

# Master Specification

## Part PC-SC1

### Site Contamination

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**Government of South Australia**  
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## PC-SC1 Site Contamination

### 1 General

- a) This Master Specification Part sets out the requirements for Site Contamination Assessments and subsequent reporting, including:
  - i) the Contractor's obligations, as set out in section 2;
  - ii) the Site Contamination Consultant requirements, as set out in section 3;
  - iii) the Site Contamination Assessment process, as set out in section 4;
  - iv) the notification requirements, as set out in section 5;
  - v) the groundwater well management requirements, as set out in section 6;
  - vi) the asbestos management requirements, as set out in section 7;
  - vii) the contamination remediation requirements, as set out in section 8;
  - viii) the classification and offsite management of surplus material, as set out in section 9;
  - ix) the recycling and reuse of material requirements, as set out in section 10;
  - x) the Completion requirements, as set out in section 11; and
  - xi) the Hold Point requirements, as set out in section 12.
- b) Where readily available and accessible to the Principal, reports documenting Site Contamination Assessments may be provided to the Contractor.
- c) Site Contamination Assessments must comply with the Reference Documents and all applicable Laws including:
  - i) Department EHTM Attachment 9A - Guideline for the Beneficial Reuse of Solid Waste (available from: <https://dit.sa.gov.au/documents/manuals>);
  - ii) Department Guideline for Asbestos Management and Removal for Government Sites (available from [https://dit.sa.gov.au/standards/standards\\_and\\_guidelines](https://dit.sa.gov.au/standards/standards_and_guidelines));
  - iii) National Environment Protection (Assessment of Site Contamination) Measure 1999 (referred to in this Master Specification Part as the ASC NEPM); and
  - iv) SA EPA Guidelines for the assessment and remediation of site contamination (referred to in this Master Specification Part as the GAR).
- d) For the avoidance of doubt, a reference to the ASC NEPM includes all amendments.

### 2 Contractor's obligations

- a) The Contractor must:
  - i) be or engage a suitably qualified Site Contamination Consultant organisation where required by section 3; and
  - ii) where required by section 4, carry out Site Contamination Assessments.
- b) Where the Contractor proposes an approach that does not conform to the requirements of this Master Specification Part:
  - i) for projects with an alliance form of contract, the Contractor must propose a Variation or Design Departure (as applicable) in accordance with the Contract Documents; and

- ii) for all other contracts, the Contractor must submit a request to the Principal detailing the alternative approach, which will constitute a **Hold Point**. The alternative approach must not be implemented until the Hold Point has been released.

### 3 Site Contamination Consultant

- a) The Contractor must engage a suitably qualified Site Contamination Consultant who has a sufficient degree of knowledge, skill, expertise and experience in its field to perform its obligations required by this Master Specification Part, who:
  - i) possess appropriate tertiary qualifications in environmental management, environmental engineering or similar;
  - ii) possess, where undertaking project management or direction activities, at least 5 years' experience in contamination assessments, investigations, management and remediation on projects of a similar scale and nature; and
  - iii) has the capability for reports to be written / signed / endorsed by a certified site contamination practitioner, for investigations that will require submission of documentation to the EPA.
- b) In relation to the relevant Works or Temporary Works, the Site Contamination Consultant must:
  - i) review all available existing reports, registers and proposed scope;
  - ii) be responsible for scoping all requirements relating to contamination on behalf of the Contractor;
  - iii) undertake all additional site contamination investigations, modelling, monitoring or design, to confirm design assumptions to complete the Works and Temporary Works (as applicable);
  - iv) obtain and comply with any Approval requirements necessary to complete the Works and Temporary Works (as applicable); and
  - v) be present at the Site, be involved in processes or be in contact with on-site personnel, whenever the Works or Temporary Works may affect contaminated material.

### 4 Site Contamination Assessment

- a) A Site Contamination Assessment is defined as an investigation (or a series of investigations) that is completed to determine if site contamination exists and how this is to be managed in the relation to the Works or Temporary Works (as applicable), while ensuring compliance with environmental due diligence under the *Environment Protection Act 1993* (SA).
- b) The Contractor must undertake all Site Contamination Assessments necessary to carry out the Contractor's Activities including as necessary for the execution of the Works and Temporary Works.
- c) All Site Contamination Assessments must be in accordance with the ASC NEPM. Schedule A of the ASC NEPM and section 6 of the GAR must be used as the framework for determining the necessary steps required for the Site Contamination Assessment.
- d) The Contractor must undertake a Site Contamination Assessment where:
  - i) no existing information is available, or existing information is made available on a no reliance basis;
  - ii) the Works or Temporary Works are in relation to, or will affect, areas that have not been included in any contamination investigations provided by the Principal, or the contamination investigations have been provided on a no reliance basis; or
  - iii) the Works or Temporary Works are in relation to, or will affect, areas that require additional investigation or where contaminants may be mobilised or contaminated media may be disturbed, relocated or moved off the Site.

- e) If not previously completed, or where previously completed but provided on a no reliance basis, a preliminary site investigation (PSI) must be undertaken in accordance with the procedure as outlined in Schedule B2 of the ASC NEPM and the GAR.
- f) The Contractor must identify (if not already undertaken):
  - i) potentially contaminated sites that are likely to impact (or be impacted by) the Project;
  - ii) the potential risks posed at each site (indicated as high, medium or low contamination risk); and
  - iii) the need to undertake additional investigations to further understand potential contamination risks at each site, to meet approval requirements.
- g) The Contractor must, based on the findings of the PSI, determine the need for a detailed site investigation (DSI) to inform soil, vapour, surface water or groundwater management during construction (e.g. waste disposal, dewatering, etc.).
- h) If required, the Contractor must undertake a DSI in accordance with procedures outlined in the ASC NEPM, GAR and relevant Reference Documents. This must involve consideration of the impact that historical contaminating activities have had on soils, soil vapour, surface water or groundwater. Undertaking a DSI in a staged approach should be considered.
- i) The Contractor must assess the presence and nature of site contamination through comparison of sampling results with published Reference Documents (Australian and international guidelines), in particular, selection of relevant screening criteria in accordance with the GAR and comparison of results with the ASC NEPM, GAR and other relevant guidelines.
- j) The Contractor must, based on the findings of the DSI, determine the nature, extent and risks of site contamination within the area to be affected by the Project and determine the need for further assessment (including site specific risk assessments) and remediation, in the context of the overall Project, if necessary.
- k) If required, the Contractor must undertake a site specific health risk assessment or ecological risk assessment, in accordance with the ASC NEPM and GAR.
- l) Unless otherwise agreed with the Principal, the Contractor must submit all assessments and reports required by this Master Specification Part as a part of the relevant Design Documentation submission.

## 5 Notification

- a) The Contractor must comply with the notification requirements for site contamination in accordance with section 5 of the GAR.
- b) The Contractor must notify the Principal if any soil, soil vapour or water (surface / ground) contamination not previously identified becomes evident during investigation or construction. This should specify any requirements for notification to the EPA in accordance with *Environment Protection Act 1993* (SA) and section 5 of the GAR.
- c) The Contractor must obtain the Principal's Approval to undertake any notification to the EPA in accordance with *Environment Protection Act 1993* (SA) and section 5 of the GAR if required, which will constitute a **Hold Point**. Notification to the EPA must not occur until the Hold Point has been released.

## 6 Groundwater well management

- a) Where relevant to the Works or Temporary Works, the Contractor must maintain an accurate and ongoing register of the location and status of all groundwater wells within the Site. In accordance with Section 119 of the *Landscape Act 2019* (SA), the Contractor must ensure that as the occupier of the land on which a well is situated, that the well (including the casing, lining and screen of the well and any mechanism used to cap the well) is properly maintained, and or decommissioned.

- b) Where specified in the Contract Documents or as required by relevant Approvals, the Contractor must undertake any ongoing groundwater management or monitoring requirements during occupation of the Site.
- c) Where an existing groundwater well is impacted by the Works or Temporary Works, it must be decommissioned as per the requirements of National Uniform Drillers Licensing Committee publication "Minimum Construction Requirements for Water Bores in Australia", and where needed for ongoing monitoring, relocated to an appropriate depth and location agreed with the relevant property owner.
- d) Prior to Completion, the Contractor must ensure that all (if any) groundwater wells no longer required, are decommissioned as per the requirements of National Uniform Drillers Licensing Committee publication Minimum Construction Requirements for Water Bores in Australia.

## 7 Asbestos management

- a) If the Contractor encounters or excavates suspected asbestos within the Site, the Contractor must immediately notify the Principal.
- b) Should any excavated soil be found to contain asbestos material, the Site Contamination Consultant must be consulted to determine if further investigation of the find is required.
- c) Where required, suitably qualified (e.g. licensed and approved by Safework SA) Subcontractors must be engaged to undertake the removal of any asbestos located on Site.
- d) Any asbestos removal from buildings must be:
  - i) completed by a Contractor on the Department's prequalification register under the category "Prequalification for Building Work - Trade / Subcontractor - Demolition and Asbestos Removal" (refer to: [https://www.dit.sa.gov.au/contractor\\_documents/prequalification](https://www.dit.sa.gov.au/contractor_documents/prequalification));
  - ii) undertaken in accordance with:
    - A. PC-SI6 "Hazardous Materials Survey and Assessment"; and
    - B. the Department Guideline for Asbestos Management and Removal for Government Sites.
- e) All asbestos removal must be undertaken in accordance with the following:
  - i) Code of Practice - How to Safely Remove Asbestos;
  - ii) Code of Practice - How to Manage and Control Asbestos in the Workplace; and
  - iii) any other applicable Laws (including environment and safety acts, regulations and guidelines).
- f) All asbestos removed must be transported by an appropriately EPA licensed transporter and disposed of at an EPA licensed facility.

## 8 Contamination remediation

- a) Remediation is defined in accordance with the *Environment Protection Act 1993* (SA) meaning 'to treat, contain, remove or manage chemical substances on or below the surface of the site'.
- b) The Contractor must satisfy itself and bear responsibility that the Site Contamination Assessments, including those provided by the Principal (where supplied) are suitable for determining and assessing the risks to human health and environment and that all relevant materials have been sufficiently classified for beneficial reuse or disposal in accordance with relevant guidance. This may require undertaking further investigations and seeking involvement from an EPA accredited site contamination auditor.

- c) Management measures should be considered in alignment with the waste management hierarchy and consideration given to minimising any ongoing monitoring requirements after Completion.
- d) If required, further investigations must determine the nature and extent of contamination (in any applicable media), identify required remedial actions to prevent risk to human health and the environment (during and post-construction) from contamination including appropriate reuse or disposal classification.
- e) The required management must be documented in a Contamination Remediation Management Plan (CRMP). The CRMP must:
  - i) be developed in accordance with the GAR;
  - ii) consider all aspects of the GAR remediation report framework (i.e. remediation options assessment, site remediation plan, remediation validation reports, site management plan);
  - iii) detail the nature, type and location of known contaminated material;
  - iv) describe the proposed method of remediation / removal / disposal (including verification) to remediate contamination identified as part of previous investigations completed by the Principal or assessment completed by the Contractor;
  - v) outline the procedure for unexpected finds, including previously unidentified contamination and asbestos;
  - vi) detail any ongoing monitoring and management requirements; and
  - vii) be presented within the Contractor's Environmental Management Plan (CEMP) or separately, as appropriate.
- f) The CRMP must be submitted and updated in accordance with:
  - i) PC-PM1 "Project Management and Reporting";
  - ii) PC-ENV1 "Environmental Management"; and
  - iii) PC-ENV2 "Environmental Protection Requirements".

## 9 Classification and offsite management of surplus material

- a) Where the Contractor proposes to manage surplus material offsite (whether it be by reuse or disposal), and a Site Contamination Assessment does not sufficiently account for the identified material, the material must be classified in accordance with the relevant EPA standards and guidelines, including the EPA publication "Standard for the Production and Use of Waste Derived Fill".
- b) Where surplus material is to be disposed offsite, materials must be transported by an appropriately EPA licensed transporter and must be disposed to an appropriately EPA licenced waste facility.

## 10 Recycling and reuse of material

- a) Where the Contractor proposes to reuse material or use recycled material, the Contractor must ensure that a risk assessment is undertaken and documented in the (CEMP) in accordance with the Department EHTM Attachment 9A - Guideline for the Beneficial Reuse of Solid Waste. This applies to material won from the Site and imported material (other than virgin quarry material). In relation to the risk assessment:
  - i) for material won from the Site, the risk assessment must include an investigation of potential site contamination from current and previous land uses, and the potential risks to human health or the environment resulting from the use of the material in the proposed location(s); and



- ii) for imported recycled material (excluding commercially produced products), the risk assessment must include a report from a suitably qualified Site Contamination Consultant organisation stating the material's classification (as per the relevant EPA standards and guidelines) and suitability for use at the site and must comply with section 8b). The Contractor must comply with any environmental management requirements and Approvals in the report, and the requirements must be incorporated into the CEMP or CRMP (as applicable).
- b) The Contractor must provide a copy of the risk assessment (and associated reports) required by section 10a) to the Principal at least 5 Business Days prior to the reuse of materials or use of recycled materials, which will constitute a **Hold Point**. Materials must not be reused or recycled materials must not be used until the Hold Point has been released.
- c) The Contractor must prepare a tracking register and track all contaminated materials from its source to its final location and provide the Principal a surveyed location of this material and include these locations on As-Built Records (including drawings).
- d) The Contractor must implement all necessary temporary and permanent management measures for the reuse of all materials.
- e) All necessary data and reports must be provided to enable on-going management of the Site by the Principal and must be identified in the post-occupation report (refer to section 11c)).

## 11 Completion requirements

As a condition precedence to Completion, the Contractor must as part of the As-Built Records:

- a) provide all reports relating to Site Contamination Assessment completed for the Works or Temporary Works (in addition to those provided by the Principal to the Contractor). The documentation must be provided in electronic format, including (where relevant) electronic borehole logs in gINT file format (.gpj format) and laboratory data as a raw excel file (i.e. .csv format);
- b) provide documentation relating to occupation of any land where a potentially contaminating activity has been undertaken (including stockpiling) in accordance with PC-SM2 "Site and Access Management"; and
- c) provide a post-occupation report (also referred to as an environmental site assessment report within planning approval or EPA licence condition documentation). The report must:
  - i) be produced in accordance with the ASC NEPM, the GAR and other relevant EPA guidance;
  - ii) confirm decommissioning of groundwater bores in accordance with section 6d);
  - iii) demonstrate that occupation by the Contractor has not resulted in actual or potential harm to human health and the environment as a result of its occupation and consider all areas occupied during the Project;
  - iv) specifically consider the nature of the operations undertaken by the Contractor and the potential for these works to bring about or result in site contamination, such as importation of fill materials or the excavation, handling and relocation (either off-site or on-site) of previously identified contaminated materials. The report must be both qualitative and quantitative and must where necessary involve intrusive soil, surface water or groundwater investigations;
  - v) provide site management plans relating to any ongoing monitoring / management requirements or audit conditions, where relevant; and
  - vi) provide a definitive statement regarding the site suitability in the context of the proposed land use (i.e. that the site does not pose an unacceptable risk to human health and the environment taking into account the proposed use(s)). This statement is to be made in accordance with section 2.3 and 2.4 of the GAR and Section 103ZA of the *Environment Protection Act 1993* (SA).

## 12 Hold Points

Table PC-SC1 12-1 details the review period or notification period, and type (documentation or construction quality) for each Hold Point referred to in this Master Specification Part.

**Table PC-SC1 12-1 Hold Points**

Section reference	Hold Point	Documentation or construction quality	Review period or notification period
2b)ii)	Proposal of an approach not conforming to this Master Specification Part	Documentation	10 Business Days review
5c)	Request to undertake notification to the EPA	Documentation	5 Business Days review
10b)	Proposed material recycling or reuse risk assessment(s)	Documentation	5 Business Days review