

Rural Development Strategy

Contaminated Sites: Issues and Options



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1 Introduction

New Zealand's history of agricultural land uses has left it a legacy of contaminated land, mainly within the rural areas of the country. Although the current framework, combining a substantive number of varied legal measures, is reasonably effective in preventing new contamination and managing potential spills, it is less successful in identifying land that was historically subjected to agrichemical uses.

In establishing a rural development strategy for the District, it is important to be mindful of this lack of knowledge on contaminated land. For instance, in making any decisions on new future land uses for any given area, it is essential to know the history of the site, especially when considering more sensitive land uses such as intensive residential living. Additionally, when buying and selling land, it is only right that people should know what they are dealing with, as the effects of contamination can potentially be far-reaching.

This paper attempts to outline the issues associated with contaminated land, and the lack of knowledge on the whereabouts of this land. It also provides a vehicle to explain the significance of the issue to the community, so that people may understand the importance of identifying and managing this land. The paper furthermore suggests a number of options on how to deal with the issues. It is intended as a discussion document that may bring to light further matters for Council and the community to address.

Importantly, it is crucial we understand that, whichever way we look at this issue, there will always be a cost. Whether this cost is manifested in terms of ill-health and necessary medical treatment for members of our community, or is expressed in monetary terms as a financial cost for clean-up or as an opportunity cost in relation to development foregone due to the inability to use the land, New Zealand's legacy with contaminated land is not just going to disappear.

2 Policy Framework

The current New Zealand policy framework for contaminated land is based on a mix of existing measures that includes laws and regulations, guidelines and funding arrangements. These measures provide protection against any new contaminated sites being created, and go some way towards managing the historical legacy of contaminated land.

2.1 National Level

2.1.1 Legislative Framework

Overall, there are seven main pieces of legislation that relate to contaminated land or the effects of contaminated land (see Figure 2). These Acts can be generally grouped by their relevance to contaminated land. The four main areas are:

- prevention of contamination
- contaminated land management, enforcement, remediation and liability (post-1991)
- protection of the environment, including human health, from the effects of contaminated land
- access to information about contaminated land (MfE, n.d.).

A number of Acts appear to overlap, especially for the protection of the environment. Within the environmental area there are five pieces of legislation, although (with the exception of the RMA) most of these Acts have quite separate and distinct functions as follows the:

- Health Act relates to public health nuisance from contaminated land
- Health and Safety in Employment Act relates to workplace safety
- Food Act relates to food safety
- Building Act relates to the suitability of land for proposed buildings
- RMA, with its emphasis on effects-based management and a holistic definition of the environment, overlaps with most of this legislation.

The relationships of the different pieces of legislation and their respective areas of concern are illustrated in Figure 1 below.

Figure 1 Main legislation relating to contaminated land, and relevant areas

Prevention	Management	Protection of the environment	Access to information
Resource Management Act 1991			
Hazardous Substances & New Organisms Act 1996			
		Health Act 1956	
		Health & Safety in Employment Act 1992	
		Building Act 2004	
		Food Act 1981	
			Local Government Official Information & Meetings Act

Source: Ministry for the Environment, Working towards a comprehensive policy framework for managing contaminated land in New Zealand (n.d.)

2.1.2 Resource Management Act (RMA)

The RMA provides for the sustainable management of natural and physical resources, and it is the core piece of environmental legislation for controlling the effects of contaminated land on the environment and people. The RMA :

- offers a definition of contaminated land
- requires planning controls for the effects of contaminated land
- defines functions for local government in relation to contaminated land.

The legislation defines the environment widely to include ecosystems, people and communities, natural and physical resources, and amenity values. It is designed to protect the environment through local government’s control of activities administered via plans and resource consents.

Roles and Responsibilities of Local Government

Each council controls the activities in its area through policies and rules in district and regional plans, designed to control the discharge of contaminants to land to ensure that no new contaminated sites are created, and to control the effects of contaminated land on the environment.

The functions given to local government under sections 30 and 31 of the RMA generally mean the following:

Regional councils work to identify and monitor land that is contaminated within their region. Most regional councils also collate and manage information about contaminants on land in a specific land-use information register.

District and city councils have the responsibility of ensuring, when decisions are made concerning land-use changes or the subdivision or development of land, that the potential for environmental effects, including health effects, are evaluated.

Roles and Responsibilities of National Government

Section 43 of the RMA also enables the use of national regulation for the management of contaminated land. Section 43(1)(a)(iv) states that a national environmental standard (NES) can prescribe “soil quality in relation to the discharge of contaminants” (MfE, n.d.). An earlier review carried out by the Ministry for the Environment assessing local authorities’ district and city plan provisions, had highlighted deficiencies in controls. As a result, MfE notified the Proposed National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil in February 2010.

2.1.3 National Environmental Standard for Assessing and Managing Contaminants in Soils

The NES proposes a nationally consistent step-by-step process for identifying, assessing and remediating or containing contaminants in soil. Submissions on this NES closed on 19 April 2010. A final decision on this document has not yet been notified.

Under the NES, subsurface investigations to determine the presence, extent and nature of any contamination would be a permitted activity. Any report produced as a result of such investigations would be required to be submitted to Council within 60 days of the results being received.

The Standard also proposes to permit the use, subdivision and development of contaminated land where the contamination is proven to be within certain limits, called soil guideline values, as set out by the Standard. These limits will define the concentrations at which the risk to human health is considered acceptable. They will not take into consideration the risk to wider environmental and or ecological matters.

The NES will not allow councils to set more stringent controls in regard human health issues; however, councils may impose additional controls in relation to other environmental matters. Any application for use, subdivision or development of contaminated land will need to be accompanied by one or more site investigation reports.

A restricted discretionary activity status is contemplated for any use, development or subdivision where the risk to human health is assessed as being unacceptable, or where there is insufficient information to confirm whether this risk is not acceptable.

Although at first glance, the proposal would appear reasonable, there remain a number of areas of concern regarding the implementation of the NES at District level. These concerns have been highlighted in submissions to the Ministry. As mentioned earlier, a final decision is yet to be made public.

2.1.4 Contaminated land management guidelines

In the past 10 years, the Ministry for the Environment has undertaken a work programme to address the risks from land contamination (MfE, 2007). The result has been a series of contaminated land management guidelines developed in partnership with regional councils and unitary authorities. Their main purpose is to introduce consistency in contaminated land assessment and management throughout the country.

The series of 5 'Contaminated Land Management Guidelines' cover the following areas:

- No 1 Reporting on Contaminated Sites in New Zealand:** This guideline details the type and amount of information required in a contaminated site report. Its aim is to ensure consistency in the reporting on contaminated sites. It includes checklists for reporting requirements for contaminated sites and for the removal of petroleum underground storage tanks.
- No 2 Hierarchy and Application in New Zealand of Environmental Guideline Values:** This guideline has been developed to ensure the consistent selection and application of environmental guideline values. An Environmental Guideline Value (EGV) database (available on CD ROM) accompanies this guideline. It will be of use to environmental consultants and landowners undertaking contaminated site investigations, and to council staff involved in reviewing contaminated site assessment reports.
- No 3 Risk Screening System:** This guideline describes the Risk Screening System (RSS). The system aims to provide a nationally consistent means of ranking sites that are, or are suspected of being, contaminated. The purpose of ranking a site is usually so that it may be prioritised for further investigation.
- No 4 Classification and Information Management Protocols:** The purpose of this guideline is to suggest a nationally consistent way of classifying, managing and releasing contaminated site information held on Council registers or databases. Local government is encouraged to adopt the systems and classifications provided by this guideline, so that we can have a nationally consistent system which will enable all practitioners involved in contaminated land to talk the same language.
- No5 Site Investigation and Analysis of Soils:** This guideline provides best practice for the sampling and analysis of soils on sites where hazardous substances are present or suspected in soils in New Zealand and guidance on the principles governing the interpretation of the data obtained.
- Schedule A Hazardous Activities and Industries List (HAIL):** The Hazardous Activities and Industries List or HAIL is a compilation of activities and industries that are considered likely to cause land contamination resulting from hazardous substance use, storage or disposal.
- Schedule B Hazardous Activities and Industries List (HAIL) with Hazardous Substances:** The Hazardous Activities and Industries List with Hazardous Substances is a version of the HAIL (Contaminated Land Management Guidelines Schedule A) containing examples of hazardous substances associated with the industries and activities.

2.1.5 Contaminated Sites Remediation Fund

The Contaminated Sites Remediation Fund (CSRf) is administered by the Ministry for the Environment (MfE, 2009). It has been set up to fund the investigation, remedial planning and remediation of sites that pose a risk to human health and the environment. It is designed to encourage willing parties to investigate and remediate contaminated land.

Funding from the CSRf is allocated to selected projects following consideration of the applications received during the funding round. A total of \$2.78 million has been made available for 2010/11 and is divided into two parts. One part is available to regional councils and unitary authorities on a contestable basis (\$0.89 million). The second part is available to regional councils and unitary authorities to address priority sites (\$1.89 million). A number of eligibility criteria have to be met in order for a site to qualify. These criteria can be found on the Ministry's website.

2.2 Regional Level

2.2.1 Regional Policy Statement and New RPS

The operative RPS makes mention of contaminated sites under Section 26 – Hazardous Substances. The specific objective related to the issue is stated as such: "Avoid, remedy or mitigate the adverse effects of the risks to people and the wider environment from existing contaminated sites".

Relevant policies are also identified:

- 1 To identify, in conjunction with interested parties, sites contaminated with hazardous substances and monitor the future development and use of them and related resources.
- 2 To promote and where appropriate, require the rehabilitation of contaminated sites and ensure effective site control measures are in place.

In September 2010, the Northland Regional Council made available a discussion document on a new Regional Policy Statement. This discussion document, together with the background report on hazardous substances and contaminated land, seems to suggest that the current Regional Council approach to this issue is satisfactory and that 'business as usual' should continue.

Given the Regional Council functions under the RMA include the identification of contaminated land, and given the fact that no contaminated land has yet been identified within the rural areas of the Whangarei District, it is questionable whether NRC is meeting its requirements under the RMA, as is suggested by the discussion document.

Whangarei District Council has provided feedback on the document, and awaits the release of a draft policy statement. Whatever policies end up in the final RPS, the District Council will have to give effect to them.

2.2.2 Regional Coastal Plan

There appears to be no immediate focus on historically contaminated land in the Regional Coastal Plan for Northland (RCP), nor on the identification of such land. There is provision, however, to try and prevent new contamination from occurring. The RCP, therefore, contains standards to manage discharges to water, including a requirement that the discharge meets defined receiving water quality standards and does not result in significant adverse effects on aquatic life or human health.

2.2.3 Regional Water and Soil Plan

In a similar vein as the RCP, the Regional Water and Soil Plan attempts to prevent new contamination of sites and water bodies by regulating the use, storage and disposal of hazardous substances. No provisions are made in relation to the identification of historically contaminated sites.

2.2.4 Other Policy Instruments

Contaminated Land Register

The NRC has assembled a register of all known contaminated sites within the region. The vast majority of these sites occur within urban areas, and many still accommodate land use activities that involve the handling of hazardous substances. These are monitored on a regular basis for their potential impact upon the (surrounding) environment. The real issue, however, lies in the fact that many sites, particularly in rural areas, have not yet been identified, and are therefore not able to be 'managed' in an appropriate manner.

Hazardous Waste Collection Service

NRC assists in the collection and disposal of hazardous waste substances, including a mobile collection service to recover chemicals that are leaking, require re-packaging or are in a deteriorating condition. This service is intended to encourage the appropriate disposal of waste and minimise the dumping of such materials, thereby reducing the potential for new contamination. NRC also attends to the clean-up of significant spills.

2.3 District Level

2.3.1 Whangarei District Plan

History of District Plan Provisions

Work on the initial provisions of the District Plan shows that, due to little information on contaminated sites being available within the District, the intention was to list the three identified contaminated sites on the District Plan maps. Proposed rules therefore applied to the 'mapped' contaminated sites only. The focus was primarily on the potential for adverse effects on human health; and regard to contamination as a result of historical land uses is not apparent.

The appeal process, upon completion, resolved to remove the contaminated sites from the District Plan, and instead establish a separate database that could be easily updated in instances where further contaminated sites were located. This would prevent lengthy plan change processes in the future, each time a new site was found. Proposed rules were adjusted accordingly by removing the word 'mapped'.

In addition, it would appear that changes were also made to the 'permitted activity' rule, allowing for the continuation of existing uses, as per section 10 RMA, rather than 'not permitting any new activities', as the rule was originally contemplated. More details are found in the subsequent section.

Current Provisions

Current District Plan provisions are limited to a few policies directing the identification and remediation of contaminated sites, as well as addressing the removal of contaminated matter and the dissemination of information held on contaminated sites. The objective of the policies in section 20 of the District Plan is to avoid, remedy or mitigate adverse effects on the environment, and to minimise adverse effects on human health and safety. This includes making information on known contaminated sites available through Land and Project Information Memoranda (i.e. LIMs and PIMs)

The rules in section 63, which are additional to the rules in other sections, make no attempt, however, to direct people and/or councils to identify contaminated or potentially contaminated land. They do, on the other hand, permit the construction/reconstruction of a building or structure on a contaminated site if the building is directly associated with an existing use activity, or with a use that is accessory to the existing use.

For any new activity that is proposed on a contaminated site, there is a requirement for the site to be decontaminated and rehabilitated according to a set programme prepared by a suitably qualified expert, prior to applying for a discretionary resource consent. Without a proposal for decontamination, a resource consent application on a contaminated site will be considered as a non-complying activity.

The District Plan also refers to a database, held by the District Council, which contains information on contaminated and potentially contaminated land. This database is a copy of the database held by the Northland Regional Council, the body charged under the RMA with identifying contaminated or potentially contaminated land. However, the database mainly identifies those properties that were reasonably easy to discover, such as those described on the Hazardous Activities and Industries List (HAIL). It is believed that, particularly in rural areas, a large number of properties have yet to be identified.

Whangarei District Council receives updates as and when changes to the database are incurred. There is an understanding between the Northland Regional Council and Whangarei District Council that wherever the District Council becomes aware of a potentially contaminated site, it will inform the Regional Council with the site details.

2.3.2 Rolling Review of Operative District Plan

Under the RMA Council is required to monitor the effectiveness of the District Plan and complete a review of all District Plan provisions within any 10 year time period. Monitoring of the Whangarei District Council Operative District Plan has identified areas of inconsistency and ineffectiveness, and has examined what new issues have emerged since the District Plan was first devised.

The District Plan will become a live document, as Council staff will review chapters of the plan every year, in what is called a “rolling review”. The rolling review examines whether the current objectives, policies and methods in the plan are consistent with legislation, and are working the way the community needs and wants them to.

The review will update the District Plan to recognise the role different areas of the District will play in the future, given the population changes and estimated economic growth over the next 10 years. These tie in with Council’s long-term planning project Whangarei District Growth Strategy: Sustainable Futures 30/50.

2.4 Iwi Management Plans

Whangarei District Council has received three iwi management plans to date. Although none of these plans make specific mention of (historically) contaminated land, the emphasis placed on the integrity of land, soils, water and air, and the plans’ holistic approach to managing human activities within the natural environment, would suggest that contaminated land does not sit comfortably with the Maori world view. It is believed that a proactive approach to identifying, and where possible remediating, such land would be valued. These objectives should be taken into account when formulating the Rural Development Strategy.

3 Current Issues

As highlighted in the proposed NES, New Zealand has a legacy of contaminated sites due to historical land use activities, including agricultural land uses. A large majority of these sites in Northland have not yet been identified, and therefore have the potential to pose a significant risk to the environment and to people’s health.

Although it is appropriate to have controls around the use and development of contaminated land, of equal importance is establishing a framework for managing risk in relation to contaminated land that has not yet been located. This issue in particular poses a major challenge for the Whangarei District. Relevant issues to this matter are explored below.

3.1 Lack of information/knowledge

The Whangarei District Council Growth Strategy’s background report on contaminated sites highlights the lack of information on the number and location of contaminated sites as an impediment to Council’s ability to carry out its functions under the Resource Management Act. Of particular relevance are the historic activities of livestock dipping, and use of persistent herbicides and pesticides that were commonplace in the rural areas of the District.

Without accurate information or data on these locations, there is a real danger of exposing people and the environment to contaminants if and when development occurs, especially where land use changes to a more sensitive activity such as residential living are proposed. The number of potentially contaminated sites in the Countryside Environment is substantial, the location of which is not straightforward to uncover

3.2 Identification of contaminated land

Identifying the location of (potentially) contaminated sites is a task assigned to Regional Councils, under the RMA. The suggestion in the NRC Discussion Document on the new RPS, that the current approach is satisfactory, is of concern given that the NRC currently has no specific program in place to identify these sites in an ordered and planned manner. If this issue is not viewed as a priority, Whangarei District Council will be forced to continue working with incomplete information, which potentially puts people and the environment at risk.

Furthermore, the District Plan contains no requirements for applicants of resource consents to provide information that may enable the identification of a potentially contaminated site, such as a history of land uses that have taken place on the site.

3.3 Ineffectiveness of existing District Plan objectives, policies and rules

Given the fact that many contaminated sites, particularly within the rural areas of the District, have not yet been identified, there is a risk that the current objectives, policies (section 20 District Plan) and rules (section 63 District Plan) may be interpreted to apply only to ‘identified’ contaminated sites as listed in the database, and not to ‘potentially’ contaminated land, which may occur anywhere in the District. This would render the framework largely ineffective in its purpose to protect people and the environment.

Additionally, it is doubtful whether the current rule (63.2.1) permitting the construction of a building or structure accessory to an existing use and/or any use accessory to an existing use, is effective in achieving

this purpose of protection, given that the construction of any structure is usually associated with some type of earthworks, which carry associated risks of exposing people and the environment to harmful substances.

The question also arises as to what interpretation may be attributed to an 'accessory use' to an existing use? Would a 'wide' interpretation of this term enable structures to be established over and above of what is really required, while at the same time risking exposure of people and the environment to potentially harmful substances? It is important for these matters to be clarified in order to avoid confusion and avoid risk to people.

3.4 Inadequate standard resource consent procedures

Internal Council procedures setting out the steps for processing a resource consent application do not contain any standard checklists or other methods in relation to contamination issues that would enable planners to identify the need for further investigations.

3.5 Liability

The lack of knowledge on contaminated or potentially contaminated land poses a possible liability issue for Council where applications for subdivisions and/or land use changes are approved without reasonable investigation of potential contamination issues, and the site is subsequently found to contain contaminated soils.

4 Best Practice

To date, there has been no clear direction set down at a national level outlining a consistent approach to managing contaminated land, although work in this area has been on-going for several years. The current framework for managing land contamination includes a mix of laws and regulations, guidelines and funding arrangements implemented by a range of central and local government agencies (MfE, 2010). At the regional and territorial levels, controls on development, subdivision and land use are also significantly inadequate. This was clearly outlined in the proposed National Environmental Standard notified by the Ministry for the Environment in early 2010. Out of 73 district councils, the vast majority had no rules at all, and no rules for section 31 functions.

One of the better examples of district plan provisions dealing with contaminated land can be found in the Wellington City Council District Plan. The provisions in this document reflect the requirements outlined in the proposed NES and also refer to the 'Guidelines for Reporting on Contaminated Sites in New Zealand', developed by the Ministry for the Environment as a best practice guide to be used by regional, territorial and unitary authorities and environmental consultants.

5 Options for Whangarei District

5.1 District Plan Implementation

Given the risks of developing contaminated land can potentially be high, a consistent management approach would be preferable. As such, objectives, policies and rules may be better placed at a District-wide level in order to achieve this consistency.

Although the objectives, policies and rules in the District Plan focus on the main issues of concern in relation to contaminants, the way in which they are worded poses the risk of contaminated sites, as yet unidentified in the database, not being addressed in a manner that would allow for their identification. As such, the liability risk for Council remains high. The current rules in the plan could be perceived to be too restrictive on the one hand, while on the other hand they may be viewed as being too lenient.

The following District Plan options could be considered:

- re-word and clarify existing District Plan objectives, policies and rules
- provide interpretation for specific terminology: i.e. provide a definition of the term 'accessory use'
- add a rule permitting initial soil sampling to allow for the identification of potentially contaminated sites (as per proposed NES)
- require resource consent applications for proposals on any pastoral land to be accompanied by a site history identifying previous land uses, including Site Investigation Reports where the site history points to the historical use of agrichemicals related to sheep dip and horticultural activities
- consider adding an overlay map to trigger soil investigation requirements for 'likely' (contaminated) areas

- wait for NES to be finalised.

5.2 Rural Development Strategy Implementation

Other methods

- make submissions on various Regional Council documents stressing the importance of identifying potentially contaminated land
- adjust internal resource consent assessment processes: i.e. develop a standard checklist to be used in the assessment of resource consent applications which would assist in the identification of potentially contaminated sites. Of particular relevance is the MfE Guidelines on Identifying, Investigating and Managing Risks Associated with Former Sheep-dip Sites
- put checks and processes in place at building consent stage
- information dissemination and education: i.e. pamphlets or information on Council website explaining potential consequences to human health and the environment from developing contaminated sites.

6 References

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