

Office of the Minister for the Environment

Chair

Cabinet Economic Growth and Infrastructure Committee

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

Proposal

1. This paper presents details of a National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (the NES) under the Resource Management Act 1991 (“the Act”).
2. I seek Cabinet agreement to this NES policy proposal and that the Ministry for the Environment commence the regulation drafting process.
3. The report and recommendations in this paper also comprise the report required under s44(2)(b) of the Act. Section 44(2)(c) of the Act requires this report to be publicly notified.

Executive summary

4. In November 2009 Cabinet agreed to the Ministry for the Environment publicly releasing the discussion document “Proposed National Environmental Standard for Assessing and Managing Contaminants in Soil” and commencing a public consultation process [POL Min (09) 42/15].
5. The policy objective of the NES is to ensure that land affected by contaminants in soil is appropriately identified and assessed at the time of being developed and if necessary remediated, or the contaminants contained, to make the land safe for human use.
6. Public consultation on the proposed NES attracted 106 submissions from industry, local and central government, community groups and individuals. The majority of submitters either supported or conditionally supported the proposal and the NES.
7. Following the Ministry’s revisions to the proposal in response to the submissions and a cost-benefit analysis, I consider the proposed NES is the best way to achieve the stated policy objective.
8. The proposed NES will require all territorial authorities to control the development¹ of land affected or potentially affected² by contaminants. The NES will enable the safe use of affected land by:

¹ For the purpose of this paper development means land-use change, subdivision, and soil disturbance. The intended definitions of these terms are provided in Appendix A.

² Potentially affected means those sites that have a history of a facility or activity that stored, used or disposed of hazardous substances.

- ensuring that all district planning controls are appropriate and nationally consistent
 - requiring that the soil contaminant values protective of human health for a range of land uses are used when decisions are made under this NES
 - requiring councils to gather and apply the information needed for efficient decision-making on land affected or potentially affected by contaminants.
9. The cost-benefit analysis³ compares the expected impacts of the NES with a scenario of what is assumed to happen without an NES. In this latter scenario, the contamination standards and planning controls contained within the proposed NES would be published by the Ministry as guidelines only.
 10. The cost-benefit analysis indicates the total estimated costs of the NES could be in the order of \$6 to \$7 million over the next 20 years. The benefits could be in the vicinity of \$4.5 to \$10 million, noting that the majority of the benefits (e.g. chronic human health effects) occur in the future and have been significantly discounted.
 11. These costs and benefits are those of ensuring a nationally consistent approach (via a NES) over a voluntary guideline approach. The benefits of ensuring national consistency are considered particularly important when it comes to setting human-health thresholds.

What is the problem?

12. The problem proposed to be addressed is as follows:

New Zealand has a legacy of soil contamination that is required to be identified, assessed and, if necessary, remediated or contained at the time of development or land-use change to ensure this land is safe for human use. However, the existing controls are either absent, inadequate or inconsistently or inappropriately applied⁴.

13. New Zealand's legacy of soil contamination is mainly associated with past activities and industries involving chemicals (hazardous substances) where spills, leaks and the disposal of wastes have led to the presence of contaminants in the soil. The historical activities that have led to soil contamination include the manufacture and use of pesticides, fertilisers, petroleum products, production of coal and gas, mining, timber treatment and livestock dipping.
14. A contaminant becomes a problem when it is at a concentration and in a place where it has an adverse effect on human health and the environment. The contamination becomes more significant in places where food is grown, or in close proximity to buildings, people, water-bodies and important habitats.
15. Since the early 1990s councils have identified approximately 20,000 sites that are affected or potentially affected by contaminants from industrial, domestic or agricultural activities. Many of the more seriously impacted sites have largely been identified and managed. However, many other sites are yet to be properly

³ Prepared to meet the requirements of section 32 of the RMA.

⁴ Ministry for the Environment 2010. *Proposed National Environmental Standard for Assessing and Managing Contaminants in Soil. Discussion Document.*

assessed and many additional sites are expected to be identified over the coming years⁵.

16. There is another aspect to the problem that relates to the role of local authorities in managing property information. At the time of purchase, the liability for land is normally transferred to the new owner; hence it is paramount that property information is accurately categorised and publicly available to interested parties. It follows that the land tenure system depends on the public having confidence that land information is properly administered, and that potential risks are identified if known.

How is land contamination managed?

17. Current policy for managing land contamination includes a mix of laws and regulations, guidelines and funding arrangements. While these measures are preventative they do not ensure that the historical legacy of contamination is adequately and consistently addressed.
18. Identifying land contamination and then ensuring that the effects are controlled is the responsibility respectively of regional councils and territorial authorities under the RMA⁶.
19. The role of the Ministry for the Environment is to provide leadership on land contamination issues across both central and local government. Since 1997 the Ministry has been involved with a number of initiatives relating to land contamination. Most notably:
 - 10 contaminated land management guidelines
 - a contaminated sites remediation fund that allocates \$2.778 million per year
 - amendments to the RMA specifying contaminated land functions for councils and a definition of contaminated land
 - voluntary targets for local authorities for identifying, assessing and managing land contamination.
20. This extensive suite of initiatives is the result of the Ministry working in close partnership with local government and industry. However, there are still important and practical gaps to address, including:
 - *absent, inadequate and inconsistent controls on the land use, subdivision, and development of affected and potentially affected land* – Of 73 district plan sets assessed for the Ministry, only 14 had rules that addressed their contaminated land function under the RMA⁷.
 - *inconsistent and inappropriate use of guideline values to assess the effects of affected and potentially affected land* – the use of guidelines among practitioners and councils is presently inconsistent and variable, and this is resulting in different soil contaminant values being applied.

⁵ For example, across New Zealand the Ministry estimates that thousands of former sheep dip sites exist. Their numbers, locations and how contaminated they are is largely unknown.

⁶ Under section 30 and 31 of the RMA

⁷ Under section 31(1)(b)(iia) of the RMA district councils have a function for: “the prevention or mitigation of any adverse effects of the development, subdivision, or use of contaminated land.”

21. These gaps have resulted in ad hoc approaches to identifying, assessing and cleaning up or containing the contaminants and consequently, risks the inappropriate development of land that may:
 - put people's health at risk
 - provoke community concern and outrage
 - initiate expensive post-development disputes and remediation or containment to correct.
22. The management problems described above are the problems the Ministry has identified as high priority, and needing to be addressed by the proposal. They do not present a full picture of all the barriers to effectively managing contaminants in soil⁸.

The details of the proposed NES for assessing and managing contaminants in soil to protect human health

23. The proposed NES is practicable and precisely targets the area of contaminated land policy that is presently weak. It is also designed to complement or give additional weight to the existing suite of central government initiatives.
24. The objective of the NES is:

*To ensure that land affected by contaminants in soil is appropriately identified and assessed at the time of being developed and if necessary remediated, or the contaminants contained, to make the land safe for human use.*⁹
25. The proposed focus on protecting human health recognises that the quality of soil affected by contaminants has already been compromised. Given this reality, ensuring that at least human health is protected is a pragmatic approach to enabling a safe use of such land.

A nationally consistent set of planning controls

26. The proposed NES will achieve the above objective via planning controls applied to land affected by contaminants. The proposed NES will enable safe and economic use to be made of land affected or potentially affected by contaminants by ensuring that:
 - all district planning controls are appropriate and nationally consistent
 - the soil contaminant values protective of human health are appropriate and applied consistently
 - councils are better able to gather and apply the information needed for efficient decision-making on affected or potentially affected land.
27. The proposed NES for assessing and managing contaminants in soil includes:

⁸ A full range of interrelated issues considered barriers by stakeholders is described in Ministry for the Environment publications: *Working Towards a Comprehensive Policy Framework for Managing Contaminated Land in New Zealand - Report on Submissions* and *- Position Paper*.

⁹ Ministry for the Environment 2010. *Proposed National Environmental Standard for Assessing and Managing Contaminants in Soil. Discussion Document*.

- a) Permitted activity status (no resource consent required) for the removal of underground petroleum storage systems, impacted soil, and associated subsurface soil sampling.
 - b) Permitted activity status (no resource consent required) for small scale (25 cubic metres) and temporary soil disturbance activities (1 month duration¹⁰) including subsurface investigations.
 - c) Controlled activity status (resource consent required¹¹) for the development of land where the risk to human health from soil contamination does not exceed the soil contaminant value for the intended land use.
 - d) A restricted discretionary activity status (resource consent required¹²) for the development of land where the risk to human health from soil contamination exceeds the soil contaminant value for the intended land use.
28. To avoid unnecessarily applying the NES requirements to all activities on all land, the proposal:
- only applies the requirements at the time of development
 - limits the type of land subject to the requirements to land that is potentially or actually affected by contaminants due to its historical use and the types of activities previously undertaken on it.
29. These requirements will also not apply to the productive parts of agricultural land, except for assessing the residential health risk (i.e. land in the immediate vicinity of a farm dwelling) at the time of development. This is because produce from agricultural land is already subject to the joint New Zealand Australian Food Standards.
30. Appendix A contains further detail on the outcomes sought under the proposed planning controls.

A nationally consistent set of soil contaminant values protective of human health

31. The proposed NES will be supported by a risk based set of values for 12 soil contaminants, and methods for applying them (see Tables 1 to 3 of Appendix B). The 12 soil contaminants are arsenic, boron, cadmium, chromium, copper, lead, mercury, benzo(a)pyrene, DDT, dieldrin, PCP, dioxin.
32. The development of the soil contaminant values has been assisted by an interdepartmental group of toxicologists¹³ and a practitioners group that includes local government and industry representatives. The work reviewed by these groups has also been subject to scientific peer review by contaminated land experts and Australian toxicologists.

¹⁰ These limits are indicative.

¹¹ Under a *controlled activity* the consent authority must grant the consent and can impose conditions on the consent, but only for those matters over which control is reserved in the proposed NES.

¹² Under a *discretionary activity* the consent authority can exercise discretion as to whether or not to grant consent, and to impose conditions, but only over which discretion is restricted in the proposed NES.

¹³ The toxicological advisory group is made up of toxicologists from the Ministry of Health, Environmental Risk Management Agency, and the New Zealand Food Safety Authority.

33. Soil contaminant values are provided for five different land uses (see Table 4 of Appendix B) defining the specific concentration at or under which the risks to human health are considered acceptable for each land use. Employing this risk based approach allows the acceptable concentration to be related to the risk of exposure. For example, the soil contaminant value for lead under a residential land use is 160 mg/kg while the industrial commercial value is 3,300 mg/kg.
34. Where there are no soil contaminant values provided for a particular contaminant, a method¹⁴ is provided to enable the most appropriate value to be selected from the national and international literature.

Resource Management Act Consultation requirements

35. To meet the requirements of the RMA¹⁵ the proposed NES was publicly notified on 6 February 2010 in the main national and regional newspapers. A discussion document was distributed to iwi authorities and made available to the public.
36. Appendix C provides more detail on how the Ministry has met the relevant notification and consultation requirements of the RMA.
37. 106 submissions were received on the proposal including 42 local government, and 33 industry submissions. The majority of submitters either supported (13 per cent) or conditionally supported (55 per cent) the proposal. Regardless of their position over other details of the proposal most submitters agreed or conditionally agreed (77 per cent) that a NES was the most appropriate instrument to achieve the objective.

Response to submissions

38. The main themes of submissions were to advise that the final regulation should:
 - contain a straightforward planning framework with provisions that are clearly stated and easy to implement
 - not undermine the importance of ecological assessment
 - not impose costs on local government that should be met by the developer
 - be supported by guidance for territorial authorities on how to implement the standard.
39. A group of departmental toxicologists and a group of practitioners that includes local government and industry representatives have assisted the Ministry to consider submissions and make revisions to the proposed planning controls and the supporting soil contaminant values.
40. The revisions make the proposed planning controls more efficient and easier for local government to implement. Post-consultation revisions include:
 - simplifying and streamlining the detail around proposed planning controls and identifying the need for clarity in defining certain terms

¹⁴ Ministry for the Environment. 2003. *Contaminated Land Management Guidelines No. 2: Hierarchy and Application in New Zealand of Environmental Guideline Values.*

¹⁵ Section 44(2) of the RMA requires public notification and an opportunity for the public and iwi authorities to comment on the proposed NES.

- amending a permitted activity¹⁶ (no consent required) to a controlled activity (consent required) to enable thorough review of investigation reports and make it easier for local government to recover the cost of reviewing these reports from developers
 - enabling territorial authorities to consider effects on the suitability of the land for its intended use (i.e. other than to protect human health) when considering whether to decline resource consent or grant resource consent subject to conditions.
41. Soil contaminant values have generally been reduced from the values proposed in the discussion document. The following key revisions were made in response to technical submissions and in response to recent and international toxicological decisions:
- a general reduction to all soil contaminant values resulting from changes to assumptions on child exposure (body weight and soil ingestion).
 - the inclusion of a rural/lifestyle scenario within the NES that assumes that the home garden supplies 25 per cent of the produce consumed by the household.
 - reductions in soil contaminant values for cadmium, benzo(a)pyrene, and lead based on the most recent scientific and toxicological advice.
42. To support city and district councils to implement the NES the Ministry plans a series of workshops and the release of implementation guidance.

What are the costs and benefits of the proposed NES?

43. The cost-benefit analysis¹⁷ compares the expected impacts of the NES with a scenario of what is assumed to happen without an NES. In this latter scenario, the contamination standards and planning controls contained within the proposed NES would be published by the MfE as guidelines only.
44. The cost benefit analysis indicates the nationwide estimated costs of the NES could be in the order of \$6 to \$7 million over the next 20 years. The total estimated benefits could be in the vicinity of \$4.5 to \$10 million.
45. These estimates are based on key assumptions that:
- the estimated amount of contaminated land that would be affected by the NES would be around 100 hectares¹⁸
 - the NES could prevent an estimated 1,685 individuals from being exposed to harmful contamination.
46. The regulatory impact statement contains more detail on the assessment of options and the cost-benefit analysis.

¹⁶ Development, where the risk to human health does not exceed the soil guideline value for the intended land use.

¹⁷ Prepared to meet the requirements of section 32 of the RMA.

¹⁸ Based on assumptions on the amount of land affected by contaminants and developed for residential use in districts that do not have relevant planning controls and are unlikely to have them in the future. Assumptions were established using medium population growth projections from Statistics New Zealand and Ministry and council estimates of the amount of land likely to be affected and require assessment.

Consultation

47. The following departments and agencies have been consulted on this paper and their views reflected: Ministry of Agriculture and Forestry, Ministry of Health, Environmental Risk Management Authority, Treasury, Te Puni Kokiri, Department of Labour, Department of Building and Housing, New Zealand Defence Force, Ministry of Justice.
48. The following departments have an interest in the paper and have been informed: Department of Conservation, New Zealand Transport Agency, Department of Internal Affairs, Housing New Zealand, New Zealand Food Safety Authority, Land Information New Zealand, Ministry of Education, Ministry of Economic Development, Ministry of Transport, Ministry of Research, Science and Technology, Department of Prime Minister and Cabinet, Accident Compensation Corporation.
49. The New Zealand Defence Force has identified that there are inefficiencies in the provisions of the RMA that have the effect of making a requiring authority undertake the usual outline plan process for a designation as well as obtaining resource consent as required by the NES.
50. This is an issue that arises for all designations that provide for outline plans, where the NES prevails. Officials from the New Zealand Defence Force and the Ministry from the Environment agree that it is not desirable to address this on an ad hoc basis within this particular NES. For reasons of consistency, they therefore agree that the relationship between outline plans and NES's should be further examined in the upcoming Phase II amendments to the RMA.

Financial implications

51. If Cabinet agrees that the proposed regulations should proceed, there will be an ongoing but minor cost to the Ministry for the Environment for:
 - supporting local government to implement the NES
 - monitoring how local government implements the NES
 - monitoring developments in contaminant toxicology
 - updating the standard as new information becomes available.
52. The costs of these activities will be able to be absorbed within baseline.

Human rights, gender implications and disability perspective

53. There are no implications arising from this paper.

Legislative implications

54. The proposed standard will be developed as a regulation made by the Governor-General, by Order in Council.

Regulatory impact analysis

55. A regulatory impact statement (RIS) is attached to this paper. The Ministry for the Environment confirms that the principles of the Code of Good Regulatory

Practice and the regulatory impact analysis requirements, including the consultation requirements, have been complied with. A draft version of the RIS was circulated with the Cabinet paper for departmental consultation.

56. The RIS includes an analysis of the costs and benefits, options for achieving the objective, and the basis for deciding that a NES is the most appropriate option.

Publicity

57. The regulations will not come into force until at least 28 days after they have been notified in the New Zealand Gazette. I will release press statements prior to the regulations being completed, and the Ministry for the Environment will develop an implementation package for district councils and industry.
58. If the standards are approved, this paper, including Cabinet decisions, and any Annexes, (including the Regulatory Impact Statement), will be publicly released and posted on the Ministry for the Environment website to meet the requirements of the RMA¹⁹.

Consistency with Government Statement on Regulation

59. I have considered the analysis and advice of my officials, as summarised in the attached RIS and I am satisfied that the regulatory proposals recommended in this paper: are required in the public interest; will deliver the highest net benefits of the practical options available; and, are consistent with the commitments in the Government Statement on Regulation.

Recommendations

60. The Minister for the Environment recommends that the Committee:
 1. **note** that New Zealand has a legacy of soil contamination that is required to be identified, assessed and, if necessary, remediated or contained at the time of development or land-use change to ensure this land is safe for human use. However, the existing controls are either absent, inadequate or inconsistently or inappropriately applied.
 2. **note** that to remedy these problems, a nationally consistent set of planning controls and soil contaminant values protective of human health have been developed within the form of a proposed national environmental standard for assessing and managing contaminants in soil.
 3. **note** that the proposed national environmental standard has been publicly notified and consulted on in accordance with the requirements of the Resource Management Act 1991.
 4. **agree** the policy objective of the national environmental standard to ensure that land affected by contaminants in soil is appropriately identified and assessed at the time of being developed and if necessary remediated, or the contaminants contained, to make the land safe for human use.

¹⁹ Section 44 (2) (b) "requires a report and recommendation to be made to the Minister . . . and to publicly notify the report and recommendation."

5. **agree** that regulations containing a national environmental standard for assessing and managing contaminants in soil to protect human health be developed based on the subject matter outlined within this Cabinet paper.
6. **invite** the Minister for the Environment to instruct Parliamentary Counsel to draft a national environmental standard under the Resource Management Act 1991 for assessing and managing contaminants in soil to protect human health.
7. **agree** that the Minister for the Environment approve the final details of the planning control terms and conditions and any other technical changes required to give effect to the policy in this paper. Any changes will be reported to the Cabinet Legislation Committee when seeking approval for the regulations to be signed by the Governor General by "Order in Council".
8. **note** that if Cabinet agrees to the recommendation of this paper the Minister for the Environment will publicly release this paper, including Cabinet decisions and any Annexes including the Regulatory Impact Statement, to meet statutory requirements.
9. **agree** to the publication of the Resource Management Act 1991 section 32 cost-benefit report on the proposed national environmental standard for assessing and managing contaminants in soil, subject to minor editorial changes as agreed by the Minister for the Environment.
10. **note** that the Minister for the Environment will examine the relationship between national environmental standards and designations where an outline plan is required in the Phase II amendments to the Resource Management Act 1991.

Appendix A – Detailed outcomes sought in the proposed National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

1. What activities and land will the National Environmental Standard (NES) apply to?

It is intended that NES controls will apply to:

Land use change, subdivision, and disturbance of any **land** where, according to the **best information** available to the local authority, there has been a facility on the land or a hazardous activity carried out on the land that may have involved the intentional or accidental discharges of hazardous substances that could now be a risk to human health.

These facilities or activities will include, but will not be limited to those identified in the Ministry for the Environment's *Hazardous Activities and Industries List*²⁰ and as identified by councils (regional and district) on a selected land use register or property file.

Notes:

- Our preference is to retain the broad entry to the NES over restricting it to sites identified on the register. Many of the councils that have rules have a similar broad entry related to the *Hazardous Activities and Industries List* and are reasonably comfortable with it.
- However, we also need to recognise that the broad approach to identifying sites may not be certain enough. In this case, we will need to default to regional council and district council registers and the **best information** available to the local authority

2. Core concepts to be addressed within the NES:

Land use change will capture the effects of the use that result in a change in character, intensity and scale that increases, or is likely to increase, the risk to human health from exposure to contaminants in soil.

Disturbance is intended to refer to disturbance of soil, including but not limited to levelling, trenching, scraping and excavating.

Best information is intended to refer to the best information that, in the circumstances, is available to council without undue cost, effort, or time.

Notes:

- For clarity does not include activities on **production land** as per its meaning in section 2 of the RMA 1991.
- For clarity **best information** includes information available on a regional council selected land use register.
- It is important that it is made clear in the drafting of the regulation that the NES applies to the land affected by the contamination rather than the whole property parcel. However, if it is not known where the contamination is on the land, the whole property should be considered potentially affected (for example, it is known that there was, or is reasonably likely to be, a livestock dip on the property but its location is unknown).
- The terms **land** and **subdivision** and **hazardous substances** are likely to require definitions that will align with the definitions already in the Act.

²⁰ The *Hazardous Activities and Industries List* is the list described in Appendix 4 of the Ministry's discussion document titled *Proposed National Environmental Standard for Assessing and Managing Contaminants in Soil* as amended after considering submissions.

Table 1 Summary of controls:

Activity		P	C	RD
1	The removal of underground petroleum storage systems, impacted soil and the associated subsurface soil sampling	P		
2	Small scale and temporary soil disturbance activities including subsurface investigations	P		
3	Land use change, subdivision, disturbance of land where the risk to human health from soil contamination does not exceed the soil contaminant value for the intended land use		C	
4	Land use change, subdivision, disturbance of land where the risk to human health from soil contamination exceeds the soil contaminant value for the intended land use			RD

P = Permitted

C = Controlled

RD = Restricted discretionary

Table 2 Proposed NES controls

#	Control	Activity	Outcomes sought by terms and conditions (I = indicative limit)	Default
1.	Permitted	The removal of underground petroleum storage systems and associated subsurface soil sampling and impacted soil removal.	<p>Limits on the:</p> <p>a) volume of soil disturbance (I: 30m³ of soil in aggregate per tank)</p> <p>b) duration of the disturbance (I: 1 month)</p> <p>Requirements to:</p> <p>c) notify the council prior to the commencement of the activity</p> <p>d) dispose of removed soil at facility authorised or consented to receive such waste</p> <p>e) prepare and report the findings of site investigations to the council within a specified time frame</p> <p>f) undertake the tank removal, investigation, remediation, validation and management processes in accordance with the <i>environmental management plan for UPST removal / replacement</i>¹ contained in substance or incorporated by reference.</p>	Controlled (3) or Restricted Discretionary (4)
2.	Permitted	Small scale and temporary soil disturbance and subsurface soil sampling	<p>Limits on the:</p> <p>a) volume of soil to be disturbed (I: 25m³ per 500m² of land) - limit does not apply to subsurface sampling</p> <p>b) duration of the disturbance activity (I: 1 month)</p> <p>Requirements to:</p> <p>c) minimise the adverse effects of mobilised contaminants</p> <p>d) reinstate to an erosion resistant state within a specified time limit (I: 1 month)</p> <p>Restrictions on the:</p> <p>e) removal of soil off the site, except for samples taken for the purpose of laboratory analysis.</p> <p>f) compromising of the integrity of any structure designed to contain contaminated soils or other contaminated materials.</p>	Controlled (3) or Restricted Discretionary (4)
3.	Controlled	Land use change, subdivision, disturbance of land where the risk to human health from soil contamination does not exceed the soil contaminant value (SCV) for the intended land use as per Appendix B	<p>Requirements for:</p> <p>a) site investigation report confirming that the risk to human health from soil contamination does not exceed the SCV for the intended land use in accordance with SCV standards derived in substance (or incorporated by reference).</p> <p>Standards relating to:</p> <p>b) the undertaking of site investigation and person who undertakes it derived in substance (or incorporated by reference) from <i>Contaminated Land Management Guideline No. 1</i>² and <i>Contaminated Land Management Guideline No. 5</i>³.</p> <p>The ability to control the following types of matters under the terms and conditions of any resource consent:</p> <ol style="list-style-type: none"> Where there is a risk of significant adverse effects on other receptors from contaminants present on the site (e.g. built structures, ecological and amenity values, soil quality), the adequacy of reporting and nature and scope of monitoring and management requirements including any site management plan. Where soil and other materials are to be removed from the land, the appropriate tracking, and safe transport to land that is authorised and/or consented for the disposal of any the soils and materials. Duration of the consent. Timing and nature of review of consent conditions. <p>Notification:</p> <p>Applications for controlled activities under this rule to be considered without publically notifying them.</p>	Restricted Discretionary (4)

#	Control	Activity	Outcomes sought by terms and conditions (I = indicative limit)	Default
4.	Restricted Discretionary	Land use change, subdivision, disturbance of land where the risk to human health from soil contamination exceeds the SCV for the intended land use for the intended land use as per Appendix B	<p>The ability to exercise discretion over the following matters in terms of whether a resource consent will be granted and the terms and conditions that should apply:</p> <p><i>Assessment of the land</i></p> <ol style="list-style-type: none"> 1. The extent to which the level, nature and extent of soil contamination has been characterised and is suitable for the intended land use (as defined in Appendix B), including but not limited to: <ol style="list-style-type: none"> a. in circumstances where there is no SCV for a contaminant, the extent to which a soil contaminant value protective of human health has been selected and justified against standards derived in substance (or incorporated by reference) from <i>Contaminated Land Management Guideline no. 2</i>⁴ b. in circumstances where a site specific approach has been adopted in selecting an SCV, the extent to which a soil contaminant value protective of human health have been derived in substance (or incorporated by reference) from the <i>MfE site specific methodology</i>⁵. c. the effects of the contamination on built structures, ecological and amenity values, soil quality. <p><i>Remediation and management and monitoring plans</i></p> <ol style="list-style-type: none"> 2. The approach to the remediation and/or ongoing management of the land and the mitigation measures (including the frequency and location of monitoring of specified contaminants monitoring) 3. The methods to address the risk posed by the contaminants to human health 4. The extent to which the detailed site investigation, site investigation report, and monitoring and risk management plan were approved by an appropriately qualified and experienced practitioner in accordance with <i>Contaminated Land Management Guideline no. 1</i>², 5. The extent site investigation and reporting was undertaken by in general accordance with <i>Contaminated Land Management Guideline No.5</i>³. 6. The timing of the remediation. <p><i>Site validation</i></p> <ol style="list-style-type: none"> 7. The standard of remediation on completion and the adequacy of the site validation report <p><i>Soil removal, transport and disposal</i></p> <ol style="list-style-type: none"> 8. Where soil and other materials are to be removed from the land, the appropriate tracking, and safe transport to land that is authorised and/or consented for the disposal of any contaminated soils <p><i>Duration, review and financial bonds</i></p> <ol style="list-style-type: none"> 9. Duration of the consent 10. The timing and nature of reviews of consent conditions 11. The requirement for and conditions of a financial bond <p><i>Cross agency requirements</i></p> <ol style="list-style-type: none"> 12. The nature of any relevant Regional Council requirements or consent conditions <p>Note: to promote communication between councils and the considering of alignment with any regional consent requirements or existing consent conditions. Not intended for the Territorial Authority to determine the regional consent requirements.</p>	Controlled (3) for a)

Documents referenced in Table 2

1. Ministry for the Environment. Unpublished. *Environmental Management Plan for UPST removal / replacement*.

2. Ministry for the Environment. 2003. *Contaminated Land Management Guidelines No. 1: Reporting on Contaminated Sites in New Zealand*. Ministry for the Environment: Wellington.
3. Ministry for the Environment. 2004. *Contaminated Land Management Guidelines No. 5: Site Investigation and Analysis of Soils*. Ministry for the Environment: Wellington.
4. Ministry for the Environment. 2003. *Contaminated Land Management Guidelines No. 2: Hierarchy and Application in New Zealand of Environmental Guideline Values*. Ministry for the Environment: Wellington.
5. Appendix 2 of the discussion document *Proposed National Environmental Standard for Assessing and Managing Contaminants in Soil* as amended after considering submissions.

Table 2 notes:

- Wording in this table reflects the policy intent rather than settled terminology. Wording and final details are subject to change as a result of the drafting process. Note also that change may occur as a result of the exercise the authority delegated to the Minister for the Environment to give effect to the policy under recommendation 7.

Permitted Activity 2

- Limit a) does not apply to subsurface sampling – the intent is to exclude the obtaining of samples for the purpose of characterising the nature and extent of contamination.
- For clarity excludes disturbance associated with ongoing activities associated with an existing use (section 10 RMA).
- To apply limit a) and restriction e) *site* may require definition. The intent is to allow movement of soil across legal property boundaries where these boundaries are part of a collective site (i.e. multiple adjoining lots owned by the same person).

Appendix B Soil contaminant values and land use scenarios

How is acceptable and unacceptable for use determined?

Soil contaminant values (SCVs_(health)) have been developed for 12 priority contaminants to determine the acceptability of contamination, and therefore whether or not resource consent is required.

SCVs_(health) are soil contaminant concentration levels at or below which the exposure is judged to be acceptable because any adverse effects on human health for most people are likely to be acceptable for the intended land use. The SCVs_(health) for selected contaminants and generic land-use scenarios are provided in Table 2, 3 & 4.

To determine whether land is acceptable for use, measured concentrations of contaminants are required to be compared against SCVs_(health) applicable to the categories described in Table 1.

Table 1: How to determine which SCVs_(health) are applicable

Category	Applicable SCVs _(health)
Land use or intended land use fits within the generic land-use scenarios described in Table 4	SCVs _(health) contained in Tables 2 and 3
Land use or intended land use results in greater human exposure than for any of the generic land-use scenarios.	Site-specific SCVs _(health) must be derived using the methodology described in the <i>Site-specific Assessment</i> ²¹ , except for land-use scenarios where produce consumption is greater than for the home grown produce consumption exposure scenarios described in Table 4.
Land use or intended land use results in lesser human exposure than for any of the generic land-use scenarios.	Site-specific SCVs _(health) may be derived using the methodology described in the <i>Site-specific Assessment</i> .
There is no SCVs_(health) for the contaminant of concern.	Soil contaminant values protective of human health and selected and justified in accordance with <i>Contaminated Land Management Guidelines No. 2 Hierarchy and Application in New Zealand of Environmental Guideline Values</i> .

If the soil contaminants exceed SCVs_(health) (ie, is unacceptable for use), the activity is a restricted discretionary activity (resource consent is required). If the soil contaminants meet or are under SCVs_(health) (ie, acceptable for use), the activity is permitted and no resource consent is required.

²¹Appendix 2 of the discussion document “Proposed National Environmental Standard for Assessing and Managing Contaminants in Soil” as amended after considering submissions.

Table 2: Summary of soil contaminant values for inorganic substances (mg/kg)

	Arsenic	Boron ¹	Cadmium (pH 5) ²	Chromium ¹		Copper ¹	Inorganic lead	Inorganic mercury compounds ³
				III	VI			
Rural residential / lifestyle block 25% produce	17 ⁴	NL	0.8	NL	290	NL	160	200
Residential 10% produce	20	NL	3	NL	460	NL	210	310
High-density residential	45	NL	230	NL	1,500	NL	500	1,000
Recreational	80	NL	400	NL	2,700	NL	880	1,800
Commercial / industrial outdoor worker / maintenance	70	NL	1,300	NL	6,300	NL	3,300	4,200

1 SCVs for boron, chromium III and copper are much greater than the soil concentration at which plant health will be affected. Plant and other environmental effects may need to be considered separately.

2 Default value is for pH 5. See Appendix 1 of the *Methodology Report*²² for SCVs at other soil pH values.

3 The inorganic mercury SCV does not apply to elemental (pure) mercury.

4 Derived value replaced with 99th percentile of national dataset of background concentrations as described in the *Methodology Report*.

Note: NL = No Limit. Derived value exceeds 10,000 mg/kg.

Table 3: Summary of soil contaminant values for organic compounds (mg/kg unless shown otherwise)

Scenario	BaP ¹ (mg/kg)	DDT (mg/kg)	Dieldrin ² (mg/kg)	PCP ³ (mg/kg)	Dioxin (µg/kg TEQ) ⁴	
					TCDD	Dioxin-like PCBs ⁵
Rural residential / lifestyle block 25% produce	6	45	1.1	55	0.12	0.09
Residential 10% produce	10	70	2.6	55	0.15	0.12
High-density residential	24	240	45	110	0.35	0.33
Recreational	40	400	70	150	0.60	0.52
Commercial / industrial outdoor worker / maintenance	35	1,000	160	360	1.4	1.2

1 SCV to be compared with the equivalent BaP concentration calculated as the sum of each of the detected concentrations of the nine PAHs listed in table 40 of the *Methodology Report* multiplied by the respective PEF.

2 SCV for dieldrin also applies to aldrin separately, or to the sum of aldrin and dieldrin where both are present.

3 Consideration should be given to investigating dioxins for PCP concentrations in excess of 0.3 mg/kg, see last paragraph of section 6.

4 TCDD TEQ calculated as the sum of each of the 17 PCDDs and PDDFs, or 12 PCBs listed in table 46 of the *Methodology Report*, multiplied by the respective 2005 WHO TEF (table 46).

5 The SCV applies to only the 12 dioxin-like PCBs. The 'ordinary' toxicity of the simple sum of the concentrations of these and all other detected PCBs must be considered separately.

Notes:

- It is intended to broadly describe the sampling protocols, analytical methods to be used to collect and measure the contaminants specified in Tables 2 and 3. i.e. in line with *Contaminated Land Management Guidelines No. 5: Site Investigation and Analysis of Soils*.
- It is intended to broadly describe the statistical methods for determining compliance with the above SCV i.e. in line with *Contaminated Land Management Guidelines No. 5: Site Investigation and Analysis of Soils*.

²² Ministry for the Environment, Unpublished, *Methodology for Deriving Soil Contaminant Values Protective of Human Health*, as amended after submissions.

Table 4 Land use scenarios

Scenario	Description
Rural / lifestyle block	Rural residential land use, including home-grown produce consumption (25 per cent). Applicable to the residential vicinity of farm houses for protection of farming families, but not the productive parts of agricultural land. (Not for regulatory use.)
Residential	Standard residential lot, for single dwelling sites with gardens, including home-grown produce consumption (10 per cent).
High-density residential	Urban residential with limited soil contact, including small ornamental gardens but no vegetable garden (no home-grown produce consumption); applicable to urban townhouses, flats and ground-floor apartments with small ornamental gardens, but not high-rise apartments.
Parks / recreational	Public and private green areas and reserves that are used for active sports and recreation. This scenario is intended to cover playing fields and suburban reserves where children play frequently. It can also reasonably cover secondary school playing fields but not primary school playing fields. Check exposure for park maintenance staff using commercial / industrial unpaved.
Commercial / industrial outdoor worker (unpaved)	Commercial / industrial site with varying degrees of exposed soil. Exposure of outdoor workers to near-surface soil during routine maintenance and gardening activities with occasional excavation as part of maintaining sub-surface utilities (ie, a caretaker or site maintenance personnel). Also conservatively applicable to outdoor workers on a largely unpaved site.

Appendix C Notification and Consultation

This appendix provides more detail on how the Ministry has met the notification and consultation requirements in the making of this proposed national environmental standard (NES) under the Resource Management Act 1991 (RMA).

Section 44 (2) of the RMA requires that the Minister must follow certain steps before recommending the making of a NES. These steps are:

(a) To notify the public and iwi authorities of–

- (i) the proposed subject matter of the standard; and*
- (ii) the Ministers reasons for considering that the standard is consistent with the purpose of the Act; and*

(b) Establish a process that–

- (i) the Minister considers gives the public and iwi authorities adequate time and opportunity to comment on the proposed subject matter of the standard . . .*

Public notification

The proposed NES was publicly notified on 6 February 2010 in the main national and regional newspapers. The discussion document “Proposed National Environmental Standard for Assessing and Managing Contaminants in Soil” was made available on the Ministry’s website and as hard copies.

Copies of or links to the discussion document were sent to:

- chief executives and planning managers of every regional council and territorial authority
- chief executives of every iwi authority
- Local Government New Zealand
- public and community interest groups
- professional organisations and industry groups including the Waste Minimisation Institute of New Zealand, Institute of Professional Engineers NZ, Resource Management Law Association.

Opportunity for the public and iwi authorities to comment

Consultation ran for ten weeks until 19 April 2010. In March 2010 the Ministry held 14 workshops throughout the country. The workshops were held to inform people about the proposal and to assist them make a submission. The workshops were well attended and attracted over 450 people from local government, health agencies, industry and the community.

Overview of submissions

106 submissions were received on the proposal from local government (42), industry (33), central government, community groups and individuals.

The majority of submitters either supported (13 per cent) or conditionally supported (55 per cent) the proposal. Eleven per cent of submitters opposed the proposal with the remainder of either having a mixed (16 per cent) or not stated position (5 per cent). Regardless of their position over other details of the proposal most submitters

agreed or conditionally agreed (77 per cent) that a NES was the most appropriate instrument to achieve the objective.

An overview of the sectors represented and the position of submitters is shown in Figures 1 and 2.

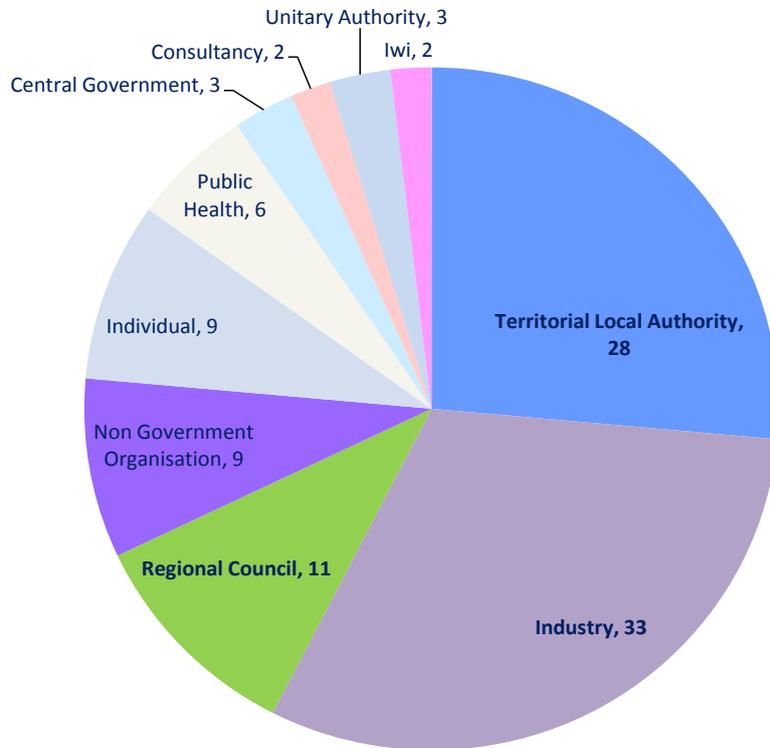


Figure 1: Proportions of submissions, by sector

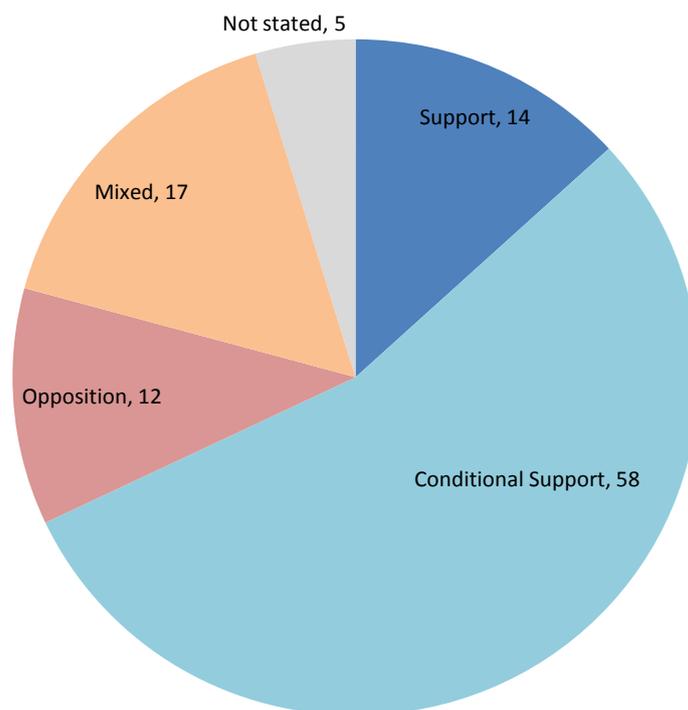


Figure 2: Breakdown of submitters positions