

# MODEL CONTAMINATED LAND POLICY

**PREPARED BY:**

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## 1. Purpose

The purpose of this policy is to establish a framework that outlines how Council will act in good faith with the *Contaminated Land Planning Guidelines* when considering the potential of site contamination in its land-use planning and development control decision-making processes.

## 2. Objectives

This policy aims to:

- enable Council to consider the likelihood of land contamination as early as possible in land-use planning and development control processes
- avoid any inappropriate restrictions on land use
- ensure a proposed change in land use or any development will not increase the risk of harm to human health and the environment
- ensure any contaminant is remediated to a level that complies with relevant contamination criteria as required by regulation, thereby ensuring the land is suitable for its intended use
- enable Council to provide accurate and timely information and advice to inform and support decision-making in land-use planning and development control processes
- enable the community to be informed of Council's requirements regarding the management of contaminated land
- enable Council to exercise its land-use planning and development control functions with a reasonable standard of care and diligence.

## 3. Scope

This policy provides information to internal and external stakeholders, interested parties and the broader community on Council's position on managing land contamination.

This policy applies to all land within the Lockhart Shire Council local government area.

This policy is predicated on the requirements of Chapter 4 ('Remediation of Land') of the *State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP)*,<sup>1</sup> as elaborated in its contaminated land planning guidelines.<sup>2</sup>

This policy is applicable to staff involved in Council land-use planning and development control functions, as well as in waste management and in managing public land and Council assets.

This policy is also applicable to:

- a principal certifying authority
- consultants (for example, strategic and statutory planning, contaminated land practitioners, underground petroleum storage systems practitioners)
- property developers
- landowners and/or managers
- members of the public.

## 4. Definitions

Term	Definition
<b>Abbreviations</b>	
ARA (appropriate regulatory authority)	Under section 6(3) of the <i>POEO Act</i> , Council is declared as the ARA for matters under the <i>UPSS Regulation</i> .
PCA (principal certifying authority)	A certifier can be either a council or a registered certifier. A registered certifier is also known as a private certifying authority. Certifiers have statutory obligations and functions under the <i>Building and Development Certifiers Act 2018</i> , the <i>EP&amp;A Act</i> and other legislation, including the <i>Building and Development Certifiers Regulation 2020</i> . This includes issuing construction and occupation certificates under Part 6 of the <i>EP&amp;A Act</i> .

<sup>1</sup> The content of Chapter 4 of the *Resilience and Hazards SEPP* was formerly the *State Environmental Planning Policy No. 55 – Remediation of Land* (guidelines for which can be found in *Managing Land Contamination: Planning Guidelines: SEPP55 – Remediation of Land*, <https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/clm/managing-contaminated-land-guidelines-remediation.pdf>).

<sup>2</sup> These guidelines, referred to in the *Resilience and Hazards SEPP*, are those found in Schedule 6(3) of the *Environmental Planning and Assessment Act 1979*.

Term	Definition
UPSS (underground petroleum storage system)	A system of tanks, pipes, valves and other equipment that is designed to either contain petroleum or to control its passage into, out of, through or within the system. The system includes any structure through which petroleum routinely passes from one part of the system to another.
<b>Legislation</b>	
<i>Contaminated Land Management Act 1997 (CLM Act)</i>	Establishes a process for the EPA to identify, investigate and (where appropriate) order the remediation of land if the EPA considers the land to be significantly contaminated.
<i>Contaminated Land Planning Guidelines</i>	Under Schedule 6 section 3 of the <i>EP&amp;A Act</i> , the Minister can notify the publication of planning guidelines related to contaminated land under the <i>Resilience and Hazards SEPP</i> for purposes of Schedule 6 section 2 ('good faith' provisions) of the <i>EP&amp;A Act</i> .
<i>Environmental Planning and Assessment Act 1979 (EP&amp;A Act)</i>	The principal legislation of the NSW planning system that governs land-use planning and development control functions in NSW.
<i>Protection of the Environment Operations Act 1997 (POEO Act)</i>	Establishes a framework to protect, control and investigate pollution.
<i>Protection of the Environment Operations (Underground Petroleum Storage System) Regulation 2019 (UPSS Regulation)</i>	Establishes a framework for the design, installation, operation, maintenance and decommissioning of an underground petroleum storage system. Also designates Council as the 'appropriate regulatory authority' to administer the requirements of the <i>UPSS Regulation</i> .
<i>State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 (Exempt and Complying Development Codes SEPP)</i>	Establishes the rules and standards for exempt and complying development.
<i>State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP)</i>	Outlines a planning framework for the remediation of contaminated land. Formerly known as SEPP55 – Remediation of Land.
<b>Processes</b>	
Category 1 remediation work	Remediation work that requires the consent of Council under the <i>Resilience and Hazards SEPP</i> .
Category 2 remediation work	Remediation work not requiring the consent of Council under the <i>Resilience and Hazards SEPP</i> .
Detailed site investigation	An investigation to define the extent and degree of contamination, to assess the potential risk posed by contaminants to health and the environment, and to obtain sufficient information for developing a remediation action plan if required.  Reporting requirements for a detailed site investigation are as outlined in the <i>National Environmental Protection (Assessment of Site Contamination) Measure 1999</i> (amended 2013) and in relevant guidelines made by the EPA regarding reports to be prepared by contaminated land consultants.
Independent review	An evaluation by an independent expert, with the appropriate competencies and qualifications, of the work of a primary consultant for all types of contaminated sites.
Initial evaluation	A process undertaken by Council to consider the potential for land to be contaminated, and the impacts of that contamination on the suitability of the land for proposed uses, when determining development applications or when preparing environmental planning instruments.

<b>Term</b>	<b>Definition</b>
Preliminary site investigation	An investigation to identify any past or present potentially contaminating activities; provide a preliminary assessment of site contamination; and, if required, provide a basis for a detailed investigation. Reporting requirements for a preliminary site investigation are as outlined in the <i>National Environmental Protection (Assessment of Site Contamination) Measure 1999</i> (amended 2013) and in relevant guidelines made by the EPA regarding reports to be prepared by contaminated land consultants.
Remediation	The remediation of contaminated land is the (i) preparation of an environmental management plan (if required); (ii) removal, dispersal, destruction, reduction, mitigation or containment of the land contamination; and (iii) elimination or reduction of any hazard arising from the land contamination (including by preventing the entry of persons or animals on the land).
Remediation action plan	A plan that sets out remediation goals and that documents the proposed process for remediating a site. Reporting requirements for a remediation action plan are outlined in the relevant guidelines made by the EPA regarding reports to be prepared by contaminated land consultants.
Validation	The process of determining whether the objectives for remediation and any conditions of development consent have been achieved. A report on the validation is to detail the site work undertaken and demonstrate compliance with the remedial action plan for the site, and compliance with the contaminated land planning guidelines and all other applicable regulatory requirements. Reporting requirements for validation are elaborated in the relevant guidelines made by the EPA regarding reports to be prepared by contaminated land consultants.
<b>Terms</b>	
Authorised officer	Authorised officers have regulatory powers and functions under environment protection legislation, as prescribed in Council's delegations of authority.
Complying development certificate	A certificate indicating approval for straightforward residential, commercial and industrial development, generally for building works larger than exempt development.
Contaminated land	Contaminated land is typically land that have been used for industrial or agricultural activities, or individual sites that store chemicals, such as service stations and dry cleaners. <i>Also see - Appendix 2</i>
Contamination	The presence in or under the land of a substance above the concentration at which the substance is normally present in or under that land at the same locality, being a presence that poses a risk of harm to human health or any other aspect of the environment (section 5 of the <i>CLM Act</i> ). <i>Also see - 'pollution incident'</i>
Development control plan	Provides detailed planning and design guidelines to support the planning controls in the local environmental plan developed by Council.
Environmental management plan	An environmental management plan for contaminated land documents the mitigation measures and/or monitoring requirements where full clean-up of a site is not feasible or where the onsite containment of contamination is proposed.
EPA guidelines	Guidelines made or approved by the EPA in relation to managing site contamination.
Investigation area	Land declared to be an investigation area by a declaration in force under Part 3 Division 2 of the <i>CLM Act</i> .
Local environment plan	A plan that guides planning decisions for Council through zoning and development controls. Amendments to the local environment plan are through planning proposals.
Newbury test	The Newbury test states that a condition of consent must be imposed for a planning purpose (not an ulterior one); must fairly and reasonably relate to the development that is the subject of the development application; and must not be so unreasonable that no planning authority would have imposed it.
Planning proposal	Council may draft a planning proposal to amend a local environment plan and submit it to the department for Gateway determination.

Term	Definition
Pollution incident	An incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises. Also see – ‘contamination’
Section 10 planning certificates	Formerly section 149 planning certificates. Section 10 planning certificates provides information regarding the development potential of a parcel of land. There are two types of planning certificates – section 10.7(2) and section 10.7(5). These certificates show the zoning of the property, its relevant state, regional and local planning controls and other property constraints such as land contamination, level of flooding and bushfire prone land. Section 10.7(5) certificates also include advice from ‘other authorities’ and certain information that Council holds on a property that is relevant to the land but is not disclosed in a section 10.7(2) certificate.
Sensitive receptor	Receiving environment or sensitive receiver. This is either a use of land for residential, educational, recreational or childcare purposes, or for the purposes of a hospital, or land identified as sensitive environmental land.

## 5. References

The following Council policies and procedures are relevant to this policy:

- [Policy 2.28 Asbestos Management]
- [Compliance and enforcement policy]
- [Soil and water management policy]
- [Engineering guidelines and technical specifications]
- [Inspection and monitoring procedures]
- [Tree preservation order process]
- [Flood mapping]
- [Add additional relevant policies and procedures]

The following legislation and standards are referenced in this policy:

- **Legislation**
  - *Building and Development Certifiers Act 2018*
  - *Building and Development Certifiers Regulation 2020*
  - *Contaminated Land Management Act 1997*
  - *Conveyancing Act 1919*
  - *Environmental Planning and Assessment Act 1979*
  - *Environmental Planning and Assessment Regulation 2021*
  - *Environmentally Hazardous Chemicals Act 1985*
  - *Government Information (Public Access) Act 2009*
  - *Home Building Act 1989*
  - *Local Government Act 1993*
  - *Local Planning Directions*
  - *National Environment Protection (Assessment of Site Contamination) Measure 1999* (as amended)
  - *Protection of the Environment Operations Act 1997*
  - *Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019*
  - *Protection of the Environment Operations (Waste) Regulation 2014*
  - *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*
  - *State Environmental Planning Policy (Resilience and Hazards) 2021, Chapter 4* (‘Remediation of Land’)
  - *Water Management Act 2000*
  - *Workplace Health and Safety Act 2011*
  - *Workplace Health and Safety Regulation 2017*

- **Guidelines**
  - *Guide to Complying Development (2022)*
  - *Guide to Writing Conditions of Consent (2021)*
  - *Guidelines for Implementing the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2019 (2020)*
  - *Guidelines for the Vertical Mixing of Soil on Former Broad-Acre Agricultural Land (2003)*
  - *Noise Policy for Industry*
  - *Interim Construction Noise Guideline*
  - *Liquid Trade Waste Management Guidelines (DPIE, 2021)*
  - *Managing Land Contamination: Planning Guidelines: SEPP55 – Remediation of Land (1998) (and its revised form, the Contaminated Land Planning Guidelines, when released)*
  - *Managing Urban Stormwater: Soils and Construction (4th ed., LANDCOM, March 2004)*
  - *Waste Classification Guidelines (2014)*
  - *Statutory guidelines made or approved by the NSW EPA under the Contaminated Land Management Act 1997*
  - *Non-statutory guidance documents made by the NSW EPA*
- **Standards**
  - *Australian Standard AS 1940-2017: Storage and Handling of Flammable and Combustible Liquids*
  - *Australian Standard AS 4897-2008: The Design, Installation and Operation of Underground Petroleum Storage Systems*
  - *Australian Standard AS 4976-2008: The Removal and Disposal of Underground Petroleum Storage Tanks.*

Best practice resources are available to assist Council in implementing this policy. These resources are listed in Appendix 1.

## 6. Content

### 6.1. Policy statement

1. Council acknowledges that land contamination poses a risk of harm to human health and the environment.

### 6.2. Responsibilities

1. Council will act in good faith with the *Contaminated Land Planning Guidelines* by ensuring due care and diligence in considering land contamination in Council's land-use planning and development control functions.
2. Council will identify, evaluate and manage contaminated land so as to not increase the risk of harm to human health and the environment:
  - a. when preparing or making a planning instrument (including a planning proposal) and a development control plan (Part 3 of the EP&A Act)
  - b. when considering the potential for land contamination in development assessment and consent processes (Part 4 of the EP&A Act) and in environmental impact assessment processes (Part 5.1 of the EP&A Act)
  - c. in building and subdivision certification processes (Part 6 of the EP&A Act)
  - d. when managing public land and assets, including land managed or under the control of Council
  - e. when managing waste, including contaminants in soil.
3. Council will not approve a development application or lodge a planning proposal unless it is satisfied, based on information available to it under this policy, that that land is suitable, or can be made suitable, for its proposed use.
4. Council will consider the potential of land contamination in a process to furnish the contaminated land information that is required on planning certificates (section 10.7 of the EP&A Act).
5. With respect to sites with operational or abandoned underground petroleum storage systems, Council acknowledges that it is the ARA under the *UPSS Regulation*. Council also acknowledges the regulation of these sites is also under various other legislation administered by state departments and agencies, including SafeWork NSW and NSW Fair Trading.

### 6.3. Information management

1. Council will maintain and update a contaminated land site register so as to comply with section 59(2) of the *CLM Act* in furnishing contaminated land information on planning certificates under section 10.7 of the *EP&A Act*.
2. The contaminated land site register will include information on actual and potential land contamination to inform its land-use planning and development control functions in alignment with the *Contaminated Land Planning Guidelines*.
3. The list of sites in the contaminated land site register will be compiled, maintained and updated in good faith in the interests of responsible land-use planning and development control and is to be used as a first point of reference by Council.

4. Information on actual or potential land contamination contained in Council's contaminated land site register is to be supplied to the public only by either:
  - a. issuing a section 10.7 planning certificate under the *EP&A Act*
  - b. a Council officer with delegation to approve the release of reports identified in Appendix 3 that have been provided to Council
  - c. providing access to information and documents in accordance with *Local Government Act 1993* and *Government Information (Public Access) Act 2009*.

#### Contaminated land site register

5. Council's contaminated land site register should contain accurate and reliable information for individual parcels of land on:
  - a. land-use history and zoning so as to flag the potential for land contamination for a parcel of land if Council reasonably suspects historical land use or zoning may indicate a use of land involving a potential land use or activity listed in Appendix 2
  - b. artefacts received by Council in relation to
    - i. reports on the assessment of site contamination listed in Appendix 3
    - ii. site audit statements
    - iii. EPA notifications under section 59(1) of the *CLM Act*
    - iv. notification for category 2 remediation works
    - v. notification of completion of category 1 and category 2 remediation works
  - c. any land-use restrictions on the land relating to possible contamination, such as notices issued by the EPA or other regulatory bodies.
6. If an EPA notification under section 59(1) of the *CLM Act* lists reports on the assessment of site contamination, Council will request copies of these reports to be included in its contaminated land site register.
7. Council will either modify an existing record or create a new record in its contaminated land site register if it approves a new or significant modification (as defined by the *UPSS Regulation*) to an existing underground petroleum storage system.
8. Information contained in this register is to be used by Council in
  - a. furnishing contaminated land information required on section 10.7 planning certificates under the *EP&A Act*
  - b. determining the suitability of land for its proposed use
  - c. determining conditions of development consent so as to not increase the risk of harm, to human health and the environment, of an approved use of land.
9. Council will consider the potential for contamination of adjacent land in any process prescribed in section 6.3(8).
10. Council will update records in the contaminated land site register with:
  - a. information provided to it in relation to the (actual or potential) contamination status of land, including notifications, notices and orders, and reports on the assessment of site contamination
  - b. information obtained from Council's inspection and monitoring of contaminated sites and from the inspection of sites operating underground petroleum storage systems
  - c. information directly obtained by Council in land-use planning and development control processes from
    - i. EPA online databases, in relation to sites subject to an investigation order and/or regulation under the *CLM Act*
    - ii. SafeWork NSW, in relation to underground petroleum storage systems licensed under Schedule 11 of the *Workplace Health and Safety Regulation 2017*
    - iii. NSW Fair Trading, in relation to registered retail fuel service stations
    - iv. other sources of information used as input into an assessment of historical land use.
11. In lieu of a contaminated land site register, Council should identify and assess historical land use using information identified in section 6.3(10)(c) in any process prescribed by section 6.3(8).

#### Section 10.7 planning certificate

12. Council will furnish contaminated land information required on section 10.7(2) planning certificates including:
  - a. whether any adopted Council policy restricts the development of land subject to the planning certificate if Council knows or reasonably suspects land contamination
  - b. information prescribed by section 59(2) of the *CLM Act*
  - c. whether the land was or remains the subject of a preliminary investigation order under section 10(1)(a)–(b) of the *CLM Act*

- d. whether the land is a remediation site
  - e. information on the potential of contamination of the land subject to the planning certificate due to its historical or current use. This information may be furnished using the annotations provided in Appendix 4 of this policy.
13. Council may furnish additional contaminated land information on section 10.7(5) planning certificates, including:
- a. report(s) possessed by Council and identified in Appendix 3 relating to the assessment or regulation of site contamination of that land or adjacent land
  - b. a statement that the site has been assessed and/or remediated
  - c. a statement that any person relying on the certificate is advised to consider these artefacts and to seek Council's advice regarding further development of the site.

#### **6.4. Council land-use planning function**

- 1. Council will consider land contamination in land-use planning processes in accordance with processes, procedures and standards prescribed by the *Contaminated Land Planning Guidelines*.
- 2. Council will consider the potential for land to be contaminated when there is a proposed change in the permissible uses of that land.
- 3. Council will not include land in a zone that would permit a change of use of that land from the existing use unless:
  - a. Council has considered whether the land is contaminated
  - b. if the land is contaminated, Council is satisfied that the land is suitable in its contaminated state or can be made suitable for its proposed use after remediation, for all purposes for which land in the zone concerned is permitted to be used
  - c. if the land requires remediation to be made suitable for any purpose for which land in that zone is permitted to be used, Council will impose conditions in development consent and approvals under Parts 4 and 5 of the *EP&A Act* to ensure the land is suitable for its proposed use through remediation prior to or during development works.

#### Initial evaluation

- 4. Council will undertake an initial evaluation to investigate the potential for land contamination when preparing or making a planning instrument, development control plan or planning proposal (rezoning proposal) under Part 3 of the *EP&A Act*, using the potential land uses and activities listed in Appendix 2 as a guide in this evaluation.

#### Preliminary site investigation

- 5. In alignment with *Local Planning Directions 4.4* ('Remediation of Contaminated Land'), Council will prepare and submit a preliminary site investigation report with a planning proposal if that proposal seeks to rezone land to a proposed use that is a sensitive receptor (as defined by this policy), and there is no knowledge (or incomplete knowledge) as to whether that and adjacent land involve a land use or activity listed in Appendix 2.
- 6. The preliminary site investigation is to be carried out in accordance with the requirements of relevant guidelines made or approved by the NSW EPA in alignment with the requirements of the *CLM Act*. The proponent is responsible for engaging a suitably qualified consultant to undertake this investigation.
- 7. Council will require a preliminary site investigation to be provided if it reasonably suspects, from an initial evaluation, that land may be contaminated because of the land's history (or historical zoning), condition or other information known to Council.
- 8. If the risk of contamination of land subject to a land-use planning process makes the land unsuitable for its proposed use, and it is not feasible to make the land suitable (that is, remediate the land) for its proposed use, Council will either:
  - a. restrict the range of permissible uses of that land in planning instruments
  - b. elect not to proceed with the planning proposal to rezone that land.
- 9. If the preliminary site investigation identifies that the land can be made suitable for its proposed use through remediation, Council will include provisions in its local environment plan or development control plan that ensure the potential for contamination and the suitability of land for any proposed use is further addressed prior to the development of that land.

#### **6.5. Council development control function**

##### *6.5.1. Development assessment*

- 1. In alignment with section 4.15(1)(c) of the *EP&A Act*, Council shall consider land contamination in subdivision and development applications, particularly when a change in land use is proposed. This is to ensure that contaminated land:
  - a. is suitable for its proposed use in its contaminated state
  - b. can be made suitable for its proposed use through remediation
  - c. presents no increased risk of harm to human health and the environment.



2. Council will undertake an initial evaluation to identify and consider the possibility of all forms of potential contamination based on an assessment of the historical or current use of that or adjacent land, particularly if the historical or current use is a use or activity listed in Appendix 2, and the proposed use is a sensitive receptor.
3. If the initial evaluation identifies a potential for land contamination then, in alignment with section 4.6(4) of the *Resilience and Hazards SEPP*, Council will initiate an assessment of site contamination (as prescribed in section 6.5.4 of this policy) to ascertain the nature and extent of contamination.

6.5.2. *Exempt and complying development*

1. Development must not be carried out on land designated as 'significantly contaminated land' within the meaning of the *CLM Act* for complying development specified for Codes identified in section 1.19 under Part 1 of the *Exempt and Complying Development Codes SEPP*.
2. During development work on land subject to a complying development certificate, if land contamination is detected or reasonably suspected, Council requires that:
  - a. all development work immediately cease
  - b. Council and the EPA be notified of the potential contamination
  - c. the notification be sent by the PCA or by the person who issued the complying development certificate.
3. Exempt development must not be carried out on land designated as 'significantly contaminated land' within the meaning of the *CLM Act*.

6.5.3. *Development consent*

1. Council will, under section 4.17 of the *EP&A Act*, impose conditions in development consent to ensure there is no increased risk of harm to human health and the environment associated with:
  - a. development works (including complying development) on land that is known to be or is potentially contaminated
  - b. onsite management of contaminants in soil, including
    - i. soil used as infill at a development site (that is, virgin excavated natural material)
    - ii. soil that may contain asbestos
    - iii. contaminated soil from remediation works
  - c. offsite management of contaminants in soil, including waste material generated during remediation for offsite processing (a waste classification report<sup>3</sup> must be provided prior to transporting waste material offsite)
  - d. the detection of contamination on land that is subject to a complying development certificate
  - e. the ongoing operation of an approved use of land that involves a land use or activity listed in Appendix 2.
2. Standard conditions prescribed by Council in development consent related to contaminated land are those either:
  - a. contained in the *Council Guidance on Implementing the Contaminated Land Policy* document
  - b. developed by the NSW Department of Planning and Environment and located in the NSW Planning Portal (voluntary contaminated land conditions)
  - c. developed by Council in accordance with the NSW Department of Planning and Environment's *Guide to Writing Conditions of Consent* and which align with the 'Newbury Test'.
3. Council can impose a condition of development consent that requires the applicant to:
  - a. prepare a report on the assessment of site contamination, and to submit this report to Council prior to issuance of a subdivision works or construction certificate
  - b. submit a validation report to Council prepared by a certified consultant prior to commencing development works, confirming the land has been made suitable through remediation for its proposed use, and whether any ongoing monitoring is required to manage residual site contamination
  - c. prior to lodging a construction certificate, provide Council with the design specifications for a new or significantly modified underground petroleum storage system that was prepared by a 'duly qualified person' (within the meaning of the *UPSS Regulation*)
  - d. prior to lodging an occupation certificate, provide Council with
    - i. works as executed plans related to the installation of new or significantly modified underground petroleum storage systems by a 'duly qualified person'
    - ii. a copy of the fuel system operation plan that has been prepared in accordance with the *UPSS Regulation*
  - e. engage an accredited site auditor to review an assessment of site contamination and reports thereon, including a validation report. This is most appropriate for high-risk sites involving a change in land use to a sensitive receptor.

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<sup>3</sup> <https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/contaminated-land/20p2233-consultants-reporting-on-contaminated-land-guidelines.pdf>

6.5.4. *Assessment of site contamination*

1. Council will require:
  - a. investigations on the nature and extent of land contamination to be undertaken by appropriately qualified contaminated land consultants
  - b. reports on these investigations to be prepared, or reviewed and approved by, an appropriately qualified and certified consultant in accordance with relevant guidelines made by the NSW EPA.

Preliminary site investigation

2. If the initial evaluation identifies a potential for land contamination, then, in alignment with section 4.6(4) of the *Resilience and Hazards SEPP*, Council will require a preliminary site investigation to be submitted with a subdivision works or development application to carry out development where the land concerned is:
  - a. land that is within an investigation area (within the meaning of the *CLM Act*)
  - b. land on which development for a purpose listed in Appendix 2 is currently being, or is known to have been, carried out
  - c. to the extent to which it is proposed to carry out development on it for residential, educational, recreational or childcare purposes, or for the purposes of a hospital – land
    - i. in relation to which there is no knowledge (or incomplete knowledge) as to whether development for a purpose listed in Appendix 2 has been carried out
    - ii. on which it would have been lawful to carry out such development during any period in respect of which there is no knowledge (or incomplete knowledge).
3. Council will also require a preliminary site investigation when:
  - a. Council reasonably suspects the land is contaminated because of its historical use (or zone), its condition or other information known to Council
  - b. the land has been investigated and/or remediated, but there is insufficient information available to Council on the nature and extent of contamination and/or remediation works undertaken, or the circumstances have changed
  - c. there are restrictions on, or conditions attached to, the use of the land by a regulatory or planning authority that are or may be related to contamination, but there is insufficient information available to Council on the nature and extent of contamination
  - d. Council records show that the land is associated with pollution incidents or the illegal dumping of waste
  - e. the land is adjacent to land historically or currently being used for a purpose listed in Appendix 2, and Council reasonably suspects it is likely that this use may have contaminated the land subject to the preliminary site investigation
4. The preliminary site investigation is to be carried out in accordance with the requirements of relevant guidelines made or approved by the NSW EPA in alignment with the requirements of the *CLM Act*. The applicant is responsible for engaging a suitably qualified consultant to undertake this investigation.

Detailed site investigation

5. Council will require a detailed site investigation to be undertaken when either:
  - a. the results of the preliminary site investigation state the potential for or existence of contamination that may not be suitable for the proposed use of the land
  - b. Council is not satisfied with the content and/or completeness of the preliminary site investigation.
6. Council may request the preliminary and detailed site investigations to be combined when the land is known to be contaminated.
7. The detailed site investigation is to be carried out in accordance with the requirements of relevant guidelines made or approved by the NSW EPA in alignment with the requirements of the *CLM Act*. The applicant is responsible for engaging a suitably qualified consultant to undertake this investigation.
8. A report on the detailed site investigation must include a statement as to whether the land is suitable for its proposed use or if remediation is necessary to make the land suitable for its proposed use. If remediation is required, the report must list the feasible remediation options available.

Remediation action plan

9. A remediation action plan is to be provided to Council if the report on the preliminary or detailed site investigation states that the land is not suitable for its proposed use but can be made suitable through remediation.
10. Prior to determining a subdivision or development application, Council must be satisfied that remedial measures have been or will be undertaken in accordance with the remediation action plan lodged with Council.

11. A remediation action plan must identify, upon completion of remediation works, the need for ongoing land management due to residual contamination. This plan may also include an outline of the environmental management plan.

Validation report

12. A validation report must be lodged with Council after remediation works have been completed.
13. Where applicable, Council will include a condition of development consent requiring this report to be provided to Council prior to issuance of the subdivision works or construction certificate.

Remediation works

14. Remediation work that is ordinarily category 2 remediation work but which is ancillary to designated development that requires development consent under Part 4 of the *EP&A Act* and an environmental impact statement under Part 5 of the *EP&A Act* may, as an applicant chooses, either:
  - a. be made part of the subject of the development application for the designated development instead of being made the subject of a separate development application
  - b. be treated as category 2 remediation work, which does not require the consent of Council.
15. All remediation work must be consistent with the *Contaminated Land Planning Guidelines* and carried out in accordance with guidelines made or approved by NSW EPA as required by the *CLM Act*.
16. Council requirements regarding site management of remediation works are outlined in Appendix 5 and are required to be included in a remediation action plan.
17. Council must be notified within 30 days of the completion of remediation works, in alignment with section 4.14(2) of the *Resilience and Hazards SEPP*. This notice is required to include:
  - a. information prescribed in section 4.15 of the *Resilience and Hazards SEPP*
  - b. a validation report.

Category 1 Remediation works

18. Remediation work that requires development consent is category 1 remediation work. Category 1 remediation work is remediation work that is either:
  - a. identified in section 4.8(a)–(f) of the *Resilience and Hazards SEPP*
  - b. not being work to which section 4.11(b) of the *Resilience and Hazards SEPP* applies
  - c. not carried out in accordance with the site management provisions outlined in Appendix 5.

Category 2 remediation work

19. Remediation work that does not require development consent is category 2 remediation work. Section 4.11 of the *Resilience and Hazards SEPP* defines what constitutes category 2 remediation work.
20. Council must be notified of the intent to undertake category 2 remediation work at least 30 days before commencement. This notification is to include the information identified in section 4.13(3) of the *Resilience and Hazards SEPP*.
21. Council also requires the following information to be lodged 14 days before commencing these works:
  - a. a copy of the preliminary site investigation report, detailed site investigation report and remediation action plan for these works
  - b. a copy of the soil and water management plan, where applicable (that is, for the management of flooding and of contaminants in soil)
  - c. the contact details of the contractor responsible for remediation works and of the party responsible for ensuring compliance of remediation work with all relevant regulatory requirements.
22. A validation report is to be submitted to Council upon the completion of category 2 remediation works.
23. For category 2 remediation works associated with underground petroleum storage systems, Council requires:
  - a. if a storage system is to be decommissioned, that the person responsible for the storage system notify Council no later than 30 days before the storage system is decommissioned or removed, and that the notification include both
    - i. a report on the assessment of site contamination, which is likely to be a report on the preliminary site investigation
    - ii. a remediation action plan
  - b. if a storage system is decommissioned, that the person responsible for the storage system either

- i. submit a site report (preliminary site investigation report) to Council no later than 60 days after the system is decommissioned
- ii. submit the site report and a validation report to Council if remediation of the site is required, and submit these 60 days after the completion of the remediation works
- c. if a storage system is to be modified and involves the removal or replacement of an underground petroleum storage tank, that the person responsible
  - i. not commission the modified underground petroleum storage system unless the reports prescribed by this clause are submitted to Council
  - ii. submit an updated fuel system operation plan to Council
  - iii. prepare, in accordance with guidelines made by the NSW EPA, the reports prescribed by this clause.

#### Site audit

24. Specific circumstances that may trigger an independent review ('audit') of information pertaining to an assessment of site contamination (including reports thereon) include when Council either:
  - a. reasonably suspects that information provided by the applicant is incorrect or incomplete
  - b. needs to verify that information provided by the applicant adheres to appropriate standards, procedures and guidelines
  - c. does not have the capacity to technically review reports on the assessment of site contamination.
25. A statutory site audit is required only when there is a requirement to demonstrate compliance with:
  - a. a requirement under the *CLM Act*
  - b. an approved voluntary management proposal
  - c. a requirement imposed by at least one of the following
    - i. the *CLM Act*
    - ii. the *Resilience and Hazards SEPP*
    - iii. the *EP&A Act* (that is, development consent or any other approval under this Act)
  - d. any other requirement imposed by or under a relevant Act.
26. Independent review ('audit') can be undertaken by a consultant with the necessary competencies and qualifications.
27. A statutory site audit must be undertaken by a site auditor accredited under the relevant provisions of the *CLM Act*.
28. For statutory site audits (within the meaning of the *CLM Act*), Council must be provided:
  - a. the site audit statement that outlines the conclusions of a site audit
  - b. the site audit report that summarises the information reviewed by the accredited site auditor.
29. Requirements of site auditors are prescribed in the relevant guidelines made by the NSW EPA on the site auditor scheme under the *CLM Act*.
30. Costs associated with an independent review or the site audit process are with the applicant.

#### Environmental management plan

31. An environmental management plan is required when either:
  - a. residual contamination on land requires ongoing management to manage the risk of harm to human health and the environment, especially when onsite containment of contamination is proposed or is in place
  - b. there are restrictions on the use of the land due to contamination.
32. An environmental management plan is to consider:
  - a. suitable management systems (active or passive)
  - b. potential for intrusive works, including any works arising from the maintenance of service infrastructure or exempt and complying development works
  - c. ecologically sustainable development
  - d. management of offsite contamination.
33. Council can, under section 4.17 of the *EP&A Act*, include a condition of development consent that requires an applicant to prepare and submit to Council an environmental management plan.

34. An environmental management plan is to be prepared in accordance with the requirements prescribed by the NSW EPA  
*Practice Note: Preparing Environmental Management Plans for Contaminated Land.*
35. An environmental management plan is to be prepared by an appropriately qualified contaminated land consultant and can be reviewed by an accredited site auditor. Environmental management plans prepared to comply with the *CLM Act* must be prepared, or reviewed and approved by, a contaminated land consultant who is certified under a certification scheme recognised by the NSW EPA.
36. Notations indicating that land is subject to an environmental management plan are required in:
  - a. section 10.7(2) and 10.7(5) planning certificates under the *EP&A Act*
  - b. covenants registered on a land title under section 88B of the *Conveyancing Act 1919*.
37. Provisions of environmental management plans must be legally enforceable. Council can rely on section 4.17 of the *EP&A Act* to include, as a condition of development consent, that an ongoing environmental management plan be prepared and may also consider orders under section 124 of the *Local Government Act 1993*.

#### 6.5.5. *Maintaining compliance with development consent*

##### Contaminated land

1. Council will monitor sites subject to an environmental management plan in accordance with any role or responsibility prescribed to it under that plan.
2. Council may monitor sites subject to remediation works to confirm that those works are undertaken in accordance with the site management provisions in Appendix 5.

##### Underground petroleum storage system

3. Council authorised officers may inspect and monitor these sites to ensure that the operation of underground petroleum storage systems maintains compliance with development consent and does not present an increased risk of harm to human health or the environment through site contamination (for example, through leaks and spills). The following are excluded:
  - a. sites with operational or abandoned underground petroleum storage systems licensed under Schedule 1 of the *POEO Act*
  - b. Council-owned or managed sites with operational or abandoned underground petroleum storage systems for which the NSW EPA is the ARA.
4. The inspection and monitoring of underground petroleum storage systems will focus on:
  - a. retail fuel service stations
  - b. fuel depots
  - c. multipurpose premises with retail fuel service (for example, general stores and post offices).
5. Council monitoring of these sites will be proportionate to the risk of harm posed by the underground petroleum storage system, which is to be determined by Council as a function of:
  - a. the age of underground petroleum storage tanks
  - b. existence of an onsite fuel system operation plan
  - c. evidence of loss monitoring
  - d. evidence leak detection
  - e. proximity to a sensitive receptor, which would also include both
    - i. irrigation channels for agricultural use
    - ii. the use of groundwater for potable water use.
6. Council may determine and/or amend the potential risk of harm for an individual underground petroleum storage system site using information obtained from any of the following:
  - a. an annual inspection
  - b. an inspection at a frequency commensurate with the risk of the site
  - c. an assessment of responses provided to the Council's survey of underground petroleum storage system sites by the person responsible for the underground petroleum storage system, with the survey to be sent every 2 years
  - d. a formal notification received by Council under Part 5.7 of the *POEO Act* in relation to a potential leak in the underground petroleum storage system
  - e. any other notification sent to Council regarding the operation or decommissioning of the underground petroleum storage system

- f. notifications under sections 91 and 96 of the *POEO Act* in relation to clean-up and prevention notices, respectively
- g. the finding of an abandoned underground petroleum storage tank on public or private land.

7. Artefacts generated from Council's inspection and monitoring of underground petroleum storage systems are to be kept in Council's electronic document and records management system and linked to Council's contaminated land site register and/or to Council's database of underground petroleum storage systems.

#### 6.6. **Duty to notify**

1. Where Council considers that contamination on a site triggers the duty to report contamination under clause 60 of the *CLM Act*, and it is not clear whether or not the polluter or site owner has reported the contamination, Council may notify the EPA.
2. Where the land is under Council management and/or control, or Council is the polluter of land, Council will notify the EPA in accordance with clause 60 of the *CLM Act*.

#### 6.7. **Public land**

1. Community or public land (or part thereof) under Council's control or management that is known to be contaminated will be managed so as to not increase the risk of harm to human health and the environment.<sup>4</sup>

#### 6.8. **Use of consultants**

1. Contaminated land investigations will be undertaken by, and reports on these investigations are to be prepared, or reviewed and approved by, an appropriately qualified and certified consultant in accordance with relevant guidelines made by the NSW EPA.
2. The design and installation of underground petroleum storage systems will be undertaken by duly qualified persons within the meaning of the *UPSS Regulation*.

### 7. **Documentation**

This policy is supported by a range of capacity resources, documents, forms and templates that are either included or referred to in:

- Appendix 1 – 'Best Practice Resources on Managing Contaminated Land' (including the *Council Guidance on Implementing the Contaminated Land Policy*) to assist and inform Council's navigation of the contaminated land regulatory landscape
- Appendix 2 – 'Potential Land Uses and Activities That May Cause Site Contamination'
- Appendix 3 – 'Artefacts Generated in the Process of Managing Contaminated Land'
- Appendix 4 – 'Annotations for Section 10.7 Planning Certificates on Contaminated Land'
- Appendix 5 – 'Site Management Provisions for Remediation Works'.

### 8. **Authorisation**

<b>Owner</b>	<b>Directorate</b>	Input Directorate – <b>Team Name</b>
	<b>Responsible Officer</b>	<b>Insert Officer Position</b>
<b>Authorisation</b>	Insert ' <b>Approved Executive</b> ' or ' <b>Adopted Council</b> ' Include <b>date approved/adopted</b>	
<b>Review Date</b>	Insert <b>date four years</b> from last issue date, or earlier if required	
<b>Register</b>	Indicate if this policy is included in the <b>public policy and procedure register</b> .	
<b>Record of Amendments</b>	Insert date	Provide brief description of the change.
	Insert date	Provide brief description of the change.

<sup>4</sup> <https://www.epa.nsw.gov.au/your-environment/contaminated-land/managing-contaminated-land/procedures-for-land-managers>

### Appendix 1 – Best practice resources on managing contaminated land

The resources listed in Table A1.1 below are based on *Managing Land Contamination: Planning Guidelines: SEPP55 – Remediation of Land (SEPP55 Guidelines)*, guidelines made or approved by the EPA and on resources developed by the EPA and other NSW councils. They have been updated, where applicable, to reflect changes in the regulatory landscape.

The resources are also provided for processes ancillary to managing contaminated land, including underground petroleum storage systems, onsite and offsite management of contaminants (including waste material) in soil, and the selection of consultants, among other processes.

A draft revision of the *SEPP55 Guidelines* (that is, the *Contaminated Land Planning Guidelines*) was released by the NSW Department of Planning and Environment in 2018 but has yet to be finalised at the time of finalising the model policy. As already noted, the Contaminated Land Framework includes (where appropriate) elements of the draft guidelines.

**Table A1.1:** Best practice resources available to Council on managing contaminated land and underground petroleum storage systems

Resource	Author	Description
<i>Assessment of Site Contamination Reports</i>	RAMJO-REROC, Ballina and Bathurst CRCB projects	A resource to assist Council to ascertain the completeness of the report and to assist in the interpretation and use of its content. Also includes checklists to provide Council with a degree of confidence and certainty on the report.
<i>Managing Offsite Transport of Soil</i>	Ballina, RAMJO-REROC and FNWJO CRCB projects	A resource outlining best practices in the offsite management of soil, including soil that includes waste materials generated during remediation, for offsite processing.
<i>Managing Asbestos in Development Control Processes</i>	FNWJO CRCB project	A resource for Council on managing asbestos in its operations. It is complementary to the Council <i>Asbestos Management Policy</i> .
<i>A Guide to Selecting a Consultant</i>	RAMJO-REROC and Ballina CRCB projects	An important resource for Council to identify the required competencies and qualifications of consultants for specific stages of the assessment of site contamination, in the design and installation of underground petroleum storage systems, and in managing asbestos.
<i>A Guide to Retail Service Station Owners on Managing UPSS Systems</i>	NSW EPA (updated by RAMJO-REROC and FNWJO CRCB projects)	A quick reference guide on the obligations of owners, operators and site managers of UPSS infrastructure. This guide is a retired NSW EPA resource that has since been updated by RAMJO and its collaborators.
<i>Council ARA Responsibilities and UPSS</i>	RAMJO-REROC CRCB project	A quick reference guide for Council on their responsibilities as the ARA regarding UPSS infrastructure.
<i>Decommissioning an Underground Petroleum Storage Tank or System</i>	NSW EPA	A fact sheet for Council on the process to decommission an underground petroleum storage system.
Statutory guidelines made or approved by the EPA	NSW EPA	The NSW EPA has made or approved a range of statutory guidelines dealing with different types of contamination. These guidelines are to be considered by accredited site auditors, contaminated land consultants, and those with a duty to report contamination to the NSW EPA.
Non-statutory guidelines made or approved by the EPA	NSW EPA	The NSW EPA has made or approved a range of non-statutory guidance documents dealing with different types of contamination. These guidance documents are to be considered by accredited site auditors, contaminated land consultants, and those with a duty to report to the EPA.

Note: RAMJO = Riverina and Murray Joint Organisation; REROC = Riverina Eastern Regional Organisation of Councils; CRCB = Council Regional Capacity Building; FNWJO = Far North West Joint Organisation.

## Appendix 2 – Potential land uses and activities that may cause site contamination

Information provided in this appendix is taken from the Department of Planning and Environment's draft *Contaminated Land Planning Guidelines*. This information relates to activities that may cause contamination, as well as industries and associated chemicals that may cause contamination. The coverage of activities, industries and associated chemicals are largely the same when compared to the corresponding table in the *SEPP55 Guidelines*. Differences are presented in *italics*.

The information in these tables is to be used as a guide by Council in an initial evaluation of the potential for site contamination. However, a conclusive find as to whether land is 'contaminated' or 'not contaminated' can only be determined after a preliminary site investigation or a detailed site investigation.

**Table A2.1:** Activities that may cause site contamination

Acid and alkali plant and formulation	Iron and steel work
Agricultural and horticultural activities	Landfill sites
Airports	Metal treatment
Asbestos production and disposal	Mining and extractive industries
Battery manufacture and recycling	Oil production and storage
Breweries and distilleries	Paint formulation and manufacture
Chemical manufacture and formulation	Pesticide manufacture, formulation and use
<i>Council depots</i>	Power stations
Defence works	Printing shops
Drum reconditioning works	Railway yards
Dry-cleaning	<i>Research institutions (laboratories)</i>
Electrical manufacturing (transformers, capacitors)	Scrap yards
Electroplating and heat treatment premises	Service stations and fuel storage facilities (depots)
Engine works	Sheep and cattle dips
Explosives industry	Smelting and refining
<i>Firefighting training and the use of firefighting foams</i>	Tanning and associated trades
Foundries	<i>Waste processing, storage and treatment</i>
Fuel storage	Water and sewerage treatment plants
Gas works	Wood preservation
<i>Hospitals</i>	

Source: Table 1 in Appendix 1 of the Department of Planning and Environment's draft *Contaminated Land Planning Guidelines*. The use of *italics* indicates an activity not identified in these guidelines but is known to cause site contamination.

**Table A2.2:** Industries and associated chemicals that may cause contamination

Industry or activity	Main chemical group	Associated chemicals
Agricultural and horticultural activities		See – 'chemical manufacture and use' ('fertiliser', 'fungicides', 'herbicides' and 'pesticides').
Airports	Hydrocarbons	Aviation fuels (total petroleum hydrocarbons, kerosene), PFAS
	Metals	Particularly lead, aluminium, magnesium, chromium, chlorinated solvents
Asbestos production and disposal	Asbestos	Asbestos (bonded and fibrous). Be aware of assessments in areas of naturally occurring asbestos. <sup>1</sup>
Battery manufacture and recycling	Acids	Sulfuric acid
	Metals	Lead, manganese, zinc, cadmium, nickel, cobalt, mercury, silver, antimony
Breweries and distilleries	Alcohol	Ethanol, methanol, esters



Industry or activity	Main chemical group	Associated chemicals
Chemical manufacture and use	Acid and alkali	Mercury; chlorine (chloralkali process); sulfuric, hydrochloric and nitric acids; sodium and calcium hydroxides
	Adhesives and resins	Polyvinyl acetate, phenols, formaldehyde, acrylates, phthalates
	Drum reconditioning works	Chemicals, paints, resins, tars, adhesives, oils, fuels, solvents, drum residues
	Dyes	Chromium, titanium, cobalt, sulfur organic compounds, nitrogen organic compounds, sulfates, solvents
	Explosives	Acetone, nitric acid, ammonium nitrate, pentachlorophenol, ammonia, sulfuric acid, nitroglycerine, calcium cyanamide, lead, ethylene glycol, methanol, copper, aluminium, bis(2-ethylhexyl) adipate, dibutyl phthalate, sodium hydroxide, mercury, silver
	Fertiliser	Calcium phosphate, calcium sulfate, nitrates, ammonium sulfate, carbonates, potassium, copper, magnesium, molybdenum, boron, cadmium, arsenic
	Flocculants	Aluminium
	Foam production	Urethane, formaldehyde, styrene
	Fungicides	Carbamates, copper sulfate, copper chloride, sulfur, chromium, zinc
	Herbicides	Ammonium thiocyanate, carbamates, organochlorines, organophosphates, arsenic, mercury, triazines
	Paints	<u>Heavy metals</u> – arsenic, barium, cadmium, chromium, cobalt, lead, manganese, mercury, selenium, zinc, titanium <u>Solvents</u> – toluene oils, either natural (for example, pine oil) or synthetic, hydrocarbon
	Pesticides	<u>Active ingredients</u> – arsenic, lead, organochlorines, organophosphates, sodium tetraborate, carbamates, sulfur, synthetic pyrethroids <u>Solvents</u> – xylenes, kerosene, methyl isobutyl ketone, amyl acetate, a wide range of chlorinated solvents
	Pharmaceutical	<u>Solvents</u> – acetone, cyclohexane, methylene chloride, ethyl acetate, butyl acetate, methanol, ethanol, isopropanol, butanol, pyridine methyl ethyl ketone, methyl isobutyl ketone, tetrahydrofuran
	Photography	Hydroquinone, sodium carbonate, sodium sulfite, potassium bromide, monomethyl para-aminophenol sulfate, ferricyanide, chromium, silver, thiocyanate, ammonium compounds, sulfur compounds, phosphate, phenylene diamine, ethyl alcohol, thiosulfates, formaldehyde
	Plastics	Sulfates, carbonates, cadmium, solvents, acrylates, phthalates, styrene
	Rubber	Carbon black
Soaps, detergents	<u>General</u> – potassium compounds, phosphates, ammonia, alcohols, esters, sodium hydroxide, surfactants (sodium lauryl sulfate), silicate compounds <u>Acids</u> – sulfuric acid and stearic acid <u>Oils</u> – palm, coconut, pine, tea tree	
Solvents	<u>General</u> – ammonia <u>Hydrocarbons</u> – for example, BTEX <u>Chlorinated organics</u> – for example, tetrachloroethene (perchloroethylene) trichloroethene, trichloroethane, dichloroethane, carbon tetrachloride, methylene chloride	
Council depots	Hydrocarbons, PAH, asbestos, heavy metals, pesticides, herbicides, PFAS	
Defence works	Hydrocarbons, PFAS, asbestos See also – ‘chemical manufacture and use’ (‘explosives’), ‘foundries’, ‘engine works’, ‘service stations and fuel storage facilities (depots)’	

Industry or activity	Main chemical group	Associated chemicals
Dry-cleaning	Chlorinated solvents	Tetrachloroethene (perchloroethylene), trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, white spirit (mixed hydrocarbons)
Electrical manufacturing	Solvents, metals	PCBs (transformers and capacitors), solvents, tin, lead, copper, mercury
Engine works	Hydrocarbons, metals, solvents, acids, alkalis, refrigerants	<u>Refrigerants</u> – chlorofluorocarbons, hydro chlorofluorocarbons, hydrofluorocarbons
	Antifreeze	Particularly aluminium, manganese, iron, copper, nickel, chromium, zinc, cadmium, lead, and oxides, chlorides, fluorides and sulfates of these metals
Foundries	Metals	Particularly aluminium, manganese, iron, copper, nickel, chromium zinc, cadmium, lead, and oxides, chlorides, fluorides and sulfates of these metals
<i>Firefighting training and the use of firefighting foam</i>	PFAS	Hydrocarbons, solvents, chlorinated solvents, inorganics
Gas works	Inorganics	Asbestos, ammonia, cyanide, nitrate, sulfide, thiocyanate, aluminium, antimony, arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, selenium, silver, vanadium, zinc
	Organics	BTEX, phenolics, PAHs and coke
<i>Hospitals</i>	Waste	Asbestos, various
	Radioactive material	Diagnostic and therapeutic isotopes
Iron and steel work	Organics, metals	BTEX; phenolics; PAHs; metals and oxides of iron, nickel, copper, chromium, magnesium, manganese and graphite
Landfill sites	Gases, metals, organics	Methane, carbon dioxide, ammonia, sulfides, heavy metals, organic acids, hydrocarbons, asbestos
Marinas	Antifouling paints	Copper, tributyltin <i>See also</i> – ‘engine works’, ‘metal treatments’ (‘electroplating’ metals)
Metal treatment	Electroplating	<u>Metals</u> – nickel, chromium, zinc, aluminium, copper, lead, cadmium, tin <u>Acids</u> – sulfuric, hydrochloric, nitric and phosphoric acids <u>General</u> – sodium hydroxide, 1,1,1-trichloroethane, tetrachloroethylene, toluene, ethylene glycol, cyanide compounds
	Liquid carburising baths	Sodium, cyanide, barium, chloride, potassium chloride, sodium chloride, sodium carbonate, sodium cyanate
Mining and extractive industries		Arsenic, mercury and cyanides. <i>See also</i> – ‘chemical manufacture and use’ (‘explosives’). Aluminium, arsenic, copper, chromium, cobalt, lead, manganese, nickel, selenium, zinc and radio radionuclides. The list of heavy metals should be decided according to the composition of the deposit and known impurities. Consideration should be given to chemicals associated with any mineral processing that also occurred on the mine site. PFAS chemicals associated with firefighting equipment to protect mining infrastructure
Oil production and storage		<i>See</i> – ‘service stations and fuel storage facilities (depots)’
Paint formulation and manufacture		<i>See</i> – ‘chemical manufacture and use’ (‘paints’)
Pesticide manufacture, formulation and use		<i>See</i> – ‘chemical manufacture and use’ (‘pesticides’)

Industry or activity	Main chemical group	Associated chemicals
Power stations		Asbestos, PCBs, fly ash metals, water treatment chemicals
Printing shops		Acids, alkalis, solvents, chromium, trichloroethene, methyl ethyl ketone <i>See also</i> – ‘chemical manufacture and use’ (‘photography’)
Railway yards		Hydrocarbons, asbestos, arsenic, phenolics (creosote), heavy metals, nitrates, ammonia
<i>Research Institutions (laboratories)</i>		Various, depending on the nature of work being carried out. A case-specific evaluation is required.
Scrap yards		Hydrocarbons, metals, solvents, asbestos
Service stations and fuel storage facilities (depots)	Petroleum hydrocarbons, PAHs and lead	Aromatic hydrocarbons, BTEX, naphthalene, PAHs, phenols, lead
Sheep and cattle dips		Arsenic, organochlorines, organophosphates, carbamates, synthetic pyrethroids
Smelting and refining		Metals, fluorides, chlorides and oxides of copper, tin, silver, selenium lead, and aluminium
Tanning and associated trades	Various	<u>Metals</u> – chromium, manganese, aluminium <u>General</u> – ammonium sulfate, ammonia, ammonium nitrate, arsenic phenolics, formaldehyde, sulfide, tannic acid
Water and sewerage treatment plants	Metals and chemicals used in water treatment and wastewater and biosolids treatment	Aluminium, arsenic, cadmium, chromium, cobalt, lead, nickel, fluoride, lime, zinc
<i>Waste processing, storage and treatment</i>	Fire retardants, plastics	Polybrominated diphenyl ethers, PFAS, plasticisers
Wood preservation	Metals	Chromium, copper, arsenic, naphthalene, ammonia, pentachlorophenol, dibenzofuran, anthracene, biphenyl, ammonium sulfate, quinoline, boron, creosote, organochlorine pesticides

Note: PFAS = per- and polyfluoroalkyl substances; BTEX = benzene, toluene, ethylbenzene, xylene; PAH = polycyclic aromatic hydrocarbons; PCB = polychlorinated biphenyl.

Source: Table 2 in Appendix 1 of the Department of Planning and Environment’s draft *Contaminated Land Planning Guidelines*. The use of *italics* indicates an activity not identified in these guidelines but is known to cause site contamination.

<sup>1</sup> <https://trade.maps.arcgis.com/apps/PublicInformation/index.html?appid=87434b6ec7dd4aba8cb664d8e646fb06>

### Appendix 3 – Artefacts generated in the process of managing contaminated land

Table A3.1 lists artefacts either prepared by or for Council in a process to consider and assess site contamination. These artefacts should be retained in Council's electronic document and records management system and also linked to the respective record in Council's contaminated land site register.

These artefacts can also be provided with section 10.7 planning certificates under the *EP&A Act*.

**Table A3.1:** Artefacts generated in a process to assess site contamination

Process	Artefact	Prepared by	Description
Initial evaluation	Checklist	Council	To guide Council's consideration of the potential for site contamination.
Preliminary site investigation	Report on the preliminary site investigation	Consultant	Reports the possibility of potential contamination based on historical land use. It includes the development of the conceptual site model.
	Checklist	Council	Confirms whether the requirements of the investigation have been met.
Detailed site investigation	Report on the detailed site investigation	Consultant	Defines the extent and degree of contamination and assesses potential risks posed to health and the environment by contaminants. The investigation is also used to obtain sufficient information for the development of a remediation action plan if required.
	Checklist	Council	Confirms whether the requirements of the investigation have been met.
Remediation	Remediation action plan	Consultant	A plan that sets out remediation objectives and documents the proposed remediation process.
	Validation report	Consultant	Reports on whether the objectives for remediation and any conditions of development consent have been achieved.
Site audit	Site audit report	Consultant	A summary of information reviewed by the accredited site auditor.
	Site audit statement	Consultant	An outline of the conclusions of a site audit.
Environmental management plan		Consultant	Outlines the mitigation measures and/or monitoring requirements where the full clean-up of a site is not feasible or where onsite containment of contamination has been proposed.

Table A3.2 lists key artefacts generated in a process to regulate contaminated land and underground petroleum storage systems.

These artefacts should be retained in Council's electronic document and records management system, and also linked to the respective record in Council's contaminated land site register.

These artefacts may also be included on section 10.7 planning certificates under the *EP&A Act*.

**Table A3.2:** Artefacts generated in a process to regulate contaminated land and underground petroleum storage systems

Process	Artefact	Prepared by
EPA notices and orders under the <i>CLM Act</i>	Preliminary investigation order	EPA
	Significant contaminated land notice	EPA
	Management order	EPA
	Voluntary management proposal	Landowner, or person managing an activity that caused the site contamination
	Environmental management plan	EPA/landowner
	Revocation of orders under the <i>CLM Act</i>	EPA
Pollution prevention	Waste classification report	Person responsible for remediation

Process	Artefact	Prepared by
	UPSS inspection form	Council
	Contaminated land investigation form	Council
	<i>POEO Act</i> section 91 clean-up notice	Council/EPA
	<i>POEO Act</i> section 96 prevention notice	Council/EPA
	Leak notification under the <i>POEO Act</i> Part 5.7	Council/UPSS operator
	Fuel system operation plan	Council/UPSS operator
	Loss monitoring reports	Council/UPSS operator
	Leak detection reports	Council/UPSS operator
Decommissioning of a UPSS (category 2 remediation works)	Development application	
	Notifications (leak notification)	UPSS owner
	Validation report	Consultant
Information management	<i>POEO Act</i> section 192 and 193 requests for information	Council
	Survey of UPSS operators	Council
Compliance	Penalty infringement notices	Council

Note: UPSS = underground petroleum storage system.

**Appendix 4 – Annotations for section 10.7 planning certificates on contaminated land**

Council is required to include contaminated land information on section 10.7 planning certificates. This requirement is anchored in:

- the *EP&A Act*
  - section 10.7(2), as elaborated by the *Environmental Planning and Assessment Regulation 2021*
  - section 10.7(5), in relation to advice on other matters affecting the land
  - section 10.7(6), in relation to furnishing of contaminated land information in good faith with Schedule 6 of the *EP&A Act*
- section 10(1) in schedule 2 of the *Environmental Planning and Assessment Regulation 2021* in relation to whether an adopted Council policy restricts the development of land because of site contamination
- the *CLM Act*
  - section 10(1)(a)–(b), in relation to preliminary investigation orders issued by the EPA for the land
  - section 44, in relation to the EPA's repeal or revoking of orders and notices issued under section 10 of the *CLM Act*
  - section 59(2), in relation to matters that are to be included in section 10.7 planning certificates.

The information required to be included on a planning certificate is outlined in Table A4.1. Council must note that information prescribed under section 59(2) of the *CLM Act* pertains to land that 'is' subject – not 'was' subject – to the prescribed regulatory processes. However, Council can elect to include this historical information on planning certificates in accordance with its *Contaminated Land Policy*.

**Table A4.1:** Contaminated land information required on section 10.7 planning certificates

Planning certificate	Contaminated land information
Section 10.7(2)	<p>A statement that Council has adopted a policy to restrict the development of land because of the actual or potential likelihood of that land being contaminated.</p> <p>See Table A4.2 for annotations that Council can use.</p> <p>At the date of issue of the planning certificate, a statement that the land to which the planning certificate relates is:</p> <ul style="list-style-type: none"> <li>• significantly contaminated land within the meaning of the <i>CLM Act</i>, including whether only part or all of the land is significantly contaminated</li> <li>• subject to a management order under the <i>CLM Act</i></li> <li>• the subject of an approved voluntary management proposal under the <i>CLM Act</i></li> <li>• subject to an ongoing maintenance order under the <i>CLM Act</i></li> <li>• the subject of a site audit statement under the <i>CLM Act</i>.</li> </ul> <p>Council may elect to include information on the potential of site contamination because the historical use of that land is known or reasonably suspected by Council to be an activity identified in Appendix 2.</p> <p>See Table A4.2 for annotations that Council can use.</p>
Section 10.7(5)	<p>Information provided on section 10.7(2) planning certificates and additional information Council may elect to disclose pertaining to the actual or potential contamination of the land.</p> <p>See Table A4.2 for annotations that Council can use.</p>

**Table A4.2:** Annotations for additional information on section 10.7 planning certificates for land that is or may be contaminated

Situation	Annotation
<p>Council has identified that the land:</p> <ul style="list-style-type: none"> <li>• has a previous land-use history that could have involved the use of contaminants on the site (for example, the land may have been used for an activity listed in Appendix 2)</li> <li>• is known to be contaminated but has not been remediated.</li> </ul>	<p>'Council has adopted by resolution a policy on contaminated land that may restrict the development of the land.</p> <p>This policy is implemented when zoning or land-use changes are proposed on lands that have previously been used for certain purposes.</p> <p>Consideration of Council's adopted policy and the application of provisions under relevant State legislation is warranted.'</p>

Situation	Annotation
<p>Council has identified that the land is known to contain contaminants but that it has been remediated for a particular use or range of uses, and some contamination remains on the site (for example, encapsulated).</p>	<p>'Council has adopted by resolution a policy on contaminated land that may restrict the development of the land. This policy is implemented when zoning or land-use changes are proposed on lands that are considered to be contaminated or on lands that have been remediated for a specific use. Consideration of Council's adopted policy and the application of provisions under relevant State legislation is warranted.'</p>
<p>Council records do not contain a clear site history without significant gaps in information, and Council cannot determine whether the land is contaminated and, therefore, the extent to which Council's policy should apply.</p>	<p>'Council has adopted by resolution a policy on contaminated land that may restrict the development of the land. This policy is implemented when zoning or land-use changes are proposed on lands that have previously been used for certain purposes. Council records do not have sufficient information about the previous use of this land to determine whether the land is contaminated. Consideration of Council's adopted policy and the application or provisions under relevant state legislation is warranted.'</p>

Note: The information in this table applies where Council has adopted a policy to restrict the development of land because of the actual or potential likelihood of that land being contaminated.

### Appendix 5 – Site management provisions for remediation works

Council can impose site management provisions for proposed remediation works. Council will request that these provisions be included in a remediation action plan that is to be lodged to Council prior to commencing these works. Council will require remediation works to be carried out in accordance with the remediation action plan.

The site management provisions listed in Table A5.1 are taken from the *Resilience and Hazards SEPP* and amended to reflect best practice site management, as included in the draft *Contaminated Land Planning Guidelines* and in other Council contaminated land policies.

Remediation work must comply with the requirements of the:

- *CLM Act*
- *Contaminated Land Planning Guidelines*
- *Resilience and Hazards SEPP*
- *POEO Act*.

Council will also require the validation report to be lodged with Council within 60 days of the completion of remediation works and, where applicable, prior to the issuance of a subdivision or construction certificate.

**Table A5.1:** Site management provisions to be included in a remediation action plan

Parameter	Provision to be included in a remediation action plan
Air quality	<p>Emissions of dust, odour and fumes from a remediation site are to be appropriately controlled and in accordance with relevant regulations and guidelines made or approved by the EPA.</p> <p>These may include but are not limited to:</p> <ul style="list-style-type: none"> <li>• ensuring no onsite burning of material</li> <li>• maintaining equipment in a functional manner to minimise exhaust emissions</li> <li>• covering vehicles transporting soil (including contaminated soil) and/or infill onsite or offsite</li> <li>• establishing dust suppression and control measures to minimise windborne emissions of dust, having regard to site-specific wind conditions</li> <li>• monitoring and managing odours, including the use of a hydrocarbon mitigating agent on the impacted areas and materials</li> <li>• covering stockpiles of contaminated soil that remain onsite for more than 24 hours (see 'stockpiles' for additional provisions)</li> <li>• regularly monitoring air quality throughout remediation work.</li> </ul>
Bunding	<p>Any areas used for remediation or the stockpiling of construction materials or contaminated soils shall be controlled to contain surface water run-off and run-on and be designed and constructed so as to prevent the leaching of contaminants into the subsurface or groundwater.</p> <p>Locate stockpiles and construction materials away from drainage lines and provide bunding of disturbed areas and excavations to prevent run-off to waterways or stormwater where necessary.</p> <p>All surface water discharges from the bunded areas to Council's stormwater system shall not contain detectable levels of the contaminants of concern and must comply with the relevant EPA and ANZECC standards for water quality.</p> <p>Any discharge must satisfy the provisions of the <i>POEO Act</i>.</p>



Parameter	Provision to be included in a remediation action plan
Capping or containment of contaminated soil	<p>Capping of contaminated soil should occur only after alternative remediation works have been investigated, particularly in urban zoning or areas identified as future growth in Council's local environment plan or development control plan.</p> <p>Contaminated soil is only permitted to be capped if it does not prevent any permitted use of the land and if it can be demonstrated that there will be no ongoing impacts on human or environmental health.</p> <p>Capping of contaminated soil that exceeds zoning permissible levels is classified as category 1 remediation work and may only be permitted with development consent.</p> <p>The soil investigation levels for urban redevelopment in NSW are contained in <i>National Environment Protection (Assessment of Site Contamination) Measure 1999</i> (as amended).</p> <p>Where the proposed remediation involves the onsite containment of contaminated material, the need for a continuing monitoring program should be assessed by both the 's consultants and Council. To ensure that future owners of the site are aware of the contaminated material and any ongoing maintenance and monitoring, Council may impose a consent condition on any subsequent development application for the subject site, requiring a covenant to be registered on the title of the land that gives notice of the existence of onsite containment of the contaminated soil. The covenant may also bind the owners or any future owners to the responsibility of ongoing monitoring and maintenance (as described in an environmental management plan) and any future remediation works required.</p> <p>Records of any maintenance undertaken on the site shall be kept for future reference and provided to Council annually.</p> <p>The cost of preparing the covenant is borne by the applicant.</p>
Consultants	<p>Ensure consultants (or contractors) undertaking the remediation works have the required competencies and qualifications.</p> <p>Remediation work requiring validation by a site auditor (that is, a statutory site audit) must use a site auditor accredited under Part 4 of the <i>CLM Act</i>.</p> <p>Validation of remediation work that is not a statutory site audit is to be undertaken by a consultant with the necessary competencies and qualifications.</p>
Consultation	<p>Written notification to adjoining owners and occupants is to occur at least two days prior to commencing remediation works.</p> <p>This notification is to include:</p> <ul style="list-style-type: none"> <li>• the estimated length of remediation work</li> <li>• the hours of remediation work</li> <li>• the contact details of the site manager.</li> </ul> <p>Signage visible from the road and adjacent to site access is to display the site manager and remediation contractor contact details for the duration of the works.</p>
Decommissioning of underground petroleum storage systems	<p>The removal of all UPSSs is to be undertaken in accordance with the:</p> <ul style="list-style-type: none"> <li>• <i>UPSS Regulations</i></li> <li>• SafeWork NSW requirements</li> <li>• <i>Australian Standard AS 4976-2008: The Removal and Disposal of Underground Petroleum Storage Tanks</i>.</li> </ul> <p>Decommissioning of an underground petroleum storage tank or system must be undertaken by a duly qualified person who holds a demolition licence from SafeWork NSW and is competent and experienced in the task.</p> <p>Following the removal of an underground petroleum storage tank or system, the site area, which includes bowser lines and fuel lines, shall be assessed, remediated if need be and validated in accordance with the requirements above and with guidelines made or approved by the NSW EPA.</p> <p>All documents must be submitted to Council, including (but not limited to) a validation report (or tank pit validation) prepared in accordance with relevant guidelines made or approved by the EPA.</p>

Parameter	Provision to be included in a remediation action plan
Erosion and sediment control	<p>An ESCP shall be prepared and submitted to Council for approval prior to commencing remediation works.</p> <p>The ESCP shall be developed with regard to the requirements detailed in Council's <i>Soil and Water Management Policy</i> and Council's <i>Engineering Guidelines and Technical Specifications</i> and must include leachate collection and disposal.</p> <p>Sediment control structures shall be provided to prevent sediment from entering drainage systems, particularly where surfaces are exposed or where soil is stockpiled.</p> <p>All erosion and sediment control measures must be maintained in a functional condition throughout the remediation works.</p> <p>Vehicles are to be cleaned prior to leaving the site.</p> <p><i>Also see – 'soil and water management' for related provisions.</i></p>
Hazardous material	<p>Hazardous and industrial wastes arising from the remediation work shall be removed and disposed of in accordance with the requirements of the NSW EPA and SafeWork NSW, together with the:</p> <ul style="list-style-type: none"> <li>• <i>Workplace Health and Safety Act 2011</i></li> <li>• <i>Workplace Health and Safety Regulation 2017</i></li> <li>• <i>CLM Act</i> and subordinate regulations</li> <li>• <i>Environmentally Hazardous Chemicals Act 1985</i> and subordinate regulations.</li> </ul> <p>Under the <i>POEO Act</i>, the transportation of Schedule 1 hazardous waste is a scheduled activity and thereby required by the EPA to be carried out by a transporter licensed by the NSW EPA.</p> <p><i>Also see – 'waste' for additional related site management provisions.</i></p>
Health and safety	<p>All works associated with remediation works must comply with workplace health and safety legislation and other applicable SafeWork NSW requirements.</p> <p>This requires:</p> <ul style="list-style-type: none"> <li>• the preparation of a health and safety plan</li> <li>• site fencing, public safety warning signs and security surveillance (where applicable) to be established for the remediation site.</li> </ul>
Hours of work	<p>All remediation work (including the delivery and removal of materials or equipment) shall be limited to the following hours of work (unless through an alternative mutual agreement in writing with Council):</p> <ul style="list-style-type: none"> <li>• Monday to Saturday – 7.00 am to 5.00 pm</li> <li>• Sunday and Public Holidays – no remediation work is permitted</li> </ul> <p>Note: The hours of work listed above are in accordance with the <i>Exempt and Complying Development Codes SEPP</i>.</p>

Parameter	Provision to be included in a remediation action plan
Importation of infill	<p>All fill imported to the site shall be validated as virgin excavated natural material as defined in the <i>POEO Act</i> to ensure that it is:</p> <ul style="list-style-type: none"> <li>• suitable for the proposed land use from a contamination perspective</li> <li>• compatible with the existing soil characteristics for site drainage purposes.</li> </ul> <p>Council may, in certain instances, require the details of the appropriate validation of imported fill material to be submitted with any application for the future development of the site. Hence, all fill imported onto a site is to be validated by one or both of the following methods during remediation works:</p> <ul style="list-style-type: none"> <li>• Imported fill should be accompanied by documentation from the supplier that certifies that the material is not contaminated, based upon analyses of the material or the known past history of the site where the material is obtained.</li> <li>• Sampling and analysis of the fill material should be conducted in accordance with the NSW EPA <i>Sampling Design Guidelines</i> to ensure that the material is not contaminated.</li> </ul> <p>Fill should be imported and exported in accordance with the provision of a virgin excavated natural material exemption or an NSW resource recovery order and exemption.</p> <p>Fill is permitted for use provided that it:</p> <ul style="list-style-type: none"> <li>• is not itself contaminated, particularly with waste material (including asbestos)</li> <li>• is weed and pest free</li> <li>• is compatible with the existing soil characteristics so as not to adversely affect site drainage.</li> </ul>
Landscaping and rehabilitation	<p>The remediation work site must be stabilised to ensure that no offsite impacts occur on the site after completion. This requires:</p> <ul style="list-style-type: none"> <li>• the preparation of a landscaping plan</li> <li>• landscaping of the site in accordance with the landscape plan</li> <li>• the progressive stabilisation and revegetation of disturbed areas in accordance with the landscape plan.</li> </ul> <p>There shall be no removal or disturbance to trees or native understorey without prior written consent obtained through Council's tree preservation order process.</p> <p>All trees that will be retained on the site must be suitably protected from damage during remediation works. This includes the provision of protective fencing to protect the root zone of these trees. The fencing must extend, at a minimum, to the drip line of each tree.</p> <p>No stockpiling, storage, excavation, vehicle parking or vehicle movement is to occur within the root zone protection area. Tree protection fencing must remain in place until the end of remediation works.</p> <p>All exposed areas shall be progressively stabilised and revegetated upon the completion of remediation works.</p>
Noise and vibrations	<p>Any noise and vibrations from the site shall be limited by complying with the NSW EPA's <i>Noise Policy for Industry (2017)</i> and the <i>Interim Construction Noise Guideline</i>.</p> <p>All equipment and machinery shall be operated in an efficient manner to minimise noise from the site on adjoining properties, including (when necessary) ensuring that plant equipment noise is suppressed.</p> <p>The use of any plant or machinery shall not, on any premises, cause vibrations in excess of the relevant NSW EPA guidelines and Australian Standards.</p>
Rodents and vermin	<p>Rodents and vermin are to be adequately controlled and disposed of in an environmentally appropriate manner.</p>

Parameter	Provision to be included in a remediation action plan
Site access and vehicle use	<p>Vehicle access to the site shall be designated to prevent the tracking of sediment onto public roadways and footpaths. Soil, earth, mud or similar material must be removed from the roadway by sweeping, shovelling or a means other than washing on a daily basis or as required by an appropriate authority. Soil residue from vehicle wheels shall be collected and disposed of in an appropriate manner.</p> <p>All vehicles are to:</p> <ul style="list-style-type: none"> <li>• enter and exit the site in a forward motion</li> <li>• comply with all road rules, including vehicle weight limits</li> <li>• minimise the use of local roads by using state roads where available</li> <li>• be cleaned pre-work and post-work to prevent the movement of weed seeds</li> <li>• have all loads securely covered or sealed to prevent the release of any dust, fumes, soil or liquid emissions during transportation</li> <li>• conduct deliveries of soil, materials, equipment or machinery during the hours of remediation work (see 'hours of work').</li> </ul>
Site security and lighting	<p>The site shall be secured to ensure against all unauthorised access by using appropriate fencing. It is recommended that security lighting be used to deter unauthorised access. If security lighting is used, it shall be shielded to protect the amenity of adjoining landowners.</p>
Soil and water management	<p>All remediation works shall be conducted in accordance with a site-specific soil and water management plan prepared in accordance with the requirements of LANDCOM's <i>Managing Urban Stormwater: Soils and Construction</i>.<sup>1</sup></p> <p>The plan should aim to segregate and manage both contaminated and non-contaminated areas in a manner that minimises the potential dispersal of contaminants and any cross-contamination of contaminated and non-contaminated materials. In some cases, standard erosion and sediment control requirements will be inadequate for managing contaminated soils and water.</p> <p>Where remediation work involves the excavation of soil, the person responsible for the remediation work shall consult Council's flood mapping. Where works are proposed to be undertaken within an area identified by Council as having the potential to be impacted by flood waters (that is, inundation), such works shall be undertaken in alignment with the responsive actions for such potential site inundation as described in the site-specific soil and water management plan.</p> <p>A copy of the remediation action plan and the soil and water management plan shall be kept onsite and made available to Council officers on request.</p> <p>Soil and water management measures for remediation work in relation to stockpiles, site access, excavation pump-out, landscaping and rehabilitation, and bunding are discussed elsewhere in this table.</p> <p>See – 'erosion and sediment control' for related provisions.</p>
Stockpiles	<p>No stockpiles of soil or other materials shall be placed on public land (for example, footpaths, reserves or nature strips).</p> <p>All stockpiles shall be placed away from drainage lines, gutters or stormwater pits or inlets. All stockpiles of soil or other material shall be maintained to prevent dust, odours or seepage. All stockpiles of contaminated soils shall be secured to prevent dust, odour or seepage if being stored for more than 24 hours.</p> <p>Stockpiling of contaminated materials requires special measures to manage the generation of leachate, run-off, vapours, odours and airborne particulates.</p> <p>Store any temporary stockpiles of contaminated soil in a secure area.</p>
Unexpected finds during remediation works	<p>Council is required to be notified of any new information that comes to light during remediation works that has the potential to alter previous conclusions regarding site contamination.</p>

Parameter	Provision to be included in a remediation action plan
Validation report	<p>The validation report is to be prepared in accordance with relevant guidelines made by the NSW EPA.</p> <p>A copy of the validation report is to be provided to Council within 60 days of completing the remediation works and prior to commencing development works at the site.</p> <p>The validation report is to:</p> <ul style="list-style-type: none"> <li>• contain a copy of any reports or records taken during remediation or following the completion of validation works</li> <li>• contain a validation statement detailing that all works have been undertaken and completed satisfactorily and in accordance with relevant guidelines made or approved by the EPA</li> <li>• demonstrate that the objectives of the remediation action plan have been achieved, any conditions of development consent have been complied with and whether any further remediation work or restrictions on land use are required</li> <li>• provide evidence confirming that all NSW EPA, SafeWork NSW and other regulatory authorities' license conditions, approvals and/or regulatory requirements have been met, including in respect of managing contaminated soil and other waste material generated by the remediation works</li> <li>• identify the need for continued monitoring in situations where clean-up is not feasible or onsite containment has occurred</li> <li>• state the suitability of the site for its current or proposed use.</li> </ul> <p>Successful validation is the statistical confirmation that the remediated site complies with the clean-up criteria set for the site.</p> <p>The full cost of the validation is borne by the applicant.</p>
Vertical mixing (on agricultural land)	<p>The <i>Guidelines for the Vertical Mixing of Soil on Former Broad-Acre Agricultural Land</i> relates to the remediation of large agriculture properties with low-level but broad-spread contamination.</p> <p>The relevant NSW EPA guidelines are not designed or suitable for use in the remediation of contamination, including lead contamination, on small allotments. Therefore, Council will not support remediation action plans relying on this methodology, and an alternative remediation methodology shall be used for small allotments.</p>
Waste	<p>If contaminated soil and other waste material generated by the remediation works are to be treated and managed onsite, the treatment and management of each is to be in accordance with relevant guidelines made or approved by the EPA.</p> <p>If contaminated soil and other waste material generated by the remediation works are to be removed from the site, then this must be in accordance with the <i>POEO Act</i> and its waste regulation. This includes:</p> <ul style="list-style-type: none"> <li>• the preparation of a waste management plan</li> <li>• that the waste classification process complies with the Protection of the Environment Operations (Waste) Regulation 2014 and is undertaken by an appropriately qualified consultant</li> <li>• record-keeping for waste going to a licensed landfill or a resource recovery facility regarding <ul style="list-style-type: none"> <li>○ how the waste is to be treated and transported</li> <li>○ evidence that the landfill is licensed to accept this waste</li> </ul> </li> <li>• the requirement that transport of the waste to or from a site must be by a licensed waste transport contractor.</li> </ul> <p>Any enquiries associated with the offsite disposal of waste from a contaminated site should be referred to the EPA helpline (phone 131 555).</p> <p>If contaminated soil or other waste generated by the remediation works is to be transported to Council's landfill or waste management facility:</p> <ul style="list-style-type: none"> <li>• Council's Waste Management Facility only accepts waste in accordance with its Environment Protection Licence (number XXXX).</li> <li>• Section L5 Waste requires that waste be general solid waste. Analysis of the contaminated soil is to be undertaken to verify that the waste is general solid waste.</li> <li>• All documentation is to be provided to Council's Waste Management Team and approved prior to the waste entering the landfill.</li> </ul> <p>See – 'hazardous material' for related site management provisions.</p>

Parameter	Provision to be included in a remediation action plan
Water quality: dewatering – excavation and groundwater pump-out	<p>Only clean and unpolluted waters are to be discharged to Council's stormwater system or any watercourse. Any discharge must satisfy the provisions of the <i>POEO Act</i>.</p> <p>Prior to any dewatering commencing, a dewatering management plan shall be submitted to Council.</p> <p>All pump-out water must be analysed for concentrations of suspended solids, pH and any contaminants of concern. The analytical results must comply with the relevant NSW EPA and ANZECC standards for the quality of water discharged to stormwater. If necessary, the water shall be treated prior to discharge.</p> <p>If the water quality does not comply with the identified criteria, then it cannot be discharged to stormwater. Alternative arrangements for the disposal of water shall be provided, if necessary (for example, offsite disposal by a licensed liquid waste transporter for treatment or disposal at an appropriate waste treatment or processing facility).</p> <p>Dewatering may require a licence from the NSW Office of Water.</p>
Water quality: groundwater	<p>Any contamination assessment, carried out in accordance with the requirements of the relevant guidelines made or approved by NSW EPA in accordance with the <i>CLM Act</i>, shall address the potential for contamination of groundwater at the site.</p> <p>Any work below the water table may require a licence from the NSW Office of Water. Such works include bores for water supply, testing and monitoring, and any dewatering or extraction.</p> <p>If the groundwater at the site is found to be contaminated, then Council, the NSW Office of Water and the NSW EPA are to be notified</p>

Note: ANZECC = Australian and New Zealand Environment and Conservation Council; UPSS = underground petroleum storage system; ESCP = erosion and sediment control plan.

<sup>1</sup> <https://www.environment.nsw.gov.au/research-and-publications/publications-search/managing-urban-stormwater-soils-and-construction-volume-1-4th-edition>