



Appendix C

Preliminary Site Investigation (PSI) Report

Skellerup South Plan Change

Preliminary Site Investigation

Rolleston Industrial Developments Limited



Reference: 773-CHCGE293048

30 September 2021

SKELLERUP SOUTH ROAD PLAN CHANGE

Preliminary Site Investigation

Report reference number: 773-CHCGE293048

30 September 2021

PREPARED FOR

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QUALITY INFORMATION

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1. INTRODUCTION

Tetra Tech Coffey (NZ) Limited (Tetra Tech Coffey) has been commissioned by Rolleston Industrial Developments Limited ('the client') to conduct a Preliminary Site Investigation (PSI) to support the proposed Skellerup South Plan Change and future residential subdivision for the property located on a 28Ha block on the corner of Dunns Crossing Road and Selwyn Road, Rolleston, Canterbury (referred to by the client as Skellerup South and seen on Figure 1).

The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) (NESCS) Regulations apply to selected activities on sites where an activity or industry on the Ministry for the Environment (MfE) Hazardous Activities and Industries List (HAIL) is, has, or is more likely than not to have occurred. The purpose of this PSI was to assess the potential for contaminants to have been deposited at the site as a result of current and/or historical activities undertaken within or in the immediate vicinity of the site and accordingly determine if any further investigation work is required under the NESCS.

This PSI report has been reviewed by a Suitably Qualified and Experienced Practitioner (SQEP), as required by the NESCS.

1.1. OBJECTIVES

The objectives of this PSI were to:

- Identify potentially contaminating (HAIL) activities or potential sources of contamination that might have occurred or exist at the site.
- Confirm the suitability of the land for subdivision and provide recommendations regarding additional works required prior to any future development.

1.2. SCOPE OF WORKS

The scope of work was undertaken in general accordance with the staged process defined by the Ministry for Environment (MfE) Contaminated Land Management Guidelines No. 5: Site Investigation and Analysis of Soils (revised 2021) and the findings are presented in accordance with the MfE Contaminated Land Management Guideline No.1: Reporting on Contaminated Sites in New Zealand (revised 2021). Both the above documents are incorporated by reference into the NESCS.

In summary, the following scope of works was undertaken:

- Review of Environment Canterbury's Listed Land-Use Register (LLUR) for the site.
- Review of published geological maps and the Tetra Tech Coffey database to appraise likely soil and groundwater conditions at the site.
- Review of selected publicly available aerial photographs or other accessible historical photographs.
- Preparation of this PSI report. As required by the NESCS, this report was reviewed and approved by a suitably qualified and experienced practitioner (SQEP).

A site walkover was not undertaken due to the current New Zealand Covid-19 lockdown. This will be completed, and this report updated if the walkover provides any additional information that will change the results of this report.

2. SITE INFORMATION

2.1. SITE DESCRIPTION

The site is approximately rectangular in shape with predominately flat topography, situated directly south of the central Rolleston township and approximately 24 km south-west of Christchurch's central business district. Details of the properties comprising the site are listed in Table 1 and the site location is shown on Figure 1.

The aerial view of the site from the Canterbury Maps Viewer showed that the site was primarily in use as agricultural land with a small shed structure and laydown area in the central section of the site area. The majority of the site appears to be currently in use as grazing fields. Current imagery shows a pair of ponds within the site, one located on the north-western boundary of the site and the other in the central-northern section of the site.

The site is bordered by agricultural land-uses in all directions.

Table 1: Site information

Address	Legal Description	Property Area (Hectares)
423 Selwyn Road, Rolleston	Rural Section 25807	20.23
423 Selwyn Road, Rolleston	Rural Section 23614	8.19

2.2. GEOLOGY AND HYDROGEOLOGY

The geology of the site is shown on the Institute of Geological and Nuclear Sciences (GNS) geological map, scale 1:250,000. The map indicates the site is underlain by Late Pleistocene river deposits which are described as unweathered, brownish-grey, variable mix of gravels/sand/silt/clay in low river terraces; locally up to 2m silt cap.

The nearest permanent surface water body to the site is the Selwyn River located approximately 5.5 km to the south-west of the site. This river flows in a south-east direction eventually feeding into Lake Ellesmere approximately 14.5 km south-east of the site. Two non-perennial ponds are located within the site with one on the north-western boundary of the site and the other in the central-northern section of the site.

Further information can be found within the geotechnical investigation report completed for the site by Tetra Tech Coffey in September 2021 (REF: 773-CHCGE293048).

2.3. SITE HISTORY

The following sections summarise the historical activities undertaken within or in the immediate vicinity of the site, as determined from the information sources reviewed during this PSI.

2.3.1. Listed land-use register

Environment Canterbury's LLUR was accessed on 31 August 2021 and it was noted that the LLUR currently has no information about HAIL activities within the property parcels. The LLUR responses have been attached as Appendix B.

2.3.2. Historical aerial photographs

Historical aerial photographs of the site and the surrounding area taken between 1942 and 2017 were sourced from the Local Government Geospatial Alliance's (LGGA) Retrolens and the Canterbury Maps Viewer. A summary of observations made from the review of these photographs (refer to Appendix C) is provided below:

- The site was in use as agricultural land from the initial 1942 historical aerial image
- A pond initially appearing in the 1982 historical aerial image until present. This pond is not visible in some historical aerals, indicating it is not a permanent feature within the site.
- A laydown area is first visible within the central section of the site in the 2010 aerial image It is not clear what is stockpiled within the site area at this time.
- The laydown area continues to be in use in the 2017 historical aerial image alongside potential cropping in the northern section of the site.

The site has remained in continuous agricultural use through all historical aerial images.

Offsite land-use is similar agricultural activities surrounding the site with a forestry plantation present on the northern boundary of the site from the initial 1942 aerial image up to the available 2010-2015 historical aerial image.

The aerial imagery indicated that the site appears to have been primarily used for agricultural purposes since before 1942 and may have been impacted by HAIL category A10 (persistent pesticide bulk storage or use) and HAIL category H (any land that has been subject to the migration of hazardous substances from adjacent land in sufficient quantity that it could be a risk to human health or the environment) associated with the adjacent orchard activities.

3. POTENTIAL HAIL ACTIVITIES

The potential HAIL activities noted during this PSI include:

- Persistent pesticide bulk storage or use (HAIL Category A10).
- Any land that has been subject to the migration of hazardous substances from adjacent land in sufficient quantity that it could be a risk to human health or the environment (HAIL Category H).
- 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 (HAIL Category I).

4. SUMMARY

Tetra Tech Coffey was contracted by the client to conduct a PSI for the properties located on the corner of Dunns Crossing Road and Selwyn Road, Rolleston, Canterbury (referred to by the client as Skellerup South, Figure 1). This investigation has been undertaken to confirm the suitability of the site for plan change and associated residential subdivision.

Tetra Tech Coffey completed a review of Environment Canterbury's LLUR, published geological maps and publicly available historical aerial photographs.

On the basis of the information reviewed and collected, Tetra Tech Coffey has identified actual or potential HAIL activities to likely have occurred on-site as summarised in Table 2 below:

Table 2: Identified actual or potential HAIL activities

Actual/Potential HAIL Activities	Land Use	Information Source	Considered Risk Potential for Contamination to Surrounding Environment
Persistent pesticide bulk storage or use (HAIL Category A10)	Use of pesticide and other agrochemicals in agricultural activities	Historical aerial photographs.	The risk potential to the underlying soil and groundwater is considered low to medium due to: - Relatively long period of use (since prior to 1942). - Likely use of non-environmentally persistent chemicals in the paddocks. - No investigation data to confirm concentrations.
Any land that has been subject to the migration of hazardous substances from adjacent land in sufficient quantity that it could be a risk to human health or the environment (HAIL Category H)	Neighbouring forestry	Historical aerial photographs	The risk potential to the underlying soil and groundwater is considered low to medium due to: - Likely use of sprays on the neighbouring forestry. - Relatively long period of use (since prior to 1942). - No investigation data to confirm concentrations.
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 (HAIL Category I)	Laydown area and shed	Historical aerial photographs	The risk potential to the underlying soil and groundwater is considered low to medium due to: - Unknown materials stored within the section of the site - Relatively short period of use (since prior to 2008). - No investigation data to confirm concentrations.

The review of site history information indicates the following key potential receptors that may be relevant to the site:

- Earthworks contractors who may come into contact with potentially contaminated soil during any proposed future development works.
- Future occupiers of the properties within the site.

5. RECOMMENDATIONS

Due to the possible presence of HAIL activities on the site, the NESCS regulations are considered to apply to the site. Subdividing or changing land use is a permitted activity under section 8(4)(b) of the NESCS if the report on the site states that it is highly unlikely that there will be a risk to human health if the activity is done to the piece of land.

The potential of contamination to soil associated with the identified potential sources of contamination are considered low to medium (refer to Table 2 above), depending on the activity identified. However, it is considered unlikely that there will be a risk to human health with the proposed plan change and subdivision

providing that the potential contaminant source areas listed in Table 2 are assessed and remediated if appropriate.

The site is considered to be suitable for plan change and subdivision, with any consent granted for the site, conditional on a detailed site investigation (DSI) being carried out prior to any earthworks and or building consents being granted.

Tetra Tech Coffey recommends soil characterisation samples are taken from across the site with soil samples also collected from targeted areas of concern to create a detailed site investigation (DSI) prior to earthworks consent being granted to ensure elevated contaminants and excessive use of pesticides are not present.

6. LIMITATIONS

The findings of this report should be read together with “Important Information ‘About Your Tetra Tech Coffey Environmental Report’ (attached).

7. REFERENCES

Environment Canterbury's listed land-use register. <https://lur.ecan.govt.nz/> (accessed 30 August 2020)

Institute of Geological and Nuclear Sciences (1992). Geological Map 1, scale 1:25,000: Geology of the Christchurch Urban Area.

MfE (2003). Contaminated Land Management Guideline No. 1: Reporting on Contaminated Sites in New Zealand. Ministry for the Environment, Wellington, New Zealand. (Revised 2021).

MfE (2004). Ministry for the Environment's Contaminated Land Management Guidelines No. 5: Site Investigation and Analysis of Soils. Ministry for the Environment, Wellington, New Zealand. (Revised 2021).

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

FIGURES

APPENDIX A: LIMITATIONS

IMPORTANT INFORMATION ABOUT YOUR TETRA TECH COFFEY ENVIRONMENTAL REPORT

Introduction

This report has been prepared by Tetra Tech Coffey for you, as Tetra Tech Coffey's client, in accordance with our agreed purpose, scope, schedule and budget.

The report has been prepared using accepted procedures and practices of the consulting profession at the time it was prepared, and the opinions, recommendations and conclusions set out in the report are made in accordance with generally accepted principles and practices of that profession.

The report is based on information gained from environmental conditions (including assessment of some or all of soil, groundwater, vapour and surface water) and supplemented by reported data of the local area and professional experience. Assessment has been scoped with consideration to industry standards, regulations, guidelines and your specific requirements, including budget and timing. The characterisation of site conditions is an interpretation of information collected during assessment, in accordance with industry practice.

This interpretation is not a complete description of all material on or in the vicinity of the site, due to the inherent variation in spatial and temporal patterns of contaminant presence and impact in the natural environment. Tetra Tech Coffey may have also relied on data and other information provided by you and other qualified individuals in preparing this report. Tetra Tech Coffey has not verified the accuracy or completeness of such data or information except as otherwise stated in the report. For these reasons the report must be regarded as interpretative, in accordance with industry standards and practice, rather than being a definitive record.

Your report has been written for a specific purpose

Your report has been developed for a specific purpose as agreed by us and applies only to the site or area investigated. Unless otherwise stated in the report, this report cannot be applied to an adjacent site or area, nor can it be used when the nature of the specific purpose changes from that which we agreed.

For each purpose, a tailored approach to the assessment of potential soil and groundwater contamination is required. In most cases, a key objective is to identify, and if possible quantify, risks that both recognised and potential contamination pose in the context of the agreed purpose. Such risks may be financial (for example, clean up costs or constraints on site use) and/or physical (for example, potential health risks to users of the site or the general public).

Limitations of the Report

The work was conducted, and the report has been prepared, in response to an agreed purpose and scope, within time and budgetary constraints, and in reliance on certain data and information made available to Tetra Tech Coffey.

The analyses, evaluations, opinions and conclusions presented in this report are based on that purpose and scope, requirements, data or information, and they could change if such requirements or data are inaccurate or incomplete.

This report is valid as of the date of preparation. The condition of the site (including subsurface conditions) and extent or nature of contamination or other environmental hazards can change over time, as a result of either natural processes or human influence. Tetra Tech Coffey should be kept apprised of any such events and should be consulted for further investigations if any changes are noted, particularly during construction activities where excavations often reveal subsurface conditions.

In addition, advancements in professional practice regarding contaminated land and changes in applicable statutes and/or guidelines may affect the validity of this report. Consequently, the currency of conclusions and recommendations in this report should be verified if you propose to use this report more than 6 months after its date of issue.

The report does not include the evaluation or assessment of potential geotechnical engineering constraints of the site.

Interpretation of factual data

Environmental site assessments identify actual conditions only at those points where samples are taken and on the date collected. Data derived from indirect field measurements, and sometimes other reports on the site, are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions.

Variations in soil and groundwater conditions may occur between test or sample locations and actual conditions may differ from those inferred to exist. No environmental assessment program, no matter how comprehensive, can reveal all subsurface details and anomalies. Similarly, no professional, no matter how well qualified, can reveal what is hidden by earth, rock or changed through time.

The actual interface between different materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but steps can be taken to reduce the impact of unexpected conditions.

For this reason, parties involved with land acquisition, management and/or redevelopment should retain the services of a suitably qualified and experienced environmental consultant through the development and use of the site to identify variances, conduct additional tests if required, and recommend solutions to unexpected conditions or other unrecognised features encountered on site. Tetra Tech Coffey would be pleased to assist with any investigation or advice in such circumstances.

Recommendations in this report

This report assumes, in accordance with industry practice, that the site conditions recognised through discrete sampling are representative of actual conditions throughout the investigation area. Recommendations are based on the resulting interpretation.

Should further data be obtained that differs from the data on which the report recommendations are based (such as through excavation or other additional assessment), then the recommendations would need to be reviewed and may need to be revised.

Report for benefit of client

Unless otherwise agreed between us, the report has been prepared for your benefit and no other party. Other parties should not rely upon the report or the accuracy or completeness of any recommendation and should make their own enquiries and obtain independent advice in relation to such matters.

Tetra Tech Coffey assumes no responsibility and will not be liable to any other person or organisation for, or in relation to, any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report.

To avoid misuse of the information presented in your report, we recommend that Tetra Tech Coffey be consulted before the report is provided to another party who may not be familiar with the background and the purpose of the report. In particular, an environmental disclosure report for a property vendor may not be suitable for satisfying the needs of that property's purchaser. This report should not be applied for any purpose other than that stated in the report.

Interpretation by other professionals

Costly problems can occur when other professionals develop their plans based on misinterpretations of a report. To help avoid misinterpretations, a suitably qualified and experienced environmental consultant should be retained to explain the implications of the report to other professionals referring to the report and then review plans and specifications produced to see how other professionals have incorporated the report findings.

Given Tetra Tech Coffey prepared the report and has familiarity with the site, Tetra Tech Coffey is well placed to provide such assistance. If another party is engaged to interpret the recommendations of the report, there is a risk that the contents of the report may be misinterpreted and Tetra Tech Coffey disowns any responsibility for such misinterpretation.

Data should not be separated from the report

The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way. Logs, figures, laboratory data, drawings, etc. are customarily included in our reports and are developed by scientists or engineers based on their interpretation of field logs, field testing and laboratory evaluation of samples. This information should not under any circumstances be redrawn for inclusion in other documents or separated from the report in any way.

This report should be reproduced in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties.

Responsibility

Environmental reporting relies on interpretation of factual information using professional judgement and opinion and has a level of uncertainty attached to it, which is much less exact than other design disciplines. This has often resulted in claims being lodged against consultants, which are unfounded. As noted earlier, the recommendations and findings set out in this report should only be regarded as interpretive and should not be taken as accurate and complete information about all environmental media at all depths and locations across the site.

APPENDIX B: LLUR ENQUIRIES



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 from our Listed Land Use Register (LLUR). The LLUR holds information about sites that have been used or are currently used for activities which have the potential to cause contamination.

The LLUR statement shows the land parcel(s) you enquired about and provides information regarding any potential LLUR sites within a specified radius.

Please note that if a property is not currently registered 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 database 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; additional relevant information may be held in other files (for example consent and enforcement files).

Please contact Environment Canterbury if you wish to discuss the contents of this property statement.

Yours sincerely

Contaminated Sites Team

Property Statement from the Listed Land Use Register

Visit ecan.govt.nz/HAIL for more information or
contact Customer Services at ecan.govt.nz/contact/ and quote ENQ292276

Date generated: 31 August 2021
Land parcels: RS 25807



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.

Sites at a glance

 Sites within enquiry area

There are no sites associated with the area of enquiry.

More detail about the sites

There are no sites associated with the area of enquiry.

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.

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.



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The LLUR statement shows the land parcel(s) you enquired about and provides information regarding any potential LLUR sites within a specified radius.

Please note that if a property is not currently registered 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 database 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; additional relevant information may be held in other files (for example consent and enforcement files).

Please contact Environment Canterbury if you wish to discuss the contents of this property statement.

Yours sincerely

Contaminated Sites Team

Property Statement from the Listed Land Use Register

Visit ecan.govt.nz/HAIL for more information or
contact Customer Services at ecan.govt.nz/contact/ and quote ENQ292277

Date generated: 31 August 2021
Land parcels: RS 23614



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.

Sites at a glance

 **Sites within enquiry area**

There are no sites associated with the area of enquiry.

More detail about the sites

There are no sites associated with the area of enquiry.

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.

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

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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.

¹The 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.

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)

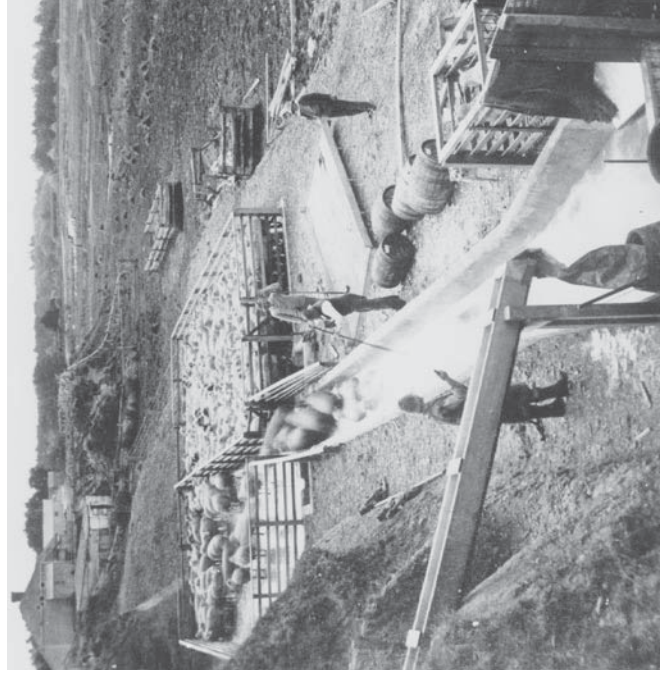


Everything is connected
Promoting quality of life through
balanced resource management.
www.ecan.govt.nz E13/101



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.)

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



E13/102

APPENDIX C: HISTORICAL AERIAL PHOTOGRAPHS

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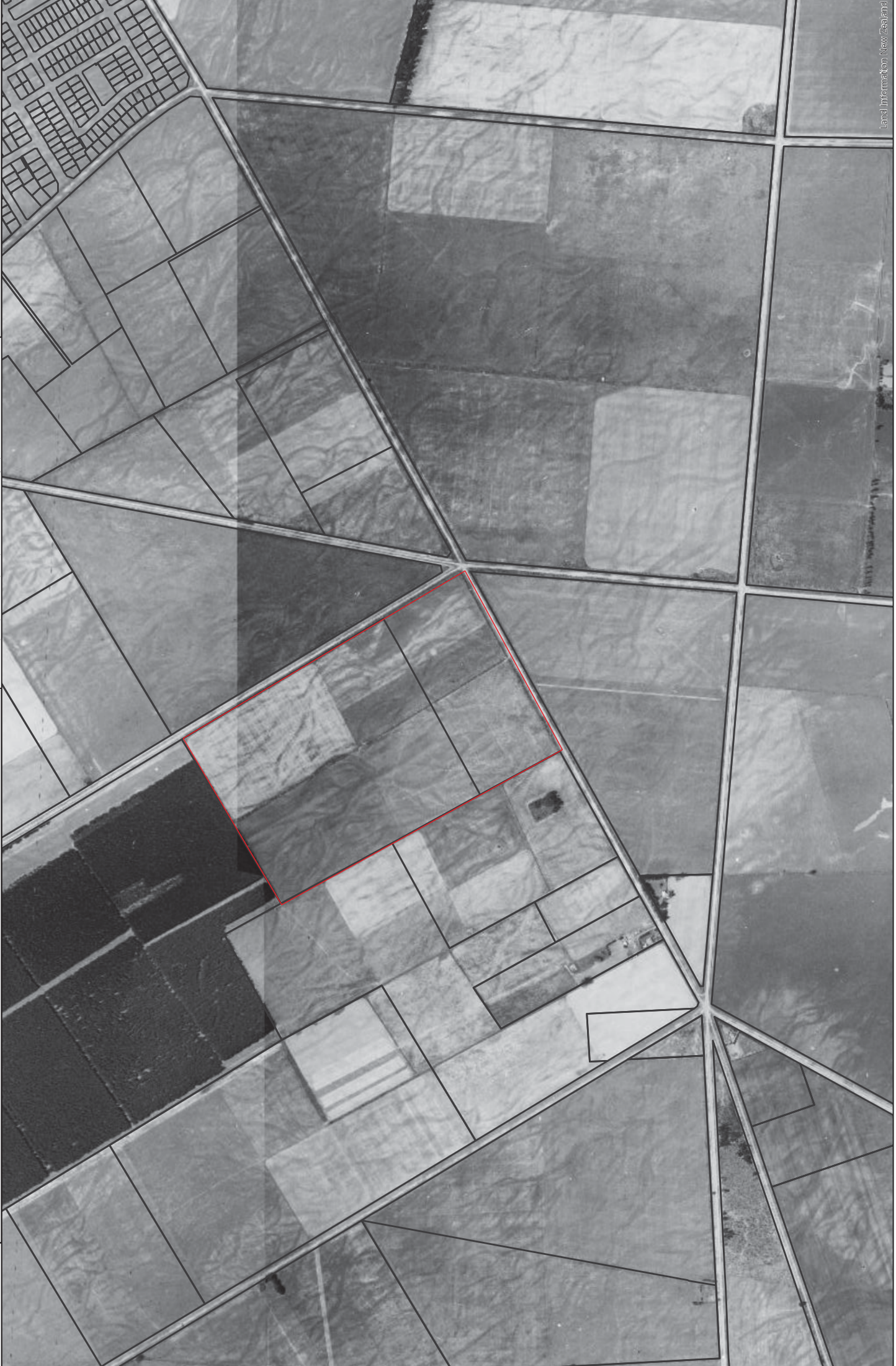
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0 0.1 0.2 0.3 0.4 Kilometres

Scale: 1:7,000 @A3

Map Created by Canterbury Maps on 2/09/2021 at 11:10 AM





Canterbury Maps - 1982

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00.070.140.210.28

Kilometres

Scale: 1:5,000 @A3

Map Created by Canterbury Maps on 30/9/2021 at 2:20 PM





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0

0.07

0.14

0.21

0.28

Kilometres

Scale: 1:5,000 @A3

Map Created by Canterbury Maps on 8/09/2021 at 1:29 PM



