



OPERATING GUIDELINES

Site Contamination Operating Guidelines

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1. INTRODUCTION

1.1 PURPOSE

To establish a framework of internal controls, that support implementation of the Site Contamination Policy (the Policy) and mitigate risks to the natural environment, human health and the corporation.

Site contamination occurs when chemical substances are detected above particular levels in or under the ground and there is potential for those substances to cause harm to public health, safety, and/or the environment, including water bodies.

This document defines the roles and responsibilities to implement, administer and review the Policy, maintain a Contaminated Land Register and includes procedures for staff involved in managing site contamination risks.

1.2 SCOPE

The Operating Guidelines are applicable to contamination present on or below the surface of all land within the Adelaide City Council Local Government Area. They do not relate to hazardous materials found within buildings. In particular, it provides operating guidelines for:

- Council owned land;
- Council controlled land – dedicated Crown land and other land for which the Council is custodian, land which the Council occupies or uses as a lessee or licensee ; and
- Private land – Council's role under the *Development Act 1993* in development assessment and proposing any Development Plan Amendment.

2. DEFINITIONS

The *Environment Protection Act 1993* (EP Act) defines site contamination in the following terms:

Council: Adelaide City Council within the meaning of the Local Government Act 1999.

Detailed Site Investigation: may be required when the results of preliminary investigation are insufficient to enable site management strategies to be devised. Potential or actual contamination will need further delineation. Many site investigations proceed in multiple stages due to the complexity of the site and the discovery of unexpected contamination or as investigation funds become available.

Earthmoving works: refers to any soil disturbance.

EPA: Refers to the South Australian Environment Protection Authority.

Environmental Management Plan (EMP): required when site contamination or chemical substances remain onsite. The EMP ensures human health and the environment is protected, that receptors at the site are not likely to be exposed to risk and that the site will remain suitable for specific use. An EMP must accurately and clearly describe:

- *The nature and location of chemical substances remaining onsite;*
- *The objectives of the plan;*
- *How the chemical substances and/or site will be managed;*
- *Health Risk Assessment (HRA) if appropriate;*
- *Who will be responsible for implementation;*
- *Evidence of the responsible parties acceptance to implement the plan (where possible);*
- *Contingency plans if the management and monitoring measures are not successful;*
- *Over what timeframe actions specified in the plan will take place; and*
- *Timeframes for reporting to the EPA (if required).*

NEPM: *National Environment Protection (Assessment of Site Contamination) Measure 1999* - is the national guiding document in relation to the assessment of site contamination. The NEPM contains the following Schedules:

- Schedule A: a flow chart that outlines the recommended process for the assessment of site contamination; and
- Schedule B: that provides guidelines for the assessment of site contamination.

[Please note that the NEPMs are currently under review- for more information visit:

<http://www.scew.gov.au/nepms/assessment-of-site-contamination.html>]

Preliminary Site Investigation: the purpose of the investigation is to determine whether site contamination poses an actual or potential risk to human health and the environment, either on or off site, of sufficient magnitude to warrant remediation appropriate to the current or proposed land use. This will involve the components:

- *Setting data quality objectives;*
- *Detailing the site history;*
- *Detailing the proposed use;*
- *Reviewing local geology and hydrogeology;*

- *Conducting a detailed site inspection; and*
- *Establishing a sampling strategy and sampling pattern for soil and groundwater contamination.*

(More information provided in Appendix C)

Qualified Environmental Consultant: a person having appropriate qualifications and a demonstrated level of practical experience in related environmental activities with an ability to access all relevant fields (e.g. hydrogeology, soil sampling and analytical procedures, risk evaluation and remedial technologies) sufficient to be recognised by Council and/or the EPA. Consultants must hold appropriate professional indemnity and public liability insurance.

Remediate: To remediate a site means *to treat, contain, remove or manage chemical substances on or below the surface of the site so as to:*

- (a) *eliminate or prevent actual or potential harm to the health or safety of human beings that is not trivial, taking into account current or proposed land uses; and*
- (b) *eliminate or prevent, as far as reasonably practicable:*
 - (i) *actual or potential harm to water that is not trivial; and*
 - (ii) *any other actual or potential environmental harm that is not trivial, taking into account current or proposed land uses,*

Remediation Action Plan (RAP): Remediation should start with the preparation of a RAP. The RAP details the methods, processes and controls of the remediation activities. The RAP should:

- *Set remediation goals that ensure that, on completion of the remediation and validation, the site will be suitable for the proposed use and will provide adequate protection of human health, property and the environment;*
- *Document the nature and extent of remediation necessary and describe the rationale for the recommended remedial option or combination of options;*
- *Detail all procedures and plans to reduce human health and/or environmental risks to acceptable levels for the proposed site use;*
- *Establish the environmental safeguards required to complete the remediation in an environmentally acceptable manner; and*
- *Identify and include proof of the necessary approvals and licences required by regulatory authorities.*

The RAP should detail:

- *The technology to be used;*
- *The expected by-products, wastes, discharges and outputs (including management of these substances);*
- *Timelines for on-site and off-site activities;*
- *The expected endpoints and outcomes;*
- *Results of trials on similar sites or at the same site;*
- *How the technology will be implemented; and*
- *Contingency plans for equipment failure.*

Sensitive use: is defined as:

- (a) *use for residential purposes; or*
- (b) *use for a pre-school within the meaning of the Development Regulations 1993. (Note: under the Regulations the definition of pre-school includes a nursery, kindergarten or child-care centre); or*

- (c) use for a primary school; or
- (d) use of a kind prescribed by regulations. (Note: to date no uses are currently prescribed).

Site Contamination exists at a site if:

- (a) chemical substances are present on or below the surface of the site in concentrations above the background concentrations (if any); and
- (b) the chemical substances have, at least in part, come to be present there as a result of an activity at the site or elsewhere; and
- (c) the presence of the chemical substances in those concentrations has resulted in—
 - (i) actual or potential harm to the health or safety of human beings that is not trivial, taking into account current or proposed land uses; or
 - (ii) actual or potential harm to water that is not trivial; or
 - (iii) other actual or potential environmental harm that is not trivial, taking into account current or proposed land uses.

There may also be circumstances where a site is contaminated but where the contamination may not be of a sufficient level to mean that it falls within the definition of “site contamination” in the EP Act. In this situation, the contamination is not regulated by the EP Act. However, common law may still apply. Contamination existing at a site may create a risk for the Council even if the contamination is not “site contamination”.

Site Contamination Audit means a review carried out by a person that—

- (a) examines assessments or remediation carried out by another person in respect of known or suspected site contamination on or below the surface of a site; and
- (b) is for the purpose of determining any 1 or more of the following matters:
 - (i) the nature and extent of any site contamination present or remaining on or below the surface of the site;
 - (ii) the suitability of the site for a sensitive use or another use or range of uses;
 - (iii) what remediation is or remains necessary for a specified use or range of uses;

Site Contamination Auditor: a person accredited by the EPA under Division 4 of Part 10A of the EPAct. There is a clear distinction between the roles of a site contamination consultant (consultant) and the auditor. A consultant is usually a company that employs a range of professional and technical staff or may be an individual person. An auditor is required to carry out audits in accordance with the EPAct, the Regulations and relevant guidelines issued by the EPA. The primary role of the auditor is to complete a site contamination audit report (and site contamination audit statement) for a commissioned audit by personally carrying out or directly supervising the carrying out of the audit.

3. SITE CONTAMINATION MANAGEMENT GUIDELINES

3.1 LEGISLATIVE REQUIREMENTS

3.1.1 Overview:

The [Environment Protection Act 1993](#) (the EP Act) and [Environment Protection Regulations 2009](#) (the Regulations), assign responsibility for site contamination in South Australia. These documents outline the processes and standards for the identification and management of site contamination.

Part 10A of the EP Act creates a scheme for the assignment of legal responsibility in relation to site contamination. That scheme applies retrospectively as well as prospectively.

Depending on the circumstances, legal responsibility for site contamination may rest with the person who caused the site contamination (including the occupier of a site at the time the contamination was caused), or the owner of the site whether or not that person actually caused the contamination. In the first instance the person who caused the site contamination at the site may be held responsible. If it is not practicable for the original polluter to be held responsible, the owner of the site may be responsible if the person knew, or were reasonably aware of the existence of chemical substances at the site. In this instance the site owner would be responsible for the on-site contamination, not off-site contamination.

Site contamination may be “caused” for the purposes of the EP Act either directly or indirectly as a result of a change of use of contaminated land to a more sensitive land use.

In addition Part 10A of the EP Act, also establishes a general environmental duty:

“...not undertake an activity that pollutes, or might pollute, the environment unless the person takes all reasonable and practicable measures to prevent or minimise any resulting environmental harm.”

3.1.2 Sale, Purchase, Transfer and Divestment of Ownership of Land:

[Land and Business \(Sale and Conveyancing\) Act 1994](#) (LBSC Act) and Land and Business (Sale and Conveyancing) Regulations 2010 regulate the process of selling land in South Australia, amongst other things.

This Act imposes an obligation on the vendor of land to disclose certain matters to a prospective purchaser. Matters that must be disclosed to a purchaser are prescribed in the Regulations, and they include matters relating to site contamination. Those obligations will apply to the Council when selling land owned by the Council.

In addition, the Council is also required to provide certain information where requested to the vendor of any land within its local government area. That information includes details of any development approvals relating to commercial or industrial activity at the land or a change in the use of the land or part of the land, which information may assist to indicate whether a potentially contaminating activity has taken place at the land.

The EPA has a statutory obligation under the LBSC Act to provide information relating to environment protection. More information can be found via:

http://www.epa.sa.gov.au/xstd_files/Site%20contamination/Information%20sheet/info_section7.pdf

3.1.3 Development Assessment and Re-Zoning of Land:

Council will consider the issue of site contamination in the performance of its functions under the [Development Act 1993](#) (D Act) and [Development Regulations 2008](#) (D Regulations).

When acting as the relevant authority for determining any development application under the D Act, Council will consider and apply objectives and principles of development control within its Development Plan that are relevant to the issue of site contamination. Where necessary, Council will request further information from an applicant to ascertain whether or not land is, or may have been, contaminated and, if so, to properly understand the implications of that contamination or the potential for contamination in the context of the proposed development.

When acting as the relevant authority under the D Act for determining any development application lodged, or in the course of preparing any Development Plan Amendment which proposes to rezone land, Council will have regard to [Planning SA Advisory Notice 20](#) dated December 2001 as amended from time to time (or any policy document or legislation that may supersede or replace it).

Appendix A outlines the **Guideline for Development Assessment - Private Land**, where the proposed development involves a change to a more sensitive land use as per D Act.

3.1.4 Protection of Human Health:

The [South Australian Public Health Act 2011](#) states every person has a general duty to:

A person must take all reasonable steps to prevent or minimise any harm to public health caused by, or likely to be caused by, anything done or omitted to be done by the person.

The [Work Health and Safety Act 2012](#) places an obligation on employers as far as is reasonably practicable to create a safe working environment. Through site contamination, Council staff and contractors may be exposed to risks from hazardous chemicals or substances. The assessment and mitigation of site contamination health risks will be undertaken as part of the project management process. Council has a **Safe Operating Procedure – Identification and Containment of Site Contamination (Appendix B)**.

3.1.5 Registers:

Legislation requires the EPA to have a Public Register and to make information available for the public to inspect. The Public Register is a wide range of information relating to EPA operations including:

- licences (environmental authorisations);
- development authorisation referrals;
- enforcement actions; and
- site contamination.

Certain information on the EPA Public Register is available on the Public Register Directory.

The Public Register Directory forms part of the EPA Public Register and is not an exhaustive list of information. In relation to site contamination, the EPA currently lists S83A notifications, audit notifications, audit terminations and audit reports. EPA Environmental Authorisations are also listed on the Directory which may indicate a potentially contaminating activity has occurred. Specific information on sites listed on the directory can be obtained from the EPA Public Register, tel: 08 8204 9128

[Link to the Public Register Directory:

http://www.epa.sa.gov.au/what_we_do/public_register_directory/site_contamination_index]

To support the sustainable development of the City, the Council will also maintain a Site Contamination Register. This register though not required by legislation will:

- Record all Council owned/managed land/properties where there is evidence of, or reasonable suspicion that land and/or water, including underground water, may have been contaminated or there is evidence of past potentially contaminating activities;
- Record all site contamination reports, assessments and management plans;
- Be used primarily for the operational requirements of Council;
- Not be used as a conclusive assessment tool for determining the contamination status of land; and

Council will disclose information on the Register to a third party in accordance with the Freedom of Information Act 1991 and the Privacy Policy.

[For Site Contamination Register information requests email – scregister@adelaidecitycouncil.com]

3.1.6 Roles:

The role of the EPA is to provide advice and guidance to ensure that site contamination is recognised, considered and addressed for all new developments throughout South Australia.

[More information on the role of the EPA can be found via http://www.epa.sa.gov.au/environmental_info/site_contamination/epa_role_and_legislation]

The role of the Council is to ensure that site contamination is managed in its capacity as land owner/custodian. Staff will:

- Comply with EPA reporting requirements;
- Implement appropriate OHSW and risk management procedures;
- Comply with legislative requirements as part of Development Assessment process. **(Appendix A)**

3.1.7 Responsibilities:

- Staff responsible for projects or works involving (actual or potential) groundwater contamination are required to notify the EPA and provide all relevant documentation to the Public Register in accordance with Section 83A of the Act.
- Any public enquiries seeking advice regarding the management of site contamination on private property must be referred to the EPA in the first instance.
- The Sustainable City Program is responsible for the maintenance of Council's Site Contamination Register.
- Staff responsible for projects or works occurring in a (actual or potentially) contaminated site are required to ensure a copy of all relevant documentation including survey or as constructed design documentation is incorporated into Council's Site Contamination Register.

3.2 SITE CONTAMINATION PREVENTION

3.2.1 Overview:

All Council staff and contractors have a general duty to not cause any environmental harm including site contamination.

There may be incidences where due to the nature of events/works this may not be possible. As such three options exist:

1. **Prior to incident occurring** (i.e. pollution/contamination forecast as part of project works) – Project Manager to apply for **an EPA Licence and/or a Water Affecting Activity Permit**.
2. **Post incident occurring** – lodge a **General Offences Notification** with the EPA.
3. **Emergency situations** – where the contamination/polluting activity is unable to be contained or has immediate environmental or public health impacts.

All Council staff and contractors also have an obligation under the *Natural Resources Management Act 2004* to maintain and not damage, a watercourse, floodplain or lake. Any works affecting these natural water bodies or groundwater systems – (including the River Torrens, Park Lands creeks/streams, wetlands, detention basins, etc) may also require a Water Affecting Activity Permit from the Natural Resource Management Board.

3.2.2 EPA Licences:

Some Council operations require EPA licensing. To check if your activity needs a licence, either contact the EPA directly or refer to the list of **prescribed activities listed under Schedule 1 of the Act**. These include, but are not limited to:

- An activity in which the waste produced is lawfully disposed of to a sewer.
- Discharge of any water to groundwater.
- Dredging - removing solid matter from the bed of any marine waters or inland waters by any digging or suction apparatus.
- Any discharges to inland waters.

[For more information: http://www.epa.sa.gov.au/licensees/general_licences]

3.2.3 Water Affecting Activity Permit:

Works that require a permit include (but are not limited to):

- the construction or enlargement of dams or structures to collect or divert water;
- building of structures, obstructing or depositing solid materials in a watercourse, lake or floodplain (e.g. erosion control, construction of water crossings or dumping material);
- excavating material from a watercourse, lake or floodplain (e.g. excavating or cleaning soaks, waterholes and on-stream dams);
- destroying vegetation in a watercourse, lake or floodplain (e.g. removal of reeds);
- draining or discharging water or brine into a watercourse or lake (e.g. stormwater including urban discharge, drainage and salinity control); and
- the use of effluent or water imported to an area for commercial activities (e.g. irrigation).

Permits need to be obtained at least two months before works are due to commence. Contact the Natural Resource Management Board for more information via 8273 9100.

Project Managers need to notify Council's Asset Consultant – Water, of their intention to apply for a Water Affecting Activity Permit.

3.2.4 EPA General Offences Notification:

If you are unsure whether an accident is actually a 'pollution incident', it is still best to contact the EPA immediately. Any person who is responsible for a pollution incident is required by law to notify the EPA as soon as possible. You can report a pollution incident to the EPA via: 8204 2004 or epainfo@epa.sa.gov.au

Where the incident involves the release of recycled water (GAP water) contact either Council's:

- Irrigation Technical Officer on 0438 867 681; or
- Team Leader Horticulture (North) on 0407 394 670; or
- Customer Centre on 8203 7203

3.2.5 Emergency Situations:

1. If you are unsure whether an incident is actually an emergency, it is best to implement the steps required in accordance with Council's Emergency Response Plan (TRIM link: ACC2011/100142).
2. If there is a public health risk, immediately notify the Team Leader City East Safety on 0439 685 645.

3.2.6 Responsibilities:

- Any public pollution notifications must be deferred to the EPA in the first instance via the General Offences Notification process or Emergency Situations procedures as detailed above.
- It is the responsibility of the Project Manager to ensure the appropriate permits for works are obtained and a copy provided to the OHS Register.
- It is the responsibility of the Program Manager to ensure their employees/contractors have reported incidents and followed Corporate Emergency Response Plan and OHS&W procedures.

3.3 CONTAMINATED SITE MANAGEMENT

3.3.1 Overview

The active management of site contamination is required where there is a potential risk to the environment or public health. For Council, this is most often due to land redevelopment, where soils may be disturbed.

There are many ways that site contamination can be managed – there is no ‘one size fits all’ approach - and each case must be assessed individually. The determination of whether site contamination exists depends on a range of factors.

[An overview of the Site Contamination Process can be found via:

http://www.epa.sa.gov.au/environmental_info/site_contamination/assessment_and_remediation]

The potential for site contamination must be identified for all Council projects involving earthmoving works:

1. Council Redevelopment Projects: Site Contamination must be considered from the proposal stage of the ‘[6 Steps to Project Delivery](#)’ process as part of the risk evaluation and managed using the process detailed below in 3.3.3
2. Minor Works – Council Staff: that have the potential to affect a contaminated site, Council staff will be required to adhere to the Safe Operating Procedure – Identification and Containment of Site Contamination (**Appendix B**) and undertake a risk assessment of the works.
3. Minor Works - Contractors: undertaking earthmoving works will be required to include management procedures in their risk assessments as part of the City Works Permit process [Link: <http://www.adelaidecitycouncil.com/services/permits-licenses/city-works/>]

3.3.2 The Audit System

A Site Contamination Auditor is only required if:

- the current or proposed land use is considered ‘[sensitive](#)’ as defined in the EPAct to mean residential, primary school, pre-school and site contamination is suspected to exist; or
- groundwater or surface water is/may be affected by site contamination; or
- air quality (vapours) is/may be affected by site contamination; or
- asbestos is present in the contaminated material; or
- is required by the EPA.

The role of a Site Contamination Auditor is to document an opinion, on which others can rely, regarding the suitability of the site for future use. In doing so, the Auditor is expected to:

- review any assessment or remediation undertaken by others;
- evaluate the adequacy of the available information about the condition of the site;
- if necessary, seek further information about the condition of the site;
- make an independent assessment and provide an opinion on the condition of the site and its suitability for the proposed use.
- review and endorse the RAP and EMP where prepared for the remediation activities;
- confirm that the proposed remediation should achieve an acceptable outcome that will enable completion of the audit;
- confirm that the proposed strategies for environmental management of any on-site remediation, adequately protect human health, property and the environment during remediation activities.

The Site Contamination Auditor must be engaged from the start of the project.

[The Audit system process is detailed at

http://www.epa.sa.gov.au/environmental_info/site_contamination/audit_system]

[The Guidelines for the Site Contamination Audit System - http://www.epa.sa.gov.au/xstd_files/Site%20contamination/Guideline/guidelines_sc_audit.pdf]

3.3.3 The Project Management of Site Contamination – Site Redevelopment Works

Council will identify and manage site contamination through a risk management process in conjunction with the [6 Steps to Project Delivery Process](#).

If an Auditor is required, their advice takes precedence over the steps detailed in this process.

The following parts will assist staff managing site contamination:

Part 1 – Identification [considered as part of the Propose Step]

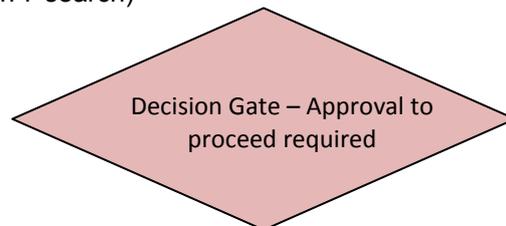
Site contamination must be considered as part of the 'Environment' Category within the risk assessment (Major Risks) of the Business Case template. This is done through a review of the site history using:

1. Email a request through to Council's Site Contamination Register (scregister@adelaidecitycouncil.com)
2. Contact the EPA to undertake a Section 7 search, which will indicate if the EPA holds information in relation to a title:
 - Email request to epasection7@epa.sa.gov.au and quote certificate of title or plan/parcel.
3. Email a request through to the City Planning Team (d.planner@adelaidecitycouncil.com) for:

"A search for development approvals relating to:

 - commercial or industrial activity at the land; or
 - a change in the use of the land or part of the land (within the meaning of the *Development Act 1993*)"

(Similar to a Section 7 search)"



Part 2 – Identify Responsibility [Analyse Step]

In order to determine the nature of contamination and who is responsible, a desktop Site History Review should be commissioned by a suitably qualified consultant (Refer to **Appendix C**). This document will form part of the Detailed Business Case.

Once the potential for site contamination has been identified at a project site, the next step is to determine who is responsible for the assessment and remediation. The EP Act adopts the polluter pays principle. This means the person who caused the site contamination is responsible for implementing and funding the assessment, management and clean-up of the site. As site contamination is often historical in nature, the person or company who caused the site contamination may no longer exist or may not be the same person or company who currently own or occupy the site. In such instances the current owner is then the appropriate (responsible) person. Refer to [Section 103D](#) of the EPAct for more information.

Should the responsibility not fall to Council, please contact Council's Risk and Governance Team to commence negotiations with the appropriate person/company.

[EPA link for more information on the 'appropriate person' - http://www.epa.sa.gov.au/xstd_files/Site%20contamination/Information%20sheet/info_sc_responsibility.pdf]

Part 3 – Preliminary Site Investigation [Analyse Step]

If the potential for site contamination is identified on the project site, a Preliminary Site Investigation Report should be commissioned by a suitably qualified consultant (Refer to **Appendix C**).

Before any design work is undertaken, the nature, extent and management of site contamination must be documented.

The outcome of this report will inform the next step:

- Develop a Remediation Action Plan (RAP) and Environmental Management Plan (EMP) for the site and commence work in accordance with these plans; OR
- If groundwater contamination is detected the next step is to notify the EPA in accordance with section 83A of the EP Act: [\[http://www.epa.sa.gov.au/xstd_files/Site%20contamination/Guideline/notification_sc_27Nov08.pdf \]](http://www.epa.sa.gov.au/xstd_files/Site%20contamination/Guideline/notification_sc_27Nov08.pdf); and then engage an Auditor and follow the Audit System process as detailed in (**Appendix D – Groundwater Process**); OR
- If the testing results are insufficient to develop remediation strategies, a Detailed Site Investigation may be required. This involves additional soil/ groundwater testing which will inform the RAP and EMP; OR
- If a health risk is suspected, ensure that the details are contained within the EMP. Notify Council's Media Relations Team and the EPA Site Contamination Branch who will assist with communication/ public relations.

These documents will form part of the Detailed Business Case and will inform the Concept Design and Detailed Design.

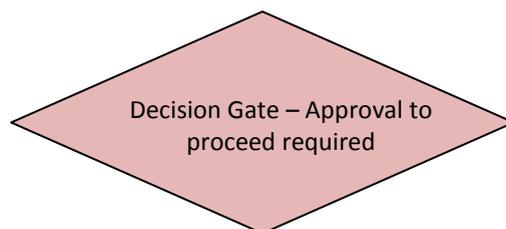
Part 4 – Planning and Design [Plan Step]

Ensure any permits/ licenses that may be required for construction are sought at this stage to allow for processing.

If appropriate consider the site contamination in the:

- Prudential Report
- Asset Management Strategy
- Risk Management Strategy
- Communications Strategy (stakeholder analysis)

The project must not proceed to the Procure Step unless all site investigations have been completed and the necessary RAP and EMP are in place.



Part 5 – Commence site works [Build Step]

Site works to be undertaken in accordance with RAP and EMP and/or Auditor Requirements.

Once works have been completed, finalise the EMP.

Part 6 – Update Site Contamination Register [Review and Maintain]

All documentation relating to the site contamination including as constructed drawings, Site History Reports, Site Investigation Reports, Auditor Reports, RAPs and EMPs must be submitted to Council's Site Contamination Register. Ensure all attachments and relevant maps are included with the documentation. Handover notes should also be filed in the Register ([email: scregister@adelaidecitycouncil.com](mailto:scregister@adelaidecitycouncil.com))

If appropriate on-going site contamination monitoring reports must also be submitted to the Register as they occur.

3.3.4 Purchase, Transfer and Divestment of Ownership of Land

The management of site contamination as part of the divestment and/or purchasing process is detailed by legislation. The Guidelines outlined in **Appendices E & F** ensures Council's compliance with these legislative requirements. A person cannot transfer liability for site contamination when disposing of land unless the person follows the procedures prescribed by the EP Act to do so.

3.3.5 EPA Site Contamination Branch Contact:

Phone: 8204 2004

Email: epasitecontam@epa.sa.gov.au

3.3.6 Responsibilities

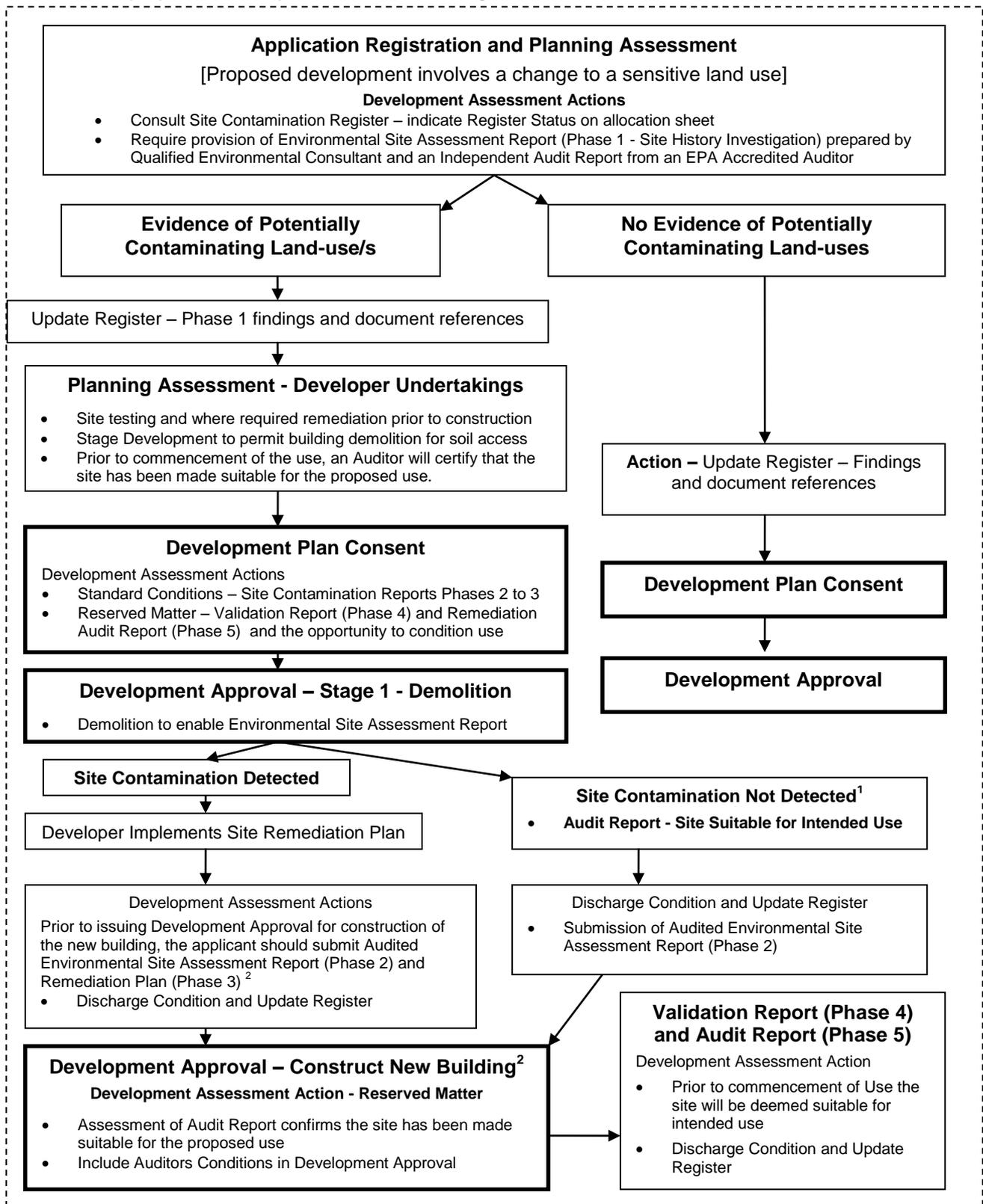
- It is the responsibility of the Project Manager to ensure that all risks associated with site contamination is managed in accordance with the process as outlined in these guidelines.
- It is the responsibility of the Project Manager to ensure the Site Contamination Register is updated with all the relevant documentation at project completion (even if the project is not constructed).
- The Sustainability Advisor is available to provide advice (including technical advice) at any stage during the process.

4. MONITORING AND REVIEW

The effectiveness of this Operating Guideline will be reviewed and evaluated by the Program Manager Sustainable City in October 2016.

APPENDIX A –Guideline for Development Assessment - Private Land

[Where the proposed development involves a change to a sensitive land use]



1. Following receipt of the Site Assessment Report and taking into account the nature of the development proposed (i.e apartments with basement excavation), the Program Manager Development Assessment may determine that a full Site Audit is not required.
2. Subject to the circumstances of the site, proposed development and/or location of identified contamination, stages of Development Approval may be granted prior to receipt of the Phase 2, Phase 3 or full Site Audit Report, where the Program Manager Development Assessment has satisfactory information to assess the likely action required to resolve site contamination.

APPENDIX B



SAFE OPERATING PROCEDURE - IDENTIFICATION AND CONTAINMENT OF SITE CONTAMINATION

Created by: L. Fielke
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Updated by: Original
Last Updated: Original
Update Due: Jan 2016
Trim Ref. ACC2013/73930

AREA: General **JOB TASK:** Identification and containment of a contaminated site

SCOPE:

This SOP is applicable to minor works conducted:

- on land within the Adelaide City Council Local Government Area as described under the [ACC Site Contamination Policy](#) and [ACC Site Contamination Operating Guidelines](#); and/or
- any works which require excavating or removing land.
which may expose staff or the general public to possible or identified contaminants or pollutants.
- Any staff assigning work which involves excavating or removing land are required to identify possible site contamination risk in Dekho prior to commencement of work.

This procedure is to be used in conjunction with any other relevant Operating Manuals, Codes of Practice, Australian Standards, SOPs or training relevant to the task. Update by contacting Team Leader, H&S Rep. and/or in consultation with the WHS Team.

CRITICAL STEPS IN TASK	IDENTIFIED HAZARDS	HAZARD CONTROLS
<p>1. Identifying potential risk</p> <p>1.1. Where site has been identified in Dekho, email the Site Contamination Register (scregister@adelaidecitycouncil.com), to determine the extent and nature of contamination.</p> <p>1.2. Where site is registered in both Dekho and the Site Contamination Register, continue work as per Site Management Plan (SMP) if available.</p> <p>1.3. If a SMP is not available proceed as per the steps listed below.</p>	<ul style="list-style-type: none"> • Exposure to unknown chemicals, toxins, poisons etc • Exposure to exceeded exposure standards eg of chemicals, pollution levels • Environmental and/or ecological damage • Accidental ingestion of pollutants, contaminated particulates or chemicals • Contaminated clothing & equipment 	<ul style="list-style-type: none"> • The Site Contamination Register is kept up to date by authorised personnel.

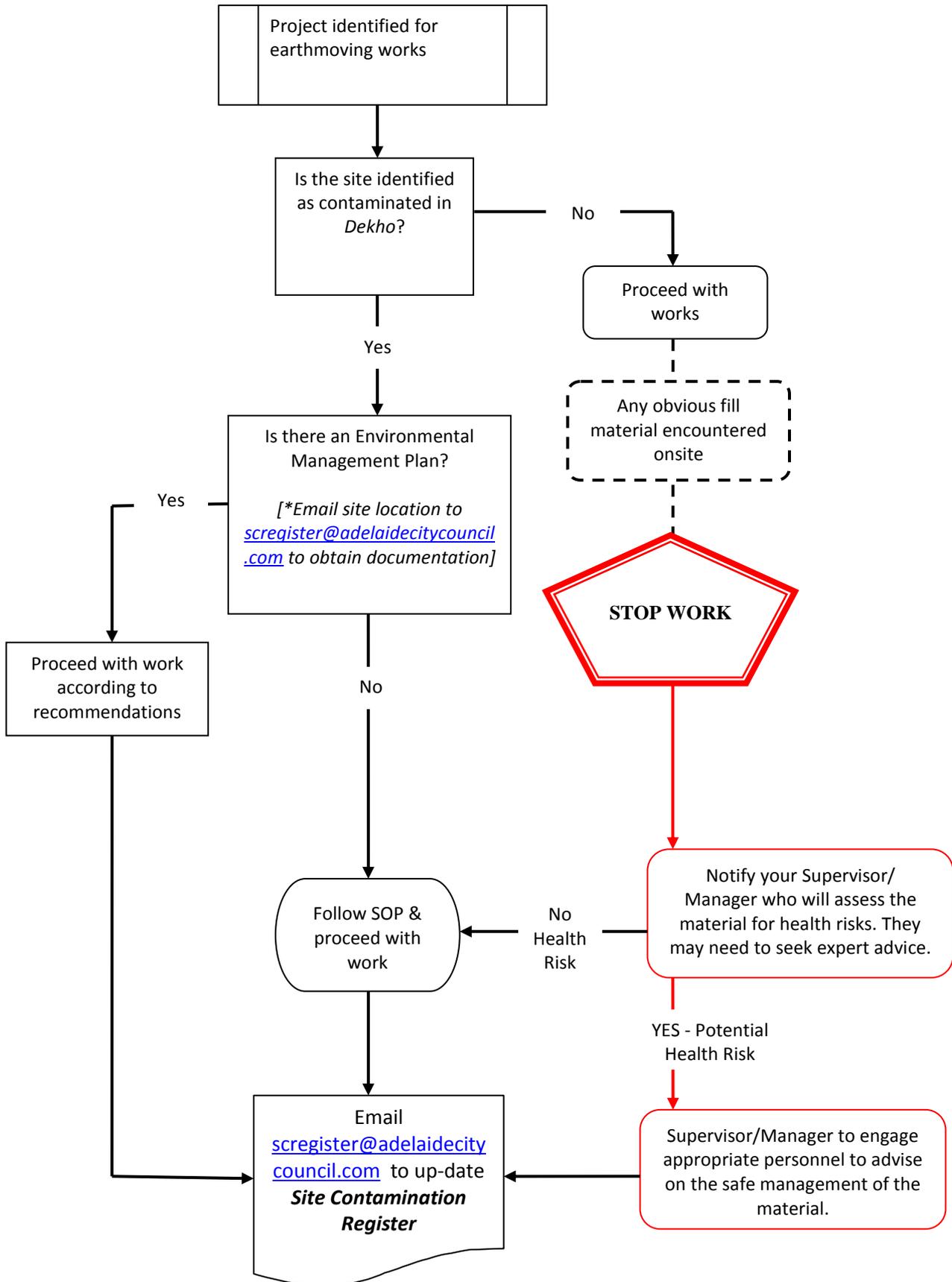
CRITICAL STEPS IN TASK	IDENTIFIED HAZARDS	HAZARD CONTROLS
<p>2. General works maintenance</p> <p>2.1. The work site shall be progressively remediated immediately after completion of sections of work.</p> <p>2.2. No open boreholes or trenches are to remain unattended.</p>	<ul style="list-style-type: none"> Slips, trips and falls 	<ul style="list-style-type: none"> All completed works will be remediated ie holes/trenches etc filled in Any works in progress unattended must be bunted to restrict access and/or covers placed (and secured) over the top of open holes where appropriate.
<p>3. Hygiene standards</p> <p>3.1. Personal hygiene must be maintained at all times prior to eating or drinking to minimise potential risk of accidental ingestion of chemicals or pollutants, contaminated particulates from hand transfer to food or drinking containers.</p>	<ul style="list-style-type: none"> Accidental ingestion of chemicals or pollutants, contaminated particulates 	<ul style="list-style-type: none"> Washing facilities must be accessible on sites including soap or approved cleansing agents.
<p>4. Monitoring of site conditions</p> <p>4.1. Dust – Where there are dusty conditions have been identified control measures must be implemented to control risk. Actions must include the minimisation of dust generation and dermal contact with contaminated soil.</p> <p>3.1.1. Where there has been controls put in place for a contaminated site, PPE must be worn.</p> <p>4.2. General waste – must be attended to at all times by contracted parties, including the tidying of the work site and its surrounding areas affected by the works (as applicable).</p>	<ul style="list-style-type: none"> Inhalation, ingestion and/or exposure to pollutants, contaminated particulates or chemicals 	<ul style="list-style-type: none"> Watering site to control dust particles  <ul style="list-style-type: none"> Use appropriate PPE- <ul style="list-style-type: none"> eg minimum requirement includes nitrile gloves should be used where contamination has been identified; respiratory/dust masks will be selected in line with AS/NZS 1715:2009- <i>Selection, use and maintenance of respiratory protective equipment</i> as required. Work areas should be bunted off to avoid exposure to members of the public and others
<p>5. Removal of contaminated waste</p> <p>5.1. All waste soil must be classified, transported and disposed of off-site in accordance with SA EPA regulations and guidance. Managers/Group Team Leaders must be notified if soil is to be disposed of.</p> <p>5.2. Storage of removed soils must not remain unattended.</p>	<ul style="list-style-type: none"> Inhalation, ingestion and/or exposure to pollutants, contaminated particulates or chemicals 	<ul style="list-style-type: none"> All waste contaminated soils are to be transported, removed and replaced with clean fill.
<p>6. Completion of works</p> <p>6.1. Identify risk of residual contaminant(s) eg ash and bitumen</p>	<ul style="list-style-type: none"> Accidental inhalation, ingestion and/or exposure to pollutants, contaminated 	<ul style="list-style-type: none"> A cover barrier layer is to be constructed and maintained across completed work areas to

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<p>fill-in can contain a range of harmful hydrocarbons. The minimising of further contact or exposure to any residual chemicals or contaminants to staff or the general public on completion of work must be considered.</p> <p>6.2. Site Maintenance</p> <p>5.2.1. Maintenance activities may be necessary periodically where residual contaminants have been identified to ensure the cover remains intact and effective.</p> <p>6.3. Contact with Sustainable City Advisor to up-date Site Contamination Register once works have been completed.</p>	<p>particulates or chemicals</p>	<p>prevent disturbance or contact with the soils at a minimum of 300 mm depth.</p> <ul style="list-style-type: none"> • Site Contamination Register is up-dated.
<p>This SOP was developed in consultation with the WHS Team and members from the Sustainable City Program.</p>		
<p>References</p> <ul style="list-style-type: none"> • South Australian Public Health Act 2011 • Environment Protection Act 1993 • Environment Protection Regulations 2009 • Work Health and Safety Act – SA (2012) • Work Health and safety Regulations – SA (2012) • ACC Site Contamination Policy; • ACC Site Contamination Operating Guidelines; • Corporate Emergency Response Plan 		

ATTACHMENT A to Safe Operating Procedure – Identification and Containment of Site Contamination

CONTAMINATION IDENTIFICATION FLOW

Note: This process is owned by the Sustainable City Program for the purposes of identifying work flow for minor works only.



APPENDIX C – Selecting a Site Contamination Consultant – (OR insert Consultant Panel reference once set up)

Selecting a site contamination consultant should be undertaken with care, as the quality and results of the assessment undertaken is dependent on the competency of the consultant. Selection should be similar to the process used when acquiring any professional service.

The EPA recommends consideration of all of the following to assist in finding an appropriately experienced site contamination consultant:

- contact a company that employs an Auditor accredited by the EPA. To identify these companies, refer to the [Auditor Register](#).
- contact the [South Australian branch of the Australian Contaminated Land Consultants Association \(ACLCA\)](#) for a list of current members on (08) 8243 2505/0409 144 122 or visit their website.
- seek advice from a trusted person who has previously engaged an environmental consultant that successfully demonstrated acceptable standards of competency and completed similar projects.

The outcome of the engagement of a site contamination consultant is the completion of the scope of work, or an agreed amended scope of work, and the issue of a report to the client. The report should be able to sustain technical and public scrutiny.

[Recommendations from:

http://www.epa.sa.gov.au/environmental_info/site_contamination/assessment_and_remediation/selecting_a_consultant]

Tips for managing Site Contamination Consultants:

- To encourage a competitive market between consultants, it is advisable to treat each report/investigation as separate projects and seek quotes/tenders for each item individually.
- Time spent ensuring the consultants have the necessary skills and experience through a thorough check of their work history and even contacting corporations about previous projects to obtain their feedback on the consultant.
- The Sustainability Advisor is available to assist with drafting project specifications and assist in the selection process including assessing consultants through the procurement process.
- Ensure a confidentiality clause between Council and the consultant is in place as part of the contract documentation.
- Ensure that the ownership of the documents rests with Council.

Project Specification Examples:

1. For a Site History Review:

- Provide information on previous site owners and uses obtained from a Land Titles search (Land Titles Office) and from a search under Section 7 of the Land and Business (Sales and Conveyancing) Act 1994 (With both Council and the EPA). Current zoning information should also be reviewed.
- Review details of present and past site owners including dates, occupations and land uses where available.
- Anecdotal information obtained from relevant people with knowledge of the site.
- Aerial photographs (historical and relevant) from the SA Dept of Lands and Heritage (Mapland) and review with respect to changes in land use.
- Review previous geological and hydrogeological information from published data sources.
- Archived information relating to the site.

- Determination of potential contamination issues including identification of potential contaminants of concern based on previous and current land use.

2. For undertaking a Preliminary Site Investigation:

Undertake intrusive investigations in accordance with the National Environment Protection Measure (Assessment of Site Contamination) 1999 and Australian Standard AS4482.1-2005 Guide to sampling and investigation of potentially contaminated soil – Part 1: non-volatile and semi-volatile compounds.

3. Preparing a Remediation Action Plan (RAP)/ Environmental Management Plan (EMP):

Consultants should propose a range of options for the remediation of the site. These options should then be ranked according to benefit/risk and cost.

The RAP should detail the methods, processes and controls of the remediation activities. The EMP should address all public health and environmental management issues.

The findings of the site investigations should determine the most appropriate remediation or management measure, taking into account the specific needs and circumstances of the project. It is important to recognise that the conditions and issues associated with site contamination are different for each site, and should be assessed on a site-specific basis. Careful planning, if completed thoroughly, can result in considerable benefits including financial savings, accurate project schedules, excellent environmental outcomes and achievement of the desired project outcomes.

All plans are expected to provide sufficient detail to demonstrate that the person undertaking the remediation has clearly identified and considered the issues that are likely to occur during the project and how they will manage or mitigate these issues. Such plans should be concise, definite and readily implemented. They should not contain, unless appropriate, words such as 'should', 'could' and 'will consider'. Plans must also take into account the level of understanding of those working with the document on site. All project plans must be achievable and, once work has commenced, fully implemented. The plans should assign responsibility and are to be signed off by the site manager to demonstrate that he or she understands the content and responsibilities of their role as detailed in the plans.

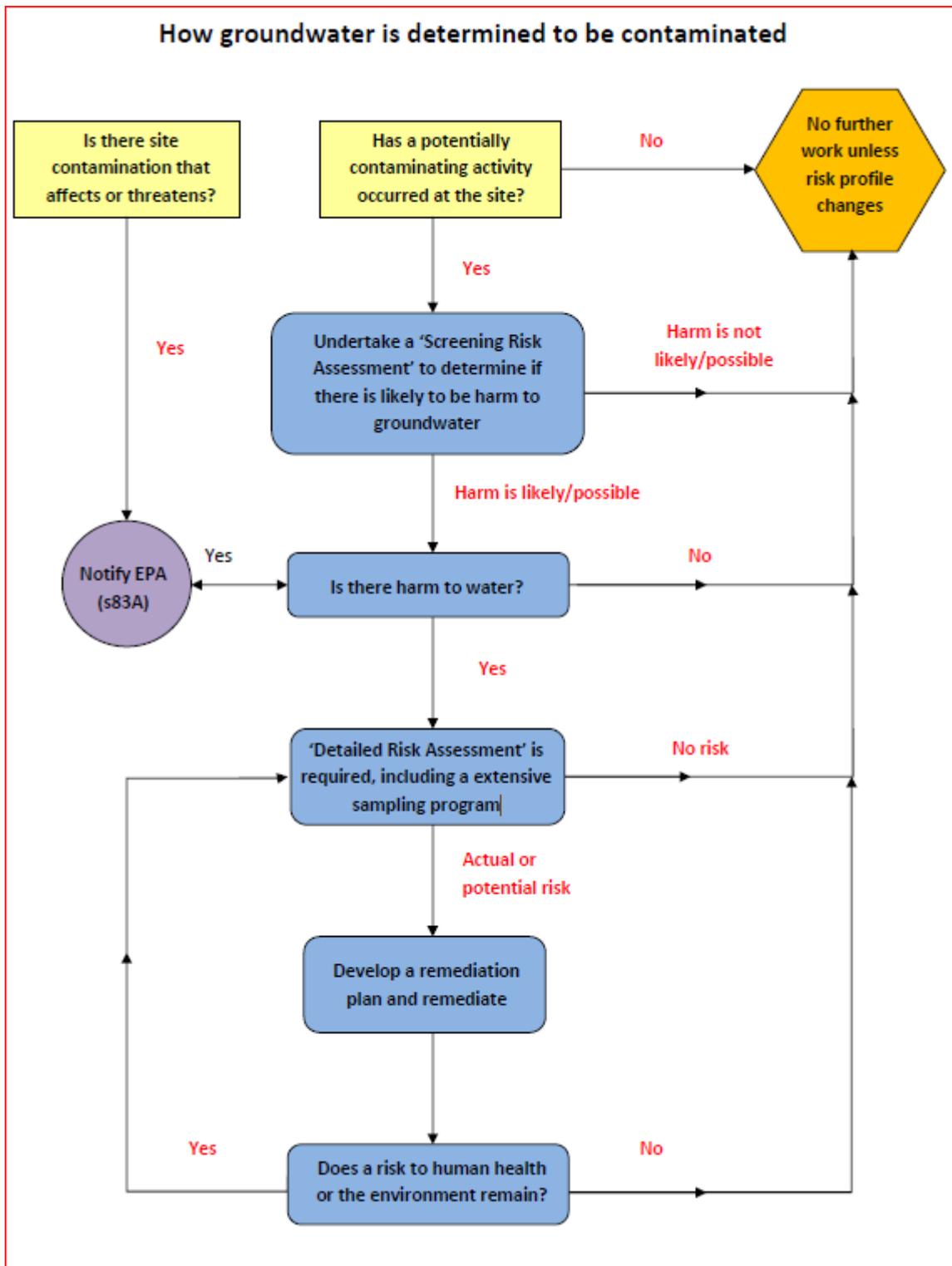
The consultant's report should state that the site assessment has been completed taking into account the Assessment of Site Contamination NEPM. The report must also provide definitive statements that the site, following remediation, does not pose unacceptable risks to human health or the environment, taking into account the intended use(s).

When the consultant's report does not satisfy this, and/or the site has significant contamination issues, taking into account technical, logistical and financial considerations – then the EPA expects that an auditor be engaged to issue an Site Audit Report for the site.

APPENDIX D - Groundwater Assessment Process

[Recommendations taken from: http://www.epa.sa.gov.au/environmental_info/site_contamination/faqs]

Auditor Register - http://www.epa.sa.gov.au/environmental_info/site_contamination/auditor_register



Public health is a paramount consideration at every step in the process and if a risk of harm to people is identified, a community engagement process to inform the potentially affected community is activated immediately.

Step 1

When notified that actual or potential site contamination (soil and groundwater) exists in an area, the EPA's first step is to:

- make a preliminary assessment, particularly to ensure exactly which properties/Certificate of Titles are affected,
- directly advise utilities and local and state government authorities so that they can be aware when planning any excavations in the area, and
- place a copy of the notification on the EPA Public Register, the EPA website and a public notice in the local media to advise that a notification has been received.

The EPA writes to the site owner outlining their responsibilities and obligations and assesses the notification to determine what further action may be needed. It also starts an ongoing dialogue with relevant parties, including [SA Health](#), in determining the level of risk that may be posed to people and the environment. This process continues throughout each of the next steps.

Step 2

Once the potential site contamination has been verified, the EPA needs to ascertain whether the contamination poses a risk to the public. This requires further investigation to determine the nature of the contaminant, such as:

- What are the concentration levels of the chemicals found?
- Are they able or likely to move (ie via groundwater or air)?
- If movement is possible or likely, where might it move to and how quickly?

This assessment is usually conducted by a site contamination consultant or auditor employed by the site owner or developer – who may not have been the person or company who originally caused the contamination.

Step 3

The assessment process typically continues in an outwards direction from the source of contamination to determine its boundary and extent. This may occur in a series of stages, which can take several months for each stage.

It can include a range of activities such as modelling to determine the direction and rate of groundwater flows, as well as drilling of monitoring bores to sample groundwater. This is a complex and specialised process and is only undertaken by qualified professionals. If not done properly, there are risks that the contamination may not be adequately identified, or may be spread further.

Step 4

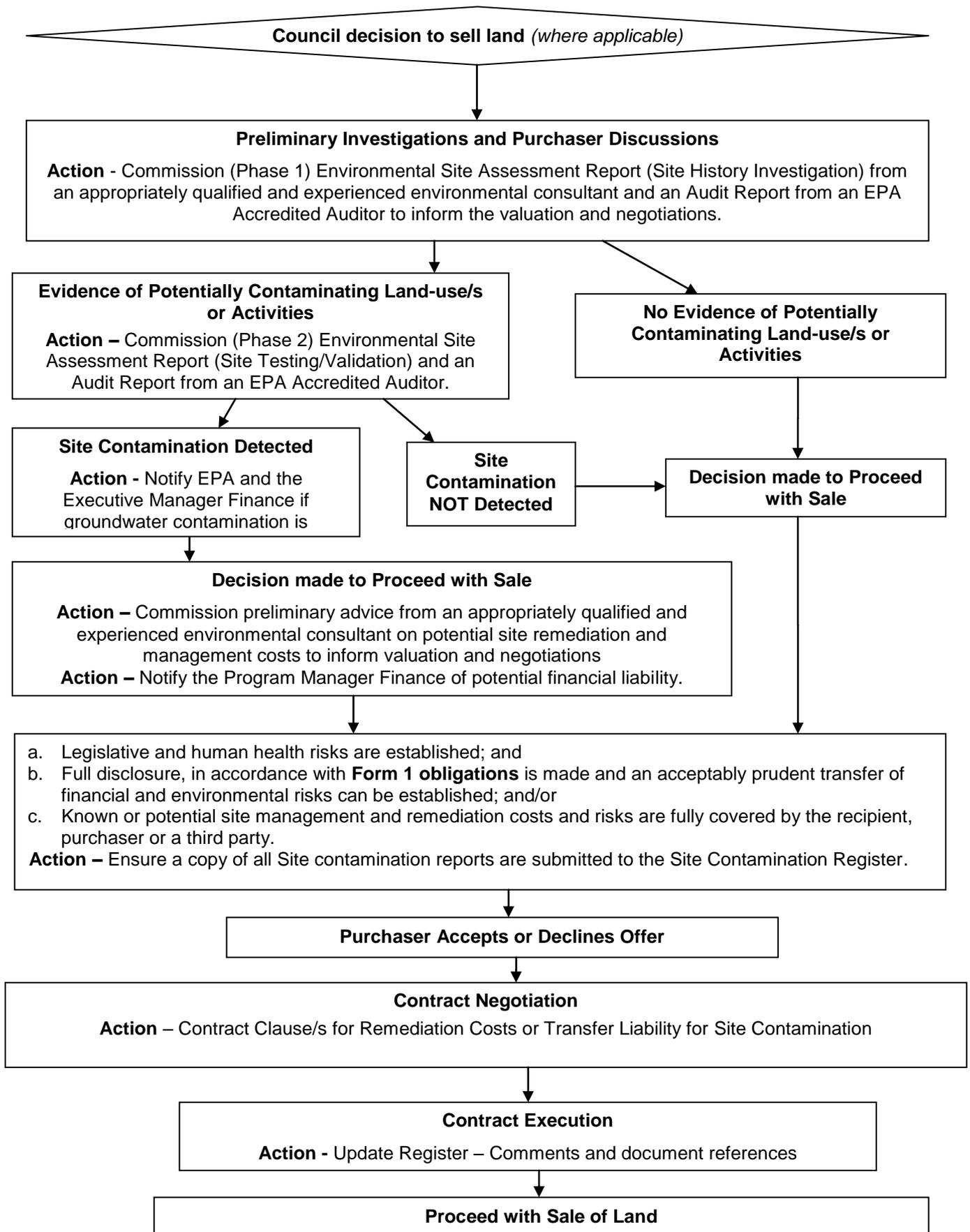
Once the outer boundary of contamination is determined, the EPA considers a management plan with the site owner for managing the now defined contamination. This typically includes ongoing monitoring requirements and independent site audits, implementation of environmental guidelines relevant to the site and codes of practice to which the company must adhere.

If at any stage in the process the EPA becomes aware of test results or other information indicating a potential risk to public health, the EPA consults with [SA Health](#). If real and actual risk to the community has scientific basis, either the responsible party and/or the EPA and/or SA Health communicates directly with affected residents and neighbourhoods.

Step 5

If the results of the assessment indicate that there is a need for further testing inside private homes, then, with the informed consent of the owner and/or occupier, that testing will be conducted by the EPA.

APPENDIX E – Guideline for Council’s Sale, Transfer and Divestment of Ownership of Land



APPENDIX F - Guideline for Council’s Purchase of Land

