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3K.1 Introduction

Consideration needs to be given to the possibility that previous or current land use has led to the contamination of the site and the potential health and environment risks.

This Part is to be read in conjunction with the *State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)*, the *Contaminated Land Management Act 1997 (CLM Act)*, *Environmental Planning and Assessment Act 1979 (EP&A Act)* the Department of Urban Affairs and Planning - *Managing Land Contamination: Planning Guidelines*; and the Office of the Environment and Heritage – *Guidelines for Consultants Reporting on Contaminated Sites*. In the event of an inconsistency between the DCP, SEPP 55, and the Acts, the DCP is overridden.

Definitions of the terms used in this Part are contained within the SEPP 55 and the *CLM Act*.

3K.1.1 General

- O1** To ensure that the development of contaminated or potentially contaminated land does not pose a risk to human health or the environment.



3K.2 Contamination Assessments

3K.2.1 Site Investigation Process

Sites must be evaluated to determine if the proposed development is on land suspected to have been used for a potentially contaminating activity or is potentially contaminated. If information suggests that contamination is, or may be present, or there is a lack of historical knowledge of potentially contaminating uses on the site, the applicant must investigate the site and provide information about the nature, extent and degree of contamination to Council prior to determination of the development application.

There are 4 main stages associated with the investigation of sites for potential land contamination and their subsequent remediation which must be followed:

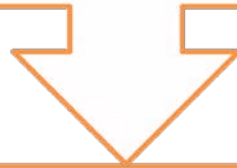
- Step 1** - Preliminary Investigation;
- Step 2** - Detailed Investigation;
- Step 3** - Remedial Action Plan; and
- Step 4** - Validation and Monitoring.

Each stage must be prepared in accordance with the guidelines set out by the NSW Environment Protection Authority (NSW EPA), *State Environmental Planning Policy No. 55 (SEPP 55)* and the *Managing Land Contamination: Planning Guidelines*.



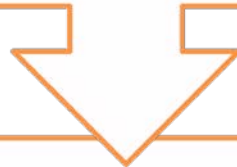
Step 1 - Preliminary Investigation

Assess whether the application is on potentially contaminated land, whether works may potentially disturb contaminated land and whether the information obtained from the site history is sufficient to determine whether the site is suitable for the proposed most sensitive use.



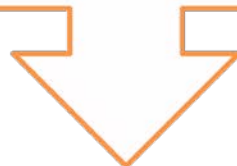
Step 2 - Detailed Investigation

To be undertaken when the results of a preliminary investigation indicate that the land has been used for a potentially contaminating activity; may be contaminated beyond appropriate guidelines for the proposed land use or the risk of exposure to contamination may increase due to a change in land use.



Step 3 - Remedial Action Plan (RAP)

To be undertaken when the detailed site investigation indicates that the site is not suitable for the most sensitive land use proposed and remediation is required.



Step 4 - Validation and Monitoring

To be undertaken when any remediation works are required.
The validation report must confirm that the site complies with the clean-up criteria stated in the RAP and standards endorsed by the NSW EPA.



Step 1 - Preliminary Investigation

If contamination is, or may be present or if the information provided is determined by Council to be insufficient to assess the proposal, the applicant must provide a Phase 1 – Preliminary Investigation. The preliminary investigation must identify any past or present potentially contaminating activities and provide a preliminary assessment of site contamination.

Where the preliminary investigation shows a history of non-contaminating activities at a site, Council can proceed with the assessment of the development application.

Where the results of a preliminary investigation demonstrate the potential for (including influences from adjacent and nearby properties) or the existence of contamination, a detailed investigation will be undertaken (refer to Step 2 - Detailed Investigation).

Note:
If appropriate, a Stage 2 Detailed Investigation can be completed incorporating the requirements of a Stage 1 Preliminary Investigation. This may increase the efficiency of the development application process when considering 'high risk' contamination sites.

Step 2 - Detailed Investigation

A detailed investigation must be undertaken when the results of a preliminary investigation indicate the site has been used for a potentially contaminating activity; may be contaminated beyond appropriate guidelines for the proposed land use or the risk of exposure to contamination may increase due to a change in land use.

The detailed investigation must include a statement which describes whether the site is suitable for the proposed use, or if remediation is necessary.

Step 3 - Remedial Action Plan

If the detailed investigation identifies that contamination has rendered the site unsuitable for the proposed land use and/or development and remediation is required, a Remedial Action Plan (RAP) must be submitted to and approved by Council.

The RAP will clearly state remedial objectives and clean-up criteria as well as detailed plans of how risks from contamination will be reduced to achieve the clean-up criteria for the site.

Step 4 - Validation and Monitoring

The purpose of validation is to demonstrate that the objectives of the RAP have been achieved and whether any further remediation work or restrictions on land use are required.

A validation report must statistically confirm that the remediated site complies with the clean-up criteria stated in the RAP, or where there is no RAP, against standards endorsed by the NSW EPA.

Documentary evidence will be provided to confirm that any contaminated soil that has been disposed of off-site or removed for re-use has been dealt with in accordance with appropriate regulations, guidelines and legislation.





3K.2 Site Audit and Site Audit Statements

Controls

C1 A site audit is necessary when Council:

- (i) Believes on reasonable grounds that the information provided by the applicant is incorrect or incomplete;
- (ii) Wishes to verify that the information provided adheres to appropriate standards, procedures and guidelines; or
- (iii) Does not have the internal resources to conduct a technical review.

Council may require a site audit be undertaken at any or all of the contamination investigation and remediation stages.

If a site audit statement is requested the applicant must provide Council with a clear and legible copy of the audit statement and the site audit report. The accredited auditor must discuss any proposed conditions with Council prior to issuing the site audit statement.

Council prefers an unconditional site audit statement but in circumstances where this is not possible, conditions for ongoing site management and restrictions on the site's future land use may be required. Council will not accept a site audit statement where the site's suitability relies on conditions which Council is of the opinion are unworkable, unwieldy, unenforceable or require constant supervision by Council.

Note: If Council requires a site audit in order to make its planning decision the cost will be borne by the applicant and not Council.



3K.3 Containment or Capping of Contaminated Material

Council does not encourage containment or capping of contaminated material but recognises that in some circumstances it is the only option available.

Controls

- C1** On-site containment or capping options are to be considered only where options (i) to (iii) listed below are not applicable.

Soil remediation and management is to be implemented in the following preferred order:

- (i) On-site treatment of the soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level.
- (ii) Offsite treatment of excavated soil so that the contaminant is either destroyed or the associated hazard is reduced to an acceptable level, after which the soil is returned to the site.
- (iii) Removal of contaminated soil to an approved site or facility, followed where necessary by replacement with clean fill.
- (iv) Consolidation and isolation of the soil on-site by containment within a properly designed barrier (i.e. capping and/or containment).

- C2** Council must be satisfied the capping and/or containment strategy:

- (i) Maximises the long-term stability of the capping and containment system(s) and any proposed structures above it (from an engineering perspective) and, where applicable, minimises the potential for leachate formation and/or volatilisation; and
- (ii) Does not result in a risk of harm to human health or the environment; and
- (iii) Recommends a notification mechanism to ensure that the capped or contained areas are protected from any unintentional or uncontrolled disturbance that could breach the integrity of the physical barrier; and
- (iv) Does not involve containment of contaminated material on riparian land.

Note: The containment of contaminated material on riparian land may conflict with the establishment of native vegetation and tree roots may penetrate the containment area and result in the release of contaminants to surface water and the ground water system.

- C3** If containment or capping of contaminated material is approved a restriction is required to be placed on the Certificate of Title to advise future owners of the land of any on-going site management requirements or restrictions on future land uses. Only Council can release, vary or modify the restriction/s.



3K.4 Landscaping Within Developments

Objectives

- O1** To ensure landscaping of contaminated sites is suitable and responds to contamination mitigation measures, including the provision of deep soil areas.

Controls

- C1** All soil used in garden beds must meet the applicable NSW EPA Guidelines and *National Environment Protection (Assessment of Site Contamination) Measure (NEPM) 1999 (amended 2013)*. This can be achieved by importing soil suitable for garden bed construction or validating soil remaining on site to demonstrate its suitability for garden beds.
- C2** For all sites to be capped or contained, deep soil zones are to be provided, as a minimum, along all boundary setbacks of a development site for the required width of that setback where possible.
- C3** Deep soil zones allow for the planting of large trees and do not include mounded areas or planter boxes over capping or concrete slabs. Deep soil zones are required to be remediated to provide a planting substrate suitable for the growth of plants. This may involve either treating the existing soil or excavating and importing soil.
- C4** A landscape plan is to be submitted illustrating deep soil zones and demonstrating stabilisation and revegetation of disturbed/exposed areas on remediated sites prior to re-development. Revegetation is to utilise a diversity of indigenous trees, shrubs and groundcovers that are appropriate to the site conditions.