

Project Controls

Master Specification

PC-SC1 Site Contamination

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3	Addition of minor text relating to assessment and classification of waste soils and use of Waste Derived Fill	August 2020

Document Management

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PC-SC1 Site Contamination

1 General

- 1.1 This Standard Specification sets out the requirements for Site Contamination Assessment and subsequent reporting.
- 1.2 For the purpose of this Standard Specification, the 'Works' can be activities associated with planning, design, supply, construction, maintenance or operation as defined by the Contract.
- 1.3 Where readily available and accessible to the Principal, reports documenting Site Contamination Assessments will be provided to the Contractor.

2 Contractor's Obligations

- 2.1 The Contractor must ensure all Site Contamination Assessment, necessary for the execution of the Works, are undertaken.
- 2.2 The Contractor shall undertake any and all Site Contamination Assessment in accordance with the National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) (ASC NEPM). Schedule A of the ASC NEPM and Section 6 of the SA EPA Guidelines for the assessment and remediation of site contamination (2018) (GAR) shall be used as the framework for determining the necessary steps required for the Site Contamination Assessment.
- 2.3 Notwithstanding the above, the Contractor may propose an approach that does not conform to the requirements of Clause 2.2. The Contractor shall obtain the Principal's approval to adopt the proposed approach, which shall constitute a **Hold Point**.
- 2.4 The Contractor shall engage a suitably qualified Contamination Specialist in accordance with the requirements of Section 3 of this Standard Specification. On behalf of the Contractor, the Contamination Specialist shall (where relevant to the Works):
 - a) review the available reports and scope;
 - b) be responsible for scoping all requirements relating to contamination under the Contract;
 - c) undertake all additional site contamination investigations, modelling, monitoring or design, to confirm design assumptions and meet approval requirements to complete the Works; and
 - d) be present at the Site, be involved in processes or be in contact with onsite personnel, whenever the Work may affect contaminated material.
- 2.5 In addition to the above, the Contractor shall undertake Site Contamination Assessment where:
 - a) no existing information is available;
 - b) the Works is in relation to, or will affect, areas that have not been included in any contamination investigations provided by the Principal; and
 - c) the Works is in relation to, or will affect, areas that require additional investigation and / or where contaminants may be mobilised or contaminated soils are disturbed, relocated or moved off the Site.

3 Contamination Specialist

- 3.1 The Contractor shall provide a suitably qualified Contamination Specialist. The Contamination Specialist must ensure its personnel have a sufficient degree of knowledge, skill, expertise and experience to perform its obligations under the Contract.
- 3.2 In addition to the above, the Contamination Specialist must ensure that it:
 - a) provides personnel that possess appropriate tertiary qualifications in environmental management, engineering or similar;

- b) provides personnel that possess, where undertaking project management or direction activities, at least 5 years' experience in contamination assessments, investigations, management and remediation on projects of similar scale and nature; and
- c) has capability for report(s) to be written / signed / endorsed by a certified site contamination practitioner, for investigations that will require submission of documentation to the EPA.

4 Site Contamination Assessment

- 4.1 For the purpose of this Standard Specification, 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, while ensure compliance with environmental due diligence under the Environmental Protection Act 1993.
- 4.2 Subject to Section 2, the Contractor shall comply with the requirements of this Section.
- 4.3 If not previously completed, a Preliminary Site Investigation (PSI) shall be undertaken in accordance with the procedure as outlined in Schedule B(2) of the ASC NEPM and the GAR.
- 4.4 The Contractor shall identify potentially contaminated sites that are likely to impact (or be impacted by) the project, the risks posed by each site (indicated as high, medium or low contamination risk), and the need to undertake additional investigations to further understand potential contamination risks at each site, if not already done so and to meet approval requirements.
- 4.5 The Contractor shall, based on the findings of the PSI, determine the need for a Detailed Site Investigation (DSI) to inform soil and groundwater management during construction (e.g. waste disposal, dewatering, etc.) and obtain the Principal's approval to undertake an investigation if required.
- 4.6 If required, the Contractor shall undertake a DSI in accordance with procedures outlined in the ASC NEPM, GAR and relevant Australian Standards. This shall involve consideration of the impact that past contaminating site activities have had on soils, soil vapour, surface water and / or groundwater. Undertaking a DSI in a staged approach should be considered.
- 4.7 The Contractor shall assess the presence and nature of site contamination through comparison of sampling results with published 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.
- 4.8 The Contractor shall, based on the findings of the DSI, determine the nature 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.
- 4.9 If required, the Contractor will undertake a site specific human health and environment risk assessment, in accordance with the ASC NEPM and GAR.

5 Notification

- 5.1 The Contractor shall identify the requirement for notification of site contamination in accordance with Section 5 of the GAR.
- 5.2 The Contractor shall notify the Principal if any soil, soil vapour or water (surface / ground) contamination not previously identified becomes evident during investigation and / or construction. This should specify any requirements for notification to the EPA in accordance with Environment Protection Act and Section 5 of the GAR.
- 5.3 The Contractor shall obtain the Principal's approval to undertake any notification to the EPA in accordance with Environment Protection Act and Section 5 of the GAR if required, which shall constitute a **Hold Point**.

6 Groundwater Well Management

- 6.1 Where relevant to the Works, the Contractor shall maintain an accurate and ongoing register of the location and status of all groundwater wells within the Site. In accordance with Section 144 of the Natural Resources Management Act 2004, the Contractor shall 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;
- 6.2 Where instructed by the Principal or as required by relevant approvals, the Contractor shall undertake any ongoing groundwater management or monitoring requirements during occupation of the site; and
- 6.3 Where relevant to the Works, groundwater wells must be decommissioned in accordance with Clause 11.1.

7 Asbestos Management

- 7.1 If the Contractor encounters or excavates suspected asbestos within the Site, the Contractor shall immediately notify the Principal;
- 7.2 Should any excavated soil be found to contain asbestos material, a contamination specialist shall be consulted to determine if further investigation of the find is required;
- 7.3 Where required, suitably qualified (e.g. licensed and approved by Safework SA) subcontractors shall be engaged to undertake the removal of any asbestos located on Site. Noting that any asbestos removal from buildings must be completed by a Contractor on the Department Prequalification for Building Work – Trade / Subcontractor – Demolition and Asbestos Removal (available from here: https://www.dpti.sa.gov.au/contractor_documents/prequalification), in accordance with the Department's Policy DP049 WHS&W Asbestos Management.
- 7.4 All asbestos removal shall be undertaken in accordance with the current Code of Practice for the Safe Removal of Asbestos, the Code of Practice for the Management and Control of Asbestos In Workplaces and any other applicable environment and safety acts, regulations and guidelines; and
- 7.5 All asbestos removed shall be transported by an appropriately EPA licensed transporter and disposed of at an EPA licensed facility.

8 Contamination Remediation

- 8.1 Remediation is defined in accordance with the Environment Protection Act 1993 meaning 'to treat, contain, remove or manage chemical substances on or below the surface of the site';
- 8.2 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 (e.g. soil / spoil) have been sufficiently classified for beneficial reuse and / or disposal in accordance with relevant guidance. This may require undertaking further investigations and seeking involvement from an EPA Accredited Site Contamination Auditor;
- 8.3 Management measures should be considered in alignment with the waste management hierarchy and consideration given to minimising any ongoing monitoring requirements after Completion;
- 8.4 If required, further investigations shall determine the extent and nature of contamination (soil, soil vapour and / or groundwater), identify required remedial actions to prevent risk to human health and the environment (during and post-construction) from identified contamination including appropriate disposal classification.
- 8.5 The required management shall be documented in a Contamination Remediation Management Plan (CRMP). The CRMP should be developed in accordance with the GAR, and consider all aspects of the GAR remediation report framework (i.e. remediation options assessment, site remediation plan, remediation validation reports, site management plan). This can be presented within the one document or separate, as appropriate. The CRMP is to be provided in accordance with PC-ENV1 "Environmental Management"; and

- 8.6 The CRMP shall detail the nature, type and location of known contaminated material and 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. The CRMP should also outline the procedure for unexpected finds, including but not limited to previously unidentified contamination and asbestos. The CRMP should be updated as required during the Works.

9 Classification and Offsite Management of Surplus Material

- 9.1 Where the Contractor proposes to manage surplus material offsite (whether it be by disposal or reuse), 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 Standard for the Production and Use of Waste Derived Fill.
- 9.2 Where surplus material is to be disposed offsite, materials shall be transported by an appropriately EPA licensed transporter and shall be disposed to an appropriately EPA licenced waste facility.

10 Recycling and Reuse of Material

- 10.1 Where the Contractor proposes to reuse material or use recycled material the Contractor shall ensure that a risk assessment is undertaken and documented in the Construction Environment Management Plan (CEMP). This applies to material won from the site and imported material (other than virgin quarry material);
- 10.2 For material won from the site, the risk assessment shall 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);
- 10.3 For imported, recycled material, the risk assessment shall include a report from a suitably qualified contamination specialist stating the material's classification (as per the relevant EPA Standard and Guidelines) and suitability for use at the site and shall comply with Clause 8.2. The Contractor shall comply with any environmental management requirements and approvals in the report, and the requirements shall be incorporated into the CEMP or CRMP.
- 10.4 The Contractor shall provide a copy of the above documentation to the Principal at least 7 days prior to the reuse of materials or use of recycled materials. Provision of this documentation shall constitute a **Hold Point**.
- 10.5 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 drawings. The Contractor must provide all necessary temporary and permanent management measures for the reuse of all materials. 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 (see Clause 11.4).

11 Post Works / Handover

- 11.1 The Contractor will provide to the Principal any reports relating to Site Contamination Assessment completed for the Works in addition to those provided by the Principal to the Contractor. The documentation shall 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);
- 11.2 Prior to Completion of the Works the Contractor shall ensure that all (if any) groundwater monitoring wells installed for the Works, and no longer required for ongoing monitoring, are decommissioned as per the requirements of National Uniform Drillers Licensing Committee (2012) Minimum Construction Requirements for Water Bores in Australia, Edition 3. Evidence of the decommissioning of wells (if required) must be provide to the Principal prior to Completion of the Works;
- 11.3 The Contractor shall 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

- 11.4 Upon Completion the Contractor shall provide a Post-Occupation Report (also referred to as an Environmental Site Assessment Report within planning approval and / or EPA licence condition documentation). The report shall:
- a) be produced in accordance with the ASC NEPM, the GAR and other relevant EPA guidance;
 - b) confirm decommissioning of groundwater bores in accordance with Clause 11.1;
 - c) demonstrate that occupation by the Contractor has not resulted in actual or potential harm to the environment and human health as a result of its occupation and consider all areas occupied during the project;
 - d) 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, e.g. importation of fill materials or the excavation, handling and relocation (either off-site or on-site) of previously identified contaminated materials. The report should be both qualitative and quantitative and will where necessary involve intrusive soil and / or groundwater investigations;
 - e) provide site management plans relating to any ongoing monitoring / management requirements or audit conditions, where relevant; and
 - f) 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.

12 Hold Points

12.1 The following is a summary of Hold Points referenced in this Part:

Table PC-SC1 12-1 Hold Points

Document Ref.	Hold Point	Response Time
2.3	Principal's approval to adopt a proposed approach that does not conform to the requirements of Clause 2.2.	10 Working Days
5.3	Principal's approval to undertake notification in accordance with Environment Protection Act and GAR.	5 Working Days
10.4	Provision of proposed material recycling and / or reuse risk assessment(s).	5 Working Days