vigilax* population spikes throughout summer, autumn and late spring (Fig. 10). The models predict an approximately 15% increased risk of *Ae. vigilax* nuisance problems in February and March, and approximate 5% probability increases in January and April. There is no suggestion of a longer *Ae. vigilax* season.

Thus, we expect residents at Buckland Park to have a greater probability of experiencing *Ae. vigilax* mosquito biting in Summer and Autumn in 2030 compared with today. We have insufficient information to determine whether this poses an increased risk of arboviral disease, as impacts of climate change on other aspects of the virus transmission cycle could not be modelled.

NOTE: These predictions assume no significant change in *Ae. vigilax* physiology and ecology between now and 2030.

Figure 10: Probability of Aedes vigilax population spikes occurring in each month in northern Adelaide. Curves for current climatic conditions and those under a climate change scenario for 2030 are shown.



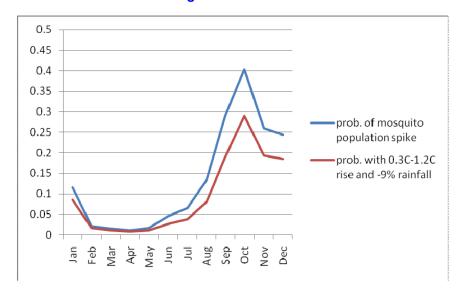
Aedes camptorhynchus: As for Ae. vigilax, a logistic regression model was developed that describes the probability of Ae. camptorhynchus population spikes in response to changed environmental variables. This model has been developed for the northern Adelaide coastal region, based on seven years of historic mosquito surveillance data, using STATA statistical software and locally available meteorological data. The methods used and the resultant algorithm describing Ae. camptorhynchus population spike probability is given in Appendix One.

To calculate predicted climate change impacts for the year 2030, 0.3°C was added to the monthly average daily minima temperatures, and 1.2°C was added to the average daily maxima. We used the maximum predicted annual rainfall decrease, -9%, to generate predicted monthly rainfall. The result is a decreased probability of *Ae. camptorhynchus* population spikes throughout Winter, Spring and early Summer (Fig. 11). The models predict an approximately 12% decreased risk of *Ae. camptorhynchus* nuisance problems in October, and an approximate 5% probability decrease in December.

Thus, we expect residents at Buckland Park to have a reduced probability of experiencing *Ae. camptorhynchus* nuisance mosquito biting in Winter, Spring and early Summer in 2030 compared with today. We have insufficient information to determine whether this poses a decreased risk of arboviral disease, as impacts of climate change on other aspects of the virus transmission cycle have not been modelled.

NOTE: These predictions assume no significant change in *Ae.* camptorhynchus physiology and ecology between now and 2030.

Figure 11: Probability of Aedes camptorhynchus population spikes occurring in each month in northern Adelaide. Curves for current climatic conditions and those under a climate change scenario for 2030 are shown.



### General comments about predicted climate change and local mosquito fauna (excluding Ae. camptorhynchus and Ae. vigilax)

Without detailed ecological modelling, it is impossible to make quantitative predictions about how mosquito fauna may change in response to an altered climate. However, given the overall prediction of slightly higher temperatures and lower rainfall in Adelaide, we can make some informed speculation about the potential impacts.

Higher temperatures will shorten generation time and potentially allow greater numbers of urbanised mosquitoes, especially *Ae. notoscriptus*, to emerge and pose a nuisance and/or disease threat. By contrast, *Cx. molestus* and *Cx. quinquefasciatus* may increase in response to greater water-storing, or decrease in response to reduced rainfall run-off into drains and sumps. Mosquitoes breeding in habitats unwittingly provided by humans may increase or decrease in response to altered climate. Species breeding in rainwater tanks may increase as these devices are increasingly utilised by water-storing residents.

Rangeland species may be expected to decrease as rainfall decreases. Species affected would include *Cx. annulirostris*, *Cx. australicus* and *An. annulipes*.

#### 4.3 CONCLUSION

Modelling of the ecological drivers of the two main pest mosquito species at Buckland Park, *Ae. camptorhynchus* and *Ae. vigilax* has permitted the potential impact of climate change on their seasonal abundance to be assessed.

Increases in *Ae. vigilax* pest effects are predicted to occur by 2030 in late Summer. By contrast, *Ae. camptorhynchus* pest effects are likely to be reduced by 2030. Effects of altered climate on other species cannot be quantified at this stage.

Nonetheless, it is likely that some will decrease and possibly disappear entirely, while others will continue to flourish.

# 5. POTENTIAL MONITORING AND CONTROL MEASURES

#### 5.1 INTRODUCTION

Mosquito control measures need to be applied within the framework of a strategic plan. All too often, the trigger for mosquito control measures is a series of complaints from residents. By this time, there is very little which can be done to ameliorate the problem and, in fact, these measures are frequently only effective in addressing the public's perception of the impacts.

We propose the establishment (and intelligent modification) of an Integrated Vector Management Strategy (IVMS) for Buckland Park. The main reason for taking a wider approach is because mosquito problems are more easily solved by pre-emptive action. Such action must be taken in the light of useful data gathered from monitoring programs.

An IVMS for Buckland Park would be based on the following guiding principles:

- Control measures are preferably pre-emptive and not reactive;
- The strategy is dynamic and is constantly modified in the light of new insights;
- The vision taken is contextual for both local and regional issues;
- Sufficient resources are provided to conduct effective mosquito surveillance and control;
- Mosquito management is conducted by individuals with vision and imagination who keep up to date with current mosquito trends and intelligence.

Our previous discussion has established that urbanised mosquitoes may be a problem in Buckland Park, though no greater than in any other urban area in Adelaide.

Coastal rangeland mosquitoes, particularly *Ae. vigilax* and *Ae. camptorhynchus*, pose a risk of nuisance and disease for future residents. As previously stated, this nuisance is most likely to occur in the period Sep-Dec (*Ae. camptorhynchus*) and Feb-Mar (*Ae. vigilax*).

Different management methods apply to the two different types of communities.

In South Australia there are various stakeholders involved in the management of mosquitoes (Environmental Health Service 2007). These include:

- The community
- Land owners
- Local Government
- State government
- Commonwealth government

Others such as research institutions, tourism interests.

Each stakeholder has its own responsibilities and concerns. An IVMS approach ensures that each works together to achieve the most effective results.

The South Australian Integrated Mosquito Management Strategy 2007 is being applied to the management of mosquitoes throughout South Australia.

It is considered that application of its principles to a future urban area at Buckland Park will assist in effectively managing mosquitoes at the site.

#### **5.2 MONITORING**

In order to provide appropriate data for the IVMS, particular monitoring is required. This should take four forms.

#### 5.2.1 Mosquito Population and Disease Intelligence

Mosquito management should be undertaken in the light of data from a variety of sources. While the gathering of data specific to the site of interest from larval and adult mosquito collection is vital, it is also important for mosquito managers to monitor and assemble information from the following sources:

- Arboviral disease notifications from the South Australian Health authorities.
- Literature about new mosquito introductions.
- Literature about emerging arboviral diseases.
- A network of environmental health personnel and academics working in government and universities within South Australia.

#### **5.2.2 Environmental Parameters**

Arrangements should be made to gather daily temperature, rainfall and tide height data for the coastline immediately west of Buckland Park for the mosquito active period (Sep-Apr). These data are particularly important for the prediction of problem outbreaks of coastal mosquitoes (*Aedes vigilax* in summer and *Aedes camptorhynchus* in winter) in light of patterns observed in very similar environs close to the site. The collection and analysis of such data would not necessarily be the work of one person, but would be part of an integrated management strategy involving several people.

#### 5.2.3 Weekly Larval Dipping

'Sentinel' larval locations should be semi-quantitatively dipped on a weekly basis in the mosquito season, September to May. This should involve taking ten random dips from the water using the appropriate method and recording the average number per dip. We recommend that sentinel locations be selected in the following areas: along the coast west of Buckland Park; within drains and ephemeral ponds in the site; in depressions and ephemeral water bodies associated with Thompsons Creek; and in areas adjacent to horticultural, horse agistment and composting activities.

#### 5.2.4 Weekly Adult Trapping

Carbon Dioxide-baited adult mosquito traps should be deployed on a weekly basis at locations shown below during the period Sep-Apr.

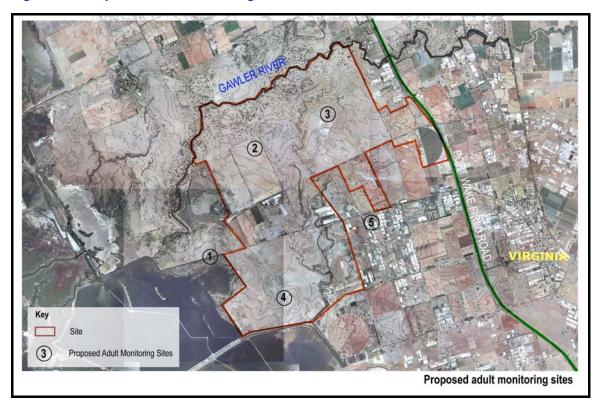


Figure 12: Proposed Adult Monitoring Locations

- **Trap 1** At a secure location west of the site in order to monitor the eastward movement of problem coastal mosquitoes.
- **Traps 2 & 3** Two traps within the site in order to monitor both urban (endogenous) and rangeland (exogenous) mosquito species.
- **Trap 4** In association with Thompson Creek in order to monitor mosquito activity associated with ephemeral waters of that drainage.
- **Trap 5** A trap which may be moved to any location on the periphery of the site in order to gauge the extent of mosquito incursions from: greenhouses; composting activities and horse agistment.

Over and above the patterns which will be revealed by the adult mosquito trapping above, there will be regular data available that will indicate any unusual mosquito incursions which may signal possible disease risk. Such unusual incursions may include exotic species or and/important disease vectors hitherto unknown in the region.

#### **5.2.5 Translating Monitoring into Action**

The framework below operates on an '*If*, *Then*' principle. The '*If* 'component is supplied from the various monitoring activities outlined above and the '*Then*' component denotes the recommended action (control measure or otherwise).

Table 2: Framework for Monitoring Activities

MONITORING AND SURVEILLANCE	IF	THEN	ACTION
Environmental Parameters	Cool weather, High Tidal Range	Inspect perched coastal pools for <i>Aedes</i> camptorhynchus breeding	Low larval numbers (< 1 per dip) will not require treatment. Otherwise treat pools with S-Methoprene.
Environmental Parameters	Hot weather, Low Tidal Range	Inspect mangrove coastal pools for <i>Aedes vigilax</i> breeding	Low larval numbers (< 1 per dip) will not require treatment. Otherwise treat pools with containing many small instars with S-Methoprene. If there are many large larval instars apply knockdown with <i>B. thuringienisis</i> formulations.
Environmental Parameters	Sustained and heavy winter rainfall	Inspect perched coastal pools for <i>Aedes</i> camptorhynchus breeding	Low larval numbers (< 1 per dip) will not require treatment. Otherwise treat pools with containing many small instars with S-Methoprene. If there are many large larval instars apply knockdown with <i>B. thuringienisis</i> formulations.
Environmental Parameters	Sustained and heavy summer rainfall	Inspect urban area for ephemeral pools	Treat pools prophylactically with S-Methoprene. If there are many large larval instars apply knockdown with <i>B. thuringienisis</i> formulations.
Arboviral Disease Notifications	Several cases reported in the area (radius 10 km)	Inspect all larval habitat in the suburb and surrounds for breeding.	Take pre-emptive action to reduce larval populations by knockdown spraying and installing S-Methoprene briquettes
Arboviral Disease Notifications	Arboviral epidemic reported in the area (radius 10 km)	Activate Emergency Plan and coopt additional personnel	<ul> <li>Broadscale larvicidal treatments;</li> <li>Adult Mosquito Knockdown;</li> <li>Public Education;</li> <li>Media Releases</li> </ul>
Trap 1. Monitoring	Numbers of coastal mosquitoes exceed 50 per trap		Low larval numbers (< 1 per dip) will not require treatment. Otherwise treat pools with containing many small instars with S-Methoprene. If there are many large larval instars apply knockdown with <i>B. thuringienisis</i> formulations.
Traps 2 & 3 Monitoring	Numbers of common pest urban species are high	Search for urban larval habitat	Undertake spot control in urban habitats (rainwater tanks; drains, puddles etc.); News release for local radio or newspaper; Public education
Traps 2 & 3 Monitoring	Numbers of coastal species are high	Check coastal larval habitat for breeding	Low larval numbers (< 1 per dip) will not require treatment. Otherwise treat pools with containing many

			small instars with S-Methoprene. If there are many large larval instars apply knockdown with <i>B. thuringienisis</i> formulations.
Traps 2 & 3 Monitoring	Numbers of unusual disease vector species are high	Consult with health authorities for concerted action. Decide on whether the Emergency Plan should be activated.	Check all larval habitats for unusual larval species and apply control measures; Consult with neighbouring suburbs for similar outbreaks; Issue warnings through media; Public Education.
Traps 4. Monitoring	Numbers of open drainage species are high	Survey open spaces associated with surface drainage related to Thompson's Creek	Low larval numbers (< 1 per dip) will not require treatment. Otherwise treat pools with containing many small instars with S-Methoprene. If there are many large larval instars apply knockdown with <i>B. thuringienisis</i> formulations.
Traps 5. Monitoring (Moved according to indicated need)	Numbers of species associated with peripheral industries are high	Survey adjacent facilities (with owner permission) for mosquito breeding sites	Arrange for the implementation of appropriate control measures and supply necessary information for the reduction of mosquito breeding sites.
All Larval Dipping	Overall patterns of larval abundance indicate future problems	Document different patterns; take advice	Take appropriate control measures
All adult trapping	Overall patterns of adult abundance indicate future problems	Document different patterns; take advice	Take appropriate control measures

### **5.3 MANAGEMENT**

A variety of mosquito control measures is available. Each situation involves the application of the appropriate control measure. For example, in an extreme medical emergency where there is a mosquito-borne disease epidemic, it would be appropriate to contemplate using broad acre aerial spraying. On the other hand, for minor local nuisance mosquitoes, limited larvaciding may be appropriate.

A major principle of mosquito control usually rules all actions: source reduction (reducing larval populations) should be the primary aim.

Given the potential environmental and economic costs of broadacre insecticide application for mosquito control, it is prudent to consider alternative mosquito control options. One such option is the use of natural and/or artificial barriers treated with insecticide to kill and/or impede mosquito incursions into the site.

### 5.3.1 Larval Control Measures

#### Larval Knockdown:

The use of *Bacillus thuringiensis* var. *israeliensis* toxins in different formulations (under different trade names) is currently the preferred method of

mosquito larval knockdown. The formulation is either sprayed as a liquid or broadcast as pellets into water bodies where it will kill most larvae within days as they ingest the toxin. The scale of the application operation can range from single puddles from a back-pack to boom-sprayers or application from fixed-wing aircraft.

Control of mosquitoes by application of larvicide may involve extensive treatment of sensitive coastal intertidal environments, something which may not be acceptable on ecological grounds. Based on the risk of nuisance and disease evident at the time (as determined by monitoring), the decision to spray extensively would be the subject of negotiation with coastal protection authorities.

# **Larval Development Stasis:**

The Insect Growth Regulator (IGR), S-Methoprene can be used, formulated as pellets or briquettes, to prevent the pupation of mosquito larvae. If applied when larvae are young, they will continue to grow and develop until they reach last larval stage where they will fail to pupate and emerge as problem adults. Similar possibilities to the knockdown methods described above for the application of IGR's are available.

#### 5.3.2 Adult Control Measures

#### Adult Knockdown:

In extreme situations it is possible to spray areas with short half-life pyrethroid insecticides in order to kill adult mosquitoes. This is the equivalent of a large scale 'fly spray' operation and is seldom justified.

### An Insecticidal Treated Barrier:

In recent times, particularly in situations where larval control is almost impossible, persistent, 90 days, formulations of the contact insecticide bifenthin has been applied to vegetation or mesh barriers erected between the larval habitat (coastal salt marshes) and the adjacent human populations. These have proved to be surprisingly effective, however, there remain concerns about their impacts on non-target insect species.

The use of an intercept barrier may be useful, given Buckland Park is at risk of incursions by coastal mosquitoes *Ae. camptorhynchus* and *Ae. vigilax* from breeding grounds to the west.

Application of insecticide (malathion) to barrier vegetation has been demonstrated to provide control of coastal mosquitoes in the United States (Anderson et al. 1991). A similar application of a pyrethroid insecticide (bifenthrin) to a natural vegetation barrier between residential areas in Buckland Park and the coastal mosquito breeding grounds to the west could be used.

Insecticide-treated barriers may consist of vegetation, or artificial structures such as fencing. Both could be used within the proposal. The proposed residential areas will include extensive fencing around houses, and parks where vegetated barriers could be grown.

A vegetated barrier should consist of dense, fine-leaved, woody foliage. Shrubs and trees with foliage from near ground level to at least 2 metres high, densely planted, would work best. Such foliage would provide a natural resting place for migrating mosquitoes, which would then be killed upon contact with residual insecticide previously applied.

The barrier should be planted to intercept migrating coastal mosquitoes from areas to the west.

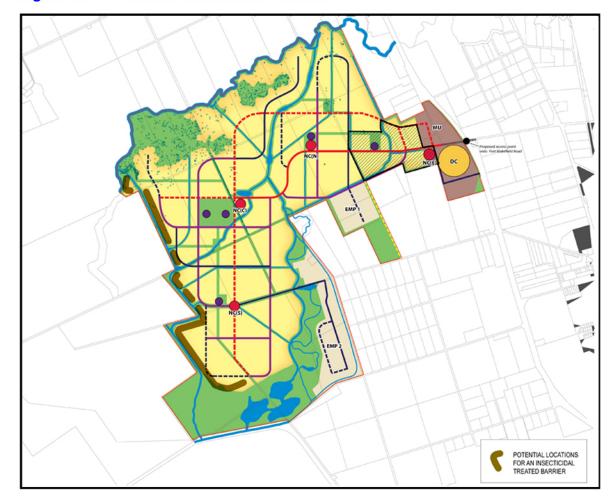


Figure 13: Potential locations for a barrier

The potential off target impact on other species is not known at this time, as this approach has not been tried in Australia before.

However, the locations in which the barrier could be considered are staged for construction in some 14 to 20 years.

It is considered that this approach to mosquito control will be further developed when the detailed design of those residential areas most likely to be impacted on by mosquito incursions from the coast occurs.

Research will need to consider these issues.

Impact on non-target species.

- Optimal configuration for physical deployment (mesh screens, vegetation barriers special plantings).
- Comparison of ecological impact with coastal insecticide application.
- Impact on nuisance and disease-vector mosquitoes.
- Costs relative to with broadcast insecticidal applications, particularly as implementation and maintenance will be the responsibility of home owners and Playford City Council.

#### 5.3.3 Individuals and land owners

New residents should be required to provide mosquito screens to windows.

New residents should be educated about keeping their gutters clear and garden free of potential receptacles for water which may provide mosquito breeding places.

These requirements will be included in the Design Guidelines which will be provided to future residents.

#### 5.4 CONCLUSION

Monitoring of mosquito communities will be essential, as such work will inform as to the current level of nuisance and disease risk, allowing decisions concerning the extent of mosquito control operations to be made. Future planning for resource allocation for any future mosquito management strategies should involve local government health officers. Discussion with personnel in the SA Department of Health (who provide partial funding for local government mosquito management programs) is also advised.

# 6. POTENTIAL IMPACTS ON LOCAL ECOSYSTEMS INDIGENOUS FISH, FAUNA AND RECREATIONAL FISHING

#### 6.1 INTRODUCTION

Insecticides are pesticide compounds specifically applied to control insects and are easily absorbed through the cuticle of an insect (Davis et al. 2007).

Mosquito larvicides are insecticides that target juvenile mosquitoes (Agency for Toxic Substances and Disease Registry 2005) and prevent the larvae from emerging (Environmental Health Service 2006). The most common larvicide used in SA is (s)-methoprene (Products: Altosid®, PROLINK® and NOMOZ®), which is a synthetic analogue of the insect juvenile hormone which regulates growth (Environmental Health Service 2006), the use of which stunts larval development (Agency for Toxic Substances and Disease Registry 2005). *Bacillus thuringiensis israelensis* (Bti) (Products: VectoBac® and Bti®) contain a bacterially produced toxin, which upon consumption, is toxic to larvae of several insects (Glare & O'Callaghan 1998).

This microbial larvicide is used in SA, as is the organophosphate temephos (Product: Abate®), which interferes with nerve signal transmission (Environmental Health Service 2006). *Bacillus sphaericus* (Bs) (Product: VectoLex®) is a bacterial toxin effectively used as a larvicide and has a similar action to Bti (Environmental Health Service 2006). Mosquito adulticides are often broad spectrum insecticides, toxic to many insects (Davis et al. 2007) and their use in SA is therefore limited. Bifenthrin (Product: Bistar®) is an adulticide used in SA (Environmental Health Service 2006).

# 6.2 OFF-TARGET IMPACTS

#### 6.2.1 Mosquito Larvicides

(S)-methoprene is an effective larvicide, delivered as either liquid, pellets, brickets, or bound to sand (Environmental Health Service 2006). However, many off-target impacts on biomass and species diversity of invertebrates have been reported, including termites, protozoa, aquatic macro invertebrates, and disruptions of normal foraging patterns and wax production in bees (Glare & O'Callaghan 1999). (S)-methoprene is moderately and slightly toxic to warm water and coldwater freshwater fish respectively, and is slightly toxic to birds (Extoxnet 1996; Agency for Toxic Substances and Disease Registry 2005). Reductions in the survival and metamorphosis of mud crabs (Glare & O'Callaghan 1999) and shrimps, has been reported, due to the use of this larvicide (McKenney & Matthews 1990).

(S)- methoprene takes effect generally at the fourth larval instar, preventing disruption of the food chain, unlike *Bacillus thurngiensis israelensis* which removes mosquito larvae from access to prey by taking effect as early as the first instar, leading to decreased predatory-insect biomass (Environmental Health Service 2006).

Bti toxicity also affects off-target invertebrate populations such as chironomids, blackflies (Glare & O'Callaghan 1998; Dickman 2000) and nematodes (Meadows et al. 1990) but has not been found to be toxic to birds

(Glare & O'Callaghan 1998). Temephos is an effective mosquito larvicide, often applied as a spray however, it has been found to be highly toxic to bird species (Extoxnet 1996) and similar to (s)-methoprene, is also toxic to fish, crustaceans, bees and freshwater macro invertebrates (Environmental Health Service 2006).

Although *Bacillus sphaericus* acts similarly to Bti, it has not been found to have any off-target impacts on any invertebrates or vertebrates (Pham et al. 1998). However, this microbial larvicide has only been found effective against two mosquito genera (*Culex spp.* And *Anopheles spp.*) (Environmental Health Service 2006; Pham et al. 1998).

# 6.2.2 Mosquito Adulticides

Bifenthrin is used as a mosquito adulticide in barrier treatments and the toxic application can be applied to off-target organisms such as fish, crustaceans and aquatic macro invertebrates (Extoxnet 1995), bees and is moderately toxic to several bird species (Briggs 1992). Bifenthrin can also be moderately toxic to mammals when ingested (Extoxnet 1995). Although temephos, used as an adulticide is considered one of the least toxic organophosphate insecticides, it can be toxic to mammals (Agency for Toxic Substances and Disease Registry 2005).

# 6.2.3 Vegetative Barriers

The off-target environmental impacts have not been established.

It is possible that the sum environmental impact will be positive, as a successful barrier would reduce the need to apply broadacre larvicides to sensitive water bodies. However, the barrier would almost certainly expose off-target invertebrates and vertebrates.

### 6.3 POTENTIAL IMPACTS ON THE LOCAL ECOLOGY

There are currently no larvicides or adulticides registered for use in SA that target all desired mosquito species without having off-target impacts. Such off-target impacts can alter species diversity, biomass and abundance, and alter important food chains and ecosystems.

It is likely that mosquito control measures in the Buckland Park area will increase as a result of the proposal. The most likely control measures to be employed are broadacre larval site treatments with either Bti or s-methoprene, and application of residual pyrethroid adulticides (e.g. bifenthrin) to artificial and vegetation barriers.

The off-target impacts of Bti and s-methoprene are well understood. If applied at unnecessarily high doses in areas where mosquito breeding is not high, there is a potential for adverse effects on local aquatic life, particularly invertebrates and animals further up the food chain (e.g. fish).

This said, a well designed and implemented mosquito control program conducted by trained vector control officers will largely circumvent any significant effects on local fisheries.

The off-target impacts of residual adulticide treatment of barriers remains unquantified and we strongly recommend the support of research programs to quantify any such effects.

# 6.4 CONCLUSION

Any chemical or biological agent used for mosquito control will have some offtarget impacts. However, a well-designed and managed mosquito control program will minimise these impacts.

# 7. OVERALL CONCLUSION

The Mosquito and Plant Research Group has studied the nature of the current mosquito community present in and around the proposed Buckland Park development site. Longer term studies of very similar nearby environs have been analysed in order to make inferences about the future impact and control of mosquito communities in the region.

Like most mosquito communities, the one at Buckland Park is seasonally variable, yet predictable in that the peak periods for mosquito nuisance and disease transmission risk (Sep – Dec; Feb - Mar) are identifiable. Mosquitoes in Buckland Park will be locally produced on-site and will also emigrate from breeding grounds immediately to the west. These latter coastal mosquitoes pose a nuisance risk.

As known vectors of Ross River virus, these coastal mosquitoes (*Ae. camptorhynchus* and *Ae. vigilax*) also pose a real disease transmission risk. However, the extent of future transmission of mosquito borne diseases at the site cannot be predicted with accuracy. Nonetheless, if current baseline transmission levels in the region are maintained (approx. 7 Ross River virus cases per 100,000 population per annum), then some small number of notifications may be expected in Buckland Park residents each year.

Based on recently derived models describing the interaction between coastal mosquitoes and climate and conservative regional warming estimates, we predict that some mosquitoes in the area are likely to become less abundant by 2030 (*Ae. camptorhynchus*), whereas some will become more abundant (*Ae. vigilax*). Thus, the net effect of climate warming and reduced rainfall on local mosquito populations is likely to be neutral.

The best way to minimise the nuisance and disease risk posed by mosquitoes to people is to implement a well designed mosquito surveillance and control program. Such a program, if run properly, will provide information permitting targeted control of problem mosquito species, thereby minimising ecological impacts of extensive, non-targeted mosquito spraying. The application of modern mosquito control products (e.g. s-methoprene) coupled with insecticide-treated foliage barriers will also act to reduce such adverse ecological impacts of mosquito control.

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# APPENDIX 1 PREDICTED CHANGES TO CLIMATE IN NORTHERN ADELAIDE

#### 1.1 PREDICTED TEMPERATURE CHANGES

Predicted temperature changes (Table 1.3), are most severe for Summer and Spring. Summer temperatures were  $15.2-29.1^{\circ}\text{C}$  between 1977-1997 (ABS 1999) and predictions see a temperature increase of  $0.3-1.2^{\circ}\text{C}$  by 2030, and  $0.8-3.7^{\circ}\text{C}$  by 2070 (McInnes et al. 2003). Spring temperatures were  $11.4-26.8^{\circ}\text{C}$  between 1977-1997 (ABS 1999) and are predicted to increase by  $0.3-1.3^{\circ}\text{C}$  by 2030, and by  $0.9-3.9^{\circ}\text{C}$  by 2070 (McInnes et al. 2003). The annual average temperatures for the Adelaide region between 1977-1997 were  $12.1-22.0^{\circ}\text{C}$  and are predicted to increase by  $0.3-1.2^{\circ}\text{C}$  by 2030, and by  $0.8-3.7^{\circ}\text{C}$  by 2070, compared to the national averages of  $0.4-2.0^{\circ}\text{C}$  by 2030 and  $1.0-6.0^{\circ}\text{C}$  by 2070 (McInnes et al. 2003).

Table 1 Predicted temperature changes for the Adelaide region.

Season	1977-1997 (min- max°C)	2030 Predicted Increase (°C)	2070 Predicted Increase (°C)
Summer	15.2 - 29.1	0.3 - 1.2	0.8 - 3.7
Spring	11.4 - 26.8	0.3 - 1.3	0.9 - 3.9
Annual Average	12.1 - 22.0	0.3 - 1.2	0.8 - 3.7

#### 1.2 PREDICTED RAINFALL CHANGES

Predicted rainfall changes (Table 1.4), are most severe for Summer and Spring. Mean Summer rainfall between 1979-1997 was 22-26 mm (ABS 1999) and this is predicted to decrease by -11 (drier periods) to +5% (wetter periods) by 2030, and -35 to +15% by 2070 (McInnes et al. 2003). Mean spring rainfall between 1979 and 1997 was 28-51 mm (ABS 1999) and is predicted to decrease by -17 to -2% by 2030, and by -55 to -4% by 2070 (McInnes et al. 2003). The annual average rainfall for the Adelaide region is predicted to decrease by -9 to -1% by 2030, and by -30 to -2% by 2070, compared to the regional average for the south-west of Australia of -20 to +5% by 2030 and -60 to +10% by 2070 (McInnes et al. 2003).

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Table 2 Predicted rainfall changes for the Adelaide region.

Season	1977-1997 (mm)	2030 Predicted Increase (%)	2070 Predicted Increase (%)
Summer	22 - 26 mm	-11 + 5	-35 + 15
Spring	28 - 51 mm	-17 - 2	-55 - 4
Annual Average	585 mm	-9 - 1	-30 - 2

# 1.3 ALGORITHMS DESCRIBING THE PROBABILITY OF COASTAL MOSQUITO ABUNDANCE SPIKES IN NORTHERN ADELAIDE

#### 1.3.1 Methods

Multivariate data analysis was employed to determine which environmental factors were significant determinants of *Ae. camptorhynchus* and *Ae. vigilax* abundance. Given that absolute abundance of coastal mosquitoes is known to be difficult to model accurately, we analysed the factors that were associated with spikes in abundance as determined from EVS trap collections using multiple logistic regression.

Before attempting this we wanted to reduce the number of factors used in the analysis so we performed stepwise negative binomial multiple regression (Intercooled Stata Ver 9.2 for Windows, StataCorp LP, College Station TX, USA) to examine the relationship between crude daily mosquito counts and a range of environmental variables. The choice of environmental variables was guided in part by personal observations of the Globe Derby Park environs, and previous attempts to model saltmarsh mosquito activity in other regions. Significant factors identified were used in subsequent logistic regressions. Temperature and rainfall data were obtained from the Australian Bureau of Meteorology for the nearest weather station (Edinburgh Air Force Base). Data used for tide height analysis were obtained for Outer Harbour from Flinders Ports.

Historic mean collections per trap per night of *Ae. camptorhynchus* and *Ae. vigilax* were calculated for the period 17 Nov 2000 to 25 Apr 2007 (n = 97 observations). The upper 95% confidence intervals for the two species were used as thresholds for population spikes. These thresholds were then applied to determine the onset and completion of mosquito abundance peaks through time. Abundance of each species was then converted to binomial data, with values above the threshold coded as '1', and values below coded as '0'.

Significant indicators determined from negative binomial regression were then used to create logistic models describing peaks in *Ae. camptorhynchus* and *Ae. vigilax* abundance. Binomial mosquito abundance data from the period 17 Nov 2000 to 26 Mar 2005 (n = 67 observations) were used. These data comprise the 'training set', with the remainder (n = 30 observations) used for validation. Multiple logistic regression (Intercooled Stata Ver 9.2) was used to create multinomial expressions

that could be potentially used to determine the onset or cessation of peak mosquito activity. These expressions take the form:

$$log(P/[1-P]) = a + b1x1 + b2x2 + ... + bnxn$$

in which P is the probability of a peak in mosquito abundance. Parameters with P > 0.10 significance were not included in the models.

The population 'spike' thresholds (historical upper CI95s) for *Ae. camptorhynchus* and *Ae. vigilax* were 122 per trap night and 70 per trap night respectively. After transforming abundance data for each species into binomial form, logistic regressions were then performed which revealed statistically significant (P < 0.10) factors determining saltmarsh mosquito abundance.

Significant determinants of *Ae. camptorhynchus* abundance were recent temperature, rainfall and current daylength. For *Ae. vigilax* these were recent temperature, current temperature and daylength. The logistic models that incorporate these variables explain 38% of variation in *Ae. camptorhynchus* abundance and 52% of variation in *Ae. vigilax* abundance.

# 1.3.2 Resultant algorithms

Aedes vigilax:

log (P/[1-P]) = 0.269368 + Maximum daily temp (°C)\*0.223475 + Mean daily temp prev. 14 d\*0.56446 + daylight hours\*-1.57124

Aedes camptorhynchus:

log (P/[1-P]) = -20.153 + Mean daily temp prev. 14 d\*-0.84815 + Mean daily temp prev. 7 d\*0.594951 + rainfall prev. 28 d\*0.127609 + rainfall prev. 14 d\*-0.085929 + daylight hours\*1.561743



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2 January 2009

Job code: WAL.BLP.1

Principal Urban Planner Walker Corporation Pty Ltd Level 50, Governor Philip Tower 1 Farrer Place Sydney NSW 200

Attention: Sally Lewis

Dear Sally,

Buckland Park – Environmental Impact Statement
Implications of the mosquito control measures recommended for the Buckland
Park urban development project on the marine ecosystem.

Drs Williams and Kokkinn suggest that it is difficult to control mosquitoes without having an impact on other animals particularly insects which in turn leads to impacts on higher order animals (fish, crabs, birds etc.). The most significant breeding grounds of mosquitoes in Buckland Park are the coastal intertidal areas and therefore are the likely targets of insecticide applications.

There are two pathways in which an insecticide can affect coastal and marine fauna (1) the reduction of food source since mosquitoes (particularly larvae) are a source of food for fish and (2) the introduction of potential toxic substances in the food chain.

The first pathway was considered to have a small to an undetectable impact on the marine fauna because no local marine species is thought to be wholly dependent on mosquitoes as a food source. The second pathway is more likely to have an unintended impact on marine species; the extent of this impact is dependent on the insecticide used, the frequency of usage and concentration reaching the marine environment.

We have reviewed available literature to investigate each substance proposed in the mosquito control measure recommended for Buckland Park by Drs Williams and Kokkinn, each insecticide will be discussed separately in the following:

**Bacillus thuringiensis israelensis** (Bti) is a mosquito larvicide (substances that kill the larval stage of insects) that is applied to water bodies (as a liquid, pallets or briquettes). It will kill most mosquito larvae within days of ingesting. Our literature review shows that Bti does not persist in the environment after application, although the solid form is more persistent. Generally, reports of activity after application show a decline in efficacy within days and little residual activity after several weeks.



In the literature reviewed we noted that over 40 tons of Bti were applied in West Africa, without any reports of safety or non-target concerns. The environmental threat posed by Bti would appear to be significantly less than that posed by most other forms of mosquito control which have a similar level of efficacy, T. R. Glare and M. O'Callaghan (1998). Personal observations in First Creek, Port Pirie noted a significant reduction in mosquitoes with no visible impact on non-target marine organisms.

Application of larvicide may involve extensive treatment. The recommended mosquito monitoring program will ensure that applications of larvicide are based on the risk of nuisance and disease evident at the time. As stated by Drs Williams and Kokkinn, the decision to spray extensively would be the subject of negotiation with coastal protection authorities.

**Insect Growth Regulator** (IGR) S-Methoprene can be used, formulated as pellets or briquettes, to prevent the pupation of mosquito larvae (Drs Williams and Kokkinn, 2008). Methoprenes are not harmful to birds or mammals, but can be "somewhat toxic to some fish and aquatic invertebrates" (US EPA, Fact sheet October 2008). Risk assessments by the US EPA show that concentrations of the active ingredient in aquatic environments, if the products are used according to label directions, should be well below the levels that are harmful in laboratory toxicity tests.

Extensive studies in New Zealand by Glare and O'Callaghan (1999) have shown that methoprene breaks down quickly in the environment and poses little hazard to humans. Methoprene was found to have little phytotoxicity and very low toxicity to mammals. However they found that methoprene is slightly toxic to coldwater fish and the examination of benthic communities (bottom dwelling animals) after application against mosquitoes had negative impacts on some organisms, however recovery after application was rapid.

Methoprene has longer residual activity than Bti, but is toxic to a greater range of species than Bti. However, the use of more than one agent during mosquito control is advisable, considering the risks of resistance developing and both methoprene and Bti should be considered (Glare and O'Callaghan, 1999)

**Bifenthrin** is a contact insecticide and one of the most popular pyrethroids used for home gardens. It is stable in light, has a long shelf life and has a residual effect. It is also effective in controlling ants, the number one problem insect for residential users. While this pesticide is highly toxic to fish and other aquatic organisms, it was originally thought that it would not pose a water quality problem because it is very insoluble in water and strongly binds to soil organic matter.

However, research conducted at the University of California Riverside and University of California Berkeley found that bifenthrin is carried on fine soil particles in surface runoff and is highly persistent in water bodies. This results in levels toxic to aquatic organisms.

Drs Williams and Kokkinn suggest that bifenthrin can be applied to vegetation or mesh barriers erected between the coastal salt marshes (larval habitat) and Buckland Park, but they caution that there remain concerns about their impacts on non-target insect species. However the strategic and monitored use of mosquito barriers may be important in controlling mosquitoes, given Buckland Park's proximity to the breeding grounds of the coastal mosquitoes *Aedes camptorhynchus* and *A. vigilax*.

**Malathion** is a broad-spectrum organophosphate (OP) insecticide first registered in 1956. It is used widely in agriculture and regional pest eradication programs. Risk assessments by the US EPA indicated some occupational handler and post-application, residential bystander, and ecological risks of concern. Occupational risks have been mitigated through personal protective equipment or engineering control requirements on the labels and extending reentry intervals for some sites, and ecological risks have been addressed through adding buffer zone and spray drift requirements to the labels, and amending use patterns for many uses.

Drs Williams and Kokkinn suggested that the application of malathion to barrier vegetation has been demonstrated to provide control of coastal mosquitoes in the United States (Anderson et al. 1991). It was suggested that insecticide-treated barriers may consist of vegetation, or artificial structures such as fencing.

We endorse the research recommended by Drs Williams and Kokkinn:

- · Impact on non-target species.
- Optimal configuration for physical deployment (mesh screens, vegetation barriers special plantings).
- Comparison of ecological impact with coastal insecticide application.
- · Impact on nuisance and disease-vector mosquitoes.
- · Costs relative to broadcast insecticidal applications.

We recommend using an integrated approach to pest management by;

- protecting species that feed on mosquitoes at all growth stages,
- · applying pesticide only as recommended by the manufacturers,
- limiting the use of pesticides to only the affected area,
- · strategically applying insecticides during the breeding season,
- ensuring that insecticides are not applied to impervious surfaces, like concrete, where
  it is easily washed into surface runoff,
- · encouraging residents to use mosquito screens to windows and doors,
- educating residents about limiting opportunities for mosquito breeding grounds close to residential areas.

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Regards

Principal Consultant

COOE (care of our environment)