

Listing and removing land on the land registers

1. Purpose

The *Environmental Protection Act 1994* (EP Act) enables listing of land on the environmental management register (EMR) if either a notifiable activity has been or is being conducted, or the land is contaminated land (section 371). Similarly, land may be listed on the contaminated land register (CLR) if the land is contaminated land and it is necessary to take action to remediate the land to prevent serious environmental harm (section 372).

Removal of land from the land registers is required if the site suitability statement accompanying a site investigation report or validation report states that the land is **not** contaminated land and is suitable for any use, i.e. in terms of its contamination status, or a compliance permit is provided on an equivalent grounds (section 381 and section 382, respectively).

This guideline provides policy guidance on the criteria for the administering authority (the Department of Environment and Science as of September 2015) with respect to:

1. listing of land on the EMR and CLR, respectively
2. determining that land is not contaminated land and is suitable for any use, and hence can be removed from the CLR or EMR, as relevant.

The first set of criteria will be considered by the administering authority in deciding whether to list land on the EMR or CLR.

The second set of criteria will inform actions to remove land from the land registers. In the first instance, however, these criteria are relevant to the preparation of a site suitability statement as part of a contaminated land investigation document (CLID) in accordance with section 389 of the EP Act. This is the task of suitably qualified persons appointed by the land owner or developer. The criteria are equally relevant to the certification of a CLID by an approved auditor.

A CLID can comprise some combination of a site investigation report, a validation report and a draft site management plan.

2. Interpretation of 'contaminated land' under EP Act

The interpretation of what is contaminated land is a critical matter in implementing the various related provisions under the EP Act, including for the listing and the removal of land from the relevant register. The formal definition of 'contaminated land' under the EP Act is concise:

Contaminated land means land contaminated by a hazardous contaminant

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This definition either directly or indirectly invokes a number of other defined terms under the EP Act, including: 'land', 'environment', 'environmental value', 'contaminant' and 'hazardous contaminant', 'prescribed contaminated land', 'environmental harm', 'material environmental harm', and 'serious environmental harm'.

These various terms are drawn upon here to frame an integrated interpretation of 'contaminated land' that is consistent with the formal definition of 'contaminated land' and which:

1. provides the core rationale for how the administering authority will evaluate the existence or otherwise of 'contaminated land'
2. assists the identification of relevant implications where the term 'contaminated land' is used in various contexts under the EP Act.

Contaminated land is interpreted in accordance with the EP Act to be land, including associated water or airspace, that is:

- 1. listed on the EMR on the grounds that it has been found to be contaminated land; or**
- 2. listed on the CLR**
- 3. contaminated by a hazardous contaminant,**

which if improperly treated, stored, disposed of or otherwise managed, is likely to cause material or serious environmental harm

by adversely affecting environmental values, including those related to ecological health or public amenity, safety or health or otherwise protected under an environmental protection policy or regulation,

of the land or other land or another part of the environment.

The first two circumstances above indicate that the administering authority has previously determined that the land is contaminated by a hazardous contaminant.

The third scenario provides that land is known to be contaminated by a hazardous contaminant. However, in the specific context of statutory duties to notify the administering authority, land may be either known or reasonably likely¹—on relevant grounds—to be contaminated.

Consistent with the definition of 'environment' and pertinent provisions under the EP Act, the potential for contaminants to cause harm to either the immediate environment of people ('public amenity, safety or health') as well as to the wider environment (e.g. 'ecological health') is recognised here.

The phrase 'likely to cause' is interpreted here to mean that there is a real and not remote chance of material or serious environmental harm occurring. This potential will reflect both the nature and extent of contamination as well as the exposure of environmental values to these contaminants.

¹ See the guideline 'The duty to notify for contaminated land'—available at www.qld.gov.au using the publication number (ESR/2016/2155) as a search term.

3. Considering the land use context

In considering the current and potential exposure of environmental values to harm from contaminants, it is necessary to take account of the uses of land—and hence the human receptors—as well as the ecological receptors that are or may be affected. The identification of relevant land uses and ecological receptors is a key factor in assessing the risk of material or serious environmental harm, as well as in considering the suitability of the land for different uses.

The uses or receptors that are most sensitive to relevant contaminants will determine the levels of those contaminants that are able to be tolerated in a local environmental setting. Consideration needs to be given to both current exposure of land uses and ecological receptors and likely future exposure. The potential for harm will depend in part on the future land uses that may occur.

The geographic setting of the land is a key consideration in judging the likelihood of different future land uses, including sensitive uses. For example, the most sensitive, realistic or reasonably foreseeable land use might be:

- a health care facility or underground car park in a built-up, urban setting
- a child care centre or residential use with access to soil, home grown produce and poultry keeping in a suburban setting
- intensive horticulture or use of groundwater for domestic purposes in a rural setting
- primary contact recreation in a riverine setting
- maintenance of groundwater dependent ecosystems in a natural area setting.

There are several contexts in which relevant land uses need to be considered:

1. The likelihood of future, sensitive uses of land (including uses of groundwater) is a key consideration in listing land on the EMR.
2. Current and approved land uses that are exposed to a risk of serious environmental harm are a key consideration in listing land on the CLR.
3. Both current and potential sensitive uses of land and associated groundwater are key considerations in determining whether land is suitable to be removed from the EMR or CLR.

The grounds under the EP Act for removing land from the EMR and CLR include that its contamination status is 'suitable for any use'. The interpretation of 'any use' should not be approached on a literal basis, i.e. to mean any use that might be undertaken anywhere. Rather, the interpretation of 'any use' in specific circumstances can take account of the geographic setting and associated constraints, since these latter factors are relevant to identifying the various uses that are realistic or foreseeable possibilities. 'Any use' is therefore interpreted here, in the context of the contaminated land provisions of the EP Act, to mean 'any reasonably foreseeable use'.

4. Proposed policy criteria for listing land on EMR

As noted above, section 371 of the EP Act provides two grounds for enabling land to be listed on the EMR.

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The existence of a notifiable activity (as identified in the list under Schedule 3 of the EP Act) is considered to provide sufficient grounds for anticipating that contamination either has already occurred or may occur in future, and hence for determining that land used for such an activity should be listed on the EMR.

Alternatively, the administering authority may decide to list land on the EMR on the basis of evidence that it is contaminated by a hazardous contaminant. While a decision to list land on the EMR on this latter ground might be informed by a CLID that is either required to be submitted or is submitted voluntarily, this is not essential. The administering authority may rely on other evidence that land is affected by a hazardous contaminant.

In light of the interpretation of contaminated land, and the considerations outlined above, the following criteria will guide the administering authority's approach to listing land on the EMR.

The administering authority will consider the need to list land on the EMR where:

1. A notifiable activity is being carried out on the land; or
2. A notifiable activity has previously been carried out on the land, except where it has been demonstrated that the land is not contaminated; or
3. There is sufficient evidence of ANY of the following:
 - (a) contamination by contaminants that could cause serious or material environmental harm as a result of effects on either public amenity, safety or health (having regard to reasonably foreseeable land uses in the geographic setting), or to ecological health or other protected environmental values, where the contaminants:
 - i. are likely to increase in adverse effects over time, due to factors such as chemical or physical changes or synergistic effects or increased dispersal; or
 - ii. are known to have migrated from the site, or are likely to migrate from the site, and that have not been cleaned up; or
 - (b) contamination of soil and associated gases or vapour that exceeds any of the following levels or limits under the National Environment Protection (Assessment of Site Contamination) Measure 1999 as amended in 2013 (ASC NEPM) for any relevant contaminant, relative to the most sensitive land use setting (as described under the ASC NEPM) that is reasonably foreseeable:
 - i. health investigation levels;
 - ii. health screening levels for petroleum hydrocarbon compounds;
 - iii. interim health investigation levels for volatile organic chlorinated compounds;
 - iv. management limits for petroleum hydrocarbon compounds; or
 - (c) contamination of soil and associated gases or vapour, or sediments, involving substances other than those covered by (b) above, where the associated levels, extent or exposure to either human or ecological receptors would be likely to cause material or serious environmental harm to reasonably foreseeable uses of the land, having regard to authoritative sources of technical guidance; or
 - (d) contamination of groundwater that exceeds either:

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- i. groundwater investigation levels under the ASC NEPM Schedule B6; or
 - ii. water quality objectives for environmental values of groundwater in accordance with the Environmental Protection (Water and Wetland Biodiversity) Policy 2019 or relevant guidelines adopted under this policy
- unless a natural quality of the groundwater precludes a relevant use of groundwater that might otherwise exist or be reasonably foreseeable; or
- (e) any other contamination that is likely to cause material or serious environmental harm.

5. Proposed policy criteria for listing land on CLR

Section 372 of the EP Act provides a high threshold for placing land on the CLR. It must be already on the EMR and then found to be contaminated land that poses such a risk of serious environmental harm that there is a need for clean-up to prevent this.

Listing land on the CLR needs to be informed either by a CLID or by an equivalent environmental audit.

The administering authority will consider the need to list land on the CLR on the basis of:

1. Evidence of contamination that is likely to cause serious environmental harm to public amenity, safety or health, in the context of either the current use of the relevant land or the current or approved use of surrounding land, or to ecological health.
2. The need for remediation of the land to prevent serious environmental harm.
3. Evaluation of other regulatory mechanisms that may be more suitable in specific circumstances to manage the risks of contamination causing serious environmental harm.

6. Proposed policy criteria for removing land from CLR and EMR

Section 381 and 382 of the EP Act respectively provide for the removal of land from the relevant land register where:

1. The administering authority receives a site investigation report or validation report, certified by an approved auditor, incorporating a site suitability statement which states that the land is not contaminated land and is suitable for any use.
2. An auditor provides the administering authority with a copy of a compliance permit that states that the land is not contaminated land and that it is suitable for any use. The compliance permit will need to be supported by a certified CLID incorporating a site investigation report or validation report, including a site suitability statement.

In light of the above:

Having regard to any exceptional circumstances that may arise, a site suitability statement may state that the land is not contaminated land and is suitable for any use where the CLID that incorporates it establishes that:

1. the land is not being used for a notifiable activity
2. the land is not it is not affected by a hazardous contaminant

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3. an appropriate assessment of site contamination has been conducted in accordance with the risk-based process under Schedule A of the ASC NEPM, having regard to relevant provisions of the EP Act and the Environmental Protection (Water and Wetland Biodiversity) Policy 2019, and this has established that:
- (a) any contaminants affecting the land are chemically and physically stable and are not expected, under prevailing site conditions and reasonably foreseeable circumstances, to migrate, increase in extent, or transform to other contaminants of greater toxicity or other adverse effect, over the long term
 - (b) there is no evidence of off-site migration of contaminants from the land, including via sediment, waters, or entrapment of vapour or gas, and this is highly unlikely to occur
 - (c) there are no credible exposure pathways linking contaminants to:
 - i. natural or semi-natural ecosystems, or habitats of threatened wildlife as prescribed under the *Nature Conservation Act 1992*, so as to cause potential or actual material or serious harm to ecological health;
 - ii. human receptors associated with current uses of land, so as to actually or potentially affect public amenity, safety or health
 - (d) the levels of relevant contaminants are below the following investigation, screening and management levels under the ASC NEPM for a low density residential use setting:
 - i. health investigation levels (HIL A)
 - ii. health screening levels for petroleum hydrocarbon compounds
 - iii. interim health investigation levels for volatile organic chlorinated compounds
 - iv. management limits for petroleum hydrocarbon compounds
 - (e) in addition to contaminants covered by criterion 3(d) above, where other contamination of soil and associated gases or vapour or exposure pathways are identified, including but not limited to:
 - i. asbestos and asbestos containing material, contaminant respiratory hazards, chemical odours, alkaline wastes, dioxins, perfluorinated compounds, radioactive substances, pathogenic materials and explosive gas and asphyxiate mixtures, or
 - ii. exposure pathways related to food production (where there is an intention or reasonable likelihood that land will be used for food production at a greater intensity than under the low density residential use setting), trapping of vapours or gases in cavities, or dermal exposure by workers,

the levels of contaminants and exposure are highly unlikely to cause material or serious harm to public amenity, safety or health, uses of the land or other land or another part of the environment, having regard to:

 - iii. reasonably foreseeable land uses in the geographic setting
 - iv. authoritative sources of technical guidance with respect to safe levels (subject to advice from the administering authority where appropriate)

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- (f) where groundwater or surface waters contain contaminants:
- i. environmental values and associated water quality objectives under the Environmental Protection (Water and Wetland Biodiversity) Policy 2019 will be protected
 - ii. groundwater has levels of contaminants:
 - a. below the groundwater investigation levels under the ASC NEPM Schedule B6, or
 - b. not exceeding background levels attributable to natural sources where the background levels are higher than corresponding groundwater investigation levels, or
 - c. not exceeding ambient levels attributable to regional anthropogenic sources (subject to advice from the administering authority where appropriate)
- (g) ecological receptors are not currently exposed, and are unlikely to be exposed in the long-term, to levels of contaminants exceeding the relevant ecological investigation limits in the ASC NEPM for the relevant land use setting
- (h) the safety of land use and the protection of environmental values is not dependent upon taking any active or passive management measures with respect to the contamination.

Version history

Version	Effective date ²	Comments
1.00	29/09/2015	First published
1.01	04/08/2016	Updated corporate style and added publication number ESR/2016/2044 and version history
1.02	15/06/2018	Document rebranded to align with machinery of government changes
1.03	09/10/2019	Updated for the commencement of the Environmental Protection Regulation 2019

² This is the date approved, not the date published.