



# MANAGEMENT OF CONTAMINATED LANDS POLICY P2.0054.2

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# MANAGEMENT OF CONTAMINATED LANDS

**DIVISION:** STATUTORY PLANNING

**BRANCH:** PLANNING AND ENVIRONMENT

**CATEGORY:** 2

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<b>1.0 INTRODUCTION .....</b>	<b>2</b>
<b>2.0 PURPOSE OF THE POLICY .....</b>	<b>2</b>
Figure 1: Decision Process for Landuse Changes .....	3
<b>3.0 OBJECTIVES OF THE POLICY .....</b>	<b>3</b>
<b>4.0 APPLICATION OF POLICY .....</b>	<b>4</b>
4.1 LAND TO WHICH THIS POLICY APPLIES .....	4
<b>5.0 DEFINITIONS .....</b>	<b>5</b>
<b>6.0 RESTRICTIONS ON LAND USE.....</b>	<b>8</b>
<b>7.0 PLANNING PROCESS FOR DEVELOPMENT APPLICATIONS (DA), REZONINGS (IE, LOCAL ENVIRONMENTAL PLANS, LEP) AND DEVELOPMENT CONTROL PLANS (DCP).....</b>	<b>8</b>
7.1 INITIAL EVALUATION .....	8
7.1.1 Information to be provided by the proponent.....	9
Figure 2: Options Available in the Rezoning Process where the Specific End Use is known.....	12
Figure 3: Options Available in the Development Application Process.....	13
7.2 THE SITE INVESTIGATION PROCESS.....	14
7.2.1 Stage 1-Preliminary Investigation.....	14
7.2.2 Stage 2-Detailed Investigation.....	15
7.2.3 Stage 3-Remedial Action Plan.....	16
7.2.4 Stage 4 - Validation and Monitoring.....	16
<b>8.0 SITE AUDITS.....</b>	<b>18</b>
8.1 CONDITIONAL SITE AUDIT STATEMENTS .....	18
<b>9.0 REMEDIATION WORK .....</b>	<b>16</b>
9.1 CATEGORY 1 REMEDIATION WORK .....	20
9.1.1 Notice of completion .....	21
Figure 4: Process for Category 1 Remediation Work.....	19
9.2 REMEDIATION SITES.....	23
9.3 WHEN IS A REMEDIAL ACTION PLAN REQUIRED? .....	23
9.4 WHAT ARE THE STANDARDS FOR REMEDIATION WORK?.....	23
<b>10.0 INFORMATION RECORDING.....</b>	<b>23</b>
10.1 PROPERTY INFORMATION SYSTEM .....	23
10.2 SECTION 149 CERTIFICATES .....	23
10.2.1 Additional matters:- .....	25
<b>11.0 LANDFORMING OPERATIONS .....</b>	<b>25</b>
<b>12.0 PREVENTING CONTAMINATION AND HARM.....</b>	<b>26</b>

**REFERENCES ..... 27**  
**APPENDIX 1..... 28**  
**APPENDIX 2..... 33**  
**APPENDIX 3..... 34**  
**APPENDIX 4..... 34**

## 1.0 Introduction

Land contamination is most often the result of past uses. It can arise from activities that took place on or adjacent to a site and be the result of improper chemical handling or disposal practices, or accidental spillage or leakage of chemicals during manufacturing or storage. Activities not directly related to the site may also cause contamination; for example, from diffuse sources such as polluted groundwater migrating under a site or dust settling out from industrial emissions.

In some situations, the use of land can result in its contamination by chemicals, posing a risk to human health or the environment and precluding later development of a site for particular uses. Council recognises that the prevention and management of contamination is of paramount importance to ensure that changes to land use will not increase the risk to health or the environment. The purpose of this policy is to provide guidelines to assist in the early identification of potential contamination and to enable management of land contamination through the planning and development control process.

The New South Wales Government has recognised that the management of contaminated land is a major issue for public agencies, industry and the community and has released a package of reforms to provide a comprehensive, consistent and whole-of-government approach to contamination and remediation. This included:

- The *Contaminated Land Management Act 1997*.
- State Environmental Planning Policy No. 55—Remediation of Land commenced 28 August 1998.
- *Managing Land Contamination: Planning Guidelines, August 1998*.

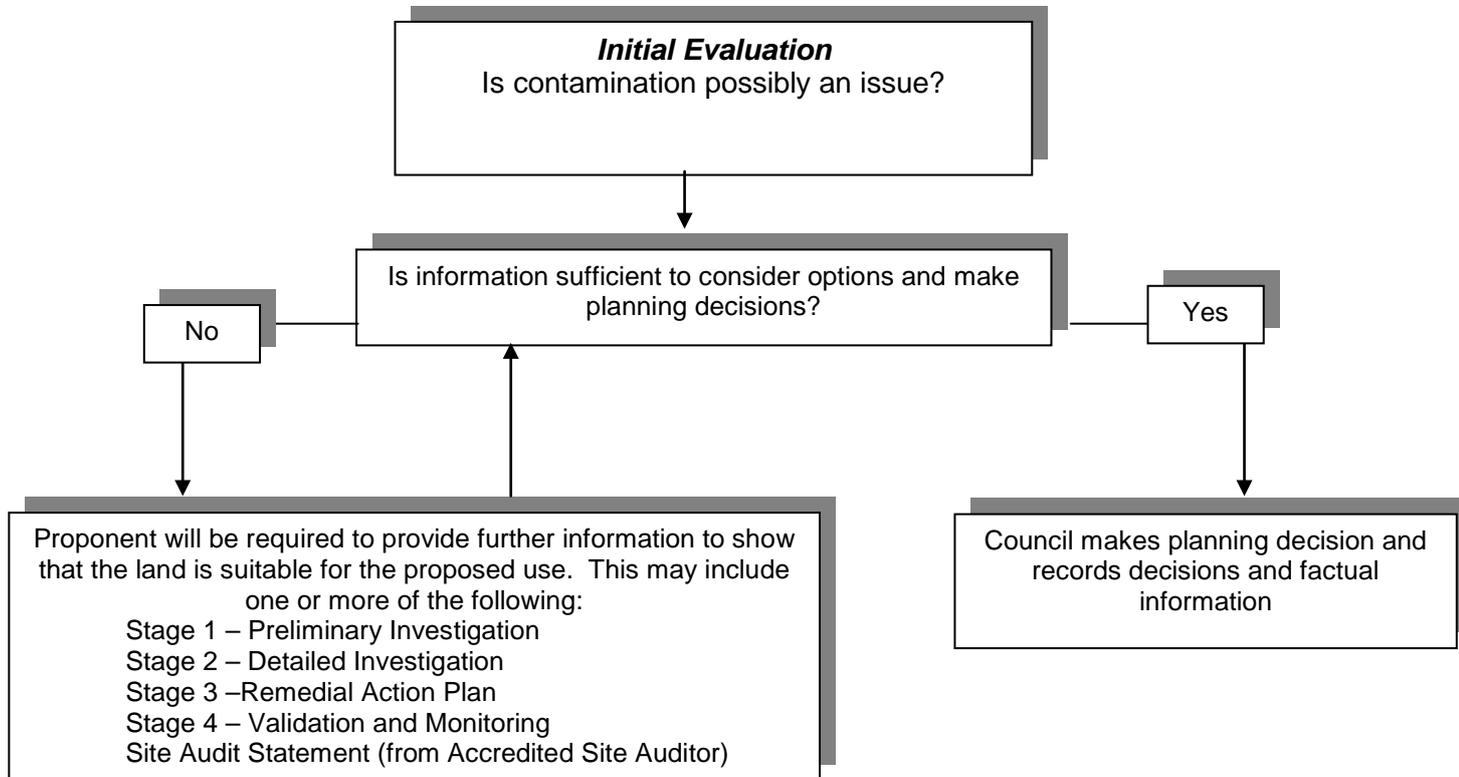
## 2.0 Purpose of the Policy

This policy sets out a framework for the management of contaminated land within the Camden Local Government Area, and provides practical advice for members of the community as well as professionals involved in the planning and development process within the Camden local government area

The policy forms the basis for the best practice management of contaminated land within the Camden Local Government Area. The policy provides information with respect to the early identification of contaminated sites, the processing of rezoning and development applications, the recording and use of information and the provision of information to the community.

For the purpose of this policy, the process for making a decision on a change of land use is as shown in figure 1.

**Figure 1: Decision Process for Land Use Changes**



(Source: DUAP, 1998)

### 3.0 Objectives of the Policy

The aim of this policy is to establish a local planning framework which ensures that Council's adopted approach to the management of contaminated land is a **precautionary based approach**. This policy adopts the Planning Guidelines for Managing Land Contamination, 1998 and SEPP 55-Remediation of Land prepared by the Department of Urban Affairs and Planning and the Environment Protection Authority. Further, the policy aims to integrate the issue of land contamination management into the planning and development control process to:

- enable the identification, evaluation and management of potential contamination at an early stage in the planning and development control process;
- ensure that changes of land use will not increase the risk to health or the environment nor impact on the safety of existing or new structures;
- ensure remediation of contaminated sites prior to redevelopment, by the adoption of practical, socially acceptable and cost effective management strategies which protect public health and the environment;

- avoid inappropriate restrictions on land use;
- provide a framework for the recording of information to support decision making and to inform the community;
- guide staff to exercise statutory planning functions with a reasonable standard of care and to act in good faith.

## **4.0 Application of policy**

This policy applies to:

- a) the preparation or making of an environmental planning instrument
- b) the preparation or making of a development control plan
- c) the processing and determination of a development application
- d) the modification of a development consent
- e) the furnishing of advice in a planning certificate under section 149 of the Environmental Planning and Assessment Act
- f) anything incidental or ancillary to the carrying out of any function listed above.

The policy provides guidelines and recommends strategies for each of the planning functions listed above. Council requirements are adopted on the base line standards and they may only be varied where Council is satisfied that the objectives are not compromised and development of land has regard to its individual capability.

### **4.1 Land to Which This Policy Applies**

**This policy applies to all land within the Camden Local Government Area.**

## 5.0 Definitions

<b>agriculture</b>	means, cotton and rice cultivation, viticulture, turf farming, animal boarding or training establishments, aquaculture or farm forestry (but does not include extensive agriculture, horticulture and intensive livestock agriculture).
<b>contaminated land</b>	land in, on or under which any substance is present at a concentration above that naturally present in, on or under the land and that poses, or is likely to pose, an immediate or long-term risk to human health or the environment
<b>contamination</b>	concentration of substances above that naturally present that poses, or is likely to pose, an immediate or long-term risk to human health or the environment
<b>detailed investigation</b>	an investigation to define the extent and degree of contamination, to assess potential risk posed by contaminants to health and the environment, and to obtain sufficient information for the development of a remedial action plan if required.
<b>extensive agriculture</b>	means: (a) the production of crops or fodder (including irrigated pasture and fodder crops), or (b) the grazing of livestock, or (c) bee keeping, for commercial purposes, but does not include any of the following (d) cotton and rice cultivation, (e) intensive livestock agriculture, (f) aquaculture, (g) turf farming, (h) animal boarding or training establishments, (i) farm forestry, (j) horticulture or viticulture.
<b>horticulture</b>	means the cultivation of fruits, vegetables, mushrooms, nuts, cut flowers and foliage and nursery products for commercial purposes, but does not include retail sales or viticulture.
<b>independent review</b>	an evaluation by an independent expert required by Council of any information submitted by a proponent, conducted at the proponent's expense
<b>initial evaluation</b>	an assessment of readily available factual information to determine whether contamination is an issue relevant to the decision being made.

<b>intensive livestock</b>	means the keeping or breeding of cattle, poultry, goats.
<b>agriculture</b>	horses or other livestock, that are fed wholly or substantially on externally-sourced feed, and includes operation of feed lots, piggeries, poultry farms or restricted dairies, but does not include the operation of facilities for drought or similar emergency relief or extensive agriculture or aquaculture.
<b>investigation area</b>	land declared to be an investigation area by a declaration in force under Division 2 of Part 3 of the Contaminated Land Management Act 1997.
<b>investigation order</b>	an order by the EPA under the Contaminated Land Management Act to investigate contamination at a site or within an area.
<b>landforming operation</b>	the carrying out of any work or other activity that affects an area of land greater than 100m <sup>2</sup> and that: <ul style="list-style-type: none"> <li>(a) alters a drainage pattern or a flood level, or</li> <li>(b) raises or lowers the surface of the land at any point so as to alter the natural ground level by more than one metre, or</li> <li>(c) raises or lowers by more than one metre at any point any level of the land that has been created by previous excavation or filling.</li> </ul>
<b>notice of completion</b>	notice in writing to the council (or Minister for Urban Affairs and Planning where he is the consent authority) in accordance with SEPP 55 that remediation work has been completed.
<b>preliminary investigation</b>	an investigation to identify any past or present potentially contaminating activities and to provide a preliminary assessment of any site contamination.
<b>qualified consultant</b>	for the purpose of this policy, is a person who, in the opinion of Council, has demonstrated experience, or access to experience in hydrology, environmental chemistry, soil science, eco toxicology, sampling and analytical procedures, risk evaluation and remediation technologies.
<b>remedial action plan</b>	a plan which sets remediation goals and documents the process to remediate a site.
<b>remediation order</b>	a direction from the EPA under the Contaminated Land Management Act to remediate the site

<b>remediation site</b>	a site declared by the EPA under the Contaminated Land Management Act as posing a significant risk of harm. However site contamination can be remediated even if it has not been determined by the EPA to be of significant risk of harm.
<b>remediation work</b>	a work in, on or under contaminated land, being a work that: <ul style="list-style-type: none"> <li>(a) removes the cause of the contamination of the land, or</li> <li>(b) disperses, destroys, reduces, mitigates or contains the contamination of the land, or</li> <li>(c) eliminates or reduces any hazard arising from the contamination of the land (including by preventing the entry of persons or animals on that land).</li> </ul>
<b>site audit</b>	an independent review by a site auditor of any or all stages of the site investigation process conducted in accordance with the Contaminated Land Management Act.
<b>site audit statement</b>	a certificate issued by a site auditor stating for what use the land is suitable.
<b>site audit summary report</b>	a report containing the key information and the basis for consideration which leads to the issue of a site audit statement.
<b>site auditor</b>	a person accredited by the EPA under the Contaminated Land Management Act to conduct site audits.
<b>validation</b>	the process of determining whether the objectives for remediation and any conditions of development consent have been achieved.

## 6.0 Restrictions on Land Use

This policy imposes the following land use restrictions in respect of potentially contaminated land;

- if the contamination status of the land is unknown and Council has reason to believe the land may be contaminated, no change in use should occur which may increase the risk of harm until the land has been investigated, remediated and validated, if appropriate;
- if contamination has caused an unacceptable risk of harm, the use of the land should be restricted to reduce the risk to acceptable levels or remediated to allow specific land use.

A list of activities and land uses that could potentially result in contamination is attached as Appendix 1.

## 7.0 Planning Process for Development Applications (DA), Rezoning (ie, Local Environmental Plans, LEP) and Development Control Plans (DCP)

In assessing a Development Application or preparing a Local Environmental Plan or Development Control Plan, Council must consider the issue of land contamination and any implications it may have for any proposed or permissible future uses of the land. Council will adopt a **precautionary approach** to ensure that any land contamination issues are identified and dealt with early in the planning process.

### 7.1 Initial Evaluation

An initial evaluation, to determine whether contamination is an issue, is required to be carried out in the determination of development applications and in the preparation of LEP's or DCP's. The initial evaluation is required regardless of the proposed or current use and will enable Council to identify whether land contamination is relevant to the decision being made and whether further information is required from the proponent.

The initial evaluation, which is undertaken by Council, will be based on readily available factual information, of which Council is aware, and will include;

- current zoning, permissible uses and records from previous rezonings;
- previous development applications and building applications relating to the site;
- site inspections including a visual inspection of adjoining sites;
- Council's property files to indicate previous and current land use;
- previous investigations or reports about contamination on the land including any remediation of previously contaminated land;
- whether the land is, or was, regulated through licensing or other mechanisms in respect of any activity listed in Appendix 1;

- whether there are any land use restrictions on the land relating to contamination such as notices issued by the EPA or other regulatory authority;
- information provided by the proponent such as a development application or rezoning request or an investigation.

#### 7.1.1 Information to be provided by the proponent

Information provided by the proponent is required to assist Council in undertaking its initial evaluation and should be provided in conjunction with any development application or rezoning request submitted to Council:

- a chronological history of the land use characteristics of the site with particular emphasis on those activities listed in Appendix 1;
- details of any previous investigations into contamination of the site;
- details of any regulatory restrictions or licensing which have applied or now apply to the subject site;
- whether any notices have been issued on the subject site by the EPA or other regulatory authority;
- details of any potentially contaminating use on adjoining lands;
- information regarding the types of chemicals to be used on the site and the technical and management controls to be employed.

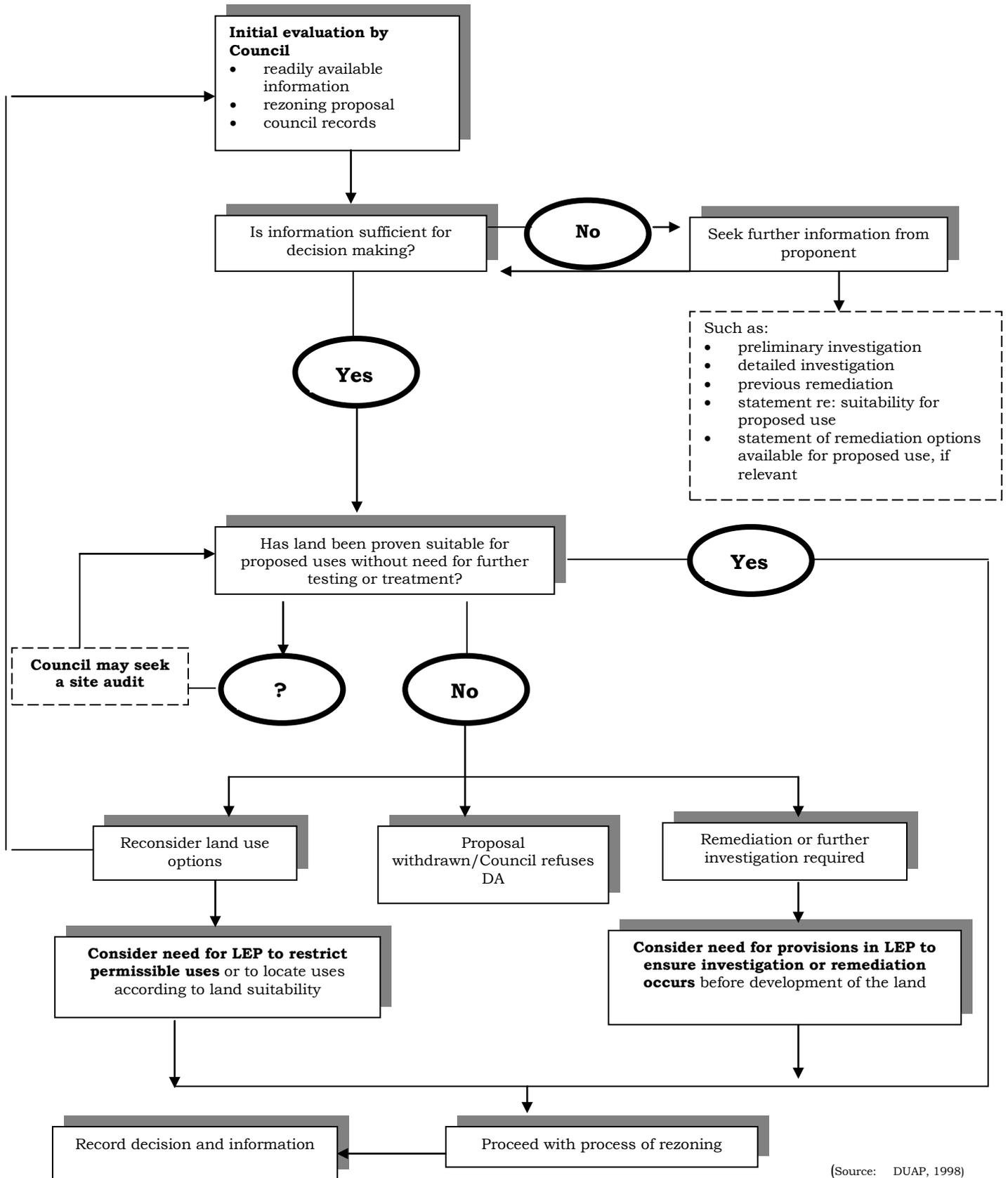
Where, after undertaking the initial evaluation, there is no reason to suspect contamination or need for further inquiry, the proposal may be processed without any further investigation into contamination.

However if, after carrying out an initial evaluation there are indications that contamination is, or may be, present and Council has insufficient information on which to make a planning decision, the proponent must undertake further investigation of the site and provide Council with the information it needs to make its determination.

In order to provide the necessary information, the proponent must engage a suitably qualified environmental consultant who is experienced in contaminated site assessment and management, to investigate the subject land in accordance with the following requirements. These reports must be prepared in accordance with the *Guidelines for Consultants Reporting on Contaminated Sites*, EPA NSW.

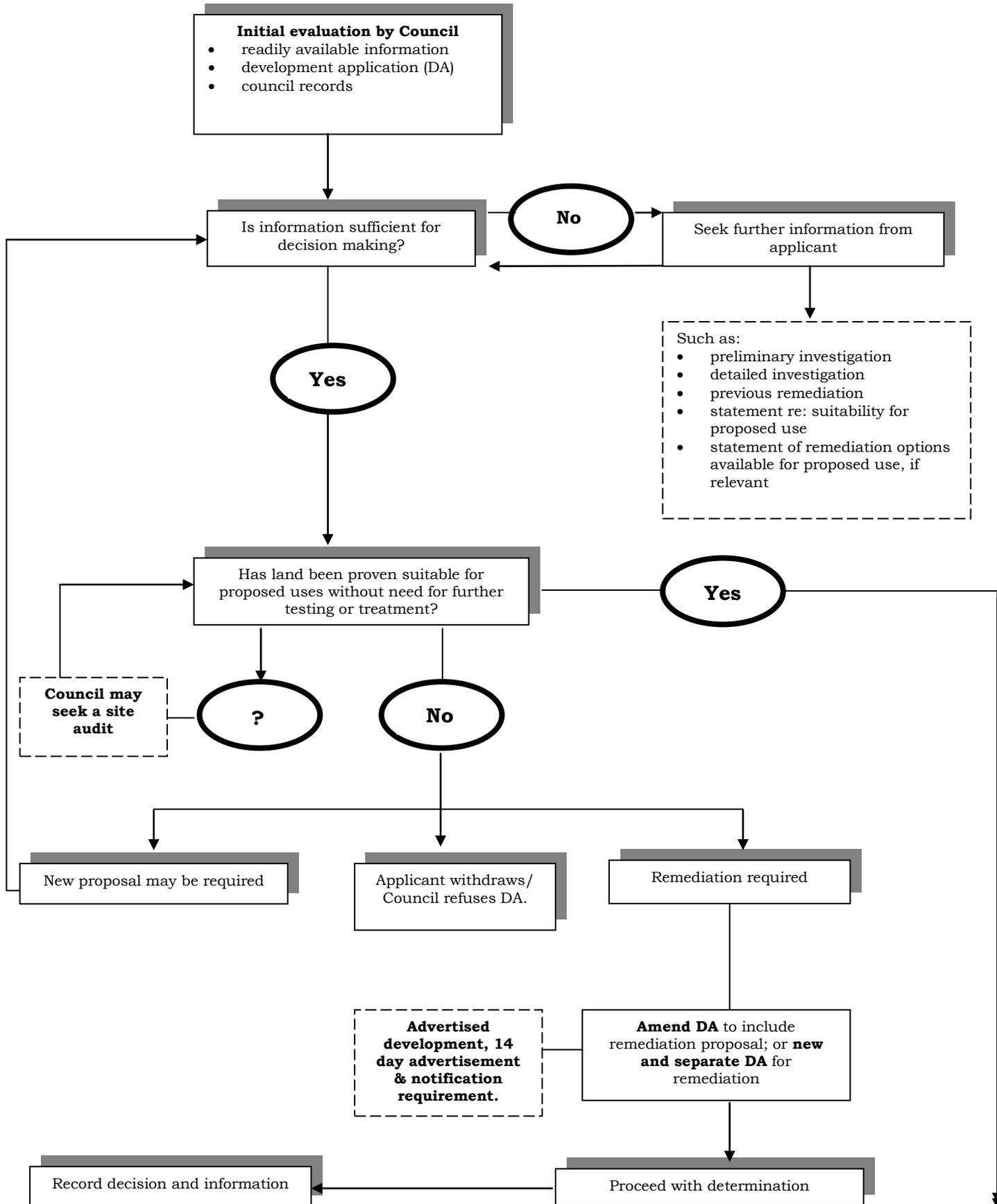
Council's procedures for considering land contamination issues for Development and Rezoning applications are detailed in figures 2 and 3 on pages 9 and 10.

**Figure 2: Options Available in the Rezoning Process where the Specific End Use is known**



(Source: DUAP, 1998)

**Figure 3: Options Available in the Development Application Process**



## 7.2 The Site Investigation Process

It should be emphasised that not every site will require all four stages of investigation.

Where it is intended to deviate from the following “site investigation process” (for any stage of the investigation) Council will not consider such a deviation unless an EPA Accredited Site Auditor has undertaken a Site Audit of all investigation works and provided a Site Audit Statement that states for what use the land is suitable. (Refer “Section 8.0” of this Policy for information about Site Audits). Where conditions are proposed to be attached to a Site Audit Statement, the Auditor must consult with, and receive approval from, Council’s Environmental Health Branch as to whether the proposed conditions will be acceptable to Council.

If the initial evaluation shows that there is possible contamination of the site the following process shall be adopted. The appropriate level of investigation will depend on the circumstances and may involve one or more of the stages described below in the *site investigation process*.

### 7.2.1 Stage 1-Preliminary Investigation

#### **(a) Why is a preliminary investigation required?**

The main objectives of a preliminary investigation are to;

- identify any past or present potentially contaminating activities;
- report on the site condition;
- provide a preliminary assessment of any site contamination; and, if required,
- provide a basis for a more detailed investigation.

#### **(b) When is a preliminary investigation required?**

A preliminary investigation is required where a change of use is proposed and:

- the land is within an investigation area; or
- a land use listed in Appendix 1 is known to have been carried out, which Council has reason to believe has resulted in contamination; or
- the site is to be used for residential, educational, recreational or child care purposes or for a hospital and a land use listed in Appendix 1 could lawfully have been carried out at any time at which land use history is incomplete.

#### **(c) What level of assessment is required for a preliminary investigation?**

The preliminary investigation will involve a detailed appraisal of the site’s history and a report based on a visual site inspection and assessment. It is important that all relevant information about the site is assessed to determine the potential for site contamination.

Where contaminating activities are suspected to have had an impact on the land, sampling and analysis will be required to confirm and support any conclusion reached from the site history appraisal. Through the assessment of sampling results, an assessment of contamination can be established.

Where the results of a preliminary investigation demonstrate the potential for or the existence of contamination a detailed investigation should be undertaken. Where the preliminary investigation shows a history of non-contaminating activities at a site and in the absence of other contrary evidence there will be no need for further investigation. If there is sufficient information to satisfy the Council that the site is suitable for the proposed use the planning process may proceed.

## 7.2.2 Stage 2-Detailed Investigation

### **(a) *When is a detailed investigation required?***

A detailed investigation is necessary when a preliminary investigation indicates that the land is:

- contaminated
- potentially contaminated (in Council's opinion)
- used for an activity listed in Appendix 1 (or has formerly been used for such an activity) and a land use change is proposed that has the potential to increase the risk of exposure to contamination or has been identified by the EPA.

A detailed investigation will also need to be conducted as part of a remediation proposal.

### **(b) *Why is a detailed investigation required?***

The objectives of a detailed investigation are to:

- define the nature, extent and degree of contamination, including the likelihood for off-site migration;
- assess the possible routes for movement of contaminants, including air, surface water and ground water;
- assess potential risk posed by contaminants to health and the environment; and
- obtain sufficient information to develop a remedial action plan (RAP), if required.

**(c) What level of assessment is required for a detailed investigation?**

A detailed investigation should provide information about the extent and degree of contamination. It should also include an assessment of the risk posed by the contaminants to health and the environment. Generally, the risk can be assessed by comparing the levels of residue on-site with appropriate predetermined thresholds such as the soil investigation levels specified by the Environment Protection Authority. The risks can also be determined by a site-specific risk assessment undertaken by the proponent's consultant.

7.2.3 Stage 3-Remedial Action Plan

**(a) When is a Remedial Action Plan (RAP) required?**

A RAP is required whenever remediation works are proposed. **A Remedial Action Plan must be submitted to Council for all remediation works.**

**(b) Why is a Remedial Action Plan required?**

The objective of a remedial action plan or RAP, is to

- set objectives and document the process to remediate the site;
- set remediation goals that will ensure that the remediated site will be suitable for the proposed use and will pose no unacceptable risk to human health or the environment;
- determine the most appropriate remedial strategy;

**(c) What information is required for a RAP?**

The level of information and the structure and scope of the report prepared by the consultant shall be in accordance with the requirements of the EPA's "Guidelines for consultants reporting on contaminated sites".

Additionally the RAP should be based on information obtained from investigations and on the proposed land use. The objectives of the remediation strategy and the recommended clean-up criteria should be clearly stated in the RAP. The RAP should demonstrate how the proponent or their consultant proposes to reduce risks to acceptable levels and achieve the clean-up objectives for the site.

7.2.4 Stage 4 - Validation and Monitoring.

**(a) Why is validation and monitoring required?**

The objective of validation and monitoring is to:

- demonstrate whether the objectives stated in the RAP and if applicable, Council's conditions of development consent have been achieved;
- identify whether any further remediation work or restrictions on land use are required.

**(b) *What is required for validation and monitoring?***

Validation must confirm statistically that the remediated site complies with the clean-up criteria set for the site. Ideally, the same consultant that conducted the rest of the site investigation and remediation process should conduct the validation. The environmental consultant is required to follow the EPA's "Guidelines for consultants reporting on contaminated sites" and "sampling design guidelines" when validating the site.

**(c) Certificate of Completion**

A certificate of completion must be submitted to Council within 30 days in accordance with clauses 17 and 18 of SEPP 55. The certificate of completion shall incorporate a validation report.

**(d) Validation report**

The report shall follow structure and scope as set out in the EPA's "Guidelines for consultants reporting on contaminated sites".

The report must assess the results of the post-remediation testing against the clean-up criteria stated in the RAP. Where the targets have not been achieved, reasons for such failure must be stated and additional site work should be proposed that would achieve the original objectives.

The report must also include information confirming that all licenses, approvals and development consents have been complied with. In particular, documentary evidence must be provided to confirm that any contaminated soil that has been disposed of off-site or removed for re-use has been dealt with as specified by the relevant authority.

In situations where full clean-up is not feasible or on-site containment of contamination is proposed, the need for a continuing monitoring programme must be assessed by both the proponent's consultant and the Council. If required, this monitoring programme will include the proposed monitoring strategy, the parameters to be monitored, the monitoring locations, and the frequency of monitoring and reporting requirements.

Council may require the validation report be referred to an independent site auditor for comment and review. The auditor will provide Council with a site audit statement that provides a clear and unequivocal statement certifying the suitability of the subject site for the proposed use. The full cost of appointing the auditor shall be borne by the applicant.

## 8.0 Site Audits

A site audit is an independent third party evaluation or review of the information submitted by the proponent, conducted in accordance with the Contaminated Land Management Act 1997. This process may review a preliminary investigation, a detailed investigation, a remedial action plan or a validation report.

A site audit may be necessary when the Council:

- believes on reasonable grounds that the information provided by the proponent is incorrect or incomplete
- wishes to verify the information provided by the proponent adheres to appropriate standards, procedures and guidelines
- does not have the internal resources to conduct its own technical review.

If a site audit is required, Council will require the audit to be prepared by an appropriately qualified site auditor who is independent of all involved parties and is accredited by the Environmental Protection Authority under the Contaminated Land Management Act, 1997. Appendix 2 provides information on how to access the list of accredited auditors. A site audit will lead to the provision of a certificate called a *site audit statement*, stating for what use the land is suitable. The structure and scope of the site audit statement shall follow the requirements as set out in the EPA's "Guidelines for consultants reporting on contaminated sites".

Another document prepared by site auditors who may be of use to Council is a *site audit summary report*. A site audit summary report is a requirement of the EPA. It contains the key information and the basis of consideration, which leads to the issue of the site audit statement.

Site auditors can assist Council by commenting on or verifying information provided by the proponent in relation to site assessment, remediation, validation or whether they have adhered to relevant standards, procedures and guidelines. Engaging a site auditor can also provide greater certainty about the information on which Council is basing its decision, particularly where sensitive uses are proposed on land that may be contaminated and a statement about the suitability of the site is required.

If Council considers that it needs a site audit in order to make its planning decision, the cost is to be borne by the proponent and not the Council. Similarly, where the proponent decides to engage the services of a site auditor for any purpose that includes to conduct a Site Audit, the cost is to be borne by the proponent.

### 8.1 Conditional site audit statements

Site audit statements should be issued with as few conditions as possible, since conditions are essentially qualifications to the auditor's conclusion and can therefore detract from the certainty and conclusiveness of the statement.

However, it is recognised that there will be occasions when it will be appropriate for a site audit statement to contain conditions, for example where ongoing monitoring of ground water is required. In these circumstances, auditors must ensure that the conditions placed on the site audit statement:

- ❑ Do not pre-empt the completion of remediation (that is, further work is not required to make the land suitable for its proposed use); and
- ❑ Can be complied with through legitimate means that are acceptable to Council.

Where conditions may affect Council's planning decision regarding development consent, auditors are required to seek written approval from Council before including them on a site audit statement.

In all cases where Council is required to be involved in order to ensure compliance with a condition, auditors are required to seek written approval from Council before issuing a site audit statement.

## 9.0 Remediation Work

**For the purposes of this policy the requirements of SEPP 55 in relation to category 2 remediation works are not applicable in Camden, as the requirements of Part 3, Clause 11, subclause (4) of Sydney Regional Environmental Plan No. 20 Hawkesbury-Nepean River (No. 2- 1997) supersede these requirements. All proposed remediation works are category 1 and as such Council consent is required for the remediation of all sites within the Camden Local Government Area**

Remediation is generally considered beneficial as it improves the quality of the environment, reduces health risks and restores land to productive use. Conversely remediation work itself has the potential for environmental impact and the planning process must ensure that these impacts are adequately identified and mitigated.

Although proceeding with remediation as being an economic decision for the proponent, Council will make a preliminary assessment of whether remediation would be acceptable on planning grounds, that is, the potential environmental impact of the works.

The objective of remediation work is to ensure that land use changes do not occur until the Council is satisfied that the land has been made suitable for the proposed use.

If investigations find that contamination makes the land unsuitable for the proposed use and requires remediation the proponent will be required to;

- **amend the development application** for the proposed use to include a remediation proposal, or submit a **new and separate development application** for the remediation.

Council will not grant consent for the use, until such time as remediation of the site is carried out and validated. Alternatively Council may issue **deferred commencement** consent for the use, requiring remediation to be carried out and validated before other work commences.

Council's procedures for considering site remediation proposals are set out in figure 4 on page 18.

SEPP 55 contains requirements with regard to the undertaking of remediation as ancillary development.

### 9.1 Category 1 Remediation Work

Development consent is generally only required for remediation work where there is potential for significant environmental impacts from the work.

Remediation work, which requires development consent, is known as category 1 work. All category 1 remediation works are deemed to be advertised development and as such the details of the proposed works are required to be advertised in a local newspaper for 14 days and that the adjoining property owners are notified of the proposed works in accordance with Council's Development Control Plan No 116.

Category 1 refers to work:

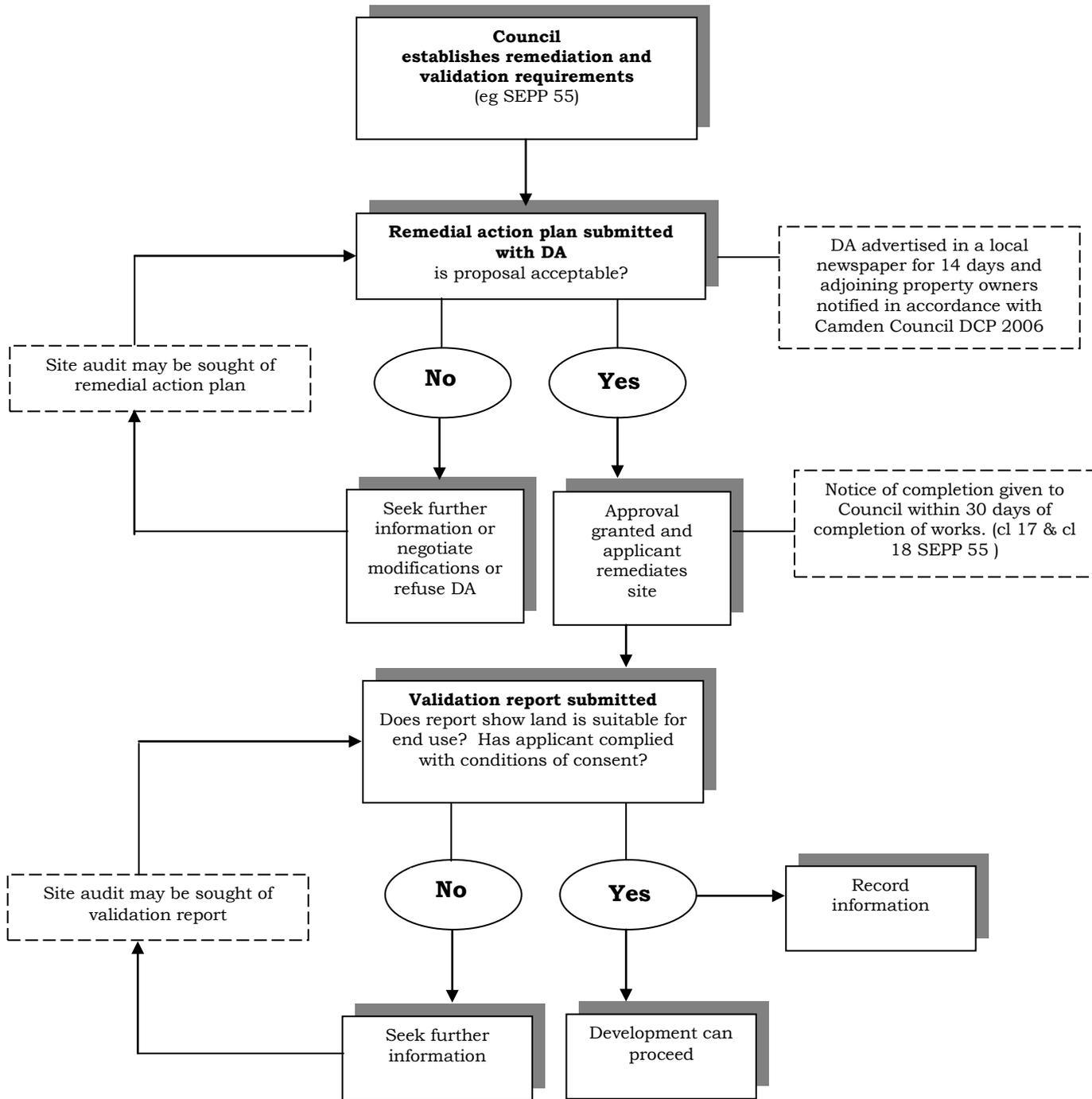
- which is proposed to be carried out in a manner which is inconsistent with the requirements of this policy; or
- which requires consent in accordance with Part 3, Clause 11, subclause (4) of Sydney Regional Environmental Plan No. 20 Hawkesbury-Nepean River (no. 2 -1997). \* **Note: As SREP No.20 applies to Camden, all remediation works proposed to be undertaken within Camden LGA are deemed to be category1 and require development consent.**
- which is designated development under Schedule 3 of the EP&A Regulation or under a planning instrument; or
- proposed on land identified as critical habitat under the *Threatened Species Conservation Act 1995*; or
- likely to have a significant effect on a critical habitat or a threatened species, population or ecological community; or
- which requires consent under another State Environmental Planning Policy or a Regional Environmental Plan; or
- is proposed in an area or zone identified in a planning instrument as being an area of environmental significance as identified in SEPP 55 - Remediation of Land.

9.1.1 Notice of completion

**A notice of completion of category 1 remediation work that incorporates a validation report must be given to Council within 30 days of completion of the work.**

Council's procedures for category 1 remediation works set out in figure 4 on page 19.

Figure 4: Process for Category 1 Remediation Work



(Source: DUAP 1998)

## 9.2 Remediation Sites

Under the Contaminated Land Management (CLM) Act, the Environmental Protection Authority (EPA) may declare that land is a *remediation site* if land has been determined by the EPA to be contaminated in such a way as to present a significant risk of harm to human health or the environment. There does not have to be a new use proposed on the land for this to occur. The EPA may issue a direction (known as a Remediation Order) to remediate a remediation site. The Minister for Urban Affairs and Planning is the consent authority for proposals affecting remediation sites.

### 9.3 When is a Remedial Action Plan Required?

**A remedial action plan (RAP) is required to be submitted to Council for all remediation work.** An appropriately qualified consultant in accordance with the Environmental Protection Authority's guidelines must prepare a RAP.

### 9.4 What are the Standards for Remediation Work?

All remediation work must be undertaken in accordance with the requirements of this policy and be carried out in accordance with standards in EPA guidelines made under the Contaminated Lands Management Act.

Council will impose conditions on the undertaking of remediation work to ensure compliance with Council's standards and to minimise the impact of the proposal. **Appendix 3 provides sample conditions of consent for remediation of contaminated land.**

## 10.0 Information Recording

### 10.1 Property Information System

Council maintains a property information system, which is continually updated with information such as land use history, contamination and remediation. Such information includes details of initial evaluations or site investigations, notification of remediation, site audit statements and assists Council in the decision making process. To assist in identifying potential risks from land contamination, this information is available for access by the wider community by written request. A fee may be applicable for conducting the relevant property searches as set out in Council's annual fees and charges schedule.

### 10.2 Section 149 Certificates

In issuing *section 149(2)* Certificates, Council is required to advise whether or not Council policy restricts the development of the land due to potential or actual risks from contamination. The following advice is provided on either Section 149 (2) and / or Section 149 (5) certificates in the following situations in accordance with the requirements of the Environmental Planning and Assessment Act, 1979 and the planning guidelines

**(i) Where Council records do not know if a site is contaminated [S149(2)];**

The following advice applies

*“Council has adopted by resolution a policy on contaminated land which may restrict the development of the land. This policy is implemented when zoning or land use changes are proposed on lands, which have previously been used certain purposes. Council records do not have sufficient information about previous land use of this land to determine whether the land is contaminated. Consideration of Council’s adopted policy and the application of provisions under State legislation is warranted.”*

**(ii) Where Council records do not know if a site is contaminated but have allowed residential development without Phase 1 testing (most existing release areas) [S149(2)];**

The following advice applies;

*“Council has adopted by resolution a policy on contaminated land which may restrict the development of the land. This policy is implemented when zoning or land use changes are proposed on lands, which have previously been used certain purposes. Consideration of Council’s adopted policy and the application of provisions under State legislation is warranted.”*

**(iii) Where the site is known to be contaminated [S149(2)];**

The following advice applies;

*“Council has adopted by resolution a policy on contaminated land which may restrict the development of the land. This policy is implemented when zoning or land use changes are proposed on lands. Consideration of Council’s adopted policy and the application of provisions under State legislation is warranted.”*

**(iv) Where the site is known to be contaminated and Council have approved a RAP [S149(5)];**

The following advice applies;

*“Council has adopted by resolution a policy on contaminated land which may restrict the development of the land. A Remediation Action Plan has been prepared for the site. This report has been prepared by (insert author’s name) and is dated (insert date).”*

**(v) Where the lot was part of a contaminated site but is free of contamination [S149(5)];**

The following advice applies;

*“In relation to Council’s Contaminated Lands Policy, a report entitled (insert report name) prepared by (insert author) and dated (insert date) concludes (include the words used in their report).”*

**(vi) Where the lot was part of a remediated site [S149(5)];**

The following advice applies;

*“Council has adopted by resolution a policy on contaminated land which may restrict the development of the land. The land has been remediated in accordance with a Remediation Action Plan and this work has been verified in Validation Report entitled (insert name of report) prepared by (insert author) dated (insert date). This report concludes that the land is (insert what the report concludes).”*

10.2.1 Additional matters:-

The Contaminated Land Management Act 1997 prescribes additional matters that are to be specified under section 149(2) certificates. Accordingly, Council will advise whether the land is;

- (a) within a declared investigation area or remediation site under Part 3 of the Contaminated Land Management 1997;
- (b) subject to an investigation order or remediation order within the meaning of the Act;
- (c) the subject of a voluntary investigation proposal or remediation proposal that is the subject of the Environment Protection Authority agreement under section 19 (or 26) of that Act;
- (d) the subject of a site audit statement within the meaning of part 4 of that Act

Council will include the above notations on s.149 Certificates only if the land to which the certificate relates is affected by any of these matters and Council has been notified that the circumstances apply.

Under *section 149(5)* Council provides additional property information, of a factual nature, of which it may be aware, relating to land contamination. Information provided on certificates under section 149(5) includes:

- the results of any site investigations held by the council
- any notifications of remediation
- advice regarding any site audit statements held by the council.

## **11.0 Landforming Operations**

A Landforming operation (ie, landfilling and/or excavation) requires the consent of Council, given the possible environmental impact and the potential for site contamination. In assessing a Development Application for Landforming, Council will consider the potential for site contamination and implications for future land uses.

Any application for landforming is required to comply with Council's relevant engineering standards and the requirements of Council's Development Control Plan 2006 – Cut and fill, Landforming Operations and Erosion and Sediment Control.

A validation report may also be required to demonstrate that the imported fill material is suitable for the proposed use.

## **12.0 Preventing Contamination and Harm**

Measures to prevent possible pollution at its source may help to reduce future land contamination and the need for remedial action. Once contamination has been detected, environmental damage may have occurred and clean-up bills could be high. Therefore, future economic consequences of contamination play a part in the current motivation for prevention.

A pro-active approach that ensures that the potential for contamination is reduced or that it does not occur must be linked to the nature of an activity on a particular site. Contamination of land may often be associated with new developments involving potentially contaminating activities (see Appendix 1). Such activities may result in accidental releases of chemicals to land, which in turn will render the land contaminated.

Accordingly Council may require new or expanding potentially contaminating developments to include information on the potential for the activity to contaminate. Further, Council may require information to be provided on the chemicals to be used and the means of storing those chemicals.

The applicant may also be required to demonstrate that technical and management controls are adequate to prevent contamination. Plant design should aim to reduce the waste produced and eliminate or minimise the release of waste into the environment by, for example, appropriate primary and secondary containment and good work practices. Periodic environmental audits are encouraged and the introduction of 'clean' technologies, waste management practices, and environmental management practices should be promoted.

## References

ANZECC & NHMRC 1992 *The Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites*.

EPA 1997 *Guidelines for Consultants Reporting on Contaminated Sites*.

EPA 1998 *Guidelines for the NSW Auditor Scheme*.

Managing Land Contamination - Planning Guidelines SEPP 55 - Remediation of Land, 1998 Department of Urban Affairs and Planning & Environmental Protection Authority

State Environmental Planning Policy No 55 - Remediation of Land, 1998.

Refer Appendix 4 for copies of the following correspondence.

Johnston. N, n.d., "Clarification of the EPA document Contaminated Sites: Sampling Design Guidelines", NSW Department of Environment and Conservation.

Mullins. D, 2007, "Clarification of Advice re SEPP 55", NSW Government Department of Planning.

## Appendix 1

### Some Activities that may Cause Contamination

Industry	Type of Chemical	Associated Chemicals
Extensive Agriculture i.e. Grazing of livestock.		Where a preliminary investigation has not identified any chemical use (excluding those used for domestic purposes) on the land currently or previously used for grazing, a detailed investigation will not be required for this land.
Agriculture & Intensive Livestock Agriculture & Horticulture i.e. Dairy Farms, Market Gardens, Orchards, and the like.		See Fertiliser, Insecticides, Fungicides and Herbicides under 'Chemicals manufacture and use'
Airports	Hydrocarbons Metals	Aviation fuels Particularly aluminium, magnesium, chromium
Asbestos production and disposal		Asbestos
Battery manufacture and recycling	Metals Acids	Lead, manganese, zinc, cadmium, nickel, cobalt, mercury, silver, antimony Sulfuric acid
Breweries/distilleries	Alcohol	Ethanol, methanol, esters
Chemicals	Acid/alkali manufacture and use	Mercury (chlor/alkali), sulfuric, hydrochloric and nitric acids, sodium and calcium hydroxides
	Adhesives/resins	Polyvinyl acetate, phenols, formaldehyde, acrylate, phthalates
	Dyes	Chromium, titanium, cobalt, sulphur and nitrogen organic compounds, sulphates, 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.

Industry	Type of Chemical	Associated Chemicals
	Fertiliser	Calium phosphate, calcium sulfate, nitrates, ammonium sulfate, carbonates, potassium, copper, magnesium, molybdenum, boron, cadmium
	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	
	• heavy metals	Arsenic, barium, cadmium, chromium, cobalt, lead, manganese, mercury, selenium, zinc
	• solvents	Toluene oils either natural (eg pine oil) or synthetic
	Pesticides	Arsenic, lead, organochlorines, organophosphates, sodium tetraborate, carbamates, sulfur, synthetic pyrethroids
	• active ingredients	
	• solvents	Xylene, kerosene, methyl isobutyl ketone, amyl acetate, chlorinated solvents
	Pharmaceutical	
	• solvents	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, monoethyl para-aminophenol sulfate, ferricyanide, chromium, silver, thiocyanate, ammonium compounds, sulfur compounds, phosphate, phenylene diamine, ethyl alcohol, thisulfates, formaldehyde
	Plastics	Sulfates, carbonates, cadmium, solvents, acrylates, phthalates, styrene
	Rubber	Carbon black
	Soap/detergent	
	• general	Potassium compounds, phosphates, ammonia, alcohols, esters, sodium hydroxide, surfactants (sodium lauryl sulfate), silicate compounds
	• acids	Sulfuric acid and stearic acid
	• oils	Palm, coconut, pine teatree

Industry	Type of Chemical	Associated Chemicals
	Solvents	
	<ul style="list-style-type: none"> <li>• general</li> <li>• hydrocarbons</li> <li>• chlorinated organics</li> </ul>	<p>Ammonia</p> <p>eg BTEX (benzene, toluene, ethylbenzene, xylene)</p> <p>eg trichloroethane, carbon tetrachloride, methylene chloride</p>
Defence works		see Explosives under 'Chemicals manufacture and use' also 'Foundries', 'Engine works' and Service stations
Drum reconditioning		see 'Chemicals manufacture and use'
Dry cleaning		Trichlorethylene and 1,1,1,-trichloroethane Carbon tetrachloride Perchloroethylene
Electrical		PCBs (transformers and capacitors), solvents, tin, lead, copper, mercury
Engine works	Hydrocarbons Metals Solvents Acids/Alkalis Refrigerants	Chlororfluorocarbons hydrochlorofluorocarbons hydrofluorocarbons
	Anti-freeze	Ethylene glycol, nitrates, phosphates, silicates
Foundries	Metals	Particularly aluminium, manganese, iron, copper, nickel, chromium zinc, cadmium and lead and oxides, chlorides, fluorides and sulfates of these metals
	Acids	Sulfuric and phosphoric Phenolics and amines coke, graphite dust
Gas works	Inorganics	Ammonia, cyanide, nitrate, sulfide, thiocyanate Aluminium antimony, arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, selenium, silver, vanadium, zinc
	Organics	BTEX, phenolic, PAHs and coke
Iron and steel works		BTEX, phenolics, PAHS, metals and oxides of iron, nickel, copper, chromium, magnesium manganese and graphite
Landfill sites		Alkanes, ammonia, sulfides, heavy metals,

Industry	Type of Chemical	Associated Chemicals
		organic acids
Marinas		see `Engine works` and Electroplating metals under `Metal treatments`
	Anti-fouling paints	Cooper, tributyltin (TBT)
Metal treatments	Electroplating	
	• metals	Nickel, chromium, zinc, aluminium, copper, lead, cadmium, tin
	• acids	Sulfuric, hydrochloric, nitric, phosphoric
	• general	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		Arsenic, mercury and cyanides and also explosives under `Chemicals manufacture and use`  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
Power stations		Asbestos, PCBs, fly ash metals, water treatment chemicals
Printing shops		Acids, alkalis, solvents, chromium  see Also Photography under `Chemicals manufacture and use`
Railway yards		Hydrocarbons, arsenic, phenolics (creosote), heavy metals, nitrates, ammonia
Scrap yards		Hydrocarbons, metals, solvents
Service stations and fuel storage facilities		Aliphatic hydrocarbons BTEX (ie benzene, toluene, ethylbenzene, xylene)  PAHs  Phenols  Lead
Sheep and cattle dips		Arsenic, organochlorines, organophosphates, carbamates, synthetic pyrethroids
Smelting and refining		Metals, the fluorides, chlorides and oxides of copper, tin, silver, gold, selenium, lead and aluminium

Tanning and associated trades	Metals	Chromium, manganese, aluminium
Industry	Type of Chemical	Associated Chemicals
	General	Ammonium sulfate, ammonia, ammonium nitrate, arsenic phenolics, formaldehyde, sulfide, tannic acid
Water and sewage treatment plants	Metals	Aluminium arsenic, cadmium, chromium, cobalt, lead, nickel, fluoride, lime, zinc
Wood preservation	Metals	Chromium, copper, arsenic Naphthalene, ammonia, pentachlorophenol, dibenzofuran, anthracene, biphenyl, ammonium sulfate, quinoline, boron, creosote, organochlorine pesticides

Source: Appendix 1 of Australian Standard AS4482.1-1997 – Guide to the Sampling and Investigation of Potentially Contaminated Soil. Part 1: Non-Volatile and Semi-Volatile Compounds.

**NOTE:** It is not sufficient to rely solely on this list to determine whether a site is likely to be contaminated or not. The list is a guide only.

## Appendix 2

### **List of Auditors - Accredited by the Environmental Protection Authority under the Contaminated Land Management Act, 1997. (Source EPA 17th December, 2001)**

The EPA periodically updates this list of accredited auditors. Enquires about the NSW Site Auditor Scheme may be directed to telephone (02) 9995 5342. An updated list is available on the Internet at [www.epa.nsw.gov.au/clm/auditors.htm](http://www.epa.nsw.gov.au/clm/auditors.htm).

## Appendix 3

### Sample Conditions of Consent for Remediation of Contaminated Land

#### Site Management

##### 1. Hours of Operation

All remedial work shall be conducted within the following hours:

Construction works SHALL BE RESTRICTED to within the hours of 7.00am to 5.00pm Monday to Friday and on Saturday within the hours of 8.00am to 5.00pm inclusive, with NO WORK on Sundays and Public Holidays.

Demolition and excavation works SHALL BE RESTRICTED to within the hours of 8.00am to 5.00pm Monday to Friday ONLY. (Excavation work includes the use of any excavation machinery and the use of jackhammers, rock breakers, excavators, loaders and the like, regardless of whether the activities disturb or alter the natural state of the existing ground stratum or are breaking up/removing materials from the site).

The site supervisor and excavator shall display, on-site, their twenty-four (24) hour contact telephone number which is to be clearly visible and legible from any public place adjoining the site.

##### 2. Soil and Water Management

All remedial works shall be conducted in accordance with a soil and water management plan. A copy of the plan shall be kept on-site and made available to Council officers on request. All erosion and sediment measures must be maintained in a functional condition throughout the remediation works. Erosion and sediment controls shall be implemented in accordance with the "Managing Urban Stormwater Soils and Construction Manual and Councils policy.

**Note:** *Under environmental legislation the person placing material into a watercourse, or even in a position where it may enter a watercourse, can be given an on-the-spot fine of \$750 or individuals and \$1500 for companies. For more serious offences the courts may give fines of \$125,000.*

A summary of the soil and water management measures for remediation work in relation to stockpiles, site access and excavation pump-out and landscaping/rehabilitation are discussed below:

###### 2.1 Stockpiles

- No stockpiles of soil or other materials shall be placed on footpaths or nature strips unless prior Council consent has been obtained.
- All stockpiles of soil or other materials are to be placed away from drainage lines, gutters or stormwater pits or inlets.

- All stockpiles of soil or other materials likely to generate dust or odours shall be covered.
- All stockpiles of contaminated soil shall be stored in a secure area and be covered if remaining more than 24 hours.
- No odour or dust nuisance shall be created as a result of remediation works.

## 2.2 Site Access

Vehicle access to the site must be stabilised to prevent the tracking of sediment onto the roads and footpath. Soil, earth, mud or similar materials must be removed from the roadway by sweeping, shovelling, or a means other than washing, on a daily basis or as required. Soil washing from wheels shall be collected and disposed of in a manner that does not pollute waters.

An all weather access shall be provided comprising of 200mm thick pad of 40mm aggregate over geotextile fabric. The pad shall have a minimum width of 3 m and extending a minimum of 15m into the site from the site boundary is to be provided.

## 2.3 Excavation Pump-Out

All excavation pump-out water must be analysed for suspended solid concentrations, pH and any contaminants of concern identified during the preliminary or detailed site investigation, prior to discharge to the stormwater system. The analytical results must comply with relevant EPA and ANZECC standards for water quality.

Design details for the pollution control system, including leachate collection and disposal shall be submitted with the remedial action plan for approval prior to commencement of work.

Other options for the disposal of excavation pump-out water include disposal to sewer with prior approval from Sydney Water, or off-site disposal by a liquid waste transporter for treatment/disposal to an EPA licensed waste treatment/processing facility.

Water quality shall be regularly monitored throughout the works. Water to be used for dust suppression shall be stored in an adequately bunded area and shall be drained to a central collection pit and treated if necessary, to meet EPA discharge criteria.

**Note:** Under environmental legislation it is an offence to pollute waters. Council may issue an on-the-spot fine of \$1500 for minor offences, or for more serious offences the courts may give fines of \$125,000.

## 2.4 Landscaping/Rehabilitation

All exposed areas shall be progressively stabilised and revegetated on the completion of remediation works in accordance with an approved landscaping plan.

### **3. Noise**

Remediation work shall not give rise to an 'offensive noise' as defined in the Protection of the Environment Operations Act (1997). All equipment and machinery associated with the remediation work shall be operated in accordance with the Protection of the Environment Operations Act (1997) and its (Noise Control) Regulations (2000). Appropriate measures should be undertaken to ensure that noise from any equipment and machinery associated with remediation work is minimised.

Remediation work shall comply with the requirement of the NSW Industrial Noise Policy and the Environment Protection Authority' Environmental Noise Manual for the control of construction site noise that specifies that:

For a cumulative period of exposure to construction activity noise of up to 4 weeks, the Laeq (15 minute) emitted by the works to specific residences should not exceed the LA90 background level by more than 20 dBA.

For a cumulative construction noise exposure period of between 4 to 26 weeks, the emitted Laeq (15 minutes) noise level should not exceed the LA90 level by more than 10 dBA.

For a cumulative construction noise exposure period greater than 26 weeks, the emitted Laeq (15 minute) noise level should not exceed the LA90 level by more than 5 dBA.

### **4. Vibration**

The use of any plant and/or machinery shall not cause vibrations to be felt or capable of being measured at any premises.

### **5. Air Quality (Dust and Odours)**

Dust emissions shall be confined within the site boundary. The following dust control procedures may be employed to achieve this objective.

- Dust screens may be erected around the perimeter of the site.
- All loads entering or leaving the site must be securely covered.
- Water sprays may be used across the site to suppress dust.
- All stockpiles of contaminated soil shall be covered if remaining more than 24 hours.
- When excavating the surface should be kept moist to minimise dust.

Volatile or semi-volatile compounds that could generate odours include monocyclic aromatic hydrocarbons (styrene, benzene, toluene, xylene, ethyl benzene, butyl benzene), polycyclic aromatic hydrocarbons (PAH's), hydrogen sulphide, hydrogen cyanide, pesticides, PCB's and herbicides.

No odours shall be detected at any boundary of the site during remediation works. The following procedures may be employed to achieve this objective:

- Appropriate covering techniques such as the use of plastic sheeting or PVA sprays should be used to cover excavation faces, stockpiles and any unsealed surfaces.
- A hydrocarbon-mitigating agent is sprayed on the impacted area/materials.
- Records of volatile emissions and odours should be logged and retained on-site.
- Equipment and machinery shall be adequately maintained to minimise exhaust emissions.
- No materials shall be burnt on the site.

## **6. Transport**

All haulage routes for trucks transporting soil, materials, equipment or machinery to and from the site must be selected to provide the shortest travel distance (or most appropriate) from the site to a state road. Applicants may consult Council prior to selecting the most suitable transport route. All remediation work shall ensure that:

- All soil, materials, equipment or machinery are delivered to or removed from the site shall be transported within the hours of operation specified in the development consent. All loads entering or leaving the site are securely covered.
- All vehicles exiting the site are securely covered.
- All vehicles exiting the site do so in a forward direction.
- All vehicles exiting the site shall not track soil, mud or sediment onto the road.

## 7. Hazardous Materials

Hazardous and/or intractable wastes arising from the remediation work shall be removed and disposed of in accordance with the requirements of the NSW EPA and WorkCover Authority, together with the relevant regulations, namely:

- (a) *New South Wales Occupational Health and Safety Act 2000;*
- (b) *Occupational Health and Safety Regulation 2001;*
- (c) *Asbestos Code of Practise For The Safe Removal Of Asbestos (National Occupational Health and Safety Commission, 2005);*
- (d) *Contaminated Land Management Act 1997;*and
- (e) *Protection of the Environment Operations (Waste) Regulations 2005.*

Under the *Protection of the Environment Act 1997* the transportation of Schedule 1 Hazardous Waste is a scheduled activity and must be licensed by the NSW Environment Protection Authority.

## 8. Disposal of Contaminated Soil

The disposal of contaminated soil should have regard to the provision of both the Protection of the Environment Operations Act (1997), POEO (General) Regulations 1998, POEO (Waste) Regulations 2005 and any relevant EPA guidelines such as the *Environmental Guidelines Assessment, Classification and Management of Non-liquid Waste, NSW EPA, 1997.*

Any queries associated with off-site disposal of waste from a contaminated site should be referred to the EPA's Hazardous Materials Advice Unit. Documentary evidence for all soil disposal shall be kept and made available to Council's Officers upon request.

## 9. Importation of Fill

All fill imported onto the site should be validated to ensure the imported fill is suitable for the proposed land use from a contaminated perspective. In addition, all imported fill must be compatible with the existing soil characteristic for site drainage purposes.

Landforming (landfilling and /or excavation) is required to comply with Council's relevant engineering standards and the requirements of Council's Development Control Plan 2006 – Cut and fill, Landforming Operations and Erosion and Sediment Control.

Council may require details of appropriate validation of imported fill material to be submitted with any application for future development of the site. Hence all fill imported onto the site should be validated by either one or both of the following methods during remediation works:

- Imported fill to be accompanied by documentation from the supplier, prepared in accordance with EPA guidelines for consultants reporting on contaminated sites (dated 1997), which certifies that the material is not contaminated based upon analysis of the material of the known past history of the site where the material is obtained.
- Sampling and analysis of the fill material should be conducted in accordance with the EPA Sampling Design Guidelines to ensure that the material is not contaminated.

## **10. Site Signage and Contact Numbers**

A sign displaying the contact details of the remediation contractor (and site supervisor if different to remediation contractor) shall be displayed on the site adjacent to the site access. This sign shall be displayed throughout the duration of the remediation works.

## **11. Community Consultation**

Owners and/or occupants of premises adjoining and across the road from the site should be notified at least two days prior to the commencement of remediation works.

## **12. Site Security**

The site shall be secured to ensure against unauthorised access by means of an appropriate fence.

## **13. Workplace Health and Safety**

It is the employer's responsibility to ensure that all site remediation works shall comply with all Workplace Health and Safety and Construction Safety Regulations of the NSW WorkCover Authority.

## **14. Pollution of Waters**

All activities conducted on the site must comply with the requirements of Section 120 of the Protection of the Environment Operations Act, 1997.

## **Appendix 4**

**Correspondence letters received from NSW Department of Environment and Conservation and NSW Government Department of Planning.**



NSW GOVERNMENT  
Department of Planning

Major Project Assessments

Contact: Dr Derek Mullins  
Phone: 02 9228 6108  
Fax: 02 9228 6433  
Email:  
[derek.mullins@planning.nsw.gov.au](mailto:derek.mullins@planning.nsw.gov.au)

Mr Geoff Green  
Manager – Environment and Health Branch  
Camden Council  
PO Box 183  
Camden NSW 2570

Our ref:  
Your ref:  
File: Camden Council re SEPP 55  
Clarification.doc

**Camden Council**  
Received

27 JUN 2007

14 June 2007

Dear Geoff

**Subject: Clarification of Advice re SEPP 55**

Thank you for your letter dated 31 May 2007 advising that that Camden Council has a "Management of Contamination Lands Policy" that draws on *Managing Land Contamination*, the Department's Planning Guidelines in relation to SEPP 55 – Remediation of Land.

As a result, Council is seeking assistance in clarifying if a "Stage 2 - Detailed Investigation" is required when considering "Section 3.2.1" of the guidelines that states "*when a preliminary investigation indicates that land is contaminated or that it is, or was, formerly used for an activity listed in "Table 1" and a land use change is proposed that has the potential to increase the risk of exposure to contamination*".

You specifically ask, "If the current and previous activity conducted on the land is known to be "Cattle or Sheep Grazing" does this fit under the definition of "Agriculture" within the Table. The change of use proposed is for residential development."

The actual guideline section to which you refer is 3.4.1, which summarises the site investigation process. The primary concern with agriculture is demonstrated in Appendix A of the Guidelines, which notes chemicals that may have been used when there have been previous agricultural/horticultural activities. Grazing does not represent an agricultural activity in the context of SEPP 55, where "agriculture" refers to the growing of plants and crops, possibly using chemical pesticides or fertilisers.

In the case of sheep or cattle grazing, further investigation of contamination would only be indicated if there were areas of the land on which chemical treatments of the livestock were carried out, such as drenching and treatment for cattle ticks.

Please contact me should you wish further clarification.

Yours sincerely

Dr Derek Mullins  
Director, Major Hazards Unit

Bridge St Office 23-33 Bridge St Sydney NSW 2000 GPO Box 39 Sydney NSW 2001  
Phone: (02) 9228 6111 Fax: (02) 9228 6191 Website: [planning.nsw.gov.au](http://planning.nsw.gov.au)

Your reference : HO9634/DOC07\_22249  
Our reference : Elvin Wong, 02 9995 5818  
Contact :

Mr Geoff Green  
Manager, Environment & Health Branch  
Camden Council  
PO Box 183  
CAMDEN NSW 2570

Camden Council  
Received

22 JUN 2007

Dear Mr Green

**Clarification of the EPA document "Contaminated Sites : Sampling Design Guidelines"**

I refer to your letter dated 31 May 2007 regarding clarification of the EPA document *Contaminated Sites : Sampling Design Guidelines*, with specific reference to large broad acre sites (larger than 5 hectares in size) considered for residential development.

The minimum number of samples required for site characterization depends on the complexity of any potential contamination, and the investigator's knowledge of the particular site and other site-specific requirements, e.g. detecting potential hotspots of a particular shape and size. While the number of samples required is dependent on site-specific considerations, Table A of the *Sampling Design Guidelines* gives examples of sampling density based on "hot spot" sizes, while Procedure A of the *Sampling Design Guidelines* outlines a methodology for determining the number of sampling points required for "hot spot" detection.

The *Sampling Design Guidelines* also indicate that for sites larger than 5 hectares, consideration should be given to a stratified sampling pattern (see section 2.3.4), rather than applying a blanket approach of sampling the whole site, which could be quite costly. The stratification could be undertaken by dividing the site into sub-units according to geological and geographical features, the nature of any potential contamination, former usage pattern of the site, intended future use of the sub-unit, and other relevant factors.

The DECC has released complementary guidelines for assessing orchards and market gardens, and these may provide further relevant information for your consideration. It would also be useful to read the *Sampling Design Guidelines* in conjunction with the publication *Managing Land Contamination - Planning Guidelines - SEPP 55 - Remediation of Land*, which also point to the importance of considering :

- Site history, especially regarding any chemical usage, disposal location, etc; and
- Site condition and surrounding environment.

It is noted that Table 1 of the *Planning Guidelines (Some Activities that may Cause Contamination)* includes agricultural/horticultural activities, but it also should be recognized that not all agricultural activities necessarily involve chemical usage. Where it can be demonstrated that no potential contaminating activities occurred at a site, limited or minimal sampling combined with "desktop" analyses to confirm these assumptions could be considered.

In essence, assessment of potentially contaminated land requires site-specific consideration of a combination of unique factors, with particular regard to site history and intended future use. Such

PO Box A290 Sydney South NSW 1232  
59-61 Goulburn St Sydney NSW 2000  
Tel: (02) 9995 5000 Fax: (02) 9995 5999  
TTY (02) 9211 4723  
ABN 30 841 387 271  
[www.environment.nsw.gov.au](http://www.environment.nsw.gov.au)

Department of **Environment and Conservation** NSW



Doc 9  
22/6/07

assessment may involve carrying out relevant investigations and, where necessary, seeking appropriate expert professional advice from reputable consultants.

Should you have any questions regarding this matter please contact Elvin Wong on 9995-5618.

Yours sincerely

*Niall Johnston* 20/6/2007

**NIALL JOHNSTON**  
**Acting Manager Contaminated Sites**

\* \* \*

**RELEVANT LEGISLATIVE  
INSTRUMENTS:  
RELATED POLICIES, PLANS AND  
PROCEDURES:**

**RESPONSIBLE DIRECTOR:** Planning and Environment

**APPROVAL:** ELG and Council

**HISTORY:**

<b>Version</b>	<b>Approved by</b>	<b>Changes made</b>	<b>Date</b>	<b>EDMS Number</b>
1	Approved by Council/ELG	New		
2	Reviewed without change	No changes	09/11/2017	15/217153