

Maintenance

Master Specification

M8 Environmental Protection

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M8 Environmental Protection

1 General

1.1 This Part defines the Requirements for

This Part sets out the minimum Environmental Protection requirements.

This Part references the following documents:

- a) PC-QA1 “Quality Management Requirements”;
- b) M7 “Environmental Management”;
- c) AS 1940 The Storage and Handling of Flammable and Combustible Liquids;
- d) DIT Rail and Roadside Significant Sites Environmental Instruction;
- e) DIT Vegetation Impact Assessment Guideline;
- f) Native Vegetation Council Guidelines for the Management of Roadside Vegetation and Regrowth Vegetation;
- g) DIT Phytophthora (Dieback) Control Environmental Instruction;
- h) DIT Protecting Waterways Guideline;
- i) DIT Water Affecting Activities Standard Operating Procedure;
- j) DIT Guideline for the Management of Noise and Vibration: Construction and Maintenance;
- k) SA Environment Protection Authority (EPA) Stormwater Pollution Prevention Code of Practice for Local, State and Federal Government (available from <http://www.epa.sa.gov.au/pdfs/govcop1.pdf>); and
- l) SA Environment Protection Authority (EPA) Standard for the Production and Use of Waste Derived Fill (2013).

1.2 DIT Publications are available from:<https://dit.sa.gov.au/standards>

2 Quality Requirements

2.1 The Contractor shall prepare and implement a Quality Management Plan vide PC-QA1 “Quality Management Requirements” that includes detailed procedures, documentation, and Work Instructions for all maintenance activities in this Part of the specification.

2.2 In addition, the Contractor shall:

- a) prepare Work Instructions for high environmental risk activities, including (but not limited to):
 - i) undertaking Works in and over a watercourse and / or wetland (including determining the need for Water Affecting Activities Permits);
 - ii) undertaking Works in high and medium risk Phytophthora areas; and
 - iii) for preventing weed introduction and spread;
- b) develop a procedure for verifying compliance with the Protect Action requirements of Roadside Significant Sites; and
- c) develop a procedure for verifying compliance with the Native Vegetation Council Interim Guidelines for the Management of Roadside Native Vegetation. The procedure shall be prepared by an appropriately qualified specialist with experience in applying the Native Vegetation Act 1991.

2.3 This documentation shall be submitted during the Mobilisation Period and at least 28 days prior to the commencement of the Maintenance Period.

2.4 Provision of all documentation required under Clause 2 “Quality Requirements” of this Part shall constitute a **Hold Point**.

3 Sites of Environmental or Cultural Significance

Roadside Significant Sites

- 3.1 Rail and Roadside Significant Sites include sites that are of natural and cultural significance and are marked on site by white and blue signs affixed to star droppers. Works within a Rail or Roadside Significant Site must be undertaken in accordance with DIT Rail and Roadside Significant Sites Environmental Instruction. Standard Protect Actions are also contained within this Environmental Instruction.
- 3.2 The location of Roadside Significant Sites including spatial information can be accessed from <https://www.dit.sa.gov.au/standards/rssd> and Nature Maps (<https://data.environment.sa.gov.au/NatureMaps>).
- 3.3 A number of Roadside Significant Sites have additional Protect Actions that may impact works within the Contract Zone. These Protect Actions are provided within the details for each site in the above link.
- 3.4 Damage to a Roadside Significant Site shall be treated as a non-conformance / non-compliance, and managed in accordance with PC-QA1 "Quality Management Requirements", the Contractor's Quality System and M7 "Environmental Management".

Aboriginal Heritage Sites

- 3.5 The Contractor shall ensure that all Staff are made aware of their obligations under the Aboriginal Heritage Act 1988 and the Aboriginal and Torres Strait Island Protection Act 1984 (Cth).
- 3.6 The Contractor shall stop work if, at any time, an Aboriginal site or a site containing items associated with Aboriginal occupation is uncovered. The Contractor shall inform the Superintendent immediately and work shall not recommence at the site until directed to do so by the Superintendent

Non-Aboriginal Heritage Sites

- 3.7 The Contractor must exercise due care and make the necessary allowance for the preservation of all World, National, State, Local, and Contributory heritage listed items / places that may be encountered whilst undertaking Works.
- 3.8 The Contractor must ensure all non-Aboriginal heritage assessments, necessary for the execution of the Works, are undertaken in accordance with all applicable environmental legislation, including:
 - a) Heritage Places Act 1993 (SA);
 - b) Planning, Development and Infrastructure Act 2016 (SA); and
 - c) Environment Protection and Biodiversity Conservation Act 1999.
- 3.9 If, at any time, the Contractor identifies that Works may be impacting a heritage site, the Contractor must advise the Superintendent immediately.

Native Vegetation

- 3.10 The Contractor shall ensure that no native vegetation is impacted beyond the Native Vegetation Council Guidelines for the Management of Roadside Vegetation and Regrowth Vegetation allowances without approval from the Native Vegetation Council or their delegate.
- 3.11 The Contractor is responsible for obtaining any approvals, permits, and authorisations required for the Works, including liaising with the Department for Environment and Water, Native Vegetation Group. The Principal will assist with the negotiations where required.

4 Vegetation Impacts and Protection

- 4.1 The Contractor must obtain all approvals required in accordance with the DIT Vegetation Impact Assessment Guideline and relevant legislation prior to commencing vegetation clearance / removal and pruning work.

- 4.2 Methods for protecting non-target vegetation shall be included in the Contractor's Environmental Management Plan (CEMP) (refer M7 "Environmental Management") including but not limited to:
- a) restricting parking, storage, and manoeuvring of machinery to areas away from native vegetation;
 - b) limiting the storage of material to nominated stacking sites;
 - c) ensuring that material is not stockpiled against trees, under the drip line of trees, or on native grasses, shrubs, and groundcover plants;
 - d) taking care when working in the immediate vicinity of any vegetation, to avoid damage. Any roots exposed in excavations shall be trimmed with a clean saw cut;
 - e) carrying out work close to trees by hand to avoid damage by equipment, and where branches intrude into the working area and are likely to be damaged during works, trimming the branches to the branch collar with a clean saw cut.

5 Fauna Protection

- 5.1 The Contractor must:
- a) implement all reasonably practicable measures to minimise disturbance to fauna (including marine mammals and other marine fauna, where applicable) and prevent injury to fauna;
 - b) contact Fauna Rescue SA, the RSPCA or a veterinarian for advice if any injured fauna is found during Works;
 - c) under the supervision of a suitably qualified specialist, relocate any native fauna to a similar habitat if that fauna's habitat will be destroyed by the Works;
 - d) notify the Superintendent if any injured or dead native fauna is found; and
 - e) provide details the type of fauna roadkill retrieved during the Works (refer RRL/RRC in M10), noting the species where known (e.g. koala) and location of roadkill. The Contractor shall maintain records and report information in accordance with M4 "Inspections" and M6 "Data, Reporting, and Governance".
- 5.2 The Contractor must relocate hollows in accordance with M15 "Vegetation Maintenance Controls".
- 5.3 Methods for protecting fauna during the Works shall be included in the Contractor's Environmental Management Plan (CEMP) (refer M7 "Environmental Management").

6 Weed, Pest and Disease Control

General

- 6.1 The Contractor shall:
- a) undertake all weed control activities in accordance with M14 "Maintenance – Vegetation" and M15 "Vegetation Maintenance Controls";
 - b) ensure that declared animals, declared plants and environmental weeds (including seeds and other propagules) are not introduced to the site or spread as a result of the Contractor's Works. Effective hygiene practices must be used on all vehicles, plant, and equipment. Environmental weed species are listed in the DIT Weeds List, which is available from:
<https://dit.sa.gov.au/standards>
 - c) liaise with Landscape Board regions to identify locations of any declared plant outbreaks within or adjacent to the Contract Zone, and adjust weed control activities accordingly;
 - d) notify the Superintendent in the event of any outbreak of declared animal, declared plant or environmental weed resulting from activities associated with this Contract; and
 - e) develop and implement a Management Plan to control the outbreak of declared and environmental weeds, up to the end of the Contract, until the outbreak is eradicated or as agreed to by the Superintendent.

- 6.2 Methods for controlling weeds during the Works shall be included in the Contractor's Environmental Management Plan (CEMP) (refer M7 "Environmental Management") and detailed in the Work Instruction per Clause 2, including but not limited to:
- a) ensuring the area is checked for declared pest plants prior to undertaking Works likely to disturb soil and vegetation;
 - b) using good machinery hygiene practices at all times and particularly when leaving an area with a declared pest plant or environmental weed. Machinery shall be clean of soil, vegetation, and seeds when starting work, moving between sites, and leaving a site;
 - c) not importing weed infested material into any work area;
 - d) not dumping topsoil within the road reserve;
 - e) not spreading pest plants through mulching; and
 - f) disposing of pest plants at a licensed waste disposal site.

Phytophthora Control

- 6.3 Phytophthora is a root rot fungus that can result in dieback of vegetation. The Contractor must plan and undertake its activities in accordance with the DIT Phytophthora (Dieback) Control Environmental Instruction.
- 6.4 The Contractor must undertake a Phytophthora Risk Assessment to determine the required hygiene procedures and disposal requirements, and must implement those procedures during work.
- 6.5 The Contractor shall ensure that all Staff are trained in the requirements of the DIT - Phytophthora (Dieback) Control Environmental Instruction.
- 6.6 Recorded and suspected Phytophthora locations can be accessed via NatureMaps online at: <https://data.environment.sa.gov.au/NatureMaps>.

7 Protecting Waterways

General

- 7.1 The Contractor shall undertake the Works in a manner that prevents the contamination of the natural watercourse system, marine environment or stormwater drainage system.
- 7.2 The Contractor shall not:
- a) pollute groundwater sources; and
 - b) extract or reinject groundwater unless appropriate Environmental Authorisations have been obtained where required.
- 7.3 When working in a waterway (including vegetation clearance activities), the Contractor shall:
- a) determine the need for a Water Affecting Activities Permit, and obtain a permit where required (refer to the DIT Water Affecting Activities Best Practise Operating Procedure);
 - b) not cause destabilisation of the bed and banks of the watercourse;
 - c) ensure all excavated materials are removed from the watercourse and placed and stabilised in a location where they will not return to the watercourse; and
 - d) compact loose material placed in and around the bed and banks of the watercourse to prevent downstream sedimentation.
- 7.4 The Contractor shall prevent solid waste, oils, chemicals, bitumen spray waste, pavement marking scrubbing waste and wastewater from brick, concrete, and asphalt cutting – or as a result of tunnel and bridge cleaning activities – from leaving the site or entering existing waterways. These shall be collected and disposed of or recycled at a licensed waste depot.

Soil Erosion and Drainage Management Plan

- 7.5 The Contractor is responsible for the design, construction, operation and maintenance of any drainage and temporary erosion control measures that may be required for the Works.
- 7.6 Where required, the Contractor shall develop, implement and maintain a Soil Erosion and Drainage Management Plan (SEDMP). The SEDMP shall be developed in accordance with:
- a) EPA Stormwater Pollution Prevention Code of Practice for Local, State and Federal Government; and
 - b) DIT Protecting Waterways Guideline; and
 - c) M7 "Environmental Management".
- 7.7 The SEDMP shall include the following as a minimum:
- a) objectives, targets, responsibilities, permits / licences, control measures, monitoring, and environmental incident / emergency response;
 - b) any management requirements from a Water Affecting Activities Permit or EPA licence;
 - c) details on how any stormwater and intercepted groundwater collected during the course of the Works will be managed and treated prior to release; and
 - d) details on how stormwater systems and waterways will be protected during the Works.

8 Construction Noise and Vibration Management

- 8.1 The Contractor shall manage noise and vibration in accordance with the DIT – Guideline (the Guideline) Management of Noise and Vibration: Construction and Maintenance.
- 8.2 Works shall be programmed to avoid noisy operations in populated areas outside the hours of 7:00 a.m. to 7:00 p.m. Monday to Saturday inclusive and not before 9:00 a.m. or after 7:00 p.m. on Sundays and public holidays.
- 8.3 When Works will involve the use of heavy equipment and significant noise generating activities, the Contractor shall, as much as practicable, prevent noise from being a nuisance to neighbouring residents.
- 8.4 The Contractor shall prepare and implement Night Works Management Plans (NWMPs), where required in accordance with the Guideline for each individual Maintenance Activity.
- 8.5 NWMPs must be assessed and endorsed by the Contractor's Environmental Management Representative prior to submission for approval by the Superintendent.
- 8.6 For night works not covered by the individual Maintenance Activity NWMP, a separate NWMP shall be prepared in accordance with the Guideline.
- 8.7 Submission of NWMPs shall constitute a **Hold Point**.

9 Air Quality Protection

- 9.1 The Contractor shall suppress nuisance dust from any Works including at stockpile sites.
- 9.2 The Contractor shall:
- a) avoid or minimise dust-generating activities during dry and windy conditions;
 - b) where dust is likely to be raised, ensure that appropriate dust control measures are planned and implemented;
 - c) water or otherwise stabilise work areas where dust is causing a safety hazard or nuisance;
 - d) minimise the stockpiling of materials;
 - e) cease any activity where that activity creates a dust hazard of nuisance to the public, personnel working on the site, or properties in the vicinity of the Works;

- f) not permit the emission of odorous substances or particulates, which create or are likely to create objectionable conditions for the public; and
 - g) minimise the extent of exposed, stripped surface until covered with appropriate fill material.
- 9.3 Air quality protection measures shall be included in the Contractor's Environmental Management Plan (CEMP) (refer M7 "Environmental Management").

10 Waste Management

- 10.1 The Contractor shall carry out all work under the Contract in such a manner as to minimise the generation of waste materials. Waste materials from maintenance activities (other than material to be mulched) shall become the property of the Contractor and shall be removed from the site within 7 days.
- 10.2 The Contractor shall use methods or plant to minimise the generation of waste from spray sealing activities. Wastewater from cleaning spray equipment shall be contained and either re-used or disposed of at a licensed waste facility.
- 10.3 Waste materials including plant maintenance (sump oil, bitumen, kerosene, etc.) shall be disposed of at the nearest licensed waste disposal depot. Hazardous wastes and contaminated material shall be disposed of in accordance with Environment Protection Authority requirements.
- 10.4 The Contractor shall collect and recycle scrap metal and other materials where appropriate. Re-use of recovered or recycled materials within the Works shall be subject to the approval of the Superintendent. All waste materials shall be disposed of at a facility that is licensed to accept the material.

11 Materials and Fuels

Construction Water

- 11.1 The water source(s) to be used for the purposes of this Specification (including dust control) shall be identified in the CEMP.
- 11.2 If the Contractor uses water from any source other than a SA Water mains supply for the purpose of maintenance, the Contractor shall obtain all approvals, licences or permits that are required. Refer M1 Clause 12.4 "Water" and M9 "Sustainability" for other requirements regarding water not sourced from a SA Water mains supply.
- 11.3 The Contractor is responsible for adhering to permanent water conservation measures and any current SA Water restrictions.

Storage and Handling of Hydrocarbons and Hazardous Liquids

- 11.4 Temporary bunding, for chemical storage required at maintenance sites remote from depot facilities, may be used providing that it is designed, operated and maintained in accordance with the relevant Australian Standards.
- 11.5 The Contractor shall ensure that any fuel, oil, lubricants, and other chemicals are stored:
- a) in accordance with the relevant Australian Standards;
 - b) within a bund with an impervious floor; and
 - c) not in an area which is subject to flooding or is within 20 m of a natural or built drainage line.
- 11.6 The Contractor shall ensure that:
- a) fuel, oil, or lubricants do not leak from machinery;
 - b) appropriate methods during refuelling and maintenance are implemented to ensure that any spills / leaks are contained (including refuelling activities being attended at all times);
 - c) when operating in a marine environment, refuelling shall be undertaken in accordance with the EPA Code of Practice for Vessel and Facility Management (Marine and Inland Waters);

- d) hydrocarbon spill kit(s) for the purpose of cleaning up oil and fuel spillage are accessible at all times and Staff trained in the efficient deployment of the spill kit are readily available in the event of a spill;
 - e) appropriately trained Staff shall be present and supervise refuelling activities at all times; and
 - f) maintenance of vehicles and machinery is carried out off-site where practicable.
- 11.7 In the event of fuel or oil spillage, the Contractor shall clean up spills and excavate or remove contaminated soil to a licensed waste disposal site and replace the contaminated soil with clean fill.
- 11.8 In the event of a substantial fuel or oil spillage, the Contractor shall also utilise the services of a suitably qualified contamination specialist to assess contamination extent following excavation of contaminated soil, and to assist with appropriate remediation where necessary.

Stockpile Management

- 11.9 Stockpile management shall be undertaken by the Contractor in accordance with the EPA Guideline for Stockpile Management: Waste and Waste Derived Products for Recycling and Reuse (2010). The Contractor shall ensure that the stockpile management considerations are documented in the CEMP.

12 Hold Points

- 12.1 The following is a summary of Hold Points, vide PC-QA1 "Quality Management Requirements", referenced in this Part:

Document Ref.	Hold Point	Response Time
2.4	Procedure for verifying compliance with the Native Vegetation Council Interim Guidelines for the Management of Roadside Native Vegetation (or final version of Guidelines).	3 Months
8.7	Provision of NWMP	10 Working Days