Section 32 report:
Contaminated land and hazardous substances

for the Proposed Natural Resources Plan for the Wellington Region

greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao

Issues and Evaluation Report

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REGIONAL COUNCIL
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1. Overview and purpose

This report provides an evaluation of the appropriateness of the objectives, and an assessment of the polices and methods in the Proposed Natural Resources Plan for the Wellington Region (referred to as the proposed Plan or PNRP) for contaminated land and hazardous substances as required under section 32 of the Resource Management Act 1991 (RMA).

This report should be read in conjunction with:

- Section 32 report: Introduction
- Section 32 report: Discharges to land
- Section 32 report: Discharges to water

1.1 Background

Contaminated land is defined under the Resource Management Act 1991 (RMA) to mean land with hazardous substances in or on it that are reasonably likely to have significant adverse effects on the environment, including human health.

The full definition in section 2 of the RMA is:

Contaminated land means land that has a hazardous substance in or on it that –

(a) has significant adverse effects on the environment; or

(b) is reasonably likely to have significant adverse effects on the environment.

A 'contaminant' is defined in section 2 of the RMA, and 'hazardous substance' is also defined in section 2 of the RMA to mean any substance defined in section 2 of the Hazardous Substances and New Organisms Act 1996 as a hazardous substance.

Land can become contaminated when hazardous substances are used, stored or disposed of in an unsafe manner. Contamination is not always limited to a specific site. Hazardous substances may seep through the soil into groundwater, or be carried to nearby land and waterways in rainwater or as dust. Hazardous gases can also pollute the air.

The past use of hazardous substances in industry, agriculture and horticulture has left a legacy of soil contamination in the Wellington Region. This contamination has been mainly caused by past practices in which chemicals were used, stored and disposed of in a way that is not considered safe by today's standards.

Contaminated sites are commonly associated with past activities such as:

- Manufacture and use of pesticides – these activities have resulted in contamination at locations where pesticides were manufactured as well as the wider contamination associated with the use of the chemicals (e.g. agrichemical sprays)

- Production of gas and coal products – includes old gasworks sites located in most towns and cities
- Production, storage and use of petroleum products – contamination has occurred from leaking fuel storage facilities at tank farms and service stations
- Timber treatment – pentachlorophenol (PCP) was one of a number of chemical formulations used routinely at most sawmills and timber treatment plants from the 1950s until 1988, when its use ceased
- Sheep dipping – from use of DDT, dieldrin, arsenic and other chemicals to treat parasites on sheep. Old sheep dips can be located on farms with a history of sheep farming, as well as on public land used at the time as stockyards and railway sidings

Many of these activities – for example, the use of dieldrin in sheep dips and to kill insects in the 1940s to the 1960s – were not considered to be hazardous at the time.

People, animals and the environment can be exposed to hazardous substances on contaminated land by:

- Direct contact with, including through ingestion of, contaminated soil
- Swallowing food or water from contaminated environment
- Breathing vapours or contaminated dust

As well as endangering health, these substances can:

- Limit the use of land
- Cause corrosion that may be threaten building structures
- Reduce land value

As land is increasingly developed in the Wellington Region, it is important to know where contaminated land is located so that people are not exposed to contaminants that may affect their health. To assist with identifying potentially contaminated land, the Ministry for the Environment has compiled a list of activities and industries commonly associated with contaminated land. This list is called the Hazardous Activities and Industries List (HAIL). The Wellington Regional Council (WRC) uses the HAIL to identify potentially contaminated sites. Further investigation of an individual site is required to determine whether the site is contaminated.

Hazardous substances are defined in the Hazardous Substances and New Organisms Act 1996 as substances with a level of explosiveness, flammability, corrosiveness, toxicity, or ecotoxicity, which on contact with air or water generates a substance with any one of these properties. The substances with explosiveness, flammability and oxidising potential are already strictly regulated and their hazardous properties are principally related to health and safety rather than environmental effects. The hazardous substances with corrosiveness, toxicity and ecotoxicity are more relevant to effects on the environment, rather than the industrial context of substances with explosiveness, flammability, and a capacity to oxidise.

1.2 Report structure

The structure of this report is as follows:

- Issues statements (section 2 of this report): this section presents a refinement of the main issues identified by the community related to air quality management
- Regulatory context (section 3 of this report): this section identifies the relevant national and regional legislation and policy direction
- Evaluation of the objectives (section 4 of this report): this section evaluates the extent to which the proposed objectives are the most appropriate way to achieve the purpose of the RMA as required by section 32(1)(a)
- Assessment of the policies and other methods (section 5 of this report): this section presents an assessment of the efficiency and effectiveness of the provisions as to whether they are the most appropriate way to achieve the objectives, in accordance with section 32(1)(b) and section 32(2) of the RMA

2. Resource management issues

The Wellington Regional Council began a region-wide engagement with the community in 2010 to identify the views of the community regarding natural resource management and to help define the issues that the proposed Plan would address, and the results are published in Parminter (2011). This process involved engagement with iwi partners organisations, the general public, agencies and organisations with interests in resource management, resource users, school children, developers and policy-makers.

The following are the issues identified from the community engagement development work (Parminter 2011) for the proposed Plan for contaminated land. The community engagement work did not identify any specific issue for the discharge of hazardous substances.

2.1 Issue 3.5: Contaminated land

Activities on contaminated land can contaminate areas off-site of the contamination.

Activities on contaminated land such as small-scale earthworks or petroleum tank removal can potentially contaminate nearby non-contaminated land. Off-site contamination in the form of discharges to groundwater or surface water is sometimes difficult to assess. There is potential for widespread discharges off-site and these can become long-term issues for the environment and for public health.

2.2 Issue 3.8: Closed landfills

Some closed landfills have been inappropriately located and have the potential to contaminate their surroundings if not managed properly.

There are a number of closed landfill sites in the Wellington Region (over 100, of which many are now recreational reserves). Discharges from these sites can contaminate the soil surrounding the landfill and leachates to groundwater or

surface water can impact on water quality. In recognition of the significant potential for adverse effects from these sites, the higher priority closed landfills are monitored to assess their effect on the environment.

3. Regulatory and policy context

3.1 National statutory requirements

3.1.1 Resource Management Act 1991

The Resource Management Act 1991 (RMA) provides the basis for the management of contaminated land in New Zealand. It is the primary statute for the development of the proposed Plan provisions for contaminated land and hazardous substances.

Section 5 requires the sustainable management of natural and physical resources to be managed in a way that enables people and communities to provide for their social, economic and cultural well-being and their health and safety. Contaminated land can directly impact people's health and safety especially where sites may be particularly toxic from a discharge into air, or where people live or have contact with the land. Section 5 also requires that the life-supporting capacity of the soil, air and water and ecosystems is safeguarded. Having contaminated land in the region reduces the life-supporting capacity of that land. All of the effects from contaminated land will need to be managed over time to reduce the long-term effects on the environment to enable the land to be useful for current and future generations.

Section 6 requires regional plans to recognise and provide for matters of national importance. Contaminated land and discharge of hazardous substances are related to the matters mentioned in section 6, as these discharges can affect the natural character of freshwater bodies and the coastal marine area, and significant indigenous flora and fauna.

Section 7 requires for the management of natural and physical resources that particular regard is made to various matters. In relation to contaminated land, section 7(f) – the maintenance and enhancement of the quality of the environment, and section 7(g) – any finite characteristics of natural and physical resources are the most relevant. By its very nature contaminated land in the region reduces the quality of the environment. In most cases the land cannot be used for the intended purpose if the land is highly contaminated. By managing contaminated land through the regional plan process, this allows the land to be used for future uses. The environment is also generally improved through this management process. Since the total land area in the region is finite, contaminated land reduces the area of land available for use. For example, if certain parts of the region contain large areas of contaminated land then future land uses are limited and the remaining area of suitable land may command a high cost for development. The management of the land through the regional plan can over time reduce the area of land that is contaminated in certain parts of the region.

Section 9 controls the use of land in district and regional plans. Regional rules can place controls on the use of land for the purposes specified in section 30. Many land-use controls are placed by district plans. Subdivision of

contaminated land is regulated by a national environmental standard (see below) and by rules in district and regional plans. The environmental standard supersedes rules in district plans although district plans may have specific requirements for contaminated land outside the standard.

Section 15 is relevant to contaminated land and hazardous substances. Regional plans control discharges into or onto land and water. The RMA is restrictive for discharges from any industrial and trade premises and non-restrictive for all other premises. The discharge from contaminated land in or to the environment is solely controlled by provisions in regional plans.

Section 30(c)(v) and section 30(ca) relate to contaminated land and hazardous substances. Part (v) requires that regional plans control the use of land to prevent and mitigate any adverse effect from the storage, use, disposal or transport of hazardous substances. Most of these requirements have been allocated to district plans in the region through the regional policy statement, Policy 63 – allocation of responsibilities for land-use controls for hazardous substances. The only areas where the regional council maintains land-use control for hazardous substances is in the coastal marine area and in the beds of lakes and rivers. Section 30(ca) requires that regional councils investigate contaminated land and monitor the status of the land. This is achieved by regional councils with the Selected Land Use Register (SLUR).

3.1.2 Hazardous Substances and New Organisms Act 1996

The Hazardous Substances and New Organisms Act 1996 (HSNO) has the main purpose to protect the environment, and the health and safety of people and communities, by preventing or managing the adverse effects of hazardous substances and new organisms.

The HSNO was passed in June 1996 and represented one of the most significant reforms of environmental legislation since the Resource Management Act. The HSNO came into force in two stages. Provisions relating to new organisms took effect in July 1998. The provisions relating to hazardous substances came into force on 2 July 2001.

HSNO established the Environmental Risk Management Authority (ERMA) to assess and decide on applications to introduce hazardous substances or new organisms into New Zealand. This includes genetic modification of plants, animals and other living things in New Zealand. In July 2011, ERMA became the Environmental Protection Authority (EPA).

As discussed above there is a relationship between the two Acts as the RMA requires regional and district councils to control the use, storage, disposal and transport of hazardous substances. The regional policy statement (see below) delegates land-use controls for hazardous substance on land to city and district councils and land-use controls in the coastal marine area and the beds of lakes and rivers to the regional council.

3.2 National policy statements

National policy statements are instruments issued under section 52(2) of the RMA. The national policy statements state the objectives and policies for

matters of national significance. The national policy statement must be given effect to in regional plans and regional policy statements.

There are four operative national policy statements in place:

- National Policy Statement on Electricity Transmission 2008
- National Policy Statement for Renewable Electricity Generation 2011
- New Zealand Coastal Policy Statement 2010
- The National Policy Statement for Freshwater Management 2014

3.2.1 National Policy Statement for Freshwater Management

The National Policy Statement for Freshwater Management 2014 (NPS-FM) requires regional councils to recognise the national significance of fresh water for all people in the region and Te Mana o te Wai (the mana of water).

There is a list of direct requirements for regional councils in the NPS-FM, including safeguarding fresh water's life-supporting capacity, ecosystem process, people's health, protection of the significant values of wetlands and outstanding water bodies, the efficient use of water and over-allocation of water takes and the input of contaminants and to phase out over-allocation. More importantly the policy statement requires the setting of freshwater objectives to meet community values and tangata whenua values which include ecosystem health, and human health for recreation. Regional councils have to set limits which allow freshwater objectives to be met under a specified set of water quality measures to set the objectives. The policy statement also requires measures to account for the source of contaminants.

Where contaminated land and hazardous substances provisions relates to the NPS-FM is in the location of contaminated land within a catchment, and the overall cumulative effect of discharges from these areas to the total catchment contaminant load.

3.2.2 New Zealand Coastal Policy Statement (NZCPS)

The New Zealand Coastal Policy Statement 2010 (NZCPS) is the only mandatory national policy statement under the RMA. The purpose of the NZCPS is to state policies to achieve the purpose of the RMA, in order to promote the sustainable management of natural and physical resources in relation to New Zealand's coastal environment (RMA section 56).

The NZCPS has objectives and policies that regional plans must give effect to for the management of the coastal marine area. Policy 23(5)(a) and (b) is the most relevant to contaminated land and the discharges of hazardous substances. This policy requires that particular regard is given to managing discharges in general in relation to the receiving environment, human sewage, and the discharges from ports and other marine facilities.

3.3 National environmental standards

National environmental standards (NES) are regulations issued under section 43 of the RMA and apply nationally. NES are standards for maintaining a clean, healthy environment. The government sets standards where appropriate

so that everyone in New Zealand has clear air to breathe, clean water to drink, and clean land to live on. The national standards prescribe technical standards, methods or other requirements for environmental matters. Each regional, city or district council must enforce the same standard. In certain circumstances, councils can impose stricter standards. The following national standards are in effect:

- National Environmental Standards for Air Quality 2004
- National Environmental Standard for Sources of Human Drinking Water 2008
- National Environmental Standards for Telecommunication Facilities 2008
- National Environmental Standards for Electricity Transmission Activities 2009
- National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2012

3.3.1 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS) came into effect 1 January 2012. The standard prescribes technical standards, methods and other requirements for the regulation of contaminated land.

The NESCS places controls on certain activities or industries on land that are:

- Described in the Hazardous Activities and Industries List (HAIL)
- If an activity that has been on HAIL land, and
- If it more than likely an activity or industry described in the HAIL is being or has been undertaken

The activities controlled by the NESCS are:

- Replacing a fuel storage system
- Sampling a piece of land to determine whether or not it is contaminated, and if it is, the amount of contamination, and
- Subdividing a piece of land and changing a piece of land, which means changing its use is likely to harm human health

The NESCS does not affect existing land uses. The NESCS classifies as permitted activities (meaning no resource consent required if stated requirements are met):

- Removal or replacement of fuel storage systems and associated soil, and associated subsurface soil sampling
- Small-scale (no greater than 25 cubic metres per 500 square metres of affected land) and temporary (two months duration) soil disturbance activities; and
- Subdividing land or changing land use where a preliminary investigation shows it is highly unlikely the proposed new use will pose a risk to human health

Activities requiring a resource consent under the NESCS include:

- The development of contaminated land where the risk to human health from soil contamination does not exceed the applicable soil contaminant value (classified as a controlled activity, meaning resource consent must be granted)
- The development of contaminated land where the risk to human health from soil contamination exceeds the applicable soil contaminant value (classified as a restricted discretionary activity)
- The development of land where the activity does not meet the requirements to be a restricted discretionary, controlled or permitted activity (classified as a discretionary activity)

Territorial authorities and unitary authorities enforce the standard. Councils cannot impose stricter rules in their regions. The role of the regional council is to manage the effects on the environment from contaminated land.

3.4 National guidelines

There are a number of national guideline documents to support the management of contaminated land and hazardous substances in New Zealand. Most of these guideline documents can be viewed on the government websites for the Ministry for the Environment, and the Environmental Protection Authority (EPA). The WRC also has a list of guidelines that are good management practice associated with the proposed Plan.

Below is a list of the common guidelines used in the management of contaminated land. These guidelines have been developed by the Ministry for the Environment in partnership with regional councils and unitary authorities:

Contaminated Land Management Guidelines No. 1 – Reporting on Contaminated Sites in New Zealand (Revised 2011) details the type and amount of information required in a contaminated site report.

Contaminated Land Management Guidelines No. 2 – Hierarchy and Application in New Zealand of Environmental Guideline Values (Revised 2011) ensures the consistent selection and application of environmental guideline values.

Contaminated Land Management Guidelines No. 3 – Risk Screening System describes the Risk Screening System which provides a nationally consistent way to rank sites that are, or are suspected of being, contaminated. The purpose of ranking a site is usually so it may be prioritised for further investigation.

Contaminated Land Management Guidelines No. 4 – Classification and Information Management Protocols suggests a nationally consistent way to classify, manage and release contaminated site information held on council registers or databases.

Contaminated Land Management Guidelines No. 5 – Site Investigation and Analysis of Soils (Revised 2011) provides best practice for sampling and

analysing soils on sites where hazardous substances are present or suspected and guidance on the principles for interpreting the data obtained.

The EPA website (www.epa.govt.nz) has links to various sources of information for the registration, use, and disposal of hazardous substances. The HSNO also has regulations pertaining to the use of certain hazardous substances in New Zealand.

3.5 Regional Policy

3.5.1 Regional Policy Statement for the Wellington Region

The Regional Policy Statement for the Wellington Region 2013 (RPS) was made operative in April 2013.

The RMA requires every regional council to prepare a statement providing an overview of resource management issues in the region and having policies and methods to achieve integrated management of the region's natural and physical resources.

The RPS identified contaminated land and hazardous substances as a significant regional management issue facing the region. The management of contaminated land since the RPS was made operative has changed with the implementation of the NESCS. The NESCS protects human health from changes in the uses of contaminated land. Before the RPS and the NESCS, land use change was not appropriately managed and new land uses were exposed to high levels of contaminants from the soils not having had sufficient treatment to render the soils safe for people to use. A common example of this is new subdivisions built over old landfills, sheep dips, orchards and other sites that were deemed unsafe for people to use. The NESCS however does not protect the environment from changes in land use and that is left to regional plans.

Policy 34 of the RPS – controlling activities on contaminated land – directs district plans to control activities on contaminated land so that the activity is not adversely affected by the contamination. This policy, though still in effect, has been in effect superseded by the NESCS.

Policy 65 of the RPS promotes the efficient use and conservation of resources, is a non-regulatory policy for district and regional councils. In regard to waste, this policy is implemented by Method 56, and has been partially implemented through publicity by city councils in the region promoting better waste management, recycling, and disposal of hazardous substances.

Method 24 requires the WRC to set up a database for the management of contaminated sites or land in the region. This is achieved through the SLUR database system. Part (a) of the method requires a history of storing, using or manufacturing hazardous substances. This requirement is the responsibility of city and district councils and the EPA through changes to the HSNO. Part (b) major spills, are the responsibility of the WRC.

Method 56 requires the WRC and city and district councils to assist the community in sustainable practices to reduce waste. The method is not directly

concerned with the discharge of hazardous substances; however, there is an association with the way these substances are correctly disposed of.

The SLUR is a record of sites that are known (or suspected) to have been involved (historically or currently) in the use, storage or disposal of substances from one or more hazardous activities/industries identified by the Ministry for the Environment (HAIL register). Some sites on the SLUR will be contaminated sites and in others they will not. There are six categories of contamination as follows:

- Category 1 – verified history of hazardous activity or industry
- Category II – unverified history of hazardous activity or industry
- Category III – contamination confirmed
- Category IV – contamination acceptable, managed or remediated
- Category V – no identified contamination
- Category VI – entered on register in error

3.6 Operative regional plans

3.6.1 Regional Discharges to Land Plan

The Regional Plan for Discharges to Land for the Wellington Region (Discharges to Land Plan) was published in 1999. It manages discharges to land that may enter water and includes provisions for agricultural discharges, landfills and cleanfills, septic tanks, contaminated land and hazardous substances.

The Discharges to Land Plan specifically addresses discharges from contaminated land and the discharge of hazardous substances. These discharges have the potential to cause adverse effects on the environment if not appropriately managed. In particular, contaminated site discharges require a resource consent if the discharge of contaminated site material is outside an approved facility (such as a landfill) for disposing of contaminated material.

The hazardous substances provisions control specific discharges of known chemicals to land that are deemed to be toxic and require a discharge consent.

3.6.2 Effectiveness of the Discharges to Land Plan

The Plan Effectiveness Monitoring Report: Regional Plan for Discharges to Land (GWRC 2006) described the changing situation (in 2006) for waste management and hazardous substances with new legislation that made waste management a requirement of city and district councils.

The Discharges to Land Plan has two rules to control discharges from contaminated sites (Rule 21 and Rule 22). The effectiveness report suggests that the operative rules are confusing and difficult for landowners and others managing contaminated land to know exactly what the plan requires to ensure that they are within the scope of the rules and there are no significant adverse effects on the environment.

4. Appropriateness of the proposed objectives

The next stage in the section 32 analysis is to evaluate the objectives for the proposed Plan with regard to contaminated land and hazardous substances. The objectives must give effect to the RPS and be evaluated against the purposes of the RMA.

The proposed objectives for contaminated land and hazardous substances in the proposed Plan are described in section 4.1. The objectives are evaluated according to section 32(1)(a) of the RMA and the analysis is summarised in the Appendix, Table A1.

Section 32(1)(a) requires that the evaluation must examine the extent to which the objectives of the proposal are the most appropriate way to achieve the purpose of the RMA.

The appropriateness test applied consists of four standard criteria: relevance, usefulness, reasonableness and achievability. These criteria can be summarised as follows:

- *Relevance* – is the objective related to addressing a resource management issues? Will it achieve one or more aspects of the purpose and principles of the RMA?
- *Usefulness* – will the objective guide decision-making? Does it meet sound principles for writing objectives?
- *Reasonableness* – what is the extent of the regulatory impact imposed on individuals, businesses or the wider community?
- *Achievability* – can the objective be achieved with tools and resources available, or likely to be available, to the local authority?

The objectives in the Discharges to Land Plan have been analysed against the appropriateness criteria to provide guidance as to what degree the objectives required amendment (if any) to achieve the purpose of the RMA, and give effect to the relevant statutory documents. In response to this assessment, some amendments have been proposed.

A brief description of each of the proposed objectives for the proposed Plan is provided below.

4.1 Proposed objectives

4.1.1 Objective O43

Contaminated land is managed to protect human health and the environment.

This objective is about protecting human health and the environment from contaminated land. The objective is to recognise and respond to the fact that contaminated land can affect people's health if it is directly ingested or used by people in ways where the effects of using the land is not recognised. Contaminated land may discharge substances into groundwater, which could place human health at risk. Objective O43 protects the soil resources as contaminated land reduces soil quality where the contamination occurs.

4.1.2 Objective O51

The discharge of hazardous substances is managed to protect human health, property and the environment.

This objective is about protecting human health, property and the environment from the discharge of hazardous substances. The discharge of a hazardous substance has the potential to be toxic to human health and the environment. The discharge also has the potential to affect people's property in situations such as through the discharge of agrichemicals where neighbouring crops are affected by spray drift. The proposed Plan manages all discharges of hazardous substances to land, water and air.

The assessment in the Appendix, Table A1 and the summary above shows that the proposed objective meets the criteria for objective evaluation.

5. Options for achieving the objectives

Section 32(1)(b)(i) of the RMA requires an evaluation to identify practicable options for achieving the proposed objective as outline in section 4. The following options have been identified to achieve the objective for contaminated land and hazardous substances:

- Maintain the status quo (no changes to the Discharges to Land Plan. The Discharges to Land Plan manages contaminated land and hazardous substances in the region)
- Non-regulatory approaches (partnerships with district councils, voluntary guidelines and guidance notes)
- Amendments to the Discharges to Land Plan for contaminated land and hazardous substances integrated into the proposed Plan

Of the options identified only the amendments to the Discharges to Land Plan are considered appropriate to meet the proposed objectives in the proposed Plan, as summarised in the Appendix, Table A2. The proposed amendments to the Discharges to Land Plan to become part of the proposed Plan are straightforward and efficient to implement, and they will:

- Ensure national consistency with the implementation of the NESCS and discharges to land and water from contaminated land
- Be beneficial and cost effective as they take advantage of existing management structures for contaminated land that are included in the consent processing procedures
- Include amendments that revise and update the set of controls to protect people's health and the environment

5.1 Maintaining the status quo

The status quo would be to continue with the operative Discharges to Land Plan to manage contaminated land and hazardous substances. As discussed above the Discharges to Land Plan does not give effect to new statutes and regulations, and the rules in the Discharges to Land Plan were assessed in the effectiveness report as being ineffective in managing contaminated land.

Maintaining the status quo is not considered an appropriate option for achieving the objectives for contaminated land and hazardous substances in the proposed Plan.

5.2 Non-regulatory approaches

In this option the objectives would be met solely by non-regulatory approaches. This option could include measures such as:

- Issuing best practice guidelines on appropriate levels of management for contaminated land and the assessment of risk to the environment
- Partnership models to improve communication and engagement between land developers and landowners, and district plans on the management of complex contaminated sites
- Issuing better guidance to industries producing hazardous substances to prevent the contamination of land in the first instance and promote methods of clean-up

This option would keep regulatory complexity to a minimum and allow a greater flexibility of local decision-making in the way contaminated land is managed. This option however would not guarantee a significant improvement compared to the status quo or the proposed option. Without regulatory compulsion there is no guarantee that landowners or land managers that discharge hazardous substances from contaminated land into groundwater would work with local councils or communities to reduce or eliminate their discharge. There is a high risk that a situation worse that the status quo would prevail through a non-regulatory approach, and the objective would be unlikely to be achieved.

5.3 Amendments to Discharges to Land Plan (the proposed Plan)

This option is in essence an amended Discharges to Land Plan that is integrated with other activity discharges (discharges into air) in the proposed Plan. This option would give effect to new and existing statutes, be updated with new information and science on contaminated land and hazardous substance controls, and include a non-regulatory approach to assist landowners and land managers with the management of contaminated land discharges from closed landfills and other sites. This approach is the best fit to meet the proposed objectives of the proposed Plan.

This approach has a better balance between regulatory and non-regulatory options to meet the objective. The regulatory option means that a discharge into groundwater is effectively assessed, monitored and managed providing people and communities with the confidence that discharges from contaminated land are well managed by the proposed Plan and discharges that affect the environment and human health in particular are regulated and mitigated to a minimum.

The amendments are summarised in Table 1 below in the proposed Plan:

Table 1: Provisions for contaminated land and hazardous substances

Objectives:	O43: Contaminated land is managed to protect human health and the environment O51: The discharge of hazardous substances is managed to protect human health, property and the environment
Policies:	Policy P4: Minimising adverse effects Policy P89: Discharges from contaminated land Policy P90: Discharges of hazardous substances Related policies Policy P2: Cross-boundary matters Policy P68: Inappropriate discharges to water Policy P69: Human drinking water supplies Policy P71: Quality of discharges Policy P95: Discharges to land
Rules:	Rule R54: Site investigation – permitted activity Rule R55: Discharges from contaminated land – permitted activity Rule R56: Discharges from contaminated land – discretionary activity Rule R57: Discharge of hazardous substances – non-complying activity
Method:	Method M16: Contaminated land

6. Efficiency and effectiveness of the proposed provisions

Section 32(1)(b)(ii) of the RMA requires that the benefits and costs of the environmental, economic, social and cultural effects that are anticipated from the implementation of the proposed provision for contaminated land hazardous substances be assessed for effectiveness and efficiency.

The following is an assessment of the effectiveness and efficiency of the proposed provisions. The assessment is based on information provided through the region's draft Natural Resources Plan (draft NRP) submission process, industry stakeholders, consultants, the national science working group for discharges to land, and other information obtained as part of the section 32 evaluation.

In summary (see Appendix, Table A2), the assessment has identified that the proposed provisions for contaminated land and hazardous substances are the most effective and efficient for achieving the objectives. The balance of costs and benefits shows that, while there are costs in implementing the proposals, in particular the potential requirement for landowners to gain a discharge consent if their land is discharging hazardous substances into the environment, these costs are outweighed by the benefits to the environment and social benefits of having land fit for current purpose and changes in land use that may occur.

6.1 Effectiveness

For the purposes of section 32, effectiveness is the ability of a provision to meet the desired outcome or result. Below is an assessment of the proposed provisions that should be read in conjunction with Table A2 in the Appendix. The assessment evaluates the proposed provisions for contaminated land and hazardous substances. The evaluation identified that the proposed provisions will be effective in achieving the objectives of the proposed Plan and will be

more effective than the status quo. The proposed provisions will widen the scope for the management of contaminated land in the region, and address more effectively discharges to the environment.

More specifically the proposed provisions will improve effectiveness by providing clear policy direction through Policy P89. The policy requires that any significant adverse effect from a discharge from contaminated land that enters land, water or air is managed to minimise the effects on groundwater, surface water bodies, air, and the coastal marine area. This policy assumes the use of Ministry for the Environment guidelines and protocols that have been developed by practitioners working in this area. There is a large body of knowledge and expertise that has been developed in New Zealand on the management of contaminated land. The management of contaminated land is further supported by the Ministry for the Environment through the NESCS.

Proposed Policy P4 provides guidance to proposed Policy P89 which requires that adverse effects be minimised. That is, adverse effects are to be reduced to the smallest amount practicable and include consideration of alternative locations, timing of the activity, the use of good management practice and ensuring the scale of the activity is as small as practicable. It is intended that Policy P4 be used to guide a resource consent assessment of environmental effects for proposed Policy P89.

Proposed Policy P90 directs how the discharge of hazardous substances is to be managed. The policy assumes that hazardous substances are appropriately used, stored and transported according to the management guidelines and regulations of the EPA. The discharge of hazardous substances to land is provided for in the proposed Plan for selected substances such as agrichemicals. The policy requires that discharges that are provided for can only occur by using good management practices which in the case of agrichemicals there are well known and accepted management practices. Any other discharge of hazardous substances that is not provided for by the proposed Plan is a non-complying activity in proposed Rule R57.

Other related policies for contaminated land and hazardous substances are policies P2 (cross-boundary), P68 (inappropriate discharges to water), P69 (human drinking water), P71 (quality of discharges), and P95 (discharges to land).

Proposed Policy P2 relates to discharges of hazardous substances where the effects cross jurisdictional boundaries. The policy requires that relevant policies in other jurisdictions are given particular regard.

Proposed Policy P68 relates to the discharge of inappropriate substances to water such as from industrial and trade premises and untreated organic waste or leachate from the storage of organic material. These discharges can be toxic to aquatic ecosystems and are to be avoided. This policy would relate to contaminated land discharges from industrial and trade premises that discharge to groundwater or surface water bodies.

Proposed Policy P69 relates to the adverse effects from discharges to land on drinking water supplies. Contaminated land has the potential to discharge hazardous substances to groundwater which may affect drinking water supplies. This policy requires the adverse effects on groundwater for human drinking water to be avoided, and if avoidance is not possible the policy has criteria for managing the adverse effects from the discharge.

Proposed Policy P71 relates to the adverse effects of point source discharges to water. This policy is relevant if there is a discharge of hazardous substances to water from contaminated land. The policy sets out the minimum standards that apply for such a discharge.

Proposed Policy P95 relates to discharges to land and how discharges are to be managed. The policy requires that activities avoid any new discharge that would create contaminated land. The number of contaminated sites in the region according to the SLUR is about 2,100. The policy requires that any new sites are to be avoided.

The implementation of all the proposed policies for contaminated land and hazardous substances will help meet the Objectives O43 and O51 of the proposed Plan.

Proposed Rule R54 permits the investigation of land to confirm the presence or otherwise of hazardous substances that may be affecting the soil and water. This rule references existing guidelines from the Ministry for the Environment on the methods and procedures to use and apply for the site investigation, and the format for reporting back to authorities on the findings from the investigation. A copy of the site investigation is forwarded to WRC within two months of the completion of the investigation.

Proposed Rule R55 permits discharges from contaminated land if the discharge is within water quality criteria. The rule has a time restriction placed with it, where the rule takes effect two years after the proposed date of the proposed Plan (31.07.2015). This will provide sufficient time for the strategy in Method M16 to be developed to assist the working of this rule. As discussed in the policy approach above, if the discharge has significant adverse effects on the environment the discharge is minimised. Proposed Rule R55 only applies to contaminated land – this is defined in the proposed Plan to be land that is category III in the SLUR register. The register as at 30 June 2014 had 105 confirmed contaminated sites in category III.

Proposed Rule R56 is a discretionary activity if either of the conditions of proposed Rule R54 or Rule R55 is not met. This consent requirement has been set at discretionary status as the nature of discharges from contaminated land can affect multiple landowners and be of a complex nature. The nature of these discharges can be long-lasting and a consent requirement of this status is appropriate.

Method M16 has been proposed that will undertake a strategy to assess contaminated land in the region, and work with landowners and key stakeholders to meet the objectives of the proposed Plan. Furthermore, to allow

the time required for the strategy to be undertaken, proposed Rule R55 does not come into effect until two years after 31 July 2015. This will provide sufficient time for the development of the strategy and landowners and developers sufficient time to begin an assessment of their land if they have not already done so.

The discharge of hazardous discharges can be detrimental to the environment if appropriate controls are not in place. There are certain discharges of hazardous substances that are permitted by the proposed Plan with conditions and these are agrichemicals, some fumigants, vertebrate toxic agents, and dye and salt tracers to water. All other discharge of hazardous substances to land that may enter water will need a resource consent. The consent classification has been set to non-complying (Rule R57) to ensure that there are no adverse effects on the environment.

6.2 Efficiency

Section 32(1)(b)(ii) requires an assessment of the efficiency of the proposal provisions. The assessment must identify the benefits and costs of the environmental, economic, social and cultural effects that are anticipated from the implementation of the proposed provisions, including opportunities for (i) economic growth and (ii) employment that are anticipated to be provided or reduced. If practicable, the benefits and costs must be quantified. However, the benefits and costs can also be qualitative where quantification is not possible.

The efficiency of the proposed provisions has been assessed by balancing the associated costs and benefits. Information about the proposed provisions has been gathered through consultation with industry representatives, submissions on the draft NRP, examination of council costs, and discussions with other regional council representatives on national working group bodies. At this stage the costs and benefits have not been monetised for the following reasons:

- The costs for this type of activity tend to be on a case-by-case basis and are difficult to quantify per site
- The cost of clean-up depends on the final land-use outcome desired
- It is difficult to attain information about contaminated land from existing landowners

The evaluation will address these limitations on a qualitative basis to meet the proposed objectives of the proposed Plan. In the Appendix, Table A2 summarises the nominal costs and benefits of the proposal.

6.2.1 Economic effects

As discussed, there has been no formal economic assessment undertaken for this proposal. There are increased economic costs for the Council in the management of contaminated land through the SLUR database and in regulatory functions. This cost (although small at present) is likely to increase. The cost to individual landowners and developers of land on the SLUR database that have land categorised as category III – contamination confirmed – may face higher costs if there is a discharge confirmed to groundwater or surface water. These costs are identical if there is a proposed land-use change under the national environmental standard, and there is a potential discharge to land or groundwater. If the

contamination is widespread and the land is required for another use such as residential the cost of remediation could be high.

There are nominal benefits to industry through increased sampling and analysis of soils and water, and assessment of the effects on the environment. Benefits can be attributed to the landowner or developer if they have remedied or rehabilitated contaminated land, as the registration is removed from the LIM (Land Information Memorandum – the property report provided by the relevant territorial authority), increasing the range of likely future land-use possibilities.

Hazardous substances as discussed are controlled by the HSNO regulations, and territorial and regional plans. The costs and benefits have not been examined for hazardous substances as there are few regulated discharges of hazardous substances (except agrichemicals, fumigants, vertebrate toxic agents and dye or salt tracers in water) in the proposed Plan. Agrichemicals are discussed in the Section 32 report: Air quality.

6.2.2 Environmental effects

The effects on the environment from contaminated land are:

- Long-term damage to the soil
- Long-term discharges of hazardous substances into the groundwater zone and surface water bodies affecting water quality and receiving environments

These effects would remain indefinitely if there was no intervention from regional councils.

The effects on soils are against the purposes of the RMA, as the life-supporting capacity of the soil is temporarily or permanently affected by the contamination. To improve the soil to a healthy functioning resource or to a level that is acceptable for another land use may involve complete removal and replacement, or if the contamination is widespread full chemical and biological remediation and rehabilitation of the soil. A complete rehabilitation of the soil is an expensive option and does not occur often in the Wellington region or New Zealand as a whole.

The environmental effects from discharges of hazardous substances to land or water if not approved can be severe and detrimental. The proposed Plan does not permit the discharge of hazardous substances except for agrichemicals, fumigants, land-based vertebrate toxic agents, and dye or salt tracers. All other discharges of hazardous substances to land or water require a resource consent because of the potential high toxicity to the environment.

6.2.3 Social effects

There are social costs from contaminated land. The social costs are in not being able to use the land for another purpose or restricting people's access to land that is deemed contaminated where access would harm people's health. Furthermore, if there are ongoing discharges to groundwater or to surface water, the social effects may lead to restrictions in recreational benefits.

6.2.4 Cultural effects

The cultural effects of the proposals are considered to be limited, as for most contaminated land the contamination is confined to the land, i.e. not escaping in significant quantities to water or air. In the Wellington Region contaminated streams have been identified and remedied (the Waiwhetu Stream, Seaview) as part of the central government initiative to remediate some of the worst areas of contamination in New Zealand. The WRC worked with the Hutt City Council and local iwi to clean up the lower part of the Waiwhetu Stream which was most affected by pollutants coming from contaminated land. The impacts from contaminated land are significant for mana whenua wherever it results in contamination of water or traditional food gathering sites or other significant sites to mana whanau.

7. Uncertain or insufficient information

Section 32(2)(c) of the RMA requires an evaluation to take account of the risk of acting or not acting if there is uncertain or insufficient information about the provisions.

7.1 Risks of not acting

The review of the Discharges to Land Plan (see section 3.6.2) found that there are shortcomings in the way contaminated land is managed in the region. These shortcomings have resulted in the issues around contaminated land not being fully addressed and this is suggested by the low number of consented sites in the region. There are risks with continuing with the status quo and they are:

- A poor understanding by industry and landowners of their situation with regard to contaminated land in the region
- There is no certainty around whether a consent is required for the discharge from contaminated land or not
- Contaminated land may potentially be used for new land uses that do not satisfy the RMA requirements; and
- Discharges may be occurring into groundwater or surface water bodies affecting receiving water bodies

The risks cannot be mitigated by continuing with the status quo.

Hazardous substances as discussed above are controlled and managed for the most part by HSNO regulations. A discharge to the environment of hazardous substances is strictly controlled by the operative plans and in the proposed Plan. An unconsented discharge of a hazardous substance would be a spill or accidental discharge where no consent is granted. There is therefore a low risk with continuing with the status quo in terms of managing the effects of the discharge of hazardous substances.

7.2 Risks of acting

The risks of acting as identified in the previous sections are:

- The potential for new land to be investigated and regulated
- Increased awareness of landowner responsibility and action on contaminated sites that may cause further increase council time and resources
- Higher level of SLUR database scrutiny by landowners and developers requiring land use changes
- Higher cost for landowners undertaking site investigation to establish the level of contamination
- Higher level of public enquiry about contaminated land to WRC; and
- Increased regulation workload

The risks can be mitigated by placing more resources into the SLUR database through the development of the contaminated land management strategy through Method M16, an increased level of information, publication and awareness about contaminated land in the region for which landowners need to take responsibility.

7.3 Conclusion on risk

The option assessed has identified that while there are other options for achieving the policy objective, the proposed amendments to the Discharges to Land Plan are the most appropriate to achieve the objectives. While there are some risks in the proposal, these can be mitigated through provisions in the proposed Plan and public consultation on the proposal.

8. Summary of evaluation

Section 32(1)(b)(iii) requires that the evaluation has been undertaken to test the efficiency, effectiveness and risk for the proposed amendments for contaminated land and hazardous substance discharges. The proposed amendments have been assessed against the status quo of keeping the existing rules in the Discharges to Land Plan unchanged.

The evaluation has found that the proposed amendments would ensure that the objective of the proposed Plan could be fully achieved to protect people's health and the environment from this form of discharge. Further, the current amendments are compatible with other policy objectives and provisions in the proposed Plan.

The preliminary cost-benefit analysis suggests that, on balance, the proposed amendments would prove the most cost effective for achieving the policy objectives. There are some risks in this approach; however these risks relate mainly to the level of resources placed into the management of contaminated land in the region.

References

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Appendix

Table A1: Appropriateness of the proposed objectives

Objective: O43	*Contaminated land is managed to protect human health and the environment*
Relevance	
Directly related to resource management issue?	Partially relates to Issue 3.5
Will achieve one or more aspects of the purpose and principles of the RMA?	Directly related to section 5(2)(b) of the RMA.
Relevant to Māori environmental issues? (sections 6(e),6(g),7(aa),8)	Yes
Relevant to statutory functions or to give effect to another plan or policy (i.e. NPS, RPS)?	Partially related to the NES for contaminated land and the RPS through Policy 34.
Usefulness	
Will effectively guide decision-making?	Yes, this objective will guide decision-making for the processing of discharges to land consents.
Meets sound principles for writing objectives? (specific; state what is to be achieved where and when; relate to the issue; able to be assessed)	The objective is a clear and complete sentence related to the issue above. The objective is not time bound as it aims to deliver benefits over time.
Consistent with other objectives?	Yes, the objectives have been assessed and work together to achieve sustainable management of soils in the region.
Achievability	
Will it be clear when the objective has been achieved in the future? Is the objective measureable and how would its achievement be measured?	The achievement of this objective will become clear in the future through: • Development of a contaminated land management strategy • Contaminated sites register • Land monitoring
Is it expected that the objective will be achieved within the life of the proposed Plan or is it an aspirational objective that will be achieved some time in the future?	This objective will be achieved over a long timeframe than the life of the proposed Plan.

Does the Council have the functions, powers, and policy tools to ensure that they can be achieved? Can you describe them?	This objective will be achieved through the policies and rules for contaminated land in the proposed Plan.
What other parties can the Council realistically expect to influence to contribute to this outcome?	Other parties that Council can realistically expect to influence are • Land managers • Territorial authorities
What risks have been identified in respect of outcomes?	The risk to soil health will be reduced through the achievement of this objective.
Reasonableness	
Does the objective seek an outcome that would have greater benefits environmentally, economically or socially compared with the costs necessary to achieve it?	This objective if implemented in total would have benefits that outweigh the costs of land remediation.
Who is likely to be most affected by achieving the objective and what are the implications for them?	Landowners and managers with contaminated land on their properties.
Existing objectives	
Is the operative objective (4.1.11) in the Discharges to Land Plan still relevant or useful?	The existing objectives are similar to the proposed objective. The issue of contaminated land has not been resolved through the existing plan and remains today. The proposed objective gives effect to recent statutes and plans.

Objective: O51	*The discharge of hazardous substances is managed to protect human health, property and the environment.*
Relevance	
Directly related to resource management issue?	There is no issue directly relating to the discharge of hazardous substances, outside those hazardous substances permitted by the proposed Plan.
Will achieve one or more aspects of the purpose and principles of the RMA?	Directly related to section 5(2)(b) of the RMA.
Relevant to Māori environmental issues? (sections 6(e),6(g),7(aa),8)	Yes.
Relevant to statutory functions or to give effect to another plan or policy (i.e. NPS, RPS)?	Partially related to the NES for contaminated land and the RPS through Policy 65.

Usefulness	
Will effectively guide decision-making?	Yes, this objective will guide decision-making for the processing of discharges to land consents for hazardous substances.
Meets sound principles for writing objectives? (specific; state what is to be achieved where and when; relate to the issue; able to be assessed)	The objective is a clear and complete sentence related to the issue above. The objective is not time bound as it aims to deliver benefits over time.
Consistent with other objectives?	Yes, the objectives have been assessed and work together to achieve sustainable management of soils in the region.
Achievability	
Will it be clear when the objective has been achieved in the future? Is the objective measureable and how would its achievement be measured?	The achievement of this objective will become clear in the future through: • The number of consents issued by WRC for this type of discharge. • Water and land monitoring
Is it expected that the objective will be achieved within the life of the proposed Plan or is it an aspirational objective that will be achieved some time in the future?	This objective will be achieved over a longer timeframe than the life of the proposed Plan.
Does the Council have the functions, powers, and policy tools to ensure that they can be achieved? Can you describe them?	This objective will be achieved through the policies and rules for contaminated land in the proposed Plan, details are provided above.
What other parties can the Council realistically expect to influence to contribute to this outcome?	Other parties that Council can realistically expect to influence are • Landowners • Territorial authorities
What risks have been identified in respect of outcomes?	The risk to soil health and discharges of hazardous substances from land to water will be reduced through the achievement of this objective.
Reasonableness	
Does the objective seek an outcome that would have greater benefits environmentally, economically or socially compared with the costs necessary to achieve it?	This objective if implemented in total would have benefits that outweigh the costs of land remediation.
Who is likely to be most affected by achieving the objective and what are the implications for them?	Landowners and managers with contaminated land on their properties.

Existing objectives	
Is the operative objective (4.1.11) in the Discharges to Land Plan still relevant or useful?	There are existing objectives for the discharge of hazardous substances. These objectives are outdated as they do not take into account recent new regulations and the Environmental Protection Authority which has been set up to manage the release of hazardous substances in New Zealand.

Table A2: Assessment of the benefits and costs

		Status quo (no change from the operative Discharges to Land Plan)	Non-regulatory approach	Amendments to the Discharges to Land Plan – regulatory and non-regulatory
Costs (of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions)	Council	Regulatory costs in processing consents and enforcement, and providing advice to landowners and managers developing land.	There would be no regulatory costs in processing consents and follow-up of staff time in pre-hearing meetings and other meetings on applications. Other costs for the Council are in ensuring applicants are up to speed in the knowledge and methods to undertake the necessary soil sampling and expertise around whether a discharge is entering water. These are costs would have to be borne by the Council.	Costs are not anticipated to be substantially different from the status quo. Costs are in regulatory compliance and enforcement and advice to landowners and territorial authorities. Added costs are in the maintenance of the SLUR registry for contaminated land.

		Status quo (no change from the operative Discharges to Land Plan)	Non-regulatory approach	Amendments to the Discharges to Land Plan – regulatory and non-regulatory
	Resource user (consent applicant or permitted use)	Regulatory costs in applying for resource consents for discharges from contaminated land. Costs to some individuals to comply with industry best practice.	Reduced regulatory costs in applying for consent, costs in times and resources meeting community expectations, meetings, etc. However there are additional costs in coming up to speed with all the non-regulatory requirements to meet the necessary Ministry for the Environment requirements and other guidelines that apply. This could be a considerable time and resource commitment for industry and resource users.	It is recognised that there are substantial costs in site investigations for contaminated land. These are dependent on the nature of the site, the size and the new intended land use. Compliance with the new site investigation for water quality criteria is likely to add further to comply with the new rule framework for discharges from contaminated land. The proposed strategy (see Method M11) will allow time for the full costs to be explored and detailed before the rule takes effect. The work on the strategy may recommend a rule change to further improvement the effectiveness and efficiency of the rule.
	Community costs (environmental, social, economic, cultural)	High economic cost to firms and individuals to undertake development of contaminated land. Social cost in land not being available for use because of contamination. Environmental cost of contaminated land and the potential ongoing cost of discharges to water.	Costs of not being fully informed as would be a requirement in a regulatory process. The non-regulatory approach would rely on users informing the community in their own way and their own time. This can be onerous and has to be fulfilled to a reasonable level to provide the community with assurances that the activity is well managed by the user.	The same costs apply as in the status quo. The economic costs have changed if the land development requires a change in land use through changes instigated by the NESCS. This regulation has created a new level playing field for developers and greater awareness of the needs to make land safe for future uses.

		Status quo (no change from the operative Discharges to Land Plan)	Non-regulatory approach	Amendments to the Discharges to Land Plan – regulatory and non-regulatory
Benefits (of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions)	Council	Improvement in the soil resource for the region, and corresponding reduction in discharges to water. This will translate into greater environmental benefits for the region as a whole.	There are certain benefits to having less processing time and staff resources committed to the regulatory process. The Council would still need to ensure that users are fully compliant with industry best practice in undertaking their activity. This would still require some staff time however there is an attributed benefit in this option.	Improved management system for contaminated land in the region. The strategy once developed with key stakeholders will show what is required to make some real benefits in reducing the number of contaminated sites, dealing with orphan contaminated sites, and any discharges that may occur from this type of land. The strategy will be an important piece of work that will inform the Council and community over the life of the proposed Plan.
	Resource user (consent applicant or permitted use)	Benefits in improved land through participating in the regulatory process, this translates into a greater land value for future development	Benefits would fall to the user in not having to proceed through a full regulatory process for this activity. There are significant costs in the site investigation and further development of the land for the next land use. These costs are all borne by the resource user, and a benefit comes from lower regulatory compliance costs.	There will be benefits attributed to the resource users from the package of policies and other methods for contaminated land. In short, the user will have a clear understanding about what is required for their land from the WRC and city and district councils for development of land or if their land is suspected of discharging to groundwater. There is a benefit in having this work completed to make development more efficiently undertaken.

		Status quo (no change from the operative Discharges to Land Plan)	Non-regulatory approach	Amendments to the Discharges to Land Plan – regulatory and non-regulatory
	Community benefits (environmental, social, economic, cultural)	Knowledge and awareness that improvements are made to contaminated land with reductions in the resulting discharge.	A benefit to the community is more involvement with the process of contaminated land management if an engaged process is provided by the Council and the applicant.	There are benefits attributed to the community with the information and knowledge that land is better managed through the changes to the proposed Plan from the status quo. There will over time be reduced discharges to groundwater and surface water bodies that may affect community outcomes for these resources.
Efficiency (costs vs benefits) and effectiveness (will the provisions achieve the objective)		The efficiency of contaminated land development will not change considerably from the status quo. The regulations are in tandem with the new environmental standard for contaminated land and it is through this overall regime that land is made safe for human use and the environment.	The costs can be reduced through less Council involvement in the process and hence benefits increase. However, the cost of remediation is not removed. The benefits are in less cost to the applicant, Council and to the community however, these reductions in cost have to be tempered with a high reliance on good practice methods and techniques being of a high standard to meet the objectives. Overall, there is a degree of risk with this option.	The proposed regulations will initially reduce efficiency of land development, however, they provide a standard for land development that means they are fit for another land use and are compliant with national environmental standards. This initial loss in efficiency is countered by more effective land development options in the future. Amendments to the Discharges to Land Plan is the most effective in achieving the objective, as through regulation there is a requirement that land developments will be safe and environmentally compliant in the future.

The Greater Wellington Regional Council's purpose is to enrich life in the Wellington Region by building resilient, connected and prosperous communities, protecting and enhancing our natural assets, and inspiring pride in what makes us unique

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