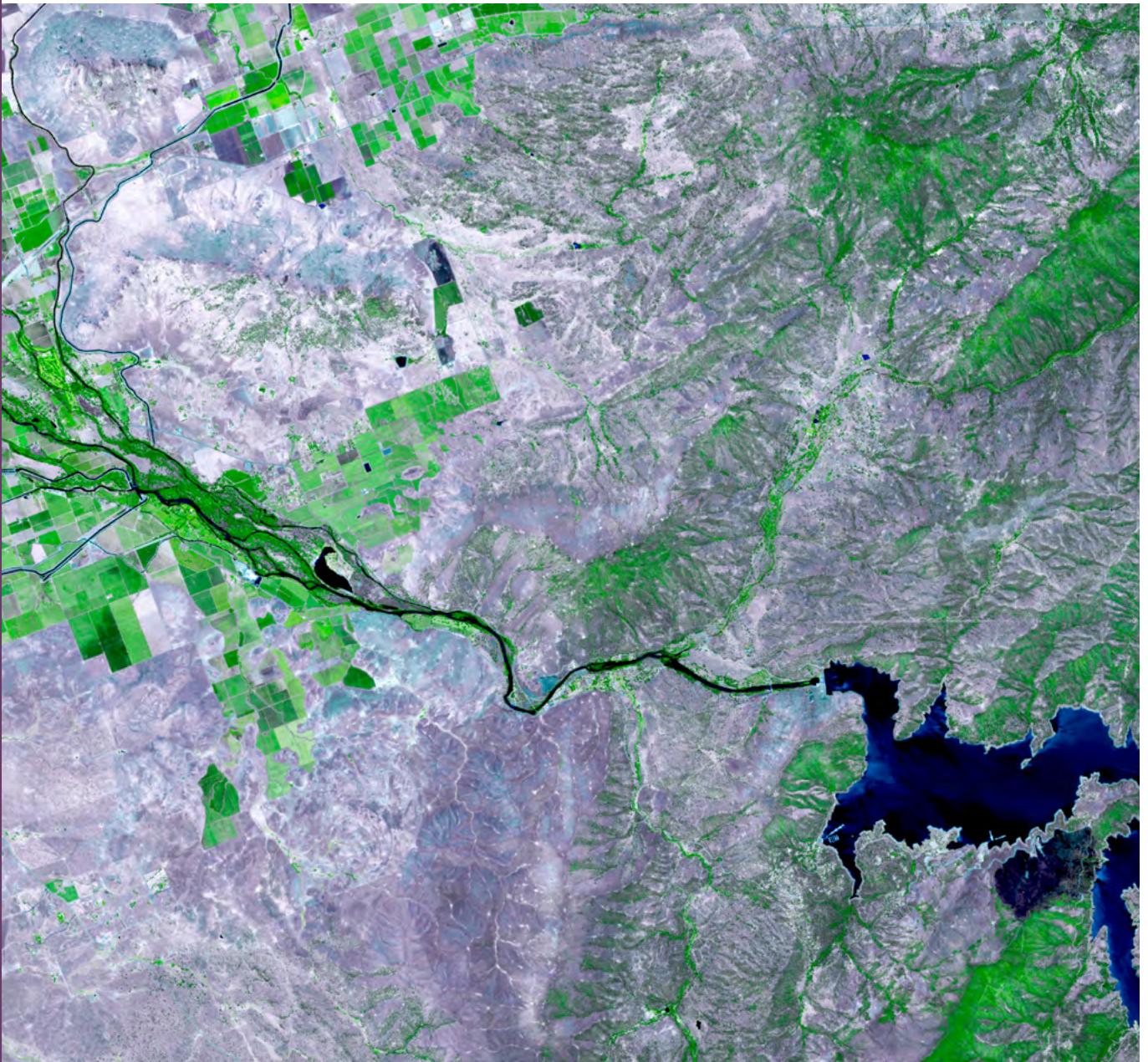




# Developing a Contaminated Land Information System



Regional Contaminated Land Capacity Building Program



**Proudly led by the Councils of the Hunter Region**

**Address for Correspondence**

Hunter Joint Organisation  
4 Sandringham Ave, PO Box 3137, Thornton, NSW 2322  
[rppd@hunterjo.com.au](mailto:rppd@hunterjo.com.au)



**Proudly funded by the  
NSW Government through the EPA's  
Contaminated Land Management Program**



**Acknowledgement of Country**

The Hunter Joint Organisation acknowledges the country and history of the traditional custodians of the lands upon which we work and live. We pay our respects to the Elders past, present and emerging, of our region, and of Australia.

**Disclaimer** - While the Hunter Joint Organisation takes reasonable steps to ensure that the information included in this resource is correct, it provides no warranty or guarantee that information is accurate, complete, or up to date. The Hunter Joint Organisation does not accept any responsibility or liability for any actions taken as a result of, or in reliance on, information included in this publication.

# Contents

<b>Part 1: Introduction</b>	<b>7</b>
1.1 Introduction	7
<b>Part 2: Considerations for the Overarching Information System</b>	<b>11</b>
2.1 Council Services and Functions	11
2.1.1 Initial Review Processes	12
2.1.2 Section 10.7 Certificates	12
2.1.3 Council Works, Activities and Land	14
2.1.4 Risk Assessment, Ranking and High Risk Areas	14
2.2 Governance and Management	17
2.3 Community Engagement and Communication	20
2.4 Links with Other Corporate Systems	21
2.5 Quality Control / Quality Assurance	21
<b>Part 3: Developing the Register</b>	<b>23</b>
3.1 Register Structure	24
3.1.1 Property Information Systems	24
3.1.2 Mapping Systems	24
3.1.3 Records Management System	25
3.2 Information Sources	25
3.2.1 Data Acquisition	25
3.3 Information Fields	26
3.3.1 Site Management Attributes	26
3.3.2 Contaminated Land Categories	27
3.3.3 Sites Regulated by the NSW EPA under the Contaminated Land Management Act 1997	31
3.3.4 Sites Notified to the NSW EPA under the Contaminated Land Management Act 1997	31
3.3.5 Sites Regulated under the Protection of the Environment Operations Act 1997	32
3.3.6 Stage in the Contaminated Land Process Life Cycle	32
3.3.7 Ongoing Management, Compliance Monitoring, and Restrictions	33
3.3.8 Contaminated Land Documents	33
3.3.9 Duty to Report Contamination	34
3.3.10 Underground Petroleum Storage Systems	34
3.4 Naming the Register	35
3.5 Further Considerations	35
<b>Part 4: Appendices</b>	<b>37</b>
Appendix A: Key Terms and Acronyms	37
Appendix B: Checklist - Planning for a Contaminated Land Information System	42
Appendix C: Contamination Land Database Information Request (Land-use Planning)	43
Appendix D: Potential Work Flows	44
Appendix E: Site Management Attributes List	47

# Foreword

The appropriate management of contaminated land is important to protect human health and the environment. Since contaminated land can restrict the development and certain uses of land it has economic, legal and planning implications for the community and for regulatory authorities.

In accordance with the Environmental Planning and Assessment Act 1979, Council as a planning authority is exempt from liability associated with contaminated land for anything done or omitted to be done in “good faith”, which is defined as acting substantially in accordance with the contaminated land planning guidelines. The development and maintenance of a corporate Contaminated Land Information System is one of the primary tools through which Councils can ensure they act in “good faith” by gathering and providing information to relevant stakeholders, and ultimately protect the health of its community and the environment.

This purpose of this Guide is to:

- Provide guidance to Councils when designing, implementing and maintaining a Contaminated Land Information System
- Define the various functions that the system must provide (both statutory and practical)
- Identify the nature of contamination information to be included in the system
- Provide a suggested contaminated sites categorisation system and associated criteria
- Inform procedures for the systematic handling and management of information by Council staff; and
- Discuss a quality assurance process for a corporate Contaminated Land Information System

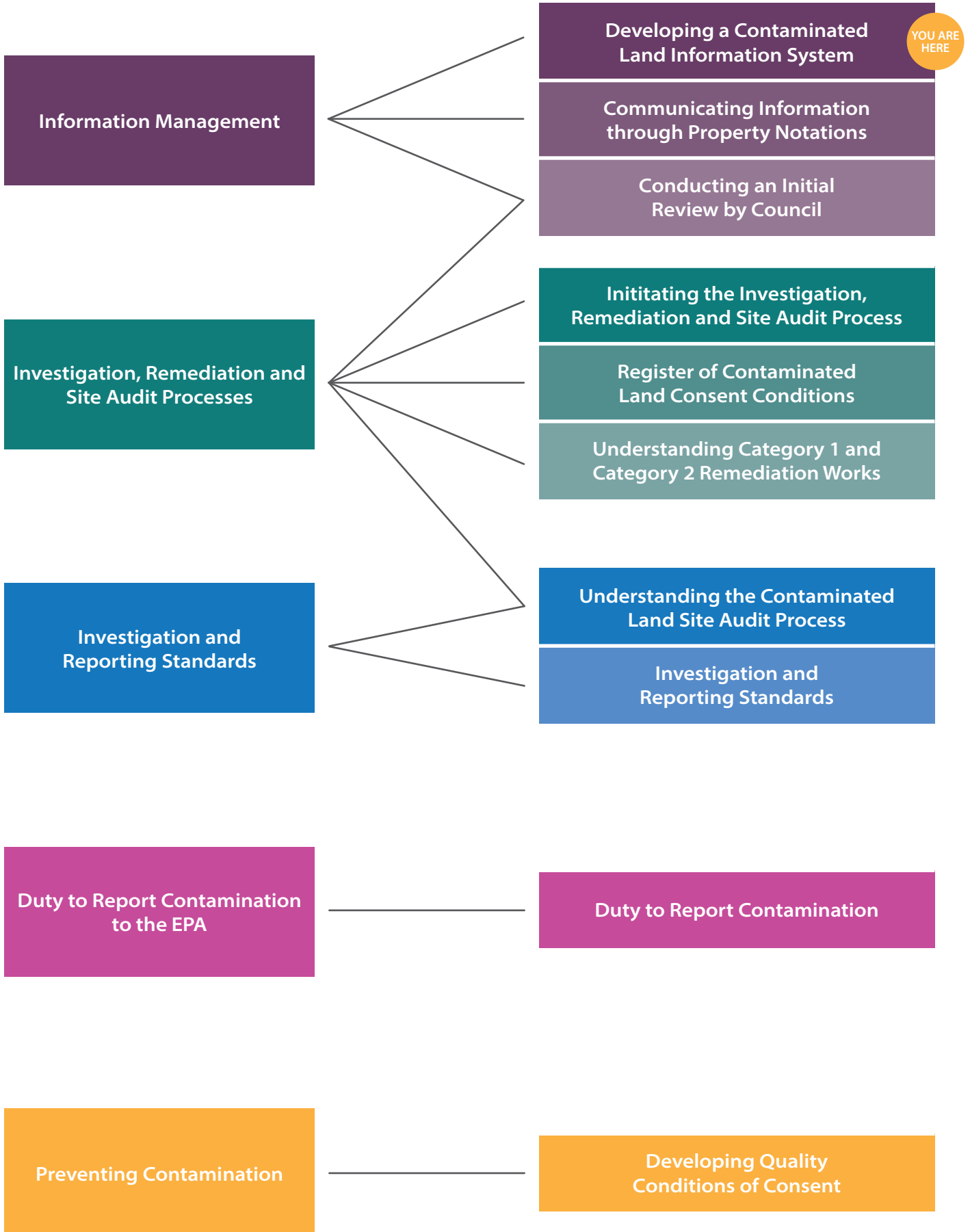
This Guide has been developed collaboratively with staff from Councils participating in the Contaminated Land Council Regional Capacity Building Program (Hunter region and Central Coast).

The Guide forms part of a series of guides and resources, developed as supporting documents to the Model Regional Contaminated Land Policy – Land Use Planning (Hunter Joint Organisation, 2023). [Figure 1](#) presents this Guide in the context of the document series.

**Advisory notes are included in these boxes to provide greater clarity and direction to staff when adapting and implementing a Contaminated Land Information System.**

## Focus Areas

## Supporting Resources and Guides





# Part One

## Part 1: Introduction

7

### 1.1 Introduction

7

# Introduction

Council has an important role in managing risks associated with contaminated land. When making planning decisions, managing contamination on Council land, supplying the community with information regarding land use history, land contamination, site restrictions, and remediation activities, the systematic management of available information is essential to ensure accurate and up to date information can be readily accessed. The development and maintenance of a corporate Contaminated Land Information System is the primary means through which to achieve this.

A corporate Contaminated Land Information System considering the factors outlined in this Guide will support Council to meet its statutory and policy obligations for managing contaminated land, and assist Councils to act in good faith when making decisions based on the information included in the system.

From a practical perspective, having information readily accessible and organised will reduce both the time needed for Council staff when seeking information about a site, and the likelihood for errors and omissions in decision making due to absent, inaccurate or out of date contaminated land information.

Key statutory functions and responsibilities that are directly supported by a Contaminated Land Information System are identified in [Table 1](#).

**Table 1. Key Statutory Functions and Responsibilities supported by a Contaminated Land Information System**

Legislation / Policy	Council Function
<i>Contaminated Land Management Act 1997</i> (Section 59)	Information provided to Council by either the NSW EPA or Accredited Auditors must be noted on certificates issued for the purposes of s10.7 of the Environmental Planning and Assessment Act 1979.
<i>Environmental Planning and Assessment Regulation 2021</i> (Schedule 2)	Council must include on certificates issued for the purposes of s10.7 of the Environmental Planning and Assessment Act 1979, whether there is a policy adopted by Council or any other public authority that restricts the development of the land, in this case due to actual or potential contamination.
<i>Environmental Planning and Assessment Act 1979</i> (Section 145)	Outlines the “good faith exemption”. This exempts Council of liability if they have acted in good faith, which is defined as acting substantially in accordance with the contaminated land planning guidelines. In the context of providing information, Council must show that there is a real attempt to manage and access records when demonstrating it has acted in good faith (reflected in case law: <i>Mid Density Developments Pty Ltd v Rockdale Municipal Council</i> [1993] FCA 408). Systematic failure of an information management system can also prevent Council from being exempt from liability (reflected in case law: <i>Port Stephens Council v Booth and Ors</i> [2005] NSWCA 323). Hence, it is not just important to have a Contaminated Land Information System in place, but to ensure that the system is maintained and used consistently and correctly.

Legislation / Policy	Council Function
<p><i>Government Information (Public Access) Act 2009</i></p>	<p>Requires Councils to provide information held in the Contaminated Land Information System to the public, including making publicly available and free of charge land contamination consultant's reports filed in the system. The types of information release defined by the Act include:</p> <ol style="list-style-type: none"> <li>1. Mandatory proactive release – Council must make public certain information free of charge. This includes information specified in schedule 1 of the NSW Government Information (Public Access) Regulation 2009, which includes information submitted with a development application that specifically includes "land contamination consultant's reports". As such, the following documents, if submitted with a development application, may be "open access documents": <ul style="list-style-type: none"> <li>• Site investigation reports (including preliminary investigation reports, detailed investigation reports, remedial action plans, validation and site monitoring reports) or any other contamination assessment reports</li> <li>• Site audit reports</li> <li>• Site audit statements</li> </ul> </li> <li>2. Authorised proactive release – a Council may choose to make information available (s7). In these circumstances a Council could decide to make reports including site investigation reports, site audit reports and statements, or any other contamination assessment reports (other than those already publicly available because they were submitted with a development application) publicly available as "open access documents". However, s7 provides that such a decision may only be made by, or with the authority of the General Manager</li> <li>3. Informal release – information can be released informally upon request.</li> <li>4. Formal access application – information can be released subject to a formal access application.</li> </ol>
<p><i>Managing Land Contamination: Planning Guidelines 1998 (Section 5)</i></p>	<p>Provides guidance on the recording and use of contaminated land information in an information management system.</p>
<p>Model Regional Contaminated Land Policy – Land Use Planning (Hunter Joint Organisation, 2023):</p>	<p>Includes the policy statement:  <i>"Council will develop and maintain a Contaminated Land Information System to facilitate compliance with statutory obligations, support its planning functions, and provide relevant and accurate information on contaminated land to the community in accordance with the NSW Government Information (Public Access) Act 2009"</i></p>
<p><i>Civil Liability Act 2000</i></p>	<p>The Act outlines principles for the Duty of Care, and for breaches of statutory duty (e.g. considerations when issuing s10.7 certificates). The Act operates to limit a Council's liability according to the financial and other resources available to it. Accordingly, if a Council implements and maintains an information management system which is commensurate with the size and resources of that Council, it is likely that this defence would be available to it to avoid liability.</p>



It is important when developing a Contaminated Land Information System to recognise that it is more than just a list or “register” of sites that are known to be contaminated or potentially contaminated. The upfront consideration of what Council functions the system will service, the appropriate governance framework for your Council, community consultation needed, means of embedding the system into the relevant Council workflows, and the practical details of the register itself will support a tailored approach that will ultimately save time, improve decision making, and reduce risks to Council and the community. This Guide separates the overall considerations for the information system and the more practical considerations for the registers in two sections, as described in [Table 2](#). A version of [Table 2](#) has also been included as a checklist in [Appendix B](#) for Councils to use in the planning and set-up of a Contaminated Land Information System.

**Table 2. Summary of Considerations for a Contaminated Land Information System**

Planning for a Contaminated Land Information System		
Consideration	Description	More Information
<b>Considerations for the Overarching Information System</b>		
Council services and functions	Consider the Council services and functions the system should support, such as: <ul style="list-style-type: none"> <li>• Initial Review Processes for planning and development</li> <li>• Section 10.7 Certificates</li> <li>• Council works, activities and land</li> <li>• Risk assessment, ranking and high-risk areas</li> </ul>	Sec. 2.1
Governance and management	Consider the governance structure, roles and responsibilities, resources, and work flows.	Sec. 2.2
Community engagement and communication	Consider the potential impacts on community and the engagement and communication needed. Consider Council and external resources to undertake the work.	Sec. 2.3
Links with other corporate systems	Consider other related and dependent corporate systems and how to link them.	Sec. 2.4
Quality control / quality assurance	Consider the data quality and how it will be assessed and maintained.	Sec. 2.5
<b>Developing the Register</b>		
Register structure	Define the structure of the register and how it is distributed over Council systems such as: <ul style="list-style-type: none"> <li>• Property Information Systems</li> <li>• Mapping System</li> <li>• Records Management System</li> </ul>	Sec. 3.1
Information sources	Identify what sources of data will be sought and how it will be resourced	Sec. 3.2
Information fields	Identify what fields of information need to be included in your register based on the functions it will serve, and the decisions it will support	Sec. 3.3



# Part Two

## Part 2: Considerations for the Overarching Information System

11

2.1 Council Services and Functions	11
2.1.1 Initial Review Processes	12
2.1.2 Section 10.7 Certificates	12
2.1.3 Council Works, Activities and Land	14
2.1.4 Risk Assessment, Ranking and High Risk Areas	14
2.2 Governance and Management	17
2.3 Community Engagement and Communication	20
2.4 Links with Other Corporate Systems	21
2.5 Quality Control / Quality Assurance	21

# Considerations for the Overarching Information System

This section outlines considerations for the overarching information system. It provides discussion and examples around what areas of the Council the system should service, what the governance system and workflow would look like, how community information and engagement can be undertaken, what other Council systems are related to it, and what type of quality control can be applied to it.

## ADVISORY NOTES:

The nature and extent of the Contaminated Land Information Management System to be established by a Council should be clearly defined and documented. It should reflect the organisation's capacity to develop and maintain such a system.



## 2.1 Council Services and Functions

Upfront consideration of what areas and functions of Council the system should service will save time and potential re-engineering of the system later. Some potential functions are outlined in this section for consideration:

- Initial review for the land use planning process
- Information for 10.7 certificates
- Council works, activities and land
- Risk assessments

The responsibility within Councils for these functions may be distributed over several areas such as:

- Land use planning
- Environmental management, health and compliance
- Customer service
- Community land management
- Council land management
- Asset and infrastructure management
- Waste management
- Section 10.7 notifications

### 2.1.1 Initial Review Processes

When carrying out planning functions under the Environmental Planning and Assessment Act 1979, Council must consider the possibility that the previous and/or current land uses, and/or a nearby land use, has caused contamination of the site, and the potential risk to human health and the environment from that contamination. Council does this by undertaking an initial review for all land use planning applications (as required by SEPP (Resilience and Hazards)) and based on that determines whether further information is required for Council to conduct its planning functions in good faith. The Initial Review process is further described in Conducting an Initial Review by Council (Hunter Joint Organisation, 2023), which includes a checklist for site visits.

#### SYSTEM REQUIREMENTS:

The Contaminated Land Information System is to inform the land use planning process by providing available information to land use planning staff during the Initial Review, and ensure that information obtained through the process can be appropriately stored and be easily accessed.

This can be achieved by allowing viewing access of the register to relevant staff, or by establishing “information request” workflows which are sent to the Contaminated Land Information System Manager. Where further information, general interpretation or guidance is required it is beneficial for staff to utilise consistent request templates, such as that found within [Appendix C](#).



### 2.1.2 Section 10.7 Certificates

Planning Certificates are issued in accordance with Section 10.7 of the Environmental Planning & Assessment Act 1979. The s10.7 Certificates are used by Council to notify the public (on request) where restrictions apply to land due to the known or potential presence of contamination. Notifications included in s10.7 planning certificates do not in themselves restrict the use of lands, but are there to notify the reader that restrictions apply.

The requirements of information, both statutory and recommended, to be included on s10.7 certificates is presented in the Model Contaminated Land Policy – Land Use Planning (Hunter Joint Organisation, 2023), with further detail presented in the guide Communicating Information through Property Notations (Hunter Joint Organisation, 2023). Recommended standard property notations are also provided within those documents. Information to include, as per regulatory requirements, and recommendations in the Model Contaminated Land Policy – Land Use Planning (Hunter Joint Organisation, 2023), are presented in [Table 3](#).

**Table 3. Information included on 10.7 certificates**

Planning Certificate	Information to be included
10.7(2)	<ul style="list-style-type: none"> <li>• Information on matters prescribed under Section 59(2) of the Contaminated Land Management Act 1997 that are relevant to the property</li> <li>• Whether any adopted policy of Council or any other public authority restricts the development of the land (the subject of the certificate) because of the likelihood of any risk of contamination</li> </ul>
10.7(5)	<ul style="list-style-type: none"> <li>• Information that is provided to Councils by the NSW EPA in accordance with s58 of the Contaminated Land Management Act 1997, that is not already included in a s10.7(2) Planning Certificate</li> <li>• If Council is aware that a site has been notified to the NSW EPA under S.60 of the Contaminated Land Management Act 1997, but is currently in various stages of being reviewed by the NSW EPA to assess if the contamination is significant enough to warrant regulation, information should be included to this effect.</li> <li>• Where Council has a Contaminated Land Information Management System in place, the following additional information included in the system will be provided on Section 10.7(5) Planning Certificates:               <ul style="list-style-type: none"> <li>- Contamination category (if adopted)</li> <li>- Any activities listed in <a href="#">Table 1</a> of the Planning Guidelines that Council records show have occurred on the land</li> <li>- Any information to Council's knowledge, that indicates the property may be affected by emerging contaminants or contaminating activities of concern</li> <li>- References to any site investigations included in the register</li> <li>- Any notifications of remediation</li> </ul> </li> </ul>

**SYSTEM REQUIREMENTS:**

Information recorded in the Contaminated Land Information Register can be categorised so that relevant information (see Table 3) is directly transferable for reporting on both s 10.7(2) and 10.7(5) Certificates. This will maximise accuracy, consistency and efficiency in managing and communicating contaminated land information by Council.



### 2.1.3 Council Works, Activities and Land

Council has a responsibility to appropriately manage contamination on land it either owns or operates on. The Contaminated Land Information Register can be set up in a way that assists Council perform this task. Identifying known and potential contamination on Council land can assist in land portfolio management as well as a quick check for maintenance staff regarding the type and severity of contamination.

Unexpected finds can lead to dramatic changes to a project's timeline and budget, and could often be avoided through an initial review process based on a functional information system including current and historical land uses and activities, and any identified contamination. Based on the information, staff can identify the need for adjusting scopes of works or requesting additional funds proactively.

Hunter JO has produced a Model Contaminated Land Management Plan (Hunter Joint Organisation, 2018), and the Hunter JO Contaminated Land Risk Assessment Tool, 2019 to assist Councils in the management of their owned and managed land.

#### SYSTEM REQUIREMENTS:

There are a few considerations for the register to support this application:

- Allow Council to obtain a list of all its owned and managed Sites
- Allow Council to obtain lists of its sites with similar potential or actual contamination history
- It is beneficial to link to, or include, a contamination risk assessment and risk ranking system where Council has it in place
- Allow access to relevant information for Council staff maintaining the Sites, such as restrictions on access or personal protective equipment needed when working at the Site
- Allow Council to see where in the Contaminated Land Process the site is up to
- Allow Council to enter and search information relating to other potential stakeholder or reliable parties for the contamination.



### 2.1.4 Risk Assessment, Ranking and High-Risk Areas

During the process of establishing a Contaminated Land Information System, Council may identify areas of high risk based on potentially contaminating history and sensitive land uses. This will be particularly likely in the set-up stages of the Contaminated Land Information System since information not previously identified may be obtained.

Council may have risk assessment tools in place that can be linked to the Contaminated Land Information System. Layers in GIS may also provide support in risk ranking, such as flooding potential, bushfire risk, environmentally sensitive areas, or areas where groundwater is used as a potable water source.

For proactive management (of Council owned and managed land in particular), Council may wish to determine the risk ranking of a potentially contaminated site by identifying potential sources, pathways, receptors and impacts of contamination on the site. Further information around the management of Council's land portfolio, and a tool for risk assessment can be found in Model Contaminated Land Management Plan (Hunter Joint Organisation, 2018), and the Hunter JO Contaminated Land Risk Assessment Tool, 2019. [Table 4](#) provides a summary of the considerations from the risk assessment tool.

Risk ranking, in particular for Council owned and managed land, is a way to prioritise resourcing and funding. It can also allow Councils to identify sites where contamination is likely to be significant enough to warrant regulation by the NSW EPA. A list of such sites can then be discussed with the EPA to decide on the appropriate approach.

**Table 4. Pathways, receptors and impacts of contamination on potentially contaminated sites**

Risk	Queries
<b>Safety</b>	Is the site secure?
	Are site users frequently exposed to soils?
	Do people consume things grown on the site?
<b>Environmental</b>	Is there surface water present? (on or adjacent to the site)
	Is groundwater extracted and used? (on or adjacent to the site)
	Are there any known sensitive flora/fauna/ecological communities? (on or adjacent to the site)
<b>Reputational</b>	Is there known public interest in the site/ or likely future public interest?
	Is the site poorly maintained (aesthetics)?
	Is there any political interest in the site?
	Is the site in a densely populated area?
<b>Compliance</b>	Is the site currently or formerly regulated under the CLM act or POEO Act?
	Have any regulatory notices been issued in relation to the site?
	Is there any regulator interest in the site?
<b>Service Delivery</b>	Is the site of operational importance to Council?

**SYSTEM REQUIREMENTS:**

- The Contaminated Land Information Register can link to, or include, a risk assessment and ranking tool
- The Contaminated Land Information Register can include a field identifying the risk rating for the site.







## 2.2 Governance and Management

Establishing governance and management for the Contaminated Land Information System can ensure that information held is consistently managed, accessible to, and applied across the functional areas involved (examples outlined in [Section 2.1](#)).

Given the broad corporate reach and application of any Contaminated Land Information System, it is recommended that the first step in establishing an Information System is to engage broadly with staff across Council and New South Wales State Government (EPA and Department of Primary Industries) to identify and confirm:

- The type, quality and currency of contaminated land information already held by staff or agencies, or to which they require access (e.g. sites with notification under CLM Act, 1997 and suspected cattle tick dip sites)
- Existing systems for managing, recording, applying and communicating contaminated land information
- Quality Assurance Processes - who will be responsible for verifying and/or entering information to be included in the system (e.g. a single officer or multiple user access) and at what frequency will quality control measures be actioned
- The frequency and processes for updating information included in the system (e.g. will it be ongoing or completed on agreed periodic basis)
- Corporate responsibilities for ongoing maintenance and updating of information generated across different Council functional areas
- Preferred technology platforms / corporate systems for managing information, including active links between them (e.g. Property Information system, document management system, and GIS systems) to ensure each one reflects current knowledge in accordance with Council records
- The opportunity or need for further investigation works to be undertaken

[Table 5](#) provides examples of those roles and responsibilities who may typically need to be included in the design process, noting that these may vary between Councils. Examples of how some of these roles may interact under different circumstances are included in [Appendix D](#).

**Table 5. Examples of Roles and Responsibilities in Developing and Maintaining the Contaminated Land Information Management System**

Role	Responsibility
<b>Executive Management Sponsor</b>	Responsible for: <ul style="list-style-type: none"> <li>• Providing executive management support for development and implementation of the Contaminated Land Information System</li> <li>• Liaising with executive management team to ensure responsibilities of all Councils division and departments are complied with</li> <li>• Providing senior management support and guidance to staff involved in designing and maintaining the Information System</li> </ul>
<b>Contaminated Land Information System Manager</b>	Responsible for: <ul style="list-style-type: none"> <li>• Overall management of the Contaminated Land Information Management System</li> <li>• Provide change management, or define the need for a change manager</li> <li>• Entering data in the Contaminated Land Register and deciding on the appropriate category of a site</li> <li>• Entering spatial data into GIS mapping tool to delineate known contamination on Council sites (with assistance from GIS officer)</li> <li>• Ensuring Council staff are trained in using the system to obtain information, and know when to provide information for input to the system</li> <li>• System changes, if needed, to reflect updates in legislation and guidance</li> </ul>
<b>IT Officer</b>	Responsible for: <ul style="list-style-type: none"> <li>• Setting up and maintaining the register functions</li> <li>• Ensuring it is set up in collaboration with the GIS officer to allow for direct links between corporate information systems</li> <li>• Ongoing maintenance and quality control of IT issues and amendments of the system when needed</li> </ul>
<b>GIS Officer</b>	Responsible for: <ul style="list-style-type: none"> <li>• Ensuring the register is set up with consideration of direct links to the GIS system.</li> <li>• Maintenance of the GIS system, regular quality control audits and amendments when needed.</li> <li>• Provision of mapping tool allowing for delineated contamination to be displayed on GIS system</li> <li>• Entering spatial data into GIS mapping tool to delineate known contamination on Council sites</li> </ul>
<b>Audit Officer</b>	Responsible for regular quality controls and audits of the system
<b>Customer Service staff</b>	Responsible for: <ul style="list-style-type: none"> <li>• Reporting relevant data to the appropriate staff member</li> <li>• Capturing appropriate customer data and issuing response request to appropriate staff member</li> <li>• Communicating information in response to customer requests</li> </ul> NB it is recommended that feedback be communicated back via the Contaminated Land Information System Manager

<b>Environmental Health and Compliance Officers / Rangers</b>	Responsible for: <ul style="list-style-type: none"> <li>Reporting relevant data to the Contaminated Land Information System Manager</li> <li>Using the system to inform themselves of any contamination issues that could create a risk in or from their work</li> </ul>
<b>Development and Strategic Planners Assessors</b>	Responsible for: <ul style="list-style-type: none"> <li>Accurately using the register or engaging the Contamination Land Information Manager to retrieve relevant information for the Initial Reviews</li> <li>Providing information from their initial review (including site visits) and from the planning process, to the Contaminated Land Information System Manager for input to the register</li> </ul>
<b>Re-zoning Officers</b>	
<b>10.7 Certificate Officer</b>	Responsible for the accurate use of the register to provide information on s10.7(2) and s10.7(5) certificates
<b>Risk Management</b>	Responsible for ensuring that the risk to Council is adequately considered in accordance with their Corporate Risk Management Systems
<b>Compliance Auditors</b>	Responsible for: <ul style="list-style-type: none"> <li>Accurately using the register to retrieve relevant information for a compliance audit</li> <li>Providing information relating to the nature and frequency of audits, including any documents outlining the requirements, and information from their audits, to the Contaminated Land Information System Manager for input to the register</li> </ul>
<b>Building Inspectors</b>	Responsible for: <ul style="list-style-type: none"> <li>Reporting relevant data to the Contaminated Land Information Manager</li> <li>Using the system to inform themselves of any contamination issues that could create a risk in or from their work</li> </ul>
<b>Asset / Waste / Community Land Management</b>	Responsible for: <ul style="list-style-type: none"> <li>Reporting relevant data to the Contaminated Land Information Manager</li> <li>Using the system to inform themselves of any contamination issues that could create a risk in or from their work</li> </ul>
<b>Contaminated Land Specialist</b>	Assist in the interpretation of data, and categorisation of sites when needed
<b>Corporate Communications / Community Engagement Officer</b>	Responsible for: <ul style="list-style-type: none"> <li>A stakeholder engagement strategy</li> <li>Sending notifications to land owners and other relevant people that could be affected (if any) where land is included in the register in a way that could restrict the development of their land</li> <li>Be the contact for any calls or concerns resulting from the notifications, or define a suitable person for the task</li> </ul>
<b>External Support (e.g. NSW EPA, Department of Land)</b>	Assist, where needed, in the decisions relating to contaminated land information

## 2.3 Community Engagement and Communication

When creating a Contaminated Land Information System for the first time, or updating an existing system, it can result in a significant increase in the number of properties registered as contaminated or potentially contaminated, in some cases by orders of magnitude. In many cases this may also represent the first time that a property owner becomes aware that their property is potentially affected by contamination and accompanying development constraints or health risks. This can lead to angst and outrage, both at an individual and potentially broader community and political levels.

To avoid community anxiety or outrage, and to reduce the significant impact on Council resources that this typically generates, it is recommended that a strategic approach to engaging affected landowners, other affected people including occupants and the polluter, and the broader community in general be developed and implemented when establishing a Contaminated Land Information System.

This process can include developing a Stakeholder Engagement Plan that identifies staff responsible for the notification and engagement process, resource requirements, the nature and format of information to be provided, the approach, and the timing of consultation activities. The Plan should also include links and information sharing with other government organisations, such as NSW EPA and Crown Lands, and consider the potential need to use external communications or contaminated land specialists where this expertise is not available in-house.

The need for stakeholder engagement is reinforced by the fact that while there is no legislative requirement for Council to even inform a landowner of their properties inclusion in a Contaminated Land Information System, it may be possible for a landowner to argue that the Council acted negligently or possibly that it did not offer procedural fairness if they are not notified of the inclusion. Notifying the landowner provides the opportunity for them to establish that the land is not contaminated and therefore should not be included, or alternatively, to manage or undertake remediation of the land prior to selling at some point in the future.

**The Model Contaminated Land Policy** – Land Use Planning (Hunter Joint Organisation, 2023), also states that inclusion of a property in the Contaminated Land Information Register in a way that has the potential to restrict the development of the land, should be notified to the landowner.

When notifying landowners of their properties inclusion in a Contaminated Land Information System, it is recommended that the following information be provided at a minimum: Introduction to the Contaminated Land Information System and what the inclusion of a property on the system means

- Category in the system (if applicable)
- Criteria for the categorisation
- Reason for the applied category
- Any restrictions if applicable
- Details of how to get further information
- Details of how to investigate contamination, if needed

Should Council decide to send notification letters, these could be sent as a notice of intent prior to the inclusion, giving the landowner a chance to investigate and respond, or as information once included.

## 2.4 Links with Other Corporate Systems

It is beneficial to establish any links to other corporate systems in the planning stage, and define if the systems need to interact. These systems may include a risk management system, health and safety system, asset management system etc.

## 2.5 Quality Control / Quality Assurance

Quality control and assurance are important considerations for information management. Defined data quality control and quality assurance procedures supports a high quality system. Contamination is often dynamic in nature, both naturally and through management actions, and as such, the accuracy of information in the register relies on information continuously being updated. The following objectives can be considered:

- **Data entry:** Any entry of information into the Contaminated Land Information System can be done through a singular source of access (i.e. the Contaminated Land Information System Manager) in order to avoid inconsistent information entry. Data entry can be facilitated by an established workflow or series of questions to ensure an identical process is followed for each entry
- **Data sourcing:** The source should be defined in the Contaminated Land Information System and its credibility is to be assessed. For example, the credibility of Consultants' reports increases with the use of certified consultants, and by involving an accredited site auditor
- **Data correctness:** Regular quality control checks can be implemented for the information in the register. The frequency of the checks or audits should be defined in the system procedures. As well as standalone checks, there is opportunity to incorporate quality control checks into any instance where the information system is interacted with (e.g. assessing an entry within the database as part of initial review considerations for land-use planning)
- **Data standardisation:** The information in the register is entered in a standardised format to avoid bias, minimise impacts of staff changes and streamline communication outputs
- **Incident management:** Procedures to deal with findings of incorrect data to ensure that any impacts are reviewed and rectified



# Part Three

## Part 3: Developing the Register

23

3.1 Register Structure	24
3.1.1 Property Information Systems	24
3.1.2 Mapping Systems	24
3.1.3 Records Management System	25
3.2 Information Sources	25
3.2.1 Data Acquisition	25
3.3 Information Fields	26
3.3.1 Site Management Attributes	26
3.3.2 Contaminated Land Categories	27
3.3.3 Sites Regulated by the NSW EPA under the Contaminated Land Management Act 1997	31
3.3.4 Sites Notified to the NSW EPA under the Contaminated Land Management Act 1997	31
3.3.5 Sites Regulated under the Protection of the Environment Operations Act 1997	32
3.3.6 Stage in the Contaminated Land Process Life Cycle	32
3.3.7 Ongoing Management, Compliance Monitoring, and Restrictions	33
3.3.8 Contaminated Land Documents	33
3.3.9 Duty to Report Contamination	34
3.3.10 Underground Petroleum Storage Systems	34
3.4 Naming the Register	35
3.5 Further Considerations	35

# Developing the Register

A core component of any Contaminated Land Information System is the Contaminated Land “Register”. This is a centralised list of properties / land / assets that are known by Council to be contaminated, or on which activities have occurred which are likely to result in contamination. The register can provide a single point for corporate information about contaminated land, that can be drawn on by the various Council functions and services.

To ensure that the Contaminated Land Information Register is functional and reliable, all information relating to contaminated land obtained by Council should be entered into the register. By managing access to information through a centralised register Councils are more easily able to meet the general objectives discussed within the NSW Managing Land Contamination Planning Guidelines (1998):

- Record information in a manner appropriate to current legislation, and which assists planning authorities to carry out planning functions in the context of land use history
- Ensure a fair and equitable means of informing stakeholders, especially potential purchasers or occupiers, of the presence of, or potential for, contamination on specific parcels of land
- Provide relevant information which facilitates the control of land use, to minimise the risk to health and the environment
- Encourage an approach which does not unnecessarily place restrictions on land or otherwise unnecessarily affect its value
- Acknowledge any limitations on information, such as its degree of uncertainty and accuracy, and the purpose and time it was collected.

**More specific functions of a Contaminated Land Register are presented in the following sections**

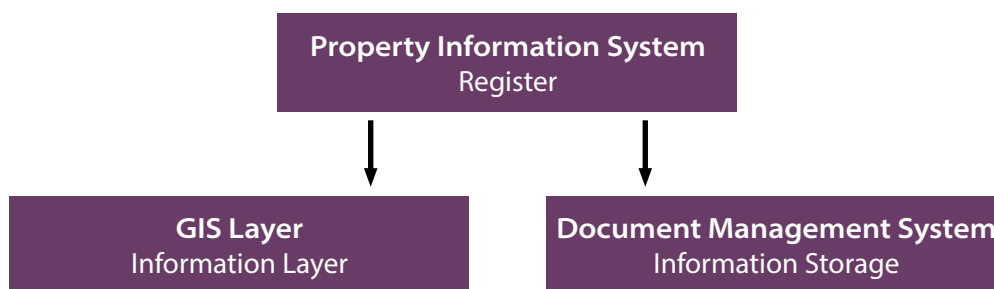
## ADVISORY NOTES:

1. It is important to note that a Contaminated Land Information Register may not be a complete list of contaminated sites, and should not be presented as a complete list. The sources of information used in each Local Government Area (LGA) should be clearly defined to avoid misunderstandings as to what the basis and completeness of the information is.
2. The nature and extent of the Contaminated Land Information Management System to be established by Council should be clearly defined, and reflect the organisations capacity to develop and maintain such a system.
3. Inclusion of a property in the Contaminated Land Information Register does not necessarily imply the actual existence of contamination on the property. This can only be determined as a result of an investigation, sampling and analysis program carried out in accordance with requirements of the relevant Guidelines made or approved by NSW EPA in accordance with the CLM Act (*Source: Managing Land Contamination Planning Guidelines, 1998*).
4. The list of sites included in the Register will be prepared in good faith in the interests of responsible planning and will be used as a first point of reference by Council. It will not necessarily be comprehensive or definitive and may not deal thoroughly with the issue of contamination of properties listed or properties adjacent to those listed. As such it should be viewed as one starting point for more detailed investigations and will necessarily evolve as more information comes to hand from third parties or from detailed investigations of particular sites (*Source: Managing Land Contamination Planning Guidelines, 1998*)



## 3.1 Register Structure

A common way to structure the register is in Council's property information system. The register then links to Council's Geographical Information System (GIS) with a specific contamination information layer, and to the document management system where information is stored.



### 3.1.1 Register Structure

The Contaminated Land Information Register is typically developed in the property information system. Property information systems are used to handle various types of information and enquiries, such as site address, owner, contact details, history of planning action and Section 10.7 certificates. Where a register is created within Council's property management system, specific consideration of how to deal with sites that are not defined as properties such as roads, railways and rivers, is required.

### 3.1.2 Mapping Systems

The Contaminated Land Information Register should include links to a contaminated land layer in Councils Geographical Information System (GIS) mapping. The GIS layer can simply provide a flag that information about contamination exists, or it can provide the category of the site (if applicable), and a reference or direct link to the information in the database.

Council may also wish to include details such as contaminating activity or even develop tools to allow for delineation of known contaminants on Council land if it would assist in Councils work.

To avoid errors caused by double handling of data, the database should be directly linked to GIS so that any updates to relevant information in the database are automatically transferred into the GIS mapping system, where possible.

The GIS layer is commonly where Council staff check in to see if they need to consider contamination based on current information that Council holds, as it is an easy way to check if there is anything flagged for the site.

### 3.1.3 Records Management System

The Contaminated Land Information Register should include links to a records management system. All supporting documentation, photographs, reports, correspondence and general evidence associated with an entry in the Information Register should be stored within a records management system with a link or reference included in the register.



## 3.2 Information Sources

When establishing a Contaminated Land Register, the potential sources of contamination information which may indicate if land is potentially contaminated should be considered. Such sources include:

- Previous investigations / notifications of remediation / site audit statements / pollution events kept on the current filing system
- Approved development applications (DAs), building applications (BAs) for uses listed in Table 1 of the Planning Guidelines, or other potentially contaminating uses, and ones refused based on contamination matters
- Rezoning proposals refused based on contamination matters
- Aerial photographs, including historical aerial photographs
- Dangerous goods searches
- Current and historical land uses
- Council records of actual and permissible uses
- Initial review notes
- Site visit notes and photographs
- Information provided through a development application / rezoning proposal
- Anecdotal information (prompting investigation into the reliability of the information). This can include information from interviews with historical societies, local residents, and former or current workers at a potentially contaminating activity, and interviews with Council staff with in-depth knowledge and long history in the area
- Complaints or concerns from the public (after investigation into the reliability of the information)
- EPA regulated sites registers
- EPA notified sites registers
- Unhealthy Building Land List
- Other agencies information systems such as Crown Lands, NSW Police (eg. former clan or hydroponic labs)
- Organisations and programs such as the Derelict Mines Program (Department of Planning and Environment), Cattle Dip Site Locator (Department of Primary Industries), UPSS Program (NSW EPA), PFAS Investigation Program, water authorities, etc.

The sources of information should be noted in the system to ensure that the credibility of the information can be assessed by anyone using the system in the future.

### 3.2.1 Data Acquisition

Searching for information about contamination status and historical site uses can be done in-house or outsourced to a company specialising in gathering information for a historical land use database. These companies may have information from sources such as historical business registers, aerial photographs, other government registers, and historical maps. Data acquisition through an external specialist can provide a basis for a register, where any information held by Council, such as assessments or remediation that has occurred at the site, is added.

#### SYSTEM REQUIREMENTS:

The system should include fields for information sources and credibility assessment. Where documents or processes (such as risk assessment tools) are held in separate systems, the register is to include links and clear references.



## 3.3 Information Fields

A Contaminated Land Information System includes data fields for property attributes that may assist Council with its understanding and management of a Site. The fields required are dictated by the services and functions it supports, as discussed in [Section 2.1](#).

Suggested fields for inclusion are summarised in [Appendix E](#), however it is noted that individual Councils may choose to reduce or expand these attributes depending on the focus and breadth of their Contaminated Land Information System.

It is essential that any content entered into the Information System or Register is timestamped, never deleted (only made historic/obsolete) and includes reference to supporting evidence for any decision made.

### 3.3.1 Site Management Attributes

The ability to obtain lists of sites with certain attributes can assist Council manage contamination more efficiently by allowing quantification of sites with similar issues.

#### SYSTEM REQUIREMENTS:

The Contaminated Land Information Register is to include specific fields for various property attributes that may assist Council with its understanding and management of the site.

Recommended attributes include:

- Site Owner
- Address
- Zoning
- Historical potentially contaminating activities (eg. Table 1 of the Planning Guidelines, and other known activities) or historical zoning
- Current land use



### 3.3.2 Contaminated Land Categories

Categorising the sites in the register based on their known or potential contamination status, any restrictions that may apply, if it has been assessed or remediated, and if it is regulated by the NSW EPA, may be a beneficial way to ensure that any person (Council staff or the community) can gain insights regardless of their level of technical expertise. However, should Council choose to categorise sites, there is a need to update the categories if the site assessment or remediation progresses, if new contaminants of concern emerge, the site is re-contaminated, or if any legislation, guidelines or criteria changes in a way that affects the category. It is also essential that a consistent and replicable approach is used when categorising.

An alternative approach is to merely identify that information about potential or known contamination exists. Council can list or categorise the type of information (as opposed to the contamination status), e.g. historical land use, assessment report, remediation and validation report, NSW EPA register, etc. This approach would then rely on the user having technical knowledge to interpret what the information means for the decision they need it for, or a process where it is referred to in-house or external contaminated land staff for interpretation.

Should Council choose to use categories for contamination status, Table 6 includes a categorisation system for consideration, including associated descriptions and criteria. These categories are adapted from the system described by the Western Australian Contaminated Sites Act 2003. When choosing categories, Council should consider the decisions that will be made based on them. Such decisions may include:

- Land use
- Capital works projects
- Purchasing of land
- Selling of land
- Rezoning and development

A well described and justified definition of a contamination category can assist in establishing and managing the expectations when communicating contaminated land information to either internal (e.g. Land-use planners) or external stakeholders (e.g. S10.7 Certificate or general information enquiry).

**Table 6. Contaminated Land Information Register Categories and Associated Criteria**

Category	Sub Category (where applicable)	Description	Criterion (supporting documents)
<b>1. Possibly contaminated</b>		There are grounds to indicate possible contamination of the site	Initial evaluation, Council records or site inspection identify a potential contaminant
<b>2. Not contaminated</b>		After Consultant's investigation(s), the site is found not to contain concentrations of known contaminants above the investigation levels	Preliminary and detailed site investigation undertaken by Consultant
<b>3. No indication of contamination</b>		The site was categorised as Possibly Contaminated and Council has since undertaken an Initial Evaluation, and no reasons were identified to indicate possible contamination of the site	Relevant Council record identifying a possible contaminant Initial Evaluation undertaken by Council which revealed no indication of contamination
<b>4. Decontaminated</b>	a. Subject to a long term environmental management plan	The site has been remediated and is suitable for all uses in accordance with management plan	Preliminary site investigation, detailed site investigation, remedial action plan, validation and site monitoring and site audit statement (if deemed necessary)
<b>5. Remediated for restricted use</b>	a. Subject to a long term environmental management plan	The site is contaminated but has been remediated so that it is suitable for restricted use (e.g. industrial or commercial)	Preliminary site investigation, detailed site investigation, remedial action plan, validation and site monitoring and site audit statement (if deemed necessary)
<b>6. Contaminated - restricted use</b>	a. Subject to a long term environmental management plan	The site is contaminated but suitable for restricted use (e.g. industrial or commercial)	Preliminary site investigation, detailed site investigation, remedial action plan, validation and site monitoring and site audit statement (if deemed necessary)
<b>7. Contaminated - no known remediation undertaken</b>		The site is contaminated and there is no remediation known to have been undertaken	Preliminary site investigation, detailed site investigation

Category	Sub Category (where)	Description	Criterion (supporting documents)
<b>8. Contaminated – Regulated by the NSW EPA</b>		The contamination is considered Significant Enough to Warrant Regulation (SEWR) and is regulated by the NSW EPA	Site is listed within the NSW Environmental Protection Authority (EPA) Register of Significantly Contaminated Land

**ADVISORY NOTES:**

Each category would warrant inclusion on a 10.7 certificate as they may influence development of the site.

When Council receives information about a contaminated site, its category is to be determined based on the information available at that time. The standard of reports obtained by Council is therefore crucial to the quality of the system. As such Council may wish to establish internal and/or external support staff to assist in the categorisation of unclear cases.

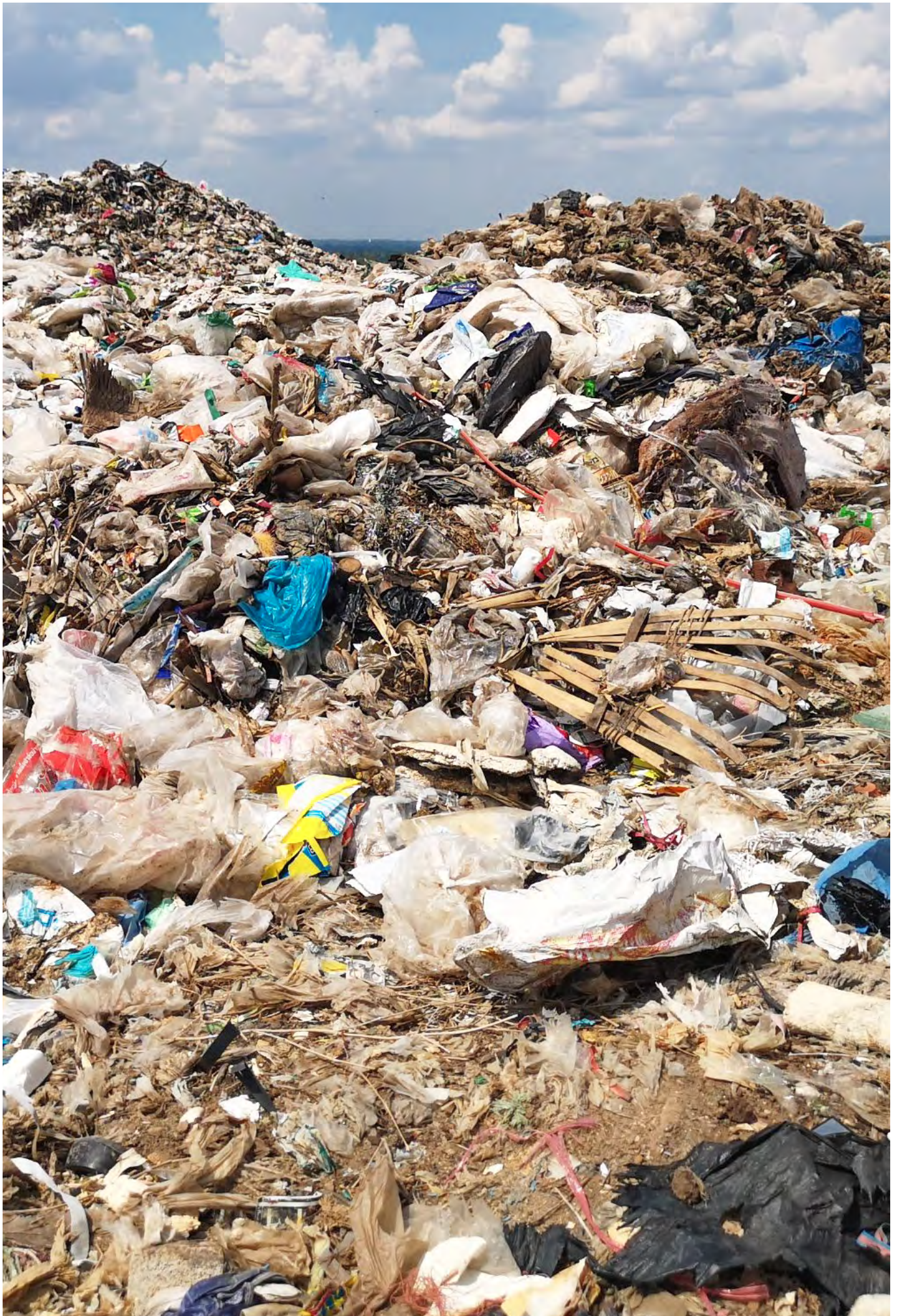


**SYSTEM REQUIREMENTS:**

The Contaminated Land Information Register should include fields for the contamination category if this approach is used. If categories are not adopted, the register should identify if information relating to contamination exist, and if so, what type of information (e.g. land use history, assessment report, etc).

The register should automatically populate the 10.7 certificates with relevant information and standard notations.





### 3.3.3 Sites Regulated by the NSW EPA under the Contaminated Land Management Act 1997

Sites that are considered Significant Enough to Warrant Regulation (SEWR) by the *NSW EPA under the Contaminated Land Management Act 1997* are listed on the EPA website (<http://www.epa.nsw.gov.au/prclmapp/searchregister.aspx>). The EPA is required by legislation to notify Council of the location of these sites.

#### SYSTEM REQUIREMENTS:

The Contaminated Land Information Register should include a specific field for sites regulated by the NSW EPA.

- The register can also be set up to capture what type of order the NSW EPA has issued (i.e. preliminary investigation order, voluntary management proposal, or a management order).



### 3.3.4 Sites Notified to the NSW EPA under the Contaminated Land Management Act 1997

When a contaminated site is notified to NSW EPA, it is listed on a public register on the NSW EPA website (<http://www.epa.nsw.gov.au/clm/publiclist.htm>). Once on a public register it is established if the contamination is significant enough to warrant regulation by the EPA. The site will remain on this public register regardless of the outcome. It is important to note that the EPA is not required to notify Council of sites included on the Register.

The register includes a “site status” for each notified site which defines at what stage in the process it is at, and if it is, needs to be, or was, regulated by the EPA. The status of the sites is continuously updated and should be considered by Councils in this process.

#### SYSTEM REQUIREMENTS:

The Contaminated Land Information Register can include a field or tick box specifically identifying if the site is notified to the NSW EPA.

NB. Since Council will not be notified by the NSW EPA if a site is included on this register, Council will need to identify how often the EPA register is checked, or when it was last checked, to ensure the limitations of the information are understood by register users.



### 3.3.5 Sites Regulated under the Protection of the Environment Operations Act 1997

Sites that are regulated under the Protection of the Environment Operations Act 1997 either by NSW EPA (for scheduled, and some non-scheduled, activities) or Council (non-scheduled activities) can be noted in the Contaminated Land Information Register. Information about the sites regulated by the NSW EPA, and links to their registers, is available on the NSW EPA website (<http://www.epa.nsw.gov.au/prpoeo/>)

#### SYSTEM REQUIREMENTS:

- The Contaminated Land Information Register can include a field or tick box specifically identifying if the site is regulated under the Protection of the Environment Operations Act 1997 and if so, if Council or NSW EPA is the Regulatory Authority.
- The register can also be set up (e.g. via an additional field) to capture more detailed information to the type of regulation (e.g. clean-up notice, environmental protection licence, etc)



### 3.3.6 Stage in the Contaminated Land Process Life Cycle

Recording information in accordance with the stages of the contaminated site assessment and remediation process may be a useful tool, particularly in the management of contamination on Council land.

#### SYSTEM REQUIREMENTS:

The Contaminated Site Information Register can include a field, or link to a “Life Cycle” page where information can be recorded under the relevant stage of the process:

1. Initial evaluation
  2. Preliminary site investigation
  3. Sampling and analysis quality plan
  4. Detailed site investigation
  5. Site specific risk assessment and modelling
  6. Remedial action plan
  7. Site remediation and validation
  8. Long term environmental management plan
  9. Long term monitoring
  10. Site audit, if needed (include field to identify the purpose of the audit, as per the standard Site Audit Statement (SAS) form)
- The register could allow Council to note progress for each stage (e.g. “in progress” or “complete”), and link to reports and information under the relevant stage.
  - The register should allow for several life cycles under each property as it is possible that further assessment and remediation may be needed in the future.





### 3.3.7 Ongoing Management, Compliance Monitoring, and Restrictions

Where an long term Environmental Management Plan or otherwise noted restrictions applies to a site, it should be noted on the register as it may include restrictions and considerations for future development or changes. Such restrictions could be on the use of groundwater, excavation, or access to certain areas. It may also include restrictions on what type of land use is permissible on the site (e.g. commercial or industrial only).

There may also be requirements for monitoring or maintenance reports to be sent regularly to Council. Council may also be responsible for regular inspections of a site to ensure it complies with requirements and / or regulations.

#### SYSTEM REQUIREMENTS:

The Contaminated Land Information Register can include specific fields and/or tick boxes to identify any long term environmental management plans, and restrictions on land use or activities that may be in place for a site.

The Contaminated Land Information Register can send reminders when compliance audits are due, and when Council should expect to receive regular monitoring reports from a proponent. Information relating to the specific requirements can be included in, or linked to, the reminder.



### 3.3.8 Contaminated Land Documents

Documentation relating to contamination may be obtained by Council from a variety of sources including the land use planning process, NSW EPA, or through Council's own investigations. There is considerable benefit in including references or links to these documents in the Contaminated Land Register, to assist with managing the contaminated land process for a site, or to assist Council in responding to requests for information under GIPA. Property systems used by Councils typically cannot store documents, but can include links to stored information.

#### SYSTEM REQUIREMENTS:

The Contaminated Land Information Register can include references (and preferably electronic links) to any document that is available for the site relating to contamination.



### 3.3.9 Duty to Report Contamination

For Council owned and managed land, Council has a duty to report contamination to the NSW EPA if it triggers the criteria outlined in the Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (NSW EPA, 2015). Any documents relating to the notification should be recorded against the relevant entry within the Information System.

In accordance with the Model Contaminated Land Policy – Land Use Planning (Hunter Joint Organisation of Councils, 2023), Council may also notify the EPA for possible action under the Contaminated Land Management Act 1997 where Council considers that contamination on a site triggers the duty to report contamination, and it is not clear if the polluter or site owner has reported the contamination.

#### SYSTEM REQUIREMENTS:

The Contaminated Land Information Register can include a tick box for sites notified to the NSW EPA under Section 60 of the CLM Act, as described earlier. Where Council has notified the site, a link to the documents can also be provided.



### 3.3.10 Underground Petroleum Storage Systems

As of September 2019, the regulatory responsibility for Underground Petroleum Storage Systems (UPSS) was transferred from the NSW EPA to Councils. This requires Councils to undertake regular compliance audits of sites containing active UPSS. To support Councils with this new regulatory responsibility and to ensure UPSS systems are effectively managed through both Council compliance and land use planning activities, it is recommended that sites including UPSS be identified in the Contaminated Land Register.

#### SYSTEM REQUIREMENTS:

The Contaminated Land Information Register can include a field or tick box for sites to which the UPSS Regulation applies.

NB If the box is ticked, then information (or links to information) relating to risk assessments, frequency of audits, status in the risk ranking system and other relevant details should be prompted to be included in the register.



### 3.4 Naming the Register

Calling the register a “Contaminated Land Register” may be a cause for misinterpretation and confusion as inclusion on the register does not necessarily mean the site is contaminated. A site can be included if it has a potentially contaminating historical land use, or if it is remediated. Alternative names can be considered, such as Land Use Information System, or Contamination Information System.

### 3.5 Further Considerations

Other considerations when setting up a Contaminated Land Information System include:

- Partial lot contamination may be considered an issue where only a small portion of the site is considered contaminated. This could be situations like a cattle tick dip on a large rural property. Some Councils have included these as polygons in the GIS layers to indicate areas of concern
- Sites adjacent to contaminated / potentially contaminated sites need to be considered since contamination has the potential to migrate
- What level of information to include in the Contaminated Land Information Register. For example, if the contaminants found are defined within the register itself without further context, it could be interpreted as that no other contaminants exist on the site, whereas the reality may be that only a limited number of analytes were assessed in the investigation obtained and the level of other contaminants is unknown
- The inclusion and use of memos where appropriate.
- The ability to add fields later if needed.
- Potential inclusion of use of water on the property (e.g. groundwater used for irrigation), or locally (e.g. groundwater used as drinking water) could be included in the register where known.



# Part Four

## Part 4: Appendices

37

Appendix A: Key Terms and Acronyms	37
Appendix B: Checklist - Planning for a Contaminated Land Information System	41
Appendix C: Contamination Land Database Information Request (Land-use Planning)	42
Appendix D: Potential Work Flows	43
Appendix E: Site Management Attributes List	47

# Appendices

## Appendix A – Key Terms and Acronyms

<b>Category 1 Remediation</b>	Remediation works requiring Development Consent
<b>Category 2 Remediation</b>	Remediation works that do not require Development Consent (but must be notified to Council)
<b>Conceptual Site Model (CSM)</b>	A CSM provides the framework for identifying sources of contamination, contaminant migration pathways, receptors and exposure mechanisms, usually in a figure
<b>Conditions of Consent</b>	Requirements imposed by Council on a development approval to ensure the development complies with required standards. Conditions may apply to both the immediate construction stages of the development and occasionally beyond
<b>Contamination</b>	The condition of land or water where any chemical substance or waste has been added as a direct or indirect result of human activity at above background level, and represents, or potentially represents, an adverse health or environmental impact
<b>Contaminated Land Information Register</b>	A Contaminated Land Register forms part of a Contaminated Land Information System and refers to the register created in a property system to capture data relating to contaminated land
<b>Contaminated Land Information System</b>	A systematic, dynamic, and quality controlled environment for the recording, organisation, retrieval, and use of information on land contamination. An information system is far more than a register as it forms part of Councils broader information management systems and can inform actions through designated workflows.
<b>Contaminated Land Process</b>	<p>The process includes several stages of investigations and actions. The level ultimately required is determined by the circumstances and outcomes from the previous stage. The potential stages of the Contaminated Land Process are:</p> <ol style="list-style-type: none"><li>1. Preliminary Site Investigation (PSI)</li><li>2. Sampling and analysis quality plan (SAQP)</li><li>3. Detailed Site Investigation (DSI): N.B. Several reports, such as additional investigations, contamination delineation, and monitoring may be included in this stage.</li><li>4. Site specific risk assessment and modelling</li><li>5. Remedial action plan</li><li>6. Site remediation and validation</li><li>7. Long Term Environmental management plan</li><li>8. Ongoing monitoring</li></ol>

<b>CLM Act</b>	<i>Contaminated Land Management Act 1997 (NSW)</i>
<b>Detailed Site Investigation (DSI)</b>	An investigation with the objective to define the nature, extent and degree of contamination; assess potential risk posed by contaminants to health and the environment; and obtain sufficient information to develop a Remedial Action Plan (if needed)
<b>Data Quality Indicators (DQI)</b>	Pre-determined indicators used to assess if the data is considered fit for its intended uses in operations, decision making and planning. The typical parameters adopted are Precision, Accuracy, Representativeness, Completeness and Comparability (PARCC)
<b>Data Quality Objectives (DQO)</b>	The DQO Process is a seven-step planning approach used to define the type, quality and quantity of data required to inform a specified decision relating to the environmental condition of a site
<b>Development Application</b>	A development application is a formal request for consent to carry out development and is considered under Part 4 of the <i>Environmental Planning &amp; Assessment Act 1979</i>
<b>Development Consent</b>	Formal approval from Local Councils to proceed with a development. Development Consent is required prior to commencement of any works associated with development governed by Part 4 of the <i>Environmental Planning &amp; Assessment Act 1979</i>
<b>Duty to Report</b>	The duty to report significant contamination to the NSW EPA is a requirement under the <i>Contaminated Land Management Act 1997</i> , with updates provided in the Contaminated Land Management Amendment Act 2008. The triggers for reporting are presented in the <i>Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997</i> (2015)
<b>EPA</b>	Environment Protection Authority
<b>Initial Review</b>	A review undertaken by Council to determine whether contamination is likely to be an issue, and to assess whether further information is required for it to conduct its planning functions in good faith
<b>Land Contamination</b>	Land contamination may be the result of past or current uses. The land may be contaminated by a current or historical land use activity directly on that site or through migration of contamination from adjacent sites. See also definition of "Contamination"
<b>LEP</b>	Local Environmental Plan. An LEP guides planning decisions for Local Government Areas through zoning and development controls, which provide a framework for the way land can be used. LEPs are <i>Planning Instruments from the Environmental Planning &amp; Assessment Act 1979</i>
<b>LGA</b>	Local Government Area

<b>Long Term Environmental Management Plan (LTEMP) / Ongoing Environmental Management Plan (OEMP)</b>	A plan outlining monitoring and management requirements where contamination remains on site, and there is uncertainty as to its potential to migrate; and/or the effectiveness of the management measures implemented to contain the contamination following remediation and validation; and/or monitoring and ongoing management forms part of the remediation strategy
<b>Ongoing Monitoring</b>	Where ongoing monitoring of one or more media (on- and/or off-site) is required, a monitoring program must be documented detailing the proposed strategy, parameters to be monitored, locations, frequency, decision process for additional actions and for ending monitoring, and reporting requirements
<b>Planning Guidelines</b>	<i>NSW Managing Land Contamination Planning Guidelines – SEPP 55 Remediation of Land (1998)</i>
<b>Planning Application</b>	A Development Application or Planning Proposal made to/by Council in accordance with the <i>Environmental Planning and Assessment Act 1979 (NSW)</i>
<b>Planning Proposal</b>	A formal application submitted by Council that proposes to rezone land
<b>POEO Act</b>	<i>Protection of the Environment Operations Act 1997 (NSW)</i>
<b>Preliminary Site Investigation (PSI)</b>	An investigation to identify any past or present potentially contaminating activities, to provide a preliminary assessment of any site contamination, and if required, to provide a basis for a more detailed investigation
<b>Proponent</b>	The person who puts forward the development application or planning proposal to Council
<b>Quality Assurance/ Quality Control Process (QA/QC)</b>	A process used to assess the reliability of field work and analytical results for an investigation
<b>Remedial Action Plan (RAP)</b>	A plan that sets objectives, and documents the process, for remediating a contaminated site
<b>Request for Information</b>	Requests by Council to the Proponent prior to determination of a development application to ensure Council is provided with adequate information to determine whether consent can be granted
<b>s10.7 Certificate</b>	Planning Certificate under Section 10.7 of the <i>Environmental Planning and Assessment Act 1979 (NSW)</i>
<b>Sampling and Analysis Quality Plan (SAQP)</b>	A document outlining the details for a sampling program, such as the objective(s) and the intended process

<b>SEPP (Resilience and Hazards)</b>	<i>State Environmental Planning Policy (Resilience and Hazards), includes the former SEPP 55 – Remediation of Land</i>
<b>Significantly Contaminated Land</b>	A site is declared Significantly Contaminated Land by the EPA where contamination is considered significant enough to warrant regulation under the <i>Contaminated Land Management Act 1997 (with changes made through the Contaminated Land Management Amendment Act 2008)</i> given the site's current or approved use
<b>Site Audit</b>	An independent review by a Contaminated Land Auditor, accredited by the NSW EPA, of any or all stages of the site investigation process, conducted in accordance with the requirements of the <i>Contaminated Land Management Act 1997</i>
<b>Site Audit Report (SAR)</b>	A report which summarises the report(s) audited and provides the Auditor's opinion and conclusions. A Site Audit Report must be accompanied by a Site Audit Statement
<b>Site Audit Statement (SAS)</b>	A statement which outlines the conclusions of a Site Audit. A Site Audit Statement must be accompanied by a Site Audit Report
<b>Site Remediation and Validation</b>	The objective of the site remediation and validation report is to detail the site work undertaken and demonstrate compliance with the RAP, and with relevant guidelines and regulations
<b>Site Specific Risk Assessment and Modelling</b>	The objective of a site-specific risk assessment is to further assess potential for harm to human health and/or the environment from a specific site, where it is uncertain if the site poses a risk to human health or the environment based on the DSI Stage
<b>Table 1 of the Planning Guidelines</b>	List of potentially contaminating activities included in Table 1 of the <i>NSW Managing Land Contamination Planning Guidelines (1998)</i>
<b>Validation</b>	The objective of the validation stage of the Contaminated Land Process is to demonstrate whether or not the objectives stated in the Remedial Action Plan have been achieved
<b>Waste Classification Report</b>	Any material removed from a Site requires a waste classification report to be prepared in accordance with the Waste Classification Guidelines prior to being disposed to landfill or taken to a recycling facility



## Appendix B – Checklist: Planning for a Contaminated Land Information System

Planning for a Contaminated Land Information System	
Consideration	Council's Inclusions
<b>Considerations for the Overarching Information System</b>	
Council services and functions	
Governance and management	
Community engagement and communication	
Links with other corporate systems	
Quality control / quality assurance	
<b>Developing the Register</b>	
Register structure	
Information sources	
Information fields	

## Appendix C – Contamination Land Database Information Request (Land-use Planning)

<b>Date:</b>		<b>DA No.</b>	
<b>Address:</b>			
<b>Contaminated Land Information System Ref.</b>			

<b>Land Contamination Category (please tick)</b>	Category 1 – No indication of contamination	
	Category 2 – Not contaminated	
	Category 3 – Decontaminated	
	Category 4 – Possibly contaminated	
	Category 5 – Contaminated – restricted use	
	Category 6 – Remediated for restricted use	
	Category 7 – Contamination – no known remediation undertaken	
	Category 8 – Regulated by the NSW EPA	

### Applicable Documentation Check:

Document Type	Received (Y/N)	Record Ref.
Preliminary Investigation undertaken		
Sampling and Analysis Quality Plan provided		
Detailed Investigation undertaken		
Remedial Action Plan provided		
Evidence of Remediation Efforts		
Validation Report provided		
Long term Environmental Management Plan and Monitoring provided		

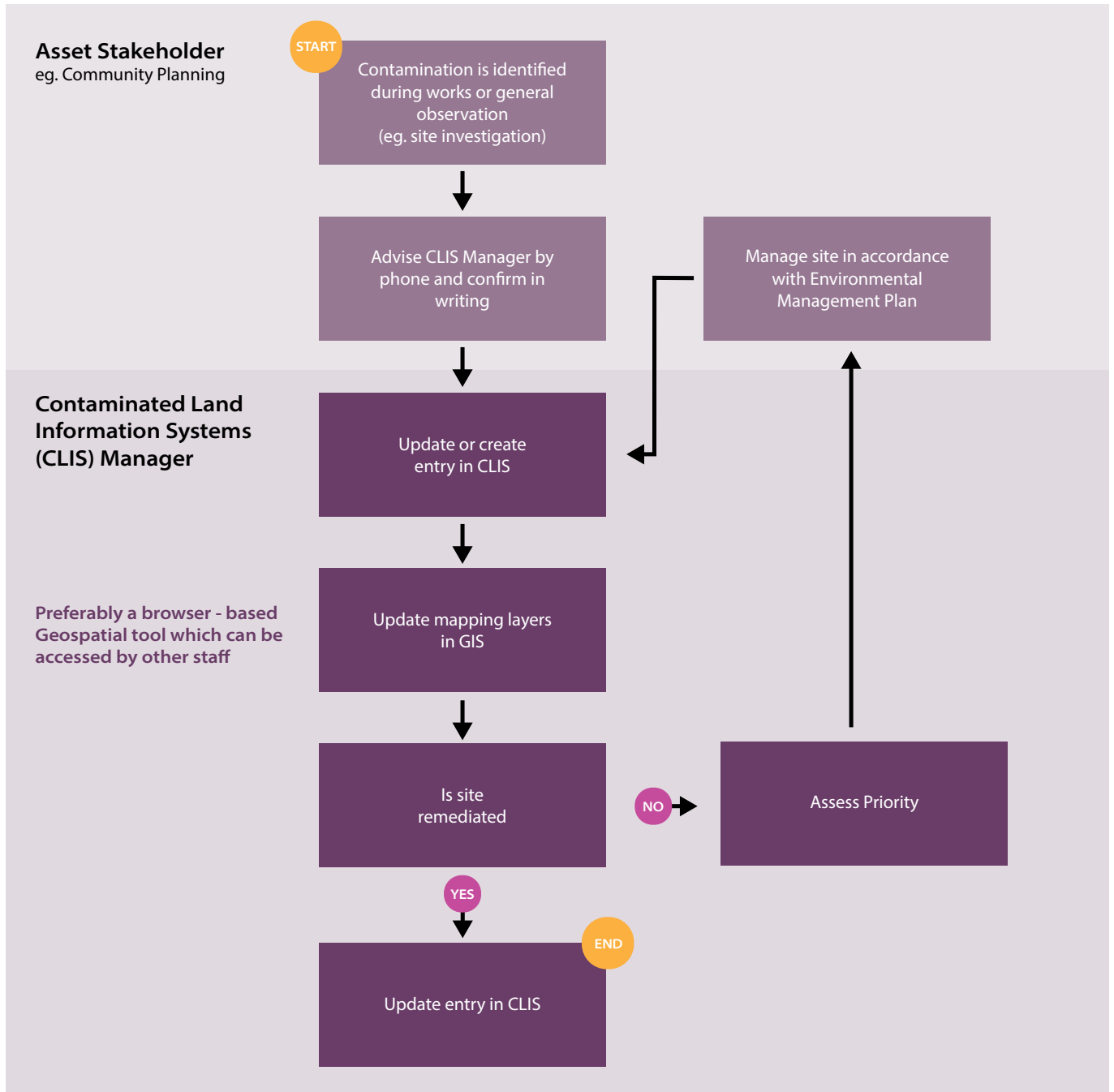
### Further Assessment Required:

<b>Report Provided by</b>		<b>Report Type</b>	
<b>Date Received</b>		<b>Record Ref.</b>	
<b>Comment:</b>			

General Comments on the site:  
(eg. groundwater issues present if digging on site, not suitable for livestock)

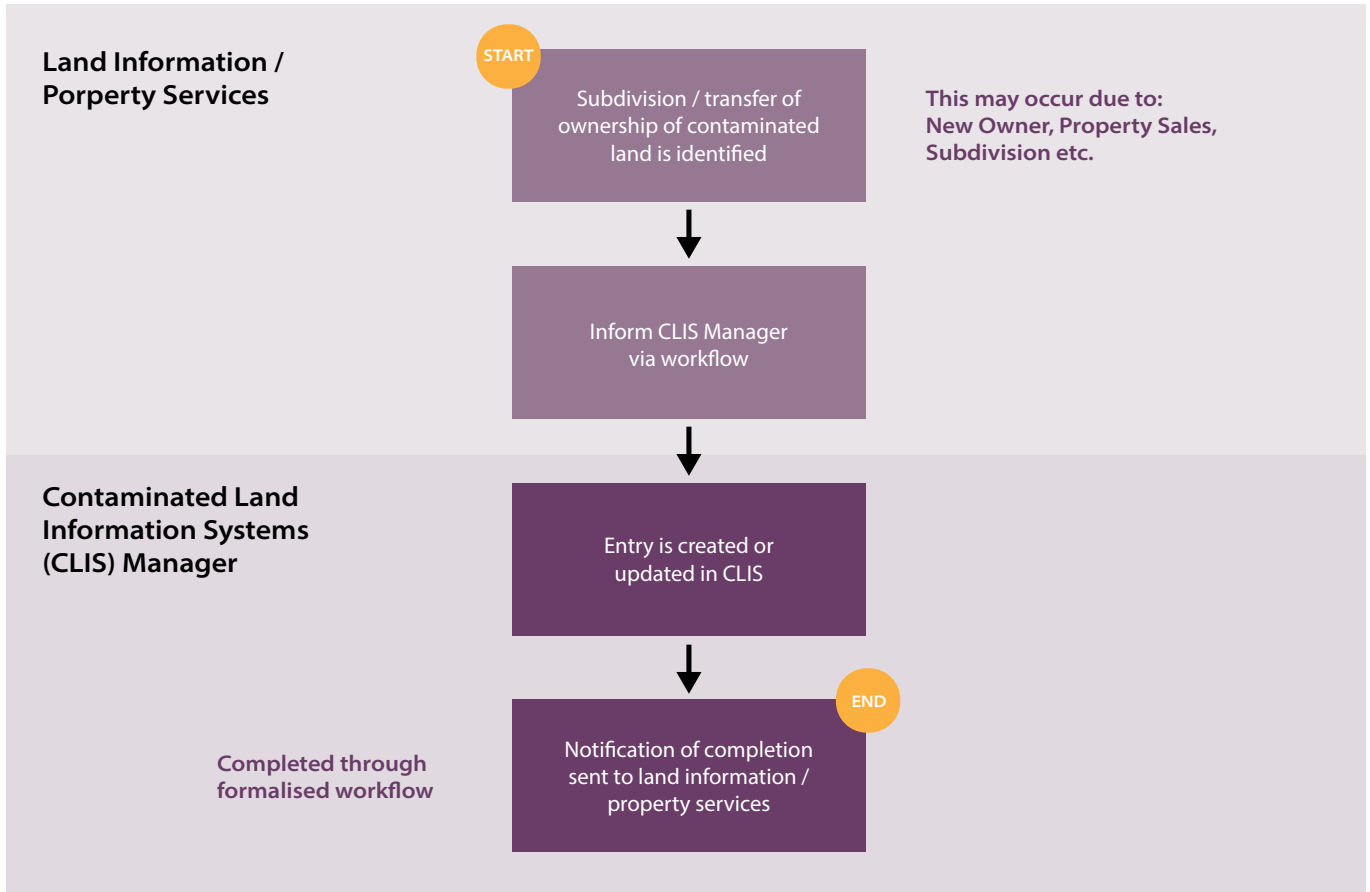
## Appendix D - Potential Work Flows

### Example Information Flow Contaminated Land Information System - Council Owned Land

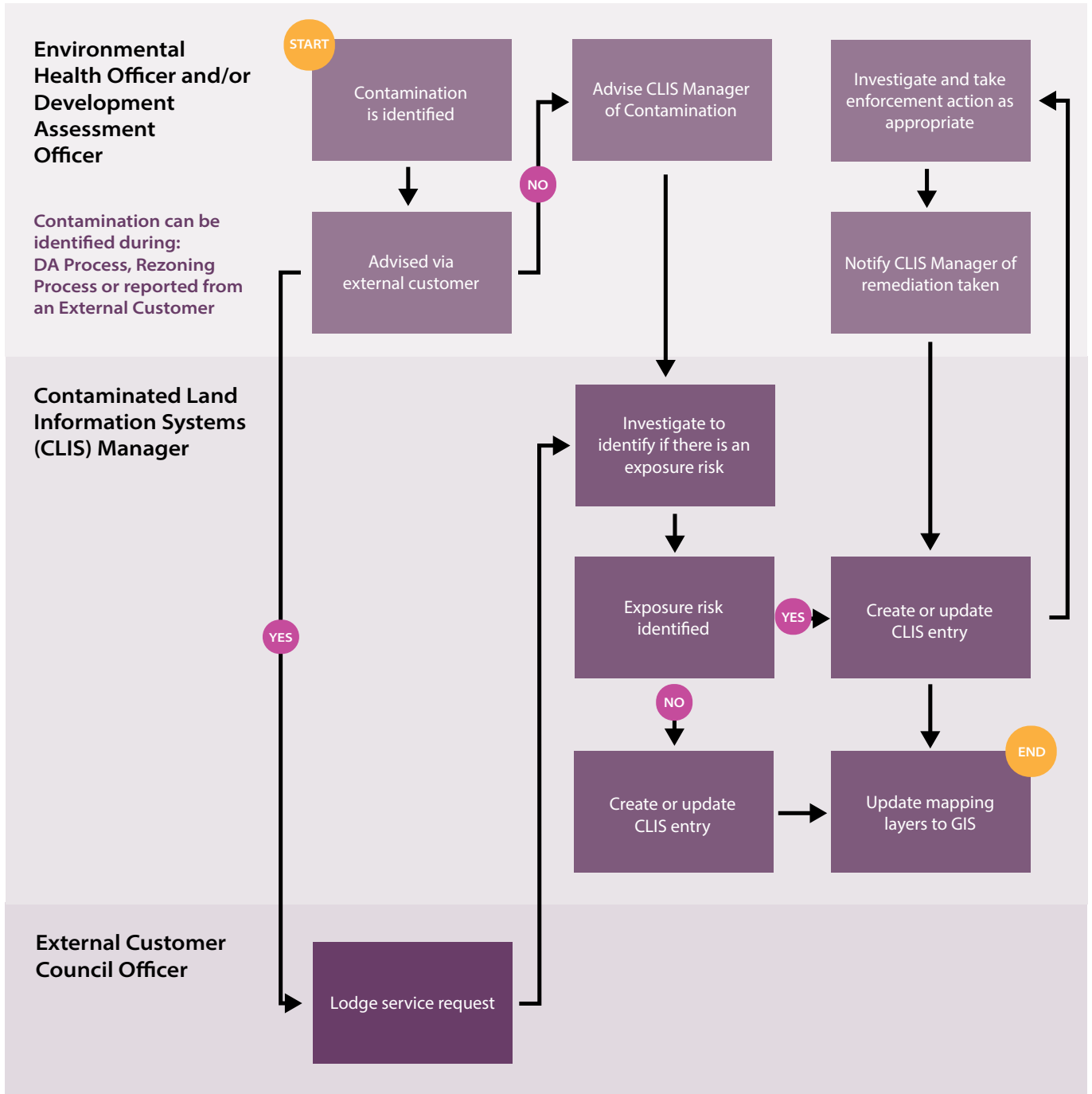


### Example Information Flow

#### Contaminated Land Information System - New Entries for New Owners / Subdivisions

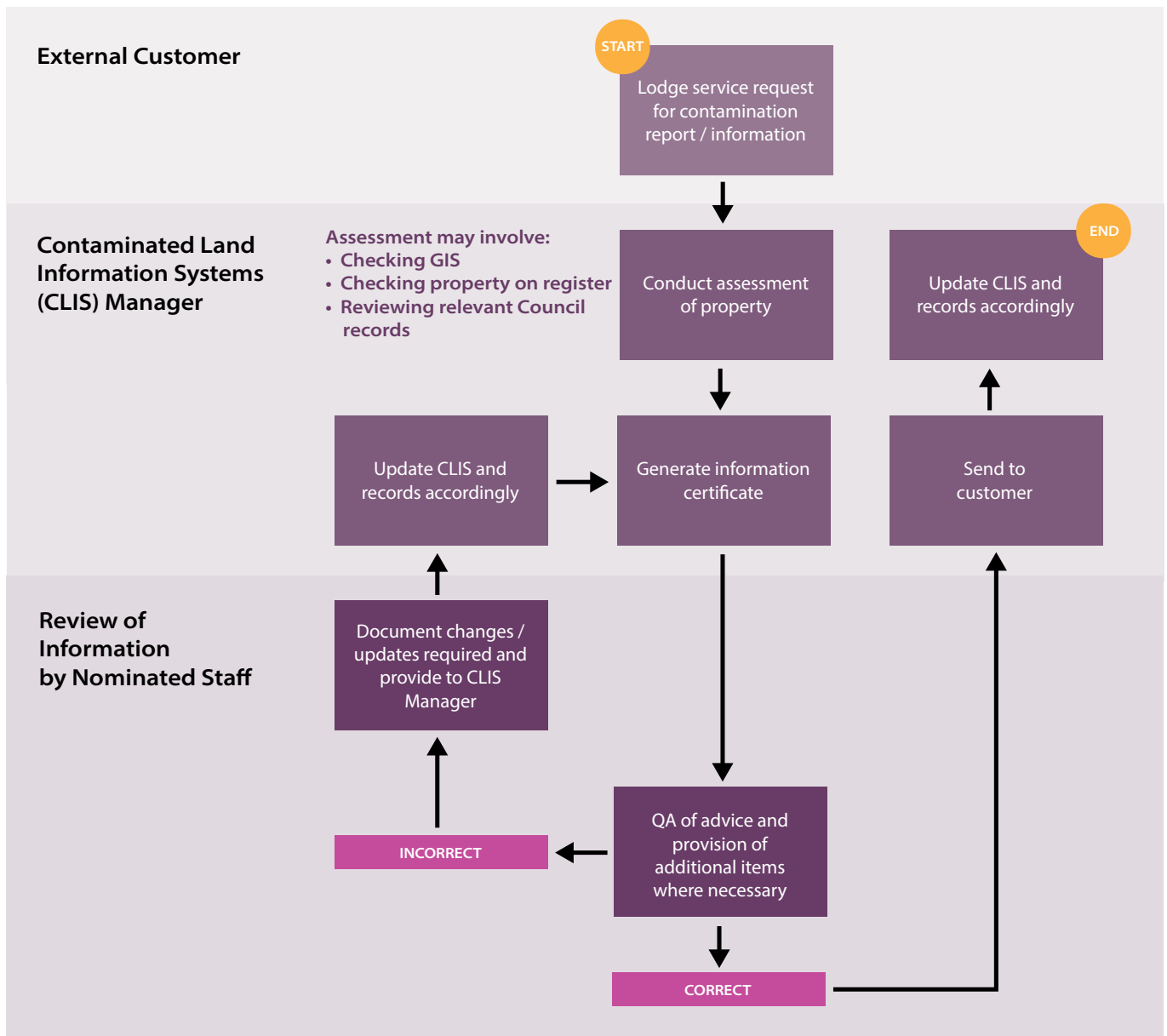


**Example Information Flow**  
Contaminated Land Information System - Privately Owned Land



## Example Information Flow

### Contaminated Land Information System - Property Enquiry / information Certificate



## Appendix E – Site Management Attributes List

Data Field Heading	Data Field Content
Site Owner	Full Name Note if this is Council owned and managed land
Site Address	Full address
Zoning	Land-use Zoning
Current Land-use	Current Land-use
Historical potentially contaminating activity or zoning	Relevant activity (if applicable) and historical zoning
Contamination Category	Define category (if this approach is adopted)
Source of Information / Basis for Inclusion	Information sources (e.g. historical land use, assessment report etc) If contamination categories are not used, this field may be of particular importance as an indication of why the site is included on the register
Document links	Information sources (e.g. historical land use, assessment report etc) If contamination categories are not used, this field may be of particular importance as an indication of why the site is included on the register
GIS links	Links to the GIS system with contamination category (if used) or flag that information relating to contamination exists
Risk Category	Risk rank/category or link to risk assessment
WHS Considerations	Site restrictions and PPE requirements
Regulated by the NSW EPA	Yes or No Consider including what type of orders and management the NSW EPA has applied
Notified to the EPA	Yes or No If yes, then additional Yes or No as to whether it was notified by Council, and link to the notification documents where relevant
Regulated under POEO Act 1997	Yes or No If Yes, then ask if ARA is NSW EPA or Council

Data Field Heading	Data Field Content
Assessment Life Cycle	Yes or No for: <ol style="list-style-type: none"> <li>1. Initial evaluation</li> <li>2. Preliminary site investigation</li> <li>3. Sampling and analysis quality plan</li> <li>4. Detailed site investigation</li> <li>5. Site specific risk assessment and modelling</li> <li>6. Remedial action plan</li> <li>7. Site remediation and validation</li> <li>8. Long term environmental management plan (see further below)</li> <li>9. Long term monitoring (see further below)</li> <li>10. Site audit, if needed (include field to identify the purpose of the audit, as per the standard Site Audit Statement (SAS) form)</li> <li>11. Other considerations for inclusions may be planning approvals for remediation</li> </ol>
Long Term Environmental Management Plan, Monitoring, Maintenance and Restrictions	Long term Environmental Management Plan, Monitoring, Maintenance and Restrictions UPSS Regulated site Contamination type and level
UPSS Regulated site	Yes or No If Yes, then ask if ARA is NSW EPA or Council If Council, link to the relevant documents
Contamination type and level	Type of contaminants, matrix impacted, and typical levels This field may be considered by Councils that have particular widespread contamination issues and management approaches based on levels and locations (e.g. lead from a local lead smelter)







4 Sandringham Ave, Thornton NSW 2322  
02 4978 4020 • [admin@hunterjo.com.au](mailto:admin@hunterjo.com.au)  
[www.hunterjo.com.au](http://www.hunterjo.com.au)