

Before an Independent Hearings Panel  
Appointed by Waimakariri District Council

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*under:* the Resource Management Act 1991

*in the matter of:* Submissions and further submissions on the Proposed  
Waimakariri District Plan and Variation 1

*and:* Hearing Stream 12: Rezoning requests (larger scale)

*and:* **Crichton Developments Limited**  
(Submitter 299)

Statement of evidence of Nicola Peacock (Contaminated land) on  
behalf of Crichton Developments Limited in relation to Gladstone  
Road rezoning request

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Dated: 5 March 2024

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Reference: J M Appleyard (jo.appleyard@chapmantripp.com)  
A M Lee (annabelle.lee@chapmantripp.com)

chapmantripp.com  
T +64 3 353 4130  
F +64 4 472 7111

PO Box 2510  
Christchurch 8140  
New Zealand

Auckland  
Wellington  
Christchurch



## **STATEMENT OF EVIDENCE OF NICOLA PEACOCK ON BEHALF OF CRICHTON DEVELOPMENTS LIMITED**

### **INTRODUCTION**

- 1 My full name is Nicola Ruth Peacock.
- 2 I have a New Zealand Certificate of Engineering (Civil) from Christchurch Polytechnic (1991), am a Certified Environmental Practitioner, and am a member of the Environmental Institute of Australia and New Zealand. I am an environmental engineer with 31 years' experience in the environmental field including the last 15 years as a contaminated land specialist.
- 3 I am Principal Environmental Engineer and owner of Momentum Environmental Ltd (formerly Malloch Environmental Ltd), where I have worked since 2013. Prior to that I worked for Davie Lovell-Smith Ltd and the Christchurch City Council.
- 4 My relevant professional experience includes soil contamination risk assessments across many hundreds of sites, predominantly within the Canterbury area. Assessments include desktop investigations, site soil sampling and remediation projects. I have been involved in multiple plan change projects from the initial plan change application stage, through field sampling investigations, to remediation of contamination found and final site validation which shows that the sites are suitable for residential use.

### **CODE OF CONDUCT**

- 5 Although this is not an Environment Court hearing, I note that in preparing my evidence I have reviewed the Code of Conduct for Expert Witnesses contained in Part 9 of the Environment Court Practice Note 2023. I have complied with it in preparing my evidence. I confirm that the issues addressed in this statement of evidence are within my area of expertise, except where relying on the opinion or evidence of other witnesses. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

### **SCOPE OF EVIDENCE**

- 6 I have been asked to comment on the relief sought by Crichton Developments Limited (Submitter 299) in relation to the proposed Waimakariri District Plan (*Proposed Plan*). Specifically, the request to rezone land at 145-167 Gladstone Road, Woodend (*site*) to Large Lot Residential Zone (*the Proposal*).
- 7 My evidence will address soil contamination risk at the site.

## EVIDENCE

- 8 I prepared an assessment dated 8 November 2023 which assessed and identified soil contamination risk across the area of the site. This assessment is included as **Appendix 1** to this evidence. I personally inspected the site and I am familiar with the area.
- 9 Investigation works were undertaken in general accordance with the Ministry for Environment (*MfE*) Contaminated Land Management Guidelines No. 5: Site Investigation and Analysis of Soils (revised 2011) and MfE Contaminated Land Management Guideline No.1: Reporting on Contaminated Sites in New Zealand (revised 2011). Both of the above documents are incorporated by reference into the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (*NESCS*).
- 10 The scope of the work was to carry out a Preliminary Site Investigation (*PSI*) to determine whether there was any risk of soil contamination that would warrant further investigations, and to determine whether the *NESCS* applies to the site.
- 11 The investigations identified confirmed or likely Hazardous Activities and Industries List (*HAIL*) activities on some parts of the site, predominantly, but not exclusively, in and around the farm building area at the northern end of the Proposal area. There may be a risk to human health or the environment from contaminated soils within these areas. The following risk areas and associated *HAIL* activities were present:
  - Potential heavy metal and organochlorine pesticide(OCP) contamination from possible sheep dip/spray race (*HAIL A8*);
  - Potential heavy metal and/or OCP contamination from possible pesticide mixing, application, or storage at 167 Gladstone Road (*HAIL A10*);
  - Potential Total Petroleum Hydrocarbon (TPH) contamination from storage of waste oil (*HAIL A17*);
  - Potential bulk storage of treated timber outside (*HAIL A18*);
  - Potential disposal of asbestos products known to be in a deteriorated condition (*HAIL E1*);
  - Potential heavy metal contamination within burn areas (*HAIL I*);
  - Potential heavy metal and/or asbestos contamination associated with farm buildings (*HAIL I*);

- 12 In terms of planning status, the PSI has identified evidence of HAIL activities occurring on the site. Therefore, the NESCS does apply, and resource consent may be required for future change of use, subdivision and soil disturbance activities.

### **CONCLUSION**

- 13 It was concluded that for the purposes of the Proposal, the identified HAIL activities/risks are not likely to preclude eventual subdivision of the land. As each stage of the Proposal area is developed, the need for an updated PSI and/or site inspections should be considered, along with Detailed Site Investigations of the risk areas as required.
- 14 No HAIL activities have been identified on the remainder of the site, therefore no additional investigations are required outside of the risk areas identified, at the time of writing.
- 15 Therefore, the Proposal can be supported from a contaminated land risk perspective as any effects can be managed through routine testing and remediation as required.

Dated: 5 March 2024



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Nicola Ruth Peacock



**Soil Contamination Risk  
Preliminary Site Investigation Report**

**145 & 167 Gladstone Road, Woodend, Canterbury**

November 2023



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## QUALITY CONTROL AND CERTIFICATION SHEET

**Client:** Crichton Developments Limited

**Date of issue:** 8 November 2023

**Report written by:**

**Andrea Horton-Gaskin, Environmental Scientist, MSc.**

(20 years environmental experience)

**Signed:**



**Report reviewed and certified as a Suitably Qualified and Experienced Practitioner  
by:**

**Nicola Peacock, Principal Environmental Engineer, NZCE, CEnvP**

(15 years contaminated land experience within 31 years environmental experience)

**Signed:**



**Email:** [nicola@momentumenviro.co.nz](mailto:nicola@momentumenviro.co.nz)

**Phone:** 021 1320 321

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## 1 Executive Summary

The site is comprised of two rural properties with street addresses 145 and 167 Gladstone Road, Woodend. 145 Gladstone Road contains a dwelling, a garage, a sleepout and gardens and 167 Gladstone Road contains farm sheds, a horse arena, with the remaining land in pasture. It is proposed to rezone the site to allow Large Lot Residential development.

This will involve future change in use, subdivision and potential disturbance of soils. The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NESCS) require an assessment of the likelihood of soil contamination being present. It is also noted that Momentum Environmental Ltd is obligated to consider the requirements of Section 10 (4) of the Health and Safety at Work (Asbestos) Regulations 2016. This report details the work undertaken to assess the risks.

This Preliminary Site Investigation (PSI) has identified confirmed or likely Hazardous Activities and Industries List (HAIL) activities on the site and there may be a risk to human health from contaminated soils. The following risk areas are present:

- Potential heavy metal and OCP contamination from possible sheep dip/spray race (HAIL A8)
- Potential heavy metal and/or OCP contamination from possible pesticide mixing, application, or storage at 167 Gladstone Road (HAIL A10).
- Potential TPH contamination from storage of waste oil (HAIL A17)
- Potential bulk storage of treated timber outside (HAIL A18)
- Potential disposal of asbestos products known to be in a deteriorated condition (HAIL E1)
- Potential heavy metal contamination within burn areas (HAIL I)
- Potential heavy metal and/or asbestos contamination associated with farm buildings (HAIL I)

The potential risks associated with the migration of hazardous substances to the site from surrounding landfill and scrapyards activities have been discounted due to separation distances, anecdotal data on material deposited and localised nature of contamination.

It is recommended that a Detailed Site Investigation be undertaken on the identified risk areas prior to development occurring.

The identified HAIL activities/risks do not preclude eventual residential/commercial subdivision of the land and do not require any further investigation for the purposes of plan change. As each stage of the plan change area is developed, the need for an updated Preliminary Site Investigation and/or site inspections should be considered, along with Detailed Site Investigations as required.

In terms of planning status, the Preliminary Site Investigation has identified evidence of HAIL activities occurring on the site. Therefore, the NESCS does apply, and resource consent may be required for future change of use, subdivision and soil disturbance.



## 2 Objectives of the Investigation

This report has been prepared in general accordance with the Ministry for the Environment's "Contaminated Land Management Guidelines No 1: Reporting on Contaminated Sites in New Zealand, revised 2021". This report includes all requirements for a Preliminary Site Investigation report.

The objective of this report is to:

- Collect and assess information from multiple sources to understand previous and current land uses.
- To describe the subject site's physical and environmental features to understand potential pathways and receptors.
- To establish under the NESCS whether it is more likely than not that an activity or industry described in the Hazardous Activities and Industries List (HAIL) is being, or has been, undertaken on the site.
- To assess whether there is any risk to potential receptors that would warrant further investigation.

## 3 Scope of Work Undertaken

The scope of the work undertaken has included:

- Obtaining and review of Environment Canterbury (ECan) GIS data including the Listed Land Use Register (LLUR).
- Search of Land Information New Zealand (LINZ) orchard database.
- Review of relevant historical aerial photographs.
- Review of relevant historical certificates of title (CTs).
- Review of Waimakariri District Council property files.
- Site inspection.
- Preparation of this report in accordance with MfE guidelines.

## 4 Site Identification

The site is located at 145 & 167 Gladstone Road, Woodend, Canterbury as shown on the plan in **Figure 1** below. It is legally described as Lot 1 DP 29099 and Lot 2 DP29099, and has a total area of approximately 22.6ha.

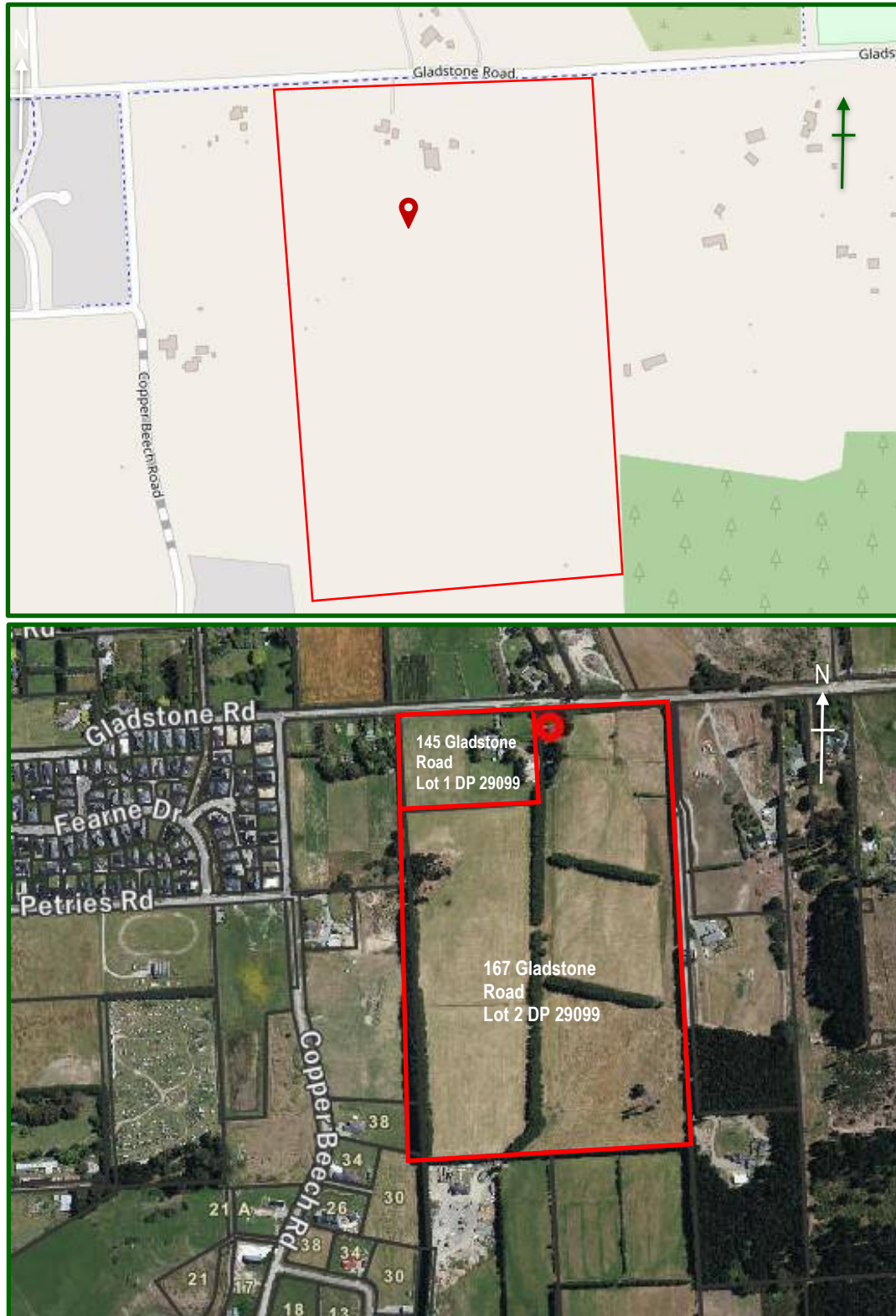


Figure 1 – Location Plan

## 5 Proposed Site Use

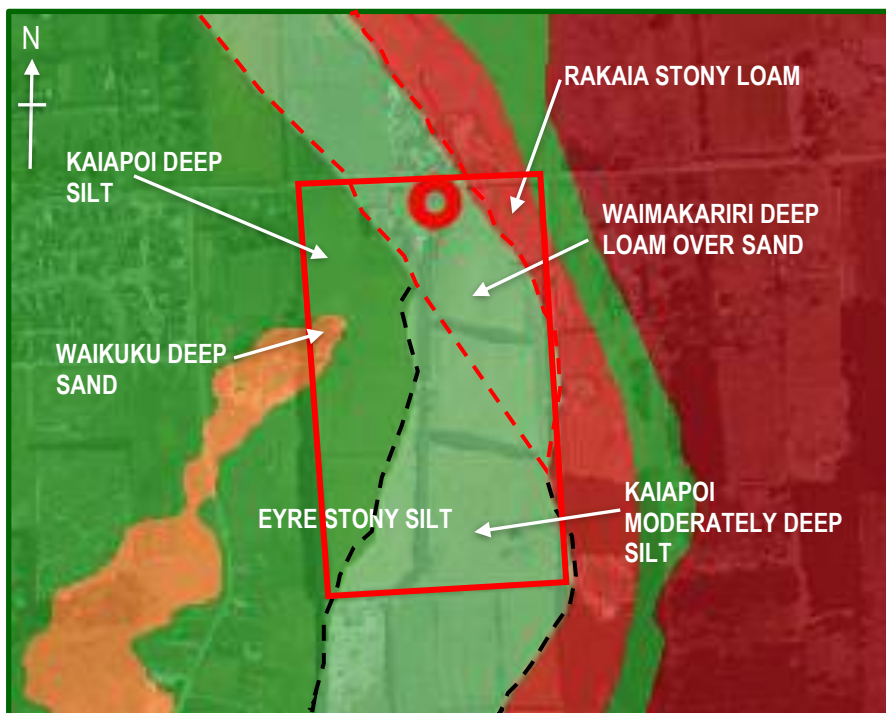
It is proposed to rezone the site to allow Large Lot Residential development. Large Lot Residential density is defined in the proposed Waimakariri District Plan as a maximum of one residential unit per 5,000m<sup>2</sup> of net site area.

## 6 Site Description

### 6.1 Environmental Setting

**Table 2 – Environmental Setting**

<b>Topography</b>	The site is generally flat however the land to the western side of the historical river, that runs centrally through the bottom half of the site from north to south, is approximately 1m-2m higher than the eastern side of the site. A small sandhill is present near the centre of the western boundary.
<b>Geology</b>	The ECan GIS database describes the soils at the site as a combination of Rakaia stony loam, Waimakariri deep loam over sand, Kaiapo moderately deep silt, Waikuku deep sand and Kaiapo deep silt as shown in <b>Figure 2</b> below. Nearby and onsite bore logs indicate that topsoils are underlain by layers of silt and clay, followed by moist grey sands.
<b>Soil Trace Elements</b>	According to the ECan GIS database, natural concentrations of trace elements for the site are those of the 'Regional, Recent'.
<b>Groundwater</b>	According to the ECan GIS database, the site lies over the coastal confined gravel aquifer system. Groundwater levels recorded on nearby and onsite bore logs are between 1.30m and 3.50m deep. The direction of groundwater flow is generally in a south-easterly direction.
<b>Surface Water</b>	According to the ECan GIS database, a river or stormwater network runs through the middle of the site in a north-south direction, this may be an historical riverbed as is evident in aerial photographs as nothing obvious was noted on site. Domestic stormwater is likely to go to an onsite soakaway.



**Figure 2 – Geological setting**

## 6.2 Site Layout and Current Site Uses

The site is comprised of two rural properties. 145 Gladstone Road contains a dwelling, garage, a sleepout and gardens and 167 Gladstone Road contains farm sheds, a horse arena, with the remaining land in pasture.

## 6.3 Surrounding Land Uses

Similar rural residential land is present to the east and south of the site. Recently developed residential land is present to the west and north-east of the site. Woodend Wastewater Treatment Plant lies 600m to the east.

## 6.4 Geotechnical Investigations

At the time of writing no geotechnical investigations were made available to Momentum Environmental Ltd (MEL).

# 7 Historical Site Use Assessment

## 7.1 Previous Site Ownership and Use

Historical Certificate of Titles (CTs) were reviewed with the following relevant ownership information outlined below:

21 February 1927	Robert Petrie and Joseph Bunting, Woodend farmers
6 July 1928	The Public Trustee
15 March 1929	Walter Armstrong Bunting & James Bunting, Woodend farmers
30 August 1935	Public Trustee (transfer of interests of James Bunting)
30 August 1935	Walter Armstrong Bunting, farmer (transfer of interests of Public Trustee)
4 December 1958	Nelson Hewitson McGowan and Irene McGowan
24 December 1959	The Public Trustee
20 September 1960	Nelson Hewitson McGowan, Woodend farmer
6 October 1971	Francis John Everest (Lots 1 & 2 DP 29099)
8 July 1983	Shirley Jean Everest (1 half share Lots 1 & 2)
7 May 1993	Stuart Graeme McFadden, Woodend farmer (Lots 1 & 2)
30 May 2022	Sweet and Sassy Limited (Lot 2)
20 September 2022	Juliet Elizabeth McFadden (Lot 1)

Note that some of the older information was of poor quality and difficult to follow, therefore the accuracy of the spelling of names and dates is not guaranteed. Copies of the historical CTs are included in **Appendix A**.

## 7.2 District Council Records

The site is zoned Rural in the operative Waimakariri District Plan.

In the proposed Waimakariri District Plan the site is zoned Rural Lifestyle Zone where one residential unit shall be located on a site with a minimum net site area of 4ha.

The property file for Lot 1 DP 29099 145 Gladstone Road was provided by Waimakariri District Council on 25 October 2023. No property files were held for Lot 2 DP 29099 167 Gladstone Road. The available property files included the following relevant information:

### 145 Gladstone Road (Lot 1 DP 29099)

1 September 1975	Building permit application form to construct a hay shed.
2 February 1978	Building permit application to construct a garage.
10 May 1991	Building permit application for a shed extension.
14 May 1991	Building permit issued for the construction a shed extension.
26 May 1997	Building permit application to construct a sleep out.
6 June 1997	Building permit issued to construct a sleep out.

### 7.3 Regional Council Records

The subject site is not listed on ECan's Listed Land Use Registry (LLUR) for land use activities and industries associated with the Hazardous Activities and Industries List (HAIL). The full LLUR Statement is included in **Appendix B**.

Multiple properties within a 100m radius of the site are listed on the ECan LLUR, as follows:

- Woodend Rubbish Pit at 162 Gladstone Road is listed on the ECan LLUR for HAIL activity 'G3' – Landfill sites. The property is located on the opposite side of Gladstone Road. The listing is categorised as 'Verified HAIL -not investigated'. The site's owner has reported that the pit was predominantly filled with hardfill material and is now covered with clean fill and scrub.
- 128 Gladstone Road is listed on the ECan LLUR for HAIL activity 'A10 – persistent pesticide bulk storage or use' associated with horticultural activities identified in aerial photographs. The listing is categorised as 'verified HAIL – not investigated'.
- 129 Gladstone Road is listed on the ECan LLUR for HAIL activity 'A10 – persistent pesticide bulk storage or use' associated with persistent pesticide bulk storage identified in aerial photographs from 1973-1994. The listing is categorised as 'verified HAIL – not investigated'.
- 83 Petries Road is listed on the ECan LLUR for HAIL activity 'G4'- scrapyards. Following investigation by Davie Lovell Smith it was concluded that small areas of contamination were present and the areas where contaminants of concern i.e zinc, lead and hydrocarbons have exceeded their respective residential soil contaminant standards are contaminated for residential land use.
- The ECan LLUR Statement also references a contaminated land investigation report for nearby properties 231,244,273 & 285 Woodend Beach Road. No HAIL activities were reported.

The properties listed above are not deemed relevant to the subject site due to separation distance or isolated areas of contamination unlikely to have resulted in the migration of contaminants to the site.

The ECan GIS database shows one active resource consent for the site, a water permit to take and use groundwater. Within a 100m to the east of the subject site there are active resource consents to discharge domestic sewage tank effluent into ground, and to take and use groundwater.

### 7.4 LINZ Records

The LINZ Orchard layer does not show the site, or any directly adjacent properties as having listed orchards.

### 7.5 Review of Historical Aerial Photographs

A total of nine aerial photographs have been sourced from the ECan GIS database. Copies of the aerial photographs used are included in **Appendix C**.

- The earliest available aerial photograph is from **1941** and shows the majority of the site is in pasture. Farm sheds are present at the northern end of the subject site and possibly a residential dwelling surrounded by trees. A suspected burn pile is present in the north-eastern corner of the site. Some small animal pens are visible in the paddock on the eastern side of the buildings. A couple of historical river channels are visible at the eastern side and southern end of the property. The surrounding land is generally rural.
- The next available aerial photograph is from **1961** and shows a new residential dwelling, small shed and driveway and the addition of a couple of large farm sheds. Around the new residential dwelling the land appears to have been tilled for pastoral cropping. Beneath the large trees to the east of the new farm sheds there appears to be a smaller shed and fenced stockyard. The suspected burn pile is no longer visible. A long narrow structure is visible where animal pens were seen previously. There appears to be haystacks at the southeastern corner of the site. There are no other significant changes to the surrounding area.
- The next available aerial photograph is from **1973** and shows the majority of the site remaining in pasture except for the field in the north-west corner around the residential dwelling and in the south-west section of the site where pastoral cropping is visible. The residential dwelling in the northern part of the site and the farm structures on the eastern side of the site that were visible on the 1941 photograph have been removed. The farm shed and stockyard is clearer on this photograph and indicates either a sheep dip or foot rot trough may be present. Driveways and paths between the residential dwelling and the farm shed have been developed and a few more small shed/structures have been constructed around the larger farm sheds. The haystacks at the southern end of the site are no longer visible. A farm track is visible in the central part of the site running from the stockyard to the southern end of the site. There are no other significant changes to the surrounding area.
- The next available aerial photograph is from **1984** and shows no significant changes to the site. There appears to be a glasshouse constructed just north of the larger farmer sheds, and the large farm shed at the rear has been extended which is consistent with information found in the property file. Trees have been established on the western boundary on part of a sand hill shared with the neighbouring property. Some rural residential development is occurring beyond the site to the north-west.
- The next available aerial photograph is from **1994** and shows no significant changes to the site other than two shelterbelts have been planted in the eastern pastureland and the southernmost part of which is now shown as cropping. The western part of the site appears to be all pastoral cropping. A small pump house has been constructed near to the trees that surround the stockyard/sheep dip. There are no significant changes to the surrounding area.
- The next available aerial photograph is from **2000** it is quite blurry; however, it shows no significant changes to the site. Three new small structures are evident northwest of the residential dwelling. Residential development is occurring to the east of the site.
- The **2013** aerial photograph shows the addition of a horse arena adjacent to the northeastern boundary and tracks in the southeastern part of the site which may be used for dirt bike riding. Three suspected burn piles are evident: in the northwestern corner, along the southern boundary and along the central shelterbelt behind the large farm shed. A concrete trough has been constructed directly to the west of the small shelterbelt on the northern boundary nearby to the fallen tree. The three small structures evident on the previous aerial are no longer visible and the glasshouse present in the previous aerial photographs from 1984 onwards has been removed. The whole site now appears to be pastureland apart from the residential curtilage area.
- The **2018** aerial photograph shows further potential burn areas at the southern end of the site and one next to the trees planted on the sandhill on the western boundary. The dirt bike track is no longer visible. Residential development has intensified on land beyond the site to the east.
- The latest aerial from **2021** shows no significant changes in the subject site. Residential development has intensified on land beyond the site to the east.

## 8 Site Inspection

A site inspection was undertaken on 20 October 2023 to assess the likelihood of soil contamination on the site. Site Inspection Plans detailing the structures on the site and potential sources of contamination are included in **Appendix D**.

The site is accessed via a driveway off Gladstone Road. 145-Lot 1 DP 29099 contains a residential dwelling, a garage, a chicken house, raised beds for vegetable growing and a small sleep out. The dwelling is a timber and weatherboard structure with an iron roof. The garage is a concrete block construction with hardboard eaves and fascias. No potential sources of contamination were observed on the dwelling, garage or within the residential curtilage area.

167-Lot 2 DP 29099 contains a large farm shed and an older timber shed, old stockyard/sheep dip/foot rot trough, a horse arena and large grassed paddock areas. This lot was generally untidy with rubbish items deposited in multiple locations near to the sheds, predominantly underneath the large trees. The tenant was present early in the inspection and stated that the horse arena was constructed using crusher dust, therefore, it is unlikely this would give rise to contamination.

The large farm shed is of timber pole and corrugated metal construction. It contained hay bales, farm machinery, a horse trailer and feed material. Outside, at the rear there were two piles of treated timber posts in amongst other farm equipment.

A smaller older painted wooden shed with an iron roof is located nearby to the east. This has the potential to have been painted using lead-based paint. At the rear of the older shed is a fenced area/stockyard which may have been a sheep dip and drip area or a foot rot trough and drip area. The area directly east of the stockyards are sloped downhill which may indicate that any livestock dip/chemical treatment residue may have contaminated land down slope of the application area. On the eastern side of the shed two drums of suspected waste oil were observed. A small burn area was noted to the north, near to the entrance to the site, and appeared to have been used recently. Also, in this area there is an old concrete trough in the ground with evidence of burnt material within.

There are a number of large trees that surround the old farm shed and farm rubbish consisting of broken concrete, iron roofing, wooden crates, timber poles, bricks, tanks, empty drums, metal wire and broken asbestos containing material "super 6" has been deposited beneath them, with broken pieces currently affecting an area approximately 5m in diameter. Crates of firewood for domestic use were also evident underneath the trees.

There were a number of green waste burn piles across the site predominantly on the western side of the site however, towards the southern boundary an historical burn area was found that appeared to have burnt upholstery foam contained within it. This area is close to the motocross track and was possibly a bonfire for enjoyment rather than burning green waste.



Photo 1 – Residential Dwelling



Photo 2 – Garage



Photo 3 – Large farm shed



Photo 4 Older farm shed



Photo 5 – Sheep dip/foot rot trough/drip area



Photo 6 – ACM Super 6 storage area





Photo 7 – Rubbish beneath trees



Photo 8 – Rubbish beneath trees



Photo 9 - Historical burn area (southern boundary)



Photo 10 – Recent burn area



Photo 11 – Suspected waste oil drums



Photo 11 – Concrete trough with burnt material



Photo 12 – Pile of treated timber posts (rear of shed)

## 9 Risk Assessment

### 9.1 Potential HAIL Uses Identified

The Hazardous Activities and Industries List (HAIL) compiled by The Ministry for the Environment include the following categories (*in italics*) that could be associated with the historical uses of the site with a summary of the risk of these activities having been carried out on the site.

#### **A – Chemical manufacture, application and bulk storage**

##### *8. Livestock dip or spray race operations*

There is evidence that sheep were grazed on the land in the 1970's and evidence from aerial photographs from this period that potential sheep dip/foot rot treatment areas were present. There is a possibility that chemical spillage and leakage could have contaminated the soils in this area. Contaminants of concern include heavy metals and organochlorine pesticides (OCPs).

##### *10. Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds*

As detailed above there is a possibility that spillage and leakage could have contaminated the soils around the sheep dip but also in the preparation/mixing and storage of these chemicals in an around sheds. Contaminants of concern include heavy metals and organochlorine pesticides (OCPs).

There has been a domestic glasshouse on the site as seen on the aerial photographs from 1984-2013. Fertilisers and pesticides may have been used for growing domestic produce, contaminants of concern are heavy metals and OCPs.

The majority of the paddock areas of the site have been used for pastoral farming activities since at least the 1940's. The normal use of fertilisers and pastoral weed controls associated with this use is unlikely to have caused soil contamination that would pose a significant risk to human health.

### *17. Storage tanks and drums for fuel, chemicals or liquid waste*

Two drums of suspected waste oil were discovered behind the older wooden shed during the site inspections. No olfactory evidence of spills or leaks were observed during the site inspection; however, the drums were rusted, and the larger drum had oil staining on the top and sides and they both appeared to have been in situ for a considerable time. The waste oil drums are considered highly unlikely to have caused soil contamination that would pose a significant risk to human health however there may be localised risk to the environment due to the integrity of the drums. Contaminants of concern are petroleum hydrocarbons (TPH).

### *18. Bulk storage of treated timber outside*

Two large piles of treated timber fence posts were seen during the site inspection, at the rear of the large farm shed. There may be localised contamination associated with the storage of these outside. Contaminants of concern are heavy metals.

### **E1 - Asbestos products known to be in a deteriorated condition.**

Asbestos in a deteriorated condition was found in an area approximately 5m in diameter close to the older farm shed. A stack of asbestos containing corrugated 'Super 6" roofing sheets was present. Broken pieces were found lying on the surface and also some covered by long grass suggesting it has been there for some time.

### **H - Any land that has been subject to the migration of hazardous substances from adjacent land in sufficient quantity that it could be a risk to human health or the environment**

The ECan LLUR identified two properties within a 100m radius of the site listed as 'HAIL A10 - persistent pesticide bulk storage or use' associated with horticultural activities undertaken between 1973 and 1994. Given the separation distance between the listed site and the subject site and the localised nature of the source of contamination, the risk of migration to the site is likely to be very low.

The ECan LLUR identified one property within a 100m radius of the site listed as 'HAIL G3 – landfill site, a former borough pit. Given the separation distance between the pit and the site, and the anecdotal evidence that the pit was predominantly filled with hardfill, the risk of migration of contaminants to the subject site is likely to be very low.

The ECan LLUR identified one property within a 100m radius of the site listed as 'HAIL G4 – scrapyards. Given the separation distance between the scrapyard and the site, the localised nature of the source of contamination and the assessment from the Davie Lovell Smith investigation, the risk of migration of contaminants to the subject site is likely to be very low.

Based on the above, it is considered highly unlikely that the migration of hazardous substances from adjacent land has impacted soils at the site in sufficient quantity to pose a risk to human health or the environment.

### **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.**

A dwelling and farm sheds were present on the site from at least the 1940's. Based on the era of the buildings present it is highly likely that lead based paint products and asbestos containing materials (ACM) were used and any natural deterioration or intentional removal may have caused contamination of the surrounding soils. Contaminants of concern include heavy metals and asbestos.

There have also been a number of extensions to sheds during the 1970s when the use of asbestos containing materials was commonplace. There is a possibility that asbestos from the construction of the sheds, deterioration over time and demolition of old sheds may have contaminated the soils around them.

A burn area which contained anthropogenic material was identified close to the entrance during the site inspection. Nearby was a concrete trough which had burnt material evident within. A further burn area containing upholstery foam was identified near to the southern boundary of the site. Contaminants of concern associated with these burn areas identified are heavy metals. The remaining burn areas identified during the site inspection were green waste material only.

## 9.2 NESCS Regulation 6(3) Probability Assessment

In terms of the NESCS, Regulation 5(7) states that land is considered to be covered if an activity or industry described in the HAIL is being undertaken; has been undertaken; or is more likely than not to have been undertaken on it. Regulation 6 describes the methods for determining this. Method 6(3) is to rely on a Preliminary Site Investigation. The NESCS Users Guide indicates the test for 'more likely than not' is that there is more than a 50 percent likelihood of the HAIL having occurred. The table below states the likelihood of each HAIL identified:

**Table 3 – NESCS Probability Assessment**

HAIL Category	6(3)a - Is being undertaken	6(3)b – has been undertaken	6(3)c – likelihood of having been undertaken (if not confirmed)
A8 – Livestock dip or spray race operations	-	-	Highly likely
A10 - Persistent pesticide bulk storage or use	-	-	Highly likely
A17 – Storage tanks for fuels or chemicals	Confirmed	-	-
A18 - Potential bulk storage of timber outside	Confirmed	-	-
E1 - Potential disposal of asbestos products known to be in a deteriorated condition.	Confirmed	-	-
H – Migration of contaminants to the subject site	-	-	Highly unlikely
I – Any other - lead paint, asbestos, heavy metals, burn areas.	Confirmed – burn areas-	-	Highly likely – lead paint

Therefore, the NESCS does apply to the site and resource consent may be required for activities controlled by the NESCS.

### 9.3 Conceptual Site Model

The following conceptual site model for the site indicates potentially complete exposure pathways:

**Table 4 – Conceptual Site Model**

Conceptual Site Model				
Source	Pathways		Receptor	Exposure Pathway Status
<ul style="list-style-type: none"> <li>• Potential heavy metal contamination within burn areas</li> <li>• Potential heavy metal and/or asbestos contamination associated with farm buildings.</li> <li>• Potential TPH contamination from storage of waste oil</li> <li>• Potential OCP and heavy metal contamination from livestock dipping/treatment and pesticide storage and use</li> </ul>	Human	Dermal contact, ingestion and inhalation through soil contact	Current and future site occupiers and workers involved in soil disturbance activities	Potentially complete
		Ecological	Infiltration through soils to groundwater	Groundwater is assumed to be 1.3 – 3.5m deep at the site
	Surface runoff to waterways		Adjacent surface water drain	Potentially complete

## 10 Conclusion

This investigation has identified confirmed or likely Hazardous Activities and Industries List (HAIL) activities on the site and there may be a risk to human health from contaminated soils. The following risk areas are present:

- Potential heavy metal and OCP contamination from possible sheep dip/spray race (HAIL A8)
- Potential heavy metal and/or OCP contamination from possible pesticide mixing, application, or storage at 167 Gladstone Road (HAIL A10).
- Potential TPH contamination from storage of waste oil (HAIL A17)
- Potential bulk storage of treated timber outside (HAIL A18)
- Potential disposal of asbestos products known to be in a deteriorated condition (HAIL E1)
- Potential heavy metal contamination within burn areas (HAIL I)
- Potential heavy metal and/or asbestos contamination associated with farm buildings (HAIL I)

The potential risks associated with the migration of hazardous substances to the site from surrounding landfill and scrapyards activities have been discounted due to separation distances, anecdotal data on material deposited and localised nature of contamination.

The identified HAIL activities/risks do not preclude eventual residential/commercial subdivision of the land and do not require any further investigation for the purposes of plan change. As each stage of the

plan change area is developed, the need for an updated Preliminary Site Investigation and/or site inspections should be considered, along with Detailed Site Investigations as required.

In terms of planning status, the Preliminary Site Investigation has identified evidence of HAIL activities occurring on the site. Therefore, the NESCS does apply, and resource consent may be required for future change of use, subdivision and soil disturbance.

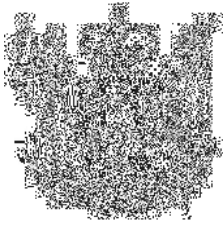
## 11 Limitations

Momentum Environmental Limited has performed services for this project in accordance with current professional standards for environmental site assessments, and in terms of the client's financial and technical brief for the work. Any reliance on this report by other parties shall be at such party's own risk. It does not purport to completely describe all the site characteristics and properties. Where data is supplied by the client or any third party, it has been assumed that the information is correct, unless otherwise stated. Momentum Environmental Limited accepts no responsibility for errors or omissions in the information provided. Should further information become available regarding the conditions at the site, Momentum Environmental Limited reserves the right to review the report in the context of the additional information.

Opinions and judgments expressed in this report are based on an understanding and interpretation of regulatory standards at the time of writing and should not be construed as legal opinions. As regulatory standards are constantly changing, conclusions and recommendations considered to be acceptable at the time of writing, may in the future become subject to different regulatory standards which cause them to become unacceptable. This may require further assessment and/or remediation of the site to be suitable for the existing or proposed land use activities. 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.

No part of this report may be reproduced, distributed, publicly displayed, or made into a derivative work without the permission of Momentum Environmental Ltd, other than the distribution in its entirety for the purposes it is intended.

## **Appendix A – Historical Certificates of Title**



**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD  
Historical Search Copy**



  
R. W. Muir  
Registrar-General  
of Land

Constituted as a Record of Title pursuant to Sections 7 and 12 of the Land Transfer Act 2017 - 12 November 2018

**Identifier** CB11A/857  
**Land Registration District** Canterbury  
**Date Issued** 06 October 1971

**Prior References**  
CB757/65

---

**Estate** Fee Simple  
**Area** 2.4941 hectares more or less  
**Legal Description** Lot 1 Deposited Plan 29099

**Original Registered Owners**  
Stuart Graeme McFadden

---

**Interests**

Fencing Provision in Transfer 845140 - 6.10.1971  
6880031.1 NOTICE OF CLAIM OF INTEREST PURSUANT TO SECTION 42(2) PROPERTY (RELATIONSHIPS)  
ACT 1976 BY JULIET ELIZABETH MCFADDEN - 25.5.2006 at 9:00 am  
12558048.1 Withdrawal of Notice of Claim 6880031.1 - 20.9.2022 at 2:42 pm  
12558048.2 Transfer to Juliet Elizabeth McFadden - 20.9.2022 at 2:42 pm



References  
Prior C/T. 757/65  
Transfer No. 845140  
N/C. Order No.

Land and Deeds 69

No. 11A/857



REGISTER

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 6th day of October one thousand nine hundred and Seventy-one under the seal of the District Land Registrar of the Land Registration District of Canterbury

WITNESSETH that FRANCIS JOHN EVEREST of Christchurch, Farmer

is seized 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 6 acres

26.1 perches or thereabouts situated in Block XII of the Rangiora Survey District being Lot 1 on Deposited Plan 29099, part of Rural Sections 1928, 2880 and 3720



Assistant Land Registrar

Subject to:-

Fencing Provision in Transfer 845140

Transfer 442335/1 of a one-half share to Shirley Jean Everest of Woodend, Farmer - 8.7.1983 at 10.08 am.

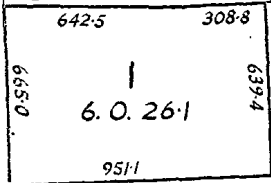
Mortgage 845143 to Nelson Hewitson McGowan - 6.10.1979 at 10.45 a.m.

Mortgage 442335/2 to Francis John Everest 8.7.1983 at 10.08 am

Mortgage 149924/2 to Bank of New South Wales Savings Bank Limited - 30.9.1977 at 9.53 a.m.

Mortgage 467781/1 to The Rural Banking and Finance Corporation 16.12.1983 at 9.53 a.m.

GLADSTONE RP



METRIC AREA:- 2.4941 ha

Scale: 1 inch = 5 chains

No. 11A/857

No. 467781/2 Memorandum of Priority making Mortgages 467781/1 and 442335/2 second and third mortgages respectively - 16.12.1983 at 9.53 a.m.

No. 917710/1 Change of Name of the mortgagee under Mortgage 467781/1 to The Rural Bank Limited - produced 28.1.1991 at 11.29am and entered 24.11.1992 at 10.41am

over...

Register copy for L. & D. 69, 71, 72

11A/857

DISCHARGED

Mortgage A24992/2 to Westpac Banking Corporation - 24.11.1992 at 10.41am

for A.L.R.

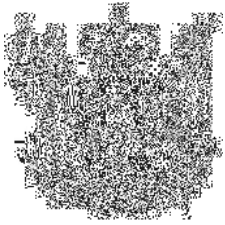
No.A53350/1 Memorandum of Priority making Mortgages A24992/2 and 442335/2 first and second mortgages respectively - 27.5.1993 at 10.55am

for A.L.R.

Transfer A295903/3 to Stuart Graeme McFadden of Woodend, Farmer - 7.5.1997 at 11.20am

for A.L.R.





**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD  
Historical Search Copy**



  
R.W. Muir  
Registrar-General  
of Land

Constituted as a Record of Title pursuant to Sections 7 and 12 of the Land Transfer Act 2017 - 12 November 2018

**Identifier** CB11A/858  
**Land Registration District** Canterbury  
**Date Issued** 06 October 1971

**Prior References**  
CB757/65

---

**Estate** Fee Simple  
**Area** 20.2343 hectares more or less  
**Legal Description** Lot 2 Deposited Plan 29099  
**Original Registered Owners**  
Stuart Graeme McFadden

---

**Interests**

Fencing Provision in Transfer 845140 - 6.10.1971  
6880031.1 NOTICE OF CLAIM OF INTEREST PURSUANT TO SECTION 42(2) PROPERTY (RELATIONSHIPS) ACT 1976 BY JULIET ELIZABETH MCFADDEN - 25.5.2006 at 9:00 am  
8899380.1 Compensation Certificate pursuant to Section 19 Public Works Act 1981 by Her Majesty the Queen - 28.10.2011 at 9:21 am  
12460262.1 Withdrawal of Notice of Claim 6880031.1 - 30.5.2022 at 3:15 pm  
12460262.2 Transfer to Sweet and Sassy Limited - 30.5.2022 at 3:15 pm

References  
Prior C/T. 757/65

Land and Deeds 69

Transfer No. 845140  
N/C. Order No.



REGISTER

No. 11A/858

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate dated the 6th day of October, one thousand nine hundred and Seventy-one under the seal of the District Land Registrar of the Land Registration District of Canterbury

WITNESSETH that FRANCIS JOHN EVEREST of Christchurch, Farmer

is seized 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 50 acres

or thereabouts situated in Block XII of the Rangiora Survey District being Lot 2 on Deposited Plan 29099, part of Rural Sections 1928, 2880 and 3720



*[Signature]*

Assistant Land Registrar

Subject to:-

Fencing Provision in Transfer 845140

Mortgage 845143 to *[Signature]* Hewitson McGowan - 6.10.1974 at 10.45 a.m.

Mortgage 149924/2 to Bank of South Wales Savings Bank Limited - 30.9.1977 at 9.30 a.m.

Transfer 442335/1 of a one-half share to Shirley Jean Everest of Woodend, Farmer - 8.7.1983 at 10.08 am.

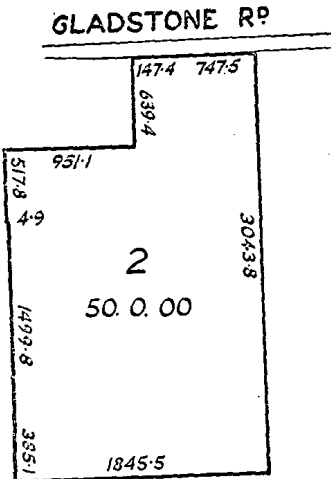
Mortgage 442335/2 to Francis John Everest - 8.7.1983 at 10.08 am.

Mortgage 467781/1 to The Royal Banking and Finance Corporation - 16.12.1983 at 9.53 a.m.

No. 467781/2 Memorandum of Priority making Mortgages 467781/1 and 442335/2 second and third mortgages respectively - 16.12.1983 at 9.53 a.m.

OVER..

Register copy for L & D, 69, 71, 72 for A.L.R.



GLADSTONE RP

METRIC AREA = 20.2342 ha

Scale: 1-inch = 10 chains

No. 11A/858

DISCHARGED  
30/9/77  
*[Signature]*

DISCHARGED  
for A.L.R.  
*[Signature]*

DISCHARGED  
for A.L.R.  
*[Signature]*

*[Signature]*

11A/858

No. 917710/1 Change of Name of the mortgagee under Mortgage 467781/1 to The Rural Bank Limited - produced 28.1.1991 at 11.29am and entered 24.11.1992 at 10.41am

DISCHARGED

Mortgage A24992/2 to Westpac Bank Corporation - 24.11.1992 at 10.41am

for A.L.R.

No.A53350/1 Memorandum of Priority making Mortgages A24992/2 and 442335/2 first and second mortgages respectively - 27.5.1993 at 10.55am

for A.L.R.

Transfer A295903/3 to Stuart Graeme McFadden of Woodend, Farmer - 7.5.1997 at 11.20am

for A.L.R.



NEW ZEALAND.

Land Transfer (Compulsory Registration of Titles) Act, 1924.  
 Reference: Deeds Index C. 1928, 2880, 3720, 5988  
 Application No. C. 4023



Register-book,  
 Vol. 390, folio 202

390/202

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT.  
 LIMITED AS TO PARCELS AND TITLE.

CANCELLED

This Certificate, dated the Twenty-first day of February, one thousand nine hundred and Twenty-seven  
 under the hand and seal of the District Land Registrar of the Land Registration District of Canterbury Witnesseth that  
ROBERT PETRIE and JOSEPH BUNTING both of Woodend Farmers are

seised of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial under written or endorsed hereon, subject also to any existing right of the Crown to take and lay off roads under the provisions of any Act of the General Assembly of New Zealand) in the land hereinafter described, as the same is delineated by the plan hereon bordered green, be the several admeasurements a little more or less, that is to say: All that parcel of land containing ONE HUNDRED AND THREE ACRES or thereabouts situated in Block XII of the Rangiora Survey District being Rural Sections 1928, 2880, 3720 and 5988 and being more particularly described in Conveyance Registered No. 101282 (156/346)

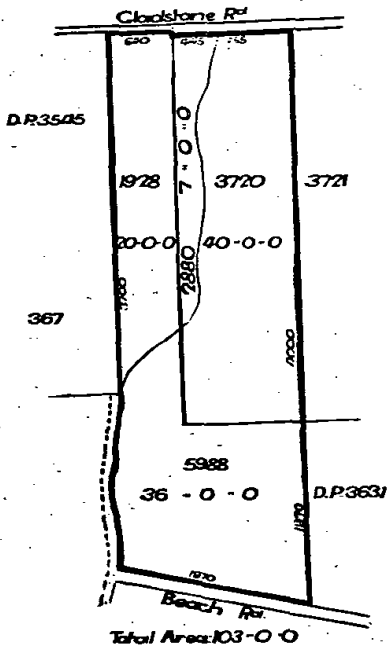
Image Quality due to Condition of Original



*J. M. Thompson*  
 District Land Registrar.

*Transfer 183916 produced 6 July 1928 at 2.45 pm  
 Robert Petrie and Joseph Bunting to be  
 Public Trustees*

*Cancelled and N.C. issued  
 Vol 416 Fol 170 the above  
 limitation as to parcels having  
 been removed 27th June  
 (N.C.O 3582) DLR*



Scale: 10 Chains to one Inch

390/202

NEW ZEALAND.



Reference: Vol. 330 Folio 202  
Transfer No.  
Application No.  
Order for N/C No. 3582

Register-book, *copy Bound*  
Vol. 416 folio 170

*Page cancelled*

416 170

CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT.

CANCELLED

This Certificate, dated the fifteenth day of March one thousand nine hundred and Twenty-nine  
under the hand and seal of the District Land Registrar of the Land Registration District of Canterbury Witnessed that

FOR PUBLIC REGISTRY

is seized of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial under written or endorsed hereon, subject also to any existing right of the Crown to take and lay off roads under the provisions of any Act of the General Assembly of New Zealand) in the land hereinafter described, as the same is delineated by the plan hereon bordered green, be the several admeasurements a little more or less, that is to say: All that parcel of land containing ONE HUNDRED AND SIX ACRES ONE HUNDRED AND FIFTY-FIVE PERCHES or thereabouts situated in Block XII of the Rangiora Survey District being Lot 1 on plan deposited in the Land Registry Office at Christchurch as Nos. 8952 Rural Sections 1928, 2580, 3720 and 5988

*Plan 19747*

*M. Bunting*  
District Land Registrar.

Transfer 167983 produced 15 March 1929 at 2.15 p.m.  
The Public Trustee to Walter Armstrong Bunting and James Bunting both of Woodend Farmers as tenants in common in equal shares *M. Bunting*

D.L.R.

Mortgage 167569 produced 15 March 1929 at 2.25 p.m.  
Walter Armstrong Bunting and James Bunting to the Public Trustee *M. Bunting*

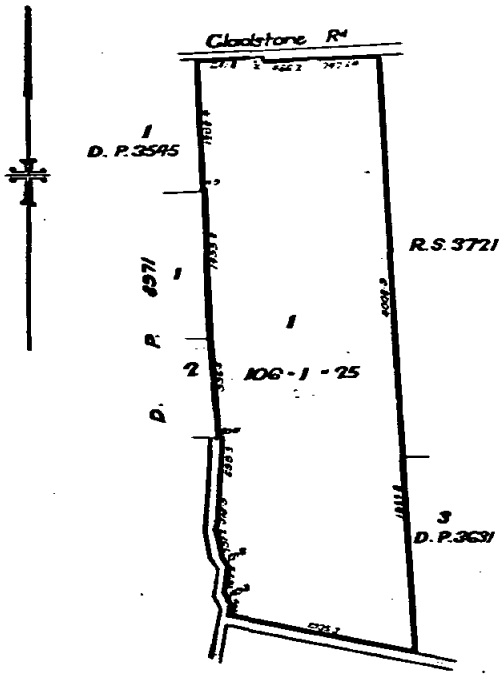
D.L.R.

Transmission 26790 of the interest of James Bunting deceased to the Public Trustee entered 30 August 1935 at 2.50 p.m. *M. Bunting*

Transfer 211537 produced 30 August 1935 at 3 p.m. the Public Trustee of his interest to Walter Armstrong Bunting of Woodend Farmer. *M. Bunting*

Variation of the terms of mortgage 167569 produced 8 April 1936 at 11.20 a.m. *M. Bunting*

D.L.R.



Scale: 10 Chains to one Inch

416 170

416/170

Violation of the terms of Mortgage 167569 produced the 24 day of January 1950 at 2:1 pm

Violation of the terms of Mortgage 167569 produced the 24 day of January 1950 at 2:30 pm

Discharge of mortgage 167569 as to lot 1 & 2 Plan 19717 produced 5/5/1958 at 2:55 pm

Changes 1179102 dedication of lot 2 Plan 19717 by Walter Armstrong Bunting as and for a public road produced 5/5/1958 at 2:56 pm

Plans cancelled

Cancelled as to Plan 19717 and CT 757/15 issued U.S.C. 481718 12/1/58

Plans cancelled

Plans 19717 of lot 10, 19717, Walter Armstrong Bunting to Walter Armstrong Bunting and Mrs. Edith Bunting produced 4/11/1958 at 2:26 pm

Cancelled as to road





Reference: Vol. 416, Folio 170  
Transfer No.  
Order for N/C No. 481718

Register-book,  
Vol. 757, folio 65



NEW ZEALAND

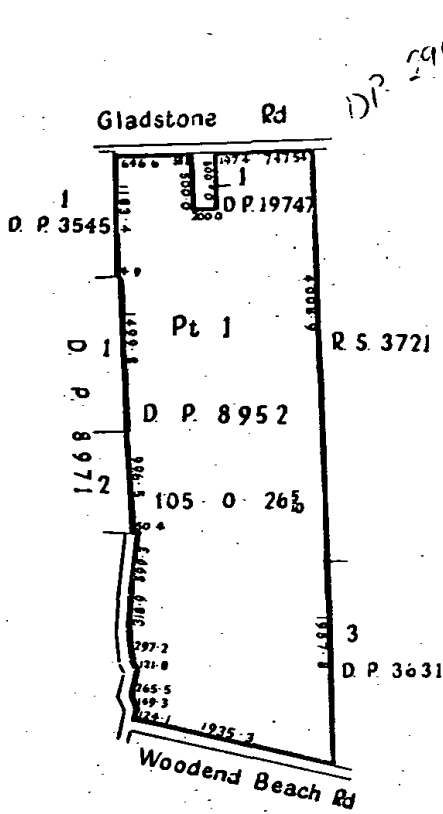
# CERTIFICATE OF TITLE UNDER LAND TRANSFER ACT

This Certificate, dated the Eighteenth day of June, one thousand nine hundred and fifty-eight  
under the hand and seal of the District Land Registrar of the Land Registration District of Canterbury Witnesseth that  
WALTER ARMSTRONG BUNTING of Woodend, Farmer

is seized of an estate in fee-simple (subject to such reservations, restrictions, encumbrances, liens, and interests as are notified by memorial under written or endorsed hereon, subject also to any existing right of the Crown to take and lay off roads under the provisions of any Act of the General Assembly of New Zealand) in the land hereinafter described, as the same is delineated by the plan hereon bordered green, be the several admeasurements, a little more or less, that is to say: All that parcel of land containing ONE HUNDRED AND FIVE ACRES TWENTY-SIX PERCHES AND FIVE-TENTHS OF A PERCH or thereabouts situated in Block XII of the Rangiora Survey District being part of Lot 1 on Deposited Plan No. 8952 Rural Sections 3720 and 5988 and part of Rural Sections 1928 and 2880



*[Signature]*  
Assistant Land Registrar



Scale: 10 chains to an inch

Mortgage 167569 (now discharged) to The Public Trustee at 2.25 p.m. 27/11/1944  
Memoranda of Variation of terms of Mortgage 167569 produced 8/4/1936 at 11.20 a.m. 27/11/1944 at 10.44 a.m. 11/1/1950 at 2.1 p.m. and 9/1/1956 at 2.36 p.m.  
Variation of the terms of Mortgage 167569 produced 15/11/1959 at 9.11 a.m.  
Discharged  
Transmission 516083 to the Public Trustee entered 24/12/1959 at 9.14 a.m.  
Transfer 529204 to the Public Trustee to Nelson Hamilton Ma Farmer of Woodend Farmer produced 20/1/1960 at 2.32 p.m.  
Mortgage 527122 to the Public Trustee produced 27/10/1959 at 1.41 p.m.  
Mortgage 601316 to the Public Trustee produced 23/12/1955 at 1.50 p.m.  
Variation of mortgage 527122 - 23/12/1955 at 2.6 p.m.  
No 733097 together herewith agreed pursuant to Section 5 of the Land Transfer Act 1962 - 19.3.1968 at 2.5 p.m.  
*[Signature]*

OVER

Variation of Postage 527127 - 18/11/1970 at 11.20am.

497/65

Plan 29099 Deposited 15.9.1971.  
Transfer 525140 of the post paid and Paid  
29099 Plan to Frank John  
Evans (Young Pension) - 1/10/1971 at

11.45 am  
11/1/57, 55c. Pd 1 + Pd 2  
11/1/59 - Pd 3.

Cancelled  
Duplicate Destroyed.



## **Appendix B – LLUR Statement**

# Property Statement from the Listed Land Use Register

Visit [ecan.govt.nz/HAIL](http://ecan.govt.nz/HAIL) for more information or contact Customer Services at [ecan.govt.nz/contact/](http://ecan.govt.nz/contact/) and quote ENQ357420

Date generated: 20 October 2023  
Land parcels: Lot 1 DP 29099



The information presented in this map is specific to the area within a 100m radius of property you have selected. Information on properties outside the search radius may not be shown on this map, even if the property is visible.

## Sites at a glance

 Sites within enquiry area

Site number	Name	Location	HAIL activity(s)	Category
-------------	------	----------	------------------	----------

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

 Nearby sites

Site number	Name	Location	HAIL activity(s)	Category
2689	Woodend Rubbish Pit	162 Gladstone Road, Woodend	G3 - Landfill sites;	Not Investigated
169883	128 Gladstone Road, Woodend	128 Gladstone Road, Woodend	A10 - Persistent pesticide bulk storage or use;	Not Investigated
172099	129 Gladstone Road, Woodend	129 Gladstone Road, Woodend	A10 - Persistent pesticide bulk storage or use;	Not Investigated

Please note that the above table represents a summary of sites and HAILS intersecting the area of enquiry within a 100m buffer.

## More detail about the sites

**Site 2689: Woodend Rubbish Pit** (Within 100m of enquiry area.)

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

Location: 162 Gladstone Road, Woodend  
 Legal description(s): Pt RS 3722

HAIL activity(s):	Period from	Period to	HAIL activity
	?	?	Landfill sites

**Notes:**

- 20 Feb 2006** Former Borough pit filled with rubbish and fill material. A site visit in 1995 reported that the site has been covered with clean fill with scrub established over the site. Exposed rubbish and ponding water were noted during the visit. A motorcycle/bike/horse track has been constructed on the site.
- 5 May 2008** Based on the anecdotal knowledge reported by the site's owner, the pit was predominantly filled with hardfill material.

**Investigations:**

**INV 12279** \*\*\* Notification of contaminated site investigation received - MWH, 19/7/2012 \*\*\*  
 Montgomery Watson Harza - Notice of Site Investigation  
 24 Jul 2012

**Summary of investigation(s):**

Report(s) have not yet been audited.

**Site 169883: 128 Gladstone Road, Woodend** (Within 100m of enquiry area.)

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

Location: 128 Gladstone Road, Woodend  
 Legal description(s): Lot 2 DP 342658

HAIL activity(s):	Period from	Period to	HAIL activity
	Unknown	Present	Persistent pesticide bulk storage or use including sports turfs, market gardens, orchards, glass houses or spray sheds

**Notes:**

- 14 Dec 2016** This record was created as part of the Waimakariri District Council 2016 HAIL identification project.
- 7 Jul 2017** Area defined from Unknown to Present aerial photographs. A10 - Horticultural activities, a poultry farm or sports turf were noted in aerial photographs reviewed.

**Investigations:**

There are no investigations associated with this site.

**Site 172099: 129 Gladstone Road, Woodend** (Within 100m of enquiry area.)

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

Location: 129 Gladstone Road, Woodend  
 Legal description(s): Lot 1 DP 3545

HAIL activity(s):	Period from	Period to	HAIL activity
	1973	1994	Persistent pesticide bulk storage or use including sports turfs, market gardens, orchards, glass houses or spray sheds

**Notes:**

14 Dec 2016

This record was created as part of the Waimakariri District Council 2016 HAIL identification project.

21 Aug 2017

Area defined from 1973 to 1994 aerial photographs. A10 - Persistent pesticide bulk storage or use was noted in aerial photographs reviewed.



### Investigations:

There are no investigations associated with this site.



### Nearby investigations of interest

There are no investigations associated with the area of enquiry.

## Disclaimer

The enclosed information is derived from Environment Canterbury's Listed Land Use Register and is made available to you under the Local Government Official Information and Meetings Act 1987.

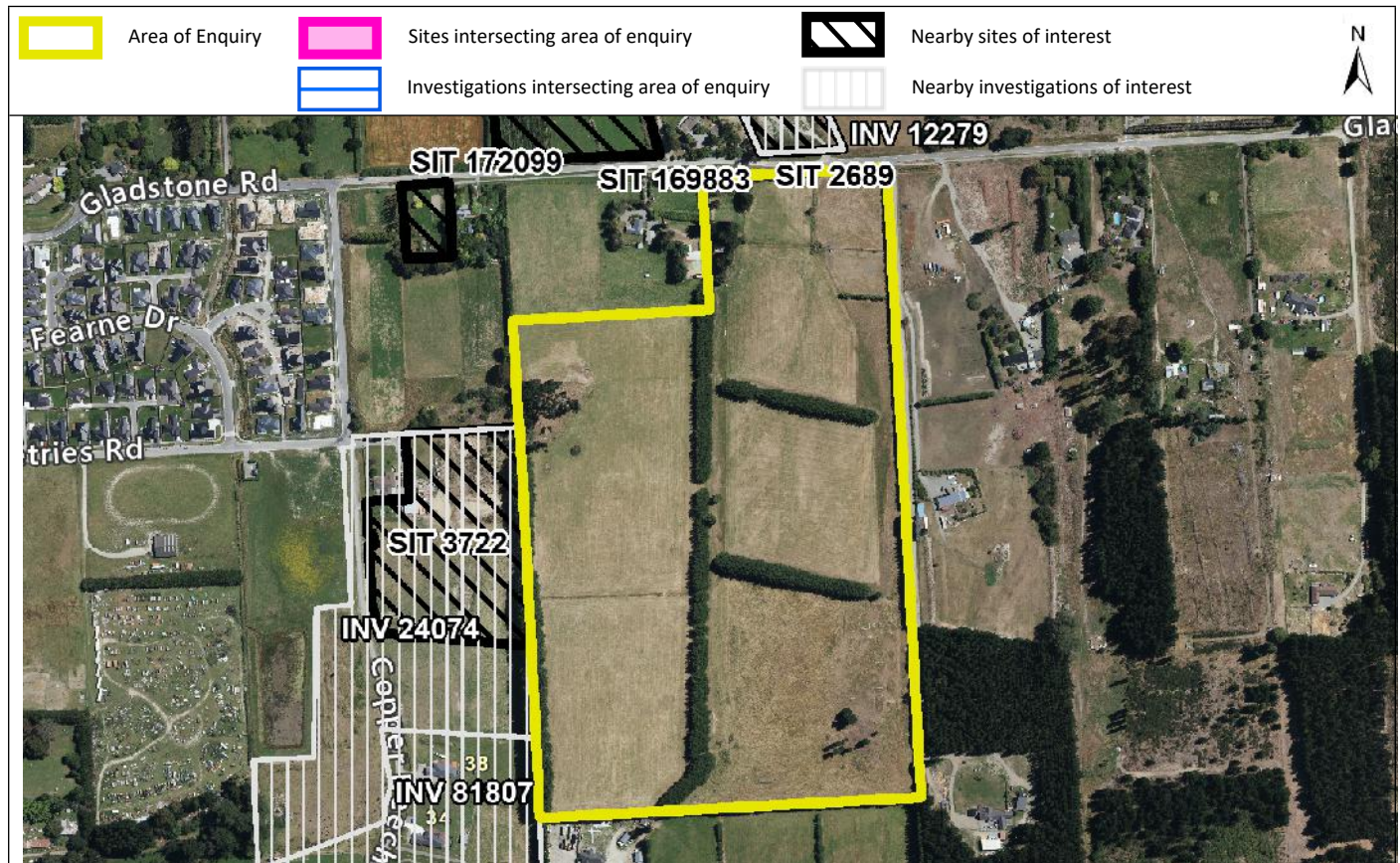
The information contained in this report reflects the current records held by Environment Canterbury regarding the activities undertaken on the site, its possible contamination and based on that information, the categorisation of the site. Environment Canterbury has not verified the accuracy or completeness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

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

# Property Statement from the Listed Land Use Register

Visit [ecan.govt.nz/HAIL](http://ecan.govt.nz/HAIL) for more information or contact Customer Services at [ecan.govt.nz/contact/](http://ecan.govt.nz/contact/) and quote ENQ357421

**Date generated:** 20 October 2023  
**Land parcels:** Lot 2 DP 29099



The information presented in this map is specific to the area within a 100m radius of property you have selected. Information on properties outside the search radius may not be shown on this map, even if the property is visible.

## Sites at a glance

 Sites within enquiry area

Site number	Name	Location	HAIL activity(s)	Category
-------------	------	----------	------------------	----------

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

 Nearby sites

Site number	Name	Location	HAIL activity(s)	Category
2689	Woodend Rubbish Pit	162 Gladstone Road, Woodend	G3 - Landfill sites;	Not Investigated
3722	83 Petries Road	83 Petries Road, Woodend	G4 - Scrap yards;	Partially Investigated
169883	128 Gladstone Road, Woodend	128 Gladstone Road, Woodend	A10 - Persistent pesticide bulk storage or use;	Not Investigated
172099	129 Gladstone Road, Woodend	129 Gladstone Road, Woodend	A10 - Persistent pesticide bulk storage or use;	Not Investigated

Please note that the above table represents a summary of sites and HAILS intersecting the area of enquiry within a 100m buffer.

## More detail about the sites

**Site 2689: Woodend Rubbish Pit** (Within 100m of enquiry area.)

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

Location: 162 Gladstone Road, Woodend  
 Legal description(s): Pt RS 3722

HAIL activity(s):	Period from	Period to	HAIL activity
	?	?	Landfill sites

**Notes:**

- 20 Feb 2006** Former Borough pit filled with rubbish and fill material. A site visit in 1995 reported that the site has been covered with clean fill with scrub established over the site. Exposed rubbish and ponding water were noted during the visit. A motorcycle/bike/horse track has been constructed on the site.
- 5 May 2008** Based on the anecdotal knowledge reported by the site's owner, the pit was predominantly filled with hardfill material.

**Investigations:**

**INV 12279** \*\*\* Notification of contaminated site investigation received - MWH, 19/7/2012 \*\*\*  
 Montgomery Watson Harza - Notice of Site Investigation  
 24 Jul 2012

**Summary of investigation(s):**

Report(s) have not yet been audited.

**Site 3722: 83 Petries Road** (Within 100m of enquiry area.)

Category: Partially Investigated  
 Definition: Verified HAIL has been partially investigated.

Location: 83 Petries Road, Woodend  
 Legal description(s): Lot 2 DP 389407,Pt RS 367

HAIL activity(s):	Period from	Period to	HAIL activity
	?	Current	Scrap yards including automotive dismantling, wrecking or scrap metal yards

**Notes:**

- 28 Jul 2009** This site has been identified from the initial Waimakariri District HAIL site location project. On this site is a scrap yard. There is a concrete pad upon which the scrapping takes place. All oil is drained into 44 gallon drums in the workshop and removed shortly after. Any remaining fuel in fuel tanks is drained and used.

**Investigations:**

**INV 24074** **Soil Contamination Risk - Stage 1 Preliminary Site Investigation Report and Stage 2 Detailed Site Investigation Report - 83 Petries Road, Woodend**  
 Davie Lovell Smith - Detailed Site Investigation  
 1 Jul 2014

**Summary of investigation(s):**

Site history: The report assessed the history of the site, including a review of regional and district council records, site ownership, interviews with local property owners and a site walkover. The site was reportedly used for grazing dairy cows in the past, and since approximately 2000 it was used as a scrap yard. A Review of recent aerial images show the scrap yard activity has been moved to an adjacent paddock to the west.

The report notes that the site was difficult to traverse because of the number of vehicles present. Wrecking of vehicles reportedly takes place on a concrete pad, and most vehicles are stored on the property without the gearbox and engine. The site walkover identified storage of waste oil and kerosene, storage of tyres, and an area where material had been burned.



Investigation objective: The detailed site investigation collected soil samples on a rough grid pattern across the site. Targeted samples were also collected from the burned area, near the kerosene and waste oil drums, near the wrecking slab, and around buildings. The soil samples were analysed for contaminants relevant to the location where they were collected.

Results: The soil sampling results indicated that, although there were a number of locations where soil contaminants exceed recorded background concentrations, contamination exceeding human health or environmental protection levels was limited to two discrete areas. Zinc and lead close to buildings near the western boundary of the site exceeded both the soil contaminant standard for protection of health and the ANZECC sediment quality guidelines for protection of aquatic ecosystems. The report compared levels of metals to a combination of the standard residential and rural/lifestyle-residential soil contaminant standards. Given that the proposed use is rural/lifestyle-residential the more conservative scenario should have been used. However comparison to the lower standards does not result in any more exceedances than were identified in the report, with the exception of cadmium in one sample.

Total petroleum hydrocarbons (TPH) in the C10-C14 band exceeded the soil acceptance criteria for residential use near waste oil drums on the western boundary. This hydrocarbon contamination has not been delineated laterally, but contained TPH in excess of 20,000 mg/kg to at least 0.5 m below ground level.

Conclusions: The report concludes that contaminated soil near the waste oil drums will require remediation, and that other visibly oil stained areas will likely be removed for aesthetic reasons. It also concludes that the metals contaminated soil is a risk to human health. With regards to environmental risk, the report concludes that the risk is low because of the small areas of contamination identified. The report also notes that the site's use as a scrapyards is ongoing and therefore the contamination status may change as a result of the ongoing operation.

Category: The areas where contaminants of concern have exceeded their respective residential soil contaminant standards are contaminated for residential land use. If information is received in future that shows these areas have been remediated, the category will be updated to reflect it. The remainder of the area is 'partially investigated' as it continued to function as a scrap yard.

### Site 169883: 128 Gladstone Road, Woodend (Within 100m of enquiry area.)

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

Location: 128 Gladstone Road, Woodend  
Legal description(s): Lot 2 DP 342658

HAIL activity(s):	Period from	Period to	HAIL activity
	Unknown	Present	Persistent pesticide bulk storage or use including sports turfs, market gardens, orchards, glass houses or spray sheds

#### Notes:

- 14 Dec 2016** This record was created as part of the Waimakariri District Council 2016 HAIL identification project.
- 7 Jul 2017** Area defined from Unknown to Present aerial photographs. A10 - Horticultural activities, a poultry farm or sports turf were noted in aerial photographs reviewed.

#### Investigations:

There are no investigations associated with this site.

### Site 172099: 129 Gladstone Road, Woodend (Within 100m of enquiry area.)

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

Location: 129 Gladstone Road, Woodend  
Legal description(s): Lot 1 DP 3545

HAIL activity(s):	Period from	Period to	HAIL activity
	1973	1994	Persistent pesticide bulk storage or use including sports turfs, market gardens, orchards, glass houses or spray sheds

#### Notes:

- 14 Dec 2016** This record was created as part of the Waimakariri District Council 2016 HAIL identification project.
- 21 Aug 2017** Area defined from 1973 to 1994 aerial photographs. A10 - Persistent pesticide bulk storage or use was noted in aerial photographs reviewed.



## Investigations:

There are no investigations associated with this site.



## Nearby investigations of interest

**INV 81807**

**Soil Contamination Risk - Stage 1 Preliminary Site Investigation Report - 231, 244, 273 and 285**

**Woodend Beach Road, Woodend**

Davie Lovell Smith - Preliminary Site Investigation

1 May 2014

### Summary of investigation(s):

A preliminary site investigation reviewed historical aerial photographs, regional and district council records and land titles to identify Hazardous Activities and Industries List (HAIL) sites. A 1,500 metre square area of peonies was identified at Lot 1 DP 72955, consented in 1996 and is not thought to have used persistent pesticides based on the era of development. No other HAIL activities were identified in the report.

Environment Canterbury understands that copper based sprays are commonly used to control bacterial blight on peonies. Fungicides for grey mould sprays are not likely to be persistent from this time period. Aerial photographs at Lot 2 DP 72955 indicate a shooting range at Lot 2 DP 72955 from 1994 to 2013 that was subsequently found to never have been used. The clay shooting trap house was set up but the owner could not afford the trap. The trap house was used to house lambs. No HAIL sites have been identified on Lot 3 DP 72955 or Lot 4 DP 80494.

## Disclaimer

The enclosed information is derived from Environment Canterbury's Listed Land Use Register and is made available to you under the Local Government Official Information and Meetings Act 1987.

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

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## **Appendix C – Historical Aerial Photographs**

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Scale: 1:2,000 @A3

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0 0.04 0.08 0.12 0.16  
Kilometres

Scale: 1:2,000 @A3

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Scale: 1:2,000 @A3

Map Created by Canterbury Maps on 24/10/2023 at 3:55 PM





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0 0.04 0.08 0.12 0.16 Kilometres

Scale: 1:2,000 @A3

Map Created by Canterbury Maps on 24/10/2023 at 3:58 PM



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Scale: 1:2,000 @A3

Map Created by Canterbury Maps on 24/10/2023 at 4:04 PM



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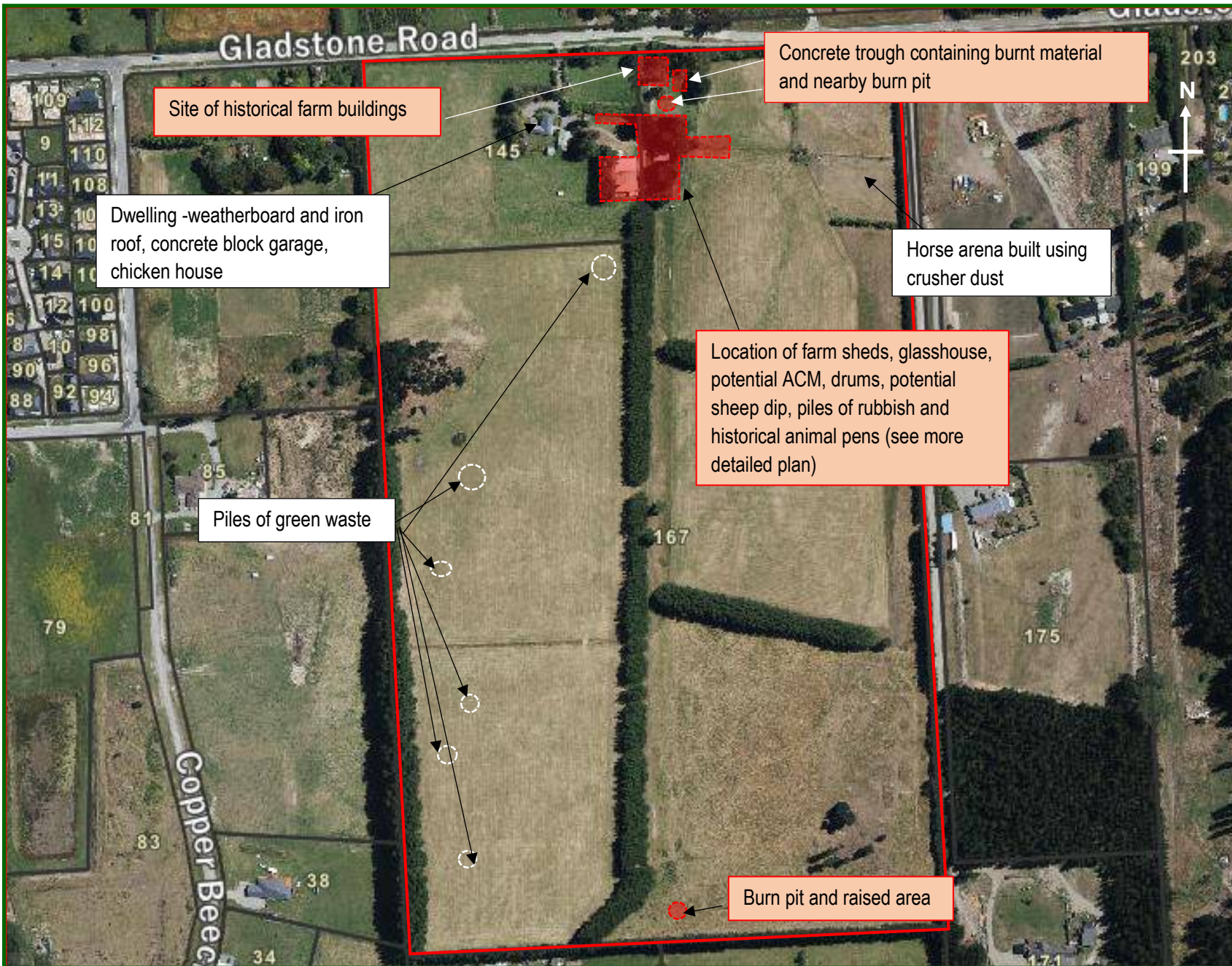


Scale: 1:2,000 @A3

Map Created by Canterbury Maps on 24/10/2023 at 4:06 PM



## **Appendix D – Site Inspection Plans**



**LEGEND**

- text Potential HAIL activity / source of contamination
- text Description of structures/areas not considered to pose a risk
- Approx. extent of risk area.
- Area not currently posing a risk

Graphic scale is approximate only



Date: 20 October 2022

Drawing No: 810/1

**145 & 167 Gladstone Road, Woodend**  
**Site Inspection and Risk Area Plan**

**Notes:**

- 1 This plan has been prepared for soil contamination risk assessment purposes only. No liability is accepted if the plan is used for any other purposes.
- 2 Any measurements taken from this plan which are not dimensioned on the electronic copy are at the risk of the user.
- 3 Soil sample locations are approximate only

**LEGEND**

- text Potential HAIL activity / source of contamination
- text Description of structures/areas not considered to pose a risk
- Approx. extent of risk area.
- Area not currently posing a risk



Graphic scale is approximate only



**145 & 167 Gladstone Road, Woodend**  
**Detailed Site Inspection and Risk Area Plan**

Date: 20 October 2022

Drawing No: 810/2

**Notes:**

- 1 This plan has been prepared for soil contamination risk assessment purposes only. No liability is accepted if the plan is used for any other purposes.
- 2 Any measurements taken from this plan which are not dimensioned on the electronic copy are at the risk of the user.
- 3 Soil sample locations are approximate only