


# Ground Contamination – Preliminary Site Investigation

December 2017

Mt Messenger Alliance

Technical Report 12



Quality Assurance Statement			
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# Glossary

Abbreviation	Definition
ACM	Asbestos-containing material
CT	Certificate of title
District Plan	New Plymouth District Council: Operative District Plan
DSI	Detailed Site Investigation as referred to in the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011, and as outlined in the Ministry for the Environment Contaminated Land Management Guidelines No 1: Reporting on Contaminated Sites in New Zealand (updated 2011).
HAIL	Ministry for the Environment Hazardous Activities Industrial List
MfE	Ministry for the Environment
MMA	Mount Messenger Alliance
NES Soil	Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011
NPDC	New Plymouth District Council
The Project	The Mt Messenger Bypass project
PSI	Preliminary Site Investigation as referred to in the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011, and as outlined in the Ministry for the Environment Contaminated Land Management Guidelines No 1: Reporting on Contaminated Sites in New Zealand (updated 2011).
RFWP	Taranaki Regional Council: Regional Fresh Water Plan for Taranaki
RSLU	Register of Selected Land Use
CLMP	Contaminated Land Management Plan.  Fulfils the requirements of a Site Management Plan as referred to in the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (as also referred to as a Remediation Action Plan).

Abbreviation	Definition
SH3	State Highway 3
SQEP	Suitably qualified and experienced practitioner
TRC	Taranaki Regional Council



# Executive Summary

This report sets out an assessment of the potential effects arising from the construction and operational phases of the proposed improvements to the Mount Messenger section of SH3 ('the Project'). This investigation has been undertaken to confirm current and historic activities that have occurred along the proposed alignment, in addition to assessing the potential for these activities to have resulted in ground contamination.

A summary of key findings are presented below:

- Around 1890, the Government bought land north of Pukearuhe and opened it up for settlement and made a new road over Mt Messenger. The existing SH3 was being formed not long after and was fully sealed by 1926.
- The properties along the proposed alignment to the east of the existing SH3 have remained largely unchanged from the earliest aerial photographs reviewed for the area from the mid-1940s.
- A number of environmental incidents have been recorded between 1999 and 2014 by TRC which relate specifically to activities on some of the farms along the alignment. There have also been reports of fly tipping, dumping and spills associated with traffic incidents along SH3.
- This ground contamination investigation has identified that activities listed on the HAIL have potentially been carried out in isolated areas along the alignment, namely:
  - Waste disposal to land associated with potential farm dumps at the dry stock farms at the northern and southern ends of the proposed alignment and potential impacts as a result of fly tipping along existing SH3.
- The NES Soil apply to the proposed works. No applicable contaminated land rules of RFWP apply to the disturbance works associated with the Project.
- A DSI would need to be carried out to characterise the impact (if any) of the identified potentially contaminating activities that have occurred within isolated locations along the proposed alignment.
- A CLMP has been prepared to support the consent application and is attached in Volume 5 of the AEE. The CLMP includes the requirement of a DSI to be undertaken during/following detailed design works in the relevant areas of potential contaminating activities along the proposed alignment. The CLMP details management, monitoring and reporting requirements for the Project based on the current available information. The CLMP may need to be updated based on the findings of the DSI.
- A large portion of the proposed alignment has not been subject to potential contaminating activities. Potential contaminating activities (waste disposal to land) has been identified in the northern and southern extents of the proposed alignment

Given the proposed adoption of the procedures in the CLMP, it can be concluded that the potential for environmental effects from contaminated land will be less than minor.





# 1 Introduction

## 1.1 Purpose & scope

This report forms part of a suite of technical reports prepared for the NZ Transport Agency's Mt Messenger Bypass project (the Project). Its purpose is to inform the Assessment of Effects on the Environment Report (AEE) and to support the resource consent applications and Notice(s) of Requirement to alter the existing State Highway designation, which are required to enable the Project to proceed.

This report provides specialist input relating to ground contamination for the project alignment and associated areas required for construction as shown on the Project Drawings in Volume 2: Drawing Set, referred to herein as 'the proposed alignment'.

This investigation has been completed to assess whether potentially contaminating activities as described by MfE Hazardous Activities Industrial List (HAIL) have occurred along the proposed alignment, and implications for the associated works.

The scope of work for this investigation comprised:

- Review of relevant property files provided by New Plymouth District Council (NPDC) for the alignment;
- Review of Taranaki Regional Council (TRC) Register of Selected Land Use (RSLU) and incident register for the alignment;
- Review of current and historical aerial photographs;
- Review of current and historic certificates of title (CT);
- Inspection of readily accessible areas of the proposed alignment; and
- Preparation of this report.

This report has been prepared in general accordance with the requirements for a Preliminary Site Investigation (PSI) referred to in the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES Soil), and as outlined in the Ministry for the Environment (MfE) Contaminated Land Management Guidelines No 1: Reporting on Contaminated Sites in New Zealand (updated 2011). The persons undertaking, managing reviewing and certifying this investigation are suitably qualified and experienced practitioners as defined in the NES Soil.

## 1.2 Description of proposed works

The Project involves the construction and ongoing operation of a new section of State Highway 3 (SH3), generally between Uruti and Ahititi to the north of New Plymouth. This new section of SH3 will bypass the existing steep, narrow and winding section of highway at Mt Messenger. The Project comprises a new section of two lane highway, approximately 6 km in length, located to the east of the existing SH3.

The primary objectives of the Project are to enhance the safety, resilience and journey time reliability of travel on SH 3 and contribute to enhanced local and regional economic growth and productivity for people and freight.

A full description of the Project including its design, construction and operation is provided in the Assessment of Effects on the Environment Report, contained in Volume 1: AEE, and is shown on the Drawings in Volume 2: Drawing Set.

## 2 Location and description

### 2.1 Location

The alignment is situated to the east of existing SH3 through the Mount Messenger area. The alignment ties-in to the existing SH3 at flats to the north and south of Mount Messenger approximately 1km south of Ahititi and 6.4km north of Uruti, respectively.

The proposed alignment intersects a number of rural zoned properties. The details of these properties are provided in Table 2.1 below and shown on Figure 1 (Appendix A:).

**Table 2.1 – Property identification**

Street address	Legal description	Area (hectare)	CT	Current site owner
3133 Mokau Rd, SH3 North Taranaki	Sec 38 and Sec 50 Blk VIII Mimi Survey District	41.32	G3/168	Gordon Andrew Thomas Keighley, Joy Keighley and Keighley Nominees Limited
N/A	Sec 51, Sec 57 and Pt Sec 52 Blk VIII Mimi Survey District	Total 99.92 ha made up of 22.14 ha (Sec 51) 0.0466 ha (Sec 57) and 77.78 ha (Pt Sec 52)	H1/1387	Debbie Ann Pascoe and Tony James Sofus Pascoe
3140 Mokau Rd, SH3 North Taranaki	Sec 55 Blk VIII Mimi Survey District	38.21	J1/249	Rodney John Barlow
3072 Mokau Rd, SH3 North Taranaki	Sec 9 SO 457513	155.66	627642	Debbie Ann Pascoe and Tony James Sofus Pascoe
N/A	Sec 1 SO 313242	182.74	149437	Ngati Tama Custodian Trustees Limited
2750 Mokau Road, SH3 North Taranaki	Lot 1 DP 5816	23.97	145/198	Kevin George Beard
N/A	Sec 1 SO 313243	44.267	149437	Ngati Tama Custodian Trustees Limited

Street address	Legal description	Area (hectare)	CT	Current site owner
2528 Mokau Road, SH3 North Taranaki	Sec 16–19 and Pt Sec 13 Blk XII Mimi Survey District	81.16 (total combined area)	G2/1020 G2/1393–5 G3/57	Allan George Robin Thomson
2397 Mokau Road, SH3 North Taranaki	Sec 35 Blk VIII Mimi Survey District	52.63	G1/238	Russell Alister Gordon
2454 Mokau Road, SH3 North Taranaki	Sec 20 Blk XII Mimi Survey District	60.1	G2/1181	Janice Robyn Bonita Anglesey and William Arthur Anglesey
2048 Mokau Road, SH3 North Taranaki	Lot 1 DP 16494	82.88	H4/333	Timothy Charles Scott and Carol Joyce Scott

## 2.2 Surrounding land use

Surrounding land use, like the alignment itself, consists of:

- Land parcels of mainly indigenous vegetation;
- Small dry stock farms; as well as
- Small forestry blocks.

The proposed alignment varies between running 1.1 km east of existing SH3 at its furthest point away from SH3 to running adjacent to SH3 through parts of the southern half of the proposed alignment, along with a tie-in into the exiting SH3 at both the northern and southern extent of the proposed alignment.

## 2.3 Partial inspection of the alignment

An environmental scientist (Elyse LaFace) completed a partial inspection of the proposed alignment on 1 August 2017. The inspection consisted of driving the existing SH3 with stops made at the following locations listed from north to south. Relevant observations made at the time of the inspection are summarised below and shown on Figure 2 (Appendix A.):

- The boundary of the farm at 3072 Mokau Rd, SH3 (Sec 9 SO 457513)
  - Access to the property was not granted at the time of inspection.
  - From the shoulder of SH3 a drive leads to a dwelling approximately 115m from SH3 with a large shed further beyond.
  - Drainage channels had recently been disturbed/ cleared with small stockpiles of soil observed along with an excavator located on the property.

- Various parts and machinery along with a small number of storage drums typical of a farm operation were observed along the driveway and dwelling.
- Pullover bays and public rest area adjacent to the summit of Mount Messenger
  - Variable quantities of litter, household rubbish and green waste was observed along the steep banks of the rest areas.
  - A dead goat was observed on the shoulder at the public rest area.
  - The 'Heritage Trails' information sign at the public rest area details that the surrounding area was settled in the 1880s. Between 1894 and 1896 a pack track was formed over Mount Messenger (largely along the existing SH3 route). The track was widened in 1900 with metalling commencing in 1909 and completed in 1923 and the road fully sealed by 1926.
- 2528 Mokau Rd, SH3 (Sec 16–19 and Pt Sec 13 Blk XII Mimi Survey District)
  - The proposed alignment along the north–west boundary of the property was walked. The ground was noted to be very saturated at the time.
  - A tributary of the Mimi River running through this area of the property was at low flow.
  - The water course in this location does not appear natural and appears to have been diverted to the current flow path.
  - The farm along the proposed alignment was in tidy condition at the time of inspection.
  - The property is fenced along the shoulder of SH3 and at the base of the steep vegetated bank at the north–west corner of the property which is the base of a previous landslide.
  - A small (approximately 5m x 3m x 1m) offal pit was observed in this area along the proposed alignment with cow bones observed within the pit; no rubbish was observed.
  - The northern boundary of the property was fenced with wetland/marsh in the low areas beyond.
  - There are no buildings along the proposed alignment though several sheds are located near the proposed alignment and a dwelling further to the south–west.
  - The sheds appeared to be timber truss and corrugated iron with no asbestos–containing materials observed.

Further south at the location where the proposed alignment ties–in with the existing SH3 forestry operations (loading of felled trees) were observed on the western side of the existing SH3 at 2397 Mokau Rd, SH3 (Sec 35 Blk VIII Mimi Survey District).

## 2.4 Published geology

The published geology beneath the alignment is described by Edbrooke<sup>1</sup> as interbedded fine to very fine-grained sandstone and mudstone or siltstone of the Mount Messenger Formation.

## 2.5 Hydrology

The alignment traverses two catchments. These are the Tongaporutu Catchment in the north and the Mimi Catchment to the south. The boundaries of these catchments are defined by the high points of the proposed alignment adjacent to the summit of Mount Messenger.

Tributaries in the Tongaporutu Catchment feed north into a valley which forms into the defined water course of the Waioiotawa Stream. Tributaries of the Mimi Catchment flow south to a low marsh/ wetland and form into the defined water course of the Mimi River.

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<sup>1</sup> Edbrooke, S.W. (compiler) 2005. Geology of the Waikato area. Institute of Geological and Nuclear Sciences 1:250 000 geological map 4. 1 sheet + 68 p. Lower Hutt, New Zealand: Institute of Geological and Nuclear Sciences Limited. Lower Hutt, New Zealand.

## 3 Site history

### 3.1 Methodology

Historical information relating to the alignment was collected from the following sources:

- Property files from NPDC;
- TRC Register of Selected Land Use (RSLU) and incident register;
- Current and historical aerial photographs;
- Current and historic certificate of titles (CT);

The review involved recording historical and current activities from along the proposed alignment, except for the aerial photograph review where readily observable surrounding land use were also observed.

### 3.2 Historical review findings

The information that has been reviewed is summarised in this section. Detailed information documented during the review is present in Appendix B.

Around 1890, the Government bought land north of Pukearuhe and opened it up for settlement and made a new road over Mt Messenger. The existing SH3 was formed not long after and was fully sealed by 1926.

The properties along the proposed alignment to the east of the existing SH3 have remained largely unchanged from the earliest available aerial photographs from the mid-1940s. The developed dry stock farms along the alignment have undergone some development over the years, namely the addition of several buildings/ structures at each of the farms and some water course modifications, while the bush blocks along the alignment have remained untouched and unchanged. No stockyards, livestock dip or spray race structures were identified along the proposed alignment in the site information reviewed and site walkover inspection.

A number of environmental incidents have been recorded between 1999 and 2015 by TRC which relate specifically to activities on two of the farms along the proposed alignment, 3072 Mokau Rd (Sec 9 SO 457513) and 2528 Mokau Road (Sec 16-19 and Pt Sec 13 Blk XII Mimi Survey District). There have also been reports of fly tipping, dumping and spills associated with traffic incidents along SH3.

## 4 Potential for contamination

This investigation has identified that potentially contaminating activities have (or are likely to have been) undertaken at discrete locations along the proposed alignment. The activities, potential contaminants and an assessment of the likelihood, potential magnitude and possible extent of contamination are presented in Table 4.1 and Figure 2 (Appendix A:). Whether the potentially contaminating activities meet the definition of HAIL is also detailed in Table 4.1.

**Table 4.1 – Potential for contamination**

Land use/ activity	Potential contaminants	Likelihood, magnitude and possible extent of contamination	HAIL reference
Fly tipping along existing SH3 and farm dumps at the dry stock farms at the northern and southern ends of the proposed alignment	Various depending on type of waste. May include (but not limited to) gross refuse, biological hazards, heavy metals, hydrocarbons and agrichemicals	<p>Review of environmental incidents held by TRC indicate that the eastern banks of the existing SH3 have been subject to fly tipping and offal disposal. This is typically concentrated at pullover bays and in particular the public rest areas adjacent to the summit of Mount Messenger. A number of incidents are also recorded of dead stock being dumped and found in waterways of the area.</p> <p>Therefore the areas of the proposed earthworks associated with the proposed alignment adjacent to the existing SH3 may encounter refuse and/ or contaminated soils impacted by dumped material.</p> <p>Furthermore, two incidents are recorded of associated waste disposal to land within the southern property along the proposed alignment. One of the incidents included the disposal of stripped cars into a drained water course following a landslip onto the property from the bank of existing SH3. The property owner was prosecuted by TRC. Details of remediation, if undertaken, are not on file.</p> <p>The second incident relates to rubbish observed in a waterway on a farm below Mount Messenger. Inspection found only inert rubbish had been dumped and the land owner was instructed to remove the rubbish. Re-inspection found that the rubbish had been removed but the specific location of the rubbish dump and/ or the</p>	G5 – Waste disposal to land



Land use/ activity	Potential contaminants	Likelihood, magnitude and possible extent of contamination	HAIL reference
		<p>location of approved disposal are not documented.</p> <p>The proposed alignment transects the area of the filled water course and other open areas of the farm which may have been subject to waste disposal.</p> <p>Therefore, there is the potential for refuse and/or near surface soils impacted by the dumped material to be encountered where the proposed alignment intersects open area of farms and in the vicinity of public rest areas adjacent to the existing SH3.</p>	
<p>Traffic incidents along existing SH3 leading to spills of various products</p>	<p>Various depending on the products spilt. May include (but not limited to) hydrocarbons, biological hazards, chemicals.</p>	<p>Review of environmental incidents held by TRC indicated a number of reported incidents between 1999 and 2015 associated with spills along the existing SH3 in the area where the proposed alignment runs adjacent to the existing SH3.</p> <p>This included spills of various volumes of various products. All incidents were responded to and mitigated with spills contained and removed offsite as much as practical.</p> <p>There is a possible albeit low potential for contamination associated with such spills (or other unreported spills) to be encountered in the areas of the proposed earthworks associated with the proposed alignment that run adjacent to the existing SH3.</p>	<p>Assessed as not a HAIL, as concentration of the migration of hazardous substances from these incidents to the areas of the earthworks associated with the proposed alignment are unlikely to be in sufficient quantity that it could be a risk to human health or the environment.</p>
<p>Bulk storage of fuel, chemicals and wastes associated with dry farming operation</p>	<p>Various depending on the products stored. May include (but not limited to) hydrocarbons and agrichemicals such as heavy metals, organochlorine pesticides,</p>	<p>The alignment transects at or near the boundary of farming activities at the northern and southern end of the alignment.</p> <p>The current and historical aerial photograph review indicates that structures or storage are not unlikely to have been located along the proposed alignment in these areas.</p>	<p>Assessed as not a HAIL, as areas of the earthworks associated with the proposed alignment are unlikely to have been impacted by bulk storage activities.</p>

Land use/ activity	Potential contaminants	Likelihood, magnitude and possible extent of contamination	HAIL reference
	organo- phosphates.		
Structures containing asbestos- containing materials (ACM)	Asbestos	<p>The property file review indicates that ACM are or have been present within buildings located on the properties. In particular, building plans show ACM used in the building materials of the dwellings located on the properties at either end of the alignment (3140 Mokau Road and 2528 Mokau Road).</p> <p>The current and historical aerial photo review indicates that dwellings and other buildings are unlikely to have been located along the alignment.</p>	Assessed as not a HAIL.

# 5 Preliminary conceptual site model and assessment of environmental effects

A conceptual model as defined by the MfE Contaminated Land Management Guidelines No 5: Site Investigation and Analysis of Soils (updated 2011), sets out known and potential sources of contamination, potential exposure pathways, and potential receptors. For there to be an effect from the proposed activity there has to be a contamination source and a mechanism (pathway) for contamination to affect human health or the environment (receptor).

A preliminary conceptual site model has been developed for the works associated with the proposed alignment, which takes into account the available information about the site, geological, hydrological and hydrogeological site conditions and our understanding of the potential effects on human health and the environment. The model is presented below.

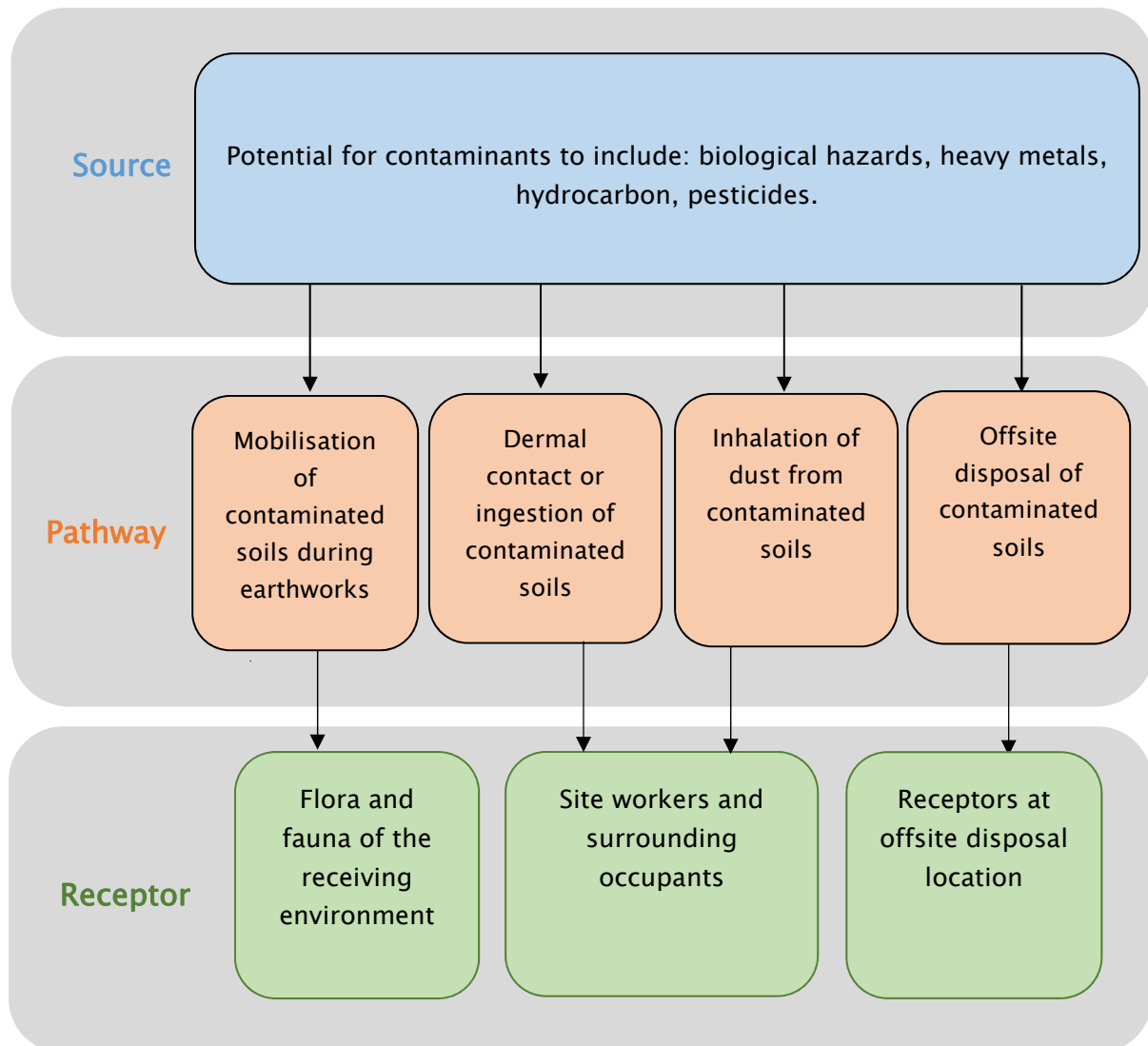


Figure 5.1: Preliminary conceptual site model.

The preliminary conceptual site model shows that there is potential for contaminants associated with fly tipping activities and disposal of waste to land to pose a risk to human or environmental receptors during the works. However, a large portion of the proposed alignment has not been subject to the potential contaminating activities and the potential for such activities to have occurred is isolated to the northern and southern extents of the proposed alignment as shown in Figure 2 (Appendix A:).

The potential risks to human health and the environment are expected to be able to be managed during works through the implementation of appropriate controls so that the effects from contaminated land will be less than minor. Such controls are to be informed by soil sampling and testing (referred to as a detailed site investigations (DSI) in the NES Soil and the MfE Contaminated Land Management Guidelines No 1: Reporting on Contaminated Sites in New Zealand (updated 2011)) and set out in a Contaminated Land Management Plan (CLMP) (refer Volume 5 of the AEE). The CLMP details management, monitoring and reporting requirements with respect to contaminated land for the Project.

The impacts of the identified potentially contaminating activities along the proposed alignment are likely to be isolated to near surface soils. These soils are likely to be removed during construction activity (mainly for geotechnical reasons). As such, it is highly unlikely for any contamination to be at a sufficient level to pose a risk to human health and the environment to remain on site on completion of the construction works.

Even if contaminated soil is retained (likely to be at the boundaries of the proposed alignment), these can be managed by capping (or other methods), to ensure that risks to human health and the environment will be less than minor. This will be provided for in the CLMP.

## 6 Regulatory framework

The rules and associated assessment criteria relating to the control of contaminated sites in the Taranaki region are specified in the following documents:

- NES Soil
- Taranaki Regional Council: Regional Fresh Water Plan for Taranaki, October 2001 (RFPW)
- Taranaki Regional Soil Plan
- New Plymouth District Council: Operative District Plan (District Plan)

The NES Soil and District Plan consider issues relating to land use and the protection of human health, while the RFPW has regard to issues relating to the protection of the general environment. The Taranaki Regional Soil Plan contains policies relating to contaminated land but no applicable rules.

The need, or otherwise, for contamination related resource consents for the works associated with the proposed alignment has been evaluated against these regulatory requirements and is discussed below.

### 6.1 NES Soil

#### 6.1.1 Applicability

The NES Soil applies to specific activities on land where a HAIL activity has, or is more likely than not to have occurred. Activities covered under the NES Soil include soil disturbance, soil sampling, fuel systems removal, subdivision and land use change.

Table 6.1 as provided in the NES Soil Users Guide (April 2012), confirms the NES Soil applies to part of the proposed alignment (as discussed above, at the southern and northern ends).

**Table 6.1 – PSI checklist**

NES Soil Requirement	Applicable to site?
Is an activity described on the HAIL currently being undertaken on the piece of land to which this application applies?	No
Has an activity described on the HAIL ever been undertaken on the piece of land to which this application applies?	Yes
Is it more likely than not that an activity described on HAIL is being or has been undertaken on the piece of land to which this application applies?	Yes
<b>If 'Yes' to any of the above, then the NES Soil may apply. The five activities to which the NES applies are:</b>	
Is the activity you propose to undertake removing or replacing a fuel storage system or parts of it?	No
Is the activity you propose to undertake sampling soil?	No
Is the activity you propose to undertake disturbing soil?	Yes

NES Soil Requirement	Applicable to site?
Is the activity you propose to undertake subdividing land?	No
Is the activity you propose to undertake changing the use of the land?	Yes
<b>Conclusion: The NES Soil applies to the Project.</b>	

## 6.1.2 NES Soil assessment

### 6.1.2.1 Soil disturbance

The soil disturbance rules under Regulation 8(3) of the NES Soil are summarised below.

- Disturbance of small volumes of soil is a permitted activity subject to the following conditions:
  - Installation of controls to minimise exposure of humans to mobilised contaminants.
  - The soil must be reinstated to an erosion free state within one month of completing the land disturbance.
  - The volume of the disturbance must be no more than 25m<sup>3</sup> per 500m<sup>2</sup> per year.
  - Soil must not be taken away unless it is for laboratory testing or, for all other purposes combined, a maximum of 5m<sup>3</sup> per 500m<sup>2</sup> of soil may be taken away per year.
  - Soil taken away must be disposed of at an appropriately licensed facility.
  - The duration of land disturbance must be no longer than two months.
- Disturbance work that cannot meet the controls outlined above or involve removal of greater volumes of soil requires a consent
  - If a detailed site investigation states that contamination levels are:
    - Below the standards detailed in the NES, then consent would be a controlled activity; and
    - Above the standards detailed in the NES, then consent would be a restricted discretionary activity.
  - If a detailed site investigation (DSI) is not available, the activity would be considered a discretionary activity.

The volume of soil requiring removal for the Project is unlikely to meet the provisions of a Permitted Activity under the NES Soil Regulation 8(3) and will require a resource consent under the NES Soil.

A DSI has not been completed for the proposed alignment as detailed design has not been finalised. Furthermore, access to areas of potential contamination has been limited as they are located on private property. In the absence of a DSI, the soil disturbance work will require consent as a **Discretionary Activity under Regulation 11 of the NES Soil**.

A CLMP has been prepared to support the Discretionary Activity application and is attached in Volume 5 of the AEE. The CLMP includes the requirement of a DSI to be undertaken

during/following detailed design in the relevant areas of potential contaminating activities along the proposed alignment (refer Section 4 and as shown on Figure 2, Appendix A:). The CLMP details management, monitoring and reporting requirements for the Project based on the available information. The CLMP may need to be updated based on the findings of the DSI.

### 6.1.2.2 Change in use

An assessment against the relevant permitted activity standards of the NES Soil with respect to change in use is provided Table 6.2.

**Table 6.2 – NES Soil Permitted Activity assessment for change in use**

NES Soil – Subdividing or changing use permitted activity conditions (Regulation 8(4))	Assessment
a A PSI of the land or piece of land must exist.	COMPLIES – This report meets that requirement of a PSI.
b The PSI report 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.	COMPLIES – Section <b>Error! Reference source not found.</b> provides an assessment of risk to human health as a result of the change in use.
c The report must be accompanied by a relevant site plan.	COMPLIES – Appropriate site plans are provided in this report.
d The consent authority must have the report and plan.	CAN COMPLY – Council is to be provided with a copy of this report.

Therefore, based on the above assessment, and with the appropriate controls in place during the soil disturbance works including stabilisation of the disturbance areas at the completion of works along with provision of this report to Council, the proposed change in use can be undertaken as a **Permitted Activity under Regulation 8(4) of the NES Soil**.

## 6.2 RFWP

The RFWP became operative on 8 October 2001. The rules related to discharge of contaminants to land and water are explained in Section 7.4.3 of the RFWP. The RFWP applies to an activity that will result in a discharge of contaminants to land and water that has the potential for adverse effect on the environment. No applicable rules of RFWP apply to the disturbance works associated with the Project.

## 6.3 District Plan

The NES Soil came into effect on 1 January 2012. This legislation sets out nationally consistent planning controls appropriate to district and city councils for assessing contaminants in soil with regard to human health.

The NES Soil now prevails over the contaminated land rules in the District Plan that apply to assessing and managing contaminants in soil to protect human health, except where the rules permit or restrict effects that are not dealt with in the NES Soil.

As the rules in the District Plan do not deal with any effects that are not dealt with in the NES Soil, with respect to managing contaminants in soil to protect human health the provisions of the District Plan have not been considered further in this assessment.



## 7 Conclusion

A large portion of the proposed alignment has not been subject to potential contaminating activities. Potential contaminating activities (waste disposal to land) has been identified in the northern and southern extents of the proposed alignment as shown in Figure 2 (Appendix A).

A CLMP has been prepared to support the discretionary activity consent application and is attached in Volume 5 of the AEE. The CLMP includes the requirement of a DSI to be undertaken during/following detailed design works in the relevant areas of potential contaminating activities along the proposed alignment. The CLMP details management, monitoring and reporting requirements for the Project based on the current available information. The CLMP may need to be updated based on the findings of the DSI.

Given the proposed adoption of the procedures in the CLMP, it can be concluded that the potential for environmental effects from contaminated land will be less than minor.



# Appendices

Appendix A: Overview plan of alignment	19
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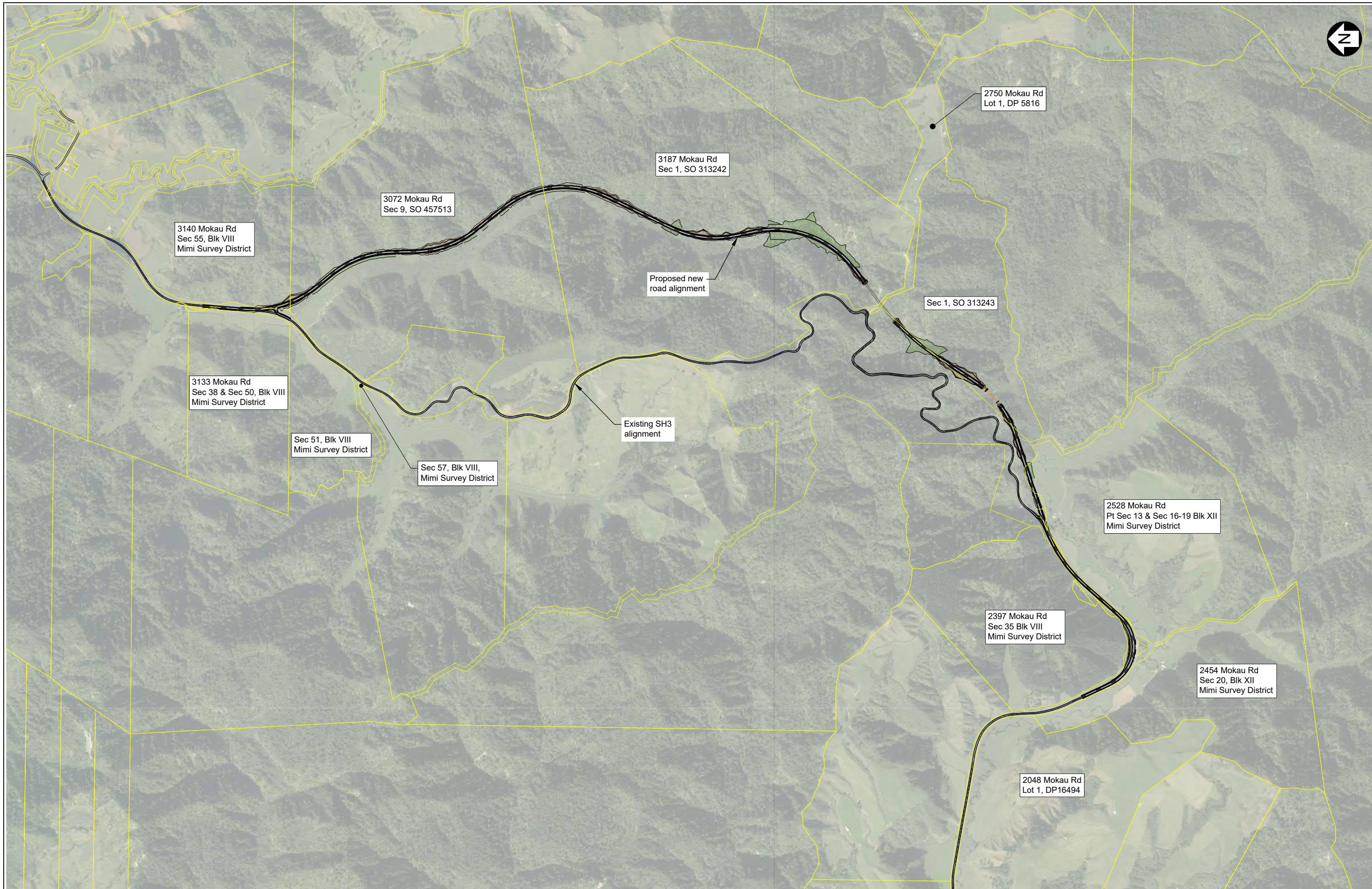
# Appendix A: Overview plan of alignment

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*Figure 1 – Overview Site Plan*

*Figure 2 – Locations of Potential Contamination*





Rev	Revision Description	Drawn	Checked	Designed	Design Checked	Approved	Date
A	FOR INFORMATION	WHE	QDO'S	-	-	-	01/11/2017

Tab	MMA-DES-ENV-E1-FIG-0001
Scales	NOT TO SCALE
Original Size	A1



**MT MESSENGER SH3 REALIGNMENT**

**ENVIRONMENTAL  
GROUND CONTAMINATION PSI  
OVERVIEW SITE PLAN**

Approved	<b>NOT FOR CONSTRUCTION</b>
Status	<b>FOR INFORMATION</b>
Drawing Number	MMA-DES-ENV-E1-FIG-0001
Revision	<b>A</b>



3072 Mokau Rd  
Potential contamination should waste disposal to land have occurred in open farm areas the proposed alignment crosses

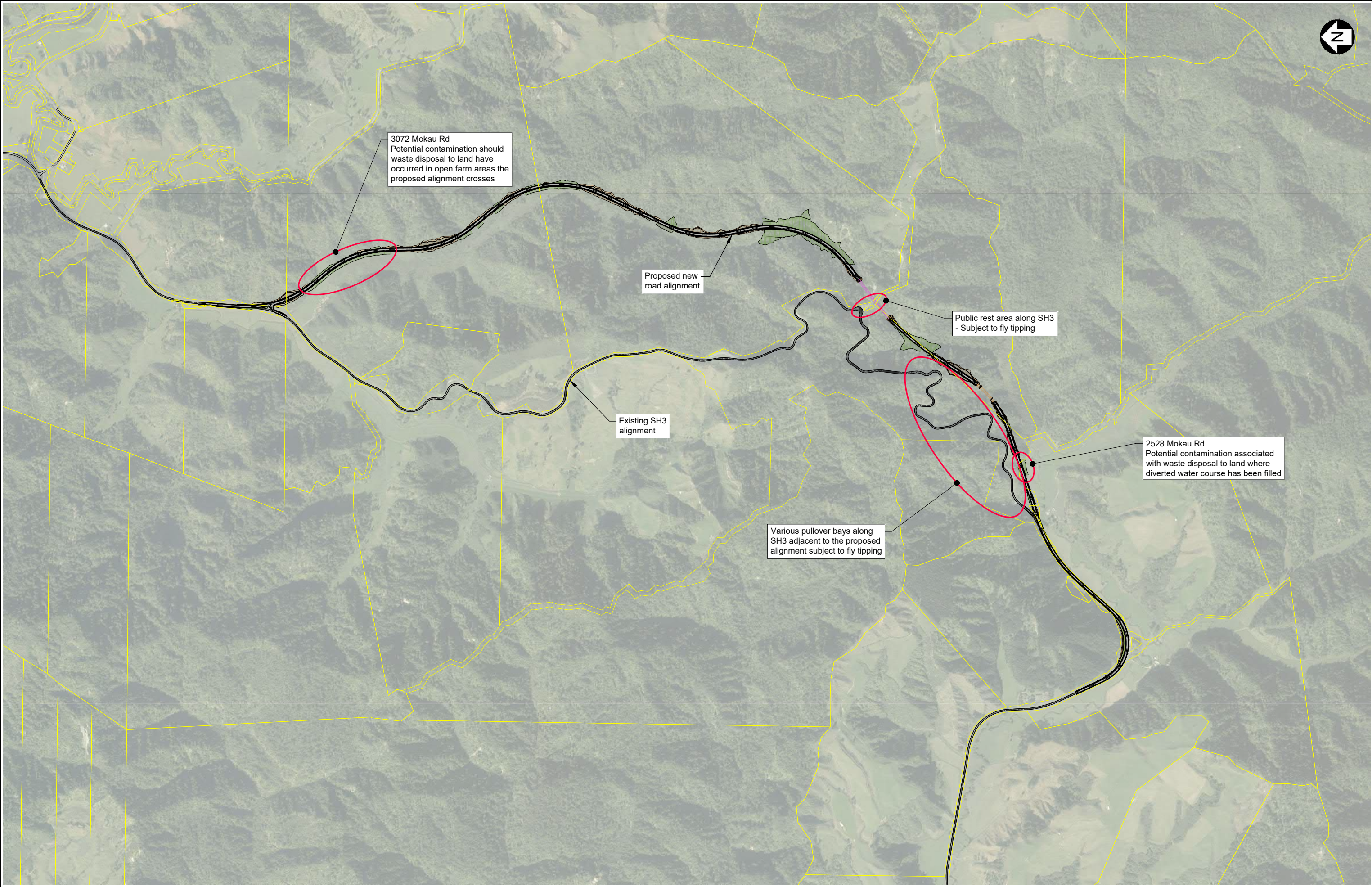
Proposed new road alignment

Public rest area along SH3  
- Subject to fly tipping

Existing SH3 alignment

2528 Mokau Rd  
Potential contamination associated with waste disposal to land where diverted water course has been filled

Various pullover bays along SH3 adjacent to the proposed alignment subject to fly tipping



Tab	MMA-DES-ENV-E1-FIG-0002						
Scales	NOT TO SCALE						
Original Size	A1						
Rev	Revision Description	Drawn	Checked	Designed	Design Checked	Approved	Date
A	FOR INFORMATION	WHE	QDO'S	-	-	-	01/11/2017



**MT MESSENGER SH3 REALIGNMENT**  
**ENVIRONMENTAL**  
**GROUND CONTAMINATION PSI**  
**LOCATIONS OF POTENTIAL CONTAMINATION**

Approved	<b>NOT FOR CONSTRUCTION</b>
Status	<b>FOR INFORMATION</b>
Drawing Number	MMA-DES-ENV-E1-FIG-0002
Revision	<b>A</b>



## Appendix B: Historical information review

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- B1 Introduction
- B2 Aerial photographs
- B3 Council Property file
- B4 Certificate of titles
- B5 Contamination enquiry



## B1 Introduction

Historical information relating to the proposed alignment was collected from a variety of sources. The information presented documents and comments on readily observable activities along the proposed alignment. The information that has been reviewed is documented in this section.

## B2 Aerial photographs

Historical aerial photographs were sourced from the T+T library and Google Earth Pro. Relevant features of the properties along the proposed alignment from each aerial photograph are described in Table B.1 below.

**Table B.1: Summary of aerial photograph review**

Date, source and run number	Key features of properties along the alignment
<p>1943/ 1945</p> <p>T+T Library: SN248 605/10 &amp; 604/9</p>	<ul style="list-style-type: none"> <li>• The section of the property to the east of SH3 at the northern tie-in of the proposed alignment is a bush block that separates the southernmost boundary of 3140 Mokau Rd (the northern most farm along the proposed alignment) and 3072 Mokau Rd (the northern most boundary of the adjacent farm to the south of 3140 Mokau Rd).</li> <li>• The properties to the west of SH3 at the northern tie-in of the proposed alignment consist of grazing land with a defined water course running adjacent to SH3 with bush block further to the west. A number of farm tracks and stream crossings are present in the grazing land and the water course appears to have been diverted with the scarp potentially filled in several locations towards the northern extent of the proposed alignment at 3133 Mokau Rd. At Pt Sec 52 Blk VII Mimi Survey District a number of buildings (appear to be dwelling and sheds) are clustered towards the northern boundary of the property along its boundary with SH3.</li> <li>• The farm at 3072 Mokau Rd is formed with access off SH3. A number of buildings are present within a similar location as situated today (i.e. outside of the proposed alignment). The cleared farm land extends up the valley to the south-east with a well-defined water course meandering through the valley much like it does today. A farm track is present extending half way up the valley along the valley's western bank.</li> <li>• The land extending south along the proposed alignment is undeveloped bush with a number of small landslips evident.</li> <li>• Extending further south along the proposed alignment, the narrow access road and cleared farm area of 2750 Mokau Road is present. A building is present within a similar location as situated today (i.e. outside the proposed alignment).</li> <li>• The land extending further south along the proposed alignment up to the cleared farm area of 2528 Mokau Rd (the southernmost farm</li> </ul>

Date, source and run number	Key features of properties along the alignment
	<p>along the proposed alignment) is undeveloped bush. Two buildings are present within a similar location as situated today (i.e. outside the proposed alignment) though appear much smaller than those currently present.</p> <ul style="list-style-type: none"> <li>• Further south and to the south of SH3 the properties consist of grazing land with a defined water course running adjacent to SH3 with bush block further south. A number of farm tracks and stream crossings are present in the grazing. A building is present adjacent to SH3 at the north-western boundary of 2454 Mokau Rd and additional buildings are set back from SH3 at 2048 Mokau Rd. To the north of SH3 in this area the properties are bush block with the exception of a cluster of buildings adjacent to SH3 at 2397 Mokau Rd. These buildings are within a grazing valley in the south-west corner of the property.</li> </ul>
<p><b>1974</b> T+T Library: SN3764 G/6, H/7 &amp; H/8</p>	<ul style="list-style-type: none"> <li>• The bush block along the northern tie-in of the proposed alignment to the east of SH3 appears largely unchanged. To the west of SH3 there to be some minor earthworks associated with the shoulder of SH3. Otherwise, the properties to the west of SH3 in this area of the proposed alignment appear largely unchanged.</li> <li>• The farm at 3072 Mokau Road also appears largely unchanged, with the exception of some straightening of the water course that runs through the property. This is particularly evident at the northern end of the property (outside of the proposed alignment) and would be expected to have been modified by the land owner. There appears to also be some straightening of the stream further south along the eastern bank of the valley (within the area the proposed alignment) which may be due to natural or man-made modification.</li> <li>• The land extending further south along the proposed alignment remains undeveloped bush and again a number of small landslips are evident.</li> <li>• Extending further south along the proposed alignment the narrow access road and cleared farm area of 2750 Mokau Road appears largely unchanged.</li> <li>• The land extending further south along the proposed alignment is undeveloped bush. A number of small landslips are evident within the bush and on the eastern banks of side of SH3.</li> <li>• Extending further south along the proposed alignment the cleared farm area 2528 Mokau Rd appears of have undergone some development. With a number of new buildings and/ or extensions around the existing buildings present. As well as new farm tracks formed in around the building as well as extending up a valley to the south-east of the proposed alignment.</li> </ul>

Date, source and run number	Key features of properties along the alignment
	<ul style="list-style-type: none"> <li>Further south and to the south of SH3 the properties appear to be largely unchanged. The expectation being that the building adjacent to SH3 at the north-western boundary of 2454 Moaku Rd appears to have been removed.</li> </ul>
<p><b>1985</b> T+T Library: SN8502 C4</p>	<ul style="list-style-type: none"> <li>The properties along the alignment all appear largely unchanged from the previous aerial photographs, with the exception of an additional building adjacent to the previous building at 2750 Mokau Road (i.e. outside the proposed alignment).</li> </ul>
<p><b>2001</b> Google Earth Pro</p>	<ul style="list-style-type: none"> <li>The bush block along the northern tie-in of the proposed alignment to the east of SH3 and the properties to the west of SH3 appear largely unchanged.</li> <li>The bush block along the northern tie-in of the alignment appears largely unchanged.</li> <li>The farm at 3072 Mokau Road includes a number of additional buildings around the previous buildings as well as various other paraphernalia scattered around the buildings.</li> <li>The land extending further south along the proposed alignment remains undeveloped bush and again a number of small landslips are evident.</li> <li>Extending further south along the proposed alignment the narrow access road and cleared farm area of 2750 Mokau Road appears to include a number of additional buildings around the previous buildings.</li> <li>The land extending further south along the proposed alignment remains as undeveloped bush.</li> <li>Extending further south along the proposed alignment the cleared farm area of 2528 Mokau Rd appears to have undergone some further development. A number of new buildings and/ or extensions around the existing buildings are present. Also, a diverted section of water course (which the proposed alignment runs through) appears to have been diverted and subject to earthworks/ filling. A landslip from SH3 to the immediate north-west of the water course is beginning to re-vegetate.</li> <li>Further south and to the south of SH3 the properties appear to be largely unchanged. The expectation being several buildings present at 2454 Mokau Rd along the boundary with 2528 Mokau Rd and set back from SH3.</li> </ul>
<p><b>2007</b> Google Earth Pro</p>	<ul style="list-style-type: none"> <li>The properties along the alignment all appear largely unchanged from the previous aerial photograph.</li> </ul>

Date, source and run number	Key features of properties along the alignment
	<ul style="list-style-type: none"> <li>The section of the diverted water course previously being filled at 2528 Mokau Rd appears to have been largely filled with a slight scrape remaining evident though the areas is grassed.</li> </ul>
<p><b>2011</b> Google Earth Pro</p>	<ul style="list-style-type: none"> <li>The properties along the alignment all appear largely unchanged from the previous aerial photograph.</li> </ul>
<p><b>2013</b> Google Earth Pro</p>	<ul style="list-style-type: none"> <li>The properties along the alignment all appear largely unchanged from the previous aerial photograph with the following exceptions:</li> <li>A number of small landslips are evident within the bush blocks that remain present along the alignment.</li> <li>Areas appear recently earthworked at 2528 Mokau Rd on the SH3 side of the water course that runs through the property adjacent to SH3. These areas are adjacent to or along where the proposed alignment crosses this property.</li> </ul>

### B3 Council property files

The information held by NPDC on the properties that the alignment cross were received on 27 July 2017. The documents reviewed are summarised in Table B.2 below.

**Table B.2: Summary of property file review**

Street address	Legal description	Summary
<p>3133 Mokau Rd, SH3 North Taranaki</p>	<p>Sec 38 and Sec 50 BLK VIII Mimi Survey District</p>	<ul style="list-style-type: none"> <li>Several building permits are held on file though this appear to be related to the adjacent property to the north.</li> <li>The permits are with respect to a dwelling and a carport extension. Communications indicate details of the effluent disposal system to be redesigned to ensure compliance with acceptable standards.</li> <li>A number plan indicates suspected ACM building material within the buildings and is noted as fibrolite soffits.</li> </ul>
<p>N/A</p>	<p>Sec 51, Sec 57 and Pt Sec 52 Blk VIII Mimi Survey District</p>	<ul style="list-style-type: none"> <li>There are no records provided by NPDC that appear to relate to this property.</li> </ul>
<p>3140 Mokau Rd, SH3 North Taranaki</p>	<p>Sec 55 Blk VIII Mimi Survey District</p>	<ul style="list-style-type: none"> <li>A number of building permits are held on file with respect to relocation of dwelling, installation of a fireplace and other building additions.</li> <li>A number of plans indicate ACM building material within the buildings and is noted with respect to the soffits.</li> </ul>

Street address	Legal description	Summary
		<ul style="list-style-type: none"> <li>The buildings are some 200 m north-east of the northern extent of the proposed alignment.</li> <li>Two letters are held on file dated 1993 discussing the potential to subdivide the land which is currently subject to three separate titles as issued in 1990 though the planning officer notes an application to subdivide had not yet been made.</li> </ul>
3072 Mokau Rd, SH3 North Taranaki	Sec 9 SO 457513	<ul style="list-style-type: none"> <li>There are no records held on NPDC records for this property.</li> </ul>
N/A	Sec 1 SO 313242	<ul style="list-style-type: none"> <li>A number of building permits are held on file with respect building of wooden staircases and footbridges associated with Department of Conservation walkways.</li> </ul>
2750 Mokau Road, SH3 North Taranaki	Lot 1 DP 5816	<ul style="list-style-type: none"> <li>There are a number of records related to a new dwelling constructed in 2000 at the property.</li> <li>The buildings are some 275 m south-east of the closest point along the proposed alignment.</li> </ul>
N/A	Sec 1 SO 313243	<ul style="list-style-type: none"> <li>There are no records held on NPDC records for this property.</li> </ul>
2528 Mokau Road, SH3 North Taranaki	Sec 16-19 and Pt Sec 13 Blk XII Mimi Survey District	<ul style="list-style-type: none"> <li>A number of building permits are held on file with respect to a bridge along the access road, alterations to the dwelling, installation of a fireplace and construction of a number of additional buildings such as sheds for calves.</li> <li>The plans for the dwelling indicate ACM building material has been used for the soffits of the dwelling.</li> <li>The plans associated with the other buildings (i.e. sheds) do not indicate the use of ACM building materials.</li> <li>The sheds are approximately 30 m south of the proposed alignment. While the dwelling is approximately 100 m south of the proposed alignment.</li> <li>There are number of communications (emails, letters and a newspaper article) dated between 2000 and 2002 regarding prosecution of Mr Allan Thomson (land owner) by TRC. The prosecution was with respect to the dumping of car wrecks within a redundant water course following a landslip onto the property from the bank of existing SH3. The location is shown on Figure 2 (Appendix A).</li> </ul>
2397 Mokau Road, SH3 North Taranaki	Sec 35 Blk VIII Mimi Survey District	<ul style="list-style-type: none"> <li>Several building permits are held on file. These include the demolition of a derelict dwelling replace with a Totalspan shed and installation of a fireplace in the existing dwelling.</li> </ul>

Street address	Legal description	Summary
2454 Mokau Road, SH3 North Taranaki	Sec 20 Blk XII Mimi Survey District	<ul style="list-style-type: none"> <li>• Several building permits are held on file including an extension to the existing dwelling, construction of a hay barn and shed and installation of a wood fireplace.</li> <li>• The plans indicate the location of septic tank and several barns/sheds on the property.</li> </ul>
2048 Mokau Road, SH3 North Taranaki	Lot 1 DP 16494	<ul style="list-style-type: none"> <li>• There are no records provided by NPDC that appear to relate to this property.</li> </ul>

## B4 Certificate of titles

The current and historic certificates of titles for the properties that the alignment will cross have been reviewed. The key details are summaries in Table B.3 below.

**Table B.3: Summary of CT review**

Street address	Legal description	Summary
3133 Mokau Rd, SH3 North Taranaki	Sec 38 and Sec 50 BLK VIII Mimi Survey District	<ul style="list-style-type: none"> <li>• Earliest CT is dated 1900 issued to Archibald Thompson the Younger (farmer). A number of transfers among private persons occurred in addition to a gazette notice detailing part of the land taken for the purposes of a road in 1963.</li> <li>• The current CT was issued in on transfer in 1984 to Gordon Andrew Thomas Keighley, Joy Keighley and Keighley Nominees Limited. A number of interests are listed with respect to Section 8 of the Mining Act 1971 and Section 5 of the Coal Mines Act 1979.</li> </ul>
N/A	Sec 51, Sec 57 and Pt Sec 52 Blk VIII Mimi Survey District	<ul style="list-style-type: none"> <li>• Earliest CT is dated 1898 issued to Thomas Gibson (farmer).</li> <li>• A number of transfers among private persons occurred in addition to a gazette notice detailing part of the land taken for the purposes of a road in 1962.</li> <li>• A new CT was issued on transfer in 1984 to Ian Robert William Petersen (farmer).</li> <li>• Current CT was issued in 1986 to Tony James Sofus and Debbie Ann Pascoe. A number of interests are listed with respect to Section 8 of the Mining Act 1971, Section 5 of the Coal Mines Act 1979, Sustainable Forest Management Permit under Section 67K of the Forest Act 1949 and Compensation Certification pursuant to Section 19 of the Public Works Act 1981.</li> </ul>
3140 Mokau Rd, SH3 North Taranaki	Sec 55 Blk VIII Mimi Survey District	<ul style="list-style-type: none"> <li>• Earliest CT is dated 1901 issued to Archibald Thompson (farmer) with a gazette notice detailing part of the land taken for the purposes of a road in 1981.</li> </ul>



Street address	Legal description	Summary
		<ul style="list-style-type: none"> <li>• A new CT was issued on transfer in 1984 to Ian Robert William Petersen (farmer) which was followed by the transfer in 1990 to Tony and Raye Judith Whitehead (farmers) with the property separated into three separate titles.</li> <li>• Current CT was issued in 1991 to Rodney John Barlow. A number of interests are listed with respect to Section 8 of the Mining Act 1971, Section 5 of the Coal Mines Act 1979 and right to convey water over part of the property.</li> </ul>
3072 Mokau Rd, SH3 North Taranaki	Sec 9 SO 457513	<ul style="list-style-type: none"> <li>• Earliest CT is dated 1917 issued to Geoffrey Pybus. A number of transfers among private persons occurred until 1964 when transferred to Eurwin James and Phyllis Mary Pascoe (farmers) in 1964. A gazette notice dated 1966 details part of the land taken for the purposes of a road.</li> <li>• A new CT was issued in 1982 to Tony James Sofus and Debbie Ann Pascoe. A gazette notice dated 1986 details part of the land taken for the purposes of a road and shall form part of SH3.</li> <li>• Current CT was issued in 2013 again to Tony James Sofus and Debbie Ann Pascoe. A number of interests are listed with respect to a Sustainable Forest Management Permit under Section 67K of the Forest Act 1949 and a Compensation Certification pursuant to Section 19 of the Public Works Act 1981.</li> </ul>
N/A	Sec 1 SO 313242	<ul style="list-style-type: none"> <li>• From as early as 1900 a number of gazette notices are issued detailing the taking of part of the land for a road and the Mount Messenger Scenic Reserve.</li> <li>• The earliest (and current) CT was issued in 2004 to Ngati Tama Custodian Trustee Limited which covers five separate land parcels. A number of interests are listed with respect to Part IVA of the Conservation Act 1987 (but also subject to Section 38(5) of the Ngati Tama Claims Settlement Act 2003, Section 11 of the Crown Minerals Act 1991, Conservation Covenant pursuant to Section 77 Reserves Act 1977 and right to a walkway easement pursuant to the New Zealand Walkways Act 1990.</li> </ul>
2750 Mokau Road, SH3 North Taranaki	Lot 1 DP 5816	<ul style="list-style-type: none"> <li>• A poor quality copy of a CT is the earliest record available but the date of issue is not legible. The remaining details are largely illegible but appear to indicate a number of transfers between private persons.</li> <li>• Current CT was issued in 1940 to Kevin George Beard. A number of interests are listed with respect to a right of</li> </ul>

Street address	Legal description	Summary
		access and to convey electricity over part in favour of Her Majesty the Queen for police, public safety and emergency services communication.
N/A	Sec 1 SO 313243	<ul style="list-style-type: none"> <li>As per the details provided for Sec 1 So 313242 (above) which shares CT reference of 149237.</li> </ul>
2528 Mokau Road, SH3 North Taranaki	Sec 16-19 and Pt Sec 13 Blk XII Mimi Survey District	<ul style="list-style-type: none"> <li>Earliest CTs for the various land parcels are dated 1880 are issued to private persons listed as farmers.</li> <li>For the larger parcel (Pt Sec 13), a new CT was issued in 1952 to Walter Wright Oxenham (retired farmer). Various transfer between private persons as well as a number of gazette notices detailing the taking of land for a road are recorded. In 1980 a transfer to John Osborne Whitehead (farmer) was followed by a transfer to Tony Whitehead and Raye Judith Whitehead (farmers) in 1983. The CT was cancelled in 1984 as well as the cancellation in 1984 of the CTs from the smaller parcels.</li> <li>Current CTs for each of the parcels were issued in 1984 to Allan George Robin Thomson. The current CTs detail Interests with respect to Section 8 of the Coal Mines Amendment Act 1950 and Section 168A of the Coal Mines Act 1925 a Compensation Certification pursuant to Section 19 of the Public Works Act 1981. .</li> </ul>
2397 Mokau Road, SH3 North Taranaki	Sec 35 Blk VIII Mimi Survey District	<ul style="list-style-type: none"> <li>Earliest CT is dated 1895 issued to William James Wells (farmer). A number of transfers among private persons occurred in addition to a gazette notice detailing part of the land taken for the purposes of a road in 1979.</li> <li>The current CT was issued in on transfer in 1983 to Russell Alister Gordon. A number of interests are listed with respect to Section 8 of the Mining Act 1971 and Section 5 of the Coal Mines Act 1979.</li> </ul>
2454 Mokau Road, SH3 North Taranaki	Sec 20 Blk XII Mimi Survey District	<ul style="list-style-type: none"> <li>Earliest CT is dated 1895 issued to John James Gilbert (farmer). A number of transfers among private persons occurred in addition to gazette notices detailing part of the land taken for the purposes of a road in 1979 and 1980.</li> <li>A new CT was issued was issued in 1983 to Tony Whitehead and Raye Judith Whitehead (farmers). The CT was cancelled in 1984 and the current CT issued.</li> <li>The current CT issued in 1984 to William Arthur Anglesey and Janice Robyn Bonita Anglesey. A number of interests are listed with respect to Section 8 of the Mining Act 1971 and Section 5 of the Coal Mines Act 1979.</li> </ul>

Street address	Legal description	Summary
2048 Mokau Road, SH3 North Taranaki	Lot 1 DP 16494	<ul style="list-style-type: none"> <li>The current CT was issued in 1989 to Timothy Charles Scott and Carol Joyce Scott.</li> <li>The only prior reference is an application made in 1988 to register a state enterprise (Landcorp Investment) in substitution for the Crown.</li> </ul>

## B5 Contamination enquiry

TRC since the 1990s have been identifying possibly contaminated sites in the region and recording this on a RSLU. Details held by TRC were requested on 20 July 2017 with respect to the properties that the proposed alignment will cross as per **Error! Reference source not found.** (refer Section **Error! Reference source not found.**). A response was provided by TRC on 25 July 2017 detailing that there are no current entries on the RSLU for the properties.

TRC also provided information with respect to resource consents they hold for the properties that the proposed alignment will cross. No consents were held on file for any of the properties.

Resource consents related to surrounding properties (including existing, superseded and surrendered consents) are summarised in Table B.4 below. Consents issued in the surrounding area are considered unlikely to cause contamination at or along the proposed alignment because of either the type of consent or the distance of the activity from the site.

**Table B.4: Resource consents for surrounding properties**

Location	Activity Description	Consent holder	Status
Western side of SH3 to the north of Mount Messenger tunnel; approximately 750 m to the west of the proposed alignment	Discharge up to 2500 m <sup>3</sup> of cleanfill onto land. The source of cleanfill was slips along SH3 which were required to be cleared.	Transit New Zealand Limited	Does not appear to have been exercised and is now surrendered.
Mangaongaonga Road; approximately 500 m to the north-east of the northern extent of the proposed alignment	Remove the existing culvert and install, use and maintain a replacement culvert to the Waioiotawa Stream.	NPDC	Exercised.

Location	Activity Description	Consent holder	Status
2397 Mokau Road (western side of SH3); adjacent to the southern extent of the alignment	Undertake vegetation disturbance activities and to discharge stormwater and sediment arising from soil disturbance activities associated with harvesting of forest, including roading and tracking onto land and into unnamed tributaries of the Mimi River.	Russell Gordon	Currently being exercised (2017).

On 27 July 2017, TRC also provided the environmental incidents held on their files for the properties the proposed alignment will cross and surrounding area. Details of 21 incidents dated between 1999 and 2015 were provided and reviewed.

Four of the incidents were related to the properties the proposed alignment will cross and are summarised in Table B.5 below.

**Table B.5: Environmental incidents summary for properties along the alignment**

Street address	Legal description	Summary of environmental incident
3140 Mokau Rd, SH3 North Taranaki	Sec 55 Blk VIII Mimi Survey District	<p>5 August 2004:</p> <ul style="list-style-type: none"> <li>A complaint was received regarding a dump site on a farm.</li> <li>Investigation found a small farm dump. No direct runoff into or out of the fill area was found and rubbish disposed appeared to be well managed and rubbish bags were secure.</li> <li>The dump at the time of inspection was found to comply with rules relating to a permitted activity under the RFWP.</li> <li>The specific location of the dump is not documented but open areas of the farm are at least approximately 100 m north-east of the northern extent of the alignment</li> </ul>
3072 Mokau Rd, SH3 North Taranaki	Sec 9 SO 457513	<p>18 September 2008:</p> <ul style="list-style-type: none"> <li>A complaint was received about dead stock near a waterbody at a property on the north side of Mount Messenger.</li> <li>An Abatement Notice was issued requiring the dead stock to be removed and disposed in an approved manner.</li> <li>Re-inspection was to take place after 9 October 2008. No further notes/details are provided.</li> <li>The specific location of the dead stock and/ or the location of approved disposal are not documented. The</li> </ul>

Street address	Legal description	Summary of environmental incident
		alignment crosses an open area of farm which may have been subject to such farm dumping (refer Figure 2, Appendix A).
2528 Mokau Road, SH3 North Taranaki	Pt Sec 13 Blk XII Mimi Survey District	<p>5 April 2000:</p> <ul style="list-style-type: none"> <li>• A complaint was received concerning old cars being dumped in a stream on the southern side of Mount Messenger.</li> <li>• Investigation found that vehicles were being dumped in an old diverted stream bed. An Abatement Notice was issued requiring the vehicles be removed. As the matter had been prolonged the Abatement Notice was cancelled and a new one issued.</li> <li>• As previously noted (Table B2 in Section B3), TRC prosecuted the land owner with regards to this matter.</li> <li>• The proposed alignment transects the area of this filled water course.</li> </ul> <p>23 July 2014:</p> <ul style="list-style-type: none"> <li>• Notification was received concerning rubbish observed in a waterway on a farm below Mount Messenger.</li> <li>• Inspection found only inert rubbish had been dumped in a swampy spring fed tributary and there were no environmental impacts on the stream. The land owner was instructed to remove the rubbish.</li> <li>• Re-inspection found that the rubbish had been removed.</li> <li>• It was noted that the disposal of rubbish generated on this farm is permitted under the RFWP, provide it is not placed within 25 m of a waterway and subject to conditions.</li> <li>• The specific location of the rubbish dump and/ or the location of approved disposal are not documented. The proposed alignment crosses an open area of farm which may have been subject to farm dumping (refer Figure 2, Appendix A).</li> </ul>

The remaining incidents relate namely to reports of fly tipping along SH3 through the Mount Messenger section or spills typically associated with traffic accidents through this section of SH3. A summary of these incidents are provided as follows:

- 10 reports of spills associated with traffic accidents
- 3 reports of dumped cows, effluent, fish carcasses and/ or rubbish
- 2 reports of silt in streams
- 2 reports of dead cows in a water course

The spills were of various products (i.e. liquid chlorine, effluent, glue resin, engine/ hydraulic oil, molasses and whey) and various volumes.

All incidents were responded to and mitigated as much as possibly with those related to spills contained and removed offsite where practicable.