## 631 Shands Road, Prebbleton Preliminary Site Investigation Report

Prepared for

## **M J Stratford**

Prepared by



October 2015



## **631 Shands Road**

## **Preliminary Site Investigation Report**

#### **M J Stratford**

This report has been prepared for M.J.Stratford by Lowe Environmental Impact (LEI). No liability is accepted by this company or any employee or sub-consultant of this company with respect to its use by any other parties.

Quality Assurance Statement				
Task	Responsibility	Signature		
Project Manager:	Philippe Dumont	Facus		
Prepared by:	Philippe Dumont	- Forman R		
Reviewed by:	Sarah Smith			
Approved for Issue by:	Rob Potts	Bas		
Status:	Final			

#### Prepared by:

Lowe Environmental Impact

P O Box 29288 Christchurch 8540

Job No.: 10380

Ref:

| T | [+64] 3 359 3059

| E | <u>office@lei.co.nz</u>

| W| www.lei.co.nz

Date: 16 October 2015

151016-Final

RE-10380-MJStratford\_631\_Shands\_Rd-PSI-



## **TABLE OF CONTENTS**

TAB	BLE OF CONTENTS	II
1	EXECUTIVE SUMMARY	1
2	INTRODUCTION	3
2.1	Terms of Reference	3
2.2	Objectives	3
2.3	Format	3
2.4	Limitations	3
3	ENVIRONMENT DETAILS	5
3.1	Site Details	5
3.2	Topography	5
3.3	Site Access	5
3.4	Geology	6
3.5	Hydrology	6
3.6	Surrounding Land Uses	7
4	SITE HISTORY	8
4.1	Site Ownership	8
4.2	Site Uses	8
4.3	Zoning	9
4.4	Regulatory Matters	9
4.5	Local Water Resources Use	10
4.6	Previous Site Investigations	10
4.7	Aerial Photography	11
5	CURRENT SITE CONDITIONS	12
6	SITE CHARACTERISATION	14
6.1	Contamination Assessment	14
ı	Palmerston North   Wellington	- 1



6.2	Asses	sment of Exposure Routes	15
7	CON	CLUSIONS AND RECOMMENDATIONS	16
7.1	Concl	usions	16
7.2	Recor	mmendation	16
8	REFE	ERENCES	17
9	APPI	ENDICES	18
Appen Appen	dix B dix C dix D	Certificates of Title Bore Detail Summary LLUR Statements Aerial Images Site Visit Photos	



#### 1 EXECUTIVE SUMMARY

A Preliminary Site Investigation Report (PSI) was prepared by Lowe Environmental Impact Ltd for M J Stratford, detailing the land use history of an area of land located on 631 Shands Road, Prebbleton, Christchurch.

The area is referenced as Lot 1 DP 53113 and is part of an area seeking a rezoning from its existing Rural (Inner Plains) zone to a Living 3 Zone. The site is intended to be subdivided into 26 lots. Redevelopment works will include soil disturbance activities.

Section 5(7) of the NES¹ states that the land is covered by the NES if an activity or industry described in the Hazardous Activities or Industries List (HAIL) is being undertaken on it, has been undertaken on it or it is more likely than not that a HAIL activity is being or has been undertaken on it.

A resource consent is required under the NES when any of the five activities specified in the NES are to be carried out on an area of land where confirmed HAIL activities have occurred. The activities specified in the NES include soil disturbance.

The objectives of the PSI report are:

- To establish if a HAIL activity/activities has/have occurred on the area under consideration.
  The provisions of the NES apply if an activity or industry on the HAIL has been, is, or is
  more likely than not to have been, undertaken on the land under consideration. All
  available information has been reviewed to assess whether a HAIL activity (or activities)
  has been undertaken on the area under examination; and
- To assess the risk to human health (if the proposed land use change occurs), given the land use history of the area under consideration.

A review of all available information was undertaken to assess whether a HAIL activity (or activities) has been undertaken on the area of land under examination. This included viewing aerial photography, Selwyn District Council property file information, historical title information, information on contamination and other environmental data held by Environment Canterbury. The review also included a site walkover, to assess current site conditions and land uses on the site.

Based on the information examined during this investigation, evidence was found that various HAIL activities have historically been undertaken on the area under consideration. The evidence reviewed in this investigation suggests that the following activities have, or are more likely than not to have occurred on the area under consideration:

- Storage of hazardous substances on bare ground including (but not limited to) oil and water based paint, paint conditioners, concrete chemical, oil and lubricants;
- Solid waste disposal (dumping) to land;
- Scrap metal deposition onto land;
- Spills of hazardous substance and metal grinding/polishing dust onto ground.

-

<sup>&</sup>lt;sup>1</sup> Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011.



#### The report concludes that:

• The NES applies to the land parcel under consideration

The relevant part of the NES, in terms of defining a piece of land that it applies to, is section 5(7), which reads as follows:

The piece of land is a piece of land that is described by 1 of the following:

- (a) an activity or industry described in the HAIL is being undertaken on it:
- (b) an activity or industry described in the HAIL has been undertaken on it:
- (c) it is more likely than not that an activity or industry described in the HAIL is being or has been undertaken on it.

Based on the information examined during this investigation, evidence was found that various HAIL activities have historically been undertaken on the piece of land under consideration.

So the provisions of the NES apply to the land parcel referenced as Lot 1 DP 53113.

• The presence of historic HAIL activities may have resulted in contamination being present on the specified land parcel

There is evidence of historical HAIL activities having occurred on the site under consideration. There could be a risk to human health from the proposed change in land use (stormwater management, with associated soil disturbance for the creation of a wetland), without additional investigations to establish contaminant levels in the locations where the HAIL activities have been identified, prior to the proposed land use change occurring.

#### The report recommended that:

• Intrusive investigations should be undertaken prior to redevelopment works occurring

Further investigations should be undertaken on the parcel of land to establish soil contaminant levels prior to redevelopment works occurring.

Suggested contaminants for analysis in a Detailed Site Investigation (DSI) would be petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbon compounds (PAHs) and heavy metals.



#### **2 INTRODUCTION**

#### 2.1 Terms of Reference

This Preliminary Site Investigation Report (PSI) has been prepared by Lowe Environmental Impact Limited (LEI) for M J Straford (the client). It details the land use history of an area of land that is located on 631 Shands Road in Prebbleton, Christchurch.

The area is referred to as "the site" in this report.

#### 2.2 Objectives

It is proposed that the area will be rezoned from Rural (Inner Plains) zone to a Living 3 Zone. The site is intended to be subdivided into 26 lots. Redevelopment works will include soil disturbance activities.

Section 5(7) of the NES<sup>2</sup> states that the NES applies to a piece of land if an activity or industry described in the Hazardous Activities or Industries List (HAIL) is being undertaken on it, has been undertaken on it or it is more likely than not that such an activity is being or has been undertaken on it.

A resource consent is required under the NES when any of the five activities specified in the NES are to be carried out on an area of land where confirmed HAIL activities have occurred. The activities specified in the NES include soil disturbance.

The objectives of this PSI report are:

- To establish if any HAIL activities have occurred on the area under consideration. The
  provisions of the NES apply if an activity or industry on the HAIL has been, is, or is more
  likely than not to have been, undertaken on the land under consideration. All available
  information has been reviewed to assess whether a HAIL activity (or activities) has been
  undertaken on the area under examination; and
- To assess if there is a risk to human health (should the proposed future land use and associated soil disturbance activities occur), given the land use history of the area under consideration.

#### 2.3 Format

The format of this PSI report follows guidelines published by the Ministry for the Environment (Ministry for the Environment (MfE), 2011).

#### 2.4 Limitations

Lowe Environmental Impact Limited has performed services for this project in accordance with current professional standards for environmental site assessments. No guarantees are either expressed or implied. This report does not attempt to fulfill the requirements of legal due diligence.

<sup>&</sup>lt;sup>2</sup> Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011.



There is no investigation that is thorough enough to preclude the presence of materials at the site that presently, or in the future, may be considered hazardous. As regulatory criteria are subject to change, contaminant concentrations present and considered to be acceptable may, in the future, become subject to different regulatory standards which cause them to become unacceptable and require further remediation for the site in order for it to be suitable for existing or proposed land use activities.

Opinions and judgments expressed in this report, which are based on an understanding and interpretation of current regulatory standards should not be construed as legal opinions. This report and the information it contains have been prepared solely for the use of M J Stratford. Any reliance on this report by other parties shall be at such party's own risk.



#### **3 ENVIRONMENT DETAILS**

#### 3.1 Site Details

The area of interest shown in **Figure 3.1.1** has a total area of 15.99 ha and is located on 631 Shands Road in Prebbleton, Christchurch.



Figure 3.1.1: Location of Area under Consideration

The site under consideration is currently made up of one single Title (CB31B/383). Copies of the current and historical Certificates of Title are included in **Appendix A.** 

The site is legally described as Lot 1 DP 53113.

#### 3.2 Topography

The topography of the site is generally flat.

#### 3.3 Site Access

The area is accessed from Shands Road.



#### 3.4 Geology

The ECan GIS database *Detailed Soils* layer indicates that the soil type underlying the area under examination is *Templeton moderately to deep silty loam with silty dominance and moderately well drained. The dominant soil type depth is >100 cm.* 

A Soil & Rock Consultants geotechnical report (2012) indicates that sandy silt was encountered directly below the topsoil in all test pits to depths between 0.5m and 1.2m below present ground level. Well packed gravel was encountered below the sandy silts to the termination of all twelve test pits, to depths of up to 2.2m below present ground level.

#### 3.5 Hydrology

#### 3.5.1 Surface

There are several surface waterways in the surroundings of the site. A main water race runs from North West to South East along Trents Road (approximately 230 m from the South East boundary of the site). That water race flows into Dawson Creek and then into the Halswell River. That water race is fed from the Paparua Scheme on the Waimakariri River and drains into the Halswell land drainage network.

The Paparua scheme is made up of a variety of smaller farms and a large number of lifestyle blocks. It consists of an intake on the southern bank of the Waimakariri River at Intake Road feeding into races, which fan out across the plains towards Christchurch in the East and Burnham in the south.

The nearest natural waterway is Dawson Creek which flows approximately 3 km south east of the boundary of the site.

The site is located within the Selwyn-Waihora water management strategy zone.

Four spring locations have been identified within a 3 km radius from the site and are shown in **Table 3.5.1** below.

Table 3.5.1: Springs located around Site

Springs	Distance from Site
M36/5386	2,400 m South East
M36/5387	2,400 m South East
M36/5388	2,150 m South East
M36/5389	2,200 m South East

#### 3.5.2 Groundwater

The ECan GIS database piezometric contours indicate that groundwater under the site flows generally in an east south east direction.

The site is located within an unconfined/semi-confined aquifer and lies within the Selwyn-Waimakariri groundwater allocation zone.



Two active Supply Wells have been identified within a 2 km radius from the site. These are listed in **Table 3.5.2** below.

**Table 5.3.2: Community Supply Wells around Site** 

Community Supply Wells	Distance from Site
M36/0870	1,850 m South East
M36/4795	1,900 m South East

Numerous groundwater wells have been identified around the area under consideration. Only the wells that are still in use are shown in **Table 5.3.3** below.

**Table 3.5.3: Currently Used Bores around Site** 

Table 3.3.3. Currently Osed Bores around Site					
Bores/Wells	Use	Distance from Site Boundary	Groundwater Depth		
M36/0280	Stock Supply	Within the site	10.4 m bgl (calculated)		
M36/20107	Domestic/Stock Supply	80 m West	N/A		
M36/3989	Domestic/Stock Supply	Within the site	10.1 m bgl (calculated)		
M36/3770	Irrigation & Domestic/Stock Supply	135 East	9.2 m bgl (calculated)		
M36/3775	Irrigation & Domestic/Stock Supply	210 m South	9.3 m bgl (calculated)		
M36/5172	Irrigation & Domestic/Stock Supply	50 m West	10.6 m bgl (calculated)		
M36/6808	Irrigation & Domestic/Stock Supply	120 m North	10.7 m bgl (calculated)		
M36/4362	Irrigation	320m South East	8.5 m bgl (calculated)		
M36/5253	Domestic Supply	50 m West	10.6 m bgl (calculated)		
M36/2999	Domestic/Stock Supply	90 m West	10.8 m bgl (calculated)		

Key: N/A: Data not available Bgl: Below Ground Level

Details about the bores and wells are included in **Appendix B**.

General depth to groundwater is indicated as being greater than six metres on the ECan GIS database. Water level information retrieved for wells in the local environment suggests that depth to groundwater is generally ranging from 7 - 11 m bgl.

#### 3.6 Surrounding Land Uses

Surrounding land uses are mostly agricultural and residential.



#### **4 SITE HISTORY**

#### 4.1 Site Ownership

The current and historical titles were obtained from Land Information New Zealand (LINZ). The titles were reviewed to establish previous land parcel ownership, in particular the occupations of previous landowners (and associated dates that this occurred). Certificates of Title are included in **Appendix A.** 

#### 4.2 Site Uses

#### 4.2.1 Historical

The land on title CB31B/383 has been used as farmland since at least 1941. A review of the historical titles and the historic aerial photography does not give any detail about the type of farming activities between the 1940's and 1988. However, according to the actual owner, the site has always been used as a pasture and for horse breeding/training since he bought the site in 1988 and most likely since the 1940's. According to the owner, no agricultural activities have ever been carried out or a sheep dip operated within the site.

#### 4.2.2 Current

Current land use in the area is horse farming/breeding/training and commercial storage. Part of the site is currently used to store some construction material including paint, conditioner and other hazardous substances involved in the different stages of building processes.

#### 4.2.3 Proposed

The area is proposed to be rezoned from Rural (Inner Plains) zone to a Living 3 Zone. The site is intended to be subdivided into 26 lots. **Figure 4.2.1** outlines the proposed future subdivision (plan provided by Calibre Consulting Ltd)





Figure 4.2.1. Proposed Subdivision

#### 4.3 Zoning

The area under consideration is part of the Selwyn District Plan and is currently zoned as Inner Plains. The first step of the development will be a Plan Change from Inner Plains to Living 3 to support rural residential development.

#### 4.4 Regulatory Matters

#### 4.4.1 Resource Consents

#### Regional

There are no current resource consents associated with the area under consideration.

#### 4.4.2 Listed Land Use Database Records

LEI sourced records from the ECan Listed Land Use Register (LLUR) database (which holds land contamination information) on 8 October 2015. LLUR records were accessed for the land parcel under consideration to assess if LLUR sites were present on the site or near it.

LLUR statements that identified LLUR sites either on a specified land parcel (within the area under consideration) or within 50 metres of the specified parcel are included in **Appendix C**.



The LLUR indicated that there is one HAIL (Hazardous Activities and Industries List) site located onsite or within 50 metres of the boundary of the area under consideration, as shown in **Table 4.3.1**.

**Table 4.3.1: LLUR Site Details** 

Relevant Lot(s) /	Period	HAIL Activity(s)	Investigations
Title	from/to		
Lot 2 DP 51743 (311	From 2000 to	A17 - Storage tanks	INV 82087 (DSI,
Trents Road)	2015	or drums for fuel,	2014) and INV
		chemicals or	109070 (Site
		liquid waste;	Validation,
			2015)

Details are outlined in **Section 4.6** below and LLUR statements are included in **Appendix C**.

#### **4.4.3 Property File Information**

LEI staff contacted Selwyn District Council to establish the property files available for the area under investigation.

The property files were reviewed at SDC on 2 October 2015.

Relevant material and information found during the review is incorporated throughout this report.

#### 4.5 Local Water Resources Use

There are no current consents for groundwater abstraction within the area under consideration.

Within a 500 m radius of the centre of the area under consideration, there are four active resource consents for groundwater abstraction (CRC010564, CRC010983, CRC011552.2 and CRC940809).

As indicated in **Section 3.5.2**, the nearest Community Supply Well is located about 1,850 metres south east of the area under consideration.

#### 4.6 Previous Site Investigations

A review of the ECan LLUR has not found any evidence of previous site investigations having been undertaken at locations in the area under consideration.

However, the parcel located on the eastern boundary of the site (311 Trents Road - Lot 2 DP 51743) has been assessed by Malloch Environmental Ltd in 2014 (Detailed Site Investigation) and 2015 (Site validation) for soil contamination caused by a small above ground fuel tank. The above ground storage tank was located approximately 20 m from the southern corner of the area under consideration. That contaminated area was remediated and validated afterwards



(INV#82087 - Soil Contamination Risk, Stage 2 Detailed Site Investigation Report, Stage 3 Remediation; INV#109070 - Site Validation Report).

#### 4.7 Aerial Photography

Aerial photography was reviewed, as it offers visual evidence as to the land use history of the site. Images were sourced from the ECan GIS database (1941, 1946, 1955, 1965, 1973, 1984, 1994 and 2011) and Google Earth (2004 - 2014). Copies of the aerial images are included in **Appendix D.** 

The 1941, 1955, 1964, 1973 and 1984 photographs shows that the area of interest was used as a farm (nature of the activity unknown, possibly cattle/horse farming) but no farm buildings are visible on the site.

The 1994 photograph shows several buildings located on the footprints of the actual buildings. Some of these buildings correspond exactly to those currently on the site. The building corresponding to the actual main dwelling appears to be smaller. This corresponds to the information collected from the property files indicating that two building permits were issued in 1988, one for a storage shed (February 1988) and one for stables and hay storage (December 1988). In July 1994, a building permit was granted for the transformation of an old hay barn into dwelling. It is assumed that the old hay barn was erected between 1984 and 1994 as it does not appear on the 1984 aerial photograph. The transformation of the old hay barn was completed in 1996. Apart from the new buildings, the site still appears to be used as a farm land for horse breeding and horse training (personal communication from the current site owner).

The 2004 aerial picture shows the site in a situation very similar to the current situation with the exception of the horse training track which has been built later.

Google Earth contains multiple images of the site for the period 2004 - 2014. The 2014 photo shows the farm apparently in very similar conditions as it is now in terms of activities and structures present on site.



#### **5 CURRENT SITE CONDITIONS**

A walkthrough of the area under consideration was undertaken by LEI staff on 1 October 2015.

The main activity of the site owner is construction. The site is partially used for building material storage (including construction related hazardous substances) and partially for horse breeding/training.

The site has three distinct zones:

- The main dwelling with the garage and the surrounding lawn, the flower garden and artificial pond;
- The horse breeding/training area with the paddocks, the stables, the hay barn and the horse training material and food/complements/ veterinary products shed; and
- The construction material storage area including the backyard.

The walkthrough of the area under consideration identified several points of interest regarding potential site contamination. The points of interest are detailed below (and numbered as per **Figure 5.1.1):** 



Figure 5.1.1. Points of Interest

- The back of the stables and the main storage shed is occupied by old construction material and wastes. This includes old metals items, fences, poles, scaffolding elements, old tyres, empty rusted containers (original content unknown) and five drums (20 L each) of *Ramset Bondbreaker LS* (Flammable sticker, content not confirmed) in very poor condition, including one drum leaking directly onto the ground.
- 2. The back of the shed is used to store already-in-use water and oil based paint and conditioners containers on bare ground without any protection against leaks. The shed is also used to grind/polish metal work, including copper items. The residues are not collected and fall (and accumulate) on the ground.



- 3. The big storage shed is used to store various items and products used in construction including tools, water and oil based paint, oil and other hazardous substances. Although the storage occurs on an impervious surface, which prevents any spill from leaching through the ground, the lack of structured storage and lack of inventory potentially creates occupational hazards.
- 4. The hay shed is used to store hay and horse training tools, and is used as a shelter for tractors/mowers and other hay harvesting tools. The place is also used for basic maintenance (point greasing, oil topping) of these tractors/movers and harvesting tools. No heavy maintenance is under this shed. Some empty containers and other already-in-use containers were found on bare ground including oil containers, tar sealant containers and other construction hazardous substances.
- 5. Point of interest #5 is mostly used to store horse training tools as well as food supplement and veterinary products. Although the storage is done on an impervious surface, which prevents any spill from leaching through the ground, the lack of structured storage and lack of inventory potentially creates occupational hazards
- 6. Outside storage of construction material including bricks, wooden pallets, timber, piping, construction debris and empty containers of oil and paint. Storage is done on bare ground.
- 7. Outside storage of farm equipment as well as construction material and debris including wooden pallets, timber, fences and two 55-gallon drums of unknown product in poor condition (originally containing oil) on bare ground.
- 8. Point of interest #8 includes several patches where burning has been carried out, storage of construction debris and abandoned hazardous waste comprising empty containers of various paint, oil, two vehicle lead-acid batteries and other construction related hazardous substances containers (some are empty, some are apparently still full, i.e. 1 drum of Ramset Bondbreaker) left on bare ground.

Photographs showing details of the above are included in **Appendix E**.

Information about the Ramset Bondbreaker LS product has been researched for Material Safety Data Sheet (MSDS), chemical properties and characteristics. No information was found using the conventional online research tools. Ramset was contacted by telephone and via email to enquire about that product. Ramset had no record on the product. The only available information was about the product was obtained verbally from Ramset customer services as being "very old (more than 20 years) and not commercialised anymore".

In response to a question enquiring about the hazardous characteristics of that product compared to similar product currently commercialised, the Ramset contact person stated that, "in the past, product may have been containing much more hazardous components, including carcinogenic compounds, which could have been the reason why the commercialisation of that old product was abandoned".

According to the owner of the site, who happened to be the user of that product, the Ramset Bondbreaker LS was "oily based".



#### **6 SITE CHARACTERISATION**

#### **6.1 Contamination Assessment**

The evidence reviewed in this investigation suggests that the following activities have, or are more likely than not to have occurred on the area under consideration:

- Storage of hazardous substances on bare ground including (but not limited to) oil and water based paint, paint conditioners, concrete chemical, oil and lubricants;
- Solid waste disposal (dumping) to land;
- Scrap metal deposition onto land;
- Spills of hazardous substance and metal grinding/polishing dust onto ground.

Aerial photography suggests that the area has been used for farm/horse breeding/horse training activities since the 1940's and as a construction-related products storage location (including hazardous substances) since the end of the 1980's.

One container of hazardous substance (Ramset Bondbreaker LS) was found leaking onto the ground. Hazardous substances containers, some empty some still containing product (unknown contents), were found on bare ground (stored and abandoned). These include (but are not limited to) water and oil based paint, paint conditioners, oil and lubricants and grinding/polishing metal dust.

The investigation has found evidence that several areas within the land parcel are likely to have been used in a way that may have resulted in soil contamination.

A review of the HAIL includes the following listings which are relevant to the activities identified above:

#### A. Chemical manufacture, application and bulk storage

- 1. Agrichemicals including commercial premises used by spray contractors for filling, storing or washing out tanks for agrichemical application;
- 17. Storage tanks or drums for fuel, chemicals or liquid waste;

#### D Metal extraction, refining and reprocessing, storage and use

3. Metal treatment or coating including polishing, anodising, galvanising, pickling, electroplating, or heat treatment or finishing using cyanide compounds

#### G. Cemeteries and waste recycling, treatment and disposal

- 5. Waste disposal to land (excluding where biosolids have been used as soil conditioners)
- 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

There could be a risk to human health from the proposed use of the site and associated soil disturbance activities, without additional investigations to establish contaminant levels in the



locations where the identified HAIL activities occurred, prior to the proposed land use changes occurring.

#### **6.2 Assessment of Exposure Routes**

Contamination present on a site can affect land uses. The following receptor pathways have been assessed as relevant for the area under consideration:

#### Surface soils (0 - 1 m depth):

- Soil ingestion;
- Dermal contact (absorption through skin); and
- Inhalation of particulates, dust, volatile contaminants (outdoor activities, particulates).

#### **Sub-surface soils (> 1m depth):**

- Dermal contact (absorption through skin); and
- Inhalation of particulates, dust, volatile contaminants (outdoor activities, particulates).

The relevant exposure routes and identified receptors are shown in **Table 6.1**.

**Table 6.1: Pathways Assessment** 

Pathway	Soil Depth		Is Pathwa	y complete?	
		Users of Surrounding Sites	Development Workers	Post- Development Users	Service and Maintenance Personnel
Soil ingestion	Surface	No	Yes	Yes	Yes
	Sub-surface	No	Yes	Very limited	Yes
Dermal	Surface	N/A	Yes	Yes	Yes
contact	Sub-surface	N/A	Yes	Very limited	Yes
Inhalation of	Surface	N/A	Yes	N/A	N/A
volatiles (indoor & outdoor)	Subsurface	N/A	Yes	N/A	N/A
Inhalation	Surface	Yes	Yes	Yes	Yes
(particulate, dust)	Sub-surface	N/A	Yes	Very limited	Yes



#### 7 CONCLUSIONS AND RECOMMENDATIONS

#### 7.1 Conclusions

It is concluded that:

The NES applies to the land parcel under consideration

The relevant part of the NES, in terms of defining a piece of land that it applies to, is section 5(7), which reads as follows:

The piece of land is a piece of land that is described by 1 of the following:

- (a) an activity or industry described in the HAIL is being undertaken on it:
- (b) an activity or industry described in the HAIL has been undertaken on it:
- (c) it is more likely than not that an activity or industry described in the HAIL is being or has been undertaken on it.

Based on the information examined during this investigation, evidence was found that various HAIL activities have historically been undertaken on the area under consideration.

So the provisions of the NES apply to the land parcel contained in this title.

• The presence of historic HAIL activities may have resulted in contamination being present on the land parcel

The investigation has found evidence to suggest that there have been various historic HAIL activities that may have resulted in soil contamination on the area under consideration.

There could be a risk to human health from the proposed land use (and associated soil disturbance), without additional investigations to establish contaminant levels in the locations where the HAIL activities have been identified, prior to the proposed land use changes occurring.

#### 7.2 Recommendation

It is recommended that:

Intrusive investigations should be undertaken prior to redevelopment works occurring

Further investigations should be undertaken on the parcel of land to establish soil contaminant levels prior to redevelopment works occurring.

Suggested contaminants for analysis in a Detailed Site Invesitgation (DSI) would be petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbon compounds (PAHs) and heavy metals.



#### **8 REFERENCES**

ECan GIS database (2014) – including aerial photography.

ECan Wellcard database (2014)

ECAN Liste Land Use Register (2015)

Ministry for the Environment (2012) - *Users' Guide: National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health.* 

Ministry for the Environment (2011) - Contaminated Land Management Guidelines No.1 Reporting on Contaminated Sites in New Zealand (Revised 2011).

Malloch Environmental Ltd (2014) - *Soil Contamination Risk - Stage 2 Detailed Site Investigation Report and Stage 3 Remediation Action Plan.* 

Malloch Environmental Ltd (2014) - Soil Contamination Risk - Stage 4 - Site Validation Report.

Soil&Rock Consultants (2012) - Geotechnical Investigation Report.



## 9 APPENDICES

Certificates of Title Bores Details Summary

Appendix A Appendix B Appendix C Appendix D **LLUR Statements** Aerial Images Appendix E Site Visit Photos



# **APPENDIX A**Certificates of Title



### COMPUTER FREEHOLD REGISTER UNDER LAND TRANSFER ACT 1952



#### **Historical Search Copy**

Identifier CB31B/383
Land Registration District Canterbury
Date Issued 05 August 1988

#### **Prior References**

CB30K/247

**Estate** Fee Simple

**Area** 15.9905 hectares more or less **Legal Description** Lot 1 Deposited Plan 53113

**Original Proprietors**Michael Joseph Stratford

#### **Interests**

Subject to Section 206 Land Act 1924

896851.1 Mortgage to Westpac Banking Corporation - 12.9.1990 at 9.50 am

A170341.2 Mortgage to Trust Bank Canterbury Limited - 1.5.1995 at 9.07 am

A170341.3 Memorandum of Priority making Mortgages A170341.2 and 896851.1 first and second mortgages respectively - 1.5.1995 at 9.07 am

A320720.1 Variation of Mortgage 896851.1 - 6.10.1997 at 3.15 pm

5462893.1 Discharge of Mortgage A170341.2 - 21.1.2003 at 9:00 am

5462893.2 Mortgage to Canterbury Finance Limited - 21.1.2003 at 9:00 am

5545124.4 Variation of Mortgage 5462893.2 - 7.4.2003 at 9:00 am

7095691.1 Application pursuant to Section 99A Land Transfer Act 1952 vesting Mortgage 896851.1 in Westpac New Zealand Limited - 2.11.2006 at 9:00 am

8085048.1 NOTICE OF CLAIM OF INTEREST PURSUANT TO SECTION 42(2) PROPERTY (RELATIONSHIPS)

ACT 1976 BY VIVIENNE ANN WITHELL - 26.2.2009 at 2:50 pm

8103153.1 Variation of Mortgage 896851.1 - 6.4.2009 at 3:36 pm

8714467.1 CAVEAT BY LEASECO FINANCE LIMITED - 11.3.2011 at 7:00 am

8745482.1 Withdrawal of Caveat 8714467.1 - 19.4.2011 at 7:00 am

8926908.1 Withdrawal of Notice of Claim 8085048.1 - 30.11.2011 at 9:33 am

9031215.1 Discharge of Mortgage 5462893.2 - 3.4.2012 at 4:07 pm

9095265.1 Variation of Mortgage 896851.1 - 19.6.2012 at 2:26 pm

9428799.1 CAVEAT BY JUDY LORRAINE HORN - 13.6.2013 at 3:31 pm (limited effect)

9444120.1 Mortgage to Judy Lorraine Horn - 27.6.2013 at 5:07 pm

9488235.1 Withdrawal of Caveat 9428799.1 - 19.8.2013 at 9:35 am

9488235.2 Discharge of Mortgage 9444120.1 - 19.8.2013 at 9:35 am

9488235.3 Mortgage to Wroxton Finance Limited and to Curzon Capital Limited in shares - 19.8.2013 at 9:35 am

9540710.1 Mortgage of Mortgage 9488235.3 to Gabrielle Desley Van Bree - 10.10.2013 at 12:49 pm

References Prior C/T 30B/236

Transfer No.

N/C. Order No. 724427/3



CANCELLED

## REGISTER

Land and Deeds 69

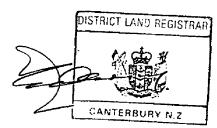
#### CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 4th day of February one thousand nine hundred and eighty-eight under the seal of the District Land Registrar of the Land Registration District of CANTERBURY

witnesseth that <u>DESMOND PETER GRICE</u> of Prebbleton, Studmaster and <u>GEOFFREY GEORGE GRICE</u> of Nelson, Electrical Engineer as executors <u>as to a one-half share</u> and <u>DESMOND PETER GRICE</u> abovenamed <u>as to a one-quarter share</u> and <u>ROMA LYON GABRIELLE GRICE</u> of Prebbleton, Married Woman <u>as to a one-quarter share</u> as tenants in common in the said shares are ---

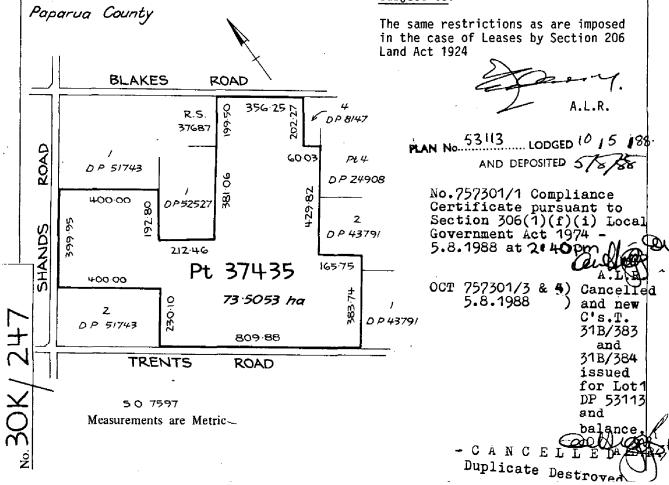
is seised of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial underwritten or endorsed hereon) in the land hereinafter described, delineated with bold black lines on the plan hereon, be the several admeasurements a little more or less, that is to say: All that parcel of land containing 73.5053

hectares or thereabouts being part Rural Section 37435 ---



#### ASSISTANT LAND REGISTRAR

#### Subject to:



CERTIFICATE OF TITLE No.

 $\mathcal{D}$ 

References Prior C/T 512/169

Transfer No. N/C. Order No. 697995/3



## REGISTER

#### CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 20th day of August one thousand nine hundred and ightyseven under the seal of the District Land Registrar of the Land Registration District of CANTERBURY

WITNESSETH that GEORGE GRICE of Prebbleton, Studmaster and GEOFFREY of Nelson, Electrical Engineer as executors as to a one-half share and DESMOND PETER GRICE abovenamed as to a one-quarter share and ROMA LYON GABRILLE GRICE of Prebbleton, Married Woman as to a one-quarter share

are as tenants in common in the said shares --
\*As seised of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial underwritten or endorsed hereon) in the land hereinafter described, delineated with bold black lines on the plan hereon, be the several admeasurements a little more or less, that is to say: All that parcel of land containing 81.8393

hectares or thereabouts being part Rural Section 37435 ---

meranian

Image Quality due to Condition of Criginal

Count

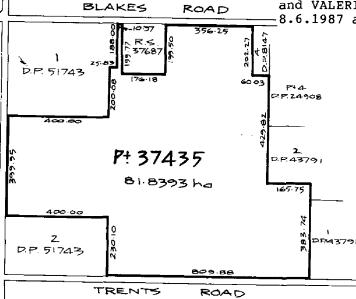
<u>Paparua</u>

ASSISTANT LAND REGISTRAR

Subject to:

The same restrictions as are imposed in the case of Leases by Section 206 Land Act 1924

CAVEAT 685263/1 by DAVID JOHN HUTTON and VALERIE MARGARET HUTTON 
8.6.1987 at 11.44am (affects part)



PLAN No. 52527 LOBOR 3 12 14
AND DEPOSITED 4/2

No.724427/1 Compliance Certificate pursuant to Section 306(1)(f)(i) Local Government Act 1974 - 4.2.1988 at 11.45am

A.L.R.

A.L.R.

OVER

Measurements are Metric ≤.0.75>7

The state of the s

30B

O

۵

ROA

HAZDA

## CERTIFICATE OF TITLE No. 308

CANCELLED - DUPLICATE DESTROYED

## NEW ZEALAND.

[SCHEDULE 1.

Warrant No. 6C.87
Reference: P.R. Vol90 folio 62
Transfer No.



Register-book, Vol. 512 , folio 169

#### CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT.

	This Certificate, dated		usy uius_	one tho	usand nine hundred and	POTEY-GIFTE
		the District Land Registrar				
	lieu of Grant, under Warr	ant of His Excellency the G	lovernor-General, in ex	ercise of the powers	enabling him in that	behalf, Witnesseth that
	ALFRED_JAMES_HALKETT	_of_Prebbleton_Farmer	r	· .		
	·	<u> </u>	·			
			·			
	is solved of an estate in fac-	simple (subject to such server	ntions motivations	-h		
		simple (subject to such reserve also to any existing right of				
		ibed, as the same is delineated				
	· ·	e said Warrant expressed to ha				
	·	·				
	as from theThirte	enthday of	June	. one thousan	d nine hundred	and forty-six
		the Land Laws Amendmen	•			hat is to say: All that
	•	TWO HUNDRED AND SIXTY		WO ROODS on the		
-		vey District being Rur			· ·	
					NO RE	
	.———	· .			<u> </u>	
•					man. Co	lhuus
	X-			(1)	sistant	st Land Registrar.
-			(22)	1000	117	י ו
		•				1924 and subject
			CAR		_	mid.Act and subject
	XIII Chri	stchurch S. D	). furt		ctions imposed by	
		<b>.</b> .	of_t	he Land Laws Ame	ndment_Act_1944	maryellan
			<u> </u>			A.L.R
		10.	Mort	gage 230681 prec	the State Adv	i7 at 10.10 a.m.
Qualit		40 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	of N	cw_Zealind	14/14 200	Laurella
ndition iginal	<b>*//</b>		<u> </u>		Milian	A.L.R.
		Noodlau Ro	. 13	8371. Jans	gan algred	Jan Halkett
	2/A	" Set. (2) 1/2		senjami	ter Guas	ance and
	**************************************	.4,			tarmero a	tanants
	7/ R	S. 37435		- com	on in eq	nal share.
	264 :	2 - 22	3 h	poluced 1	18 Parel 19	51 at 2.4 from
	204 -	2 = 00			5/5/ CEDO	more Peter Chia
<i>\</i>	1.4	₹/			CL COMPANIES SIGN	
7		Ø		2624 Motogoape		
7	REST		_			
7	REALS	R. S	. 1423	HIS REPRODUCTION	Attion of the state of the stat	SCALED T
7	Williams I start	R. S	5. 1423 T	HIS PERRODUCTE ERTURED TO HISTORIAL RECT.	MINION A DE SERVICIO	SCAPE) THE
RIC A	REA:—	R. S	5. 1423 T	uniomia d'amade HIS DEPRODUCTE ERTUTED TO	A LOUE OF GET	LSCALES THE OSES OF 52.
RIC A	REA:-07.0393 ha	R. S	5. 1423 T	HIS PERRODUCTE ERTURED TO HISTORIAL RECT.	MINION A DE SERVICIO	LSCALES THE OSES OF 52.
	10+.0343 Ma	R S	5. 1423 S	HIS DEPRODUCTION OF THE PRODUCTION OF T	der vesting t	SCALE) THE OSES OF 52.  L.H. he one-half
86)	107.0393 Mu	R S	No sh	HIS DEPRODUCTION OF THE PROPERTY OF THE PROPER	der vesting t	SCALES  THE  OSFS OF  S2.  1.11.  he one-half  in Roma Lyon
Sub Surv	104.0343 Numer 15 classification in the second seco	R S	No sh	HIS DEPRODUCTION OF THE PROPURE TO STATE AND STATE OF THE PROPURE TO STATE OF THE PROPURE	der vesting t d Peter Grice	SCALE) THE OSSES OF 52.  L.M. he one—half in Roma Lyon , Marfied Wome
Stab Stre Char	10†.0343 na	R S	No she	HIS DEPRODUCTION OF THE PROPUGATION 215.  445048/1 Or are of Desmonorille Grice and Peter Gr	der vesting t d Peter Grice of Prebbleton ice, above-name	in Roma Lyon  Married Womened as tenants
Stab Stre Char	104.0343 Numer 15 classification in the second seco	R S	No sha Gal Desr in	HIS DEPRODUCTION OF THE PROPUGATION 215.  445048/1 Or are of Desmonorille Grice and Peter Gr	der vesting t d Peter Grice	in Roma Lyon  Married Womened as tenants

Transmission 675631/1 of the share of Benjamin Thomas Grice to Desmond Peter Grice of Prebbleton, farmer and studmaster and Geoffrey George Grice of Nelson, electrical engineer as executors - 15.4.1987 at 10.45am

Transmission 675631/1 of Mortgage 460627 to Desmond Peter Grice and Geoffrey George Grice as exegutors - 15.4.1987 at 10.45am >

A.L.R.

CAVEAT 685263/1 BY DAVID JOHN HUTTON and VALERIE MARGARET HUTTON (affects part) - 8.6.1987 at 11.44am

COMANN. for A.L.R.

Plan 51743 deported 2018/1987

No.697995/2 Compliance Certificate pursuant to Section 306(1)(f)(i) Local Government Act 1974 -20.8.1987 at 9.158m

A.L.R.

20.8.1987

OCT 697995/3 - Cancilled and new CsT 30B/234,235 issued for Lots 1 and 2 DP 51743 and  $\sigma$ new CT 30B/236 issued for balance herein

A.L.R.

CANCELLED DUPLICATE DESTROYED

NEW ZEALAND. TEN M. Entered in REFERENCE Volume 322 folio 142 f pd 214 day of octock. A 19 30 CANTERBURY \_LAND DISTRICT. Lease under Section 4 of the Discharged Soldiers Settlement Act, 1915. No. STL/S 352. day of July 1930, between His Majesty the King (who with his being and do as "the lessor"), of the one part, and ENCETH HATCH FARMER

in the Land District of Canterbury in the Dominion of New Zealand (hereinafter, with his executors, administrators, and permitted assigns, referred to as "the lessee"), of the other part, witnesseth that, in consideration of the rent hereinafter reserved, and of the covenants, conditions, and agreements herein contained and implied, and on the part of the lessee to be paid, observed, and performed, the lessor doth hereby demise and lessee unto the lessee all that piece or parcel of land, containing by admeasurement one hundred and fifteen (115) series one (11) cooks wentyone (21) perrhes, a little more or less, situated in the Land District of Canterbury aforesaid, and being Section 4 and Lat 1 D.F. E147

Woodlam Settlement Block KIII Christehurch Survey District; as the same is more particularly edimented and described in the plan drawn hereon and therein coloured red in outline, together with the rights, easements, and appurtenances to the same belonging; to bodd the said several premises intended to be hereby demised muto the lessee for the term of twentythree [23] years, commencing from the first day of July 1930

vielding and paying therefor unto the Receiver of Land Revenue for the said District of Canterbury the samual rent of One hundred and thirty four pounds two shillings (£ 134: 2: 0), payable half-yearly, in advance, on the first day of Junuary and first day of July in each and every vear during the said term, free from all deductions whatscore.

His it is hereby declared and agreed that the lessee shall have a perpetual right of renewal for further successive terms of Efficiency for the samual renewal properties. The lessee doth hereby covenant with the lessor as follows, that is to say:—

(11) Schibert to the measurement of the mandations of the successive of This Deed, made the Pint July . 1930, between His Majosty the King (who with his bein day of successors in hereinafter referred to WOODLAU SETTE CHRISTCHURCH XIII Q. the Land Board.

28s the lessee doth hereby covenant with the lessor at follows, that is to say:—

(1.) Subject to the provisions of the regulations in force under the Discharged Soldiers

Settlement Act, 1915, the lessee will reside continuously on the demised land from
the date of this lease.

(2.) The lessee will put on the demised land substantial improvements as under:— Scale: 15 Chains to an Inch. " 16TF: (1.) For the purpose of distinguishing the improvements on the denised land and owned by the lessor at the date of this lease from those paid for or subsequently made by the lessee, such improvements and their value shall be deemed to be those specified in the schedule hereta.

(4.) The lessee will pay all rates, taxes, and assessments levied on or payable in respect of the demised land during the said term.

(5.) The lessee will at all times during the said term keep in good repair and condition, to the satisfaction of the Land Board, all buildings and erretions for the time being standing on the demised land, and will not destroy, pull down, or remove them or any part thereof without the previous permission, in writing, of the said Board.

(6.) The lessee will fully and punctually pay the rent hereinbefore reserved at the times and in the manner hereinbefore named in that behalf. in that behalf.

(2) The lessee will care a year throughout the term of this lease, and at the proper season of the year, properly cut and trim all five fences on the definied land, and will stub all gorse not growing as fences, and will also stub all broom, sweethner, and other notices plants.

(8) The land comprised berein shall not, except with the consent of the Land Board and the approval of the Minister of Landa, be espable of being transferred until the expiry of ten (10) years after the date of this lease. (9) Importance included in the Capital Value of this area and therefore remaining the property of the Leasor comprise 103 chains of boundary and subdivisional fencing valued at \$26 (all on Section 4) Section 4)
In addition to the rental payments herein provided for the leases will at date hereof pay to
the Sectiver of Land Revenue the sum of one hundred and thirty four pounds two shillings
(£134.2.0) being rent arrears (£67.1.0) due on 1st January 1930 under leases now
surrendered and rent £67.1.0 previously postponed to 1st July 1930 and recharged on that date. (1) That the lessee may at any time during the continuance of this lease, with the approval of the Land Board and the Minister of Lands, acquire the fee-simple of the demised land for the sum of Two thousand nine hundred and eighty pounds (22,920)—either for each or on deferred payments:

(2) That if the lessee makes default in the payment of rent or other payments, or in the observance or performance of the combinions expressed or implied in this lease, or makes any false declaration in respect of the land comprised therein, then and in any such case the Land Board may, without any previous or other notice or demand, forfeit this lease, and in such case all the lessee a interest therein shall absolutely cease and determine; and

(2) That if any dispute or disagreement shall arise between the parties hereto touching the construction of these presents, or in anywire relating hereto, such dispute or disagreement shall take or cause to be taken any steps or proceedings to set aside or call in question any award or decision which may have been given upon any such reference as final.

That it is bereby further declared and agreed that these presents are intended to take effect as a lease under section 4 of the such angles of the same apply to the term, estate, or interest hereby granted or created, and to the relations between the lesser and issue some time to time, shall be binding in all respects upon the parties hereto in the same manner as if such provisions had been fully a out herein. n.

St injures the Commissioner of Crown Lands for the Land District of Canterbury executions in hand, and these presents have been also executed by the said lesses. , on behalf of the Mar och Howart. Severat uteberch

wacher)

المستنافية

55

(a) Owned by the lessor and inclu-

As per C

(b) Owned by the lessee





Department of Lands and Survey District Office: P.O. Box 1286, Christehurch 21st January, 1941.

MEMORANDUM for:

The District Land Registrar, CHRISTCHURCH.

STL/S. 352, Sec. & & Lot 1, D.P. 8147, Woodlau Sett.

I have to advise that by notice on page 27 of N.Z. Gazette No. 1 of 9th January 1941 the leasee's interest in this lease registered as Volume 409, Folio 144 was declared forfeited at the Cotober 1940. Kindly note the forfeiture in your records.

Commissioner of Crown Lan

PRIOL 90 fol 62 min

Mortgage 121101 produces 31st M at 2 pm Blenneth Hammons Mayesty the Kingger of fart

Mortgage 157064 produces 31# May 1927

12645 produced the 26 day at

Mortgage 2048 67 produced 6th

Forfeited be attached immoranding and st 3 legette No, of que January 1941 at page 27

		<b>.</b> .
<b>-</b>		
C		
<b></b>		
3		

	Sign NEW	ZEALAND.			Lends B. 65
r en		Establish of the	CANIC	ELLED	4.0
R3F3R2:03	30		Entered	<i>"</i>	40 Fd.
	The Contract			to day of ful	ı
Volume 351 folio 152 //	1/30 56.50		1946 , at	O'clock.	any
322 141	CASTERBURY	LAND DISTR	ICT.	A American	
Lease under Section	n 4 of the Di	scharged Soldier	s Settlement	Act, 1915.	* c 5
· · ·	No. ST	11/s 353.		1	
This Deed, made the First	day of July	19 30 1	hetwaen His Veigetz th	e King (who with his h	
successors is hereinafter reference of President	•		THER O RESERVE	7amer	
				ion of New Zealand (her red to as "the lessee")	
XIII CHRISTCHURCH	ים יו U- other part, w	rutors, auministrators, and itnesseth that, in consideration ad agreements berein contain	on of the rent bereinafte	r reserved, and of the co	Terants.
•	s observed, and	l performed, the lessot doth land, containing by admeast	bereby demise and lea	se unto the lessee all th	at piece
		roods thirtythree	(33) perches, a little;	ngge of less situated in t	be Land
	; Settlement	Block Kill Christch	arch Sarvey Distr	ict 3°D P 812	SEEDE IS
<i>#</i>	👚 in outline, to	larly delineated and describ- gether with the rights, east	ments, and appurtenar	ices to the same belong	ing: to
8/1	bold the said twentythree	(23) years, commencing	to be hereby demised from the first day of	unto the lessee for the July 1930 —	term of
Sec. I.	vielding and Canterbury	paying therefor unto the	Receiver of Land Re One hundred and	venue for the said Dis	ance of
Lot 2 Sec 2	(£ 108 —	and every year during the sa	, in advance, on the first	t day of January and firs	t day of
DP 8147 Lot 3 DP8147		hereby declared and agreed recessive terms of thirt;			renewal
Total Area 93 - 0-33	by the Land	Board.			ermined
DP 847	(1.) Subje	essee doth hereby covenant ect to the provisions of th	e regulations in force	under the Discharged	Soldiers
Scale: 20 Chains to are I		ttlement Act, 1915, the less e date of this lesse.	ee will reside continuo	asly on the demised lar	od from
(To be determined by the # # # # # # # # # # # # # # # # # # #	(2.) The	lessee will put on the demis	ed land substantial imp	rovements as under:-	
providence of such and .	The issue of	this lease shall no	t exempt the Less	see from effecting	Š.
		as provided for in Olio 2 and Volume 32			
· - · · · · · · · · · · · · · · · · · ·	such improve fully set ou	ments shall have ful t herein.	l force and effer	t as if the tame	were
	•				
. paid for or subseque	tinguishing the improvemen utly made by the lessee, suc	ts on the demised land and o h improvements and their va	wned by the lessor at t lue shall be deemed to b	be date of this lease from a those specified in the s	m those schedule
hereto.		s levied on or payable in resp		•	
(5.) The leseec will at all	I times during the said to	rm keep in good repair as ng standing on the demise	ol condition, to the s	atisfaction of the Land	Board,
them or any part ti	tereof without the previous	permission, in writing, of th	e suid Board.		
m that behalf.		rent bereinbefore reserved a		-	
all live fences on t	the demised land, and will	rm of this lease, and at the stub all gorse not growing	e proper season of the sas fences, and will a	e year, properly cut ar Iso stub all broom, swe	ad trim eetbrier,
and other noxious p  (8.) The land comprised h		h the consent of the Land	Board and the approx	al of the Minister of La	nds, be
capable of being train	asterred until the expiry of	ten (10) years after the date	of this lease.		
Surf. with the approach of the Marieto, units			٠		
dirain.)				-	•
			<i>,</i> ,	•	
•	:	•	•		•
Sub it is hereby further do  (i.) That the lessee may		entinuance of this lease, wit	th the approval of the	Land Board and the I	Vinister
	he fee-simple of the demise either for cash or on deferr	entinuance of this lease, with distribution of Two editors with the sum of the su	thousand four bu	nired pounds (424	22)
(2.) That if the lessee m	akes default in the paym	ent of rent or other pays or makes any false declar	nents, or in the obse	rvance or performance	of the
and in any such o	case the Land Board may	, without any previous or	other notice or dem	nd, forfeit this lease,	and in
(3.) That if any dispute	or disagreement shall aris	absolutely cease and determ se between the parties her	eto touching the cons	truction of these prese	esta, cer
in anywise relating of the Land Act, 19:	bereto, such dispute or di- 24, and neither of the said	sagreens at shall be referred parties shall take or cause to	to arbitration in the be taken any steps or	manner set forth in sect proceedings to set aside	tion 86 or call
in question any awa	ard or decision which may !	have been given upon any s hat these presents are inten	och reference as final		
Discharged Soldiers Settlement so far as the same apply to th	Act, 1915; and the provi	sions of the said Act, and o	of the regulations there	under, applicable to such	h leaves
from time to time, shall be b	binding in all respects upo	on the parties bereto in the	same manner as if s	ach provisions had bee	n fully
act out herein.  3m beinges inferent the Co	mmissioner of Crown Land	ls for the Land District of	Canterbury	, on behalf	of the
leasur, hath hereunto set his har	_	neen also executed by the sa	HI 105500.	· /	
Signed by the Commissioner on behalf of the less					
Vinne Coll Stomfell	611	)	NKVa	wait.	
Compation: 10 are dendo	MI -	. }	Commission	or of Crown Lands.	
	- 55			· · · · · · · · · · · · · · · · · · ·	
Stigart by the above-named leave, in the presen	ce oi⊢				• : • _
Witness:	The state of the s	}	Wester		
Occupation:	1.1		W UUHL	Lemma.	
A Miras:	HE CH	/ 1 -	•		

District Office. P. 0. Box 1286, Christchurch C.1. 21st January 1941.

Department of Lands and Survey

(a) Owned by the le

(b) Owned by the les

93 chains of subd on Section

MEMORANDUM for

The District Land Registrar, CHRISTCHURCH.

STL/S 353 - Sec. 1 Lot 1 of Sec. 2 and Lot 3, D.P. 8147 Woodlau Settlement J.W. O'NEILL.

I have to advise that by notice on Page 27 of N.Z. Gazette No. 1 of 9th January 1941 the lessee's interest in this lesse registered as Volume 409, Polio 150 was declared forfeited at 6th October 1940. Kindly note the forfeiture in your records.

Commissioner of Crown Lands.

JW O.R

Montgage 119 670 produces 11 " farmany 1921 No Majesty the Kins the King of part will

Montgage 134647 produced 7th November 1923 at 10 sam John William O'Meill to the Majesty the king of the

Martgage 157067 produces 3181 May 1927 at 125 pm John William O'keill to his Majesty the king of hart

12610 France the

Faloman 1789 at 9-800 Har Assistance in 186 Affecting

Gorfeeted. he attacked a and I Segette 1. 1 of January 9th 1941 Page 27

> Proclaration 753 declaring described land to be subject to the visions of Section 23 of the Respi visions of Section 23 of the Reserves and other Lands Risposal Act, 1939, Intered 218 day of February 19 of At 1, 15 and the land of February 19 of At 1, 15 and the land of Section 23 of Land of Lan

New feare much for Les Vol: 472 Folio 38.

PR vol 90 Fe 62 mil

CANCELLED NEW ZEALAND. \_LAND DISTRICT. CARTERBURY Lease under Section 4 of the Discharged Soldiers Settlement Act, No. STL/S 326 Jaco beite his heirs and the lessor"), of the one part, and LETS TILLIANS
District of Carterbary, Parter in the Dominion of New Jolland Referentator, with his executors, administrators, and permitted assigns, referred to as "the lessor") of the other part, witnesseth that, in consideration of the rent hereinafter reserved, and of the coverants, conditions, and agreements herein contained and implied, and on the part of the lessor do be paid, observed, and performed the lessor doth hereby demise and lesse into the lessor all that piece or parcel of land, containing by submeasurement SILTY-70LR [64]—
acres Tio (2) roots TallTY-052 percles; a little more or less, situated in the Land District of Canterbury—aforesial, and heing Section numbered Let 2
District of Canterbury—bisnict of Circlifectures ; as the same is more particularly delineated and described in the plan drawn hereon and therein coloured red in cothine, together with the rights, easements, and appartenances to the same belonging; to hold the said several premises intended to be hereby demised unto the lessee for the term of Twenty-serven and a helificars, commercing from the first day of Tilly, 1926, and paying therefor unto the Receiver of Land Revence for the said District of Canterbury and hereby and large that annual rent of Lilaty three posities and paying the said and agreed that the lessee shall have a perpetual right of renewal by the Land Board.

But it is hereby declared and agreed that the lessee shall have a perpetual right of renewal for further successive terms of Thirty-three (33) years, at a rent to be determined by the Land Board.

But the lessee doth hereby coverant with the lessor as follows, that is to sav:—(1). Subject to the same of the coverant with the lessor as follows, that is to sav:—(1). Subject to the same of the coverant with the lessor as follows, that is to sav:—(1). Subject to the same of the coverant with the lessor as follows, that is to sav:—(1). Subject to the same of the coverant with the lessor as follows, that is to sav:—(1). Subject t , 192 6 , between His Majesty the Kir This Beed, made the First. July--day of sors is hereinafter referred to as "the lessor"), of the one part, and LENIS TILLIAUS recibileton \_\_\_\_\_\_, in the Land District of Canterbury, Parter in the XIII CHRISTCHURCH S.D. WOODLAU SETT. ine Land Board.

And the lessee doth hereby covenant with the lessor as follows, that is to say:—

(1.) Subject to the provisions of the regulations in force under the Discharged Soldiers

Settlement Act, 1915, the lessee will reside continuously on the demised land from
the date of this lease. use date of this lease.

(2) The lesses will put on the demised land substantial improvements as undertained in this one year from the date of this lease substantial improvements of a value equal to 5 per cent. of the dapital value of the land.

(2) The lease will be considered from the per cent. of the dapital improvements of a value equal to snother fire per cent of the accessful ments of a value equal to snother fire per cent of the accessful Image Quality dire ments of a value speak to such date further substantial improvec) Sithin dix years from such date further substantial improvec) Sithin dix years from such date further substantial improvements of a value ental to such that the total value of such improvedarital value in the sand so that the total value of such improvements at the end of six years from such date shall not be less than
existeen per cent. of the aforeosit uspital value of the land and infacilition thereto substantial improvements of a permanent character
to a volue of all per acre. to Condition of Original (3.) The lessee will pay all rates, taxes, and assessments levied on or payable in respect of the demised land during the said term.

(4.) The lessee will at all times during the said term keep in good repair and condition, to the satisfaction of the Land Board, all buildings and erections for the time being standing on the demised land, and will not destroy, pull down, or remove them or any part thereof without the previous permission, in writing, of the said Board.

(5.) The lessee will fully and runotually pay the rent hereinbefore reserved at the times and in the manner hereinbefore marked for that behalf. in that behalf.

(6.) The lessee will once a year throughout the term of this lesse, and at the proper season of the year, properly out and trim all live fences on the demised hand, and will stub all gorse not growing as fences, and will also sub all broom, sweether, and other noxious plants.

(7.) The land comprised herein shall not, except with the consent of the Land Board and the approval of the Minister of Lands, be capable of being transferred until the expiry of ten (10) years after the date of this lease. (1.) That the lessee may at any time during the continuance of this lease, with the approval of the Land Roard and the Minister of Lands, acquire the fee-simple of the demised land for the sum of IAD INCORNI AID SNAFTY POUNDS.

(2.2070.0.0.0) , either for cash or on deferred perments:

(2.1) That if the lessee makes default in the payment of rent or other payments, or in the observance or performance of the conditions expressed or implied in this lease, or makes any false declaration in respect of the land comprised therein, then such many such case the Land Board may, without any persons or other notice or demand forfeit this lease, and in such case all the lessee's interest therein that absolutely cease and determine; and

(3.) That if any dispute or disagreement shall arise between the praises hereto touching the construction of these presents, or in anywise relating hereso, such dispute or disagreement shall be referred to arbitration in the manner set forth in section 9 of the Land Laws Amendment Act, 1912, as modified by section 33 of the Land Laws Amendment Act, 1912, as modified by section 33 of the Land Laws Amendment Act, 1912, as modified by section 33 of the Land Laws Amendment Act, 1913, and neither of the said parties shall take or cause to be taken any steps or proceedings to set aside or call in question any award or decision which may have been given upon any such reference as final.

Said it is beredy further declared and agreed that these presents are intended to take effect as a lease under section 4 of the Discharged Soldiers Settlement Act, 1915; and the provisions of the said Act, and of the regulations thereunder, applicable to such leases from time to time, shall be binding in all respects upon the parties hereto in the same maner as if such provisions had been fully set out between the terms to be the forties as the same apply to the term, estate, or interest hereby granted or created, and to the relations between the lessor and lease from times to the results of the same apply to the it is hereby further declared hath hereunto set his hand, and these presents have been also executed by the said lessee. issioner on behalf of the lessor, in the presence of-WW at ie Servant Orrist church asele

many to make the continued of the graph

go 157065 produced 31 May 1927 at 12.7 Comme H5980 7 Thomy 30 to missed to 2 1470 . 0 0 . mi the yearly resi . 13431 produció ma 30 day of Wavember 1939 : - 9 3000 Order Ma 1936 affect Forfiled - See attacked mem and N 3. leget No 1 of gt ga at page 27 PR vac 90 Jal 62 11



The District Land Registrar, CHRISTCHURCE.

578. 326, Lot 2, D.P. 8147, Woodlau Sett. - L. Williams.

I have to advise that by notice on page 27 of H.2. Gazet:
1 of 9th January 1941, the lessee's interest in this lesse
stered as Volume 351 Folio 153 was declared forfeited at 8th
ber 1940. Kindly note the forfeiture in your records.

328/180

Uw KSlivenzon

Address: Cletical Educated.

Ocenpasion Lufra where of delder Lettlement

Montgage 132 18 1, produced of fune 19 28 at 10 am. Delongen Brigham to Harry Carlo Majerly the King ack

Majerly the King ack

Male of the Land construct to the trace of per Deposited to the Land construct to the trace of per Deposited to the Carlo ack 1180 may 10 fune have

to a 117.18 - and to Seption 3. W. yould a settled

Torfelled See Jetter Alla Clad -

New Lease issued for Part Not. 351 folio 147.



TE/C

In your softy
Sirie Style
The 1 270

Telegraphic Address: "LANDS." Department of Lands and Survey

Forfested as to balance See Letter Ottached

District Office, CHRISTORURCH, October 25, 1924.

New Lease issued The District Land Registrer, CHRISTCHURCH, for Balance Vol 351 For 153

Section 3. Woodlaw Settlement

S. Bigham

I have to draw your attention to a notice appearing in the M. Z. Sazatte of the 2nd July, 1925, page 2013, declaring the interest of the lesses in the above described section forfsited. I should be glad if you would note the fact in your register.

Destrict Office, 018157611

Your attention is drawn to a notice in the Gazotte of the 14th inclant yago 245% whereby leads of lot 2 of Section 2 Woodlau Settlement is declared forfeit This is part of the lard included in Register Book Yolume 328 folio 180. The balance of the land included in this folio was forfeited by Sazette of 2nd July 1925 page 2018.

CANCELLED NEW ZEALAND. B 65 APPLICATION NO 19500 Particulars entered in the Re SALE PLAN A.S. 171 the 40 o'ckek AUTEREURY Allin LAND DISTRICT. Lease under Section 4 of the Discharged Soldiers Settlement Act, 1915. No. S.T.L./S 130 '9 Chis Deed, made the HERTY FIRST MARCH -, 19 20 , between His Majesty the King (who with het the lessor ), of the one part, and LARGADE SIICH, BURSING SISCHAR District of CANTERED AT in the Dominion of New Zealand (the Research with his executors, administrators, and permitted assigns, referred to as "the lesser other part, witnesseth that, in consideration of the rent hereinafter reserved, and of the content o essors is hereinafter referred to as "the lessor" RICCARTON in the Land District of WOODLAU SETTLEMENT ther part, witnessenth that, in consideration of the rest hereinafter reserved, and of the conditions, and agreements herein contained and implied, and on the part of the lesses to be paid conditions, and agreements herein contained and implied, and on the part of the lesses to be paid charred, and performed, the lesses of the hereby demise and lesse unto the lesses all that pace or parted of land, containing by admensurement SIXTY ELVET (63)

acres roods

TOOS FIXED PROCESSING STATE SIXTY SIX XIII CHRISTCHURCH S.D. the Land Board.

Subt be lessed doth hereby covenant with the lessor as follows, that is to say:—

(1) Subject to the provisions of the regulations in force under the Discharged Soldiers Settlement Act, 1915, the lessee will reside continuously on the demised land from the date of this lesse. (2) The lessee will put on the demised land substantial improvements as under:—

(a) Within one year from the date of this lease substantial improvement of a value equal to five per centum of the capital value of the lesses when the date further substantial improvements of a value equal to another five per centum of the aforesaid empiral value of the land. substantial improvement Within two years from such date further substantial improvements, in a value equal to another five per centum of the aforesaid empiral. The situe of the land.

And within six years from such date further substantial improvements of a value equal to ambiter five per centum of the aforesaid expital value of the land, so that the total value of one improvements at the end of six years from such date shall not be less than fifteen per centum of the aforesaid capital value of the land, and in (c) Inch The lessee will may all latters three being standing on the first and condition, to the satisfaction of the Land Board, all buildings and erections for the time being standing on the time being standing on the first behavior of the Land Board, all buildings and erections for the time being standing on the demised land, and will not desarby, pull down, or remove them or any first thereof without the previous permission, in writing, of the said Board.

The lessee will fully and punctually pay the run hereinbefore reserved at the times and in the manner hereinbefore named in that behalf. image Quality due to Condition (6) The lessee will once a year throughout the term of this lease, and at the times and in the manner hereinbefore named in that behalf.

(6) The lessee will once a year throughout the term of this lease, and at the proper season of the year, properly out and win all fire lenoes on the demised land, and will stub all gorse not growing as fences, and will also stub all broom, sweethrier, and other nonious plants.

(7) The tend comprised herein shall not, except with the consent of the Land Board and the approval of the Minister of Lands, be chapled of being transferred until the expiry of ten (10) years after the date of this lease.

(8) The improvements that an within 1 and are 104 chains of brandary and subdivisional fencing valued at 259. of Original Sint it is hereby further declared—
(1.) That the lessee may at my time during the continuance of this lesse, with the approval of the Land Board and the Minister of Lands, acquire the fee-simple of the demised land for the sum of THOUSAID MIGHT HUNDRED POUNDS (£2200)

(2.) That if the lessee may at my time during the continuance of this lesse, with the approval of the Land Board and the Minister of Lands, acquire the fee-simple of the demised land for the sum of THOUSAID MIGHT HUNDRED POUNDS (£2200) (2.) That if the lessed-makes default in the payment of rent or other payments, or in the observance or performance of the conditions expressed or implied in this lease, or makes any false declaration in respect of the land comprised therein, then and in any such case the Land Board may, without any previous or other notice or demand forfeit this lease, and in such case all the lessee's interest therein shall absolutely case and determine; and

(3.) That if any dispute or disagreement shall also between the parties bereto touching the construction of these presents, or in anywise relating hereto, such dispute or disagreement shall be referred to arbitration in the manner set forth in section 9 of the Land Laws Amendment Act, 1912, as modified by section 63 of the Land Laws Amendment Act, 1912, as modified by section 63 of the Land Laws Amendment Act, 1913, and neither of the said parties shall take or cause to be taken any steps or proceedings to set saide or call in question any award or decision which may have been given upon any such reference as final.

Such it is hereby further declared and arread that these presents are intended to take effect as a lease under section 4 of the Discharged Soldiers Settlement Act, 1915, and the provisions of the said Act, and of the regulations thereunder, applicable to such lesses so far as the same apply to the term, estate, or interest hereby granted or created, and to the relations between the lessor and lessee from time to time, shall be binding in all respects upon the parties hereto in the same manner as if such provisions had been fully set out berein. the hereunds set his hand, and these presents have been also executed by the said lesses. CANTERBURY said Commissioner on behalf of the lessor, in the presence ofrogulal

16

322/030

Department of Lands and Survey.

District Office, SERISCOURS.

920 1922

The District Land Registrar CHRISTCHURCH

#### SECTION 3, WOODLAN SETTLEMENT

I have to inform you that the lease of the above section has been formeited by the Canterbury Lund Board, and I should be glad if you will note this fact in your register (Gazette No. 37, 11th May, 1922).

Mouro.

COMMISSIONNEOF CROWN LANDS

322/08



CANCELLED

va. 90 Polia 62

washing bushes burney was to a burn of the O

in the were man as uningward, its world is well is now as it is Estato in fer simple subject somewhall of the side we summanies hims and industries bunife windlusally we march bressless so wither wound their and pet befixen an and with Cinches at rounding reinter a justificant grant and XI no all in whanter which in many obeyed in brown to be which of considering the course with the course with the course in listantitus 36/40 but man waited Laure and windmay bus havind walk phenonous were the wife a by and be a fit in between their contractions and it of and without with purchased from the Come of the Kinder white the part of the work was by Carry

in Byun been for summy fun began duncered sund proceeding of Williams Iranch this twenty first days? wines in the mount of "a ambrose the sit anyof Anarch 1990

مسيلان لما كا المسترح المستركة to the District of Endine

عدد والألام وعدد المنطون المنطوع والمعالية والمناطقة المنطوع ا March & Harber C contract Harmond 21 wanted winds Spelword O. L. S.

g Thankle It rest modered & O proton is a at a so he Edward Som Balmer & Goodfal Glineay Durch of balance Meden 11 Dis

selvicels between

34532

image Quality due of Original



# **APPENDIX B**Bores Details Summary

Well Name:

Owner: GRICE



Street of Well: SHANDS ROAD File No:

Locality: PREBBLETON Allocation Zone: Selwyn-Waimakariri

NZTM Grid Reference: BX23:59204-75289 QAR 4 CWMS Zone: Selwyn - Waihora

NZTM X-Y: 1559204 - 5175289

Location Description: Uses: Stock Supply

**ECan Monitoring:** 

Well Status: Active (exist, present)

**Drill Date:** Water Level Count: 0

Well Depth: 16.80m -GL Strata Layers: 0

Initial Water Depth: -5.90m -MP Aquifer Tests: 0

Diameter: Yield/Drawdown Tests: 0

Measuring Point Ait: 31.00m MSD QAR 4 Highest GW Level:

GL Around Well: 0.00m -MP Lowest GW Level:

MP Description: First Reading:

Last Reading:

**Driller:** not known **Calc. Min. (Below MP):** -10.40m -MP

**Drilling Method:** Unknown **Last Updated:** 18 Oct 2006

Casing Material: Last Field Check:

Pump Type: Unknown

Yield: Aquifer Type: Unknown

Drawdown: Aquifer Name:

**Specific Capacity:** 

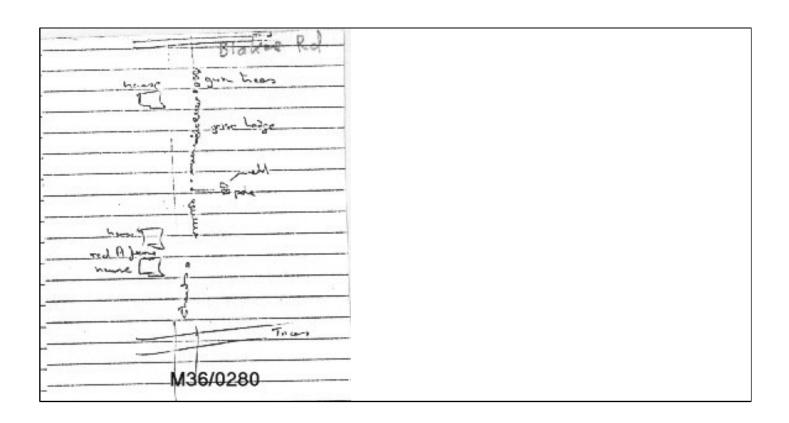
Screens:								
Screen No.	Screen Type	Top (m)	Bottom (m)	Diameter (mm)	Leader Length (mm)		Slot Length (mm)	

Step Tests:				
Sten Test Date	Sten	Viold (I/s)	Drawdown	Duration (mins)

Date Comments

NCCB 587/S83A 162

Aquifer test date(s) where this is the pump bore



Well Name:

Owner: MULLINS JH & SJ



Uses: Domestic and Stockwater

File No:

CWMS Zone: Selwyn - Waihora

Street of Well: CNR TRENTS & SHANDS

RD

Locality: PREBBLETON Allocation Zone: Selwyn-Waimakariri

NZTM Grid Reference: BX23:58854-75039 QAR 4

NZTM X-Y: 1558854 - 5175039

Location Description: BY FENCE NEXT TO

HOUSE

**ECan Monitoring:** 

Well Status: Active (exist, present)

**Drill Date:** 04 Jul 1985 **Water Level Count:** 0

Well Depth: 18.00m -GL Strata Layers: 0

Initial Water Depth: -12.20m -MP Aquifer Tests: 0

Diameter: 150mm Yield/Drawdown Tests: 1

Measuring Point Ait: 29.96m MSD QAR 4 Highest GW Level:

GL Around Well: 0.00m -MP Lowest GW Level:

MP Description: First Reading:

Last Reading:

**Driller:** McMillan Drilling Ltd **Calc. Min. (Below MP):** -10.80m -MP

**Drilling Method:** Rotary Rig Last Updated: 08 Nov 2013

Casing Material: STEEL Last Field Check:

Pump Type: Unknown

Yield: 5 l/s Aquifer Type: Unknown

**Drawdown:** 2 m Aquifer Name:

Specific Capacity: 2.30 l/s/m

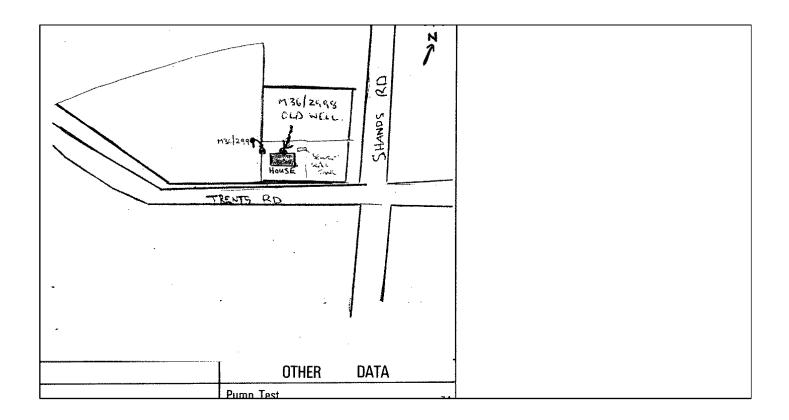
Screens:	S:									
Screen No.	Screen Type	Top (m)	Bottom (m)	Diameter (mm)	Leader Length (mm)	Slot Size (mm)	Slot Length (mm)			
1	Stainless steel	16.5	18							

Step Tests:				
Step Test Date	Step	Yield (I/s)	Drawdown	Duration (mins)
04 Jul 1985	1	4.6	2	180

Date Comments

NO LOG EXISTS. SCREENED IN FREE BR STAINED GRAVELS.

Aquifer test date(s) where this is the pump bore



Well Name:

Owner: HUTTON DJ & VM



Street of Well: BLAKES RD File No: CO6C/00955

Locality: PREBBLETON Allocation Zone: Selwyn-Waimakariri

NZTM Grid Reference: BX23:59703-75249 QAR 3 CWMS Zone: Selwyn - Waihora

NZTM X-Y: 1559703 - 5175249

Location Description: Uses: Irrigation

ECan Monitoring: Domestic Supply

Well Status: Active (exist, present)

**Drill Date:** 01 Jun 1987 **Water Level Count:** 0

Well Depth: 29.60m -GL Strata Layers: 16

Initial Water Depth: -9.20m -MP Aquifer Tests: 0

**Diameter:** 150mm **Yield/Drawdown Tests:** 1

Measuring Point Ait: 29.79m MSD QAR 4 Highest GW Level:

GL Around Well: 0.00m -MP Lowest GW Level:

MP Description: First Reading:

Last Reading:

**Driller:** Clemence Drilling **Calc. Min. (Below MP):** -9.20m -MP

Contractors

Drilling Method: Cable Tool

Casing Material: STEEL

Last Updated: 08 Nov 2013

Last Field Check: 16 May 1997

Pump Type: Submersible

Yield: 10 l/s Aquifer Type: Unknown

**Drawdown:** 12 m **Aquifer Name:** Riccarton Gravel

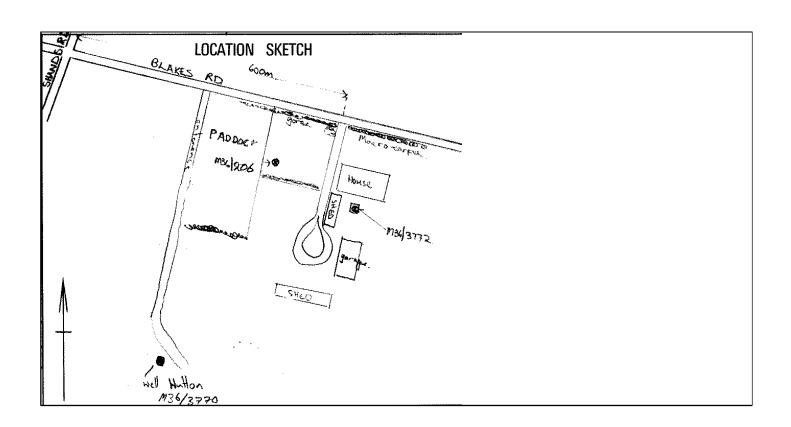
Specific Capacity: 0.79 l/s/m

#### Screens:

Screen No.	Screen Type	Top (m)	Bottom (m)	Diameter (mm)	Leader Length (mm)	Slot Length (mm)
1	Stainless steel	26.6	29.6			

### Step Tests:

	Step Test Date	Step	Yield (I/s)	Drawdown	Duration (mins)	
	01 Jun 1987	1	9.8	12.4	300	



Well Name:

Owner: Mr & Mrs D J & S J Anderson



Street of Well: 311 TRENTS RD File No: CO6C/00048

Locality: PREBBLETON Allocation Zone: Selwyn-Waimakariri

NZTM Grid Reference: BX23:59034-74839 QAR 2 CWMS Zone: Selwyn - Waihora

NZTM X-Y: 1559034 - 5174839

Location Description: Uses: Irrigation

**ECan Monitoring:**Domestic and Stockwater

Well Status: Active (exist, present)

**Drill Date:** 12 Jul 1987 **Water Level Count:** 0

Well Depth: 46.00m -GL Strata Layers: 13

Initial Water Depth: -7.50m -MP Aquifer Tests: 0

**Diameter:** 100mm Yield/Drawdown Tests: 2

Measuring Point Ait: 28.18m MSD QAR 4 Highest GW Level:

GL Around Well: 0.00m -MP Lowest GW Level:

MP Description: First Reading:

Last Reading:

Last Field Check: 11 Mar 2010

**Driller:** Smith, J R & I G **Calc. Min. (Below MP):** -9.30m -MP

**Drilling Method:** Cable Tool Last Updated: 30 Mar 2010

Pump Type: Unknown

Yield: 6 l/s Aquifer Type: Non-Flowing Artesian

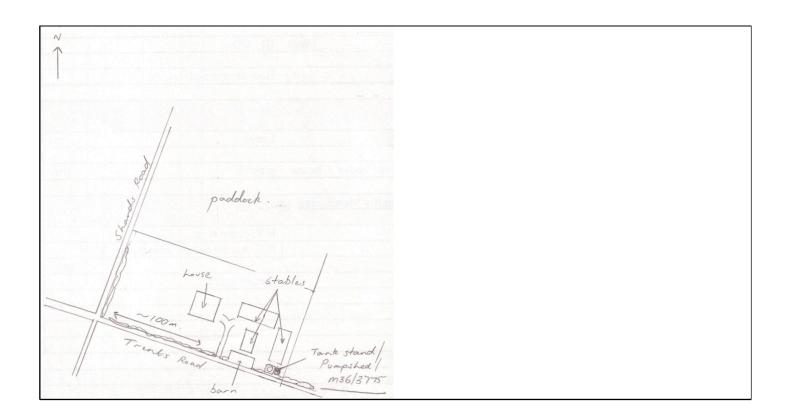
**Drawdown:** 2 m **Aquifer Name:** Linwood Gravel

Specific Capacity: 2.85 l/s/m

**Casing Material: STEEL** 

Screens:							
Screen No.	Screen Type	Top (m)	Bottom (m)	Diameter (mm)	Leader Length (mm)		Slot Length (mm)
1	Stainless steel	44.5	46				

Step Tests:				
Step Test Date	Step	Yield (I/s)	Drawdown	<b>Duration (mins)</b>
12 Jul 1987	1	5.69	2	



Well Name:

Owner: STRATFORD M.J.



Street of Well: SHANDS RD File No:

Locality: PREBBLETON Allocation Zone: Selwyn-Waimakariri

NZTM Grid Reference: BX23:59254-75189 QAR 4 CWMS Zone: Selwyn - Waihora

NZTM X-Y: 1559254 - 5175189

Location Description: Uses: Domestic and Stockwater

**ECan Monitoring:** 

Well Status: Active (exist, present)

**Drill Date:** 11 Jan 1989 **Water Level Count:** 0

Well Depth: 30.00m -GL Strata Layers: 6

Initial Water Depth: -12.42m -MP Aquifer Tests: 0

**Diameter:** 200mm Yield/Drawdown Tests: 1

Measuring Point Ait: 30.17m MSD QAR 4 Highest GW Level:

GL Around Well: 0.00m -MP Lowest GW Level:

MP Description: First Reading:

Last Reading:

**Driller:** McMillan Drilling Ltd **Calc. Min. (Below MP):** -10.10m -MP

**Drilling Method:** Rotary/Percussion Last Updated: 08 Nov 2013

Casing Material: STEEL Last Field Check:

Pump Type: Unknown

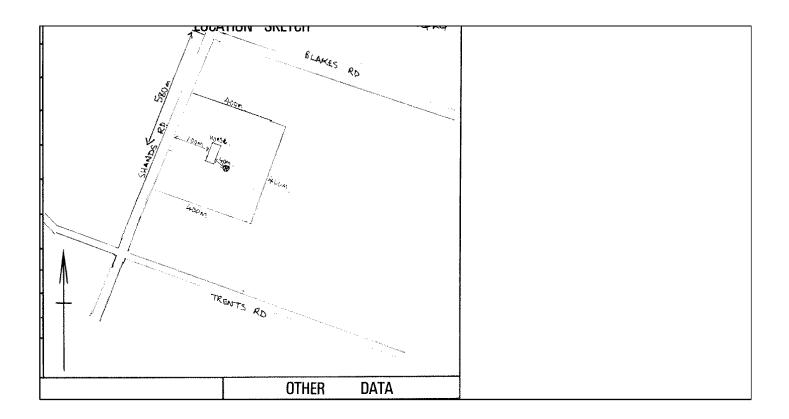
Yield: 11 l/s Aquifer Type: Unknown

Drawdown: 1 m Aguifer Name: Riccarton Gravel

Specific Capacity: 8.14 l/s/m

Screens:	Screens:								
Screen No.	Screen Type	Top (m)	Bottom (m)	Diameter (mm)	Leader Length (mm)		Slot Length (mm)		
1	Stainless steel	18.2	20.2						
2	Unknown	28.3	30						

Step Tests:				
Step Test Date	Step	Yield (I/s)	Drawdown	Duration (mins)
11 Jan 1989	1	11.4	1.4	60



Well Name:

Owner: Mr & Mrs P L & J M Sommerville



Street of Well: BLAKES RD File No: CO6C/01797

Locality: PREBBLETON Allocation Zone: Selwyn-Waimakariri

NZTM Grid Reference: BX23:59812-74994 QAR 2 CWMS Zone: Selwyn - Waihora

NZTM X-Y: 1559812 - 5174994

Location Description: Uses: Irrigation

**ECan Monitoring:** 

Well Status: Active (exist, present)

**Drill Date:** 10 Sep 1991 **Water Level Count:** 0

Well Depth: 30.00m -GL Strata Layers: 9

Initial Water Depth: -9.20m -MP Aquifer Tests: 0

**Diameter:** 150mm Yield/Drawdown Tests: 2

Measuring Point Ait: 27.48m MSD QAR 4 Highest GW Level:

GL Around Well: 0.00m -MP Lowest GW Level:

MP Description: First Reading:

Last Reading:

Driller: McMillan Drilling Ltd Calc. Min. (Below MP): -8.50m -MP

**Drilling Method:** Cable Tool **Last Updated:** 29 Nov 2010

Casing Material: Last Field Check: 29 Oct 2010

Pump Type: Unknown

Yield: 11 l/s Aquifer Type: Unknown

**Drawdown:** 8 m **Aquifer Name:** Riccarton Gravel

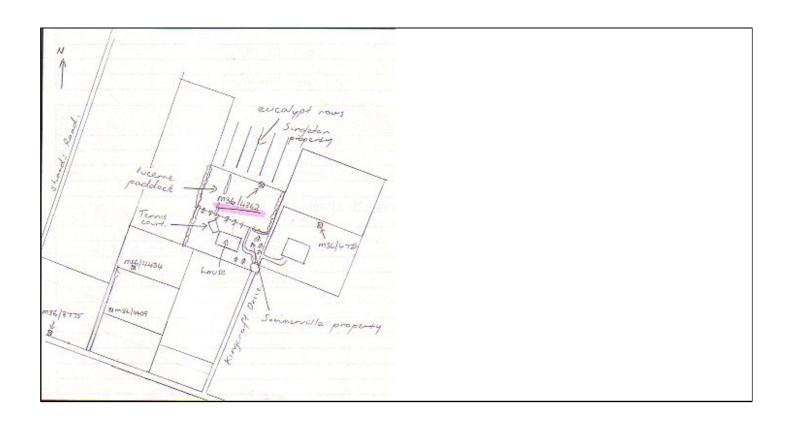
Specific Capacity: 1.36 l/s/m

Screens:	creens:								
Screen No.	Screen Type	Top (m)	Bottom (m)	Diameter (mm)	Leader Length (mm)	Slot Size (mm)	Slot Length (mm)		
1	Stainless steel	28	30						

Step Tests:					
Step Test Date	Step		Yield (I/s)	Drawdown	Duration (mins)
10 Sep 1991		1	10.6	7.82	480

Date	Comments
	SINGLETON CONSENT # CRC916292 FILETRAK CO6C-01797. SOMMERVILLE CONSENT # CRC916123 FILETRAK CO6C-01833
29 Nov 2010	Gridref changed from: M36:6979-3660 to M36:69809-36605 and set to an accuracy of QAR 2, site visit

#### Aquifer test date(s) where this is the pump bore



Well Name:

Owner: GOULD, T.D & HUTTON, J.R



Street of Well: SHANDS ROAD File No: CO6C/11706

Locality: PREBBLETON Allocation Zone: Selwyn-Waimakariri

NZTM Grid Reference: BX23:59004-75209 QAR 4 CWMS Zone: Selwyn - Waihora

NZTM X-Y: 1559004 - 5175209

Location Description: IN SOUTHERN CORNER Uses: Irrigation

ECan Monitoring: Domestic Supply

Well Status: Active (exist, present)

**Drill Date:** Water Level Count: 0

Well Depth: 35.00m -GL Strata Layers: 0

Initial Water Depth: Aquifer Tests: 0

**Diameter:** 150mm Yield/Drawdown Tests: 0

Measuring Point Ait: 30.78m MSD QAR 4 Highest GW Level:

GL Around Well: 0.00m -MP Lowest GW Level:

MP Description: First Reading:

Last Reading:

**Driller:** McMillan Drilling Ltd **Calc. Min. (Below MP):** -10.60m -MP

Drilling Method: Rotary/Percussion Last Updated: 21 Sep 2006

Casing Material: STEEL Last Field Check:

Pump Type: Unknown

Yield: 0 l/s Aquifer Type: Unknown

**Drawdown:** 0 m Aquifer Name:

**Specific Capacity:** 

Screens:								
Screen No.	Screen Ty	pe	Top (m)	Bottom (m)	Diameter (mm)	Leader Length (mm)	Slot Size (mm)	Slot Length (mm)
Step Tests:							]	
Step Tes	st Date	Step	Yield (I/s)	Drawdo	wn Durat	ion (mins)		

Well Name:

Owner: MONK, M.R & GEARY, J.E



**Uses:** Domestic Supply

Street of Well: SHANDS ROAD File No: CO6C/12651

Locality: PREBBLETON Allocation Zone: Selwyn-Waimakariri

NZTM Grid Reference: BX23:58904-75039 QAR 4 CWMS Zone: Selwyn - Waihora

NZTM X-Y: 1558904 - 5175039

Location Description: 5M FROM NORTHERN

BOUND, ROADSIDE OF

HOUS

**ECan Monitoring:** 

Well Status: Active (exist, present)

Drill Date: 06 Jan 1997 Water Level Count: 0

Well Depth: 33.00m -GL Strata Layers: 3

Initial Water Depth: -12.00m -MP Aquifer Tests: 0

Diameter: 125mm Yield/Drawdown Tests: 1

Measuring Point Ait: 29.72m MSD QAR 4 Highest GW Level:

GL Around Well: 0.00m -MP Lowest GW Level:

MP Description: First Reading:

Last Reading:

**Driller:** East Coast Drilling **Calc. Min. (Below MP):** -10.60m -MP

**Drilling Method:** Rotary Rig **Last Updated:** 08 Nov 2013

Casing Material: STEEL Last Field Check:

Pump Type: Unknown

Yield: 2 l/s Aquifer Type: Unknown

**Drawdown:** 5 m **Aquifer Name:** Riccarton Gravel

Specific Capacity: 0.30 l/s/m

Screens	:
---------	---

Screen No.	Screen Type	Top (m)	Bottom (m)	Diameter (mm)	Leader Length (mm)	Slot Length (mm)
1	Stainless steel	32	33			

Step Tests:							
Step Test Date	Step	Yield (I/s)	Drawdown	Duration (mins)			
06 Jan 1997	1	1.5	5	150			

#### Date Comments

replacing existing bore. No record of exsiting bore which is 4m to the west of this new bore. [Old bore was sealed at time of drilling and is now dry. Old bore not on database check file for location sketch -few details SMc]

Aquifer test date(s) where this is the pump bore

Well Name:

Owner: Elliott, R



File No: CO6C/16746

CWMS Zone: Selwyn - Waihora

Street of Well: Blakes and Shands Road

Corner

Locality: Prebbleton Allocation Zone: Selwyn-Waimakariri

NZTM Grid Reference: BX23:59352-75502 QAR 2

NZTM X-Y: 1559352 - 5175502

Location Description: Uses: Irrigation

ECan Monitoring: Domestic Supply

Well Status: Active (exist, present)

Drill Date: 05 May 2001 Water Level Count: 0

Well Depth: 29.59m -GL Strata Layers: 9

Initial Water Depth: -12.30m -MP Aquifer Tests: 0

Diameter: 150mm Yield/Drawdown Tests: 1

Measuring Point Ait: 32.54m MSD QAR 4 Highest GW Level:

GL Around Well: -0.30m -MP Lowest GW Level:

MP Description: ToC First Reading:

**Last Reading:** 

**Driller:** McMillan Drilling Ltd **Calc. Min. (Below MP):** -10.70m -MP

**Drilling Method:** Rotary/Percussion Last Updated: 08 Nov 2013

Casing Material: STEEL Last Field Check:

**Pump Type:** 

Yield: 13 l/s Aquifer Type:

**Drawdown:** 10 m **Aquifer Name:** Riccarton Gravel

Specific Capacity: 1.29 l/s/m

S	C	re	۵	n	c	
u	•		ㄷ			

Screen No.	Screen Type	Top (m)	Bottom (m)	Diameter (mm)	Leader Length (mm)	Slot Size (mm)	Slot Length (mm)
1	Stainless steel	26.59	29.59				

<b>^</b> 4	Tests:
STAN	LOCTO

Step Test Date	Step	Yield (I/s)	Drawdown	Duration (mins)	
05 May 2001	1	13.07	10.1	•	180

Date Comments

31 May 2001 Top of leader 26.09m. Slot size-2.5mm. Screen D-125mm.

Aquifer test date(s) where this is the pump bore

Well Name:

Owner: MR C L & MS M L SEAWARD



Street of Well: SHANDS ROAD File No: CO6C/28299

Locality: CHRISTCHURCH Allocation Zone: Selwyn-Waimakariri

NZTM Grid Reference: BX23:58956-75144 QAR 2 CWMS Zone: Selwyn - Waihora

NZTM X-Y: 1558956 - 5175144

Location Description: Uses: Domestic and Stockwater

**ECan Monitoring:** 

Well Status: Active (exist, present)

**Drill Date:** 06 May 2008 **Water Level Count:** 0

Well Depth: 36.00m -GL Strata Layers: 4

Initial Water Depth: -14.00m -MP Aquifer Tests: 0

Diameter: 150mm Yield/Drawdown Tests: 1

Measuring Point Ait: 30.00m MSD QAR 3 Highest GW Level:

GL Around Well: -0.30m -MP Lowest GW Level:

MP Description: ToC First Reading:

Last Reading:

Driller: East Coast Drilling Calc. Min. (Below MP):

**Drilling Method:** Rotary Rig Last Updated: 08 Nov 2013

Casing Material: Steel Last Field Check:

**Pump Type:** 

Yield: 2 l/s Aquifer Type:

Drawdown: 3 m Aquifer Name:

Specific Capacity: 0.67 l/s/m

Screen No.	Screen Type	Top (m)	Bottom (m)	Diameter (mm)	Leader Length (mm)	Slot Size (mm)	Slot Length (mm)
1	Stainless steel	34.5	36				

Step Tests:							
Step Test Date	Step	Yield (I/s)	Drawdown	Duration (mins)			
06 May 2007	1	2	3				

Date Comments

30 May 2008 Gridref changed from: M36:6895-3674 BCR & log receieved

Aquifer test date(s) where this is the pump bore



## **APPENDIX C**

### **LLUR Statements**



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: 08 October 2015

Land Parcels: Lot 2 DP 51743 Valuation No(s): 2355204700



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
85878	311 Trents Road, Prebbleton - Diesel AST	311 Trents Road, Prebbleton	A17 - Storage tanks or drums for fuel, chemicals or liquid waste:	Review in Progress

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 85878: 311 Trents Road, Prebbleton - Diesel AST (Intersects enquiry area.)

Site Address: 311 Trents Road, Prebbleton

Legal Description(s): Lot 2 DP 51743

Site Category:

**Review in Progress** 

**Definition:** 

Investigation reports have been received and are currently being reviewed to determine the most appropriate site category.

Land Uses (from HAIL):

:	Period From	Period To	HAIL land use
	2000	2015	Storage tanks or drums for fuel, chemicals or liquid waste

Notes:

23 Feb 2015

A small (1,000 L) above ground diesel tank was at the site from c. 2000 to 2015 adjacent to the horse training track.

**Investigations:** 

15 Dec 2014

INV 82087: Soil Contamination Risk, Stage 2 Detailed Site Investigation Report, Stage 3 Remediation

Action Pla - 311 Trents Road, Prebbleton (Detailed Site Investigation)

Malloch Environmental Ltd

11 Sep 2015

INV 109070: Soil Contamination Risk, Stage 4 - Site Validation Report, Mr DJ Anderson, 311 Trents Road,

Prebbleton (Detailed Site Investigation)

Malloch Environmental Ltd

Summary of investigation(s):

Report(s) have not yet been audited.

#### 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 ENQ110709.

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.



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).

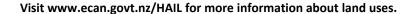
If your enquiry relates to a farm property, please note that many current and past activities undertaken on farms may not be listed on the LLUR. Activities such as the storage, formulation and disposal of pesticides, offal pits, foot rot troughs, animal dips and underground or above ground fuel tanks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





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: Land Parcels: 08 October 2015

Lot 1 DP 53113 Valuation No(s): 2355205900



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 ENQ110707.

#### 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.



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).

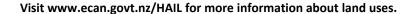
If your enquiry relates to a farm property, please note that many current and past activities undertaken on farms may not be listed on the LLUR. Activities such as the storage, formulation and disposal of pesticides, offal pits, foot rot troughs, animal dips and underground or above ground fuel tanks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





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: Land Parcels: 08 October 2015 Lot 1 DP 56145

Valuation No(s): 2352208801



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 ENQ110708.

#### 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.



### **APPENDIX D**

# **Aerial Images**