

Queensland Auditor Handbook for Contaminated Land

Module 6: Content requirements for contaminated land investigation documents, certifications and audit reports

Prepared by: Operational Support, Department of Environment and Science

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1 Introduction

This module of the auditor handbook describes the required content for a *contaminated land investigation document* to be in the approved form under s. 389 of the *Environmental Protection Act 1994* (EP Act). A *suitably qualified person* should prepare a contaminated land investigation document in accordance with this module, and an auditor should use this module to verify that the document has been adequately prepared before they provide their certification. This module also describes the required content of an *audit report*. An audit report is a necessary part of an auditor's certification to be in the approved form required by s. 389(4) of the EP Act.

2 Types of documents and reports

2.1 Contaminated land investigation document

A contaminated land investigation document may be a *site investigation report*, *validation report*, or *draft site management plan*—see sections 370 and 387 of the EP Act. In all cases a contaminated land investigation document must include a *site suitability statement* (see s. 389 of the EP Act). A *draft site management plan* must be submitted with either a *site investigation report* or a *validation report* (see s. 389(3)(d) of the EP Act).

Contaminated land investigation documents relate to *relevant land*, which is land for which particulars are recorded in a *relevant land register*. A relevant land register is either the environmental management register (EMR) or the contaminated land register (CLR).

The following descriptions of the types of contaminated land investigation documents and the site suitability statement are adapted from the EP Act:

A *site investigation report* is a report about an investigation of the relevant land to scientifically assess whether it is contaminated land.

A *validation report* is a report about work carried out to remediate the relevant land.

A *site management plan* is a plan for managing the environmental harm that may be caused by the hazardous contaminant(s) on the relevant land. The environmental harm may be managed by applying conditions (i.e. limits or requirements) to the use or development of the land, or to the activities carried out on the land.

A *site suitability statement* provides details of the uses or activities for which the land is suitable.

A contaminated land investigation document and site suitability statement are not prepared by an auditor; rather, they are prepared by a suitably qualified person (SQP), and then independently verified and certified by an auditor. A submitted contaminated land investigation document must be in the *approved form* (see ss. 389(2) and 389(3)) and must be accompanied by an auditor's certification that is in its approved form (refer s. 389(4)(a)). To be in the approved form the contaminated land investigation document must be submitted with the form *Contaminated land investigation document—approved form*, which is available from the Queensland government's website.

Section 3 of this module provides information about the required content of a contaminated land investigation document and its site suitability statement.

2.2 Certification

A contaminated land investigation document must be accompanied by a written certification by an auditor (an *auditor's certification*) that verifies the document complies with ss. 389(2) or 389(3) of the EP Act. Section 389(4) of the EP Act requires the auditor's certification to be in the approved form. The auditor's certification will be in the approved form when it is completed using Part D of the form *Contaminated land investigation document—approved form*, which is available on the Queensland Government website.

In effect, this means that a contaminated land investigation document cannot be submitted unless an auditor has independently verified and certified that the document:

- has the content required by law
- has been prepared in accordance with guidance provided in the National Environment Protection (Assessment of Site Contamination) Measure 1999 (contaminated land NEPM)
- accurately reflects the condition of the site
- includes a site suitability statement that accurately confirms the uses or activities for which the land is suitable.

2.3 Audit report

An auditor prepares an *audit report* about their certification. An audit report explains and justifies how an auditor arrived at their decision to certify that the contaminated land investigation document and its site suitability statement comply with ss. 389(2) or 389(3) of the EP Act. An auditor's certification must include an audit report to be in the approved form. Section 5 of this module provides information about the required content of an audit report.

3 Required content for contaminated land investigation documents

Subsection 389(2) of the EP Act states the statutory requirements for the content of a site investigation report or validation report, while s. 389(3) states the statutory requirements for the content of a draft site management plan. Appendix 1 of this module provides the text of s. 389 of the EP Act. All contaminated land investigation documents must include a site suitability statement and another statement about whether the land is *prescribed contaminated land* (see *Definitions* below), and if the land is contaminated—the extent to which the land is contaminated. Also, if the document is a draft site management plan, the statement must address whether the proposed objectives, methods and measures stated the plan are appropriate. Additionally, more specific requirements for the preparation and submission of a draft site management plan are detailed in ss. 391–400 inclusive of the EP Act.

As noted above, the statutory content requirements for a site investigation report or validation report are distinct from those for a draft site management plan. Section 3.1 below advises how the requirements for a site investigation report or validation report may be met, while section 3.2 provides advice for a draft site management plan. Section 3.3 below advises how to prepare the common requirements for a contaminated land investigation document submission, such as a site suitability statement and an auditor's certification. Sections 4 to 6 provide additional advice about the requirements for all contaminated land investigation documents.

The advice in this module should not be considered to be limiting or exhaustive. Furthermore, anyone preparing or auditing a contaminated land investigation document must also follow the contaminated land NEPM as an authoritative guide. Various schedules of the contaminated land NEPM may be applicable to the circumstances of particular sites. Each subsection below has a text box indicating the section of the EP Act that authorises its requirements and references the parts of the contaminated land NEPM that should be used when preparing and certifying the contaminated land investigation document. The approved form for a contaminated land investigation document further indicates the relevant sections of the contaminated land NEPM that must be followed and recorded when investigating, remediating and preparing a site investigation report or validation report. The people preparing or certifying the contaminated land investigation document are responsible for ensuring that the contaminated land NEPM is applied as necessary. However, Queensland Acts and their subordinate legislation take precedence over guidance provided in the contaminated land NEPM in any difference. Also, some contaminants may be out of the scope of the contaminated land NEPM. In these cases, the general principles of the contaminated land NEPM should be supplemented with relevant State and National guidance pertinent to the contaminant(s).

A site investigation report or validation report must be a stand-alone document and must not rely on cross-referencing to any other document when meeting its information requirements unless the secondary document is provided at the same time as an appendix to the main contaminated land investigation document. A draft site management plan must make reference to, and be submitted with, either a site investigation report or validation report.

3.1 Requirements for a site investigation report or validation report

The requirements in sections 3.1.1 to 3.1.12 apply to both site investigation reports and validation reports.

3.1.1 Introduction

In the introduction, establish the context for the contaminated land investigation document and explain:

- whether it is a site investigation report or validation report
- why the contaminated land investigation document was prepared, and note any statutory triggers
- what the desired outcome of the investigation is (e.g. to have the particulars of the land removed from, or amended on, the relevant land register).

3.1.2 Site investigations

Describe and illustrate all the site investigations that were used when preparing the contaminated land investigation document, including any that may have been undertaken for previous purposes. If the contaminated land investigation document relies on the findings of previous investigations, then the SQP must take appropriate action to verify the accuracy of the information in order to satisfy themselves that the information is current and reliable.

3.1.3 Reasons the land is on a relevant land register

Section of the EP Act that authorises this requirement	Corresponding section(s) of the contaminated land NEPM
s. 389(2)(a)(i)	Schedule B2, sections 3.1 to 3.4, and 3.6

In order to fully address the reasons for listing the land on a relevant register, it is essential that the contaminated land investigation document identifies and describes the land by the following information:

- street address of the site
- registered lot-on-plan details
- owner(s) of the land and their registered address
- current occupier(s) of the land
- area of the land (m² or hectares)
- map of the site at a suitable scale showing lot and plan boundaries, and latitude and longitude in decimal degrees
- relevant local government authority
- zoning of the site and the surrounding land on the local government's planning scheme (current and proposed)
- any proposed changes to the zoning of the site and the surrounding land on the local government's planning scheme
- any existing, pending or proposed development approval or building works approval.

After identifying the relevant parcel(s) of land, state whether or not the land is currently listed on the EMR or the CLR, and provide the identifying number on the EMR or CLR. Provide a short history (if available) of when any listing(s) occurred, and any changes that were made to the listings.

Describe the past and current activities and use(s) of the land that resulted in its potential or actual contamination and its listing on the register. Describe and map the locations where those activities occurred. In particular, address any notifiable activities and/or environmentally relevant activities (see also section 3.1.8 below).

3.1.4 Surface and subsurface infrastructure

Section of the EP Act that authorises this requirement	Corresponding section(s) of the contaminated land NEPM
s. 389(2)(a)(ii)	Schedule B2, sections 3.3.5 to 3.3.7

Describe all surface and subsurface infrastructure on the land, including details of the location, size and type of the infrastructure. Relevant infrastructure includes, but is not limited to, pipes, tanks, drains, dams, bores, buildings and foundations. In particular, describe any infrastructure that has contributed to contamination of the site, even if that infrastructure has since been removed. Also, describe any infrastructure that may either retard or increase the movement of contaminants, and describe how the effect may occur. For example, bedding sand for stormwater drainage or sewerage pipes can act as a preferential pathway for contaminants even if the pipe itself has been removed. Describe any infrastructure that could inhibit assessment or remediation. Describe any infrastructure that may act as a secondary source of contamination following prior contact with products or wastes containing contaminants. For example, concrete and asphalt exposed to PFAS have been found to contaminate stormwater.

3.1.5 Site and surrounding area

Section of the EP Act that authorises this requirement	Corresponding section(s) of the contaminated land NEPM
s. 389(2)(a)(iii)	Schedule B2, sections 3.4 and 4.3

Provide a description of the site and surrounding area of the land. The description of the site and surrounding area must address the following matters (see s. 389(2)(a)(iii) of the EP Act):

- all *environmentally sensitive areas*
- the location of all water, watercourses and wetlands
- the location of all stormwater drainage
- all uses of the land, including uses that may affect the safety of the relevant land or cause environmental harm
- all activities carried out that may affect the safety of the relevant land or cause environmental harm.

In addition, describe the climate of the area of the land, and the vegetation on the site and the surrounding area.

The surrounding area to be included in the description is not defined by a specific radius or buffer that can be applied in all cases. Rather, it will vary according to the circumstances of each case. It should include any areas that could have an effect on the site itself (e.g. because of groundwater movement or overland flow of water from a surrounding area onto the site), and any areas that could be affected by the spread of contamination from the site (e.g. by the leaching of contaminated groundwater into a waterway downstream of the site).

Illustrate the description with maps, diagrams and photographs, and include the topography of the area. If the site and/or its surrounding land have areas of low relief, illustrate the topography on maps with contours at no more than 1m intervals.

Describe the stormwater drainage, delineate the catchments, and include any stormwater quality improvement devices, weirs, sediment basins, storage dams, and so on. Include the potential for stormwater drainage to affect the movement of contaminants. Also, address flood risk and locations where significantly large pools of water occur during or after rain events. A significantly large water pool is one that could affect the movement or management of contaminants, such as by infiltration or overland flow of water, but does not include minor puddles.

The description must establish whether there are uses or activities (including notifiable activities or environmentally relevant activities) on the surrounding land that may reduce safety or increase the risk of environmental harm on the relevant land.

3.1.6 Waste disposed of or stored on the land

Section of the EP Act that authorises this requirement	Corresponding section(s) of the contaminated land NEPM
s. 389(2)(a)(iv)	Schedule B2, sections 3.3.8 to 3.3.16

Provide details of any waste (liquid or solid) that has been disposed of on the land, or that is or was stored on the land. Under Queensland law, waste is defined by s. 13 of the EP Act (see Appendix 3 of this module for the text of s. 13).

The details should include the location, quantity and type of the waste, and the method(s) of its storage or disposal. Also, address any potential contamination of the land caused by storing or disposing of the waste on the land, such as might occur through the failure or breaching of an underground containment cell, the deterioration of storage vessels, or an accident such as a fire. That is, disposal should be taken to include accidental spills or releases.

The description should also include any waste that may have been extracted, then moved or stored at the site during any site works e.g. earthworks (see also section 3.1.9 below). Suitably qualified persons must search all available records when researching information for this section of the report.

3.1.7 Geology and hydrogeology

Section of the EP Act that authorises this requirement	Corresponding section(s) of the contaminated land NEPM
s. 389(2)(a)(v)	Schedules B2 (sections 3.4, 3.5, 15.2.8), B3, and B6

Describe the geology and hydrogeology of the land, including soils, subsoils, rock strata, aquifers, and aquitards. The contaminated land NEPM (particularly its Schedules B2, B3 and B6) provides advice in regard to this requirement. However, there is a large body of research, other texts and sources of information about geology and hydrogeology that should be used to supplement the NEPM. When developing a concept or model of the groundwater system, comply with the *Australian groundwater modelling guidelines* (National Water Commission, June 2012).

Identify the environmental values (EVs) to be enhanced or protected under the Environmental Protection (Water and Wetland Biodiversity) Policy 2019 (Water EPP) that have been scheduled for the land and receiving environment. This information is available in the applicable Environmental Value and Water Quality Objective (WQO) documents and corresponding maps available on the department's website, including the factsheet *Healthy waters for Queensland: Environmental values, management goals and water quality objectives*. If a document has

not yet been published for the particular waters or a water type was not listed in the published document, the EVs and WQOs are respectively determined in accordance with section 6 and section 11 of the Water EPP.

Describe beneficial groundwater use(s) at and in the vicinity of the site, including a search for registered bores. A site investigation may warrant a more detailed assessment including a survey of properties and groundwater users.

Assess how the geology and hydrogeology of the land would affect the movement or retention of contaminants within soils, subsoils, and rock strata. Describe groundwater quality, and groundwater levels and flow directions. Describe any barriers to, and migration pathways for, the dispersal of contaminants in groundwater. Assess the rate at which any contaminants may migrate. If there has been irrigation of wastewater to land, or subsurface injection of water, describe the quantity and quality of wastewater and the geological material and strata onto or into which the irrigation or injection occurred.

Describe the natural geochemistry including acid sulfate soils, or sulfide bearing minerals. Assess the effects that these soils may have on the distribution and migration of contaminants. Document how possible impacts to acid sulfate soils were considered and managed during any remediation activities. Also describe any naturally occurring toxicants that are present in quantities or concentrations that might affect the use or management of the site.

In addition to solid contaminants, address liquid and gaseous contaminants that may be dispersed in pore spaces, and assess the potential for, and the likely rate of, dispersal of contaminants to the atmosphere. Assess whether the dispersal of contaminants from the ground could impact on air quality in buildings or underground car parks.

If groundwater remediation is required, assess how effectively the site's contamination could be remediated, describe any limitations, and assess the likely residual contamination. Remediation is further addressed in section 3.1.10, below.

3.1.8 Environmentally relevant activities and notifiable activities

Section of the EP Act that authorises this requirement	Corresponding section(s) of the contaminated land NEPM
s. 389(2)(a)(vi)	Schedule B2, section 2.1 and 3.3.5,

Provide details of any environmentally relevant activities and notifiable activities carried out on the land, whether formerly or currently. Focus on the materials used and any waste produced during the carrying out of the activities that could be sources of on-site and/or off-site contamination. Illustrate on maps where any environmentally relevant activities or notifiable activities were carried out.

Environmentally relevant activities are listed in Schedule 2 of the Environmental Protection Regulation 2019. Notifiable activities are listed in Schedule 3 of the *Environmental Protection Act 1994*.

3.1.9 Earthworks

Section of the EP Act that authorises this requirement	Corresponding section(s) of the contaminated land NEPM
s. 389(2)(a)(vii)	Schedule B2, section 3.3.17

Provide details of any earthworks carried out on the land, including an inventory of any earth excavated in order to be treated or disposed of elsewhere, and/or soil imported to the site as fill. Provide maps and cross-sections to illustrate how earthworks have changed the topography and geology of the land. Integrate the description of any earthworks with the required description of the site's watercourses, wetlands, geology and hydrogeology.

Address whether the earthworks could be a source of contamination. Also, assess how earthworks may have affected how water and/or other liquids or gaseous contaminants move over, into or through the ground dispersing contaminants.

3.1.10 Remediation

Section of the EP Act that authorises this requirement	Corresponding section(s) of the contaminated land NEPM
s. 389(2)(a)(viii)	Schedules A, B1, B2 section 5.2, B3, B4 to B8

If any contamination has been remediated on the land, describe the remediation in detail in a *validation report*. The validation report may be submitted with a site investigation report so that the combined reports cover the matters detailed in the previous subsections of Module 6. Alternatively, the validation report may be a stand-alone document that addresses the relevant requirements of the EP Act.

The validation report must describe the remedial approach that was adopted. The approach should be developed in accordance with the *National Remediation Framework*, which was developed to complement the contaminated land NEPM.

The administering authority may require remediation of contamination and a validation report. For example, a person may be directed to take action (e.g. by a clean-up notice under s. 363H of the EP Act) to contain, remove, disperse or destroy contaminants and rehabilitate or restore the environment because of a contamination incident involving contaminated land. In these cases, the validation report should detail how the notice requirements have been met.

The validation report must describe the remedial strategy, how the validation criteria were developed, and explain why the criteria were considered appropriate for the site’s particular circumstances. The validation report must describe the contamination levels recorded on the land before and after the work was carried out; and compare the contamination levels to the remediation objectives and validation criteria that were used to evaluate the effectiveness of the remediation. The report must describe how the residual contamination levels were validated and demonstrate that the methods were appropriate and statistically robust. Also, the validation report must assess any residual risks to human health and all environmental values as a result of the remediated state of the land.

Where appropriate, the validation report should include a copy of the *remediation action plan* that was developed for the remedial activities and the remedial options assessment (ROA) that was carried out prior to remediation. The ROA should include an analysis of the options that were available for remediating the land and explain why the preferred option was chosen.

3.1.11 Site suitability statement

Section 389(2)(b) of the EP Act requires all site investigation reports and validation reports to include a site suitability statement—see section 3.3 below for further advice.

3.1.12 Contaminated land

Section of the EP Act that authorises this requirement	Corresponding section(s) of the contaminated land NEPM
s. 389(2)(c)	Schedules A, B1, B2, B3, B4, B5a, and B6

Section 389(2)(c) requires the contaminated land investigation document to include a statement of the following matters:

- whether the land is prescribed contaminated land
- if the land is contaminated—the extent to which the land is contaminated.

Provide details of the site investigations and the findings of those investigations with regard to contamination of the land, particularly the extent, fate and movement of contamination. Provide details of the data quality objectives, sampling strategy, and sampling and analysis quality plan prepared to support the investigation. Describe in detail all: desk-top assessments of the site; site inspections; and sampling of soil, water, and any other media. Provide maps, GPS coordinates and diagrams, including cross-sections where necessary, to illustrate the site and where sampling has taken place on the site or its surrounds and the location of identified contaminants. Provide details of a site conceptual model (CSM) presented in text, tables, and illustrated with suitable graphics and flow diagrams.

Describe the methods used to collect, store, preserve and analyse samples of media. Discuss any limitations to those methods that may affect reliance on the results. Samples must be collected in accordance with appropriate standards and quality control processes. Present the details of the QA/QC assessment and record the chain of custody of samples. If the samples were handled and/or analysed by a third-party, identify the laboratory or contractor(s) that undertook the work, and state whether or not they are accredited (e.g. by the National Association of Testing Authorities, Australia (NATA)). If the laboratory or contractor is not accredited by NATA, explain how the methods have been appropriately validated.

Describe and validate the methods used to interpolate and extrapolate, from the sampling results, the spatial extent of any contamination.

If the land was found to be contaminated, s. 389(2)(c)(ii) of the EP Act requires that the contaminated land investigation document states the extent to which the land is contaminated. Describe and illustrate (with data tables, maps, GPS coordinates, diagrams and cross-sections at suitable scales) the location(s) of any residual contamination, and the quantities or concentrations of contaminants. Also, assess, describe and illustrate the potential risks of contamination either moving off the relevant land to any surrounding area, or moving onto the relevant land from any off-site sources of contamination. The assessment should determine whether the land is prescribed contaminated land.

Assess the levels of contaminants against applicable criteria, considering all relevant environmental values, including human health, amenity, and ecological values.

Derive environmental values for water pursuant to the Environmental Protection (Water and Wetland Biodiversity) Policy 2019 (EPP(Water)) and *Australian water quality guidelines for fresh and marine waters* (ANZECC & ARMCANZ, 2000). Include criteria to assess potential impact(s) on environmental values that relate to potential uses; for example, saline groundwater may be treated for potable or stock use during a drought, and therefore has an environmental value. Furthermore, all environmental values that derive from Queensland’s EP Act and environmental protection policies cannot be subsequently disregarded or diminished by applying the contaminated land NEPM’s risk-based process.

Assess how the levels of contaminants would impact on all current and foreseeable future uses, while taking account of the likely extent that the contamination can be remediated (see also section 3.1.10).

If the land was found to be not contaminated, the contaminated land investigation document should justify how the conclusion was reached, with reference to the site investigations and any remediation (see section 3.1.10).

3.2 Draft site management plans

3.2.1 Introduction

Section 370 of the EP Act defines an SMP for relevant land, as ‘a plan for managing the environmental harm that may be caused by the hazardous contaminant contaminating the land by applying conditions to the use or development of, or activities carried out on, the land.’ An SMP specifies conditions for *contaminated land* to manage the contaminant and environmental harm that may be caused by the contaminant in order to protect human health and the environment, and to maintain the suitability of the *contaminated land* as certified by the auditor.

The statutory requirements for preparing and submitting a draft site management plan are provided in ss. 388 to 404 of the EP Act.

Section 389(3) of the EP Act requires a draft site management plan to be in the *approved form*. In practice, this means the draft site management plan must include all the information detailed in this section 3.2 of this module. To be in the approved form, the draft site management plan must be submitted with the form *Contaminated land investigation documents – approved form* that is available from the Queensland government’s website.

Section 389(3)(d) of the EP Act requires a draft site management plan to include a reference to, and a copy of, the site investigation report or validation report that relates to the plan.

The draft site management plan must take account of, and address, the following matters:

- a) the nature and extent of contamination
- b) expected risks to public safety and amenity, human health, environmental values of waters and ecological values associated with any residual contamination of the land after site management measures are implemented
- c) appropriate standards that will: protect public safety and amenity, human health, environmental values of waters and ecological values; support the suitability of the land for its intended use and associated activities; and avoid environmental harm to other land and the surrounding environment
- d) associated risks to environmental values that could arise from actions taken to manage contamination
- e) the mitigation strategy that will be applied to specified parts of the land to reduce and manage risks
- f) ongoing monitoring of the effectiveness of the adopted measures, environmental quality and residual risks
- g) whether the objectives, methods and measures proposed in the plan are appropriate
- h) measurable, achievable and auditable conditions that would apply the objectives, methods and measures.

The following sections expand on the requirements for a draft site management plan under s. 389(3) of the EP Act.

3.2.2 Proposed objectives

Section of the EP Act that authorises this requirement:	s. 389(3)(a)(i)
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The draft site management plan must state the proposed objectives to be achieved and maintained under the plan.

Develop the draft site management plan’s objectives having regard to, and identifying, the relevant aspects of the contaminated land NEPM, the EP Act, the Environmental Protection Regulation 2019, environmental protection policies, and any relevant technical standards.

3.2.3 Proposed methods for achieving and maintaining objectives

Section of the EP Act that authorises this requirement:	s. 389(3)(a)(ii)
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The methods for achieving and maintaining objectives must be relevant to the land contamination. The methods will typically involve a combination of engineered solutions (such as capping and fencing) and active measures (such as prohibiting groundwater extraction.).

The draft site management plan should ensure the site will remain suitable for the specified use. Furthermore, the site investigation report and/or validation report that support the draft site management plan should evaluate and justify the efficacy of the control measures.

Ensure the proposed methods specify what must be done and who must do it. The actions must be written as measurable, achievable and auditable conditions.

The conditions should manage the current state of the land and maintain its suitability for the particular use(s) or activities described in the site suitability statement. That is, the draft site management plan should not include conditions that require the site to be further remediated at a later date to make the site suitable for the stated use. For example, if capping is required to achieve site suitability by preventing users of the land from coming into contact with contamination, then the capping should be installed before the site management plan is finalised.

Furthermore, the draft site management plan should not include conditions that make actions dependent upon the findings of further studies. The person should complete all necessary studies before developing the draft site management plan.

If the draft site management plan proposes to rely, either in part or fully, on monitored natural attenuation, the supporting site investigation report or validation report must provide justification for choosing this option and assess:

- the likelihood of success
- the reasonableness of the time period over which natural attenuation is predicted to occur
- the risks of environmental harm compared to more active forms of remediation.

In addition to addressing the direct risks of environmental harm due to the contamination itself, the draft site management plan should address activities associated with managing the contamination that might cause impacts on environmental values. This might include, for example, describing how to manage waste, noise, dust, odour, run-off, and erosion.

3.2.4 Proposed monitoring and reporting compliance measures

Section of the EP Act that authorises this requirement:	s. 389(3)(a)(iii)
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The draft site management plan must state the proposed monitoring and reporting compliance measures for the land.

Develop monitoring and reporting measures that are commensurate with the environmental risks involved. The measures must include indicators and procedures that will be used to monitor and evaluate compliance with the objectives and obligations of the site management plan. The measures must effectively monitor and evaluate the risks associated with the current contamination of the land and potential changes to the condition of the contaminated land. The measures must include details of who will prepare reports of the monitoring results, when the reports will be due, and who the reports will be provided to. Monitoring conditions should be sufficient to ensure any physical control measures are maintained in a proper and effective condition. They should be sufficient to detect any change in condition of the site and any increased risk of environmental harm due to changing circumstances.

3.2.5 Site suitability statement

Section of the EP Act that authorises this requirement:	s. 389(3)(b)
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Section 389(3)(b) of the EP Act requires the draft site management plan to include a site suitability statement—see section 3.3 below for further advice.

3.2.6 Statement of additional matters

Sections of the EP Act that authorises this requirement:	ss. 389(3)(c) and 389(5)
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Section 389(3)(c) requires the contaminated land investigation document to include a statement of the following matters:

- whether the land is prescribed contaminated land
- if the land is contaminated—the extent to which the land is contaminated
- whether the proposed objectives, methods and measures stated in the plan (as required by s. 389(3)(a)) are appropriate.

The plan should determine whether the land is prescribed contaminated land as defined in s. 389(5) of the EP Act, which is land contaminated in a way that causes a risk of environmental harm to:

- land other than the relevant land, or
- human health, or
- another part of the environment.

Provide a summary that describes the extent to which the land is contaminated. This may be achieved using text, data tables, diagrams/figures, GPS coordinates, and cross-sections (if applicable) at suitable scales that identify the location(s) of any residual contamination, and the quantities or concentrations of contaminants.

The draft site management plan must state whether the objectives, methods and measures proposed in the plan are appropriate to ensure the relevant land will not pose environmental harm for the proposed land uses.

3.2.7 Site investigation report or validation report that relates to the draft site management plan

Section of the EP Act that authorises this requirement:	s. 389(3)(d)
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A draft site management plan must make reference to, and be supported by, a site investigation report and/or validation report that substantiates the management objectives, methods and monitoring of the plan. DES will need the supporting report when deciding whether to approve the draft site management plan.

3.2.8 Environmental harm

Section of the EP Act that authorises this requirement:	s. 389(3)(e)
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Section 389(3)(e) of the EP Act requires the draft site management plan to include a description of the source, cause, and extent of environmental harm to be managed under the plan.

3.2.9 Landowner's agreement

Section of the EP Act that authorises this requirement:	s. 390(5)(a)
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If a draft site management plan is prepared by a person other than the land's owner, it must be accompanied by a signed statement by the land's owner agreeing to the draft plan.

3.3 Common requirements for all contaminated land investigation documents

This section expands on the common requirements for all contaminated land investigation documents, which include:

- the need for the documents to be in the approved form
- a site suitability statement
- accordance with the NEPM
- declarations by the relevant person, the suitably qualified person, and the auditor.

The requirements for the auditor's certification and audit report, which must accompany the contaminated land investigation document, are addressed separately in sections 4 and 5 below.

3.3.1 Approved form

All contaminated land investigation documents are required by s. 389 of the EP Act to be in the approved form. To be in the approved form the document must:

- meet the content requirements of s. 389(2) of the EP Act for a site investigation report or validation report, or s. 389(3) of the EP Act for a draft site management plan
- be prepared by an SQP in accordance with the current state and Commonwealth legislation, policies and guidelines, Australian Standards, and the National Environment Protection (Assessment of Site Contamination) Measure 1999
- be certified by a contaminated land auditor
- be submitted with the form *Contaminated land investigation document—approved form*, which is available from the department's website.

Furthermore, s. 389(4) requires the auditor's certification of the contaminated land investigation document to be in the approved form. To be in the approved form the auditor's certification must be completed using Part D of the form *Contaminated land investigation document—approved form*, which is available from the department's website (see section 4 of this module below for additional advice).

3.3.2 Site suitability statement

Section of the EP Act that authorises this requirement	Corresponding section(s) of the contaminated land NEPM
s. 389(2)(b) or 389(3)(b)	Schedule B1 and B2 (sections 3 and 4)

All contaminated land investigation documents must by law (see ss. 389(2)(b) and 389(3)(b) of the EP Act) include a statement (a *site suitability statement*) of the uses or activities for which the land is suitable. The suitably qualified person first prepares the contaminated land investigation document and then bases the site suitability statement on its findings. A site suitability statement therefore expresses the view of the suitably qualified person and the relevant person who submits the statement with the contaminated land investigation document.

A site suitability statement cannot be submitted to the department unless it is certified by an auditor.

If a project site comprises multiple parcels of land, it is essential that every separate parcel of land has its own individual site suitability statement.

A site suitability statement can only include uses and activities for which the relevant land is unequivocally and indisputably suitable in its present state; that is, at the time the contaminated land investigation document is prepared. A site suitability statement that purports to specify uses and activities for which relevant contaminated land may be suitable in the future if particular actions or events occur would not be valid under s. 389(2)(b) or 389(3)(b) of the EP Act. This has other relevance because an invalid site suitability statement would cause the contaminated land investigation document it accompanies to fail the statutory requirements, and the government would not be obliged to take action in respect of either document.

The stated use in the site suitability statement must be in accordance with one of the following generic land use categories:

Land use A—Residential with garden/accessible soil; childcare centres, preschools, and primary schools with access to soil.

Land use B—Residential, childcare centres, preschools, and primary schools with minimal opportunities for access to impacted soil (capped site), vapour and/or groundwater; dwellings with fully and permanently paved yard space such as units, high-rise buildings and apartments.

Land use C—Public open space, including parks, playgrounds, and playing fields (e.g. ovals); secondary schools; and footpaths.

Land use D—Commercial/industrial, including shops, offices, factories and industrial sites.

Undertake a site specific risk assessment to determine site suitability where a current use includes commercial agriculture including fodder production, or greater than 10% consumption of garden produce, or consumption of home grown eggs, poultry or meat, or irrigation of produce, or watering of stock with contaminated water.

Only sites that are suitable for unrestricted land use will be eligible for removal from the relevant land register. Any site that requires ongoing management through a site management plan due to residual risks will remain on the relevant land register. That is because, while the contaminated land NEPM encourages a risk-based approach to manage residual contamination, the only tool currently available under Queensland legislation to manage residual risks is to list the land on one of the registers.

A site suitability statement may be based on one of the following four possible outcomes. Appendix 4 of this module provides wording that must be used as the template for the relevant outcome in a site suitability statement. The wording of a template in Appendix 4 can only be changed where it indicates information should be inserted or an option selected—no other changes can be made. For all four outcomes, an appropriate assessment of site contamination must have been conducted in accordance with the contaminated land NEPM, having regard to relevant provisions of the EP Act, the Environmental Protection (Water and Wetland) Policy 2019, the PFAS National Environmental Management Plan.

Outcome 1 has been met—The land is not contaminated land and is suitable for any use

This is the only outcome from which relevant land can be removed from the EMR or CLR. The contaminated land investigation document must demonstrate that the land is not contaminated land (e.g. because it has been remediated) and is suitable for unrestricted land use, including Land use A and all sensitive uses listed in Schedule 24 of the Planning Regulation 2017. In order for that to be demonstrated, the contaminated land investigation document must establish that:

1. the land is not being used for a notifiable activity; and
2. the land is not affected by a hazardous contaminant; and
3. the land is not prescribed contaminated land; and
4. an appropriate assessment of site contamination has been conducted using current best practice and in accordance with the current state and Commonwealth legislation, policies and guidelines, Australian Standards, and the National Environment Protection (Assessment of Site Contamination) Measure 1999.

Only when all those circumstances are met may the site suitability statement declare the relevant land is suitable for any use.

Outcome 2 has been met—The land is suitable for specified uses, without warranting a site management plan

Land may be found to be contaminated such that it is suitable for specified uses without needing to implement a site management plan. A site management plan may not be needed if there is another enduring legislative mechanism under the EP Act that is being used to manage relevant contamination and risk factors.

An example of where Outcome 2 may be appropriate due to another enduring a legislative mechanism is outlined below.

Example

The land is listed on the EMR. Investigations identified elevated concentrations of contaminants above the NEPM criteria for low density residential land use, but below the NEPM criteria for industrial/commercial land use. The contamination is not migrating, nor likely to do so. Assessment of the analytical results by the SQP concluded that although the land is not suitable for unrestricted land use, management was not required for the ongoing use of the site for industrial uses in which the contaminants would not pose a risk to human health or the environment.

In this situation, the following circumstances may make Outcome 2 appropriate:

- The contamination does not require management for the current industrial land use setting.
- The land is listed on the EMR, stating, for example, the details about the notifiable activity and that hazardous contaminants are impacting the land, with a description of the contaminants and the most elevated concentrations.
- Other potential activities, such as soil excavation and disposal, would require a soil disposal permit in accordance with the EP Act.
- A material change of use of the land to a more sensitive land use would be assessable development under Part 4 of the Planning Regulation 2017.

End of example

A site suitability statement using Outcome 2 may declare that the land is only suitable for Land use D, but not Land uses A, B, or C, nor any sensitive land uses listed in Schedule 24 of the Planning Regulation 2017.

If Outcome 2 is the most appropriate finding (i.e. there are residual risks, but with a low likelihood under the contaminated land NEPM), the risks must be documented and the site managed for the current contaminated state of the land. The relevant land's listing would also remain on the EMR. If an enduring mechanism is to be used, the contaminated site investigation document must provide full details of the mechanism, who is responsible for implementing it, and how it will be monitored.

Outcome 3 has been met—The land is suitable for specified uses, subject to complying with a site management plan

Land may be found to be contaminated such that it is suitable for specified uses and capable of avoiding harm to the environment and other land, but only if an approved site management plan is effectively implemented.

If Outcome 3 is the most appropriate finding, a draft site management plan must be prepared and submitted to DES for approval in accordance with the provisions in the EP Act, Chapter 7, Part 8.

Outcome 3 is not applicable to Land use A. Also, Outcome 3 is not appropriate if there is the potential now, or in the future, for contamination to move off the site—for example, due to preferential pathways or secondary sources.

When DES has approved the site management plan, the details of the plan will be recorded on the relevant land register. Anyone who undertakes development or other activities at the site will have to comply with the site management plan, and it would be an offence not to do so.

Outcome 4 has been met—Insufficient information to determine site suitability

A site suitability statement must be submitted with a contaminated land investigation document. This fourth outcome would occur if there is a need to submit a contaminated land investigation document while the land is still being investigated and there is insufficient information to characterise the risks associated with hazardous contaminants. This statement captures the uncertainty of the ongoing investigation and indicates that the land cannot be said to be appropriate for any land use until risks are further characterised and sufficient information has been obtained to determine site suitability.

3.3.3 Accordance with the NEPM

A contaminated land investigation document must be developed, written and presented in accordance with the contaminated land NEPM. The approved form indicates the minimum aspects of NEPM that must be met when preparing a contaminated land investigation document. These requirements have been developed in accordance with Schedule B2 of the NEPM, which provides guidance on the design and implementation of soil, groundwater and vapour sampling programs and the presentation of site assessment reports. Each requirement in the approved form includes a reference to the applicable section of NEPM that provides guidance on how best to meet the requirements of the form. The requirements described in the approved form are not exhaustive. Additional schedules of the contaminated land NEPM may be applicable to the investigation and assessment of particular sites. The SQP preparing and auditor certifying the contaminated land investigation document are responsible for ensuring that all aspects of the contaminated land NEPM are applied as necessary.

Should any investigation deviate from the NEPM requirements outlined in the approved form, the contaminated land investigation document must:

- describe the extent of any deviations from the recommendations of the NEPM's schedules
- explain whether any deviations were due to overriding state legislation or policies
- evaluate with reference to current best practice how effective any alternative methods were in comparison to those of the NEPM.

The contaminated land investigation document must demonstrate that the investigation components of an assessment of site contamination listed in Section 1 of Schedule B2 of the contaminated land NEPM have been conducted for every stage of investigation.

3.3.4 Declarations

Section of the EP Act that authorises this requirement	Corresponding section(s) of the contaminated land NEPM
ss. 390(2), 566, and 574C	Not applicable

The approved form, *Contaminated land investigation document—approved form*, includes the declarations that are required when preparing, certifying and submitting a contaminated land investigation document. A copy of the approved form is available from DES's website. Information about the declarations is outlined below:

Declaration by the relevant person

A contaminated land investigation document must also be accompanied by a declaration by the relevant person submitting the document. If someone was given a notice by the administering authority that required them to prepare the contaminated land investigation document, then the person who was given the notice is the relevant person who must make the declaration. Otherwise, the declaration must be made by whoever gives the

contaminated land investigation document to the administering authority. The relevant person may be the SQP who prepared the document (see the definition of the relevant person in section 7 below).

Section 390(2) of the EP Act requires that the declaration must state that the relevant person:

- has not knowingly given any false or misleading information to the auditor who certified the document; and
- has given all relevant information to the auditor; and
- if the person is not the land's owner—has given a copy of the document to the owner.

Declaration by the suitably qualified person(s)

Section 566 of the EP Act requires that a contaminated land investigation document must be accompanied by a declaration by the suitably qualified person stating all of the following:

- a) the person's qualifications and experience relevant to the function [i.e. preparing the contaminated land investigation document]
- b) that the person has not knowingly included false, misleading or incomplete information in the document
- c) that the person has not knowingly failed to reveal any relevant information or document to the administering authority
- d) the document addresses the relevant matters for the function and is factually correct
- e) the opinions expressed in the document are honestly and reasonably held.

Declaration by the auditor

Section 574C of the EP Act requires that an auditor's certification must be accompanied by a declaration by the auditor stating all of the following—

- a) the auditor's qualifications and experience relevant to the audit
- b) that the auditor has not knowingly included false, misleading or incomplete information in the certification
- c) that the auditor has not knowingly failed to reveal any relevant information or document to the administering authority
- d) that the certification is factually correct
- e) the opinions expressed in the certification are honestly and reasonably held.

4 Content of the auditor's certification

Section of the EP Act that authorises this requirement	Corresponding section(s) of the contaminated land NEPM
s. 389(4)	Schedule A and B

The auditor is personally responsible for the certification of a contaminated land investigation document. The responsibility cannot be devolved to a business that employs the auditor.

The auditor's certification of a contaminated land investigation document must be in the approved form. To be in the approved form, the auditor must complete Part D of the form *Contaminated land investigation document – approved form*. They must also include an audit report with the form—see section 5 of this module for further advice.

The auditor's certification must be clear and unequivocal. It is essential that the state government, land owner(s), and any other stakeholders can rely on the certified document. An auditor cannot qualify their certification to limit reliance only to the auditor's client or to the Queensland government. Furthermore, an auditor cannot limit their responsibility on the basis that it is reliant on the veracity of a contaminated land investigation document. That is because the audit's main purpose is to check that the investigations and findings reported in the contaminated land investigation document are honest, correct and sufficient, and that the document accurately reflects the condition of the site and its suitable use(s).

In addition to this section of Module 6, the content requirements for an auditor's certification are established in section 574C of the EP Act, *Module 4: Code of professional conduct* of the *Queensland auditor handbook for contaminated land* and Part D of the form *Contaminated land investigation document – approved form*. The requirements include the declaration mentioned in the previous section of this module. The audit report that accompanies their certification must provide evidence of their oversight of the suitably qualified person's investigations, including evidence of the auditor's site visit(s) and their review of the site investigation's sampling and analysis program.

5 Required content for audit report

An auditor must prepare an audit report for every certification they sign. They provide the audit report to their client with their certification and provide it to the administering authority as an attachment to the approved form. The audit report must explain and justify how the auditor arrived at their decision that they could verify that the contaminated land investigation document and its site suitability statement comply with ss. 389(2) or 389(3) of the EP Act. The audit report must also provide evidence of the auditor's verification of the requirements of Part D of form *Contaminated land investigation document – approved form*.

The audit report is needed because, in regard to a certified site suitability statement, the auditor has effectively been delegated the decision-making power for s. 381(2) of the EP Act when they undertake an auditor's function, and DES is obliged by s. 381(2) of the EP Act to act in accordance with the certified site suitability statement. The decision to act under that section of the EP Act is an original decision that may be appealed in the Planning and Environment Court. A good audit report will assist in establishing how the decision was made if it is challenged. It will also provide transparency in decision-making and allow the department to check that an auditor is performing their functions in accordance with the prescribed code of professional conduct.

The audit report must clearly identify which matters considered in the certification were based on another's expert opinion rather than the auditor's and identify who provided the opinion. Nevertheless, whether expressing their opinion or the opinion of a member of their expert team, the auditor must take responsibility for the validity of the opinion and take all necessary steps to verify the evidence on which the opinion is based.

The audit report must:

- provide the name of the auditor
- provide details of the auditor's approval at the time they issued the certification
- list the relevant chronology for the audit
- set out the findings on material questions of fact
- refer to the evidence or other material on which those findings were based
- summarise the reasons for the decision given in the certification
- provide evidence of the auditor's verification of the requirements of Part D of the form – *Contaminated land investigation document – approved form*.

The audit report should contain a logical explanation of how the facts led to the decision to issue the certification. A reader should be able to understand how the decision was reached, and they should not have to guess at any gaps in the process.

In making a record of the decision, the auditor should list the evidence and materials that were before them when they made the decision. They should take care to list all the things that they took into consideration.

In practice, the audit report should explicitly reference the individual subsections of s. 389 (*Content of contaminated land document*) of the EP Act and the relevant sections of *Contaminated land investigation document – approved form*, and address each in turn. For each content requirement, the notes should list the evidence and materials the auditor used when making their decision and contain the findings on all material questions of fact. A material fact is one that can affect the outcome of the decision, and the findings on material facts are those that support the decision, based on the consideration of all relevant evidence.

The audit report should address how the auditor:

- identified the core considerations of the certification, including relevant factors (such as exposure pathways) and the assessment criteria, which may have been sourced from state legislation and policies or the contaminated land NEPM
- assessed the adequacy of the available data
- evaluated the key lines of evidence with respect to site risks and potential responses, having regard to relevant factors and assessment criteria
- identified and evaluated any substantial uncertainties about the assessment of the site or the effectiveness of proposed management measures.

If there are substantial uncertainties, the auditor must check whether the site suitability statement has used Outcome 4 (see section 3.13 above). If Outcomes 1, 2 or 3 have been used, the auditor must either withhold their certification or fully explain why they thought it appropriate to certify the contaminated land investigation document and its site suitability statement despite the uncertainties.

6 Submitting a contaminated land investigation document

A contaminated land investigation document and its accompanying declaration and certification must be submitted to the department administering the EP Act, which at the time this module was written is the Department of Environment and Science. The document is submitted by the *relevant person* (see *Definitions* below).

The contaminated land investigation document must be submitted in the approved form as required by s. 389 of the EP Act. The department's website provides the form *Contaminated land investigation document – approved form*, which must be used to submit the document.

In addition to the statutory content requirements described in this module, the statutory requirements for submitting a contaminated land investigation document are detailed in s. 390 of the EP Act (see Appendix 3 of this module).

The contaminated land investigation document may be submitted in PDF format and/or hardcopy. The department's addresses for submission of PDF copies or hardcopy are on the department's approved form.

7 Definitions

Administering authority means the government department that administers the *Environmental Protection Act 1994*, which at the time this module was written is the Department of Environment and Science.

Approved form:

A site investigation report or validation report is in the approved form if it is:

- (a) submitted with the form *Contaminated land investigation document – approved form*
- (b) includes the information required by s. 389(2) of the EP Act
- (c) has been prepared according to the contaminated land NEPM and Module 6 of the Queensland auditor handbook for contaminated land.

A draft site management plan is in the approved form if it is:

- (a) submitted with the form *Contaminated land investigation document – approved form*
- (b) includes the information required by s. 389(3) of the EP Act
- (c) has been prepared according to the contaminated land NEPM and Module 6 of the Queensland auditor handbook for contaminated land.

Contaminated land means land contaminated by a hazardous contaminant.

Contaminated land NEPM means the National Environment Protection (Assessment of Site Contamination) Measure, made by the National Environment Protection Council under the *National Environment Protection Council Act 1994* (Cwlth).

Environmentally sensitive area means an area prescribed by (i.e. listed in) Schedule 12 of the Environmental Protection Regulation 2008. The list includes such features as a national park, fish habitat area, and endangered regional ecosystem.

Hazardous contaminant means a contaminant, other than an item of explosive ordnance, that, if improperly treated, stored, disposed of or otherwise managed, is likely to cause serious or material environmental harm because of—

- (a) its quantity, concentration, acute or chronic toxic effects, carcinogenicity, teratogenicity, mutagenicity, corrosiveness, explosiveness, radioactivity or flammability; or
- (b) its physical, chemical or infectious characteristics.

[This definition is from Schedule 4 of the EP Act]

National Remediation Framework means the National Remediation Framework, Cooperative Research Centre for Contamination Assessment and Remediation of the Environment, National Remediation Framework, August 2019.

Prescribed contaminated land is defined in s. 389(5) of the EP Act as land contaminated in a way that is a risk of causing environmental harm to—

- (a) land other than the relevant land; or
- (b) human health; or
- (c) another part of the environment.

This should be interpreted to mean that land is prescribed contaminated land if the land is contaminated and there is a risk that the contamination may cause serious or material harm to:

- (a) another property; or
- (b) human health on the contaminated property or another property; or
- (c) environmental values on the contaminated property or another property.

Relevant person: If the contaminated land investigation document is given to the administering authority in order to comply with a notice given by the authority under the EP Act, then the *relevant person* is the person to whom the notice was given. Otherwise, the *relevant person* is the person who gives the contaminated land investigation document to the administering authority (see s. 390(3) of the EP Act). In this sense, the person who 'gives' the document is not necessarily the person who simply delivers it, rather it is the person who causes the document to be given to the administering authority and has responsibility for it, e.g. site owner, SQP, tenant, developer etc.

Remediation action plan: If land has contamination that requires remediation, a remediation action plan describes the work that needs to be done, specifies the objectives, and sets out the timeframe for achieving the remediation objectives.

Suitably qualified person—ss. 564–566 of the EP Act regulate who can be a suitably qualified person, and what they do.

Waste has the meaning given in s. 13 of the EP Act (see Appendix 2 of this module for the text of s. 13).

Water has the meanings given in the *Water Act 2000*.

Appendix 1—Content of contaminated land investigation document

The following text is an excerpt from the EP Act (s. 389, at the time this module was published) that specifies the statutory content requirements for a contaminated land investigation document:

389 Content of contaminated land investigation document

- (1) This section applies to a contaminated land investigation document for relevant land.
- (2) If the contaminated land investigation document is a site investigation report or validation report, the document must be in the approved form and include—
 - (a) the following information about the relevant land—
 - (i) the reasons particulars of the land have been recorded in a relevant land register;
 - (ii) a description of all surface and subsurface infrastructure on the land, including details of the location, size and type of the infrastructure;
 - (iii) a description of the surrounding area of the land, including a description of each of the following in the surrounding area—
 - (A) all environmentally sensitive areas;
 - (B) the location of all water, watercourses and wetlands;
 - (C) the location of all stormwater drainage;
 - (D) all uses of the land, including uses that may affect the safety of the relevant land or cause environmental harm;
 - (E) all activities carried out that may affect the safety of the relevant land or cause environmental harm;
 - (iv) for waste disposed of or stored on the land that contains, or may potentially contain, hazardous contaminants—
 - (A) details of the location, volume and type of the waste; and
 - (B) details of any potential contamination of the land caused by disposing of or storing the waste on the land;
 - (v) a description of the geology and hydrogeology of the land;
 - (vi) details of any environmentally relevant activities or notifiable activities carried out on the land, including the materials used and waste produced during the carrying out of the activities;
 - (vii) details of any earthworks carried out on the land, including the materials used and waste produced during the earthworks;
 - (viii) if work has been carried out on the land to remediate the contamination of the land—the contamination levels recorded on the land before and after the work was carried out; and
 - (b) a statement (a **site suitability statement**) of the uses or activities for which the land is suitable; and
 - (c) a statement of the following matters—
 - (i) whether the land is prescribed contaminated land;
 - (ii) if the land is contaminated—the extent to which the land is contaminated.
- (3) If the contaminated land investigation document is a draft site management plan, the document must be in the approved form and include—
 - (a) the following information about the relevant land—
 - (i) the proposed objectives to be achieved and maintained under the plan;
 - (ii) the proposed methods for achieving and maintaining the objectives;
 - (iii) the proposed monitoring and reporting compliance measures for the land; and
 - (b) a site suitability statement; and

- (c) a statement of the following matters—
 - (i) whether the land is prescribed contaminated land;
 - (ii) if the land is contaminated—the extent to which the land is contaminated;
 - (iii) whether the proposed objectives, methods and measures stated in the plan under paragraph (a) are appropriate; and
 - (d) a reference to, and a copy of, the site investigation report or validation report that relates to the draft site management plan; and
 - (e) a description of the source, cause and extent of environmental harm to be managed under the plan.
- (4) A contaminated land investigation document must be accompanied by a certification by an auditor (an **auditor's certification**) that—
- (a) is in the approved form; and
 - (b) verifies that the document complies with subsection (2) or (3).

(5) In this section—

environmentally sensitive area means an area prescribed by regulation as an environmentally sensitive area.

prescribed contaminated land means land contaminated in a way that causes a risk of environmental harm to—

- (a) land other than the relevant land; or
- (b) human health; or
- (c) another part of the environment.

water has the meaning given under the *Water Act 2000*.

Appendix 2—Waste

The following text is an excerpt from the EP Act (s. 13, at the time this module was published) that defines waste for the purposes of the law in Queensland:

13 Waste

- (1) **Waste** includes any thing, other than an end of waste resource, that is—
- (a) left over, or an unwanted by-product, from an industrial, commercial, domestic or other activity; or
 - (b) surplus to the industrial, commercial, domestic or other activity generating the waste.

Example of paragraph (a)—

Abandoned or discarded material from an activity is left over, or an unwanted by-product, from the activity.

- (2) **Waste** can be a gas, liquid, solid or energy, or a combination of any of them.
- (3) A thing can be waste whether or not it is of value.
- (4) Despite subsection (1), an end of waste resource becomes waste—
- (a) when it is disposed of at a waste disposal site; or
 - (b) if it is deposited at a place in a way that would, apart from its use under an end of waste code or end of waste approval, constitute a contravention of the general littering provision or the illegal dumping of waste provision under that Act—when the depositing starts.
- (5) In this section—

end of waste approval—see the Waste Reduction Act, section 156.

end of waste code—see the Waste Reduction Act, section 156.

end of waste resource means a resource under the Waste Reduction Act, section 156.

waste disposal site—see the Waste Reduction Act, section 8A.

Waste Reduction Act means the *Waste Reduction and Recycling Act 2011*.

Appendix 3—Submitting a contaminated land investigation document

The following text is an excerpt from the EP Act (s. 390 at the time this module was published) that specifies the statutory requirements for submitting a contaminated land investigation document:

390 Requirements for submission of contaminated land investigation document

- (1) This section applies if a person gives the administering authority a contaminated land investigation document.
- (2) The document must be accompanied by a declaration, made by the relevant person, that the person—
 - (a) has not knowingly given any false or misleading information to the auditor who certified the document; and
 - (b) has given all relevant information to the auditor; and
 - (c) if the person is not the land's owner—has given a copy of the document to the owner.
- (3) The relevant person is—
 - (a) if the contaminated land investigation document is given to the administering authority in order to comply with a notice given to a person by the authority under this Act—the person to whom the notice was given; or
 - (b) otherwise—the person who gives the document to the administering authority.
- (4) However, if the person mentioned in subsection (3)(a) or (b) is a corporation, an executive officer of the corporation is taken to be the relevant person.
- (5) The contaminated land investigation document must also be accompanied by—
 - (a) for a draft site management plan prepared by a person other than the land's owner—a statement by the land's owner agreeing to the draft plan; and
 - (b) the fee prescribed by regulation.

Appendix 4—Wording for site suitability statements

Suitably qualified persons may choose one of the following four outcome templates as wording for a site suitability statement to be submitted with a contaminated land investigation document. However, they may only alter the wording of a template where it indicates they should insert information or select an option—no other changes may be made.

Outcome 1 has been met—The land is not contaminated land and is suitable for any use

The land described as <INSERT LOT AND PLAN NUMBER(S)> is not contaminated land and is suitable for unrestricted land use, including Land Use A (residential with garden/accessible soil; childcare centres, preschools, and primary schools with access to soil) and any sensitive land uses listed in Schedule 24 of the Planning Regulation 2017. It has been demonstrated that:

1. the land is not being used for a notifiable activity, and
2. the land is not affected by a hazardous contaminant, and
3. the land is not prescribed contaminated land, and
4. an appropriate assessment of site contamination has been conducted using current best practice and in accordance with the current state and Commonwealth legislation, policies and guidelines, Australian Standards, and the National Environment Protection (Assessment of Site Contamination) Measure 1999.

OR

Outcome 2 has been met—The land is suitable for specified uses, without warranting a site management plan

The land described as <INSERT LOT AND PLAN NUMBER(S)> is contaminated by <INSERT HAZARDOUS CONTAMINANT(S)> affecting <INSERT MEDIA (e.g. soil, groundwater, etc.)>

The land is suitable for **Land use D** (Commercial/industrial, including shops, offices, factories and industrial sites) including associated activities without the need for specific management or monitoring.

However, the land is NOT suitable for the following specified use(s):

Land use A (Residential with garden/accessible soil; childcare centres, preschools, and primary schools with access to soil), and any sensitive uses listed in Schedule 24 of the Planning Regulation 2017; or

Land use B (Residential, childcare centres, preschools, and primary schools with minimal opportunities for access to impacted soil (capped site), vapour and/or groundwater; dwellings with fully and permanently paved yard space such as units, high-rise buildings and apartments); or

Land use C (Public open space, including parks, playgrounds, and playing fields (e.g. ovals); secondary schools; and footpaths).

It has been demonstrated that an appropriate assessment of site contamination has been conducted using current best practice and in accordance with the current state and Commonwealth legislation, policies and guidelines, Australian Standards, and the National Environment Protection (Assessment of Site Contamination) Measure 1999.

The suitability of the land for the stated use(s) does not warrant the implementation of a site management plan to manage the contamination because an alternative enduring mechanism under the *Environmental Protection Act 1994* for managing the risks associated with the hazardous contaminant(s) has been required or approved by the administering authority. The alternative mechanism is <PROVIDE FULL DETAILS OF THE MECHANISM, WHO IS RESPONSIBLE FOR IMPLEMENTING IT, AND HOW IT WILL BE MONITORED>.

OR

Outcome 3 has been met—The land is suitable for specified uses, subject to complying with a site management plan

The land described as <INSERT LOT AND PLAN NUMBER(S)> is contaminated by <INSERT HAZARDOUS CONTAMINANT(S)> affecting <INSERT MEDIA (e.g. soil, groundwater, etc.)>

The land is suitable for the following specified use(s) including associated activities:

<INSERT ANY OF THE FOLLOWING THAT ARE APPROPRIATE: **Land use B** (Residential, childcare centres, preschools, and primary schools with minimal opportunities for access to impacted soil (capped site), vapour and/or groundwater; dwellings with fully and permanently paved yard space such as units, high-rise buildings and apartments); AND/OR **Land use C** (Public open space, including parks, playgrounds, and

playing fields (e.g. ovals); secondary schools; and footpaths); AND/OR **Land use D** (Commercial/industrial, including shops, offices, factories and industrial sites).>

There is no potential now or in the future for contamination to migrate off the site through preferential pathways or secondary sources.

It has been demonstrated that an appropriate assessment of site contamination has been conducted using current best practice and in accordance with the current state and Commonwealth legislation, policies and guidelines, Australian Standards, and the National Environment Protection (Assessment of Site Contamination) Measure 1999

The draft site management plan submitted for approval is <INSERT TITLE AND DATE OF DRAFT SITE MANAGEMENT PLAN OR DRAFT AMENDED SITE MANAGEMENT PLAN>

However, the land is NOT suitable for the following specified use(s):

Land use A (Residential with garden/accessible soil; childcare centres, preschools, and primary schools with access to soil); < AND, IF NECESSARY, INSERT ANY OF THE FOLLOWING THAT ARE APPROPRIATE:
Land use B (Residential, childcare centres, preschools, and primary schools with minimal opportunities for access to impacted soil (capped site), vapour and/or groundwater; dwellings with fully and permanently paved yard space such as units, high-rise buildings and apartments); AND/OR **Land use C** (Public open space, including parks, playgrounds, and playing fields (e.g. ovals); secondary schools; and footpaths); AND/OR **Land use D** (Commercial/industrial, including shops, offices, factories and industrial sites)>

OR

Outcome 4 has been met—Insufficient information to determine site suitability

The land described as <INSERT LOT AND PLAN NUMBER(S)> is contaminated by <INSERT HAZARDOUS CONTAMINANT(S)> affecting <INSERT MEDIA (e.g. soil, groundwater)>

As at <INSERT DATE>, the land is currently being investigated, and there is insufficient information to determine site suitability at this time.

Notes:

Land use A—Residential with garden/accessible soil; childcare centres, preschools, and primary schools with access to soil.

Land use B—Residential, childcare centres, preschools, primary schools with minimal opportunities for access to impacted soil (capped site), vapour and/or groundwater; dwellings with fully and permanently paved yard space such as units, high-rise buildings and apartments.

Land use C—Public open space, including parks, playgrounds, and playing fields (e.g. ovals); secondary schools; and footpaths.

Land use D—Commercial/industrial, including shops, offices, factories and industrial sites.

A site-specific risk assessment is required to determine site suitability where a current use includes commercial agriculture including fodder production, or greater than 10% consumption of garden produce, or consumption of home grown eggs, poultry or meat, or irrigation of produce, or watering of stock with contaminated water.

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