

Before Independent Commissioners

In Taupō

Under the Resource Management Act 1991 (the Act)

In the matter of Plan Change 37 – Nukuhau

Statement of evidence of Adam Michael Gray for the Taupō District Council (Contaminated Land)

Dated 30 September 2021

1 Summary of evidence

1.1 In my opinion,

- a contaminated land investigations to date have established, that it is more likely than not, that potentially contaminating activities have been undertaken on portions of the land subject to Private Plan Change 37 (**PPC37**).
- b the investigations into contaminated land to date have commenced the assessment of potential adverse effects associated with the potentially contaminating activities undertaken. I consider there remains some data gaps and uncertainties that would require resolution prior to future development, subdivision and earthwork activities on the relevant 'piece of land' associated with the potentially contaminating activities.
- c the management of potential adverse effects associated with the identified potentially contaminated land, and resolution of potential data gaps I consider present in the investigations completed to date, can be addressed through further investigation and / or documentation and implementation of management or remedial approaches, prior to future development, subdivision and earthwork activities on these portions of the land associated with **PPC37**.

1.2 I consider that further investigation works are most appropriately completed at the time of development, subdivision or earthworks. My rationale is that land contamination issues can occur at any time and therefore results from prior investigations can be invalidated or require updating prior to the development, subdivision or earthworks.

1.3 In consideration of the above, I consider it appropriate to conduct additional investigations, as required, at the time of future development, subdivision or earthworks. These future investigations would need to be completed in accordance with the requirements of the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health Regulations 2011 (the **NES Soil**) and if contamination is identified, consent obtained (as a controlled or restricted-discretionary activity) under the **NES Soil**. If no investigation is undertaken, consent would be required under the **NES soil** for a discretionary activity.

2 Introduction

2.1 My full name is Adam Michael Gray.

2.2 I am a Technical Director at GHD. I have 16 years' experience in the contaminated land sector, which includes site investigation and monitoring, risk assessment, and soil and groundwater remediation. This experience has been gained in Australia, United Kingdom and New Zealand working for environmental consultants and environmental regulators.

2.3 I have a bachelor's degree in Applied Science from RMIT University, Australia and a Post Graduate Diploma Planning from Massey University, New Zealand.

2.4 My role in relation to Private Plan Change 37 (**PPC37**) to rezone approximately 78 hectares of land and enable creation of 780 new residential lots and a neighbourhood centre is as an advisor to Taupō District Council on contaminated land matters.

3 Code of conduct

3.1 While this is not a hearing before the Environment Court, I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court of New Zealand Practice Note 2014 and that I have complied with it when preparing my evidence. Other than when I state I am relying on the advice of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

4 Scope of evidence

4.1 I have prepared evidence in relationship to my review of the following documents:

- a The **Preliminary Site Investigation** submitted as part of the Plan Change proposal ("Nukuhau Taupō Plan Change, Preliminary Site Investigation, WSP Opus, Reference 2-37400.01/007CL", dated March 2019), and
- b The **Detailed Site Investigation** submitted as part of the Plan Change proposal ("Nukuhau Taupō Plan Change, Detailed Site Investigation, WSP Opus, Reference 2-37400.01/007CL", dated September 2019).

4.2 Based on my review of the **Preliminary Site Investigation** and the **Detailed Site Investigation**, I have an understanding of the area that **PPC37** covers, but I have not had the opportunity to complete a site inspection. I do not consider it necessary for me to visit the site associated with **PPC37** to provide the information presented within this evidence.

5 Proposal

- 5.1 In reading the investigations undertaken to date, I understand that the **PPC37** seeks to enable the future development of currently rural environmental land. The development will include approximately 800 residential dwellings.
- 5.2 The **Preliminary Site Investigation** (and the subsequent **Detailed Site Investigation**) have taken an approach of breaking the land subject to **PPC37** into six areas which are described below and depicted in **Appendix A**. My evidence also uses these descriptions.
- a Site 1 – 24 Acacia Bay Road and 27 Watene Lane.
 - b Site 2 – 48 Acacia Bay Road.
 - c Site 3 – 6 Poihipi Road.
 - d Site 4 – Poihipi Road (the road reserve).
 - e Site 5 – 29 – 79 Watene Lane (a portion of this site, as described in the **Preliminary Site Investigation** is no longer included within the extent of **PPC37**, the subsequent **Detailed Site Investigation** includes clarity on the revised extent of **PPC37**).
 - f Site 6 – 200 Lakewood Drive.

6 Review methodology

- 6.1 I have utilised the following documents to inform my review:
- a The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health Regulations 2011 (the **NES Soil**), attached as **Appendix B**.
 - b The Ministry for the Environment document 'Contaminated land management guidelines No 1: Reporting on contaminated sites in New Zealand (Revised 2011)', published in April 2001 and revised in October 2011 (**CLMG 1A**). At the time the **Preliminary Site Investigation** was written **CLMG 1A** was incorporated by reference into the **NES Soil**.
 - c The Ministry for the Environment document 'Contaminated land management guidelines No 1: Reporting on contaminated sites in New Zealand (Revised 2021)', published in June 2021 (**CLMG 1B**). **CLMG 1B**, replaced **CLMG 1A** and, at the time of writing this evidence, **CLMG 1B** was incorporated by reference into the **NES Soil**.
 - d The Ministry for the Environment document 'Contaminated land management guidelines No 5: Site investigation and analysis of soils (Revised 2011)', published in April 2001 and revised in

October 2011 (**CLMG 5A**). At the time the **Detailed Site Investigation** was written **CLMG 5A** was incorporated by reference into the **NES Soil**.

- e The Ministry for the Environment document 'Contaminated land management guidelines No 5: Site investigation and analysis of soils (Revised 2021)', published in June 2021 (**CLMG 5B**). **CLMG 5B**. At the time of writing this evidence, **CLMG 5B** was incorporated by reference into the **NES Soil**.
- f The Ministry for the Environment document 'Users' Guide: National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health' published April 2012 (the **Users' Guide**).
- g The Ministry for the Environment document 'Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand (Revised 2011)' published October 2011 (**the Petroleum Guide**).

7 Statutory framework

- 7.1 Regulation 5(1) of the **NES Soil** defines the land and the activities controlled by the **NES Soil**. It states that the regulations "apply when a person wants to do an activity described in any of subclauses (2) to (6) on a piece of land described in subclause (7) or (8)".
- 7.2 Regulation 6 of the **NES Soil** prescribes two methods for establishing whether or not a piece of land is as described in regulation 5(7). One of these methods, as described in Regulation 6(3) of the **NES Soil** is by relying on a preliminary site investigation:
 - a stating that an activity or industry described in the current version of the Ministry for the Environment Hazardous Activities and Industries List (**HAIL**) is, or is not, being undertaken on the piece of land; or
 - b stating that an activity or industry described in the **HAIL** has, or has not, been undertaken on the piece of land; or
 - c stating the likelihood of an activity or industry described in the **HAIL** being undertaken, or having been undertaken, on the piece of land.
- 7.3 The **Users' guide** notes the following in relation to why the **NES Soil** refers to a 'piece of land' is "*If the hazardous activity occurred on only part of the property parcel, then that is the piece of land to which the NES applies*". The **Users' guide** clarifies that "*If the proposed activity is on, or intersects with, a piece of land that currently has, or has had, a HAIL activity on it, then the NES applies. The area required to be investigated is that area covered by the proposed activity (not the entire area that the HAIL activity may have occurred on)*".

- 7.4 In my opinion the **Preliminary Site Investigation** and the **Detailed Site Investigation** includes information which identifies that activities regulated under the **NES Soil** are potential future activities which may be undertaken if **PPC37** was to proceed e.g. subdivision and soil disturbance.
- 7.5 In my opinion, the **Preliminary Site Investigation** and the **Detailed Site Investigation** have established that it is more likely than not that potentially contaminating activities or industries listed in the **HAIL** have been undertaken on portions of the land associated with **PPC37**. Therefore, in my opinion, the **NES Soil** will be applicable on those 'piece of land', if activities regulated under the **NES Soil** are undertaken.
- 7.6 Pursuant to regulation 5(8), the **NES Soil** also applies if a 'piece of land' is identified to be on 'production land'. Production land is defined in Section 2 of the Resource Management Act 1991 as
- a "Means any land and auxiliary buildings used for the production (but not processing) of primary products (including agricultural, pastoral, horticultural, and forestry products):
 - b does not include land or auxiliary buildings used or associated with prospecting, exploration, or mining for minerals."
- 7.7 In my opinion the **Preliminary Site Investigation** and the **Detailed Site Investigation** include information that identifies that the land associated with **PPC37** is being used for the production of primary products. Therefore, in my opinion, regulation 5(8) of the **NES Soil** is applicable where a 'piece of land' is identified in 'production land' areas.

8 Review of the Preliminary Site Investigation

- 8.1 To enable the proposed residential development, in 2019 the **Preliminary Site Investigation** was undertaken to evaluate the presence of potentially contaminating activities that may have occurred on the land subject to **PPC37**. The **Preliminary Site Investigation** utilised information on the historical and then current use of the land associated with **PPC37** and included a site visit.

Assumed location of potentially contaminating activities and land uses

- 8.2 The **Preliminary Site Investigation** identified a range of potentially contaminating activities or land uses, across the full extent **PPC37**. This included several activities associated with the Site 5 (29 – 79 Watene Lane, properties), which are no longer included within the extent of **PPC37**.
- 8.3 The **Preliminary Site Investigation** has identified (amongst other potentially contaminating activities or land uses):
- a a potential sawmill on Site 1 (24 Acacia Bay Road and 27 Watene Lane), as per pages 4 – 6 and page 17 of the **Preliminary Site Investigation**. This potential sawmill has also been assumed to be a possible Coal Yard, refer page 5 of the **Preliminary Site Investigation**.

b a potential Coal Yard from Council records, on Site 5 (29 – 79 Watene Lane, properties), as per page 17 of the **Preliminary Site Investigation**.

8.4 In reading the **Preliminary Site Investigation**, it is not clear to me the rationale for combining the Site 5 Coal Yard with the Site 1 sawmill, and I consider there is a potential that the locations may be separate. As a consequence, an additional area of the land associated with **PPC37** (i.e. a portion of Site 5) may require additional assessment.

8.5 As a result, I recommend that:

a prior to future development, subdivision or soil disturbance in this area, investigations should consider and design for, the potential data gap associated with the location of the potential coal yard documented to be on Site 5 (29 – 79 Watene Lane, properties).

Additional potentially contaminating activities and land uses

8.6 In my opinion, the **Preliminary Site Investigation** includes information that identifies that portions of the land associated with **PPC37** has been used for machinery storage and use, pastoral purposes and farming. In my reading, potentially contaminating activities associated with these land uses (including but not limited to livestock dip or spray race operations – HAIL Category A8), have not been addressed, via exclusion or identification as a potential data gap.

8.7 As a result, I recommend that:

a prior to future development, subdivision or soil disturbance within the plan change area, future investigations should include a further review of potentially contaminating activities associated with production land uses that have occurred.

9 Review of the Detailed Site Investigation

9.1 Based on the findings of the **Preliminary Site Investigation**, a **Detailed Site Investigation** was subsequently completed to evaluate potential risks to human health from the identified potentially contaminating activities. The **Detailed Site Investigation** sought to evaluate two of the five potentially contaminating activities listed in the **Preliminary Site Investigation**, including:

a Fill and land disturbance, including potential disposal of wood waste, which may have occurred on Site 1.

b Potential asbestos contamination identified on Site 3.

9.2 Potentially elevated cadmium levels associated with superphosphate use on Site 3 was also assessed.

9.3 In my reading of the **Detailed Site Investigation**, the investigation has assumed that the coal yard documented to be on Site 5, was present on what is assumed to be the sawmill location on Site 1. This assumption is consistent with the assumption in the **Preliminary Site Investigation**, which I have discussed earlier in this evidence.

9.4 The **Detailed Site Investigation** did not include:

- a potentially contaminating activities in the **Preliminary Site Investigation** that were associated with the portion of Site 5 now removed from the extent of **PPC37**.
- b assessment of potential waste disposal to land in Sites 2 and 5. I note that the **Detailed Site Investigation** concludes in relation to the area of potential wood waste assessed on Site 1 *“Parameters in the buried woodwaste were all at or below the 95% upper limit for background. It is likely that other fill areas will be of similar nature”*. I have therefore assumed that in the opinion of the investigators, the waste disposal which may have occurred on Sites 2 and 5 is consistent with the material assessed on Site 1 during the investigation.

Have investigations into the sawmill waste confirmed the absence of timber treatment activities and characterisation of ‘fill’ material present

9.5 The **Preliminary Site Investigation** identified that ‘filling’ (with imported soils etc.) and soil disturbance of land associated with **PPC37** has likely occurred, including some areas which may have been ‘filled’ with sawmill waste. The **Preliminary Site Investigation** noted the following data gap (page 28): *“If investigations into the sawmill waste confirms the absence of timber treatment then the waste disposal to land in areas 1, 2 and 5 is unlikely to be a contamination issue”*.

9.6 I note that the **Users’ Guide** includes the following contaminants of potential concern associated with HAIL Category A18 sites (i.e. wood treatment sites): Pentachlorophenol, metals (including copper, arsenic, chromium and boron), Polycyclic Aromatic Hydrocarbons, phenolics (creosote), antiseptant, organochlorine pesticides, fungicides and tributyl tin.

9.7 The **Detailed Site Investigation** reports in Table 8 of the **Detailed Site Investigation**, that the samples (replicated in the below table) were collected and analysed in the vicinity of the assumed sawmill building on Site 1. The samples were analysed for a subset of those listed in the **Users’ Guide**: namely metals (including arsenic, copper and chromium), polycyclic aromatic hydrocarbons and organochlorine pesticides.

Table 1

Test pit location	Sample ID	Natural Ground / Unnatural Ground	Depth	Comments	Analysed
Test Pit 1 – Filled valley	1	Unnatural	1.0m	Wood pulp	No
	2	Unnatural	0.3m	Pumice loam	Yes
	3	Unnatural	2.0m	Wood pulp	No
Test Pit 2 – Filled valley	4	Unnatural	0.3m	Grey fine silt/ash near surface	Yes
	5	Unnatural	0.3m	Pumice loam	No
	6	Unnatural	1.0m	Wood pulp	No
Top of flat, near test pits	7	Natural	0.15m	Near surface sample of 'clean ground'	Yes

- 9.8 In my reading of the **Detailed Site Investigation**, the identified wood waste was not analysed. Rather soil samples in the vicinity of the assumed sawmill building on Site 1 were analysed including a pumice loam (Sample 2), a silt (Sample 4) and a 'natural' soil outside of the wood waste area (Sample 7).
- 9.9 In my reading of the **Detailed Site Investigation** it was not evident that the **Detailed Site Investigation** had confirmed that wood treatment did not occur on the land associated with **PPC37**. Rather the **Detailed Site Investigation** included a comparison between the selected contaminants analysed (metals etc.) from samples of soils within the vicinity of identified wood waste, and adopted soil contaminant standards.
- 9.10 In my opinion, based on my reading of the **Detailed Site Investigation**, the inferred extent of 'fill' across the land associated with **PPC37** appears to cover an area of >30,000m² which extends across Site 1, Site 2 and Site 5; the extent of wood waste within that 'fill' has not been delineated; and the depth of the wood waste has also not been delineated. Based on the information in the **Preliminary Site Investigation** the 'filling' occurred over ~30 years, during which time the method of wood processing (treatment or no treatment), or sources of 'fill' may have changed (potentially varying source sites, with varying site histories and land uses).
- 9.11 Based on the above, I consider that further assessment of the 'filled' areas of the land subject to **PPC37** requires further assessment prior to future development, subdivision or soil disturbance.
- 9.12 I recommend that:
- a prior to future development, subdivision or soil disturbance in areas potentially affected by wood waste, future investigations should consider potential affects from wood waste.
 - b prior to future development, subdivision or soil disturbance in areas potentially affected by other 'fill' material, future investigations should include consideration of the fill material utilised.

Orchard area assessment

- 9.13 The **Preliminary Site Investigation** identified a 'small' orchard in the north-west corner of Site 5 along with 'green houses' in the north-eastern portion (refer page 13-14). Orchards and glass houses are listed as a potentially contaminating activity in the HAIL due to potential storage and use of pesticides. The **Preliminary Site Investigation** identified HAIL category A10 (Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds) as occurring on Site 5.
- 9.14 While the eastern portion of Site 5, including the area of identified 'glass houses' is now excluded from **PPC37**, I understand that the western portion, including the 'small orchard' remains subject to **PPC37**. In my reading of the **Detailed Site Investigation**, identified potential 'small' orchard in the western portion of Site 5 was not assessed.
- 9.15 I recommend that:
- a prior to future development, subdivision or soil disturbance in the area of the potential 'small' orchard identified in west of Site 5 (within land subject to **PPC37**), future investigations should include a review potentially contaminating activities associated land uses that may have occurred.

Asbestos impacts

- 9.16 The **Preliminary Site Investigation** identified that potentially asbestos-containing materials were identified in the vicinity of a former building structure on Site 3 and in the **Detailed Site Investigation**, soils were sampled in the vicinity of this structure for the presence of asbestos. Asbestos was not identified in the soil samples collected. The potentially asbestos-containing materials identified in the **Preliminary Site Investigation** were not sampled, rather the **Detailed Site Investigation** recommended their removal.
- 9.17 The **Preliminary Site Investigation** has identified that buildings constructed prior to the mid-1980s were present in other areas of the land associated with **PPC37** (refer pages 5 – 16), with some demolished. Ministry of Business Innovation and Employment guidance¹ indicates that buildings constructed before the mid-1980s have a high likelihood of having materials containing asbestos. The **Detailed Site Investigation** did not record information in relation to the assessment of these other areas, for potential asbestos impacts, or recommend further assessment of areas with buildings constructed before the mid-1980s.

¹ Factsheet "Locations where asbestos may be present" https://www.sitesafe.org.nz/globalassets/about-us/safety-liaison-group/waikato/5-locations-where-asbestos-maybe-present-factsheet_mbie.pdf accessed 30 September 2021.

9.18 Given the identification that potentially asbestos containing materials were identified in the vicinity of a former structure on the land, and the age of buildings identified in the **Preliminary Site Investigation** I recommend:

- a prior to future development, subdivision or soil disturbance, future investigations consider the potential for asbestos issues to be present in areas associated with current or historical structures across the wider area of **PPC37**, in particular those constructed prior to the mid-1980s.

10 Submissions

10.1 I have reviewed the summary of submissions and did not identify any comments related to contamination issues.

11 Conclusions

11.1 The purpose of my evidence was to provide a review of the **Preliminary Site Investigation** and the **Detailed Site Investigation**. I conclude the following in regard to the review undertaken.

11.2 In my opinion,

- a contaminated land investigations to date have established, that it is more likely than not, that potentially contaminating activities have been undertaken on portions of the land associated with Private Plan Change 37 (**PPC37**).
- b the investigations into contaminated land to date have commenced the assessment of potential adverse effects associated with the potentially contaminating activities undertaken. In my opinion there remains some data gaps and uncertainties that would require resolution prior to future development, subdivision and earthwork activities on the relevant 'piece of land' associated with the potentially contaminating activities.
- c the management of potential adverse effects associated with the identified potentially contaminated land, and resolution of potential data gaps I consider present in the investigations completed to date, can be addressed through further investigation and / or documentation and implementation of management or remedial approaches, prior to future development, subdivision and earthwork activities on these portions of the land subject to **PPC37**.

11.3 I consider that further investigation works are most appropriately completed at the time of development, subdivision or earthworks. My rationale is that land contamination issues can occur at any time and therefore results from prior investigations can be invalidated or require updating prior to the development, subdivision or earthworks.

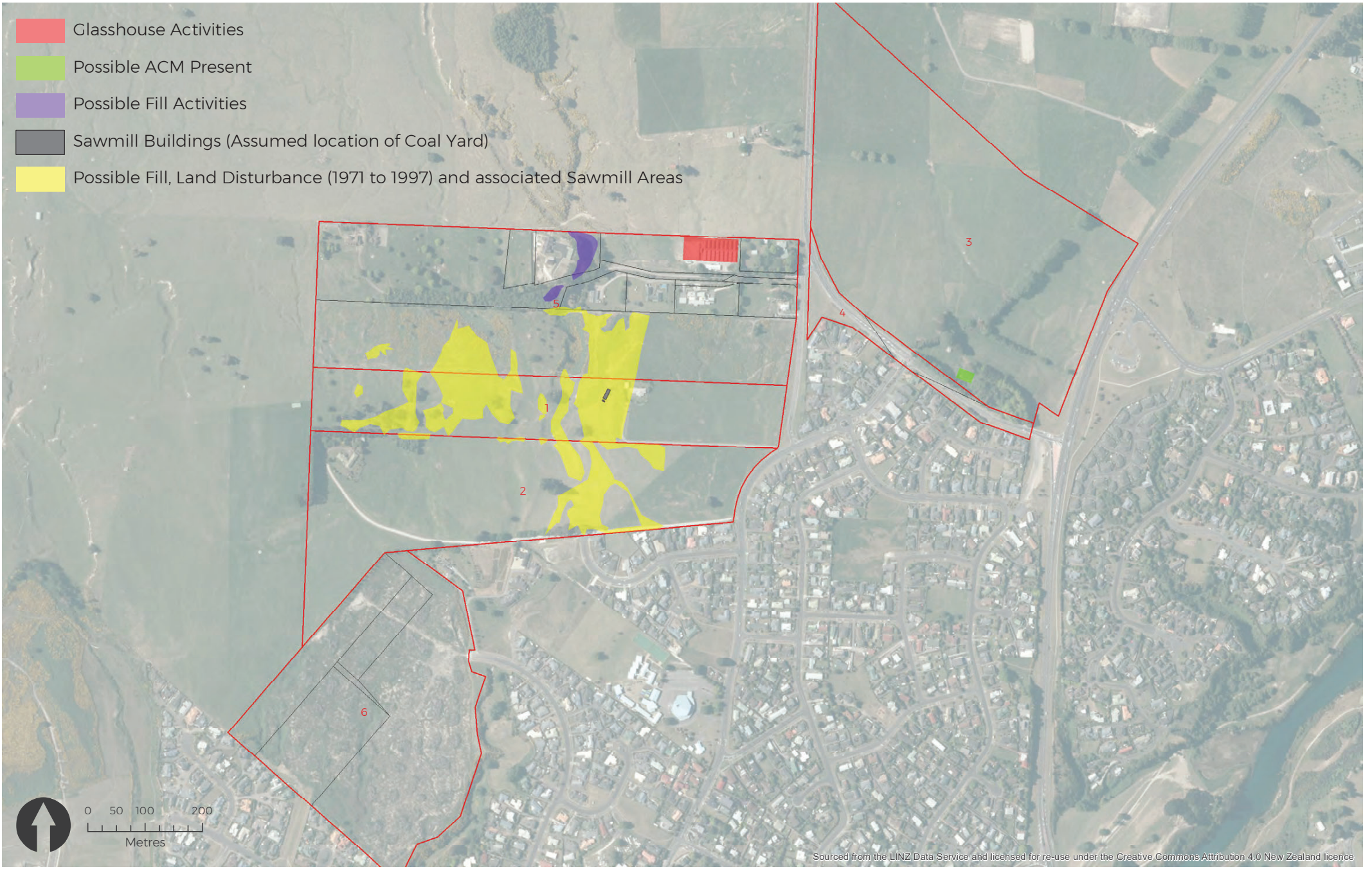
11.4 In consideration of the above, I consider it appropriate to conduct additional investigations, as required, at the time of future development, subdivision or earthworks. These future investigations would need to be completed in accordance with the requirements of the **NES Soil** and if contamination is identified, consent obtained (as a controlled or restricted-discretionary activity) under the **NES Soil**. If no investigation is undertaken, consent would be required under the **NES soil** for a discretionary activity.

Adam Michael Gray

30 September 2021

Appendix A – Site figure (sourced from the Preliminary Site Investigation)

- Glasshouse Activities
- Possible ACM Present
- Possible Fill Activities
- Sawmill Buildings (Assumed location of Coal Yard)
- Possible Fill, Land Disturbance (1971 to 1997) and associated Sawmill Areas



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Nukuhau Taupo Plan Change - Possible HAIL Activities



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Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011

Jerry Mateparae, Governor-General

Order in Council

At Wellington this 10th day of October 2011

Present:

His Excellency the Governor-General in Council

Pursuant to section 43 of the Resource Management Act 1991, His Excellency the Governor-General, acting on the advice and with the consent of the Executive Council, and on the recommendation of the Minister for the Environment given in accordance with section 44 of the Act, makes the following regulations.

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**Resource Management (National
Environmental Standard for Assessing and
Managing Contaminants in Soil to Protect
Human Health) Regulations 2011**

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Regulations

1 Title

These regulations are the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011.

2 Commencement

These regulations come into force on 1 January 2012.

3 Interpretation

In these regulations,—

Act means the Resource Management Act 1991

current edition means the edition that has legal effect when the edition is being used

detailed site investigation means an investigation that—

- (a) is done by a suitably qualified and experienced practitioner; and
- (b) is done in accordance with the current edition of *Contaminated Land Management Guidelines No. 5—Site Investigation and Analysis of Soils*, Wellington, Ministry for the Environment; and
- (c) is reported on in accordance with the current edition of *Contaminated Land Management Guidelines No. 1—Reporting on Contaminated Sites in New Zealand*, Wellington, Ministry for the Environment; and
- (d) results in a report that is certified by the practitioner

fuel storage system means a system in which at least 1 of the following is underground:

- (a) a storage tank for aviation kerosene, diesel, kerosene, lubricating oil, or petroleum:

- (b) the whole of the tank's ancillary equipment:
- (c) part of the tank's ancillary equipment

HAIL means the current edition of the *Hazardous Activities and Industries List*, Wellington, Ministry for the Environment

person means the person referred to in regulation 5(1)(a)

preliminary site investigation means an investigation that—

- (a) is done by a suitably qualified and experienced practitioner; and
- (b) is reported on in accordance with the current edition of *Contaminated Land Management Guidelines No. 1—Reporting on Contaminated Sites in New Zealand*, Wellington, Ministry for the Environment; and
- (c) results in a report that is certified by the practitioner.

4 Relationship of regulations with territorial authority and regional council functions

These regulations—

- (a) deal with territorial authority functions under section 31 of the Act:
- (b) do not deal with regional council functions under section 30 of the Act.

5 Application

(1) These regulations—

- (a) apply when a person wants to do an activity described in any of subclauses (2) to (6) on a piece of land described in subclause (7) or (8):
- (b) do not apply when a person wants to do an activity described in any of subclauses (2) to (6) on a piece of land described in subclause (9).

Activities

(2) An activity is removing a fuel storage system from the piece of land or replacing a fuel storage system in or on the piece of land, which means—

- (a) doing any of the following:
 - (i) removing or replacing the whole system:
 - (ii) removing or replacing an underground part of the system:

- (iii) taking away or putting back soil associated with the removal or replacement of the system or the part:
 - (b) doing any of the following for purposes associated with removing or replacing the whole system or part of the system:
 - (i) sampling the soil of the piece of land:
 - (ii) investigating the piece of land:
 - (iii) remediating the piece of land:
 - (iv) validating the piece of land:
 - (v) managing the piece of land.
- (3) An activity is sampling the soil of the piece of land, which means sampling it to determine whether or not it is contaminated and, if it is, the amount and kind of contamination.
- (4) An activity is disturbing the soil of the piece of land, which—
 - (a) means disturbing the soil of the piece of land for a particular purpose:
 - (b) does not include disturbing the soil of the piece of land, whatever the purpose, if the land is land to which regulation 33(9) or 36 of the Resource Management (National Environmental Standard for Electricity Transmission Activities) Regulations 2009 applies.
- (5) An activity is subdividing land, which means subdividing land—
 - (a) that has boundaries that are identical with the boundaries of the piece of land; or
 - (b) that has all the piece of land within its boundaries; or
 - (c) that has part of the piece of land within its boundaries.
- (6) An activity is changing the use of the piece of land, which means changing it to a use that, because the land is as described in subclause (7), is reasonably likely to harm human health.

Land covered

- (7) The piece of land is a piece of land that is described by 1 of the following:
 - (a) an activity or industry described in the *HAIL* is being undertaken on it:
 - (b) an activity or industry described in the *HAIL* has been undertaken on it:

- (c) it is more likely than not that an activity or industry described in the *HAIL* is being or has been undertaken on it.
- (8) If a piece of land described in subclause (7) is production land, these regulations apply if the person wants to—
 - (a) remove a fuel storage system from the piece of land or replace a fuel storage system in or on the piece of land:
 - (b) sample or disturb—
 - (i) soil under existing residential buildings on the piece of land:
 - (ii) soil used for the farmhouse garden or other residential purposes in the immediate vicinity of existing residential buildings:
 - (iii) soil that would be under proposed residential buildings on the piece of land:
 - (iv) soil that would be used for the farmhouse garden or other residential purposes in the immediate vicinity of proposed residential buildings:
 - (c) subdivide land in a way that causes the piece of land to stop being production land:
 - (d) change the use of the piece of land in a way that causes the piece of land to stop being production land.

Land not covered

- (9) These regulations do not apply to a piece of land described in subclause (7) or (8) about which a detailed site investigation exists that demonstrates that any contaminants in or on the piece of land are at, or below, background concentrations.

6 Methods

- (1) Subclauses (2) and (3) prescribe the only 2 methods that the person may use for establishing whether or not a piece of land is as described in regulation 5(7).
- (2) One method is by using information that is the most up-to-date information about the area where the piece of land is located that the territorial authority—
 - (a) holds on its dangerous goods files, property files, or resource consent database or relevant registers; or
 - (b) has available to it from the regional council.

- (3) The other method is by relying on the report of a preliminary site investigation—
 - (a) stating that an activity or industry described in the *HAIL* is, or is not, being undertaken on the piece of land; or
 - (b) stating that an activity or industry described in the *HAIL* has, or has not, been undertaken on the piece of land; or
 - (c) stating the likelihood of an activity or industry described in the *HAIL* being undertaken, or having been undertaken, on the piece of land.
- (4) The person must—
 - (a) choose which of the 2 methods to use; and
 - (b) meet all the costs involved in using the method that the person has chosen.

7 Standards

- (1) In this regulation,—

land use means—

 - (a) the current use, if the activity the person wants to do is—
 - (i) to remove a fuel storage system from the piece of land or replace a fuel storage system in or on the piece of land;
 - (ii) to sample the soil of the piece of land;
 - (iii) to disturb the soil of the piece of land;
 - (b) the intended use, if the activity the person wants to do is—
 - (i) to subdivide land;
 - (ii) to change the use of the piece of land

Methodology means the current edition of the *Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health*, Wellington, Ministry for the Environment

priority contaminant means a contaminant for which the *Methodology* derives a soil contaminant standard.

- (2) If the contaminant of concern is a priority contaminant and the land use fits within an exposure scenario adopted in the *Methodology*, the applicable standard is the soil contaminant standard for the priority contaminant.

- (3) If the contaminant of concern is a priority contaminant and the land use does not fit within an exposure scenario adopted in the *Methodology*, the applicable standard is whichever of the following is more appropriate in the circumstances:
 - (a) the guideline value derived in accordance with the methods and guidance on site-specific risk assessment provided in the *Methodology*;
 - (b) the soil contaminant standard for the priority contaminant of the exposure scenario adopted in the *Methodology* with greater assumed exposure than the actual exposure.
- (4) If the contaminant of concern is not a priority contaminant, the applicable standard is whichever of the following is more appropriate in the circumstances:
 - (a) the guideline value derived in accordance with the methods and guidance on site-specific risk assessment provided in the *Methodology*;
 - (b) a guideline value for the protection of human health that is chosen in accordance with the current edition of *Contaminated Land Management Guidelines No. 2—Hierarchy and Application in New Zealand of Environmental Guideline Values*, Wellington, Ministry for the Environment.

8 Permitted activities

Removing or replacing fuel storage system

- (1) Removing or replacing a fuel storage system is a permitted activity while the following requirements are met:
 - (a) the activity must be done in accordance with the current edition of *Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand*, Wellington, Ministry for the Environment;
 - (b) the territorial authority of the district where the system is located must be notified of—
 - (i) the place where the activity is to be done;
 - (ii) the dates on which it is intended that the activity begin and end;
 - (iii) the facility at which it is intended that soil taken away in the course of the activity be disposed of:

- (c) notification under paragraph (b) must be done no sooner than 1 month and no later than 1 week before the activity begins:
- (d) the volume of soil disturbed must be no more than 30 m³ for each tank in the system:
- (e) the volume of soil taken away in the course of the activity must be no more than 30 m³ for each tank in the system:
- (f) soil taken away in the course of the activity must be disposed of at a facility authorised to receive soil of that kind:
- (g) the duration of the activity must be no longer than 2 months:
- (h) the results of the investigation of the piece of land required by the guidelines described in paragraph (a) must be reported to the territorial authority within 3 months after the activity ends.

Sampling soil

- (2) Sampling the soil of the piece of land is a permitted activity while the following requirements are met:
 - (a) controls to minimise the exposure of humans to mobilised contaminants must—
 - (i) be in place when the activity begins:
 - (ii) be effective while the activity is done:
 - (iii) be effective until the soil is reinstated to an erosion-resistant state:
 - (b) the soil must be reinstated to an erosion-resistant state within 1 month after the end of the course of sampling for which the activity was done:
 - (c) soil must not be taken away in the course of the activity except as samples taken for the purpose of laboratory analysis:
 - (d) the integrity of a structure designed to contain contaminated soil or other contaminated materials must not be compromised.

Disturbing soil

- (3) Disturbing the soil of the piece of land is a permitted activity while the following requirements are met:

- (a) controls to minimise the exposure of humans to mobilised contaminants must—
 - (i) be in place when the activity begins:
 - (ii) be effective while the activity is done:
 - (iii) be effective until the soil is reinstated to an erosion-resistant state:
- (b) the soil must be reinstated to an erosion-resistant state within 1 month after the serving of the purpose for which the activity was done:
- (c) the volume of the disturbance of the soil of the piece of land must be no more than 25 m³ per 500 m²:
- (d) soil must not be taken away in the course of the activity, except that,—
 - (i) for the purpose of laboratory analysis, any amount of soil may be taken away as samples:
 - (ii) for all other purposes combined, a maximum of 5 m³ per 500 m² of soil may be taken away per year:
- (e) soil taken away in the course of the activity must be disposed of at a facility authorised to receive soil of that kind:
- (f) the duration of the activity must be no longer than 2 months:
- (g) the integrity of a structure designed to contain contaminated soil or other contaminated materials must not be compromised.

Subdividing or changing use

- (4) Subdividing land or changing the use of the piece of land is a permitted activity while the following requirements are met:
 - (a) a preliminary site investigation of the land or piece of land must exist:
 - (b) the report on the preliminary site investigation must state that it is highly unlikely that there will be a risk to human health if the activity is done to the piece of land:
 - (c) the report must be accompanied by a relevant site plan to which the report is referenced:
 - (d) the consent authority must have the report and the plan.

Consequence if requirement not met

- (5) If a requirement described in any of subclauses (1) to (3) is not met, the activity is a controlled activity under regulation 9 while it meets the requirements in regulation 9(1).
- (6) If a requirement described in subclause (4) is not met, the activity is a controlled activity under regulation 9 while it meets the requirements in regulation 9(3).

9 Controlled activities

*Removing or replacing fuel storage system, sampling soil,
or disturbing soil*

- (1) If a requirement described in any of regulation 8(1) to (3) is not met, the activity is a controlled activity while the following requirements are met:
 - (a) a detailed site investigation of the piece of land must exist:
 - (b) the report on the detailed site investigation must state that the soil contamination does not exceed the applicable standard in regulation 7:
 - (c) the consent authority must have the report:
 - (d) conditions arising from the application of subclause (2), if there are any, must be complied with.
- (2) The matters over which control is reserved are as follows:
 - (a) the adequacy of the detailed site investigation, including—
 - (i) site sampling:
 - (ii) laboratory analysis:
 - (iii) risk assessment:
 - (b) how the activity must be—
 - (i) managed, which may include the requirement of a site management plan:
 - (ii) monitored:
 - (iii) reported on:
 - (c) the transport, disposal, and tracking of soil and other materials taken away in the course of the activity:
 - (d) the timing and nature of the review of the conditions in the resource consent:
 - (e) the duration of the resource consent.

Subdividing or changing use

- (3) If a requirement described in regulation 8(4) is not met, the activity is a controlled activity while the following requirements are met:
 - (a) a detailed site investigation of the piece of land must exist;
 - (b) the report on the detailed site investigation must state that the soil contamination does not exceed the applicable standard in regulation 7;
 - (c) the consent authority must have the report;
 - (d) conditions arising from the application of subclause (4), if there are any, must be complied with.
- (4) The matter over which control is reserved is the adequacy of the detailed site investigation, including—
 - (a) site sampling;
 - (b) laboratory analysis;
 - (c) risk assessment.

No public notification of application for resource consent

- (5) The consent authority must not give public notification of an application for a resource consent to do any of the activities.

Consequence if requirement not met

- (6) If a requirement described in this regulation is not met, the activity is a restricted discretionary activity under regulation 10 while it meets the requirements in regulation 10(2).

10 Restricted discretionary activities

- (1) This regulation applies to an activity described in any of regulation 5(2) to (6) on a piece of land described in regulation 5(7) or (8) that is not a permitted activity or a controlled activity.
- (2) The activity is a restricted discretionary activity while the following requirements are met:
 - (a) a detailed site investigation of the piece of land must exist;
 - (b) the report on the detailed site investigation must state that the soil contamination exceeds the applicable standard in regulation 7;
 - (c) the consent authority must have the report;

- (d) conditions arising from the application of subclause (3), if there are any, must be complied with.
- (3) The matters over which discretion is restricted are as follows:
 - (a) the adequacy of the detailed site investigation, including—
 - (i) site sampling:
 - (ii) laboratory analysis:
 - (iii) risk assessment:
 - (b) the suitability of the piece of land for the proposed activity, given the amount and kind of soil contamination:
 - (c) the approach to the remediation or ongoing management of the piece of land, including—
 - (i) the remediation or management methods to address the risk posed by the contaminants to human health:
 - (ii) the timing of the remediation:
 - (iii) the standard of the remediation on completion:
 - (iv) the mitigation methods to address the risk posed by the contaminants to human health:
 - (v) the mitigation measures for the piece of land, including the frequency and location of monitoring of specified contaminants:
 - (d) the adequacy of the site management plan or the site validation report or both, as applicable:
 - (e) the transport, disposal, and tracking of soil and other materials taken away in the course of the activity:
 - (f) the requirement for and conditions of a financial bond:
 - (g) the timing and nature of the review of the conditions in the resource consent:
 - (h) the duration of the resource consent.

Consequence if requirement not met

- (4) If a requirement described in this regulation is not met, the activity is a discretionary activity under regulation 11.

11 Discretionary activities

- (1) This regulation applies to an activity described in any of regulation 5(2) to (6) on a piece of land described in regulation 5(7) or (8) that is not a permitted activity, controlled activity, or restricted discretionary activity.

- (2) The activity is a discretionary activity.

Rebecca Kitteridge,
Clerk of the Executive Council.

Explanatory note

This note is not part of the regulations, but is intended to indicate their general effect.

These regulations provide a national environmental standard for activities on pieces of land whose soil may be contaminated in such a way as to be a risk to human health. The activities are removing or replacing a fuel storage system, sampling the soil, disturbing the soil, subdividing land, and changing the use of the piece of land. The activities are classed as permitted activities, controlled activities, restricted discretionary activities, or discretionary activities.

The current editions of documents incorporated by reference are available on the Ministry for the Environment's website.

The regulations come into force on 1 January 2012.

Issued under the authority of the Acts and Regulations Publication Act 1989.

Date of notification in *Gazette*: 13 October 2011.

These regulations are administered by the Ministry for the Environment.

Appendix B – National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health Regulations 2011