

Appendix 7: Preliminary Site Investigation

TRICES ROAD REZONING GROUP



Fraser Thomas

ENGINEERS • RESOURCE MANAGERS • SURVEYORS

PRIVATE PLAN CHANGE TO THE
OPERATIVE SELWYN DISTRICT
PLAN AND SUBMISSION ON
SELWYN DISTRICT PLAN REVIEW,
TRICES ROAD AREA,
PREBBLETON



PRELIMINARY SITE INVESTIGATION – CONTAMINATION

TRICES ROAD REZONING GROUP

PRIVATE PLAN CHANGE TO THE
OPERATIVE SELWYN DISTRICT PLAN
AND SUBMISSION ON SELWYN
DISTRICT PLAN REVIEW,
TRICES ROAD AREA,
PREBBLETON

PRELIMINARY SITE INVESTIGATION - CONTAMINATION

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TRICES ROAD REZONING GROUP

PRIVATE PLAN CHANGE TO THE OPERATIVE SELWYN DISTRICT PLAN AND SUBMISSION ON SELWYN DISTRICT PLAN REVIEW TRICES ROAD, PREBBLETON

PRELIMINARY SITE INVESTIGATION - CONTAMINATION

EXECUTIVE SUMMARY

In response to instructions from Aston Consultants, Fraser Thomas Limited (FTL) undertook a Preliminary Site Investigation (PSI) for Lot 1 DP 73583, Lot 2 73583, Part RS 3122, RS 39794, Lot 1 DP 3896, Lot 1 DP 5284, Lot 1 78905, Lot 1 DP 360577, Lot 2 360577, Part RS 2423 ('site'). The site comprises eight properties (10 separate Records of Title) and is located between Trices Road and Hamptons Road to the north and south, and Birchs Road and rural properties to the west and east, respectively.

This investigation involved a desktop study, site walkover, and reporting associated with potential land contamination issues.

The main rationale and objectives for this investigation were:

- To identify the main actual or potential contamination issues due to ongoing and historic use of land within the site.
- To confirm that the site is suitable or can be made suitable for the proposed rezoning.

This investigation has been managed, reviewed and approved by a Suitably Qualified and Experienced Practitioner (SQEP), as defined in the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS).

The NESCS governs a number of activities, including soil sampling, soil disturbance, subdivision and changes of land use on potentially contaminated land in New Zealand. In general, the rules of the NESCS apply to sites on which it is "more likely than not" that a HAIL (Hazardous Activities and Industries List) activity has occurred or is occurring (Regulation 5(7)).

This investigation has confirmed that the subject site has only been used for rural/residential and grazing purposes and identified few localised potential or actual HAIL activities:

- *Activity A10: Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glasshouses or spray sheds.* This relates to persistent pesticide use associated with the former poultry farm (no longer present on site), orchards, and vegetable growing on Lot 1 and 2 73583, Lot 1 DP 3896, Lot 1 DP 5284. Additionally, an orchard spraying apparatus was observed being stored in a paddock on Lot 1 DP

360577. It is recommended that these areas be further investigated and soil sampling undertaken to confirm identified HAIL activity.

- *Activity A17: Storage tanks or drums for fuel, chemicals or liquid waste.* This relates to above ground fuel storage tanks and oil drums being stored in paddocks in Lots 1 and 2 DP 360577.
- *Activity G5: Waste disposal to land (excluding where biosolids have been used as soil conditioners).* This relates to general refuse being observed stored on existing ground surface on Lots 1 and 2 DP 360577 and Pt RS 2423.
- *Activity I: Land subject to intentional or accidental release of hazardous substances in sufficient quantity that it could be a risk to human health or the environment. This applies to:*
 - Historical railway along the western boundary of Lots 1 & 2, DP73583, Pt RS3122 and RS39794.
 - Existing stockpiles on Pt RS 2423. The stockpiled soil appeared to be silts and sands and occasional gravel, with some demolition materials (concrete blocks) of unknown origin. Soil sampling may be required by Council to confirm the stockpile soils and underlying ground are not contaminated.
 - Existing stockpiles on Lots 1 and 2 DP 360577. The stockpiles generally comprised soil and plant material. The soil appeared to be silts and sands and occasional gravel. Soil sampling may be required by Council to confirm the stockpile soils and underlying ground are not contaminated.
 - Rubbish and old machinery/car body remains on Lot 1 DP 73583, Lots 1 and 2 DP 360577, Pt RS 2423 (historical) These areas need to be cleared of rubbish and then the underlying ground inspected for signs of contamination (staining or odour). Soil sampling is likely to be required at this time to confirm the presence or absence of soil contamination.
 - Other activities such as potential lead-based paint use on older buildings, historical fires and burn piles on Lots 1 and 2 DP 73583, Pt RS 3122, Lot 1 3896, Lot 1 DP 5284, Lot 1 DP 360577 and Pt RS 2423.
- *Activity E1: Asbestos products manufacture or disposal including sites with buildings containing asbestos products known to be in a deteriorated condition.* ACM demolition material from historical buildings (HAIL activity E1) on Lots 1 and 2 DP 73583, Pt RS 3122, Lot 1 3896, Lot 1 DP5284, Lot 1 DP360577, and Pt RS 2423. A review of the available historical aerials of these sites show that several small sheds/buildings have been historically present at least since 1940. Asbestos based products were prominent in New Zealand homes and other buildings from the 1920s to the mid-1980s. Therefore, it is likely that these soils could potentially be contaminated with asbestos from prior demolition activities. Hence, it is recommended that this area be further investigated and soil sampling be undertaken to confirm the identified HAIL activity.

In summary, based on the information presented in this report, whilst it is clear that historic HAIL activities have occurred at the site, it is uncertain what effects, if any, they have had on site soils. Therefore, in accordance with NESCS requirements, a Detailed Site Investigation (DSI) is required in order to assess site soils to determine environmental effects, or otherwise. It is

recommended this work be done at the subdivision resource consent application stage. If further investigation is not undertaken prior to lodging for resource consent, then the proposed subdivision would be a discretionary activity under Regulation 11 of the NESCS.

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TRICES ROAD REZONING GROUP

PRIVATE PLAN CHANGE TO THE OPERATIVE SELWYN DISTRICT PLAN AND SUBMISSION ON SELWYN DISTRICT PLAN REVIEW TRICES ROAD, PREBBLETON

PRELIMINARY SITE INVESTIGATION - CONTAMINATION

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PRELIMINARY SITE INVESTIGATION - CONTAMINATION

1.0 INTRODUCTION

In response to instructions from Aston Consultants, Fraser Thomas Limited (FTL) undertook a Preliminary Site Investigation (PSI) for Lot 1 DP 73583, Lot 2 73583, Part RS 3122, RS 39794, Lot 1 DP 3896, Lot 1 DP 5284, Lot 1 78905, Lot 1 DP 360577, Lot 2 360577, Part RS 2423 ('site'). The site comprises eight properties (10 separate Records of Title) and is located between Trices Road and Hamptons Road to the north and south, and Birchs Road and rural properties to the west and east, respectively.

It is understood that it is proposed to lodge a submission on the Proposed Selwyn District Plan, and a private plan change request to the Operative Selwyn District Plan, seeking rezoning of the above properties from "Rural" to "Residential", to enable subdivision of the site to create new lots, with an average lot size of 650m², but also include some areas of small lot residential development in the 400m² to 500m² size range. It is understood that the parcel of land bordering Birchs Road and Hamptons Road (approximately 2.8 ha) is also proposed to be rezoned, in order to create new lots, with an average proposed lot size of approximately 5,000m².

This investigation involved a desktop study, site walkover and reporting associated with potential land contamination issues.

The format of this report is as follows:

- Rationale, objectives and scope of work.
- Site details.
- Investigation methodology.
- Desktop study and site walkover results.
- Discussion, conclusions and recommendations.
- Site plans, representative photographs and other relevant information in appendix form.

This investigation has been managed, reviewed and approved by a Suitably Qualified and Experienced Practitioner (SQEP), as defined in the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS).

2.0 RATIONALE, OBJECTIVES AND SCOPE OF WORK

The main rationale and objectives for this investigation were:

- To identify the main actual or potential contamination issues due to ongoing and historic use of land within the site.
- To confirm that the site is suitable or can be made suitable for the proposed rezoning.

3.0 INVESTIGATION METHODOLOGY

The methodology used for this site assessment is summarised below:

1. Desktop study involving review of existing historical information for the subject site including aerial photographs, certificates of title, Council property files/databases and interviews with relevant people.
2. Site walkover investigation of the subject site, with a visual appraisal to identify any disturbed and potentially contaminated areas. Relevant photographs are set out in Appendix C.
3. Preparation of a PSI report including the results of the desktop study, site walkover survey and conclusions and recommendations.
4. Provision of site plans, relevant documentation and representative photographs as appendices to this report.

Fraser Thomas Limited Health and Safety Management Plan procedures were followed throughout the duration of the investigation.

4.0 SITE DETAILS

4.1 LOCATION, PROPERTY DETAILS AND LAND USE

The site comprises nine different properties and covers an area of approximately 28.4 ha between Trices Road and Hamptons Road to the north and south, and Birchs Road and rural properties to the west and east, respectively.

The site is zoned “Rural” under the Selwyn District Plan.

Details of each of the individual properties making up the rezoning area are listed in Table 1, including the current land use.

Table 1: Property Details

Registered Owner	Address	Appellation Title	Area (ha)	Land Use
Grant James Crabbe Mark James Crabbe Rosemary Joyce Crabbe	341 Trices Road, Prebbleton	Lot 1 DP 73583	2.0236	Rural
Anne Elizabeth Sweney Mark Raymond Sweney	329 Trices Road	Lot 2 DP 73583	2.3868	Rural; forestry, and orcharding
Helen Nancy Tuff Lawrence Napier Tuff	42 Hamptons Road	Pt RS 3122 RS 39794	2.4837 0.3038	Rural
Gina Ann Cridge Timothy John Cridge	32 Hamptons Road	Lot 1 DP 3896	2.4357	Rural; sheep grazing
Lee Michael Christopher Robinson	327 Trices Road	Lot 1 DP 5284	0.1279	Residential
Bronwyn Jeffs Evan Ross Jeffs	321 Trices Road	Lot 1 DP 78905	8.0	Rural
Anthony Edwin George Barbara Ellen George Hugh Simon Lindo	311 Trices Road	Lot 1 DP 360577 Lot 2 DP 360577	8.12	Rural; sheep and cattle grazing, cropping
John Barrett Tania Maree Barrett	299 Trices Road	Pt RS 2423	2.8327	Rural

4.2 TOPOGRAPHY, GEOLOGY AND SOILS

The topography across the entire site is generally level, with some gentle undulations across the site.

In carrying out the appraisal of the site, reference has been made to the Institute of Geological and Nuclear Sciences geological web map (NZ 1:250,000). The map indicates that the site is underlain by unweathered, variably sorted gravel, sand, silt and clay of alluvial origin.

The results of a geotechnical investigation undertaken by Fraser Thomas Ltd on 2 July 2020, in general, indicate that the surficial soils underlying the site are likely to comprise alluvial sediments of the Springston Formation of Holocene age. No obvious surficial fill material was identified during the geotechnical investigation.

4.3 PROPOSED DEVELOPMENT

It is understood that it is proposed to lodge a submission on the Proposed Selwyn District Plan, and a private plan change request to the Operative Selwyn District Plan, seeking rezoning of the above properties from “Rural” to “Residential”, to enable subdivision of the site to create new lots, with an average lot size of 650m², but also include some areas of small lot residential development in the 400m² to 500m² size range. It is understood that the parcel of land bordering Birchs Road and Hamptons Road (approximately 2.8 ha) is also proposed to be rezoned, in order to create new lots, with an average proposed lot size of approximately 5,000m².

5.0 DESKTOP STUDY AND WALKOVER SURVEY RESULTS

The results of the desktop study and the site walkover survey are summarised in this section and illustrated in the attached site features plan (drawing E00417-01B), aerial photographs (Appendix B) and site photographs (Appendix C). Throughout the site walkover survey, a visual assessment was used to classify any foreign materials as particular contaminants, without any formal identification. Hence, reference to a specific contaminant in the survey results should essentially be read as “suspected contaminant”, unless otherwise stated.

5.1 LOT 1 DP 73583

5.1.1 Site Identification and Use

The site details and ownership history are summarised below.

Table 2: Site Details and Ownership History

Registered Owner	Grant James Crabbe Mark James Crabbe Rosemary Joyce Crabbe	
Street Address	341 Trices Road, Prebbleton	
Legal Description	Lot 1 DP 73583	
Title	CB40A/876	
Area (ha)	2.0236	
Zoning	Rural	
Ownership History		
CTs	From	Registered Owner
CB40A/876	Oct 1996 Jun 2007	Grant James Crabbe and Rosemary Joyce Crabbe Transfer to Grant James Crabbe and Rosemary Joyce Crabbe (1/9 Share) and Mark James Crabbe (8/9 Share)
CB414/287	1929 to 1972 Aug 1972 June 1989	Several owners, including farmers Transfer to Melville Edward Sutton and Elaine Patricia Sutton, Poultry Inspector Transfer to Grant James Crabbe and Rosemary Joyce Crabbe, mechanic

CB10B/158	Nov 1970 Aug 1972 June 1989	Henry James Bailey and Edna Daphne Bailey, molder Transfer to Melville Edward Sutton and Elaine Patricia Sutton, Poultry Inspector Transfer to Grant James Crabbe and Rosemary Joyce Crabbe, mechanic
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The CT information available indicates that the property was previously part of a larger property Pt RS 3122 and has had several owners, of various occupations until 1989, when current part owners took ownership. In 1996, the site was subdivided to create Lots 1 and 2 DP 73583.

5.1.2 Interviews

Mark Crabbe – Current owner

Mark's parents purchased the property in the late 1980's. At that time the sheds that had historically been used for poultry farming (caged eggs), were in a state of disrepair. They had not been used for a significant period of time. The sheds are understood to have been constructed of light timber framing with corrugated iron cladding. The sheds were demolished sometime during 1989 to 1990.

The two existing sheds/garages were built in the 1990s from new materials, and rebuilt again in 2016 and 2018.

No crops have been cultivated at the site during his family's ownership, and the only chemical used on site has been Roundup.

The site is currently used for grazing small numbers of cattle.

The site has previously been used for horse grazing.

5.1.3 Aerial Photographs

1940-44 Aerial

The subject site is almost entirely covered with grass and appears to be in pasture. A dwelling is located in the middle of the site along the northern boundary. The only other buildings present on site appear to be four sheds or shelters located south of the main dwelling. A railway is located along the western boundary of the site.

1955-59 Aerial

There only significant change from 1940-44 are the addition of what appear to be permanent shed structures. The sheds or shelters identified in the earlier aerial photograph are no longer on the site. The remainder of the site is still in pasture.

1960-64 Aerial

A large shed (confirmed by owner to be poultry shed) is present across the eastern half of the site. The fields in the western and south-eastern parts of the site appear to be used for cropping.

1965-69 Aerial

Several sheds (confirmed by owner to be poultry sheds) can be seen immediately south and west of the existing glasshouse. The remainder of the site appears to have been returned to pasture.

1970-74 Aerial

The railway along the western boundary of the site appears to have been removed sometime after 1965-69. The remainder of the site is unchanged apart from a few extensions to the existing poultry shed towards the east.

1975-79 Aerial

The only change from 1970-74 is the addition of a horse trotting track in the south-eastern corner of the site.

1980-84 Aerial

There are no significant changes from 1975-79.

1990-94 Aerial

The site has changed significantly since 1980-84. All previously existing buildings have been removed. A new dwelling has been constructed in the same location as the previous dwelling. Two new garages have been constructed to the south of the new dwelling. The remainder of the site is in pasture, and there is no evidence of any other activity on the site.

1995-2015 Aerial

There are no significant changes from 1990-94.

2019 Aerial

There are no significant changes from 2010-15; however, based on the results of the site walkover, the existing garages appear to have been either rebuilt or re-clad in corrugated iron.

5.1.4 Council Records

The Council property file was reviewed. The only relevant information found related to building consents issued by Council:

- 1990 – Building permit documents for dwelling

The building permit documents indicate that the original dwelling located on the site was destroyed by a fire sometime in 1990. The documents do not specify the materials used in the construction of the original dwelling.

5.1.5 Listed Land Use Register (LLUR)

A contaminated site enquiry was sent to Canterbury Regional Council on 15 July 2020, for information on the subject site held on their Listed Land Use Register (LLUR).

There records indicate the site has been subject to HAIL activity A10 (*Persistent pesticide bulk storage or use including sports turfs, market gardens, orchards, glass houses, or spray sheds*). The LLUR also notes the following: “Area defined from 1965 to 1984 aerial photographs. A poultry farm (persistent pesticides) was noted in aerial photographs reviewed” and the verified HAIL has not been investigated. The LLUR statement for this site is included in Appendix D.

5.1.6 Site Walkover Results

A site walkover of the subject site was undertaken by a FTL Engineering Geologist on 3rd July 2020. Site investigation photographs are provided in Appendix C. The site is located at the south-eastern corner of Trices Road and Birchs Road.

The central part of the site is used for residential purposes, a house with two detached garages was noted. The driveway and area surrounding the garages had an unsealed metalled surface. The remainder of the site was vegetated with grass, and appears to be used for grazing a small number of cattle.

Various refuse items were being stored on bare ground behind the larger garage. These include old car bodies, old car batteries, paint and motor oil containers, and demolition material. No obvious leaking or spillage of paint or oils was observed in this area.

No obvious evidence of demolition material from the poultry farm identified in the LLUR was observed while on site.

5.1.7 Discussion

The existing property appears to have been part of a larger property (including Lot 2 DP 73583 to the south) since at least 1944. The eastern portion of the site appears to have been used for horticultural purposes sometime between 1960-1969 when several poultry sheds were visible in the aerial photos reviewed. - The remainder of the site has been used for grazing purposes until around 1999 when the original property was subdivided into Lots 1 and 2 DP73583.

Potential HAIL activities identified for this property relates to the following:

- Persistent pesticides associated with the poultry farm -HAIL activity A10.
- Anecdotally, the poultry sheds historically located on the site (which were demolished sometime during 1989 to 1990) are understood to have been constructed out of timber and corrugated iron. However, based on our experience with similar structures, it is possible that some asbestos containing material (ACM) may have been used in the construction of the sheds -HAIL activity E1.
- Heavy metals and asbestos associated with the destruction by fire of the original dwelling of unknown construction in 1990 - HAIL activity I.
- The storage of old car bodies and used batteries on bare ground behind one of the garages - HAIL activity I.
- Heavy metals and PAHs associated with the historical railway located within the site along the western boundary until at least 1965-69 - HAIL activity I.
- Lead paint contamination of soils from historical buildings no longer present on site which have either been damaged or demolished – potential HAIL activity I.

5.2 LOT 2 DP 73583

5.2.1 Site Identification and Use

The site details and ownership history are summarised below.

Table 3: Site Details and Ownership History

Registered Owner	Anne Elizabeth Sweney Mark Raymond Sweney	
Street Address	329 Trices Road, Prebbleton	
Legal Description	Lot 2 DP 73583	
Title	CB40A/877	
Area (ha)	2.3868	
Zoning	Rural	
Ownership History		
CTs	From	Registered Owner
CB40A/877	Oct 1996	Transfer to Mark Raymond and Anne Elizabeth Sweney
CB414/287	1929 to 1972	Several owners, including farmers
	Aug 1972	Transfer to Melville Edward Sutton and Elaine Patricia Sutton, Poultry Inspector
	June 1989	

		Transfer to Grant James Crabbe and Rosemary Joyce Crabbe, mechanic
CB10B/158	Nov 1970 Aug 1972 June 1989	Henry James Bailey and Edna Daphne Bailey, molder Transfer to Melville Edward Sutton and Elaine Patricia Sutton, Poultry Inspector Transfer to Grant James Crabbe and Rosemary Joyce Crabbe, mechanic

The CT information available indicates that the property was previously part of a larger property Pt RS 3122 and has had several owners, of various occupations until 1989, when current part owners of Lot 1 DP 73583 took ownership. In 1996, the site was subdivided to create Lots 1 and 2 DP 73583.

5.2.2 Interviews

Mark Sweney – Current owner

The property was purchased in 1996 as a vacant lot. A small pine forest of approximately 0.5 ha was subsequently planted, as well as a small orchard at the western side of the dwelling.

According to information provided by the owner, the only agrichemical used on the subject site was Orthene (insecticide). The owner indicated that Orthene was only used when the orchard was initially planted (1998 according to Council records – see below), and that the orchard was kept productive for only a short time as birds kept eating the fruit.

5.2.3 Aerial Photographs

1940-44 Aerial

The subject site is entirely covered with grass and appears to be in pasture. A railway is located along the western boundary of the site. No structures are present.

1955-59 Aerial

There are no significant changes from 1940-44.

1960-64 Aerial

The entire site appears to be prepared for crop planting.

1965-69 Aerial

Two sheds (confirmed to be poultry sheds) constructed on Lot 1 DP 73583 (north of the subject site) encroach approximately 10 m into the site along the middle of the northern boundary. The remaining site appears to have been returned to pasture.

1970-74 Aerial

The railway along the western boundary of the site appears to have been removed sometime after 1965-69. The western paddock appears to be used for cropping activities.

1975-79 Aerial

The site has been returned to pasture and a horse trotting track is located in the eastern half of the site.

1980-84 Aerial

There are no significant changes from the 1975-79 aerial.

1990-94 Aerial

The previously existing along the middle of the northern boundary have been removed.

1995-99 Aerial

There are no significant changes from the 1990-94 aerial.

2000-04 Aerial

A dwelling and shed have been constructed in the north-western corner of the site. The remainder of the site is in pasture.

2004-10 Aerial

Shelter belts have been planted at the site. Landscaping associated with the dwelling has been undertaken.

2010-15 Aerial

A forestry block is visible in the south-eastern corner of the site.

2019 Aerial

There are no significant changes from 2010-15.

5.2.4 Council Records

The Council property file was reviewed. The only relevant information found related to building consents issued by Council:

- 1998 – Resource consent (R302754) file note for new dwelling and intensive horticulture and nursery.
- 1999 – Building consent for new dwelling
- 1999 – Drainage Plan
- 2017 – Internal Selwyn District Council (SDC) email regarding potential contamination issues on site.

The SDC email states the following:

“LIM note suggested.

This property was identified on a preliminary list (prepared by SDC in September 2014), of potentially contaminated sites due to its previous use as an intensive shrub and tree nursery in conjunction with intensive vegetable production. This SDC list along with other Information relating to the site has been separately assessed by ECan and the site has not been included on the Listed Land Use Register. Never the less this preliminary list is information that SDC holds in relation to the property so disclosure is appropriate enabling further consideration as to whether or not additional research is required relating to the existence or otherwise of previous uses. “

5.2.5 Listed Land Use Register (LLUR)

A contaminated site enquiry was sent to Canterbury Regional Council on 16 July 2020, for information on the subject site held on their Listed Land Use Register (LLUR). There are no records associated with the site under the Environment Canterbury LLUR. The LLUR statement for this site is included in Appendix D.

5.2.6 Site Walkover Results

A site walkover of the subject site was undertaken by a FTL Engineering Geologist on 3rd July 2020. Site investigation photographs are provided in Appendix C. The site is accessed via the southern side of Trices Road and also borders the eastern side of Birchs Road.

The north-eastern corner of the site is used for residential purposes. A dwelling and shed are the only structures on site.

A small orchard is located at the western end of the dwelling.

A small forestry block is located in the south-eastern corner of the site. An empty container which contained chlorhexidine gluconate (Hibitane Organic), was observed at the edge of this

forest. The owner has indicated that Hibitane has not been used on the site, and that the empty drum was most likely used as a watering trough for horses.

No evidence of an intensive tree or shrub nursery was observed at the time of the site walkover.

The remainder of the site is divided into two paddocks, which are vegetated with grass and separated by windbreaks. There are several burn pile locations within these paddocks, which the owner has indicated have been used to burn brush/branch cuttings.

5.2.7 Chemical Risk Assessment

According to information received from the client, the only chemical used on site during the last few years is Orthene (insecticide). Research found that Orthene's active ingredient is acephate, which dissipates rapidly with half lives of <3 and 6 days in aerobic and anaerobic soils respectively, producing methamidophos and carbon dioxide, with the methamidophos degrading to immobile compounds within 20 days. Consequently, it is considered unlikely that orthene application would lead to any soil contamination.

5.2.8 Discussion

The existing property appears to have been part of a larger property (including Lot 1 DP 73583 to the north) since at least 1944. The aerials show that between 1960 and 1990 the buildings inferred to be poultry sheds encroached into the site along the northern boundary. The rest of the site appears to have been used for farming (grazing) purposes until around 1999 when the original property was subdivided into Lots 1 and 2 DP73583.

Potential HAIL activities identified for this property relate to the following:

- Persistent pesticides associated with the poultry farm, and orchard -HAIL activity A10
- Anecdotally, the poultry sheds are understood to have been constructed out of timber and corrugated iron. However based on our experience with similar structures, it is possible that some asbestos containing material (ACM) may have been used in construction-HAIL activity E1.
- Heavy metals and PAHs associated with the railway located within the site along the western boundary until at least 1965-69-HAIL activity I.
- Burn piles are unlikely to have caused soil contamination if only brush/branch. cuttings were burnt as advised by the owner. However, Council may require independent verification (i.e. soil testing) of this to confirm that no other potentially contaminating items were burnt (e.g. treated timber) – HAIL activity I.
- Lead paint contamination of soils from historical buildings (poultry sheds) no longer present on site which have either been damaged or demolished – potential HAIL activity I
- Historical horse track located on site may have been subjected to filling or lining with ash or other unknown materials – HAIL activity I.

5.3 PT RS 3122 AND RS 39794

5.3.1 Site Identification and Use

The site details and ownership history are summarised below.

Table 4: Site Details and Ownership History

Registered Owner	Helen Nancy Tuff & Lawrence Napier Tuff	
Street Address	42 Hamptons Road, Prebbleton	
Legal Description	Pt RS 3122 and RS39794	
Titles	CB23K/1215 and CB11A/555	
Area (ha)	2.4837 and 0.03038	
Zoning	Rural	
Ownership History		
CTs	From	Registered Owner
CB23K/1215	Jun 1992	Transfer to Russell Treloar Stevens and Henrietta Maria Stevens, Company Director
	Sep 1996	Transfer to Sergei Stanislavovich Kotelkov, Student
	Mar 2003	Transfer to Horseman’s Limited
	Mar 2005	Transfer to Stephen David Cunningham and Sandra Jean Cunningham
	July 2011	Transfer to Stephen William Hansen and Trevor David Steele
	Mar 2020	Transfer to Lawrence Napier Tuff and Helen Nancy Tuff

The CT information available indicates that the property has had several owners of various occupations since 1982. CT information before 1982 was unable to be obtained.

5.3.2 Interviews

The current owners were not interviewed as part of this investigation.

5.3.3 Aerial Photographs

1940-44 Aerial

The majority of the subject site is surrounded on three sides by a shelter belt, entirely covered with grass and appears to be in pasture. There are several buildings at the southern end of the site, which appear to comprise a dwelling and at least three sheds. The image quality is relatively poor, making it difficult to establish the land use in the vicinity of the buildings. A railway is located along the western boundary of the site.

1955-59 Aerial

The only significant changes from 1940-44, is what appears to be further sheds erected in the southern part of the site. The image quality is relatively poor, making it difficult to establish the land use in the vicinity of the buildings.

1960-64 Aerial

The only significant changes from 1955-59, is what appears to be further sheds and some trees in the southern part of the site.

1965-69 Aerial

There are no significant changes from 1960-64.

1970-74 Aerial

The majority of the sheds appear to have been removed and replaced with a single, larger structure along the eastern boundary. There also appears to be some development immediately north of the dwelling, although its purpose cannot be ascertained due to poor image quality. The railway along the western boundary of the site appears to have been removed sometime after 1965-69.

1975-79 Aerial

A new building, inferred to be a dwelling, has been constructed in the southern part of the site. All previously existing structures appear to have been removed, with the exception of the larger structure along the eastern boundary. The ground in the vicinity of the new dwelling appears to have been cleared; it is unknown if it is vegetated due to poor image quality.

1980-84 Aerial

The south part of the site associated with the dwelling appears to have been significantly landscaped. Several trees have been planted, and surrounding area is vegetated with grass.

1990-94 Aerial

Several trees have been planted in the vicinity of the dwelling.

1995-99 Aerial

The image quality is too poor to establish any significant changes, although it appears an inground swimming pool has been built next to the dwelling.

2000-04 Aerial

The image quality is too poor to establish any significant changes.

2004-10 Aerial

There does not appear to be any significant change to land use for the site. Shelter belts along the eastern and northern boundaries have been removed.

2010-15 Aerial

The paddocks in the northern two thirds of the site appear to have been used for cropping, and have been recently harvested. Two small sheds have also been constructed in this part of the site.

2019 Aerial

The southern part of the site has significantly changed. The pre-existing dwelling and swimming pool have been removed. A large new dwelling and new swimming pool have been constructed and significant landscaping has taken place. Approximately one quarter of the southern part of the site now appears to be covered in impervious surfaces (asphalt and concrete). The northern two thirds of the site have been fenced off in to paddocks which appear to be used for keeping animals.

5.3.4 Council Records

The Council property file was reviewed. The only relevant information found related to building consents issued by Council:

- 1973 – Building Permit documents for new house. Plans indicate soffits were made from ACM.
- 1973 – Building Permit for new shed
- 1973 – Building Permit documents for new pump house
- 1987 – Building Permit documents for new swimming pool
- 2005 – Letter from SDC regarding query about infilling a stock water race
- 2014 – Building consent documents for new dwelling

5.3.5 Listed Land Use Register (LLUR)

A contaminated site enquiry was sent to Canterbury Regional Council on 16 July 2020, for information on the subject site held on their Listed Land Use Register (LLUR). There are no records associated with the site under the Environment Canterbury LLUR. The LLUR statement for this site is included in Appendix D.

5.3.6 Site Walkover Results

The site was unable to be directly accessed on 3rd July 2020. However, paddocks in the northern two thirds of the site were able to be observed from the property to the north. Site investigation photographs are provided in Appendix C. The site is located on the north-eastern corner of Hamptons Road and Birchs Road.

The southern third of the site is used for residential purposes, this part of the site was unable to be directly observed.

The remainder of the site is divided into paddocks, which are vegetated with grass.

5.3.7 Discussion

Since at least 1944, the northern portion of the site appears to have been used for pastoral purposes, with parts of the site intermittently used for cropping activities, while the southern portion of the site has been used for residential purposes.

Potential HAIL activities identified for this property relates to the following:

- Asbestos may be present in the southern part of the site due to the demolition of previously existing buildings-HAIL activity E1.
- Heavy metals and PAHs associated with the railway located within the site along the western boundary until at least 1965-69-HAIL activity I.
- Lead paint contamination of soils from historical buildings no longer present on site which have either been damaged or demolished – potential HAIL activity I.

No evidence of a historic stock race was found in any aerial photographs or during the site walkover, including checking for any stock race on adjacent properties that it would have connected into. Hence, this has not been listed as a potential HAIL activity.

5.4 LOT 1 DP 3896

5.4.1 Site Identification and Use

The site details and ownership history are summarised below.

Table 5: Site Details and Ownership History

Registered Owner	Timothy John Cridge Gina Ann Cridge	
Street Address	32 Hamptons Road, Prebbleton	
Legal Description	Lot 1 DP 3896	
Title	CB20A/225	
Area (ha)	2.4357	
Zoning	Rural	
Ownership History		
CTs	From	Registered Owner
CB20A/225	Jun 1979	Transfer to Peter William Watson, University Lecturer
	Jun 2000	Transfer to Graham John Pye and Eileen Gillian Pye
	Jan 2019	Transfer to Timothy John Cridge and Gina Ann Cridge

The CT information for owners before 1979 was unable to be obtained.

5.4.2 Interviews

The current owners were not interviewed as part of the PSI.

5.4.3 Aerial Photographs

1940-44 Aerial

No development is present, and the entire site is in pasture. A wind break is located along the western boundary.

1955-69 Aerial

There are no significant changes from 1940-44.

1970-74 Aerial

The majority of the site remains in pasture, however, a dwelling has been constructed in the south-eastern corner.

1975-79 Aerial

There are no significant changes from 1970-74.

1980-84 Aerial

The existing dwelling has been extended and some landscaping has been undertaken. A shed like structure has been built midway along the eastern boundary. The remainder of the site appears to still be in pasture. A shelter belt has been planted along the eastern boundary.

1990-94 Aerial

Further landscaping, including tree planting has taken place in the vicinity of the dwelling. It is unknown whether these were orchard type plants. Rows of trees, can be seen in the northern part of the site, is inferred to show orchard activities.

1995-99 Aerial

There are no significant changes from 1990-94.

2000-04 Aerial

The image quality is poor, however, the paddocks appear to have been subjected to cropping activities. The suspected orcharding activities in the northern part of the site are still present.

2004-10 Aerial

There does not appear to be any significant change to land use for the site. The landscaped area associated with the dwelling appears to have increased in size by 0.25 ha. The land use in this area is difficult to establish due to the image quality.

2010-15 Aerial

The site is generally in the same configuration as the 2004-10 aerial apart from a glasshouse and areas inferred to be used for growing vegetables seen in close proximity to the existing dwelling towards the southern end of the site. Three sheds can also be seen present surrounding the existing dwelling.

2019 Aerial

The site is generally in the same configuration as the 2010-15 aerial. The glasshouse and sheds are still present, but the growing areas appear to have been left to overgrow.

5.4.4 Council Records

The Council property file was reviewed. The only relevant information found related to building consents issued by Council:

- 1972 – Building Permit documents for new garage
- 1973 – Building Permit documentation for new dwelling
- 1977 – Building Permit documentation for new carport
- 1980 – Building Permit documents for extension to dwelling
- 1990 – Building Permit documents for extension to dwelling
- 1999 – Building Consent documents for extension to dwelling
- 2006 – Building Consent documents for extension to dwelling
- 2018 – Building Consent documents for extension to dwelling

Architects plans for the new dwelling in 1973 specify that Polite was to be used for the Soffit board.

5.4.5 Listed Land Use Register (LLUR)

A contaminated site enquiry was sent to Canterbury Regional Council on 16 July 2020, for information on the subject site held on their Listed Land Use Register (LLUR). There are no records associated with the site under the Environment Canterbury LLUR. The LLUR statement for this site is included in Appendix D.

5.4.6 Site Walkover Results

The subject site was unable to be accessed on 3rd July 2020, as the current owners are not part of the rezoning group. The site is located on the northern side of Hamptons Road. The paddocks in the northern part of the site were able to be observed from the adjacent property to the east, although visibility was limited due to the windbreak.

The location of the suspected orchard activities was still planted with trees, however it was not possible to establish whether these were in fact part of an orchard.

The remainder of the site is divided into paddocks, which are vegetated with grass. The paddocks appear to currently be used for grazing a small number of sheep.

The residential part of the site was unable to be inspected for signs of contamination.

5.4.7 Discussion

Since at least 1944, the majority of the site appears to have been used for pastoral purposes. The only development on the site has only taken place sometime from 1970, in the south-eastern corner of the site. Generally, this appears to have involved residential activity, and since approximately 2004 the small scale growing of produce.

Since the original dwelling was constructed, it appears there has been five extensions added. The plans for the original dwelling indicate that the soffit boards were to be of Polite construction. It is unclear if any damage to the soffit boards occurred during any of the extension works.

Potential horticultural activity has been present in the northern end of the site from 1990.

Potential HAIL activity identified for this property relates to the following:

- Persistent pesticides associated with the inferred historical orchard-HAIL activity A10.
- Possible asbestos in the southern part of the site due to alterations to the existing buildings, which records indicate may have ACM-HAIL activity E1.
- Lead paint contamination of soils from buildings present on site which have either been subject to alterations – potential HAIL activity I.

5.5 LOT 1 DP 5284

5.5.1 Site Identification and Use

The site details and ownership history are summarised below.

Table 6: Site Details and Ownership History

Registered Owner	Lee Michael Christopher Robinson	
Street Address	327 Trices Road, Prebbleton	
Legal Description	Lot 1 DP 5284	
Title	CB321/181	
Area (ha)	0.1279	
Zoning	Rural	
Ownership History		
CTs	From	Registered Owner
CB321/181	Apr 1920	Transfer to Walter Payne
	Nov 1921	Transfer to Joseph Nicholas, farm labourer
	Dec 1927	Transfer to David McKee
	Feb 1946	Transfer to Horace William Gallagher
	Jan 1956	Transfer to Russell Patrick O'Shaughnessy, farmer
	Aug 1959	Transfer to name/occupation illegible
	Sep 1963	Transfer to Winnie Marion Sylvia McJarrow, farmer
	Aug 2014	Transfer to Lee Michael Christopher Robinson

The CT information available indicates that the property has had several owners, mostly farmers until at least 2014.

5.5.2 Interviews

The current owners were not interviewed as part of this investigation.

5.5.3 Aerial Photographs

1940-44 Aerial

A dwelling is located in the northern half of the site, and sheds appear to be located along the southern boundary. The remainder of the site appears to be vegetated with grass.

1955-59 Aerial

There are no significant changes from 1940-44, other than a wind break surrounding the property.

1960-64 Aerial

There are no significant changes from 1955-59.

1965-69 Aerial

The only significant change is the addition of a garage in the northern part of the site. The extent of the shelter belt has been reduced.

1970-74 Aerial

The aforementioned garage has been extended to the house, and another shed has been constructed in the southern part of the site.

1975-79 Aerial

The image quality is poor, however, there appear to be no significant changes from 1970-74.

1980-84 Aerial

An extension has been added to the northern end of the dwelling.

1990-2010 Aerial

There are no significant changes from 1980-84.

2010-15 Aerial

The site is generally in the same configuration as the 2004-10 aerial. The land use in the vicinity of the house can be more clearly identified. An area inferred to be used for growing vegetables can be seen in the south western corner of the site. A further growing area can be seen along the southern boundary, but within the adjacent property (Lot 1 DP78905).

2019 Aerial

The site is generally in the same configuration as the 2010-15 aerial. However, the growing area in the adjacent property has been returned to grass.

5.5.4 Council Records

The Council property file was reviewed. The only relevant information found related to building consents issued by Council:

- 1974 – Building Permit documents for new garage
- 1977 – Letter concerning unpermitted building.
- 1977 – Building Permit documents for a new shed
- 1980 – Building Permit documents for a new car port
- 1983 – Building Permit documents for and extension to dwelling

The 1974 Building Permit documents for the garage which was shifted to the site indicate the cladding was consisted of either Polite or Durock (contains asbestos).

A letter from the County Engineer for Paparua County Council, dated November 1974, indicates that approval was granted for the garage to be moved to site subject to several conditions. The third condition stated that *“All damaged sheets of Durock to be replaced”*. It is not known if this was undertaken.

5.5.5 Listed Land Use Register (LLUR)

A contaminated site enquiry was sent to Canterbury Regional Council on 16 July 2020, for information on the subject site held on their Listed Land Use Register (LLUR). There are no records associated with the site under the Environment Canterbury LLUR. The LLUR statement for this site is included in Appendix D.

5.5.6 Site Walkover Results

The subject site was viewed from the adjacent property on 3rd July 2020. The site is located on the southern side of Trices Road.

No obvious signs of contamination sources were visible within the site.

5.5.7 Discussion

Since at least 1944, the site appears to have been used for residential purposes.

Suspected vegetable growing has been present in the south-western corner of the site, from at least 2010 to present day.

Potential HAIL activities identified for this property relates to the following:

- Persistent pesticides associated with the historical growing activity covering the south-western portion of the site – HAIL activity A10.
- Possible asbestos in the existing buildings, which records indicate may have ACM – HAIL activity E1.
- Lead paint contamination of soils from older buildings located on site – potential HAIL activity I.

5.6 LOT 1 DP 78905

5.6.1 Site Identification and Use

The site details and ownership history are summarised below.

Table 7: Site Details and Ownership History

Registered Owner	Evan Ross Jeffs and Bronwyn Jeffs	
Street Address	321 Trices Road, Prebbleton	
Legal Description	Lot 1 DP 78905	
Title	CB45B/617	
Area (ha)	8.0	
Zoning	Rural	
Ownership History		
CTs	From	Registered Owner
CB45B/617	Oct 1998	Transfer to John Blake Eskdale and Hazel Dawn Eskdale
	Nov 1998	Transfer to John Pitura
	Mar 2014	Transfer to Evan Ross Jeffs and Bronwyn Jeff

The CT information for owners before 1998 was unable to be obtained.

5.6.2 Interviews

The current owners have provided feed back via email as to the origins of the sources of the potential contamination identified during the site walkover.

The circular patch of discoloured ground observed in the paddock south of the dwelling is the result of a “Beer Keg BBQ” burning the ground.

The vegetable garden and orchard is understood to be organic, and no chemicals have been used.

The stockpiled soil identified in the paddock to the south of the dwelling is understood to comprise topsoil sourced from the site. The stockpiles were formed for use as mountain bike jumps.

5.6.3 Aerial Photographs

1940-44 Aerial

The entire subject site appears to be vegetated with grass and used for grazing.

1955-1964 Aerial

There are no significant changes from 1940-44.

1965-69 Aerial

The southern three quarters of the site appear to be used for cropping purposes.

1970-74 Aerial

The entire site has been returned to pasture.

1975-79 Aerial

The image quality is poor, however, it appears that the northern half of the site is being used for cropping purposes.

1980-1994 Aerial

The entire site has been returned to pasture.

1995-99 Aerial

There are no significant changes from 1990-94, other than windbreaks having been planted in the northern part of the site.

2000-04 Aerial

A dwelling and detached garage/barn have been constructed in the northern part of the site. The remainder of the site is in pasture.

2004-10 Aerial

There are no significant changes from 1990-94. The paddocks adjacent to the dwelling have had some landscaping works undertaken. It appears a small shed has been constructed in the vicinity of the main garage/barn.

2010-15 Aerial

The site is generally in the same configuration as the 2004-10 aerial. The land use in the vicinity of the house can be more clearly identified. In the paddock immediately to the south of the dwelling, an area inferred to be used for growing vegetables can be seen.

2019 Aerial

The site is generally in the same configuration as the 2010-15 aerial. However, the growing area appears to have increased in size with two timber structures visible in the immediate surroundings. There appears to be an extension to the garage/barn.

5.6.4 Council Records

The Council property file was reviewed. The only relevant information found related to building consents issued by Council:

- 1998 – Building Consent documents for new dwelling and attached garage
- 1998 – Resource Consent for water bore
- 2000 – Building Consent documents for new garage/barn

5.6.5 Listed Land Use Register (LLUR)

A contaminated site enquiry was sent to Canterbury Regional Council on 16 July 2020, for information on the subject site held on their Listed Land Use Register (LLUR). There are no records associated with the site under the Environment Canterbury LLUR. The LLUR statement for this site is included in Appendix D.

5.6.6 Site Walkover Results

A site walkover of the subject site was undertaken by a FTL Engineering Geologist on 3rd July 2020. Site investigation photographs are provided in Appendix C. The site is located on the south side of Trices Road and extends to Hamptons Road.

The northern part of the site is used for residential purposes, a dwelling and detached garage/barn was noted. Landscaped gardens, and paddocks vegetated with grass are also located in this part of the site.

The drive way has an asphalt surface.

In the paddock to the south of the dwelling and garage/barn. There is an area used for growing produce, comprising a vegetable garden and small orchard, which the current owners have confirmed is largely organic and is used for private use only. A small glasshouse was also present.

The barn, of timber pole construction and a concrete slab on ground floor, backs on to this paddock. The barn is used to store vehicles and equipment (lawnmower, tires).

A container has been placed next to the barn, and a make shift roof spans between the two. In this area, a circular patch approximately 500 mm in diameter of black discoloured ground was observed. The current owners have indicated that this is burnt ground from a keg BBQ.

The paddock is also used for storage of various vehicle trailers and campervans.

Small stockpiles of topsoil, understood to have originated onsite, were also observed within this paddock. The current owners have confirmed that these small stockpiles are part of a mountain bike track.

The southern three quarters of the site comprise paddocks vegetated with grass.

No features of note or areas of potential contamination were identified in the southern three quarters of the site.

5.6.7 Discussion

Since at least 1944, the site appears to have been used for pastoral purposes, with parts of the site intermittently used for cropping activities.

Suspected vegetable growing, orcharding and farm sheds are seen present in the paddock south of the dwelling, from at least 2010 to present day. Bronwyn Jeffs has indicated that the vegetable garden and orchard are for private use and are of organic nature.

The discoloured ground is the result of a “Beer Keg BBQ” burning the ground.

Based on the site walkover and feedback provided by the homeowner, no obvious potential HAIL activities were identified at the site.

5.7 LOTS 1 AND 2 DP 360577

5.7.1 Site Identification and Use

The site details and ownership history are summarised below.

Table 8: Site Details and Ownership History

Registered Owner	Anthony Edwin George, Barbara Ellen George and Hugh Simon Lindo	
Street Address	311 Trices Road, Prebbleton	
Legal Description	Lot 1 and 2 DP 360577	
Title	246404 and 246405	
Area (ha)	8.0	
Zoning	Rural	
Ownership History		
CTs	From	Registered Owner
CB45B/617	May 2006	Transfer to Howjean Limited
	Jul 2006	Transfer to Anthony Edwin George, Barbara Ellen George
	Sep 2007	

		Transfer to Anthony Edwin George, Barbara Ellen George and Hugh Simon Lindo
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The CT information for owners before 2006 was unable to be obtained.

5.7.2 Interviews

Anthony and Barbara George – Current owners

The property was purchased in 1996 and comprised the current dwelling and two sheds in the northern part of the site. The remainder of the site was previously used for trotting and pacing of horses.

Since the George's have owned the property, the predominant land use has been sheep cattle grazing. No sheep dips or footrot troughs were known to be located on the site.

Intermittently some of the paddocks located on the internal side of the former trotting track, have been used to grow crops. The owners indicated that it was generally only one paddock per year, and were planted with either oats or hay. The soil was ploughed to a depth of approximately 300 mm.

According to information provided by the owner, the only agrichemical used on the subject site was Roundup, initially on the paddocks, but now mostly only used along fence lines in order to keep growth off the electric fences.

5.7.3 Aerial Photographs

1940-44 Aerial

A building, inferred to be a dwelling and at least two sheds, are located in the north-western corner of the subject site. Lot 1 appears to be used for cropping activities. The remainder of the site appears to be vegetated with grass and used for grazing.

1955-59 Aerial

Several other sheds have been constructed in the north-western corner of the subject site. The remainder of the site appears to be in pasture.

1960-64 Aerial

Lot 1 appears similar to the previous aerial while Lot 2 is used for cropping activities; the remainder of the site appears to be in pasture.

1965-69 Aerial

The aerial appears similar to the previous aerial apart from cropping activities now visible across remainder of Lot 1. Lot 2 appears to be vegetated with grass and used for grazing.

1970-74 Aerial

The sheds identified in the 1955-59 aerial photo, have been demolished. Both lots have returned to pasture.

1975-79 Aerial

There are no significant changes from 1970-74.

1980-84 Aerial

Two sheds have been constructed in the north-western corner of the subject site.

1990-94 Aerial

All pre-existing buildings in the north-western corner have been demolished. A new dwelling and two sheds have been constructed in the north-western portion of Lot 1. The remainder of the site is in pasture, and a horse trotting pacing track has been constructed.

1995-99 Aerial

There are no significant changes from 1990-94, other than windbreaks having been planted in the northern part of the site.

2000-2010 Aerial

There are no significant changes from 1995-99.

2010-15 Aerial

The site is generally in the same configuration as the 2004-10 aerial. The land use in the vicinity of the house can be more clearly identified. The paddocks immediately to the south of the dwelling and one paddock in the southern part of the site are used as storage areas for various vehicles, farm equipment, and general refuse items. Paddocks in the southern part of the site appear to have been used for cropping activity.

2019 Aerial

There are no significant changes from 2010-15.

5.7.4 Council Records

The Council property file was reviewed. The only relevant information found related to building consents issued by Council:

- 1979 – Building Permit documents for new shed
- 1981 – Building Permit documents for two horse boxes
- 1985 – Building Permit documents for new dwelling
- 1986 – Building Permit documents for new stables
- 1988 – Building Permit documents for extension to shed
- 2009 – Building Consent documentation for extension to dwelling

5.7.5 Listed Land Use Register (LLUR)

A contaminated site enquiry was sent to Canterbury Regional Council on 16 July 2020, for information on the subject site held on their Listed Land Use Register (LLUR). There are no records associated with the site under the Environment Canterbury LLUR. The LLUR statement for this site is included in Appendix D.

5.7.6 Site Walkover Results

The subject site was viewed from the adjacent property on 3rd July 2020. The site is located on the southern side of Trices Road. The northern part of the site (Lot 1 DP 360577) is used for residential purposes, a dwelling and two sheds were noted. Landscaped gardens, and paddocks vegetated with grass are also located in this part of the site. One of the paddocks is used for keeping a small number of cattle. The drive way surface is a mixture of metalled and asphalt.

The sheds of timber pole construction and a mix of earth and concrete slab on ground floors. The sheds are used to store vehicles and equipment. The western most shed is also used to store a small amount of fertilizer on pallets. The eastern shed is being used as a workshop (non-commercial).

The paddocks immediately to the south of the dwelling and sheds, are currently being used to store vehicles, farm equipment, and general refuse. Items of interest to this PSI include, above ground fuel storage tanks, orchard spraying apparatus, and numerous empty chemical containers. A burn pile, covered in dirt but with some visible organic material, is also located in the eastern most paddock.

The owner has stated that the above ground fuel tanks have never been used, as there has been problems with fuel theft in the area. The orchard spraying equipment, comprising a 500L tank, is a recent addition to the site and is currently empty. It has not been used on site.

The empty chemical containers are being stored on a wooden pallet, with pallets used as walls on three sides. The containers appear to be empty, and are in a generally clean condition. No

obvious leaks, or odours were observed while on site. The chemicals stored in these containers were generally lubricants, and cleaning agents.

The southern three quarters (Lot 2 DP 360577) of the site comprise paddocks vegetated with grass surrounded by a former horse trotting track.

A paddock in the southern part of the site, is also currently being used for storage of items including heating oil tanks, oil drums, and old building materials.

Old oil drums and stockpiles of soil and plant material, were also observed, in the south-eastern corner of the site.

5.7.7 Discussion

Since at least 1944, the majority of the site appears to have been used for pastoral purposes, with parts of the site intermittently used for cropping activities.

Potential HAIL activities identified for this property relates to the following:

- Asbestos may be present in the north-western corner of the site due to the demolition of previously existing buildings of unknown construction-HAIL activity E1.
- Heavy metals and TPHs associated with the storage of farm equipment vehicles, rubbish in paddocks and burn pile- HAIL activity I and/or G5.
- Persistent pesticides associated with the orchard spraying apparatus -HAIL activity A10.
- Oil drums and fuel storage tanks being stored in paddocks – HAIL activity A17
- Lead paint contamination of soils from historical buildings no longer present on site which have either been damaged or demolished – potential HAIL activity I.
- Existing horse track located on site may have been subjected to filling with unknown materials – HAIL activity I

5.8 PT RS 2423

5.8.1 Site Identification and Use

The site details and ownership history are summarised below.

Table 9: Site Details and Ownership History

Registered Owner	John Barret and Tania Maree Barrett	
Street Address	299 Trices Road, Prebbleton	
Legal Description	Pt RS 2423	
Title	CB22K/192	
Area (ha)	2.8328	
Zoning	Rural	
Ownership History		
CTs	From	Registered Owner

CB45B/617	Jul 1981	Transfer to Anthony Anderson and Yvonne Mary Anderson, Civil Servant
	Jul 1985	Transfer to Dean Alexander Taylor and Sandra Taylor, Stockman
	Feb 1990	Transfer to Dean Alexander Taylor, Stockman
	Sep 1995	Transfer to Roger John Searle and Glennis Maree Searle
	Mar 1999	Transfer to Grant Raymond Askew and Karen Gail Askew
	May 2018	Transfer to John Barrett and Tania Maree Barrett

The CT information available indicates that the property has had several owners, of various occupations.

5.8.2 Interviews

The current owners were not interviewed as part of this investigation.

5.8.3 Aerial Photographs

1940-44 Aerial

A building, inferred to be a dwelling, and a detached shed/garage, are located in the north-western corner of the subject site. The remainder of the site appears to be vegetated with grass and used for grazing.

1955-59 Aerial

Three large sheds have been constructed in the northern part of the subject site. The remainder of the site appears to be in pasture, with the exception of the southern end which is vegetated with trees and shrubs.

1960-64 Aerial

The only significant changes from 1955-59, are the demolition of one of the sheds, the southern end of the site has been returned to pasture.

1965-69 Aerial

The shed/garage associated with the dwelling has been extended or replaced. The image quality is poor, however, the land surrounding the dwelling to the dwelling appear to be used for cropping activities. Another of the sheds identified in the 1955-59 aerial has been demolished, however, a new shed has been constructed in the vicinity. The remainder of the site appears to be used for cropping activity.

1970-74 Aerial

All the sheds identified in the 1955-59 and 1965-69 aerial photos, have been demolished. The majority of site appears to have been returned to pasture.

1975-79 Aerial

There are no significant changes from 1970-74.

1980-84 Aerial

A garage has been constructed in the north-western corner of the subject site. There are no significant changes to the remainder of the site.

1990-94 Aerial

The image quality is poor, however, a new structure, inferred to be a shed, has been constructed in the vicinity of the dwelling.

1995-99 Aerial

The image quality is poor, however, there are no significant changes from 1990-94.

2000-04 Aerial

No significant changes from the previous aerial, apart from the garage being demolished and there are what look like dirt bike tracks in paddocks in the southern half of the site.

2004-10 Aerial

A new dwelling has been constructed in the southern half of the site. The paddocks in the southern half of the site are been used to store items that are unable to be identified due to the poor image quality, but are of vehicle size. There is a paddock racing track in this part of the site.

2010-15 Aerial

The land use in the southern half of the site has changed significantly. Two sheds/garages and a swimming pool have been constructed in the vicinity of the dwelling. Landscaping has also been undertaken. The paddocks in the southern half of the site are being used for the storage of building material, multiple vehicles and trailers. Along the western boundary, several of the vehicles appear to be partially buried. Several stockpiles of material, of unknown origin are also present in the southern half of the site. The northern portion of the site appears unchanged.

2019 Aerial

With the exception of a small fenced off area, the southern half of the site is no longer being used for the storage of building material, multiple vehicles and trailers. The stockpiles identified in the 2010-15 aerial photo appear to be still on site, but are vegetated with grass.

5.8.4 Site Walkover Results

A site walkover of the subject site was undertaken by Sam Gladwin, Engineering Geologist of FTL on 3rd July 2020.

The site is generally level, with gentle undulations.

The north western corner and middle parts of the site are used for residential purposes. There appears to be some form of dumping occurring between the dwelling and associated sheds/garages located in the north-western corner of the site.

The remainder of the site generally consists of paddocks vegetated with grass. One of the paddocks has been cleared of vegetation.

The driveway surface is unsealed.

There is a fenced off storage area in the southern half of the site, which is currently being used to store shipping containers, and what appears to be concrete form work boxing.

Demolition material was observed along the western boundary, in the southern part of the site.

Stockpiles of soil comprising silt, sand and gravel approximately 3 to 4 m in height, were observed, at the south end of the site. The southernmost stockpile was observed to also contain demolition material mostly comprising concrete bricks.

5.8.5 Council Records

The Council property file was reviewed. The only relevant information found related to building consents issued by Council:

- 1972 – Building Permit documents for a new shed
- 1976 – Building Permit documents for a new garage
- 1982 – Building Permit documents for alterations to dwelling
- 1991 – Building Permit documents for extension to dwelling
- 2004 – Building Consent documents for new dwelling
- 2007 – Building Consent documents for new, barn and relocated garage

In a 1976 letter to the council in regards to the location of the proposed new garage in the north-western part of the site, the son of the then owner notes that an area used for gardening is located in this part of the site.

5.8.6 Listed Land Use Register (LLUR)

A contaminated site enquiry was sent to Canterbury Regional Council on 16 July 2020, for information on the subject site held on their Listed Land Use Register (LLUR). There are no

records associated with the site under the Environment Canterbury LLUR. The LLUR statement for this site is included in Appendix D.

5.8.7 Discussion

Since at least 1944, the site appears to have been used for pastoral purposes, with parts of the site intermittently used for cropping activities.

Potential HAIL activities identified for this property relates to the following:

- Heavy metals, PAHs, and asbestos associated with current and historical storage of rubbish, vehicles, demolition/construction material, and stockpiles of unknown origin in the north-western corner and southern half of the site-HAIL activity E1, I and/or G5.
- Asbestos may be present in the north part of the site due to the demolition of previously existing buildings of unknown construction-HAIL activity E1.
- Lead paint contamination of soils from historical buildings no longer present on site which have either been damaged or demolished – potential HAIL activity I.

6.0 LEAD CONTAMINATION

Due to older buildings currently or historically having been located at the site, this section provides a discussion on the probability of lead-based paints being present on the properties making up the subject site.

The concentration of lead in domestic paints declined dramatically over the latter half of the last century. It may be assumed that pre- 1945 interior or exterior domestic paintwork contains a high lead content; pre- 1965 probably does, while pre-1980 paintwork possibly does. Post-1980 paintwork may generally be assumed to have a very low lead content, unless old stock or industrial specification paint was used (inappropriately).

The list below, adapted from Ministry of Health guidelines, shows key dates and events in the use of lead in paint in New Zealand.

- Before 1945, white lead (lead carbonate) was extensively used as a pigment in paint, especially exterior house paint (which contained up to 50 percent lead by weight in the dry film) and as a masonry filler mixed with gold-size. After the war, white lead was progressively replaced by titanium dioxide in domestic paint.
- White lead and lead sulphate were finally banned from paints intended for domestic use in 1965.
- Lead chromate (bright yellows, oranges and reds generally in top coats) remained in use as an ingredient in domestic paints (for interior and exterior use) until the late 1970s, and possibly until the 1990s by some small suppliers of paint and is still used for automotive and some heavy duty maintenance paints.

- Red lead was extensively used as a steel primer and was also in wood primers until the late 1970s to early 1980s. Old coats of primer that appear pink, however, do not always contain red lead, as other pink pigments were and still are used. Some steel-sash putty used to be a mash up from red lead powder and linseed oil putty; it is unlikely to be found in wooden windows.
- Calcium plumbate was widely used in primers for galvanized steel roofing from its introductions in 1958 until the 1990s. It is no longer manufactured, and few stocks remain.

Based on the foregoing, with the exception of 321 Trices Road (Lot 1 78905), all the properties comprising the site have had structures present on them since at least the 1940s to 1970s. Therefore, it is likely that some lead-based paint has been used on buildings or surfaces, that have since been demolished or renovated (possibly including paint stripping).

Where paint surfaces have had lead paint and these locations have deteriorated, been sanded or stripped: then there is a probability that elevated lead levels could be present in the surficial soils within 1-2 metres of the painted surface.

Whilst “lead paint” is not specifically listed as a HAIL activity under the NESCS, soil contamination around the perimeters of older buildings (particularly pre-1980) is relatively common and can be significant. Hence, lead paint has been listed as a potential HAIL activity I in this report.

7.0 NESCS CONSENTING REQUIREMENTS

The NESCS governs a number of activities, including soil sampling, soil disturbance, subdivision and changes of land use on potentially contaminated land in New Zealand. In general, the rules of the NESCS apply to sites on which it is “more likely than not” that a HAIL (Hazardous Activities and Industries List) activity has occurred or is occurring (Regulation 5(7)).

Based on the potential issues identified above, the parcels making up the site are considered to potentially have been subject to the HAIL activities listed in Table 10.

It is recommended that these potential/actual HAIL areas be further investigated and remediated, as necessary, as part of enabling (pre-construction) works prior to any bulk earthworks or other soil disturbance activities. If this is done and these areas are validated as being free of contamination, then subsequent earthworks and soil disturbance activities can be undertaken without having to consider contamination issues, other than accidental discovery protocols for unexpected contamination.

Table 10: Potential HAIL activities identified at the subject sites

HAIL Activity	Applicable Lots	Possible Contaminants
A10 – Persistent pesticide bulk storage or use including sport turfs, market gardens, orchard glass houses or spray sheds	Lot 1 DP 73583 341 Trices Road – Historical poultry sheds Lot 2 DP 73583 329 Trices Road – Historical poultry sheds and Orchard Lot 1 DP 3896 32 Hamptons Road – Suspected historical orchard Lot 1 DP 5284 327 Trices Road – Vegetable Growing Lot 1 DP360577 311 Trices Road – Orchard spraying equipment being stored in paddocks	Heavy Metals and Organo-chlorine Pesticides (OCPs)
A17 – Storage tanks or drums for fuel, chemicals or liquid waste	Lots 1 and 2 DP 360577 311 Trices Road – Above ground fuel tanks and oil containers and drums being stored in paddocks.	Polycyclic Aromatic Hydrocarbons (PAHs), Total Petroleum Hydrocarbons (TPHs)
G5 – Waste disposal to land (excluding where biosolids have been used as soil conditioners)	Lots 1 and 2 DP360577 311 Trices Road – Rubbish Pt RS 2423 299 Trices Road – General refuse observed being stored on ground	Heavy Metals, Polycyclic Aromatic Hydrocarbons (PAHs)
HAIL I – Any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.	Lot 1 DP 73583 341 Trices Road – House fire, refuse storage, historical railway Lot 2 DP 73583 341 Trices Road – Historical railway, burn piles and horse track may have been subjected to filling. Pt RS 3122 and RS 39794 42 Hamptons Road – Historical railway Lots 1 and 2 DP360577 311 Trices Road – Storage of refuse, vehicles farm equipment, and stockpiled soil on permeable surfaces. Existing horse track may have been subjected to filling. Pt RS 2423 299 Trices Road – Stockpiled soil including demolition debris of unknown origin, historical storage of vehicles on permeable surfaces	Heavy Metals, Polycyclic Aromatic Hydrocarbons (PAHs), Asbestos and/or Total Petroleum Hydrocarbons (TPHs)

Potential HAIL I – see above	Lot 1 DP 73583 341 Trices Road – historical lead paint use (potential HAIL) Lot 2 DP 73583 329 Trices Road – historical lead paint use (potential HAIL) Pt RS 3122 42 Hamptons Road – historical lead paint use (potential HAIL) Lot 1 3896 32 Hamptons Road – historical lead paint use (potential HAIL) Lot 1 DP 5284 327 Trices Road – historical lead paint use (potential HAIL) Lot 1 DP360577 311 Trices Road – historical lead paint use (potential HAIL) Pt RS 2423 299 Trices Road – historical lead paint use (potential HAIL)	Lead
E1 – Asbestos products manufacture or disposal including sites with buildings containing asbestos products known to be in a deteriorated condition.	Lot 1 DP 73583 341 Trices Road – Historical poultry sheds Lot 2 DP 73583 341 Trices Road – Historical poultry sheds Pt RS 3122 42 Hamptons Road – Demolition of historical buildings Lot 1 3896 32 Hamptons Road – Alterations to existing dwelling suspected to be constructed with ACM Lot DP5284 327 Trice Road – Historical damage to building suspected to be constructed with ACM Lot 1 DP360577 311 Trices Road - Demolition of historical buildings Pt RS 2423 299 Trices Road – Stockpiled soil including demolition debris of unknown origin, historical storage of building/demolition material. Demolition of historical sheds in northern part of the site.	Asbestos

8.0 CONCLUSIONS AND RECOMMENDATIONS

This investigation has confirmed that part of the subject site has only been used for rural/residential and grazing purposes. The NESCS does not apply to these portions of the site under Regulation 5(7).

This investigation has confirmed that the subject site has only been used for rural/residential and grazing purposes and identified few localised potential or actual HAIL activities:

- *Activity A10: Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glasshouses or spray sheds.* This relates to persistent pesticide use associated with the former poultry farm (no longer present on site), orchards, and vegetable growing on Lot 1 and 2 73583, Lot 1 DP 3896, Lot 1 DP 5284. Additionally, an orchard spraying apparatus was observed being stored in a paddock on Lot 1 DP 360577. It is recommended that these areas be further investigated and soil sampling undertaken to confirm identified HAIL activity.
- *Activity A17: Storage tanks or drums for fuel, chemicals or liquid waste.* This relates to above ground fuel storage tanks and oil drums being stored in paddocks in Lots 1 and 2 DP 360577.
- *Activity G5: Waste disposal to land (excluding where biosolids have been used as soil conditioners).* This relates to general refuse being observed stored on existing ground surface on Lots 1 and 2 DP 360577 and Pt RS 2423.
- *Activity I: Land subject to intentional or accidental release of hazardous substances in sufficient quantity that it could be a risk to human health or the environment. This applies to:*
 - Historical railway along the western boundary of Lots 1 & 2, DP73583, Pt RS3122 and RS39794.
 - Existing stockpiles on Pt RS 2423. The stockpiled soil appeared to be silts and sands and occasional gravel, with some demolition materials (concrete blocks) of unknown origin. Soil sampling may be required by Council to confirm the stockpile soils and underlying ground are not contaminated.
 - Existing stockpiles on Lots 1 and 2 DP 360577. The stockpiles generally comprised soil and plant material. The soil appeared to be silts and sands and occasional gravel. Soil sampling may be required by Council to confirm the stockpile soils and underlying ground are not contaminated.
 - Rubbish and old machinery/car body remains on Lot 1 DP 73583, Lots 1 and 2 DP 360577, Pt RS 2423 (historical) These areas need to be cleared of rubbish and then the underlying ground inspected for signs of contamination (staining or odour). Soil sampling is likely to be required at this time to confirm the presence or absence of soil contamination.
 - Other activities such as potential lead-based paint use on older buildings, historical fires and burn piles on Lots 1 and 2 DP 73583, Pt RS 3122, Lot 1 3896, Lot 1 DP 5284, Lot 1 DP 360577 and Pt RS 2423.
- *Activity E1: Asbestos products manufacture or disposal including sites with buildings*

containing asbestos products known to be in a deteriorated condition. ACM demolition material from historical buildings (HAIL activity E1) on Lots 1 and 2 DP 73583, Pt RS 3122, Lot 1 3896, Lot 1 DP5284, Lot 1 DP360577, and Pt RS 2423. A review of the available historical aerials of these sites show that several small sheds/buildings have been historically present at least since 1940. Asbestos based products were prominent in New Zealand homes and other buildings from the 1920s to the mid-1980s. Therefore, it is likely that these soils could potentially be contaminated with asbestos from prior demolition activities. Hence, it is recommended that this area be further investigated and soil sampling be undertaken to confirm the identified HAIL activity.

In summary, based on the information presented in this report, whilst it is clear that historic HAIL activities have occurred at the site, it is uncertain what effects, if any, they have had on site soils. Therefore, in accordance with NESCS requirements, a Detailed Site Investigation (DSI) is required in order to assess site soils to determine environmental effects, or otherwise. It is recommended this work be done at the subdivision resource consent application stage. If further investigation is not undertaken prior to lodging for resource consent, then the proposed subdivision would be a discretionary activity under Regulation 11 of the NESCS.

9.0 LIMITATIONS

We have performed our services for this project in accordance with current professional standards for an assessment of the nature and extent of any soil contamination on-site, based upon detailed site assessment investigations and current regulatory standards for site contamination. The scope of the site assessment activities was generally in accordance with the Ministry for Environment Contaminated Land Management Guideline's (Parts 1 (2003), 2 (2003) and 5 (2004)) and the NESCS (2011). Conclusions on actual or potential contamination cannot be applied to areas outside of the site investigation.

We do not assume any liability for misrepresentation or items not visible, accessible or present at the subject site during the time of the site inspection.

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Figures/Drawings

Appendix A

Ministry for the Environment Contaminated Site Report Checklist

TRICES ROAD REZONING GROUP

PRELIMINARY SITE INVESTIGATION - CONTAMINATION TRICES ROAD, PREBBLETON

SUMMARY CONTAMINATED SITES REPORT CHECKLIST

Report sections and information to be presented	PSI	SIR	RAP	SVR	MMP	Notes
Executive summary	R ☒	R ☐	R ☐	R ☐	R ☐	
Scope of work	R ☒	R ☐	R ☐	R ☐	R ☐	
Site identification	R ☒	R ☐	R ☐	R ☐	R ☐	
Site history	R ☒	S ☐	S ☐	S ☐	S ☐	
Site condition and surrounding environment	R ☒	S ☐	S ☐	S ☐	S ☐	
Geology and hydrology	A ☒	R ☐	S ☐	S ☐	S ☐	
Sampling and analysis plan and sampling methodology	A ☒	R ☐	X	R ☐	R ☐	
Field quality assurance and quality control (QA/QC)	N ☒	R ☐	X	R ☐	S ☐	
Laboratory QA/QC	N ☒	R ☐	X	R ☐	X	
QA/QC data evaluation	N ☐	R ☐	R ☐	R ☐	X	
Basis for guideline values	R ☒	R ☐	R ☐	R ☐	R ☐	
Results	A ☒	R ☐	R ☐	R ☐	S ☐	
Site Characterisation	R ☒	R ☐	R ☐	R ☐	R ☐	
Remedial actions	X	X	R ☐	S ☐	S ☐	
Validation	X	X	X	R ☐	S ☐	
Site management plan	X	X	R ☐	S ☐	S ☐	
Ongoing monitoring	X	X	X	N ☐	R ☐	
Conclusions and recommendations	R ☒	R ☐	R ☐	R ☐	R ☐	

KEY:

- PSI = preliminary site inspection report
 SIR = detailed site investigation report
 RAP = site remedial action plan
 SVR = site validation report
 MMP = ongoing monitoring and management plan

2. R = corresponding details required
A = readily available information should be included;
S = summary of this section's details is adequate if detailed information has been included in an available referenced report;
N = include only if no further site investigation is to be undertaken;
X = not applicable and may be omitted.

Appendix B

Aerial Photographs

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Scale: 1:3,000 @A4

Map Created by Canterbury Maps on 7/07/2020 at 6:32 PM



Trices Road Rezoning Block 1955-59

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Trices Road Rezoning Block 1970-74

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Trices Road Rezoning Block 1975-79

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Scale: 1:3,000 @A4

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Trices Road Rezoning Block 1990-94

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Scale: 1:3,000 @A4

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Trices Road Rezoning Block 1995-99

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Kilometres

Scale: 1:3,000 @A4

Map Created by Canterbury Maps on 7/07/2020 at 6:48 PM



Trices Road Rezoning Block Latest Imagery

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Appendix C

Site Walkover Photographs

Trices Road Site Walkover Photographs – July 2020



P1: Lot 1 DP 73583 341 Trices Road looking west from driveway.



P2: Lot 1 DP 73583 341 Trices Road looking east across paddock where former poultry shed was located.



P3: Lot 1 DP 73583 341 Trices Road behind garage.



P4: Lot 1 DP 73583 341 Trices Road behind garage.

Trices Road Site Walkover Photographs – July 2020



P5: Lot 2 DP 73583 Shed used for storing wood.



P6: Lot 2 DP 73583 Small orchard at western end of dwelling.



P7: Lot 2 DP 73583 Forest in south-east corner of site.



P8: Lot 2 DP 73583 Central paddock. Circular dark patches are burn pile locations.

Trices Road Site Walkover Photographs – July 2020



P9: Pt RS 3122 42 Hamptons Road looking south.



P10: Pt RS 3122 42 Hamptons Road looking south.



P11: Lot 1 DP 78905 321 Trices Road glasshouse located in backyard of dwelling.



P12: Lot 1 DP 78905 321 Trices Road vegetable garden in paddock to the south of dwelling.

Trices Road Site Walkover Photographs – July 2020



P13: Lot 1 DP 78905 321 Trices Road small orchard in paddock to the south of dwelling.



P14: Lot 1 DP 78905 321 Trices Road. Black circular patch is burnt ground from BBQ between barn and shipping container located in paddock to the south of dwelling.



P15: Lot 1 DP 78905 321 Trices Road inferred overgrown stockpile of unknown origin.



P16: Lot 1 DP 78905 321 Trices Road Looking south across remainder of site.

Trices Road Site Walkover Photographs – July 2020



P17: Lot 1 DP 360577 311 Trices Road shed/workshop.



P18: Lot 1 DP 360577 311 Trices Road shed for storing vehicles and equipment. Small quantities of fertilizer are also stored here.



P19: Lot 1 DP 360577 311 Trices Road of rear of shed/workshop. The tank in the background is a water tank.



P20: Lot 1 DP 360577 311 Trices Road paddock to the south of dwelling used for storage of old equipment and general refuse. Above ground fuel tank in foreground is not used according to the owner.

Trices Road Site Walkover Photographs – July 2020



P21: Lot 1 DP 360577 311 Trices Road Sheep race/shute behind implement shed. No below ground structures observed.



P22: Lot 1 DP 360577 311 Trices Road Sheep race/shute behind implement shed. No below ground structures observed.

Trices Road Site Walkover Photographs – July 2020



P23: Lot 1 DP 360577 311 Trices Road Used chemical containers stored on pallet.



P24: Lot 1 DP 360577 311 Trices Road paddock to the south of dwelling used for storage of old equipment and general refuse.



P25: Lot 1 DP 360577 311 Trices Road looking south across site from former horse trotting track.



P26: Lot 2 DP 360577 311 Trices Road paddock in the south of site used for storage of old equipment and general refuse. The old tanks were for heating fuel.

Trices Road Site Walkover Photographs – July 2020



P27 Lot 2 DP 360577 Oil drums located in southern corner of site.



P28 Lot 2 DP 360577 Stockpiles of tree clippings and soil located in southern corner of site.



P29 Pt RS 2423 View of paddock in approximate location of former sheds identified in aerial photography. No obvious demoliton materials present.



P30 Pt RS 2423 View of paddock in app~~ro~~ximate location of former sheds identified in aerial photography. No obvious demoliton materials present.

Trices Road Site Walkover Photographs – July 2020



P31: Pt RS 2423 299 Trices Road looking west from driveway. Dwelling in north-west corner of site visible in background.



P32: Pt RS 2423 299 Trices Road looking south across northern half of site.



P33: Pt RS 2423 299 Trices Road storage area in southern half of site.



P34: Pt RS 2423 299 Trices Road Looking south across southern half of site.

Trices Road Site Walkover Photographs – July 2020

	
P35: Pt RS 2423 299 Trices Road refuse along western boundary in southern half of site.	P36: Pt RS 2423 299 Trices Road stockpiles of unknown origin in southern end of site.
	
P37: Pt RS 2423 299 Trices Road stockpiles of unknown origin in southern end of site.	

Appendix D

Listed Land Use Register (LLUR)

Customer Services
P. 03 353 9007 or 0800 324 636

PO Box 345
Christchurch 8140

P. 03 365 3828
F. 03 365 3194
E. ecinfo@ecan.govt.nz

www.ecan.govt.nz

Dear Sir/Madam

Thank you for submitting your property enquiry in regards to our Listed Land Use Register (LLUR) which holds information about sites that have been used, or are currently used for activities which have the potential to have caused contamination.

The LLUR statement provided indicates the location of the land parcel(s) you enquired about and provides information regarding any LLUR sites within a radius specified in the statement of this land.

Please note that if a property is not currently entered on the LLUR, it does not mean that an activity with the potential to cause contamination has never occurred, or is not currently occurring there. The LLUR is not complete, and new sites are regularly being added as we receive information and conduct our own investigations into current and historic land uses.

The LLUR only contains information held by Environment Canterbury in relation to contaminated or potentially contaminated land; other information relevant to potential contamination may be held in other files (for example consent and enforcement files).

If your enquiry relates to a farm property, please note that many current and past activities undertaken on farms may not be listed on the LLUR. Activities such as the storage, formulation and disposal of pesticides, offal pits, foot rot troughs, animal dips and underground or above ground fuel tanks have the potential to cause contamination.

Please contact and Environment Canterbury Contaminated Sites Officer if you wish to discuss the contents of the LLUR statement, or if you require additional information. For any other information regarding this land please contact Environment Canterbury Customer Services.

Yours sincerely

Contaminated Sites Team

Property Statement from the Listed Land Use Register

Visit www.ecan.govt.nz/HAIL for more information about land uses.



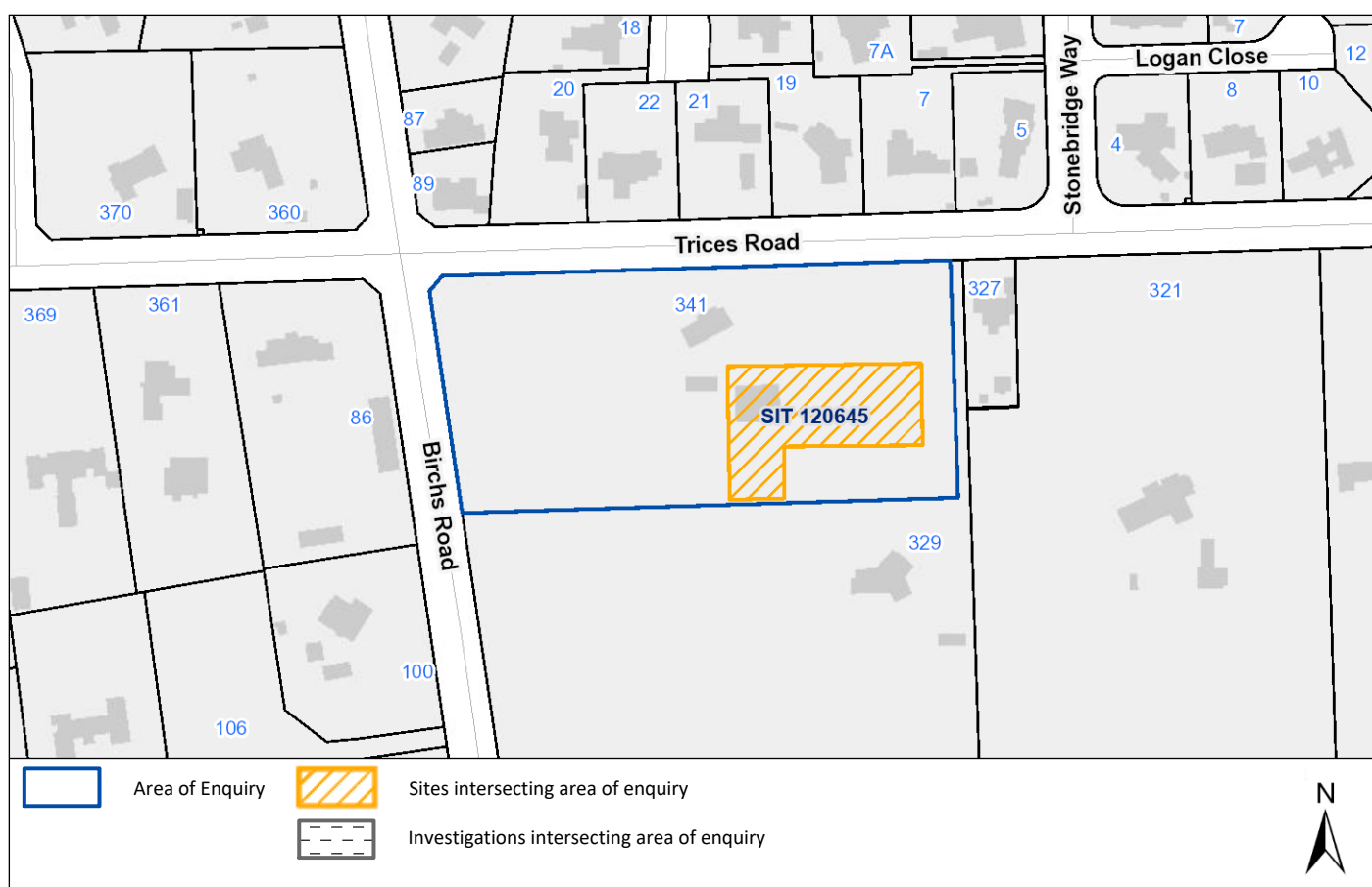
Customer Services
P. 03 353 9007 or 0800 324 636

PO Box 345
Christchurch 8140

P. 03 365 3828
F. 03 365 3194
E. ecinfo@ecan.govt.nz

www.ecan.govt.nz

Date:	15 July 2020
Land Parcels:	Lot 1 DP 73583 Valuation No(s): 2355232500



The information presented in this map is specific to the property you have selected. Information on nearby properties may not be shown on this map, even if the property is visible.

Summary of sites:

Site ID	Site Name	Location	HAIL Activity(s)	Category
120645	341 Trices Road, Prebbleton	341 Trices Road, Prebbleton	A10 - Persistent pesticide bulk storage or use;	Not Investigated

Please note that the above table represents a summary of sites and HAILs intersecting the area of enquiry only.

Information held about the sites on the Listed Land Use Register

Site 120645: 341 Trices Road, Prebbleton (Intersects enquiry area.)

Site Address:	341 Trices Road, Prebbleton
Legal Description(s):	Lot 1 DP 73583

Site Category:	Not Investigated
Definition:	Verified HAIL has not been investigated.

Land Uses (from HAIL):	Period From	Period To	HAIL land use
	1965	1984	Persistent pesticide bulk storage or use including sports turfs, market gardens, orchards, glass houses or spray sheds

Notes:

7 Jan 2016	This record was created as part of the Selwyn District Council 2015 HAIL identification project.
7 Jan 2016	Area defined from 1965 to 1984 aerial photographs. A poultry farm (persistent pesticides) was noted in aerial photographs reviewed.

Investigations:

There are no investigations associated with this site.

Information held about other investigations on the Listed Land Use Register

For further information from Environment Canterbury, contact Customer Services and refer to enquiry number ENQ259281.

Disclaimer: *The enclosed information is derived from Environment Canterbury's Listed Land Use Register and is made available to you under the Local Government Official Information and Meetings Act 1987 and Environment Canterbury's Contaminated Land Information Management Strategy (ECan 2009).*

The information contained in this report reflects the current records held by Environment Canterbury regarding the activities undertaken on the site, its possible contamination and based on that information, the categorisation of the site. Environment Canterbury has not verified the accuracy or completeness of this information. It is released only as a copy of Environment Canterbury's records and is not intended to provide a full, complete or totally accurate assessment of the site. It is provided on the basis that Environment Canterbury makes no warranty or representation regarding the reliability, accuracy or completeness of the information provided or the level of contamination (if any) at the relevant site or that the site is suitable or otherwise for any particular purpose. Environment Canterbury accepts no responsibility for any loss, cost, damage or expense any person may incur as a result of the use, reference to or reliance on the information contained in this report.

Any person receiving and using this information is bound by the provisions of the Privacy Act 1993.

Property Statement from the Listed Land Use Register

Visit www.ecan.govt.nz/HAIL for more information about land uses.



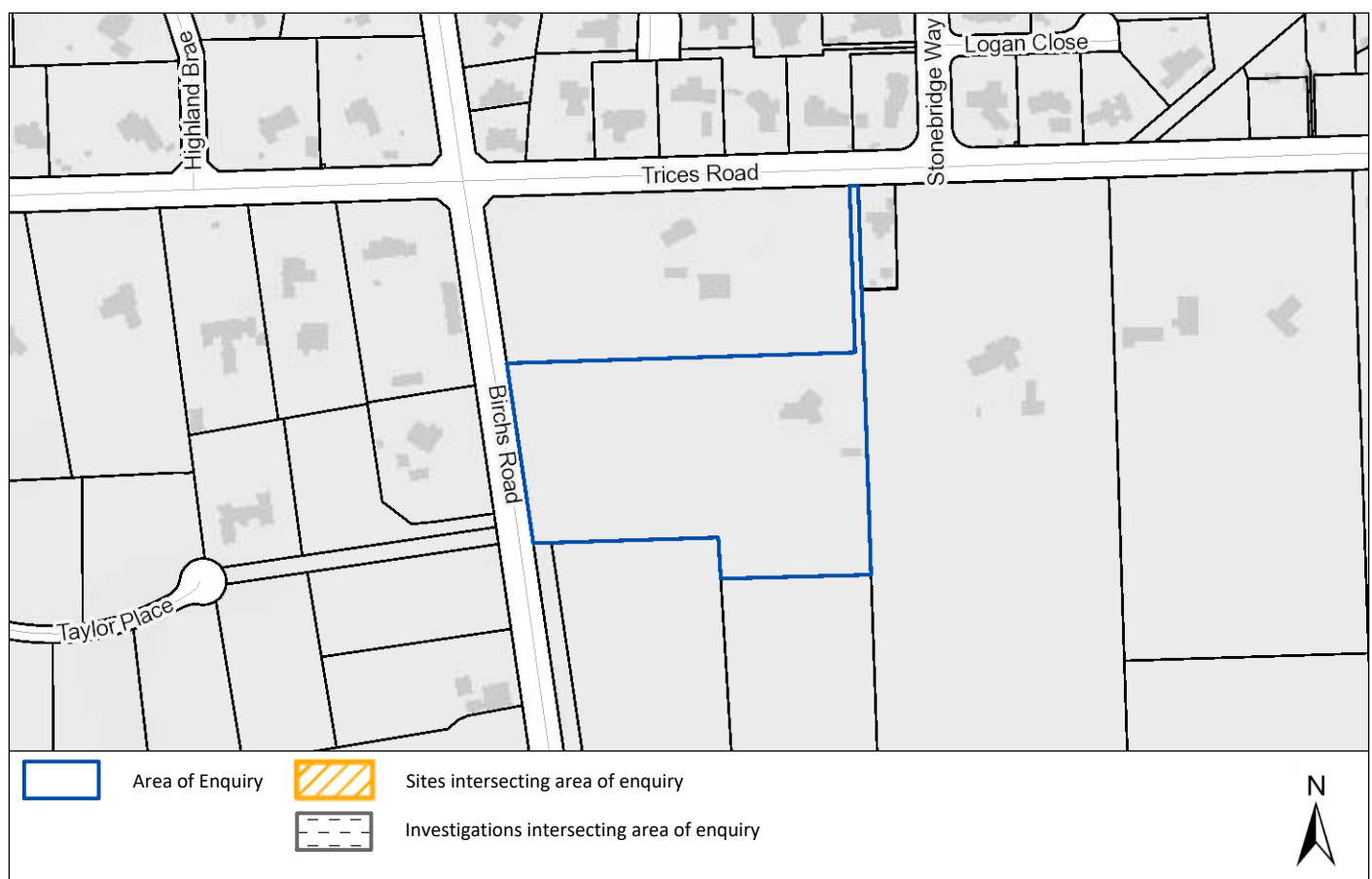
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Date:	16 July 2020	
Land Parcels:	Lot 2 DP 73583	Valuation No(s): 2355232501



The information presented in this map is specific to the property you have selected. Information on nearby properties may not be shown on this map, even if the property is visible.

Summary of sites:

There are no sites associated with the area of enquiry.

Information held about the sites on the Listed Land Use Register

There are no sites associated with the area of enquiry.

Information held about other investigations on the Listed Land Use Register

For further information from Environment Canterbury, contact Customer Services and refer to enquiry number ENQ259316.

Property Statement from the Listed Land Use Register

Visit www.ecan.govt.nz/HAIL for more information about land uses.



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Date:	16 July 2020	
Land Parcels:	Part RS 3122	Valuation No(s): 2355232600



The information presented in this map is specific to the property you have selected. Information on nearby properties may not be shown on this map, even if the property is visible.

Summary of sites:

There are no sites associated with the area of enquiry.

Information held about the sites on the Listed Land Use Register

There are no sites associated with the area of enquiry.

Information held about other investigations on the Listed Land Use Register

For further information from Environment Canterbury, contact Customer Services and refer to enquiry number ENQ259317.

Property Statement from the Listed Land Use Register

Visit www.ecan.govt.nz/HAIL for more information about land uses.



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Date:	16 July 2020	
Land Parcels:	Lot 1 DP 3896	Valuation No(s): 2355232700



The information presented in this map is specific to the property you have selected. Information on nearby properties may not be shown on this map, even if the property is visible.

Summary of sites:

There are no sites associated with the area of enquiry.

Information held about the sites on the Listed Land Use Register

There are no sites associated with the area of enquiry.

Information held about other investigations on the Listed Land Use Register

For further information from Environment Canterbury, contact Customer Services and refer to enquiry number ENQ259318.

Property Statement from the Listed Land Use Register

Visit www.ecan.govt.nz/HAIL for more information about land uses.



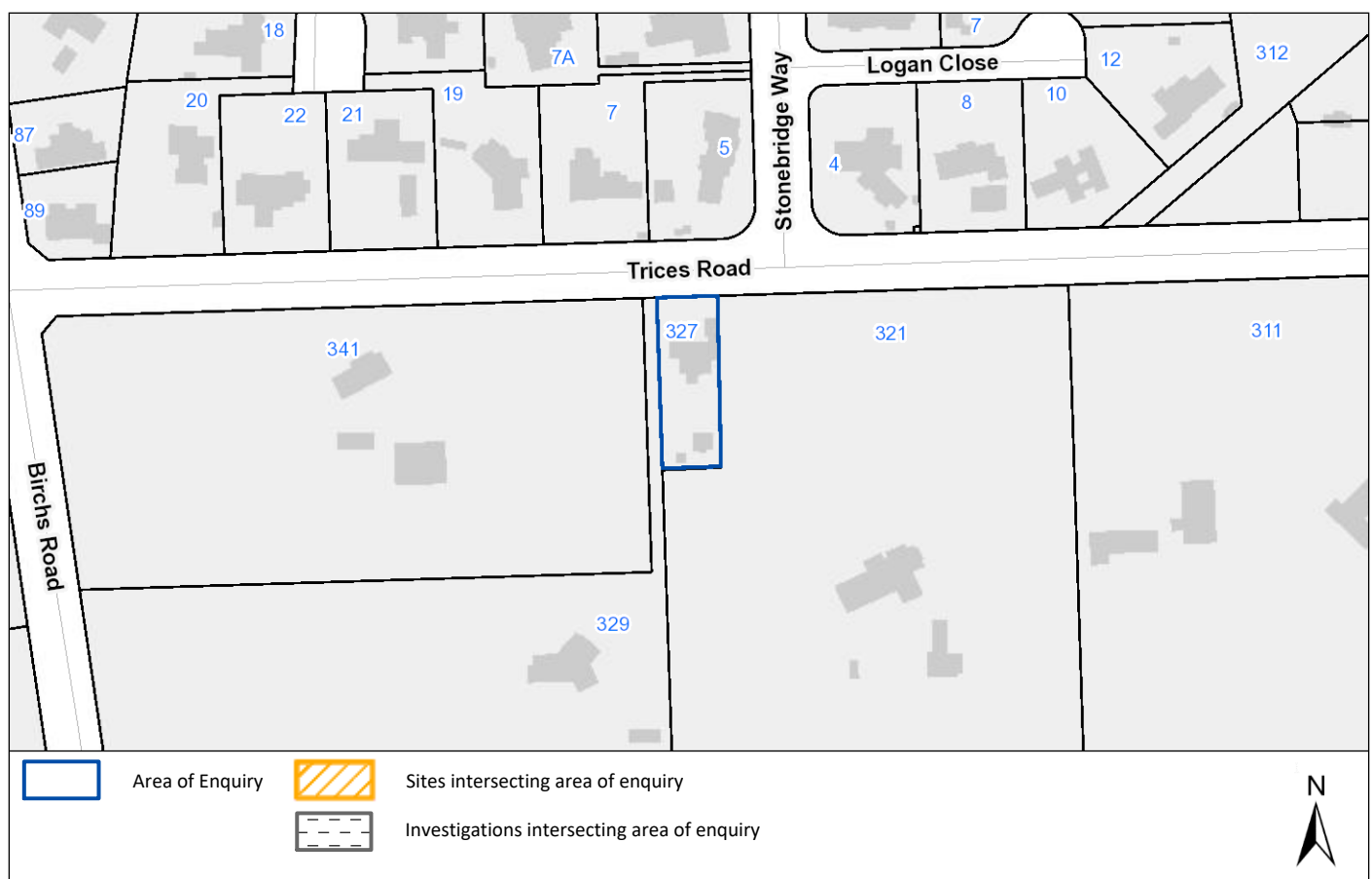
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Date:	16 July 2020	
Land Parcels:	Lot 1 DP 5284	Valuation No(s): 2355235400



The information presented in this map is specific to the property you have selected. Information on nearby properties may not be shown on this map, even if the property is visible.

Summary of sites:

There are no sites associated with the area of enquiry.

Information held about the sites on the Listed Land Use Register

There are no sites associated with the area of enquiry.

Information held about other investigations on the Listed Land Use Register

For further information from Environment Canterbury, contact Customer Services and refer to enquiry number ENQ259325.

Property Statement from the Listed Land Use Register

Visit www.ecan.govt.nz/HAIL for more information about land uses.



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Date:	16 July 2020		
Land Parcels:	Lot 1 DP 78905	Valuation No(s): 2355235300	
	Part RS 3050	Valuation No(s): 2355235300	



The information presented in this map is specific to the property you have selected. Information on nearby properties may not be shown on this map, even if the property is visible.

Summary of sites:

There are no sites associated with the area of enquiry.

Information held about the sites on the Listed Land Use Register

There are no sites associated with the area of enquiry.

Information held about other investigations on the Listed Land Use Register

Property Statement from the Listed Land Use Register

Visit www.ecan.govt.nz/HAIL for more information about land uses.



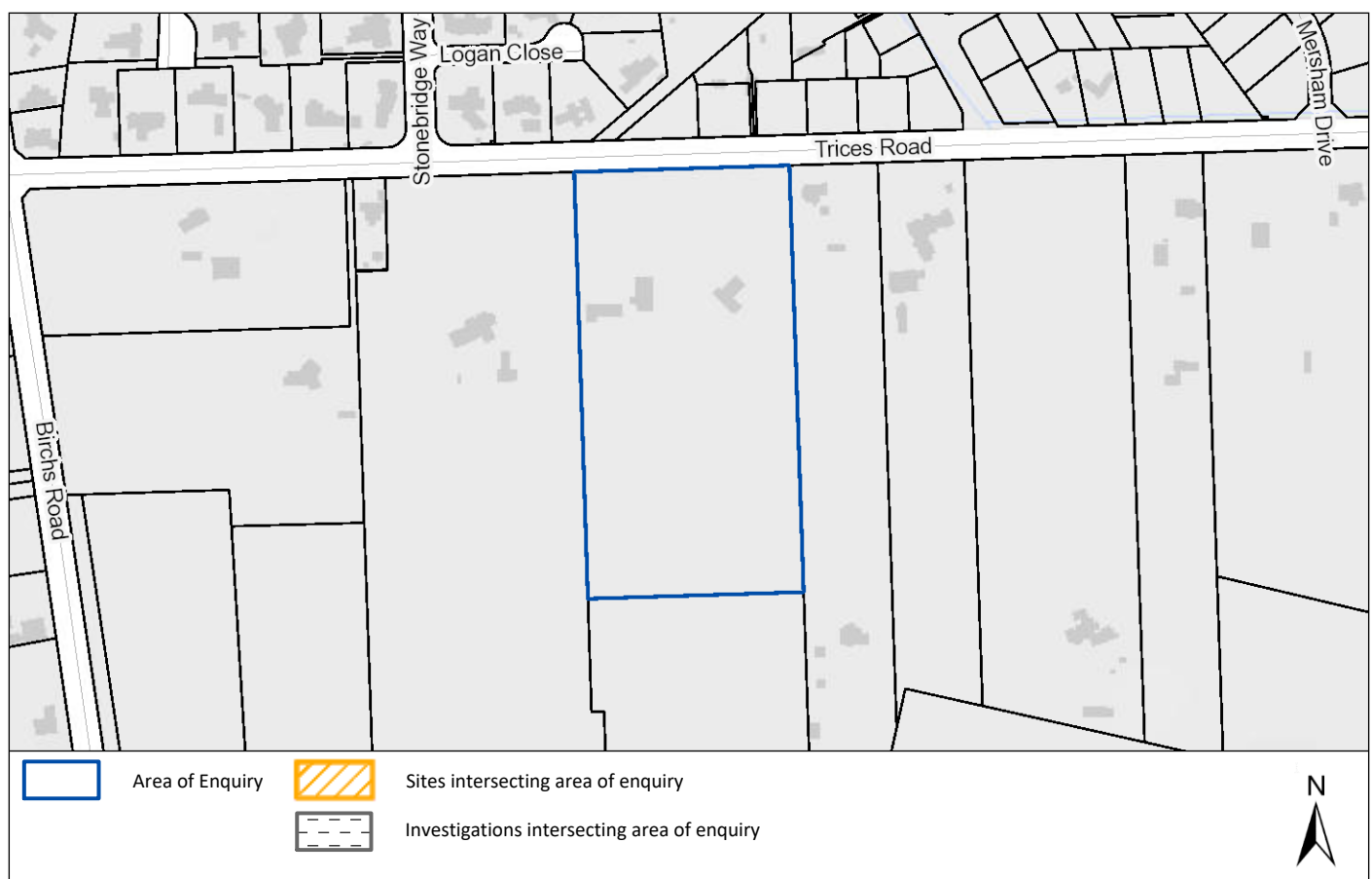
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Date:	16 July 2020	
Land Parcels:	Lot 1 DP 360577	Valuation No(s): 2355235200



The information presented in this map is specific to the property you have selected. Information on nearby properties may not be shown on this map, even if the property is visible.

Summary of sites:

There are no sites associated with the area of enquiry.

Information held about the sites on the Listed Land Use Register

There are no sites associated with the area of enquiry.

Information held about other investigations on the Listed Land Use Register

For further information from Environment Canterbury, contact Customer Services and refer to enquiry number ENQ259321.

Property Statement from the Listed Land Use Register

Visit www.ecan.govt.nz/HAIL for more information about land uses.



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Date:	16 July 2020	
Land Parcels:	Lot 2 DP 360577	Valuation No(s): 2355235201



The information presented in this map is specific to the property you have selected. Information on nearby properties may not be shown on this map, even if the property is visible.

Summary of sites:

There are no sites associated with the area of enquiry.

Information held about the sites on the Listed Land Use Register

There are no sites associated with the area of enquiry.

Information held about other investigations on the Listed Land Use Register

For further information from Environment Canterbury, contact Customer Services and refer to enquiry number ENQ259322.

Property Statement from the Listed Land Use Register

Visit www.ecan.govt.nz/HAIL for more information about land uses.



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Date:	16 July 2020	
Land Parcels:	Part RS 2423	Valuation No(s): 2355234800,2355235100
	Part RS 2423	Valuation No(s): 2355234800,2355235100



The information presented in this map is specific to the property you have selected. Information on nearby properties may not be shown on this map, even if the property is visible.

Summary of sites:

There are no sites associated with the area of enquiry.

Information held about the sites on the Listed Land Use Register

There are no sites associated with the area of enquiry.

Information held about other investigations on the Listed Land Use Register

For further information from Environment Canterbury, contact Customer Services and refer to enquiry number ENQ259323.

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Listed Land Use Register

What you need to know



What is the Listed Land Use Register (LLUR)?

The LLUR is a database that Environment Canterbury uses to manage information about land that is, or has been, associated with the use, storage or disposal of hazardous substances.

Why do we need the LLUR?

Some activities and industries are hazardous and can potentially contaminate land or water. We need the LLUR to help us manage information about land which could pose a risk to your health and the environment because of its current or former land use.

Section 30 of the Resource Management Act (RMA, 1991) requires Environment Canterbury to investigate, identify and monitor contaminated land. To do this we follow national guidelines and use the LLUR to help us manage the information.

The information we collect also helps your local district or city council to fulfil its functions under the RMA. One of these is implementing the National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil, which came into effect on 1 January 2012.

For information on the NES, contact your city or district council.

How does Environment Canterbury identify sites to be included on the LLUR?

We identify sites to be included on the LLUR based on a list of land uses produced by the Ministry for the Environment (MfE). This is called the Hazardous Activities and Industries List (HAIL)¹. The HAIL has 53 different activities, and includes land uses such as fuel storage sites, orchards, timber treatment yards, landfills, sheep dips and any other activities where hazardous substances could cause land and water contamination.

We have two main ways of identifying HAIL sites:

- We are actively identifying sites in each district using historic records and aerial photographs. This project started in 2008 and is ongoing.
- We also receive information from other sources, such as environmental site investigation reports submitted to us as a requirement of the Regional Plan, and in resource consent applications.

¹ The Hazardous Activities and Industries List (HAIL) can be downloaded from MfE's website www.mfe.govt.nz, keyword search HAIL

How does Environment Canterbury classify sites on the LLUR?

Where we have identified a HAIL land use, we review all the available information, which may include investigation reports if we have them. We then assign the site a category on the LLUR. The category is intended to best describe what we know about the land use and potential contamination at the site and is signed off by a senior staff member.

Please refer to the Site Categories and Definitions factsheet for further information.

What does Environment Canterbury do with the information on the LLUR?

The LLUR is available online at www.llur.ecan.govt.nz. We mainly receive enquiries from potential property buyers and environmental consultants or engineers working on sites. An inquirer would typically receive a summary of any information we hold, including the category assigned to the site and a list of any investigation reports.

We may also use the information to prioritise sites for further investigation, remediation and management, to aid with planning, and to help assess resource consent applications. These are some of our other responsibilities under the RMA.

If you are conducting an environmental investigation or removing an underground storage tank at your property, you will need to comply with the rules in the Regional Plan and send us a copy of the report. This means we can keep our records accurate and up-to-date, and we can assign your property an appropriate category on the LLUR. To find out more, visit www.ecan.govt.nz/HAIL.



My land is on the LLUR – what should I do now?

IMPORTANT! Just because your property has a land use that is deemed hazardous or is on the LLUR, it doesn't necessarily mean it's contaminated. The only way to know if land is contaminated is by carrying out a detailed site investigation, which involves collecting and testing soil samples.

You do not need to do anything if your land is on the LLUR and you have no plans to alter it in any way. It is important that you let a tenant or buyer know your land is on the Listed Land Use Register if you intend to rent or sell your property. If you are not sure what you need to tell the other party, you should seek legal advice.

You may choose to have your property further investigated for your own peace of mind, or because you want to do one of the activities covered by the National Environmental Standard for Assessing and Managing Contaminants in Soil. Your district or city council will provide further information.

If you wish to engage a suitably qualified experienced practitioner to undertake a detailed site investigation, there are criteria for choosing a practitioner on www.ecan.govt.nz/HAIL.



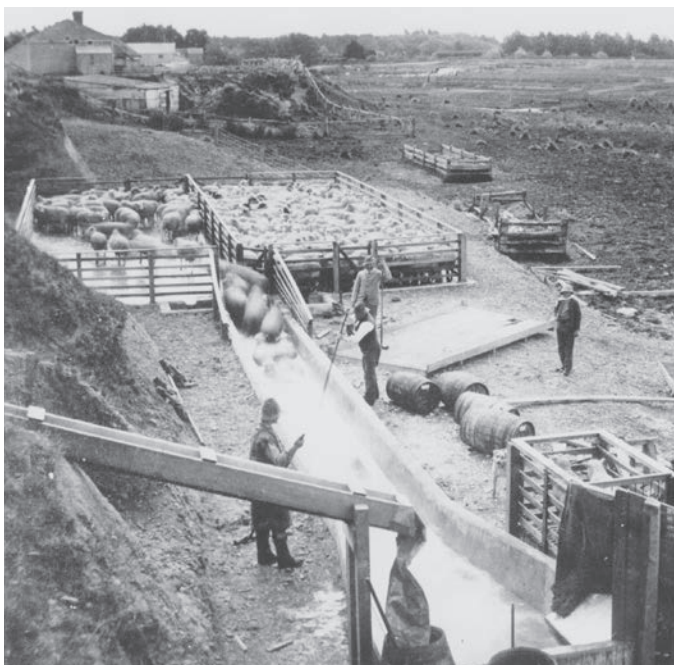
I think my site category is incorrect – how can I change it?

If you have an environmental investigation undertaken at your site, you must send us the report and we will review the LLUR category based on the information you provide. Similarly, if you have information that clearly shows your site has not been associated with HAIL activities (eg. a preliminary site investigation), or if other HAIL activities have occurred which we have not listed, we need to know about it so that our records are accurate.

If we have incorrectly identified that a HAIL activity has occurred at a site, it will be not be removed from the LLUR but categorised as Verified Non-HAIL. This helps us to ensure that the same site is not re-identified in the future.

IMPORTANT!

The LLUR is an online database which we are continually updating. A property may not currently be registered on the LLUR, but this does not necessarily mean that it hasn't had a HAIL use in the past.



Sheep dipping (ABOVE) and gas works (TOP) are among the former land uses that have been identified as potentially hazardous. (Photo above by Wheeler & Son in 1987, courtesy of Canterbury Museum.)

Contact us

Property owners have the right to look at all the information Environment Canterbury holds about their properties.

It is free to check the information on the LLUR, online at www.llur.ecan.govt.nz.

If you don't have access to the internet, you can enquire about a specific site by phoning us on (03) 353 9007 or toll free on 0800 EC INFO (32 4636) during business hours.

Contact Environment Canterbury:

Email: ecinfo@ecan.govt.nz

Phone:

Calling from Christchurch: (03) 353 9007

Calling from any other area: 0800 EC INFO (32 4636)



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E13/101

Listed Land Use Register

Site categories and definitions

When Environment Canterbury identifies a Hazardous Activities and Industries List (HAIL) land use, we review the available information and assign the site a category on the Listed Land Use Register. The category is intended to best describe what we know about the land use.

If a site is categorised as **Unverified** it means it has been reported or identified as one that appears on the HAIL, but the land use has not been confirmed with the property owner.

If the land use has been confirmed but analytical information from the collection of samples is not available, and the presence or absence of contamination has therefore not been determined, the site is registered as:

Not investigated:

- A site whose past or present use has been reported and verified as one that appears on the HAIL.
- The site has not been investigated, which might typically include sampling and analysis of site soil, water and/or ambient air, and assessment of the associated analytical data.
- There is insufficient information to characterise any risks to human health or the environment from those activities undertaken on the site. Contamination may have occurred, but should not be assumed to have occurred.

If analytical information from the collection of samples is available, the site can be registered in one of six ways:

At or below background concentrations:

The site has been investigated or remediated. The investigation or post remediation validation results confirm there are no hazardous substances above local background concentrations other than those that occur naturally in the area. The investigation or validation sampling has been sufficiently detailed to characterise the site.

Below guideline values for:

The site has been investigated. Results show that there are hazardous substances present at the site but indicate that any adverse effects or risks to people and/or the environment are considered to be so low as to be acceptable. The site may have been remediated to reduce contamination to this level, and samples taken after remediation confirm this.

Managed for:

The site has been investigated. Results show that there are hazardous substances present at the site in concentrations that have the potential to cause adverse effects or risks to people and/or the environment. However, those risks are considered managed because:

- the nature of the use of the site prevents human and/or ecological exposure to the risks; and/or
- the land has been altered in some way and/or restrictions have been placed on the way it is used which prevent human and/or ecological exposure to the risks.

Partially investigated:

The site has been partially investigated. Results:

- demonstrate there are hazardous substances present at the site; however, there is insufficient information to quantify any adverse effects or risks to people or the environment; or
- do not adequately verify the presence or absence of contamination associated with all HAIL activities that are and/or have been undertaken on the site.

Significant adverse environmental effects:

The site has been investigated. Results show that sediment, groundwater or surface water contains hazardous substances that:

- have significant adverse effects on the environment; or
- are reasonably likely to have significant adverse effects on the environment.

Contaminated:

The site has been investigated. Results show that the land has a hazardous substance in or on it that:

- has significant adverse effects on human health and/or the environment; and/or
- is reasonably likely to have significant adverse effects on human health and/or the environment.

If a site has been included incorrectly on the Listed Land Use Register as having a HAIL, it will not be removed but will be registered as:

Verified non-HAIL:

Information shows that this site has never been associated with any of the specific activities or industries on the HAIL.

Please contact Environment Canterbury for further information:

(03) 353 9007 or toll free
on 0800 EC INFO (32 4636)
email ecinfo@ecan.govt.nz