

**REPORT PREPARED FOR:
FLETCHER DEVELOPMENT LIMITED**

**PRELIMINARY SITE INVESTIGATION
SILVERDALE WEST PRIVATE PLAN CHANGE
DAIRY FLAT**

**Prepared by:
Groundwater and Environmental Services
PO Box 190
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31 July 2023**

EXECUTIVE SUMMARY

This PSI has been undertaken to determine the potential for contamination across and beneath the ground within the Silverdale West Private Plan Change area due to past or present activities on the properties or on surrounding land.

Auckland Council's site contamination enquiry response noted the occurrence of actual or potential HAIL activities at 1738, 1744, 1748 and 1748a Dairy Flat Highway within the currently proposed plan change area. There was no recorded evidence of actual contamination at the properties within the plan change area and no contamination-related consents or pollution incidents were noted for the subject properties. Council noted the presence of a closed landfill on 193 Wilks Road however this was located outside of the proposed plan change area. There were no other identified items in the surrounding area that would be likely to have resulted in contamination of the subject properties.

The review of the council property files identified the potential for contamination at most of the subject properties. Key observations from the files include:

- None of the property files contained records of actual contamination;
- The use of asbestos-containing materials was indicated on all of the properties except Sec 6 SO 308591, 1738, 1748 and 1748a Dairy Flat Highway;
- Dairy waste disposal occurred on 1636 Dairy Flat Highway; and
- The presence of fill was noted on 1738, 1744, 1748 and 1748a Dairy Flat Highway.

In general, the aerial photographs largely confirmed the available site history and indicated that the properties within the plan change area had historically been in pasture and used for stock grazing and dairy farming. Some of the properties have more recently been redeveloped for lifestyle residential use and/or industrial uses. The aerial photographs did not provide any visible confirmation of actual contamination at the subject properties however potentially contaminating activities were identified on many of them. The activities included:

- The placing of fill in parts of 1636, 1732, 1738, 1744, 1748 and 1748a Dairy Flat Highway;
- The presence of dairy wastewater treatment ponds on 1636 Dairy Flat Highway; and
- The presence of earlier dwellings and other buildings on properties that could potentially have asbestos-containing materials and/or been painted using lead-based paints.

There were no activities identified on surrounding properties that were considered likely to be causing contamination of the subject properties.

Walkover inspections of the accessible properties identified multiple locations of actual or potential contamination. Identified issues included:

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- 1636 Dairy Flat Highway. Potential chemical and asbestos contamination within and around former farm sheds, around stock yards and loading ramps, possible contamination in fill areas and possible asbestos and lead contamination around the dwelling and garage.
- 1638 Dairy Flat Highway. Possible lead paint and asbestos use on the dwelling.
- 1646 Dairy Flat Highway. Possible lead paint and asbestos use on the dwelling.
- 1700 Dairy Flat Highway. Possible asbestos use on the dwelling.
- 1732 Dairy Flat Highway. Areas of uncertified fill (some including waste or demolition material), rubbish piles, rubbish areas, possible lead paint and/or asbestos contamination around older buildings, discharges to ground from machinery/vehicle storage, repair, sandblasting and painting activities.
- Sec 6 SO 308591. Potential contaminant discharges to stormwater ponds.
- 1744 Dairy Flat Highway. Possible lead paint and asbestos contamination around the dwelling and possible leaks or spills to ground from workshop activities.
- 1748 Dairy Flat Highway. Possible minor leaks of hydrocarbons to ground.
- 1748a Dairy Flat Highway. Contamination from rubbish burning, minor hydrocarbon contamination from compressor operation and minor leaks of oil from machinery stored on site.

HAIL activities are confirmed, likely and/or possible for the majority of properties within the plan change area.

The preliminary conceptual site model identifies the potential for contamination within specific areas of many of the properties where this PSI has identified likely HAIL activities.

The preliminary conceptual site model for the plan change area identified the potential for contamination within particular areas of the subject properties where this PSI has identified HAIL activities. Intrusive investigation of potential contamination would be required for these areas if they were to undergo subdivision, a change of land use or any earthworks associated with the redevelopment.

Outside of areas of identified HAIL activities, the subject properties have incomplete source, pathway and receptor linkages and no intrusive investigation of potential contamination is required for areas where there were no HAIL activities.

The information gathered for this PSI indicates that further investigations are likely to be required for specific parts of most of the properties within the private plan change area and that consents under the NES and/or the contaminated land provisions of the Auckland Unitary Plan may be required prior to any redevelopment commencing.

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None of the identified environmental issues would provide a barrier to the proposed plan change. The issues would be able to be dealt with at the subdivision or earthworks consent stages following the processes set out in the NES and the contaminated land provisions of the Auckland Unitary Plan.

As with any assessment of this nature, there is always the possibility that additional items not visible during the investigation may be revealed during more detailed investigations or during subsequent redevelopment earthworks. Any such items should be evaluated by a suitably qualified environmental consultant in accordance with the requirements of Auckland Council.

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LIMITATIONS

No liability is assumed for misrepresentation of data or for items not visible, accessible or present at the time of the site investigations conducted by Groundwater and Environmental Services that may affect the validity and/or accuracy of the interpretation of environmental data.

Interpretations and conclusions presented herein are based on data presented in this report, information from others and experience on similar projects. The available data does not preclude the presence of materials at other locations at the site, which presently or in the future may be considered hazardous. Services in respect of this investigation have been performed in accordance with professional standards for investigations of contamination assessment. No guarantees are either expressed or implied.

This document and the information contained herein have been prepared for the use of Fletcher Development Limited in relation to the redevelopment of the subject site and should not be used or relied upon by any other person or entity for any other project, with the exception that the relevant territorial authority can rely on it for the purpose of processing those consent applications for which this report has been prepared. Any reliance on this report by any other parties shall be at such party's sole risk.

This document has been prepared by a suitably qualified and experienced practitioner as required by the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (2011).

Report prepared: 6 December 2022

Report revised: 31 July 2023

Report prepared by:



Andrew MacDonald, MSc(Hons), Principal

1 Introduction

Groundwater and Environmental Services (GES) was engaged to carry out a preliminary site investigation (PSI) for the bulk of the properties within Stage 1 of the Silverdale West Private Plan Change area. This work has been undertaken on behalf of Fletcher Development Limited to support future commercial/industrial redevelopment.

The investigation has been undertaken in accordance with the requirements of the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 and the relevant Ministry for the Environment site investigation¹ and reporting guidelines². It also addresses the requirements of the Auckland Unitary Plan in relation to potentially contaminated sites.

This report provides information on historic or present potentially contaminating activities within the proposed private plan change area.

1.1 Scope

This report details the results of a background investigation and walkover inspection carried out to determine the likelihood of there being contamination on and beneath the ground within the subject properties due to current or past activities.

Significant activities undertaken as part of this investigation included:

- Collection and review of background information about the individual properties including the Auckland Council property files and site contamination database information;
- Review of historic aerial photographs covering the area from 1940 onwards;
- A walkover inspection of the properties to check for indications of potential contamination; and
- Reporting the investigation results and providing recommendations.

1.2 Site Identification

The Silverdale West Private Plan Change area is located between the northern motorway (SH1) and Dairy Flat Highway, immediately south of the Silverdale Interchange. The currently proposed private plan change area consists of 13 separate titles.

The property at 1660 Dairy Flat Highway is within the plan change area but is not included in this PSI as there are existing environmental reports for that property^{3,4,5}.

¹ Ministry for the Environment (June 2021). Contaminated Land Management Guidelines No. 5: Site Investigation and Analysis of Soils.

² Ministry for the Environment (June 2021). Contaminated Land Management Guidelines No. 1: Reporting on Contaminated Sites in New Zealand.

³ Groundwater & Environmental Services (4 August 2020). Preliminary Site Investigation, 1660 Dairy Flat Highway, Dairy Flat. Report prepared for Fletcher Development Limited.

⁴ Groundwater & Environmental Services (30 June 2021). Detailed Site Investigation, 1660 Dairy Flat Highway, Dairy Flat. Report prepared for Fletcher Development Limited.

⁵ Groundwater & Environmental Services (30 July 2021). Site Management & Remedial Action Plan, 1660 Dairy Flat Highway, Dairy Flat. Report prepared for Fletcher Development Limited.

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Properties at 1638 and 1646 Dairy Flat Highway were also not formally included in this investigation as their respective owners have elected not to be part of the plan change process at this time.

Much of the private plan change area is currently rural residential or rural in nature and predominantly in pasture. Existing commercial/industrial activities are however located on 1732, 1738, 1744, 1748 and 1748a Dairy Flat Highway.

The land within the plan change area generally slopes down to the east or south-east from Dairy Flat Highway towards the stream that runs from south to north through the area. There is a relatively flat floodplain around parts of the stream margins. East of the stream, the ground generally rises up towards the Northern Motorway.

The location and layout of properties in the plan change area are shown on Figure 1.

The details for the properties included in this investigation are provided on Table 1.

1.3 Nature of Proposed Redevelopment

A commercial/industrial subdivision is currently proposed for the private plan change area, with the creation of a range of different sized lots, roadways, and associated amenities. Activities to be conducted as part of the proposed subdivision and redevelopment are likely to include:

- Stripping and stockpiling of site topsoil;
- Cut and fill earthworks to provide appropriate levels and building platforms. This may include creation of significant retaining structures in some areas;
- Earthworks for construction of roads, access driveways, paths and associated paved areas;
- Earthworks for the installation of public and private underground services; and
- Minor earthworks for landscaping.

1.4 Reason for Investigation

This investigation has been conducted to assess the nature and extent of historic land uses and any resulting potential for contamination across and beneath the properties making up the private plan change area that could potentially pose a risk to human health or the environment during redevelopment earthworks and during future commercial/industrial land use.

1.5 Geology

The Auckland geological map⁶ indicates that the geology of the area is likely to consist of Mahurangi Limestone of the Motatau Complex (Northland Allochthon) in the west and more recent Tauranga Group Alluvium in the east. The Tauranga Group Alluvium is described as including sand, silt, mud, and clay soils, interbedded with pumice, gravel and peat.

More recent alluvial deposits may also be present in stream margins.

⁶ Edbrooke, SW (2001). Geology of the Auckland Area. Institute of Geological and Nuclear Sciences 1:250,000 Geological Map 3.

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Table 1 Silverdale West Private Plan Change Area Property Details

Address	Legal Description	Area (hectares)	Title Number	Owner
1636 Dairy Flat Highway	Lot 1 DP 208687	59.2450	NA136D/722	Wilks Road 2014 Limited
<i>1638 Dairy Flat Highway</i>	<i>Lot 1 DP 46158</i>	<i>0.3703</i>	<i>NA1698/16</i>	<i>Robert & Rong Woolley</i>
<i>1646 Dairy Flat Highway</i>	<i>Lot 1 DP 74321</i>	<i>0.7802</i>	<i>NA30B/736</i>	<i>Geok Mui Law & Huiping Sun</i>
<i>1660 Dairy Flat Highway</i>	<i>Lot 2 DP 74321</i>	<i>20.2365</i>	<i>NA30B/737</i>	<i>Fletcher Development Ltd</i>
1686 Dairy Flat Highway	Lot 1 DP 69561	0.7809	NA25C/412	Beth & Stephen Wagstaff
1700 Dairy Flat Highway	Pt Lot 1 DP 68886	2.6787	NA25A/502	Elaine Butler-Stoney
1732 Dairy Flat Highway	Pt Lot 2 DP 68886	16.3822	NA25A/503	YJS Holding Ltd
Sec 6 SO 308591	Sec 6 SO 308591	0.9990	65593 Severance Vested in Crown	Papanui Station House Ltd
Dairy Flat Highway	Lot 2 DP 480626	0.5345	672037 Severance Vested in Crown	DP Boocock No. 2 Trustee Ltd
1738 Dairy Flat Highway	Lot 1 DP 480626	0.5481	672036 Severance Vested in Crown	Mammoth Ventures Limited
1744 Dairy Flat Highway	Sec 9 SO 308591 Sec 10 SO 308591	2.1924	65588	DP Boocock No. 2 Trustee Ltd
1748 Dairy Flat Highway	Pt Allot 210 Psh Of Okura SO 18072 & Sec 19 SO 308591	2.7781	111842	DP Boocock No. 2 Trustee Ltd
1748A Dairy Flat Highway	Sec 1 SO 308831	3.4277	72678	Evan Kemp & Tracey Soffe

Note: Properties in italics are within the plan change area but are not included in this investigation.

1.6 Hydrology & Hydrogeology

The most significant potentially sensitive receiving environments for any contamination on the properties within the plan change area would be surface water and underlying groundwater.

Surface water across the plan change area drains towards a stream (John's Creek) that runs from south to north through the area. John's Creek discharges to Weiti Stream, which becomes Weiti River before discharging through Karepiro Bay to Waitemata Harbour.

Groundwater within the area is also expected to flow locally towards John's Creek.

1.7 Previous Environmental Reports

As noted above, there are existing environmental investigation reports for 1660 Dairy Flat Highway. These include primary and detailed site investigations and a site management and remedial action plan.

No previous environmental investigations are known to exist for the other properties within the private plan change area.

1.8 Background

The properties within the proposed plan change area have historically been rural in nature and were originally used for dry stock and dairy farming. The properties were originally part of larger farms that in some cases extended to the east of the current location of the Northern Motorway. The original properties were subdivided into smaller blocks and most of the properties are now lifestyle residential. The larger blocks at 1636 and 1660 Dairy Flat Highway have remained rural. Commercial/industrial activities predominate at 1738, 1744, 1748 and 1748a Dairy Flat Highway. Parts of 1732 Dairy Flat Highway also support industrial activities.

Small scale commercial horticultural activity has been carried out on some of the subject properties including 1636 Dairy Flat Highway.

The bulk of the plan change area is in pasture. A number of man-made ponds are also located across the area.

2 Site History

The available site history has been gathered from a number of sources and is set out in the following sections.

2.1 Review of Auckland Council Environmental databases

A request for available site contamination information relating to the private plan change area was made to Auckland Council as part of this investigation.

The site contamination enquiry response was based on information available to the Contamination, Air and Noise Team in the Resource Consent Department. A copy of the Auckland Council response is attached to this report as Appendix A.

The following additional properties were included on the request and on the response from council however they have since been excluded from the currently proposed plan change area:

- 1570 Dairy Flat Highway
- 1584 Dairy Flat Highway
- 1596 Dairy Flat Highway
- 1602 Dairy Flat Highway
- 1602a Dairy Flat Highway

2.1.1 HAIL Information

The Ministry for the Environment's Hazardous Activities and Industries List (HAIL) consists of activities and industries that are considered likely to cause land contamination as a result of hazardous substance use, storage, and/or disposal. Council's records suggested that the plan change area may have been subject to the following HAIL activities:

- HAIL Item (A.10) - Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds.
- HAIL Item (D.5) - Engineering workshops with metal fabrication.
- HAIL Item (F.4) - Motor vehicle workshops.
- HAIL Item (F.5) - Port activities including dry docks or marine vessel maintenance facilities.
- HAIL Item (F.8) - Transport depots or yards including areas used for refuelling or the bulk storage of hazardous substances.

Specifically, Council records indicated:

- 1738, 1744 and 1748 Dairy Flat Highway were utilised for depot activities with workshops on site.
- 1748a Dairy Flat Highway has been utilised for boat building, brick making, steel fabrication and depot activities.
- Lot 2 DP 480626 Dairy Flat Highway was utilised for horticultural activities in 2004.

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193 Wilks Road (outside of the plan change area) was used for landfilling activities within an old quarry pit on site, starting in the 1960s. The activities were legalised in 1989 when consent was granted. The landfill is known to contain buildings materials, car bodies, tyres, and organic waste. A further consent was granted in 1995 for further filling along an access road on site. The filling locations were located well outside the private plan change area and are unlikely to have resulted in any significant contamination within the plan change area. Plans showing the location of the filling are included with the site contamination enquiry response information in Appendix A.

There was no contaminant information within Council records for 1636, 1638, 1646, 1686, 1700 or 1732 Dairy Flat Highway or for Sec 6 SO 308591.

It was noted that, owing to the use of land for farming, the potential for spray race activities, wastewater treatment ponds, or burn piles should be considered on the properties.

It was further noted that, due to the age of buildings on some of the properties, the potential use of asbestos and/or lead paint may need to be considered.

2.1.2 Consent and Incidents Information

The Council database was searched for records of relevant HAIL activities, consents or incidents within approximately 200 metres of the plan change area. The hail activities are set out in the following table.

Table 2 HAIL Activities

Address	HAIL Description	Lodged
193 Wilks Road	Waste disposal to land (excluding where biosolids have been used as soil conditioners)	14/06/2010
1602A Dairy Flat Highway	Chemical manufacture, formulation or bulk storage	26/08/2016
1738 Dairy Flat Highway	Transport depots or yards including areas used for refuelling or the bulk storage of hazardous substances	21/09/2022
1738 Dairy Flat Highway	Motor vehicle workshops	21/09/2022
1748A Dairy Flat Highway	Transport depots or yards including areas used for refuelling or the bulk storage of hazardous substances	21/09/2022
1748 Dairy Flat Highway	Transport depots or yards including areas used for refuelling or the bulk storage of hazardous substances	21/09/2022
1744 Dairy Flat Highway	Transport depots or yards including areas used for refuelling or the bulk storage of hazardous substances	21/09/2022
1744 Dairy Flat Highway	Motor vehicle workshops	21/09/2022
1748A Dairy Flat Highway	Engineering workshops with metal fabrication	21/09/2022
1748 Dairy Flat Highway	Motor vehicle workshops	21/09/2022
1748A Dairy Flat Highway	Port activities including dry docks or marine vessel maintenance facilities	21/09/2022

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Relevant consents identified by Council are provided in **Table 3**.

Table 3 Consents

Status	Granted	Activity Description	Site Name
Expired	4-Dec-11	To authorise discharge of wastewater from the cleaning of a culvert associated with maintenance of motorway/highway.	NZTA -John's Creek - SH1
Issued	11-Jul-11	To divert and discharge stormwater from a proposed development to create a recreational vehicle sales yard which will provide parking for 28 recreational vehicles as well as 5 customer and 4 staff carparks.	1738 Dairy Flat Highway
Issued	5-Sep-15	Earthworks associated with the establishment and operation of a rural services depot.	1744 & 1748 Dairy Flat Highway
Issued	5-Sep-15	Stormwater Discharge associated with the establishment and operation of a rural services depot.	1744 and 1748 Dairy Flat Highway
Surrendered	9-Jun-00	To authorise the discharge of farm dairy wash water in accordance with Section 15(1)(a) of the Resource Management Act 1991.	1636/38 Dairy Flat Highway

No other consents or pollution incidents were recorded for the plan change area and there are no identified items in the surrounding area that would be likely to have resulted in contamination of the properties within the area.

No pollution incidents were recorded that would be likely to have resulted in contamination within the plan change area.

2.2 Review of Auckland Council Property Files

Electronic copies of the Auckland Council property files for the properties within the plan change area were obtained from Auckland Council for this investigation.

As 1638 Dairy Flat Highway was originally part of 1636 Dairy Flat Highway, some of the consents contained in the property file for 1638 relate to activities carried out on 1636.

More details from the property files are included along with copies of relevant plans in Appendix B.

Implications for potential contamination inferred from the property file information are discussed for each property in the following paragraphs.

1636 Dairy Flat Highway

The property file for 1636 Dairy Flat Highway indicates a long history of dairy farming, with consent for alterations to an existing cowshed in 1956. A piggery was constructed on site in 1962. Existing dairy wastewater ponds were enlarged in 2000 and it was noted that discharge from the ponds flows to John's Creek.

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Consents for the site note the construction of three barns between 1961 and 1965.

A dwelling constructed on site in 1977 specified 6 mm thick asbestos-cement exterior cladding.

1638 Dairy Flat Highway

This property was formerly associated with 1636 Dairy Flat Highway. Consent 24010 contained in the property file was a discharge consent for dairy wash water on the larger property. The consent was surrendered in 2005 as the farm had been sold and no further milking was being conducted.

A dwelling constructed on the property in 1959 is noted as having asbestos cement exterior cladding. A second-hand building was relocated to the property in 1974.

1646 Dairy Flat Highway

Consents for 1646 Dairy Flat Highway indicate that it was primarily rural residential in nature. A second-hand dwelling was moved onto the property in 1959 and a new garage was erected in 1979. A sheep shelter was erected on site in 2005. The main potential issues at the site are likely to be related to use of asbestos cement materials in the dwelling and the use of lead-based paints on the exterior.

1686 Dairy Flat Highway

There appears to have been a dwelling on 1686 Dairy Flat Highway prior to 1964 when consent was given for erection of a carport. The property file does not contain consents for the original dwelling. A second-hand dwelling was relocated to the property in 2006 and links to the original dwelling.

A site plan included in a consent application for additions to the original dwelling shows an existing garage on the road frontage north of the dwelling.

The main potential issues at the site are likely to be related to use of asbestos cement materials in the dwelling and original garage and the use of lead-based paints on the exterior of the older buildings.

1700 Dairy Flat Highway

The only relevant information relating to 1700 Dairy Flat Highway is a 1977 consent for construction of the dwelling. Site plans associated with the consent do not show any other buildings on the property.

1732 Dairy Flat Highway

The property file for 1732 Dairy Flat Highway contains information relating to a subdivision consent application to create an additional house lot in 1974, and extensions to the existing dwelling in 1984. A LIM obtained for the property in 1996 as part of the sale process did not record the presence of any potential contaminants on site.

The main potential issues arising from the property file information relate to potential use of asbestos cement materials in the dwelling, and the use of lead-based paints on the exterior.

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1738 Dairy Flat Highway

Property file information notes that significant filling had been carried out across this property prior to 2006 with depths of fill between 1.2 and 6.4 m in the north of the property. A fill bund was present parallel to part of the north-west property boundary. Consents were obtained in 2016/2017 for construction of offices and a workshop however it appears that these were never constructed. A portable building was however recorded as being on site in 2020.

Aside from the presence of significant fill on site did not appear to have been any other potentially hazardous activities conducted there.

Sec 6 SO 308591

Auckland Council did not have any property file information for this site.

1744 Dairy Flat Highway

There was a 1985 consent to relocate an existing dwelling and install a septic tank on site.

The most significant items in the file related to consent to establish rural service depots on both 1744 and 1748 Dairy Flat Highway. Associated work included 10,000 m³ of earthworks to create level yard areas and a wetland for stormwater management. The land use consent noted that no hazardous chemicals would be stored on site.

1748 Dairy Flat Highway

There was a 1997 building consent for construction of a garage on this property. There was also a 2016 consent for a relocated dwelling and wastewater treatment system for existing and relocated dwellings. Other file information was the same as that contained in the property file for 1744 Dairy Flat Highway.

1748A Dairy Flat Highway

Council information included with a 2003 application for construction of a detached dwelling and workshop noted that the site was recorded as an earthworks dumpsite with the building sites located within the dumpsite. A geotechnical investigation report for the building consents did not however record the presence of fill at the building sites.

The workshop on site was originally intended for building a large catamaran for personal use however information from 2007 indicated that it had been used for boatbuilding, brickmaking and stainless steel fabricating.

Council noted in 2018 that the site had been extended using concrete based fill, and asphalt road material had been stockpiled on-site. The extension had been set up for an earthmoving machinery depot. A 2020 abatement notice noted that the site had been rented to "Black-And-White Container Hire" and "Ground Structures" for use as depots for their businesses. Retrospective consent for this was granted in 2020.

2.2.1 Summary of Property File Information

The property files identified the potential for contamination at the subject properties as follows:

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- **1636 Dairy Flat Highway** – operation of a piggery, dairy waste treatment and disposal and the use of asbestos-containing materials in buildings.
- **1638 Dairy Flat Highway** – use of asbestos-containing materials in the dwelling.
- **1646 Dairy Flat Highway** – likely use of asbestos-containing materials in buildings.
- **1686 Dairy Flat Highway** – likely use of asbestos-containing materials in buildings.
- **1700 Dairy Flat Highway** – possible use of asbestos-containing materials in the dwelling.
- **1732 Dairy Flat Highway** – possible use of asbestos-containing materials in the dwelling.
- **1738 Dairy Flat Highway** – presence of significant fill on site. This material is likely to have come from the Northern Motorway construction process.
- **Sec 6 SO 308591** - no property file information
- **1744 Dairy Flat Highway** – possible use of asbestos-containing materials in the dwelling. Significant cut and fill earthworks were carried out across the property however the engineered fill appears unlikely to have significant contamination.
- **1748 Dairy Flat Highway** – no significant issues identified in the property file.
- **1748a Dairy Flat Highway** – geotechnical investigations did not find fill that had been indicated on council records. Unauthorised fill on site could potentially contain contamination.

The property files did not contain any records of actual contamination at the properties within the plan change area.

2.3 Review of Aerial Photographs

A review of aerial photographs covering the subject properties and surrounding area was undertaken to determine past land use practices. Available photographs covered the period from 1940 onwards. No earlier photographs were available at the time of the review.

Observations from the aerial photographs that relate to potential contamination are set out for each property in the Table 4 below. Potential contamination issues associated with the identified activities are also included in the table. The aerial photo observations do not however provide direct evidence for the presence of contamination at the properties.

Copies of historic aerial photographs and a more detailed summary of the observations from each of the properties are attached to this report in Appendix C.

Table 4 Aerial Photograph Observations and Potential Contamination

Date and Description	Potential Contamination
1636 Dairy Flat Highway	
Pre-1957 dwelling (50 m from road)	Lead paint or asbestos
Pre-1957 farm shed (70 m from road)	Agricultural chemicals, hydrocarbons, lead paint or asbestos
Pre-1957 milking shed	Agricultural chemicals, hydrocarbons, lead paint or asbestos
Pre-1957 pond	Site discharges or dumping of material in the pond.
Pre-1957 shed (220 m from road)	Agricultural chemicals, hydrocarbons, lead paint or asbestos
Pre-1957 shed (350 m from road)	Agricultural chemicals, hydrocarbons, lead paint or asbestos
1961 shed (100 m from road)	Agricultural chemicals, hydrocarbons, lead paint or asbestos
1996 wastewater ponds (south of milking shed)	Agricultural chemicals or hydrocarbons
1996 earthworks (south and west of milking shed)	Potential fill contamination Heavy metals, hydrocarbons or asbestos
1686 Dairy Flat Highway	
Pre-1957 dwelling (in south-west of property)	Lead paint or asbestos
Pre-1957 shed (east of dwelling)	Agricultural chemicals, lead paint or asbestos
2010 dwelling (south of the original dwelling)	No likely issues identified
1700 Dairy Flat Highway	
1981 farm shed (north of property)	Agricultural chemicals
1981 dwelling (south-west of property)	Asbestos(unlikely)
1996 garage (south-east of dwelling)	Hydrocarbons
1732 Dairy Flat Highway	
1940 dwelling (in the north-west property)	Lead paint and asbestos
1957 home orchard? (North of dwelling)	Agricultural chemicals
1957 shed (south-west of dwelling)	Agricultural chemicals, hydrocarbons, lead paint or asbestos
1981 earthworks (south-west and south-east of dwelling)	Possible fill Heavy metals, hydrocarbons and asbestos
1981 earthworks (150 m south of dwelling)	Agricultural chemicals
1996 farm buildings (south of dwelling)	Agricultural chemicals or hydrocarbons
1996 earthworks (south-west of dwelling)	Possible fill Heavy metals, hydrocarbons and asbestos
2001 shed (south-west of dwelling)	agricultural chemicals or hydrocarbons
2008 fill (south-west dwelling)	Possible fill Heavy metals, hydrocarbons and asbestos
2010 fill (south-west of dwelling)	Ongoing filling Heavy Metals, Hydrocarbons and Asbestos
2013 fill (south-west of dwelling)	Ongoing filling Heavy Metals, Hydrocarbons and Asbestos

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2021 buildings X2 (east of western driveway)	Heavy metals and hydrocarbons
1738 Dairy Flat Highway	
1999 earthworks	Possible fill Heavy metals and hydrocarbons
2017 trucking depot	Heavy metals and hydrocarbons
2017 earthworks (southern half of property)	Possible fill Heavy metals and hydrocarbons
Lot 2 DP 480626	
1999 earthworks	Possible fill Heavy metals and hydrocarbons
Sec 6 SO 308591	
1999 earthworks	Construction of stormwater ponds Heavy metals and hydrocarbons
1744 Dairy Flat Highway	
1988 dwelling	Lead paint and asbestos
1999 earthworks	Possible fill Heavy metals and hydrocarbons
2003 earthworks	Possible fill Heavy metals and hydrocarbons
2010 earthworks	Possible fill Heavy metals and hydrocarbons
2013 onwards depot activities	Heavy metals and hydrocarbons
2015 earthworks (Northern part of property)	Possible fill Heavy metals and hydrocarbons
1748 Dairy Flat Highway	
1996 buildings X2 (middle of property)	No issues identified
1996 earthworks (north-west corner)	Possible fill Heavy metals and hydrocarbons
1996 pond (south of buildings)	Site discharges Heavy metals and hydrocarbons
2014 earthworks (eastern half)	Possible fill Heavy metals and hydrocarbons
2015 depot activities	Heavy metals and hydrocarbons
2015 earthworks (western half)	Possible fill Heavy metals and hydrocarbons
2016 onwards – depot activities	Heavy metals and hydrocarbons
1748A Dairy Flat Highway	
2006 shed	Industrial activities Heavy metals, hydrocarbons and organic compounds
2006 dwelling	No issues identified
2006 earthworks	Likely cut to fill no issues identified
2008 soil bund (east of driveway)	Possible imported material Heavy metals and hydrocarbons
2013 soil bund (east and south of driveway)	Possible imported material

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	Heavy metals and hydrocarbons
2015 earthworks/filling (south of shed)	Possible imported material Heavy metals and hydrocarbons
2017 earthworks/filling (south of shed)	Possible imported material Heavy metals and hydrocarbons
2019 earthworks/filling (south-west of previous yard extent)	Possible imported material Heavy metals and hydrocarbons
2021 depot activities	Heavy metals and hydrocarbons

2.3.1 Summary of Aerial Photograph Observations

In general, the aerial photographs largely confirmed the available site history obtained from other sources that indicated that the properties within the plan change area had historically been in pasture and used for stock grazing and dairy farming. Some of the properties have more recently been redeveloped for lifestyle residential use and/or industrial uses. The aerial photographs did not provide any visible indications of actual contamination at the subject properties however potentially contaminating activities were identified on many of the properties. The activities included:

- The placing of significant fill in parts of some of the properties;
- The presence of dairy wastewater treatment ponds on 1636 Dairy Flat Highway; and
- The presence of earlier dwellings and other buildings on properties that could potentially have asbestos-containing materials and/or have been painted using lead-based paints.

There were no activities identified on surrounding properties that were considered likely to be causing contamination of the subject properties.

3 Walkover Site Inspection

A walkover inspection of accessible properties within the plan change area was conducted on 2 September 2022.

No inspection access was provided by the owners for the following properties:

- 1638 Dairy Flat Highway
- 1646 Dairy Flat Highway
- 1686 Dairy Flat Highway
- 1700 Dairy Flat Highway
- 1738 Dairy Flat Highway
- Sec 6 SO 308591

For the properties where access was not permitted, they were only able to be viewed from outside the property boundaries and a thorough inspection was not possible. Walkover inspection of these properties is likely to be required prior to consent applications for future redevelopment.

Relevant observations from the walkover inspections are summarised in Table 5 below. Typical potential contaminants associated with each of the observations are also provided in the table.

Full lists of recorded observations and site photographs from the inspections are included in Appendix D to this report.

Relevant inspection locations are shown on Figure 2 (1636 Dairy Flat Highway) and Figure 3 (1686 to 1748a Dairy Flat Highway).

At the time of the walkover inspections, there were no activities observed on neighbouring properties that were likely to have resulted in contamination of the subject properties within the private plan change area.

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Table 5 Significant Walkover Inspection Observations

Location #	Observation	Potential Contaminants
1636 Dairy Flat Highway		
1	Disused small red galvanised iron shed with raised wooden floor. Lean-to galvanised iron garage (more recent) with concrete floor on south-east side.	Lead & Zinc
2	Galvanised iron farm shed with earth floor.	Zinc, Agrichemicals, TPH
3	Stock loading ramp.	Agrichemicals
5	Milking shed. Concrete block with concrete foundations with fibrolite used for the vat room cladding. Yard on southeast side of shed. Switchboard could potentially contain asbestos. Water tank on SE corner of shed.	Asbestos, Agrichemicals
6	Soil stockpile between pond and milking shed.	Heavy metals, PAHs, asbestos
8	Area of raised earth (possible fill) among trees. Stock in area so unable to inspect. This was a former barn location.	Agrichemicals & heavy metals
15	Dwelling & garage in northwest of property.	Asbestos & Lead
1638 Dairy Flat Highway		
1	20 L containers in an enclosure in the south-east corner of the adjacent property at 1638 Dairy Flat Highway.	Unknown
5	Dwelling in middle of property with detached garage located north of the dwelling. Mature trees around west, south, and east sides of dwelling	Asbestos & Lead
1646 Dairy Flat Highway		
3	Dwelling and garage near to middle of southern boundary.	Asbestos & Lead
1686 Dairy Flat Highway		
1	Single-level weatherboard dwelling.	Asbestos & Lead
1700 Dairy Flat Highway		
4	Split-level dwelling and shed in south of property.	Asbestos & Lead
1732 Dairy Flat Highway		
2	Fill platform and temporary vehicle storage area.	Heavy metals, PAHs, Asbestos
3	Asphalt, concrete and gravel stockpile on the ground south-east of the farm track corner. Some general rubbish visible within the stockpile.	Heavy metals, PAHs, Asbestos
4	Rubbish pile north of fill area.	Heavy metals, PAHs, Asbestos
5	Rubbish burning pit (2 m x 2 m). Burnt steel, plastic and insulation material visible in the pit.	Heavy metals, PAHs

Groundwater and Environmental Services

8	Area of significant earthworks in paddock. Appears to be an off-road vehicle course. The majority of the raised of stockpiles there to consist of silt and soil although occasional concrete and gravel pieces were observed. Rare brick and steel (1) pieces observed in parts of the stockpiles.	No issues identified
12	Ponds with earth bunds. Some galvanised iron sheet pieces and polystyrene noted on the surface downstream of the second pond. Remains of a brick chimney on the first pond edge. Galvanised iron sheet upstream of first pond.	No significant issues identified
13	Rubbish pile (6 m x 6 m). Visible rubbish includes beds, cabinetry, plastic, steel and treated timber.	Heavy metals, PAHs
14	Excavated yard with soil bund on south side. Stock handling yard on west side.	Heavy metals, agrichemicals
16	Fill platform covered with soil and lime gravel. Up to 2 m high on the south-east face. Current tenant indicated that the platform contains refuse.	Heavy metals, PAHs, Asbestos
17	Stock yards and ramp	Agrichemicals
18	Rubbish pile on ground surface. Visible rubbish includes timber, galvanised iron, wire and plastic.	Heavy metals, PAHs, Asbestos
19	Shed/stable with mixed fibrolite cladding (broken in places) and a galvanised iron roof. A drain outside the east end of the sheds discharges under the farm track to the south. Concrete floor down the centre of the interior of the shed with earth floor inside stables.	Asbestos & Lead
21	Container shed. Vehicle servicing. Minor oil staining by NE end of concrete pad. Compressor located in small shed on the north-east end of container shed.	PAHs, TPHs
22	Dangerous goods store on concrete west of container shed. No visible signs of leaks to ground around the DG store.	PAHs, TPHs, SVOCs
23	Rectangular steel bin used for rubbish burning (1.5 x 1.2 x 1.2 m high) beside blue shipping container.	Heavy metals, PAHs
24	Hardstand/fill platform area. The current tenant noted this as an area of fill.	Heavy metals, PAHs, asbestos
25	Split-level dwelling with garages/carports on SW side. Some visible fibrolite cladding on side of garage/carport.	Asbestos & Lead
27	Container shed for sandblasting and painting business. Sand accumulated around the outside of the shed on the east, west and north sides. The shed has a concrete floor inside. Drainage channel located around the north side of the shed.	Heavy metals, PAHs, SVOCs, VOCs
1738 Dairy Flat Highway		

Groundwater and Environmental Services

	No relevant observations	
Sec 6 SO 308591		
1	The property is mostly taken up with two large stormwater ponds	Discharges from surrounding land Heavy metals, PAHs & TPH
1744 & 1748 Dairy Flat Highway		
1	Single level weatherboard dwelling (old).	Asbestos & Lead
3	Diggers and Diesel (mobile electrical and mechanical) workshop/yard. No indications of oil leaks to ground.	PAHs & TPHs
1748A Dairy Flat Highway		
1	Machinery & equipment/materials storage area (Ground Structures). The property owner noted that there was no vehicle maintenance carried out on site.	PAHs & TPHs
4	Rubbish burning area on top of asphalt chip seal in southwest of yard.	Heavy metals, PAHs
5	Four metal drums used as incinerators in the southwest of the yard. Some ash on the adjacent bank.	Heavy metals, PAHs
6	Compressor at rear (west side) of large shed. Traces of oil on the ground beside the compressor.	PAHs & TPHs

3.1 Summary of Walkover Inspection Observations

The inspection of 1636 Dairy Flat Highway identified multiple locations of potential contamination although no actual contamination was confirmed. Soil sampling and analysis will be required for the identified areas of concern.

No issues were identified at 1638 or 1646 Dairy Flat Highway that would be likely to cause contamination of the surrounding properties. The main issues identified for the properties were associated with possible lead paint and asbestos use on the dwellings.

The only potential issue identified for 1700 Dairy Flat Highway was associated with the possible use of asbestos in the dwelling. Given the age of the dwelling this is considered to be relatively low risk.

Multiple potential issues were identified at 1732 Dairy Flat Highway. Significant areas of uncertified fill were identified in the north-west of the property and the origin of the fill material surface unknown. In some areas refuse or demolition material was visible in the fill. Rubbish piles and areas of rubbish burning were identified. There is also potential for lead paint and/or asbestos contamination around older buildings on the property. Machinery storage, repair, sandblasting and painting activities are likely to have resulted in discharges to ground in areas of the property. A detailed site investigation will be required to assess the nature and extent of contamination.

No potential issues were identified for 1738 Dairy Flat Highway.

The stormwater ponds on Sec 6 SO 308591 could potentially contain contaminated sediment as a result of discharges from nearby properties.

There is potential for lead paint and asbestos contamination around the dwelling on 1744 Dairy Flat Highway. Workshop activities in the north-east of the property could have resulted in spills or leaks of hydrocarbon to ground. No other potentially contaminating activities were identified at the property.

No significant potentially contaminating activities were identified at 1748 Dairy Flat Highway however there is potential for minor leaks of hydrocarbons to ground.

Rubbish burning at two locations on 1748a Dairy Flat Highway is likely to have resulted in some contamination of the surrounding ground. Minor contamination is also likely from the operation of the compressor at the rear of the large shed. Minor leaks of oil from machinery stored on site are unlikely to be a significant issue.

4 HAIL Activities

The Ministry for the Environment’s Hazardous Activities and Industries List (HAIL) specifies activities/industries that have the potential to result in contamination. Where current or former HAIL activities are identified on a property, intrusive investigation is generally required prior to a change in land use or redevelopment of those areas. Actual and potential HAIL activities for the subject properties are evaluated in Table 6 below using the information gathered for this investigation.

Areas of the properties that have had HAIL activities and therefore may have potential contamination are highlighted on Figure 4 (1636 Dairy Flat Highway) and Figure 5 (1686 to 1748a Dairy Flat Highway).

Table 6 Potential HAIL Activities

HAIL ID	Description	Assessment
A.8	Livestock dip or spray race operations	<p>Possible Possibility of livestock spray operations at stock loading ramp, race or yards at 1636 and 1732 Dairy Flat Highway</p> <p>Highly unlikely for other properties No evidence for the presence of livestock dip or spray race structures elsewhere on those properties or on the other properties</p>
A.10	Persistent pesticide bulk storage or use	<p>Unlikely No commercial horticulture activity identified for the properties</p>
A.17	Storage tanks or drums for fuel, chemicals or liquid-based	<p>Confirmed Oil and dangerous goods storage confirmed for 1732 Dairy Flat Highway.</p> <p>Likely Storage of limited quantities of oils and lubricants for vehicle maintenance on 1744 Dairy Flat Highway.</p> <p>Possible The past use of on-farm fuel storage tanks (most likely aboveground) was possible on 1636 and 1732 Dairy Flat Highway</p> <p>Unlikely No evidence of fuel for chemical storage on the other subject properties</p>
D.1	Abrasive blasting including abrasive blast cleaning (excluding cleaning carried out	<p>Confirmed Abrasive blasting undertaken at 1732 Dairy Flat Highway</p>

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	in fully enclosed booths) or the disposal of abrasive blasting material.	
D.5	Engineering workshops with metal fabrication	Possible Engineering work undertaken within the workshop shed at 1748a Dairy Flat Highway
E.1	Asbestos products manufacture or disposal including sites with buildings containing asbestos products known to be in a deteriorated condition	Highly Likely Asbestos is highly likely to have been used in buildings at 1636, 1638, 1646, 1700 and 1732 Dairy Flat Highway.
F.4	Motor vehicle workshops	Confirmed Motor vehicle workshops at 1732 Dairy Flat Highway (heavy machinery) and 1744 Dairy Flat Highway Possible Motor vehicle workshops could also have operated at 1738 and 1748 Dairy Flat Highway.
F.8	Transport depots or yards including areas used for refuelling or the bulk storage of hazardous substances	Confirmed Transport depots or yards operated at 1738, 1744, 1748 and 1748a Dairy Flat Highway.
G.3	Landfill sites	Confirmed The confirmed presence of buried waste on 1732 Dairy Flat Highway Possible The actual or possible presence of uncertified fill has been noted on 1636, 1732, 1738, 1744, 1748 and 1748a Dairy Flat Highway Unlikely No indications for the presence of potentially hazardous fill or buried rubbish on the remaining properties
G.5	Waste disposal to land (excluding where biosolids have been used as soil conditioners)	Highly unlikely No indications for any waste disposal to land at the properties other than spreading of treated dairy shed effluent
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	Highly unlikely No potentially hazardous substances that would be likely to affect the subject properties are likely to be present on adjacent land

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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	Highly Likely Lead paint is highly likely to have been used on buildings at 1636, 1638, 1646, 1686, 1700, 1732 and 1744 Dairy Flat Highway Highly unlikely No evidence to suggest that there would have been any releases of other hazardous substances to land at the subject properties
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5 Preliminary Conceptual Site Model

The information gathered for this PSI has been used to prepare a preliminary conceptual site model (CSM) for the plan change area to aid in determining whether intrusive investigation was likely to be required. The CSM provided in Table 2 evaluates contaminant source, pathway and receptor linkages for potential items of concern within the plan change area during redevelopment or under future commercial/industrial land use.

Table 7 Preliminary Conceptual Site Model

Potential Source	Potential Pathways	Potential Receptors	Assessment
Contaminated Soil due to HAIL Activities	Dermal contact with contaminated soils	Human Health - residential and outdoor worker	Potentially complete: Hail Activities Identified at specific locations
	Ingestion of contaminated soils	Human Health - residential and outdoor worker	Potentially complete: Hail Activities Identified at specific locations
	Inhalation of vapours	Human Health - residential and outdoor worker	Potentially complete: Hail Activities Identified at specific locations
	Surface water run-off	Ecological receptors – John’s Creek & Weiti River	Potentially complete: Hail Activities Identified at specific locations
	Migration of groundwater	Ecological receptors – John’s Creek & Weiti River	Potentially complete: Hail Activities Identified at specific locations

The preliminary conceptual site model identifies the potential for contamination within specific areas of many of the properties where this PSI has identified likely HAIL activities. The areas of concern include:

- The likely or confirmed use of asbestos-cement products and/or lead paint on buildings at 1636, 1638, 1646, 1700 and 1732 Dairy Flat Highway.
- Possibility of livestock spray operations at stock loading ramp, race or yards at 1636 and 1732 Dairy Flat Highway;
- Oil and dangerous goods storage confirmed for 1732 Dairy Flat Highway.
- Storage of limited quantities of oils and lubricants for vehicle maintenance on 1744 Dairy Flat Highway;
- The possibility of past use of on-farm fuel storage tanks (most likely aboveground) was possible on 1636 and 1732 Dairy Flat Highway;
- Asbestos is highly likely to have been used in buildings at 1636, 1638, 1646, 1700 and 1732 Dairy Flat Highway;
- Lead paint is highly likely to have been used on buildings at 1636, 1638, 1646, 1686, 1700, 1732 and 1744 Dairy Flat Highway;
- Possible motor vehicle workshops on 1732, 1738, 1744 and 1748 Dairy Flat Highway.

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- Properties at 1738, 1744, 1748 and 1748a Dairy Flat Highway may have been used as transport depots or yards
- The confirmed presence of buried waste on 1732 Dairy Flat Highway; and
- The actual or possible presence of uncertified fill has been noted on 1636, 1732, 1738, 1744, 1748 and 1748a Dairy Flat Highway.

Intrusive investigation of potential contamination would be required for areas of the subject properties identified as being potentially contaminated if they were to undergo subdivision, a change of land use or any earthworks associated with the redevelopment.

Outside of areas of identified HAIL activities, the subject properties have incomplete source, pathway and receptor linkages and no intrusive investigation of potential contamination is required for areas where there were no HAIL activities.

6 Summary & Conclusions

This PSI has been undertaken to determine the potential for contamination across and beneath the ground within the Silverdale West Private Plan Change area due to past or present activities on the properties within the area or on surrounding land.

The subject properties have historically been rural and have historically been used for dry stock and dairy farming. The properties were originally part of larger farms that in some cases extended to east of the current location of the Northern Motorway. The original properties were subdivided into smaller blocks and most of the properties are now lifestyle residential. The larger blocks at 1636 and 1660 Dairy Flat Highway have remained rural. Commercial/industrial activities predominated on 1738, 1744, 1748 and 1748a Dairy Flat Highway and parts of 1732 Dairy Flat Highway also support industrial activities. Relatively small-scale commercial horticultural activity has been carried out on some of the subject properties.

The bulk of the plan change area remains in pasture and there are several man-made ponds across the area.

Auckland Council's site contamination enquiry response noted the occurrence of actual or potential HAIL activities at 1738, 1744, 1748 and 1748a Dairy Flat Highway in addition to neighbouring properties outside the plan change area (1570, 1584 and 1596 Dairy Flat Highway). No contamination related consents or pollution incidents were recorded for the subject properties. A closed landfill is present on 193 Wilks Road, outside of the proposed private plan change area. There were no other identified items in the surrounding area that would be likely to have resulted in contamination of the subject properties.

The review of the council property files identified the potential for contamination at most of the subject properties. Key observations from the files include:

- The use of asbestos-containing materials was indicated on all of the properties except Sec 6 SO 308591, and 1738, 1748 and 1748a Dairy Flat Highway;
- Dairy waste disposal occurred on 1636 Dairy Flat Highway; and
- The presence of fill was noted on 1738, 1744, 1748 and 1748a Dairy Flat Highway.

In general, historic aerial photographs confirmed the available site history and indicated that the properties within the plan change area had historically been in pasture and used for stock grazing and dairy farming. Some of the properties had more recently been redeveloped for lifestyle residential use and/or industrial uses.

The aerial photographs did not provide any confirmation of actual contamination at the subject properties however potentially contaminating activities were identified on many of them. The activities included:

- The placing of fill in parts of 1636, 1732, 1738, 1744, 1748 and 1748a Dairy Flat Highway;
- The presence of dairy wastewater treatment ponds on 1636 Dairy Flat Highway; and

Groundwater and Environmental Services

- The presence of earlier dwellings and other buildings on properties that could potentially have asbestos-containing materials and/or have been painted using lead-based paints.

The review of aerial photographs did not identify activities on surrounding properties that were considered likely to be causing contamination of the subject properties.

Walkover inspections of the accessible properties and limited viewing of inaccessible properties from outside their boundaries identified multiple locations of actual or potential contamination. Identified issues included:

- 1636 Dairy Flat Highway. Potential chemical and asbestos contamination within and around former farm sheds, around stock yards and loading ramps, possible contamination in fill areas and possible asbestos and lead contamination around the dwelling and garage.
- 1638 Dairy Flat Highway. Possible lead paint and asbestos use on the dwelling.
- 1646 Dairy Flat Highway. Possible lead paint and asbestos use on the dwelling.
- 1700 Dairy Flat Highway. Possible asbestos use on the dwelling.
- 1732 Dairy Flat Highway. Areas of uncertified fill (some including waste or demolition material), rubbish piles, rubbish areas, possible lead paint and/or asbestos contamination around older buildings, discharges to ground from machinery/vehicle storage, repair, sandblasting and painting activities.
- Sec 6 SO 308591. Potential contaminant discharges to stormwater ponds.
- 1744 Dairy Flat Highway. Possible lead paint and asbestos contamination around the dwelling and possible leaks or spills to ground from workshop activities.
- 1748 Dairy Flat Highway. Possible minor leaks of hydrocarbons to ground.
- 1748a Dairy Flat Highway. Contamination from rubbish burning, minor hydrocarbon contamination from compressor operation and minor leaks of oil from machinery stored on site.

Walkover inspections within 1638, 1646, 1686, 1700 and 1738 Dairy Flat Highway and Sec 6 SO 308591 will be required prior to confirming the nature and extent of future detailed site investigations for these properties (if required).

HAIL activities are confirmed, likely and/or possible for the majority of properties within the plan change area.

The preliminary conceptual site model for the plan change area identifies the potential for contamination within specific areas of many of the properties where this PSI has identified likely HAIL activities. The identified items/areas of concern are as follows:

- The likely or confirmed use of asbestos-cement products and/or lead paint on buildings at 1636, 1638, 1646, 1700 and 1732 Dairy Flat Highway;
- Possibility of livestock spray operations at stock loading ramp, race or yards at 1636 and 1732 Dairy Flat Highway;
- Oil and dangerous goods storage confirmed for 1732 Dairy Flat Highway;

Groundwater and Environmental Services

- Storage of limited quantities of oils and lubricants for vehicle maintenance on 1744 Dairy Flat Highway;
- The possibility of past use of on-farm fuel storage tanks (most likely aboveground) was possible on 1636 and 1732 Dairy Flat Highway;
- Asbestos is highly likely to have been used in buildings at 1636, 1638, 1646, 1700 and 1732 Dairy Flat Highway;
- Lead paint is highly likely to have been used on buildings at 1636, 1638, 1646, 1686, 1700, 1732 and 1744 Dairy Flat Highway;
- Possible motor vehicle workshops on 1732, 1738, 1744 and 1748 Dairy Flat Highway;
- Properties at 1738, 1744, 1748 and 1748a Dairy Flat Highway may have been used as transport depots or yards;
- The confirmed presence of buried waste on 1732 Dairy Flat Highway; and
- The actual or possible presence of uncertified fill has been noted on 1636, 1732, 1738, 1744, 1748 and 1748a Dairy Flat Highway.

Intrusive investigation of potential contamination would be required for areas where the potential for contamination has been identified if they were to undergo subdivision, a change of land use or any earthworks associated with redevelopment.

Outside of areas of identified HAIL activities, the subject properties have incomplete source, pathway and receptor linkages. No intrusive investigation of potential contamination is required for areas where there were no HAIL activities.

The information gathered for this PSI indicates that further investigations are likely to be required for parts of most of the properties within the private plan change area and that consents under the NES and/or the contaminated land provisions of the Auckland Unitary Plan may be required prior to any redevelopment commencing.

None of the identified environmental issues would provide a barrier to the proposed plan change. The issues would be able to be dealt with at the subdivision or earthworks consent stages following the processes set out in the NES and the contaminated land provisions of the Auckland Unitary Plan.

As with any assessment of this nature, there is always the possibility that additional items not visible during the investigation may be revealed during more detailed investigations or during subsequent redevelopment earthworks. Any such items should be evaluated by a suitably qualified environmental consultant in accordance with the requirements of Auckland Council.

7 PSI Certifying Statement

I **Andrew James MacDonald** of Groundwater and Environmental Services certify that:

This preliminary site investigation report meets the requirements of the Resource Management (National Environmental Standard for assessing and managing contaminants in soil to protect human health) Regulations 2011 because it has been:

- Carried out by a suitably qualified and experienced practitioner;
- Reported on in accordance with the current edition of Contaminant Land Management Guidelines No 1 – Reporting on Contaminated Sites in New Zealand (June 2021); and
- Certified by a suitably qualified and experienced practitioner.

Evidence of the qualifications and experience of the suitably qualified and experienced practitioner who has carried out this investigation and has certified this report is appended to this plan in Appendix E.

Signed and dated:

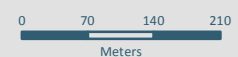


31 July 2023



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Figure 1: Plan Change Area Location & Layout



Scale @ A3
 = 1:8,000

Date Printed:
 6/12/2022





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Figure 2: Inspection Locations
1636 Dairy Flat Highway

0 50 100 150
Meters

Scale @ A3
= 1:5,000

Date Printed:
6/12/2022



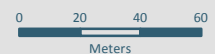
KEY

+1 Inspection Locations



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Figure 3: Inspection Locations
 1686 to 1748a Dairy Flat Highway



Scale @ A3
 = 1:2,500

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Figure 4: Potential Contamination Areas
1636 Dairy Flat Highway

KEY

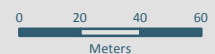


Potential Contamination Area



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Figure 5: Potential Contamination Areas
 1686 to 1748a Dairy Flat Highway



Scale @ A3
 = 1:2,500

Date Printed:
 6/12/2022



Auckland Council
 Te Kaurihera o Tāmaki Makaurau

Appendix A
Site Contamination Enquiry Response

11 October 2022

Groundwater and Environmental Services
70 Hooker Road
HAMILTON 3283

Attention: Andrew MacDonald

Dear Andrew

Site Contamination Enquiry – Dairy Flat (updated)

This letter is in response to your enquiry requesting available site contamination information within Auckland Council records for the above site. Please note this report does not constitute a site investigation report; such reports are required to be prepared by a (third-party) Suitably Qualified and Experienced Practitioner.

The following details are based on information available to the Contamination, Air & Noise Team in the Resource Consent Department. The details provided may be from former regional council information, as well as property information held by the former district/city councils. For completeness the relevant property file should also be requested to obtain all historical records and reports via 09 3010101 or online at:

<https://www.aucklandcouncil.govt.nz/buying-property/order-property-report/Pages/order-property-file.aspx>.

1. Hazardous Activities and Industries List (HAIL) Information

This list published by the Ministry for the Environment (MfE) comprises activities and industries that are considered likely to cause land contamination as a result of hazardous substance use, storage, and/or disposal.

Council's records indicate this site has possibly been subject to the following activity that fall within the HAIL:

- HAIL Item (A.10)- Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds
- HAIL Item (D.5)- Engineering workshops with metal fabrication
- HAIL Item (F.4)- Motor vehicle workshops
- HAIL Item (F.5)- Port activities including dry docks or marine vessel maintenance facilities
- HAIL Item (F.8)- Transport depots or yards including areas used for refuelling or the bulk storage of hazardous substances

Council records indicate in 1982 consent was granted for a plastic house at 1596 Dairy Flat Highway with removal occurring in 2011.

A DSI dated October 2018 undertaken on a portion of 1570 Dairy Flat Highway indicated the site had been utilised for historical horticultural activities and a portion of the site had potentially been utilised for motor vehicle workshop activities. Soil sampling indicated elevated levels of arsenic, chromium, copper, zinc and lead above AUP(OP) PA Criterion and/or relevant NES:CS Criteria.

Council records indicate consent was granted in 1973 and 1984 for glasshouses at 1584 Dairy Flat Highway.

Council records indicate 1744 Dairy Flat Highway, 1748 Dairy Flat Highway, 1738 Dairy Flat Highway are utilised for depot activities with workshops on site.

Council records indicate 1748a Dairy Flat Highway is utilised for boat building, brick making, steel fabrication and depot activities.

Council records indicate Lot 2 DP 480626, Dairy Flat Highway was utilised for horticultural activities in 2004.

There is no contaminant information within Council records for 1636 Dairy Flat Highway, 1638 Dairy Flat Highway, 1646 Dairy Flat Highway, 1732 Dairy Flat Highway, 1686 Dairy Flat Highway, 1700 Dairy Flat Highway, 1602 Dairy Flat Highway and Sec 6 SO 308591, Dairy Flat Highway. Due to use as a farm any potential for spray race activities, wastewater treatment ponds or burn piles should be considered.

Additionally due to the age of the buildings on site the potential for asbestos and/or lead paint may need to be considered.

Please note:

- *If you are demolishing any building that may have asbestos containing materials (ACM) in it, you have obligations under the Health and Safety at Work (Asbestos) Regulations 2016 for the management and removal of asbestos, including the need to engage a Competent Asbestos Surveyor to confirm the presence or absence of any ACM.*
- *Paints used on external parts of properties up until the mid-1970's routinely contained lead, a poison and a persistent environmental pollutant. You are advised to ensure that soils affected by old, peeling or flaking paint are assessed in relation to the proposed use of the property, including high risk use by young children.*

2. Consents and Incidents Information (200m radius of the selected site)

The Council database was searched for records of the following activities within approximately 200 metres of the site:

- Pollution Incidents (including air discharges, oil or diesel spills)
- Bores
- Contaminated site and air discharges, and industrial trade process consents
- Closed Landfills
- Air quality permitted activities
- Identified HAIL activities



Figure 1: Selected Consents, Incidents and HAIL activities within approximately 200m of the subject site

Legend:

- | | |
|---|---|
| All Consents + | Closed Landfill (Auckland Council owned) |
| All Applications ■ | Closed Landfill (Privately owned) |
| All Permitted Activities ✱ | All Incidents ● |
| All Bores ★ | HAIL activities |

Relevant details of any pollution incidents and consents and HAIL activities are appended to this letter (Attachment A). Please refer to the column titled 'Property Address' on the spreadsheet to aid in identifying corresponding data on the map.

For any identified HAIL sites, please refer to the tab "HAIL activities" for more information (Column C and D include HAIL activity details where these are available).

Please note:

The HAIL activity hatching in Figure 1 only reflects whether a site has been identified as a HAIL site (both verified and non-verified) by the Council and the type of HAIL associated with the site. This does not confirm whether the site has been formally investigated or the contamination status of the property (e.g. contaminated, remediated etc.). Additionally, due to limitations within Council's records, the specific HAIL activity is not included in the data for all properties. For further information on any of these known HAIL sites, a subsequent site contamination enquiry can be lodged for the specific property (up to 5 adjacent properties can be covered in one request).

While the Auckland Council has carried out the above search using its best practical endeavours, it does not warrant its completeness or accuracy and disclaims any responsibility or liability in respect of the information. If you or any other person wishes to act or to rely on this information, or make any financial commitment based upon it, it is recommended that you seek appropriate technical and/or professional advice.

If you wish to clarify anything in this letter that relates to this site, please contact contaminatedsites@aucklandcouncil.govt.nz. Any follow up requests for information on other sites must go through the online order process.

Should you wish to request any of the files referenced above and/or listed in the attached spreadsheet for viewing, please contact the Auckland Council Call Centre on 301 0101 and note you are requesting former Auckland Regional Council records (the records department requires three working days' notice to ensure the files will be available).

Please note Auckland Council cost recovers officer's time for all site enquiries. As such an invoice for \$228 for the time involved in this enquiry will follow shortly.

Yours Sincerely,

**Contamination, Air and Noise Team
Specialist Unit | Resource Consents
Auckland Council**

Appendix B
Property File Information Summary

1636 Dairy Flat Highway

Date	Reference	Description
1956	37741	Building consent for alterations to cowshed .
1956	39581	Building consent for alterations to cowshed to bring it up to Department of agriculture standard.
1961	158181	Building consent for erection of a hay barn to the north-west of the existing cowshed.
1962	194971	Building consent to erect piggery (165 feet east of the road frontage).
1964	4759	Building consent for construction of a barn 100 ft. east of the existing cowshed
1965	8045	Building consent (retrospective) for construction of a Dutch (open sided) hay barn close to the road frontage to the south-west of the existing cowshed and yard. Loading ramps were also constructed.
1977	95487	Building consent to erect 95 m ² new dwelling. Exterior cladding (cover line, Highline) recorded as being 6 mm thick asbestos cement sheets. Hardiflex eaves. Main cladding appears to be MDF planks.
2000	3780	Land information report for land use consent application to enlarge the on-site wastewater treatment and disposal system . Existing anaerobic and aerobic ponds to be upgraded to serve the dairy farm running 110 cows. Proposed work involves removal of water and sludge from the existing pond (to be dispersed over pasture), cut to fill of 1000 m ³ loose measure top soil and clay material, and revegetation of the site. Notes that John's Creek runs through the site and receives a discharge from the dairy treatment ponds. The creek was confirmed as ephemeral until the confluence with Weiti Stream, where it becomes tidal.
2001	30933	Subdivision resource consent application to relocate the boundary between adjoining titles. Separates off two lots on the eastern side of the motorway from the larger lot (Lot 1) between the motorway and Dairy Flat Highway.

GRAPH FOR PLAN:—

Where drainage plans are necessary (see page 2) the graph below is to be completed accurately to scale in ink, and must show clearly street boundary, property boundaries, outline of buildings as well as layout of ALL drains and inspection fittings.

Owner's Name: J. Woolley

Scale: Metric

Address of Property: Main Highway, Dairy Flat

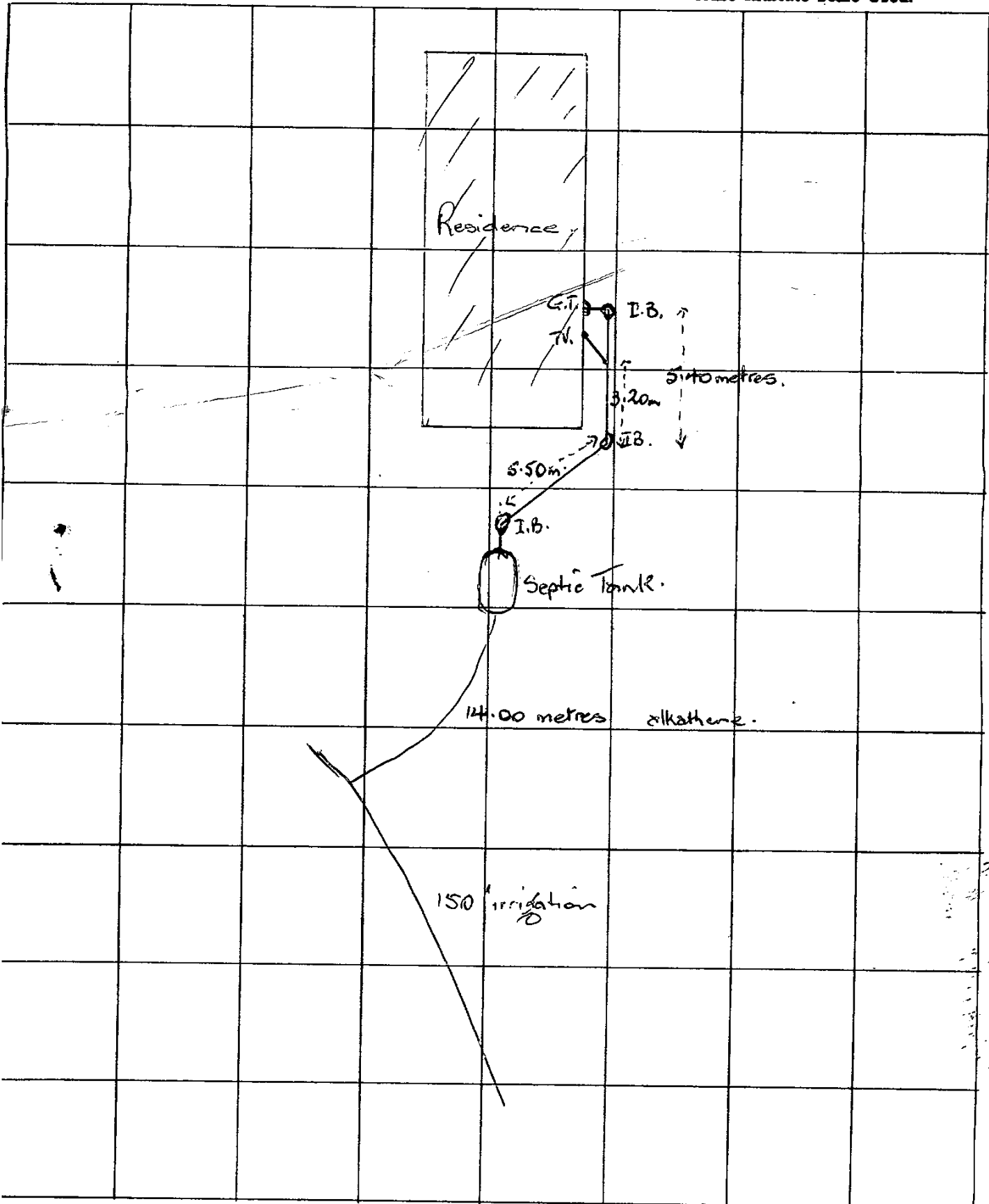
Where possible use 1 : 20

Lot D.P.

Otherwise use 1 : 200

Drainlayer's Name: N. Keesince

Please Indicate Scale Used.



For Office Use Only:

Drainage Permit No.

Building Permit No.

Date inspected 1-9-77 Inspector [Signature]

97-2-20 Acres.
600yds

Road Frontage.

SITE PLAN

RESIDENTIAL SECTIONS

The site plan must be accurately drawn to the scale provided (16 feet to 1 inch).

ALL OTHER SECTIONS

(including farms, etc.)

Please state scale used.

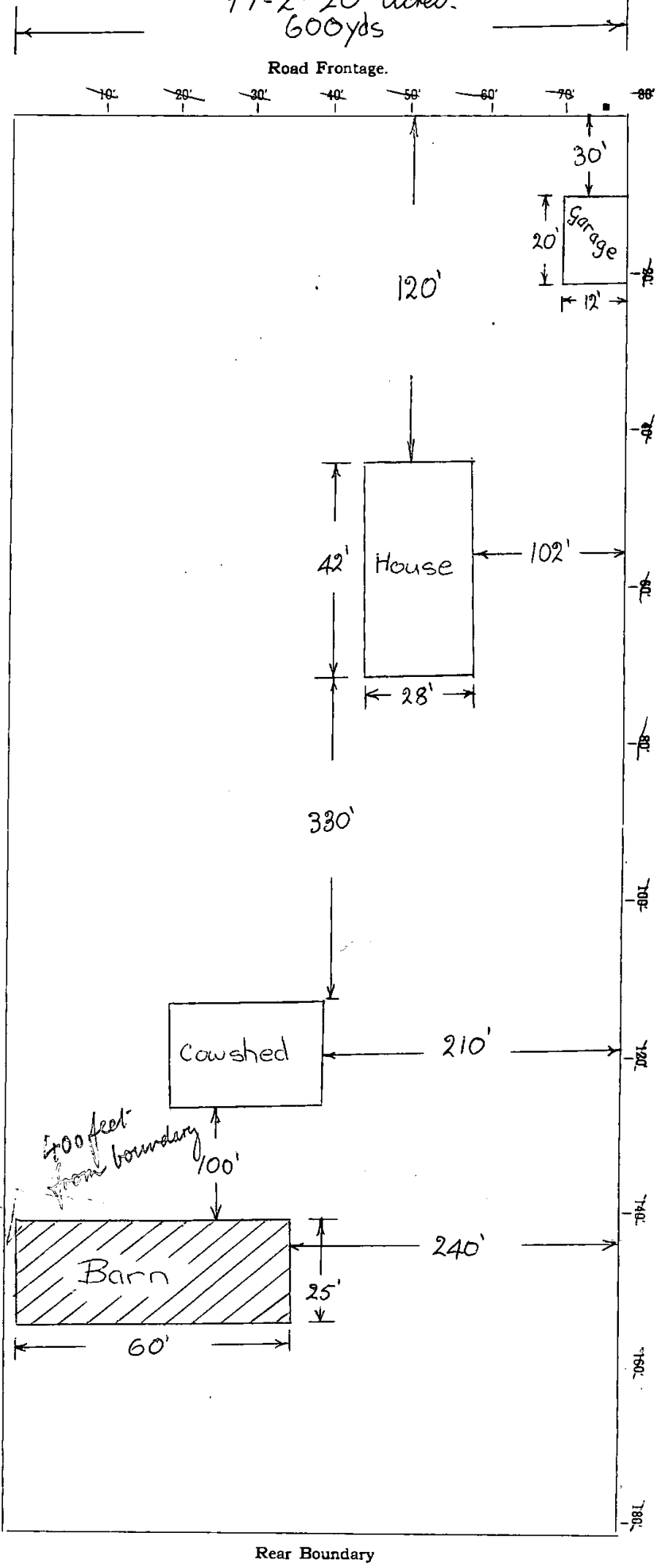
Note

1. This site plan must show the desired position of the proposed building and also ALL existing buildings.
2. Distances of each building from boundary lines must be clearly indicated. Consult your Building Inspector if in doubt as to council's requirements as to the Siting of Buildings. BUILDING INSPECTORS ARE AVAILABLE AT COUNTY OFFICE BETWEEN 8.30-9.45 A.M. MONDAY TO FRIDAY.
3. Separate plans, drawn to scale (preferably 1/8" or 1/4" to 1'), must be submitted, showing a ground plan, and elevations of two sides. In cases of extensions to existing buildings, these plans should show the whole building, and the extension should be shaded or coloured.
4. Applications, plans and specifications MUST be made in duplicate, except for minor outbuildings.
5. Location plan must be completed.

PENCIL DRAWINGS WILL NOT BE ACCEPTED.

IMPORTANT

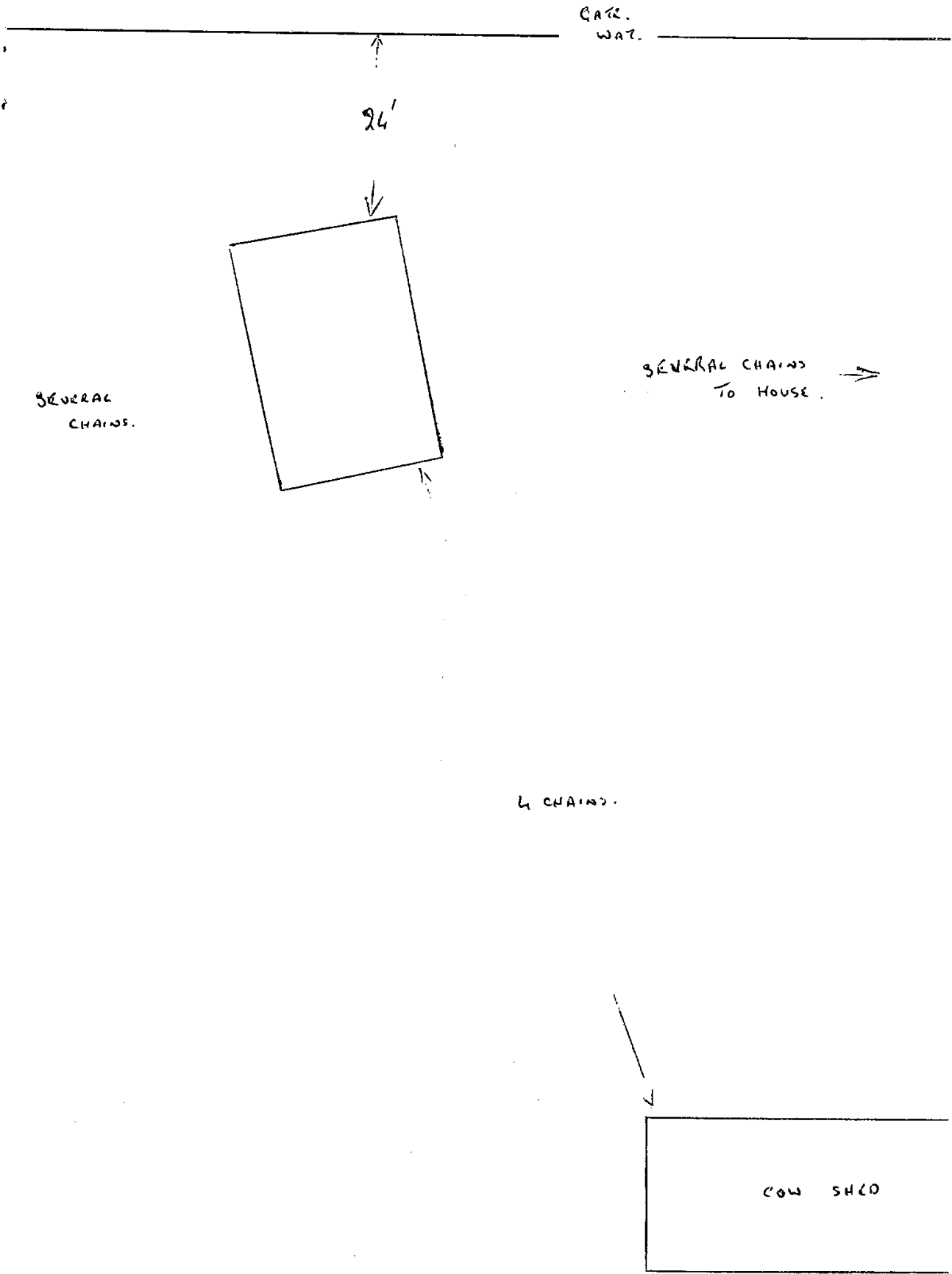
A condition of this permit is that THE BUILDER is responsible for all stormwater drains being constructed to comply with health inspectors requirements.



Rear Boundary

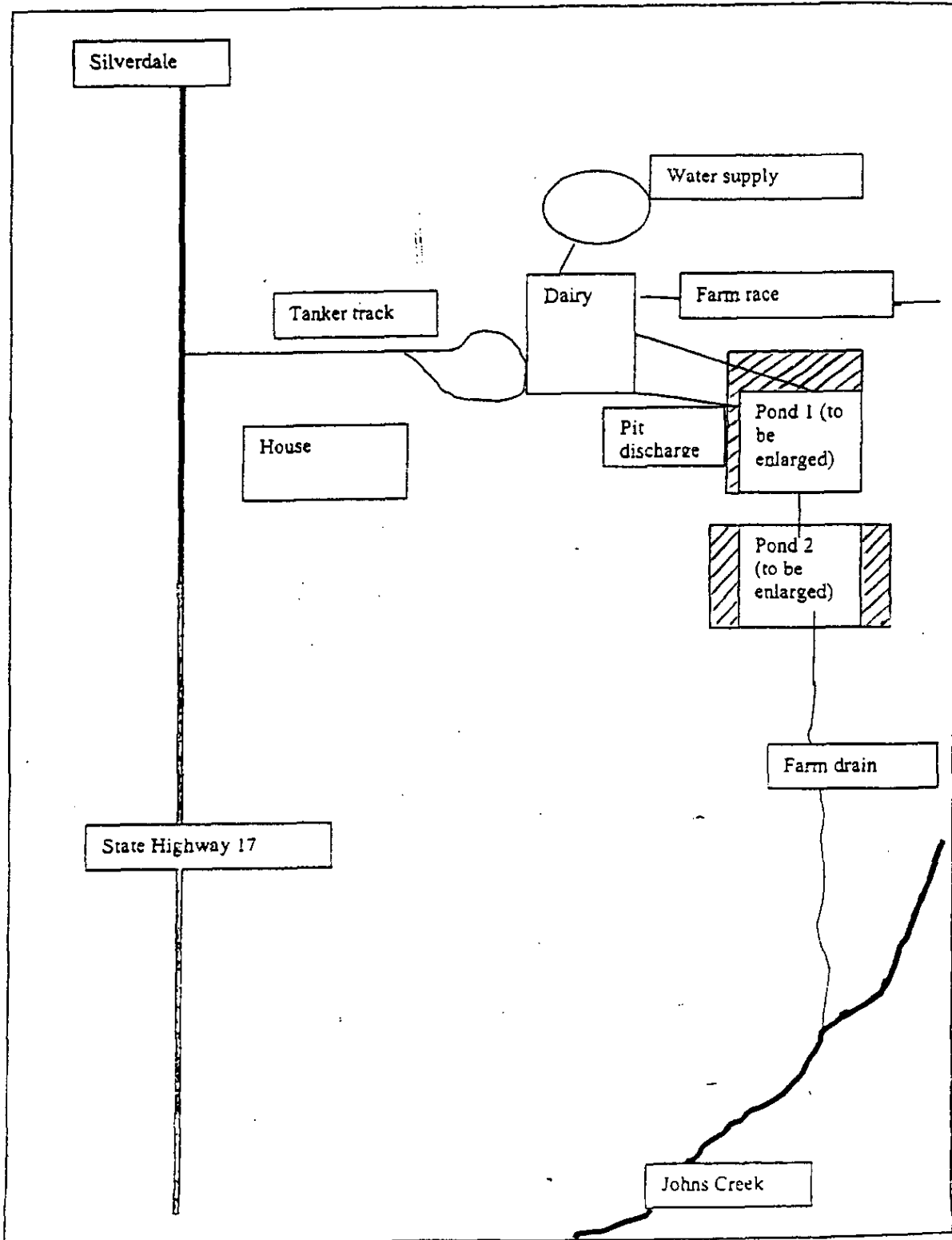
SITE PLAN:

HAY BARN. R.W. DENNIS.



Site Layout JJ Woolley NZD 9575

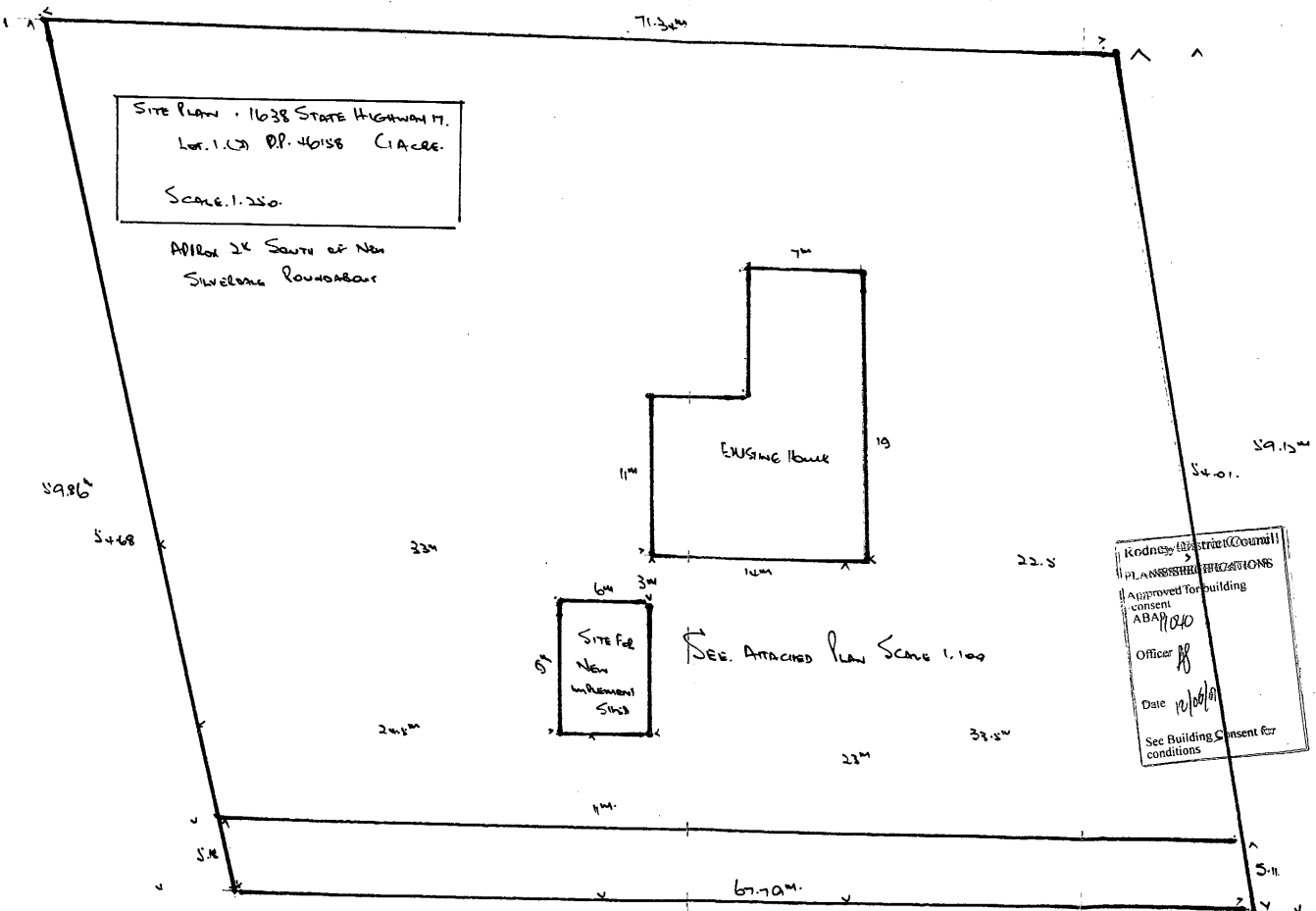
Not to scale



REQUIRED AREA TO BE ENLARGED

1638 Dairy Flat Highway

Date	Reference	Description
1959	12138	Building consent for construction of a new dwelling 40 feet from the road frontage. Exterior cladding noted as "duroc sidings". Duroc was an asbestos-cement product.
1974	52942	Building consent for relocation of a second-hand house onto the property and construction of a new basement.
2000	24010	Application for discharge consent for dairy wash water from treatment ponds. Noted completion of modifications to treatment system in April 2001. The resource consent was surrendered in October 2005. Indicated that the farm had been sold and no further milking was being carried out.
2001	11040	Building consent for construction of a farm implement shed (Ideal Garage).
2001	5785	Land use consent application to construct an implement shed within 10 m of front boundary.



SITE PLAN - 11638 STATE HIGHWAY 17.
 Lot. 1 (A) DP. 40158 1.1 ACRES.
 Scale. 1:250.

APPROX 24 SOUTH OF NEW
 SIRELENE ROAD

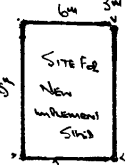
71.34m

59.86

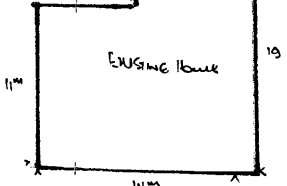
54.68

33m

24.2m



SEE ATTACHED PLAN SCALE 1:100



22.5

33.5m

23m

11m

67.70m

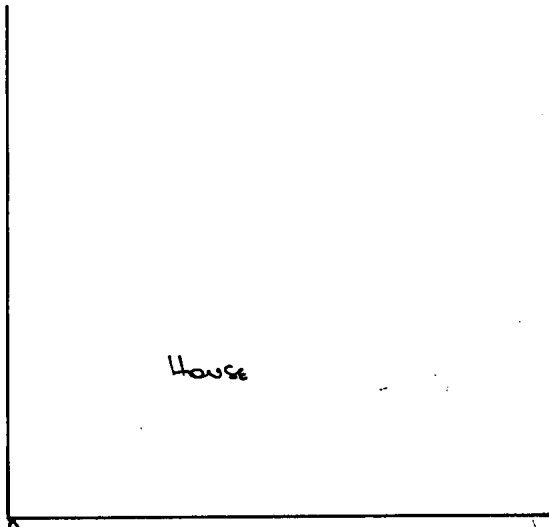
59.15m

54.01

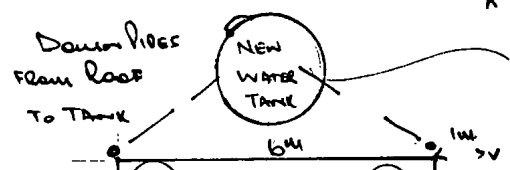
5.11

STATE HIGHWAY 17

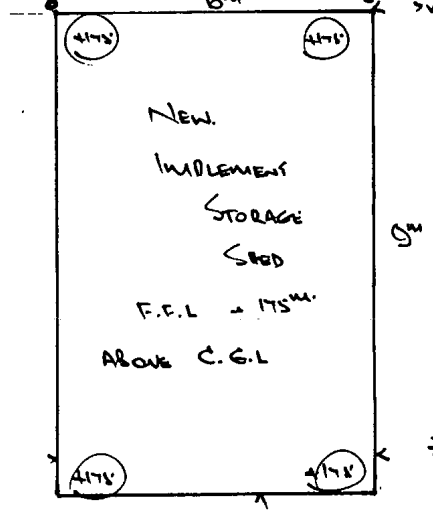
Rodney District Council
 PLANNING APPLICATIONS
 Approved for building consent
 ABAP 1040
 Officer RB
 Date 10/06/18
 See Building Consent for conditions



House



WATER TANK OVER FLOW TO APPROVED OUTFALL. @FO TO CHECK ON SITE.



4400 TO SIDE BROW

3300 TO SIDE BROW

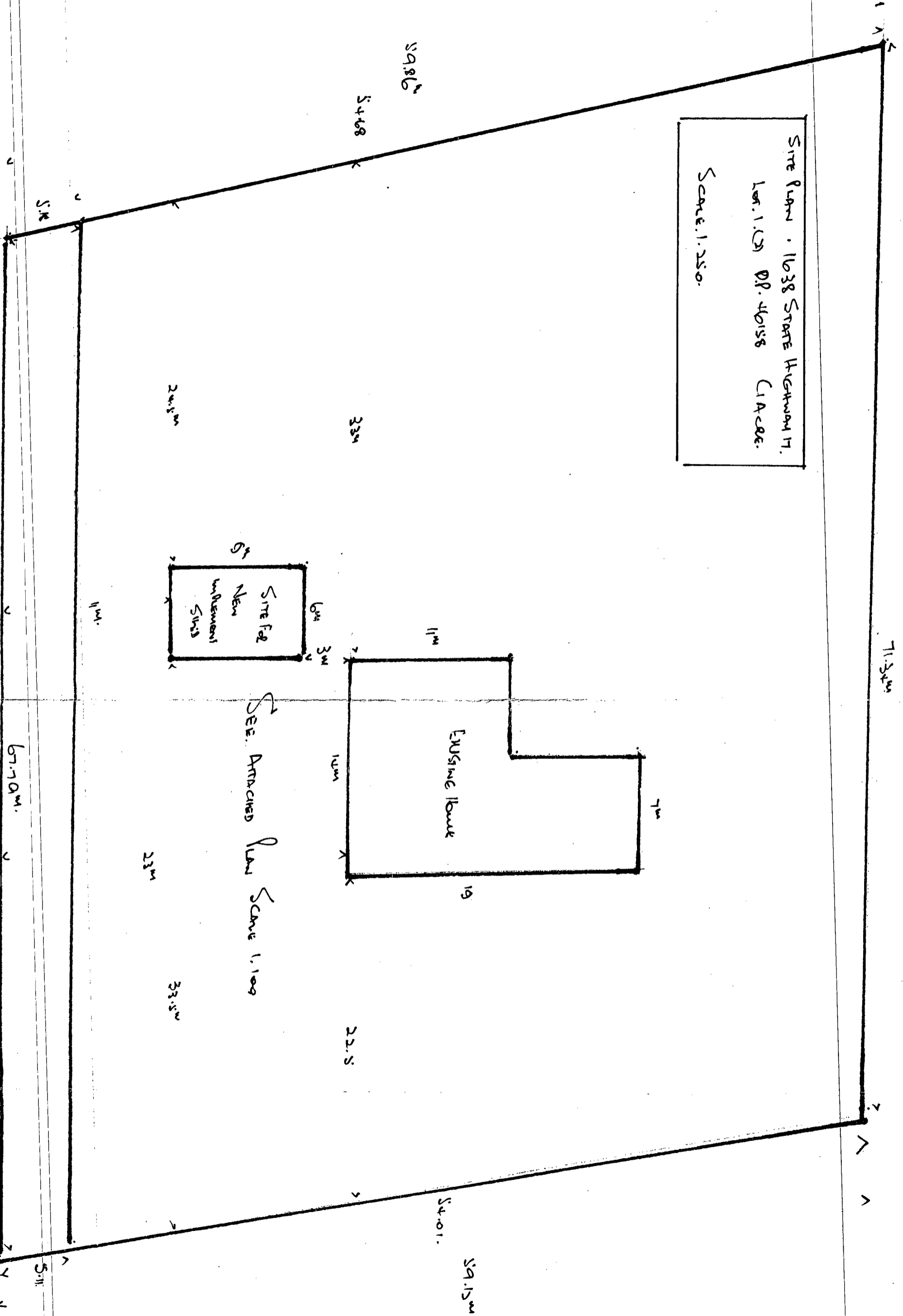
1100 TO FRONT BOUNDARY

CIVIL ENGINEER APPROVED FOR BUILDING OFFICER [Signature] Date: [Signature]	See Building Consent for conditions
--	-------------------------------------

STATE HIGHWAY 17

Scale 1:100.

Site Plan - 1638 State Highway 17,
Lot 1.29 DP 40158 Clared.
Scale 1:250.

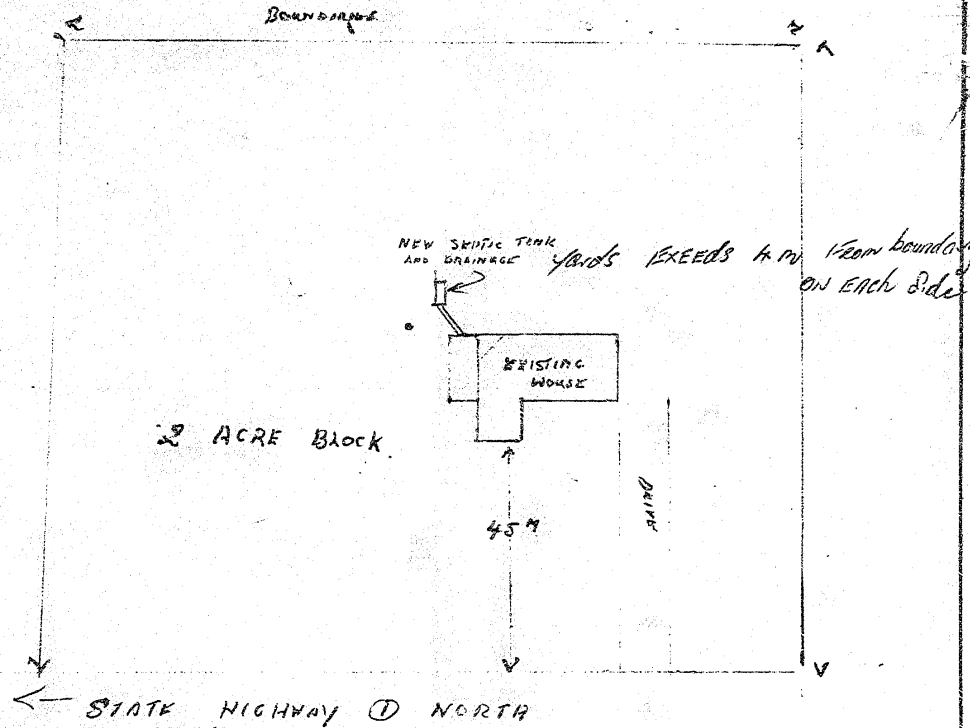


State Highway 17

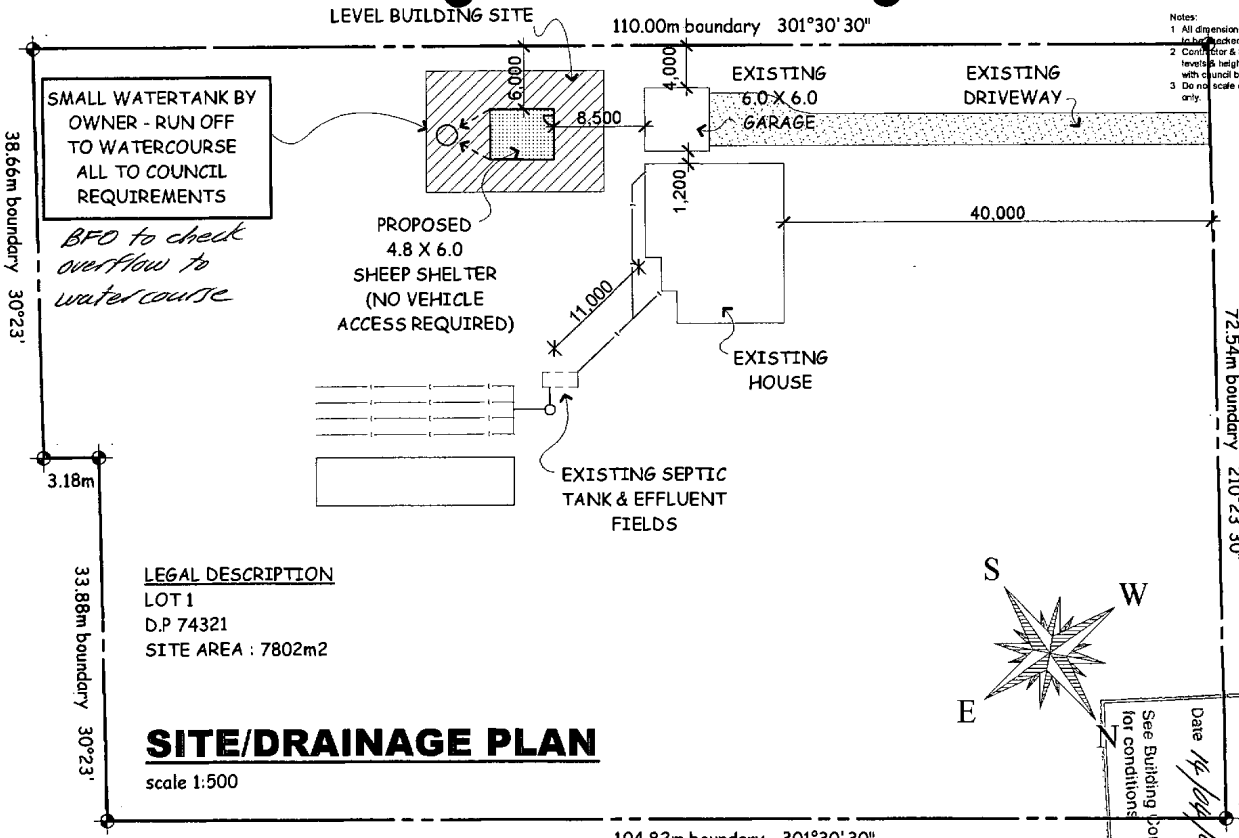
1646 Dairy Flat Highway

Date	Reference	Description
1959	12019	Building consent to move and re-site house and garage.
1961	17515	Building consent for addition of breakfast room two dwelling.
1967	16553	Building consent for extension to garage to provide detached sleepout.
1979	38252	Building consent to erect Skyline garage immediately south of dwelling.
1979	53493	Building consent for addition of two new bedrooms to dwelling.
1986	96271	Building consent for extension of existing kitchen and dining area.
1992	9201686	Building consent for addition of new sunroom to dwelling.
2005	50728	Building consent for construction of a new domestic garage and outbuilding (Versatile). The Project information memorandum noted that there were no hazardous substances or processes on site.

PLANS
AND SPECIFICATIONS
APPROVED
SUBJECT TO SUCH
CONDITIONS AS ARE TO
BE ENDORSED ON OR
APPENDED TO
BUILDING PERMIT
SIGNED: *[Signature]*
BUILDING INSPECTOR
DATE: 1/5/8/79

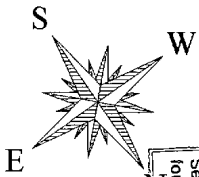


SITE PLAN NOT TO SCALE



Notes:
 1 All dimensions and underground service locations to be checked prior to the commencement of work.
 2 Contractor & Sub-contractors to ensure all ground levels & height restrictions are correct & comply with council bylaws at all stages of construction
 3 Do not scale off drawings. Use figured dimensions only.

EXPOSURE ZONE 1
 Type 304 Stainless Steel or hot dipped Galvanizing plus additional protection rain well locations.



Footway District Council
 PLANS/ SPECIFICATIONS
 Approved for building consent
 IGA 50728
 Officer: *[Signature]*
 Date: *14/04/10*
 See Building Consent for conditions

Hibiscus Coast District
 2 Flaxman Pl
 P.O. Box 345,
 Silverdale.
 Ph (09) 426 3030
 Fax (09) 426 3030
 Mobile (025) 850 720

VERSATILE BUILDINGS

PROJECT: PROPOSED VERSATILE GARAGE FOR D & C HARPER 1646 STATE HIGHWAY 17 SILVERDALE

SHEET CONTROL

SITE/ DRAINAGE PLAN

PROJECT	73468	DATE	17th March 2005	CLASS	Other	ISSUE	1
DESCRIPTION	For Building Consent	SCALE	1:500 @ A4	DATE			
PROJECT	A1	DATE		CLASS	A	ISSUE	

SITE PLAN

RESIDENTIAL SECTIONS

The site plan must be accurately drawn to the scale provided (16 feet to 1 inch):

ALL OTHER SECTIONS

(including farms, etc.)

Please state scale used.

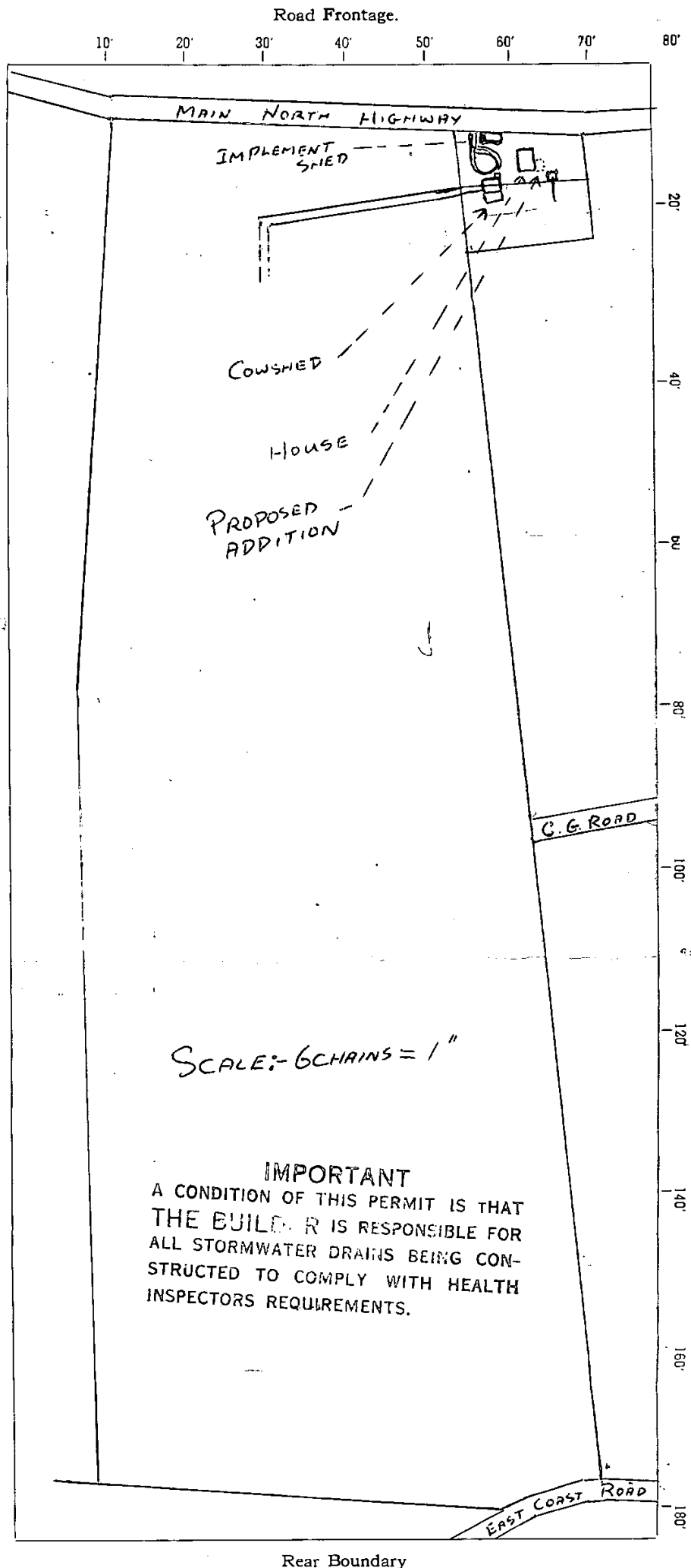
Note

1. This site plan must show the desired position of the proposed building and also ALL existing buildings.
2. Distances of each building from boundary lines must be clearly indicated.
3. No building shall be erected closer than 4 feet from side boundary to building proper. A fascia board may be 3 feet from side boundary in the case of an overhanging eave.
4. Separate plans, drawn to scale (preferably $\frac{1}{8}$ " or $\frac{1}{4}$ " to 1'), must be submitted, showing a ground plan, and elevations of two sides. In cases of extensions to existing buildings, these plans should show the whole building, and the extension should be shaded or coloured.
5. Applications, plans and specifications **MUST** be made in duplicate.
6. Location plan must be completed.

PENCIL DRAWINGS WILL NOT BE ACCEPTED.

IMPORTANT

A condition of this permit is that **THE BUILDER** is responsible for all stormwater drains being constructed to comply with health inspectors requirements.



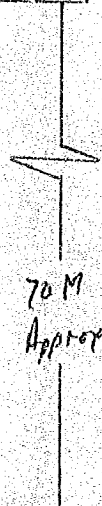
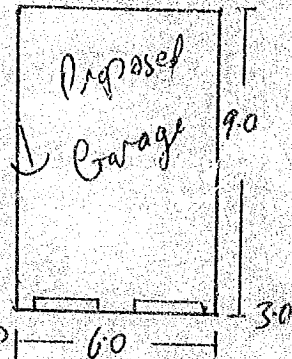
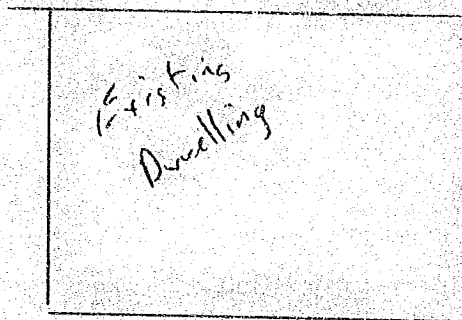
SKYLINE GARAGES

manufactured by Skyline Buildings Ltd,
64 A Wall's Rd, Penrose, Auckland. Ph. 598.821

Property is situated approx 2 miles from Silverdale
(south) on left hand side. Name as Letter Box

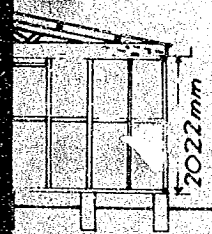
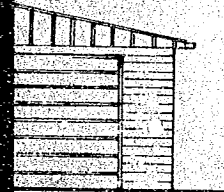
2 Acres Approx

Exist
for
Demolish



Main Rd Dairy Flat.
SITE PLAN 1mm = 200mm.

9.0



SECTION



1m = 25m

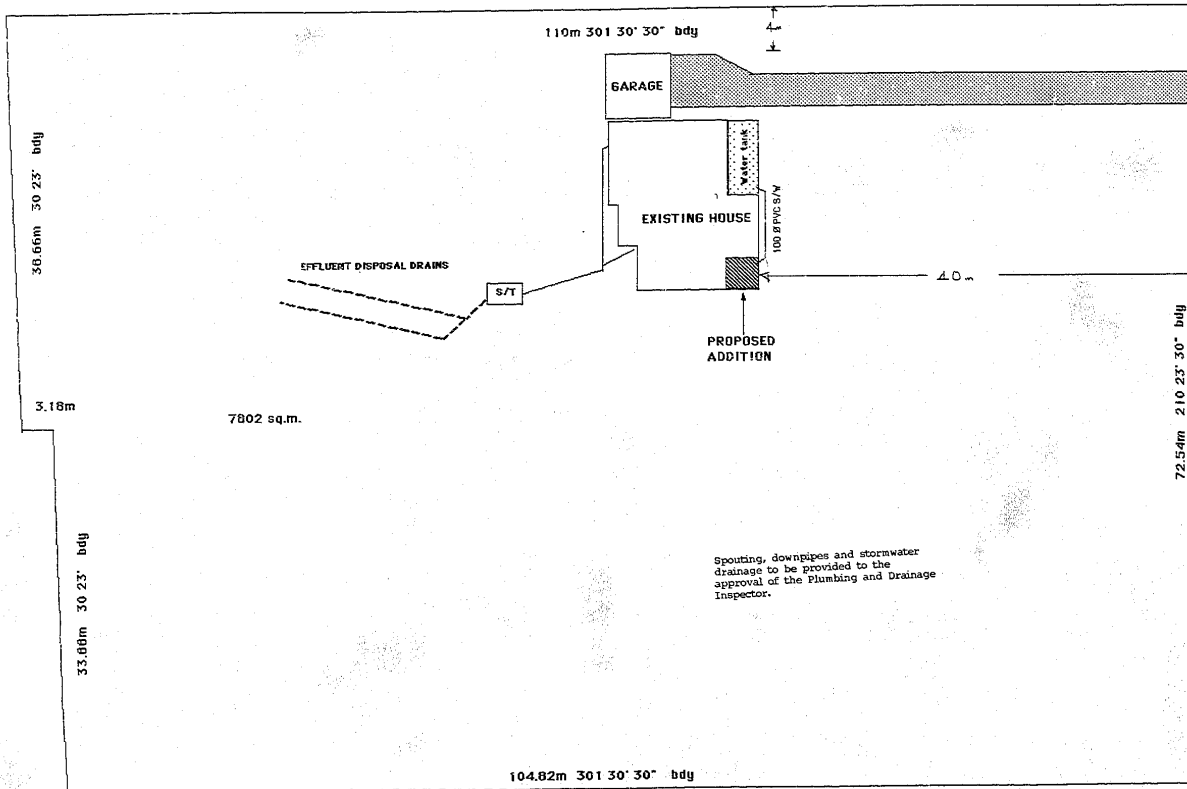
100 x 50mm in lieu of
used with a similar

under studs

checked into studs.
- 100 x 50mm.

to end
10mm and

external weatherboards
external doors on overhead
roller doors.



STATE HIGHWAY 1

PLANS AND SPECIFICATION

APPROVED

SUBJECT TO SUCH CONDITIONS AS ARE TO BE ENDORSED ON OR APPENDED TO BUILDING PERMIT

SIGNED *[Signature]*
BUILDING INSPECTOR

DATE 25/11/22

PLANS & CALCS
C.A.D. SPECIALISTS

CONSULTING ENGINEERS, DRAFTING

325 MAIN RD, DREWA
Ph./ FAX 09 426 9203

SITE & DRAINAGE
SCALE 1:250 DRAWN AUG 92
REFERENCE DWG 1/1892

CHECKED, GREG SHAW BE MIPENZ
REGISTERED ENGINEER

ALTERATIONS FOR HARPER PH 4263421
LOT 1 DP74321 STATE HIGHWAY 1 WAINUI *Drewa Plan*

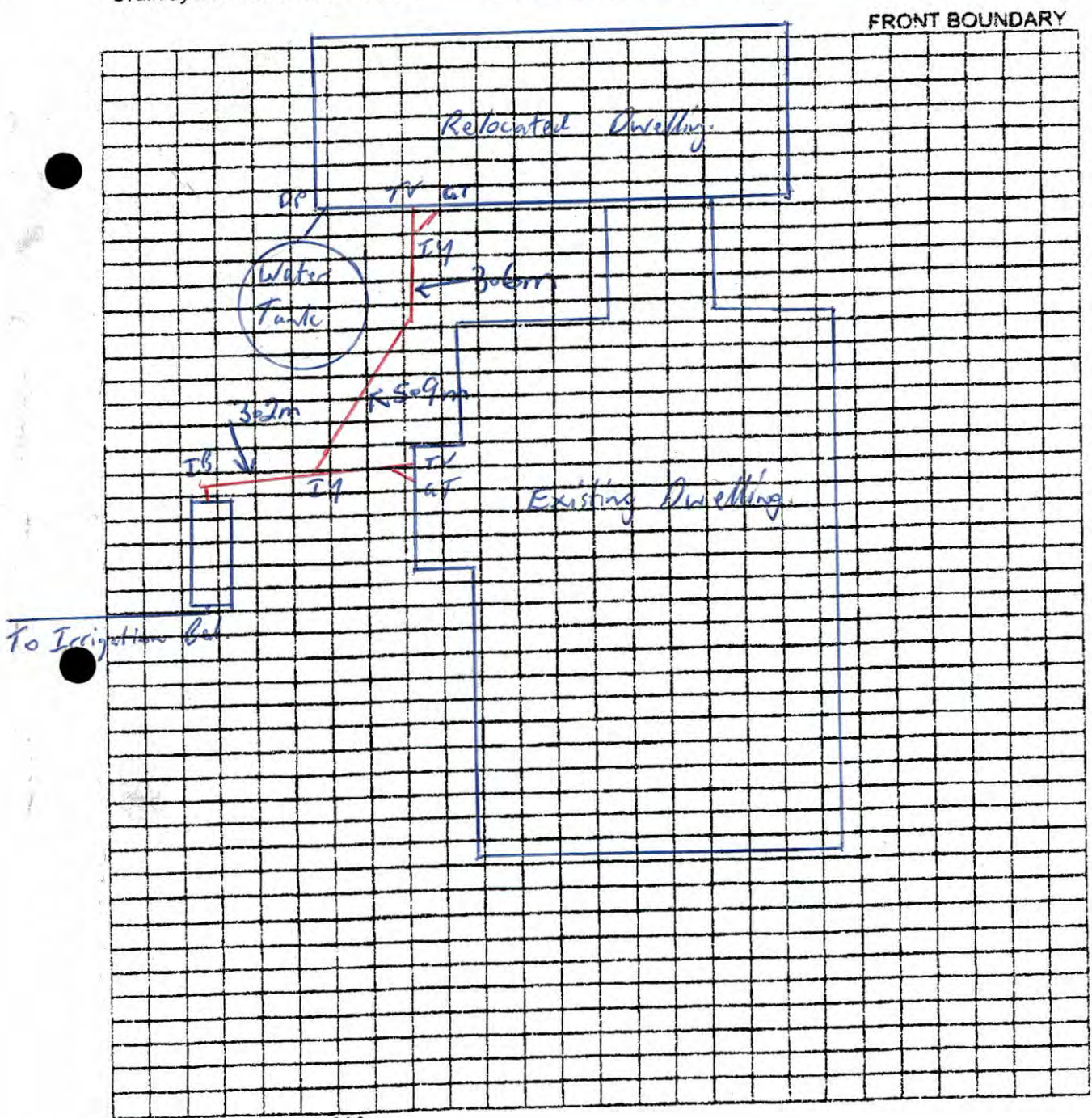
1686 Dairy Flat Highway

Date	Reference	Description
1964	6993	Building consent for erection of a lean-to carport.
1996	960995	Building consent for construction of freestanding fireplace.
1999	991245	Building consent for alterations to dwelling.
2006	62070	Building consent for relocation of second-hand building, construction of new link building and installation of new septic tank. A Project information memoranda provided by Council noted that there were no hazardous contaminants recorded in council files for the site.
2006	51311	Resource consent application for relocation of second-hand dwelling.



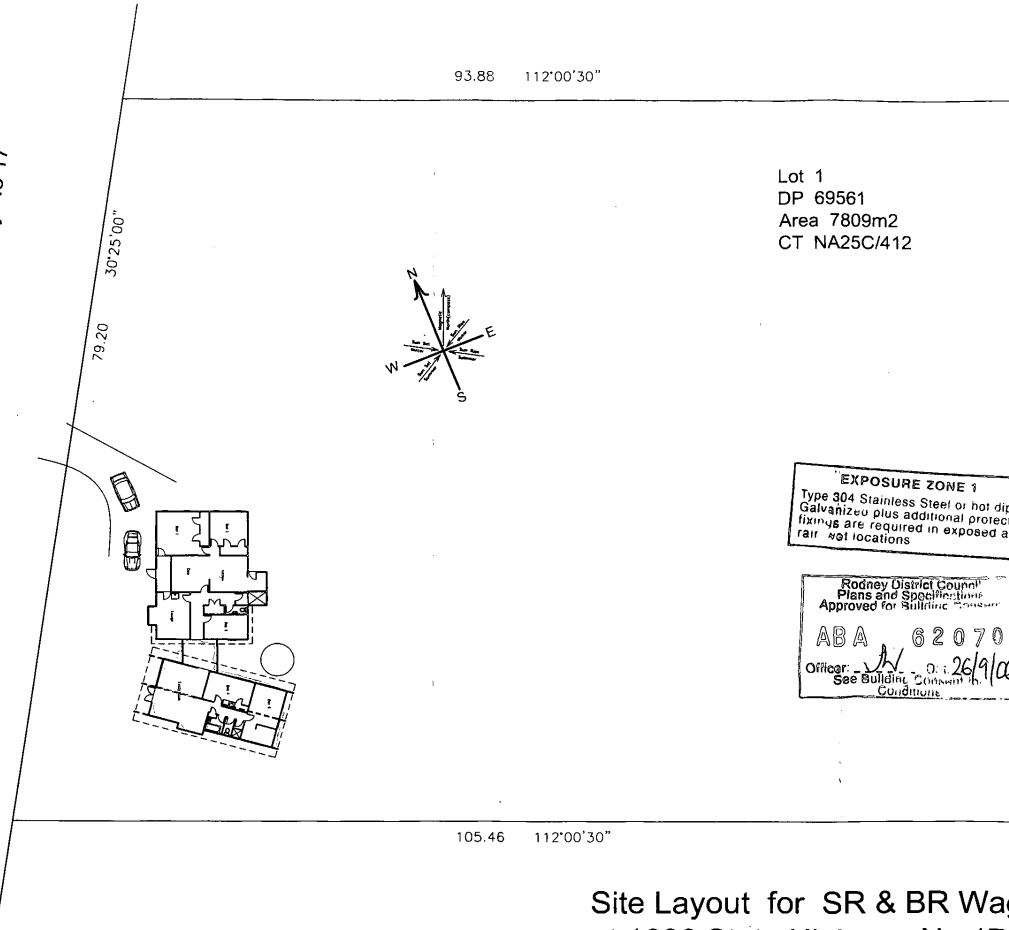
Owner: Wagstaff
Job Address: 1686 State Hwy 17
Lot No: _____ DP No: _____
Drainlayers - Name and Address: PA Oliver 10084

Consent No: 62070
Inspector: Jaw B
Inspected Date: 27/11/06



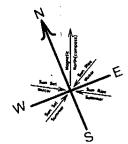
SCALE 1m = 200m

State Highway No 17



93.88 112'00'30"

Lot 1
DP 69561
Area 7809m²
CT NA25C/412



EXPOSURE ZONE 1
Type 304 Stainless Steel or hot dipped Galvanized plus additional protection fixings are required in exposed and rail locations

Rodney District Council
Plans and Specifications
Approved for Building
ABA 62070
Office: *[Signature]* 26/9/00
See Building Contract Conditions

105.46 112'00'30"

Site Layout for SR & BR Wagstaff
at 1686 State Highway No 17 Silverdale
Drawn B.W.

Scale 1:400 Code 31.08.06 4025

State Highway No 17

30'25.00"

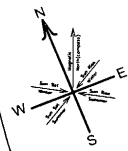
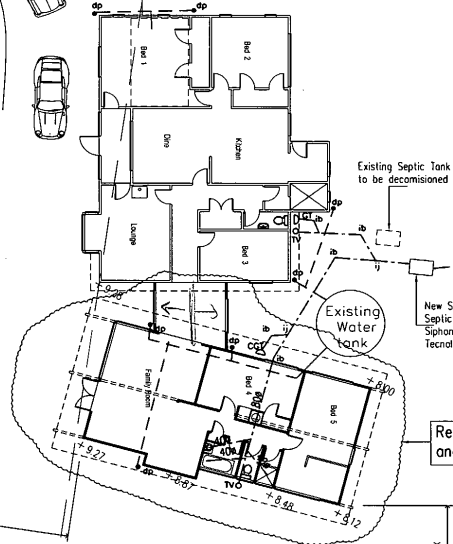
79.20

+9.51

+9.32

10.35

Down set back Line



100% Reserve Area.

Plumbing Waste Pipes
 Main one pipe system 100mm ϕ with 50mm ϕ vent
 Min gradients 1:40
 All wastes to be 50mm ϕ
 Min gradients 1:40
 Any pipe with a development length exceeding 10m to be fitted with a AS valve.
 All waste pipes to be supported at 500mm c/s. Plumbing to AS/NZS3500.2

Drainage Pipes
 All drainage pipes to be 100mm ϕ Upvc at a min gradient of 1:50
 All to G13/AS1

Ensure that the on-site waste water treatment and disposal system complies with the A.R.C. Environment Technical Publication No. 58.

Manawatu District Council
 Plans and Specifications
 Approved for Building Consent
 ABA 62070
 Officer: *[Signature]* Date: 26/9/06
 See Building Consent for Conditions

Relocated building and new link

Site Coverage 3.12%

8m approx

105.46 112'00'30"

NOTES:

1. All works to comply to NZS 3604 and the NZBC unless noted.
2. Treatment plant and associated disposal field to attached design.
3. All Down pipes to be 80mm ϕ .
4. Earthworks nominal, basically site cleanup, approx 5m3.

Site Layout for SR & BR Wagstaff
 at 1686 State Highway No 17 Silverdale
 Drawn B.W.

Scale 1:200 Code 31.08.06 4025

ROAD FRONTAGE

10' 20' 30' 40' 50' 60' 70' 80'

SITE PLAN

RESIDENTIAL SECTIONS

The site plan must be accurately drawn to the scale provided (16 feet to 1 inch).

ALL OTHER SECTIONS

(including farms, etc.)

Please state scale used.

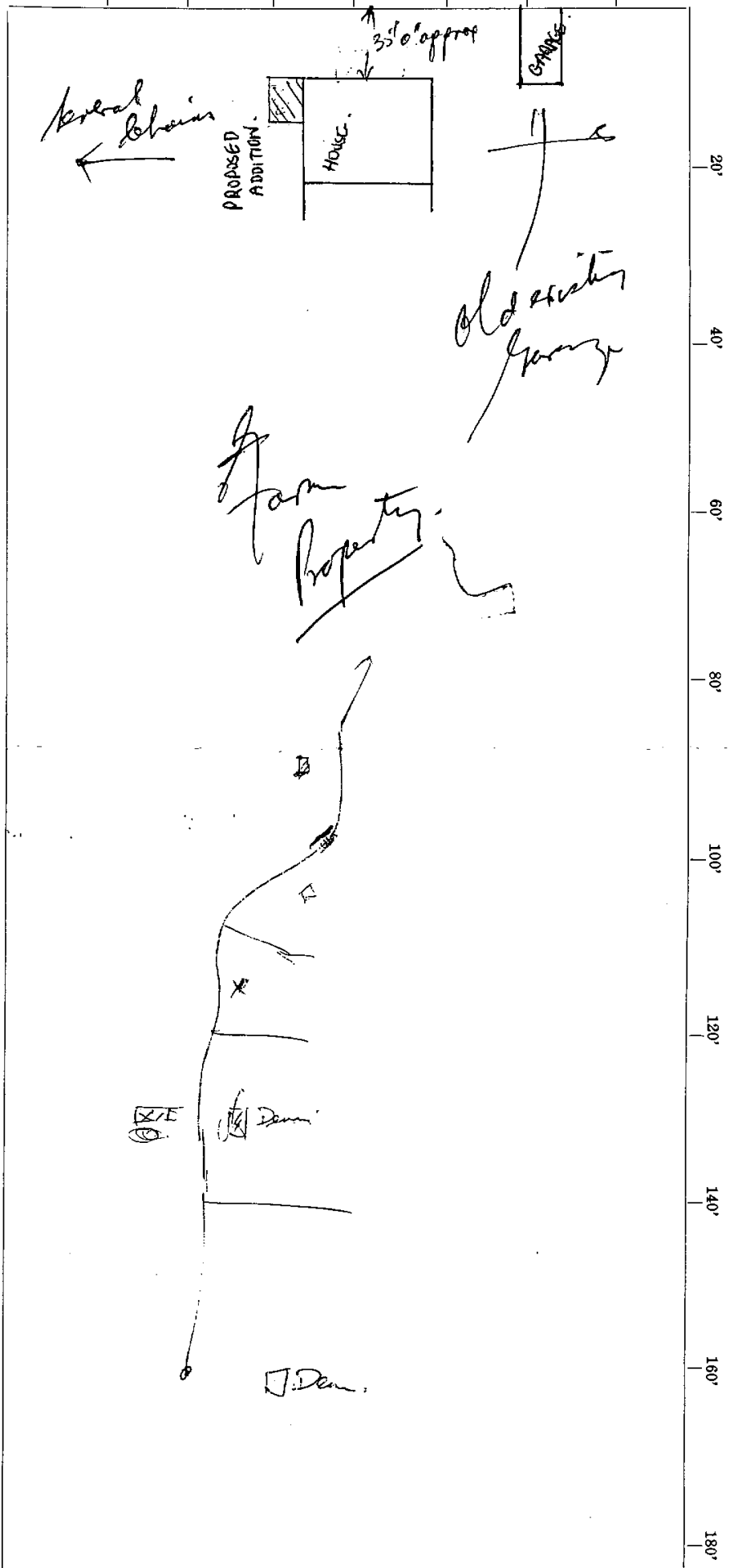
Note

1. This site plan must show the desired position of the proposed building and also ALL existing buildings.
2. Distances of each building from boundary lines must be clearly indicated. Consult your Building Inspector if in doubt as to Council's requirements as to Siting of Buildings.
BUILDING INSPECTORS ARE AVAILABLE AT COUNTY OFFICE BETWEEN 8.30-9.45 A.M. MONDAY TO FRIDAY.
3. Separate plans, drawn to scale (preferably 1/8" or 1/4" to 1'), must be submitted, showing a ground plan, and elevations of two sides. In cases of extensions to existing buildings, these plans should show the whole building, and the extension should be shaded or coloured.
4. Applications, plans and specifications MUST be made in duplicate, except for minor outbuildings.
5. Location plan must be completed.

PENCIL DRAWINGS WILL NOT BE ACCEPTED.

IMPORTANT:

A condition of this permit is that THE BUILDER is responsible for all stormwater drains being constructed to comply with health inspectors requirements.



REAR BOUNDARY

1700 Dairy Flat Highway

Date	Reference	Description
1977	95242	Building consent application for construction of new 158 m ² dwelling.

GRAPH FOR PLAN:—

Where drainage plans are necessary (see page 2) the graph below is to be completed accurately to scale in ink, and must show clearly street boundary, property boundaries, outline of buildings as well as layout of ALL drains and inspection fittings.

Owner's Name: MARYMAS BUTLER - STEWART

State Highway 17

Scale: Metric

Address of Property: MAIN RD. SILVERDALE

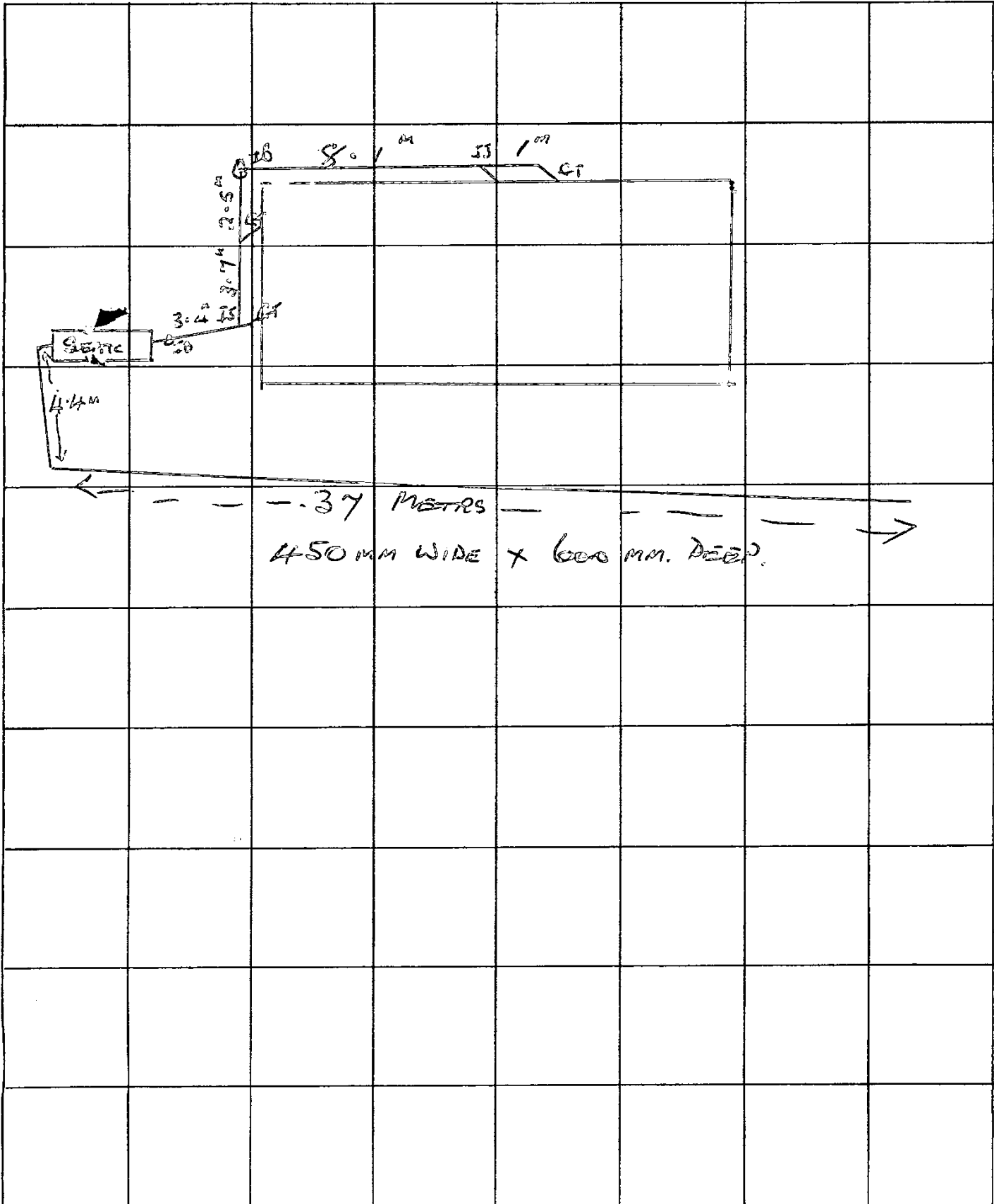
Where possible use 1 : 20

Lot D.P.

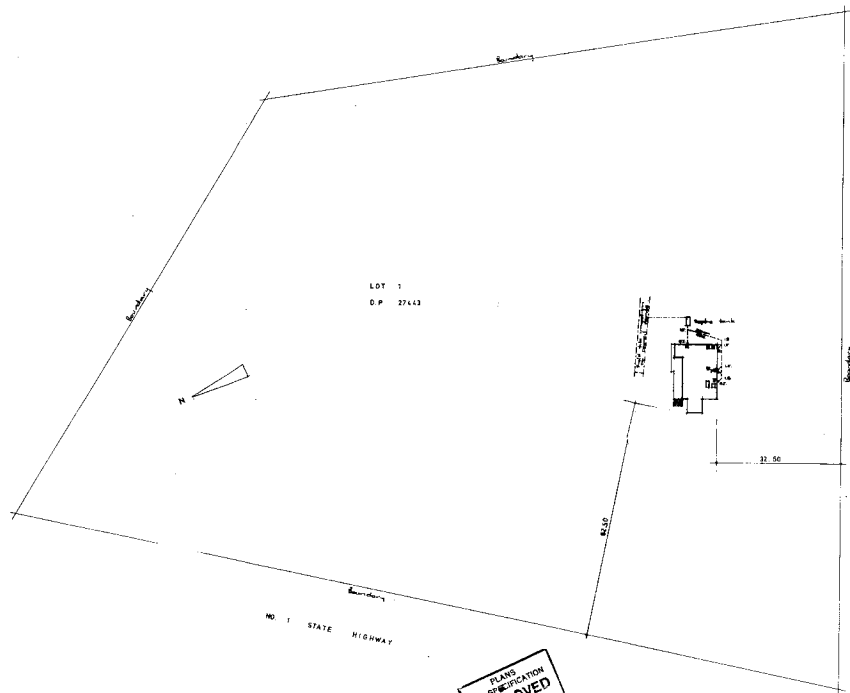
Otherwise use 1 : 200

Drainlayer's Name: R.V. FLEKMAN.

Please Indicate Scale Used.



For Office Use Only:	
Drainage Permit No.	Date inspected <u>20.8.83</u> Inspector <u>[Signature]</u>
Building Permit No.



PLANS
AND SPECIFICATION
APPROVED
SUBJECT TO SHOW
SHEDDING AS ARE TO
BE EXERCISED ON THE
BUILDING PERMIT
SHOWING
W. J. Mason
ARCHITECT
DATE 20-9-77

PROPOSED RESIDENCE AT NO. 1 STATE HIGHWAY SILVERDALE FOR
MR & MRS C. M. BUTLER — STONEY.

SCALE —
1:500

SITE PLAN



ESTABLISHED BY
W. J. MASON & ASSOCIATES
111 FLOOD ROAD, HOVE, VIC.
1 BOWEN ST, MELB. (SHEPPARD ST. JUNCTION)
PHONE 439 4141



DEPARTMENT OF THE
SURVEYOR-GENERAL
BRIDGEWAY VIC.

PLAN NO.
2104
SECTION — L.A.M.
MASON — L.A.M.
DATE — 30.9.77

ENTRY NO.
TWO
SHEET OF 2

1732 Dairy Flat Highway

Date	Reference	Description
1974	750362	Subdivision consent application to create an additional house lot. Declined.
1984	76420	Building consent for extension to dwelling.
1996	961123	Retrospective consent to build new deck (built around 1994).
1996		A LIM obtained in connection with the sale of the property did not record the presence of any potential contaminants on site.
1996	21760	Land use consent to move a relocatable 65 m ² house onto the site south of the existing stables. It is understood that the consent lapsed and house was not moved on site.

343-17

11/17/77

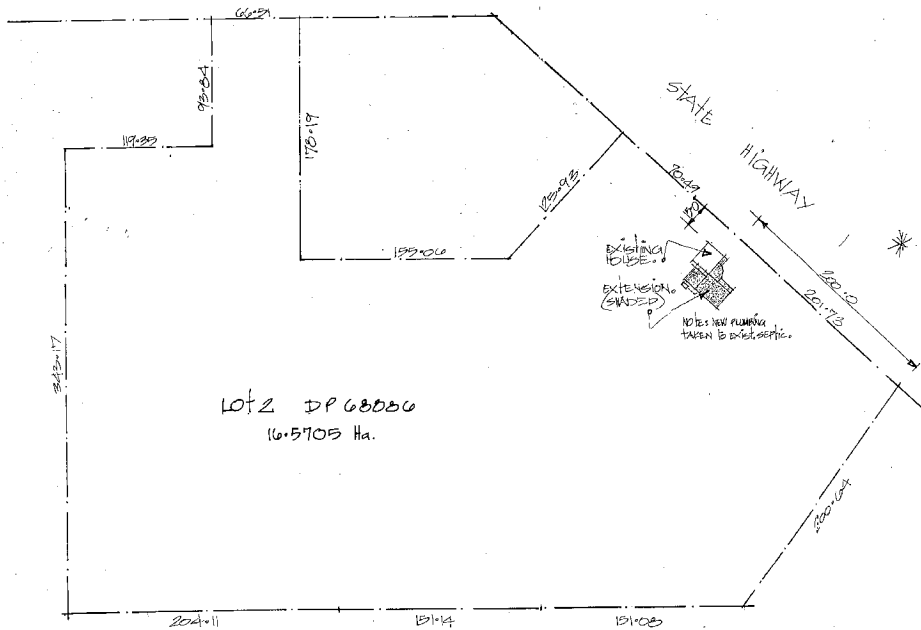
PPPS

11/17/77

11/17/77

11/17/77

STATE HIGHWAY 1



LOT 2 DP 68006
16.5705 Ha.

* Stormwater drainage directed into existing house system.

PLANS AND SPECIFICATION

APPROVED

SUBJECT TO SUCH CONDITIONS AS ARE TO BE ENFORCED ON OR APPENDED TO BUILDING PERMIT

SIGNED *H. Scott*
BUILDING INSPECTOR

DATE 2-2-84

STORMWATER DISPOSAL TO THE SATISFACTION OF D.C.C. BUILDING INSPECTOR

SITE PLAN SCALE 1:2000

CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE. DIMENSIONS TO FACE. PRECEDENCE OVER SCALE.

ADDITIONS TO EXISTING HOUSE - STATE HIGHWAY 1 - VEGE. CLEARANCE.

architectural draughtsman

101/111, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440, 442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 500, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 554, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692, 694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720, 722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748, 750, 752, 754, 756, 758, 760, 762, 764, 766, 768, 770, 772, 774, 776, 778, 780, 782, 784, 786, 788, 790, 792, 794, 796, 798, 800, 802, 804, 806, 808, 810, 812, 814, 816, 818, 820, 822, 824, 826, 828, 830, 832, 834, 836, 838, 840, 842, 844, 846, 848, 850, 852, 854, 856, 858, 860, 862, 864, 866, 868, 870, 872, 874, 876, 878, 880, 882, 884, 886, 888, 890, 892, 894, 896, 898, 900, 902, 904, 906, 908, 910, 912, 914, 916, 918, 920, 922, 924, 926, 928, 930, 932, 934, 936, 938, 940, 942, 944, 946, 948, 950, 952, 954, 956, 958, 960, 962, 964, 966, 968, 970, 972, 974, 976, 978, 980, 982, 984, 986, 988, 990, 992, 994, 996, 998, 1000

1738 Dairy Flat Highway

Date	Reference	Description
2012	59404	Resource consents to establish, maintain and operated a mobile phone tower. Auckland Council confirmed that the site was not listed in the contaminated sites register.
2014	62849	Subdivision application for boundary adjustment between Sec 1 and Sec 3 SO 308591.
2016	67823	Land use consent to construct a vehicle/machinery storage shed and office building to operate to business activities. The proposed activity involved 1227 m ³ of earthworks. At the time of the application the site was vacant with predominantly grassed pasture cover. A geotechnical investigation report by GWE noted that significant filling had been carried out in the past (prior to 2006) to form the ground contours with depth of fill between 1.2 and 2 m close to the north-west boundary and between 5.5 and 6.4 m over the remaining northern part of the property. A fill bund (up to 1 m high) was present parallel with the north-western property boundary in part. An application was made in April 2021 to extend the lapsed period of the resource consent. Granted for five years from May 2021.
2017	10093193	Building consent for construction of office and workshop. Code compliance certificate unable to be issued.
2017	10288120	Building consent application for construction of office. Relinquished 2019
2020	21477305	Abatement notice relating to additional signage on front façade of Porter, building at U-Sell premises

TAYLOR architecture & environment ltd, 404 9 418 0200
 post: 9 wairuna avenue, northcote park, auckland 0627
 www.taylorstudio.co.nz
 DRAFT RC ISSUE 27/05/16
 RC ISSUE 03/06/16
 NOTE: It is the responsibility of the contractor to verify all dimensions on the plan to ensure compliance with the Resource Management Act 1991 and the Resource Management Act 1991. The contractor is to ensure that all work complies with the New Zealand Building Code, all amendments thereto and all other relevant New Zealand Standards. All property lines and materials shall be laid and topped in strict accordance with the manufacturer's specifications. TAYLOR architecture & environment Ltd under no circumstances accept any responsibility for the accuracy of any dimensions or areas specified.

10/08/2016
 Approved Resource Consent Plan
 LAN - 67823
 Auckland Council



TAYLOR
 STUDIO

PROJECT: Silverdale New Build
 CLIENT: Joe Allen
 SITE: Lot 1 DP 480626 Dairy Flat Silverdale

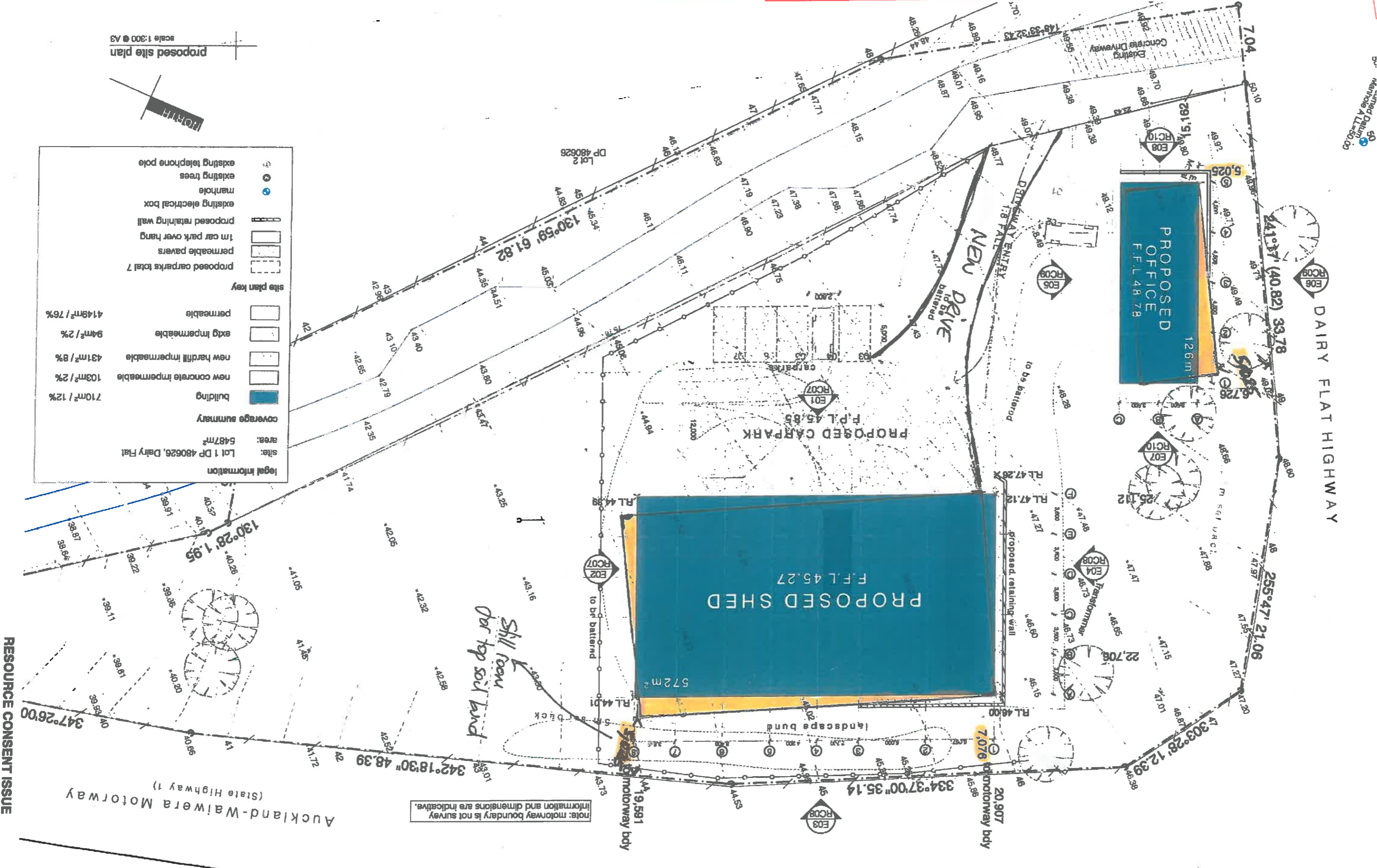
PROJECT REF: T0438 - Silverdale New Build
 DATE: 21/06/16
 SCALE: 1:300 @ A3
 SHEET: RC02
 REVISION: A

Proposed Site Plan

proposed site plan
 scale 1:300 @ A3

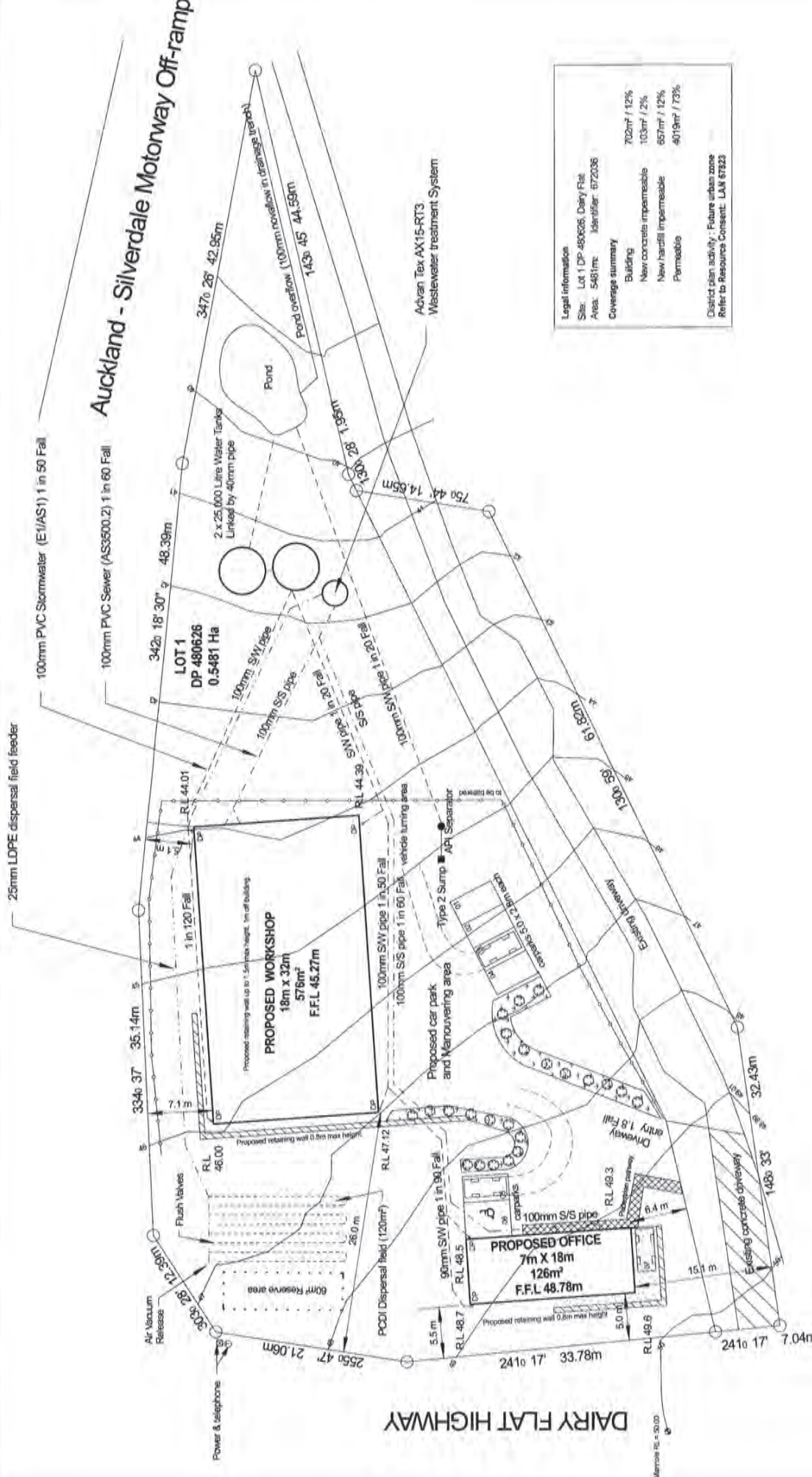


legal information	
site:	Lot 1 DP 480626, Dairy Flat
area:	5487m ²
coverage summary	
building	710m ² / 12%
new concrete impermeable	103m ² / 2%
new hardfill impermeable	431m ² / 8%
exd impermeable	94m ² / 2%
permeable	4149m ² / 76%
site plan key	
proposed carparks total 7	
permeable pavers	
1m car park over hang	
proposed retaining wall	
existing electrical box	
manhole	
existing trees	
existing telephone pole	



RESOURCE CONSENT ISSUE

Auckland - Silverdale Motorway Off-ramp



Legal information
 Site: Lot 1 DP 480626, Dairy Flat
 Area: 5461m² Identifier: 672036
 Coverage summary
 Building: 702m² / 12%
 New concrete impermeable: 103m² / 2%
 New hardfill impermeable: 657m² / 12%
 Permeable: 4019m² / 73%

Discharge plan activity: Future urban zone
 Refer to Resource Consent: LAM 67623

© 2014/2017 Original Drawing for Building Consent.
 No. 1042017
 Date: 10/04/2017
 Revision description:

Wide Span Sheds
 No Compromise Steel Building Solutions
 285 Pukari Way
 Silverdale 1051
 Phone: 0920 94 33 77

Project name & address:
**Wide span Sheds Silverdale
 Office & Workshop
 1738 Dairy Flat Highway
 Silverdale**

Drawing Description:
**Proposed
 Site Plan**

Job Number: **ZAUC170001**
 Date: **April 2017**
 Sheet Size: **A3**
 Drawing Number: **9**
 Scale: **1:400**




legal information
 site: Lot 1 DP 480626, Dairy Flat
 area: 5487m²

existing site key

- Electrical Box
- Manhole
- Bore Hole
- Cesspit
- Tree
- Telephone Pole
- Boundary
- Easement
- Fence
- Edge of Metal
- Vehicle Xing
- Edge of Concrete

TAYLORED architecture & environments Ltd. +64 9 418 5260
 post: 6 waimana avenue, northcote point, auckland 0627
www.taylorredstudio.co.nz
 NOTE: It is the responsibility of the contractor to verify all dimensions on site prior to commencing all work. The contractor is to ensure that all work complies with the New Zealand Building Code, all amendments thereof and all relevant New Zealand Standards. All propriety items and materials shall be fixed and applied in strict accordance with manufacturers specifications. TAYLORED architecture & environments Ltd under no circumstances accepts responsibility for payment of any products or services specified.

ISSUE:	DATE:	NOTES:
DRAFT RC ISSUE	27/05/16	
RC ISSUE	03/06/16	



LAN - 67823
 Approved Resource Consent Plan
 10/08/2016



TAYLORED
STUDIO

PROJECT: Silverdale New Build
 CLIENT: Joe Allen
 SITE: Lot 1 DP 480626 Dairy Flat Silverdale

DRAWING TITLE:
 existing site plan

PROJECT REF:	
T0438 - Silverdale New Build	
DATE:	SCALE:
21/06/16	1:500 @ A3
SHEET:	REV:
RC01	A

Sec 6 SO 308591

No property file information

1744 Dairy Flat Highway

Date	Reference	Description
1985	77555	Documents relating to relocation of existing dwelling and installation of original septic tank and drainage field.
1992	15813	Land use consent to replace an existing cross-lease arrangement with three separate titles. Includes land to the east of the motorway.
2015	20414629 LAN- 62501	Resource consent to establish rural service depots on 1744 and 1748 Dairy Flat Highway. Consent included relocation of a building on two 1478 dairy flat Highway as well as 10,000 m³ of earthworks to create more level yard areas and a wetland the stormwater management. A plan showing cut and fill in the north and west of the sites is attached. The land use consent application noted the depot comprising yard areas, 2 yard managers dwellings (existing), a workshop/storage building, and amenities building, and a range of portable buildings and containers. Noted that no hazardous chemicals would be stored on site.
2015	1022234	Building consent to install new wastewater treatment system for detached dwelling.
2015	460	Engineering plans for the proposed earthworks.
2015		Geotechnical report for proposed office relocation. Noted the presence of approximately 0.5 m of hard fill (gravel and asphalt mix) above natural clays.
2018	60049257	As built stormwater plans.



5100 l Septic Tank fitted with 0078 Solids Filter.

Plus 2.6 m² Textile Filter Tank and 2 pumps:
ADN + SPA 24

Existing S/S Line

RECEIVED
20 JAN 2016
AUCKLAND COUNCIL

New S/S Line TO
new septic system

100% Reserve Area

AUCKLAND COUNCIL
Bc # 1022234
MINOR VARIATION APPROVED
Date: 22/1/16
Inspector: [Signature]

Lot 2
DP 74321

Pt Allot 210
Okura Parish
2.7781ha

Section 9
SO 308591
2.0894ha

540⁺⁺ m² Disposal Area comprising Dripline
at 1 metre centres stapled through MULCH

Section 1
SO 308831

Section 19
SO 308591

Northern Motorway

BY AUCKLAND COUNCIL

BA 1022234



INSTALL NOTE:

Exact location of installation to be defined on day of installation.

Invert on septic tank 600mm below finished ground level.

Installation required after earthworks but before any construction

Confirm all stormwater discharge and pipe work is clear of system.

No fill to be placed on irrigation area. No machinery to drive over system or irrigation area.



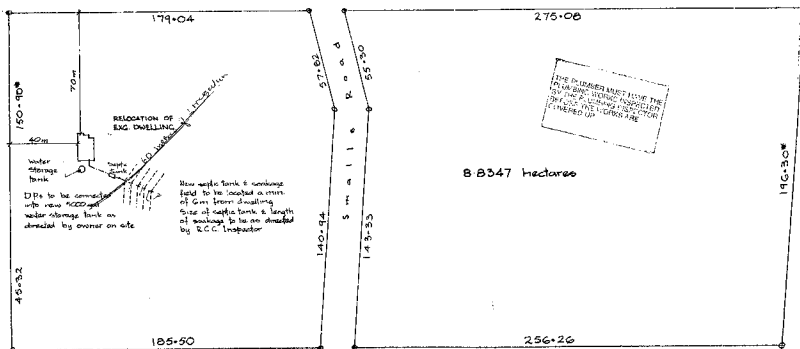
C & R SURVEYORS LTD

Registered Professional
Land Surveyors
PO Box 854
Orewa 0608
Phone (09) 429 4361
Fax (09) 429 5817

Karepiro Investments Ltd
Dairy Flat Highway
Silverdale

Topographic Survey - Sheet 3

1:500 1:1000	A1 A1
385027014	3483



Mr. & Mrs. C. O'CALLAGHANE,
SMALLS ROAD.

ALLOT. 212 PARISH of ORORA.

SITE PLAN FOR
RELOCATED DWELLING.
SCALE 1:1000.





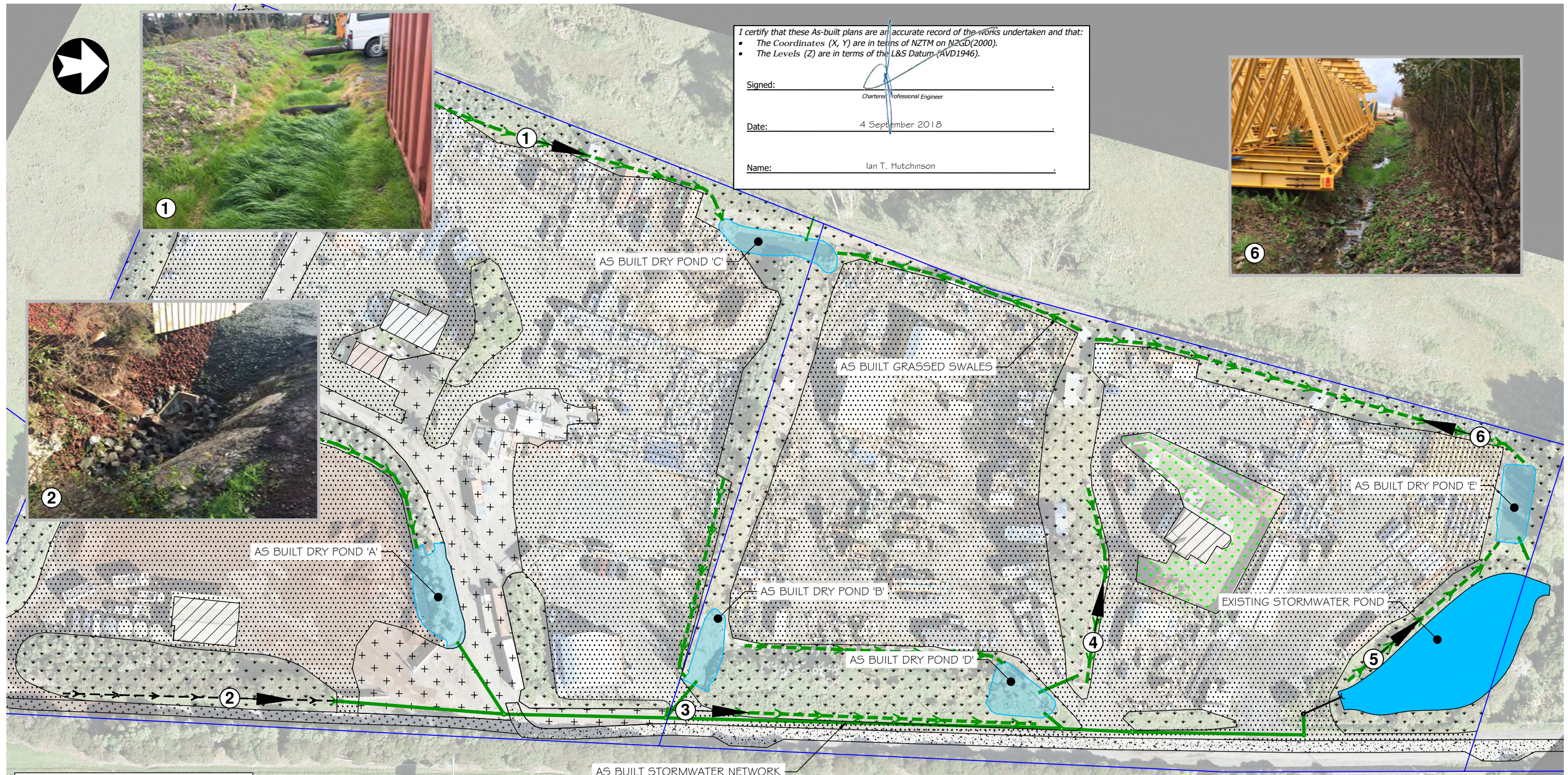
I certify that these As-built plans are an accurate record of the works undertaken and that:

- The Coordinates (X, Y) are in terms of NZTM on NZGD(2000).
- The Levels (Z) are in terms of the L&S Datum (AVD1946).

Signed: _____
Chartered Professional Engineer

Date: 4 September 2018

Name: Ian T. Hutchinson



LEGEND

	EXISTING BUILDING
	EXISTING SEALED SURFACE
	EXISTING CONCRETE SURFACE
	EXISTING METALLED SURFACE
	EXISTING LANDSCAPING
	EXISTING STORMWATER POND
	AS BUILT STORMWATER POND
	EXISTING OPEN DRAIN
	AS BUILT STORMWATER
	AS BUILT SWALE



No.	Revision	Drawn	Chk.	Appd.	Date
-	AS BUILT ISSUE	S.D	P.F	I.H	SEPT 2018

Hutchinson
CONSULTING ENGINEERS

PO Box 150, Orewa 0946
 154 Centreway Road, Orewa 0931
 Ph: 09 426 5702 www.hc.co.nz

Design	H. NORTON	APRIL 2018
Drawn	S. DAWSON	SEPT 2018
Checked	P. FARLEY	SEPT 2018
Approved	I. HUTCHINSON	SEPT 2018
Scale	1:1000 @ A3	
Scale vert. exag.		

Project
KAREPIRO INVESTMENTS LTD
1744 DAIRY FLAT HIGHWAY
SILVERDALE

Title
AS BUILT SITE PLAN

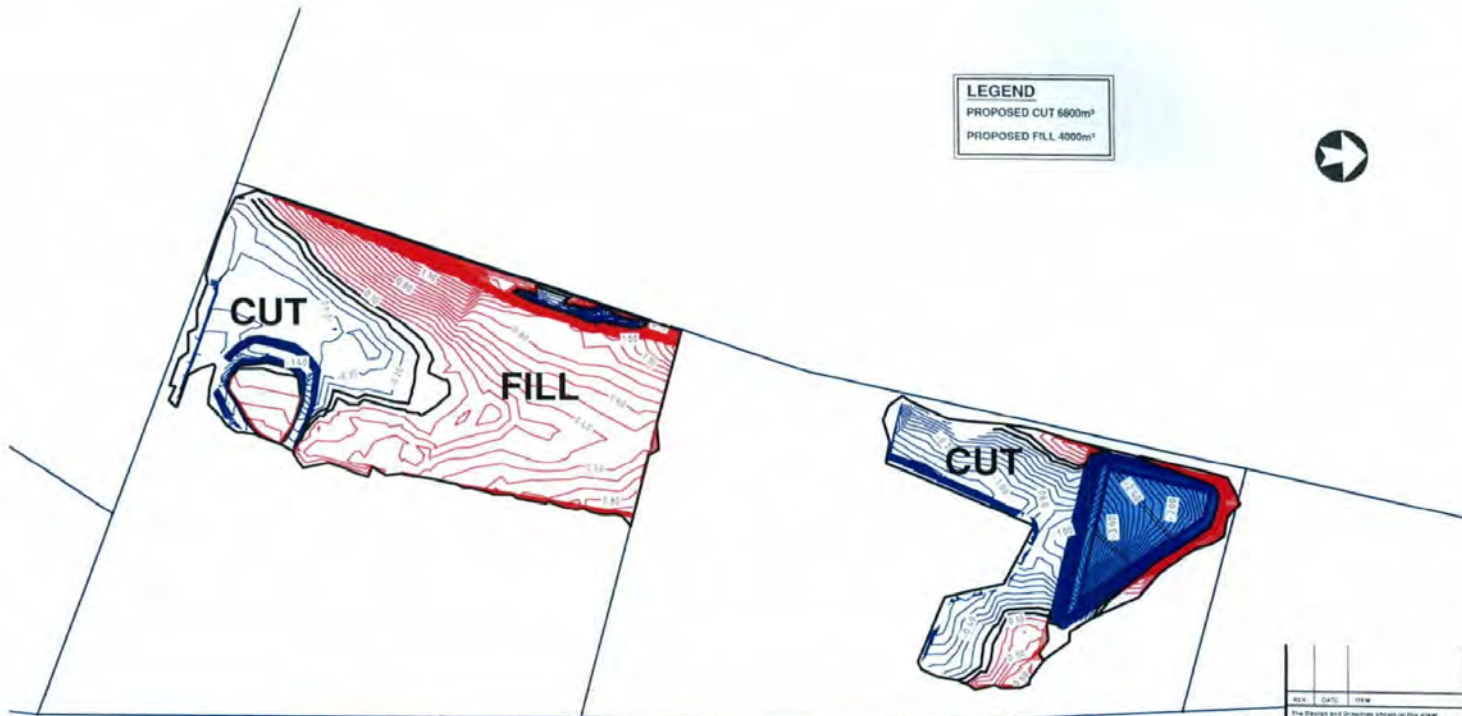
Job No.
A3-17276

Sheet No.
AB-002

LEGEND

PROPOSED CUT 6600m³

PROPOSED FILL 4000m³



NOTE:
ALL LEVELS RELATE TO L & S DATUM
ALL AREAS SUBJECT TO FINAL SURVEY

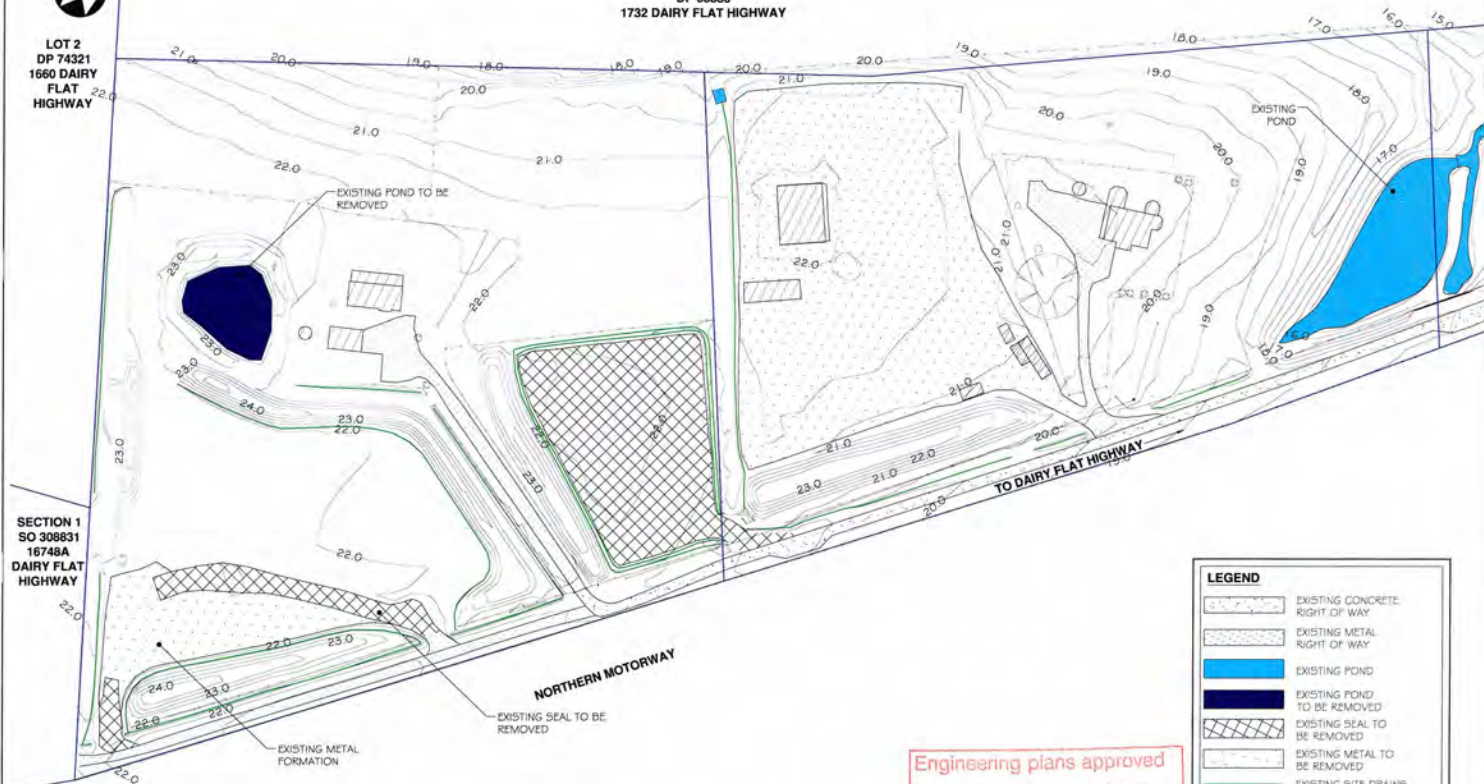
REV.	DATE	BY
The Design and Drawings shown on this stage remain the Copyright of Ian Hutchinson Consultants, Limited, and are not to be reproduced without their written Authority.		
DO NOT SCALE IF IN DOUBT - ASK		
		
HQ Box 100, Dinwiddie Road 158 Cromwell Street, Christchurch PH: 03 435 1702 Fax: 03 435 1809 www.HC.co.nz		
PROJECT KAREPIRO INVESTMENTS LTD 1766 DAIRY FLAT HIGHWAY SILVERDALE		
DRAWING TITLE PROPOSED CUT TO FILL PLAN		
SCALE 1:1000 (S&D)	DATE JUNE 2014	
TITLEBLOCK JC	SYNO 17276R EW-102	



LOT 2
DP 74321
1660 DAIRY
FLAT
HIGHWAY

PT LOT 2
DP 68886
1732 DAIRY FLAT HIGHWAY

SECTION 1
SO 308831
16748A
DAIRY FLAT
HIGHWAY



LEGEND	
	EXISTING CONCRETE RIGHT OF WAY
	EXISTING METAL RIGHT OF WAY
	EXISTING POND
	EXISTING POND TO BE REMOVED
	EXISTING SEAL TO BE REMOVED
	EXISTING METAL TO BE REMOVED
	EXISTING SITE DRAINS

Engineering plans approved

ENG-600 30/9/15

[Signature]
KAREPIRO INVESTMENTS LTD
1744 DAIRY FLAT HIGHWAY
SILVERDALE

RDC 21546

No.	Revision	Drawn	CHK.	Appd.	Date

H Hutchinson
CONSULTING ENGINEERS
PO Box 150, Orana 0545
154 Centreway Road, Orana 0531
Ph. 08 425 5700 www.hc.co.nz

Design
Drawn
Checked
Approved
Scale
Scale vert. exag.

H. WORTON
P. WILSON
P. FAHLEY
L. T. HUTCHINSON
1:1000 @ A3

SEPT 2015
SEPT 2015
SEPT 2015
SEPT 2015

Project
KAREPIRO INVESTMENTS LTD
1744 DAIRY FLAT HIGHWAY
SILVERDALE

Title
EXISTING SITE PLAN
Job No.
A3-17276

Sheet No.
E-002

1748 Dairy Flat Highway

Date	Reference	Description
1997	920380	Building consent for construction of a garage
2016	1020950	Building consent for relocated dwelling plus wastewater treatment systems for an existing dwelling and a relocated dwelling.

03 JUN 2016

WATER AND COUNCIL

JOB ADDRESS: 1748 DAIRY FLAT HIGHWAY
SILVERDALE, AUCKLAND 0931

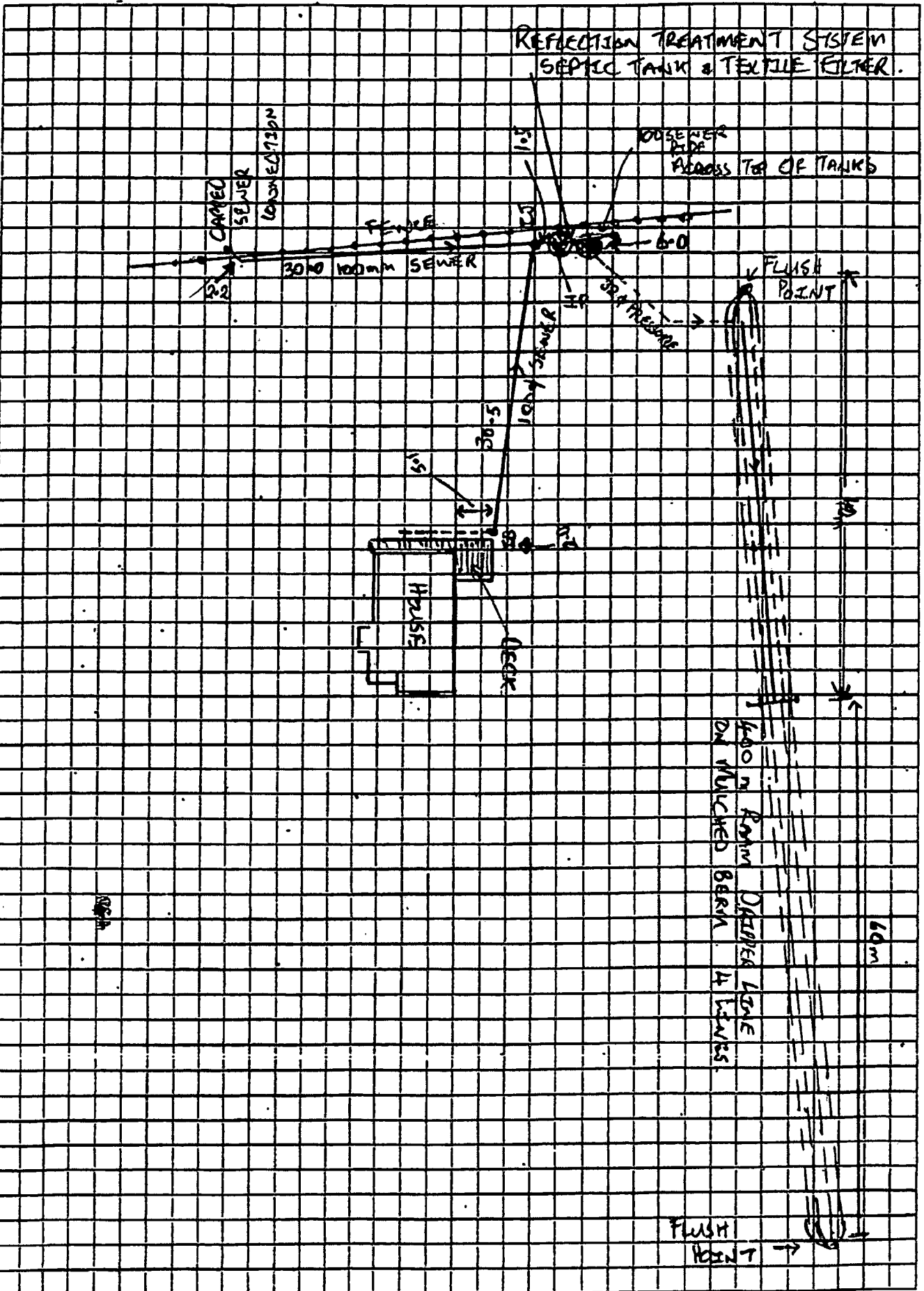
Permit No.: ABA1020950

LOT NO.: SECTION 19, SD 308591, PT ALLOTMENT 210 PSH OF OKURA SD 18072

Inspected Date:

DRAINLAYER'S NAME & ADDRESS:

FRONT BOUNDARY



JOB ADDRESS: 1744 DAIRY FLAT HIGHWAY
SILVERDALE

Permit No.: ABA 1020950

LOT NO SEC 9 S0308591

DRAINAGE SEC 10 S0308591

Inspected Date: 14-12-2013

DRAINLAYER'S NAME & ADDRESS: R OWEN PO Box 121 KUMEMU

FRONT BOUNDARY

RECEIVED

- 3 MAR 2016

AUCKLAND COUNCIL

RECEIVED

- 4 MAR 2016

AUCKLAND COUNCIL

AUCKLAND COUNCIL

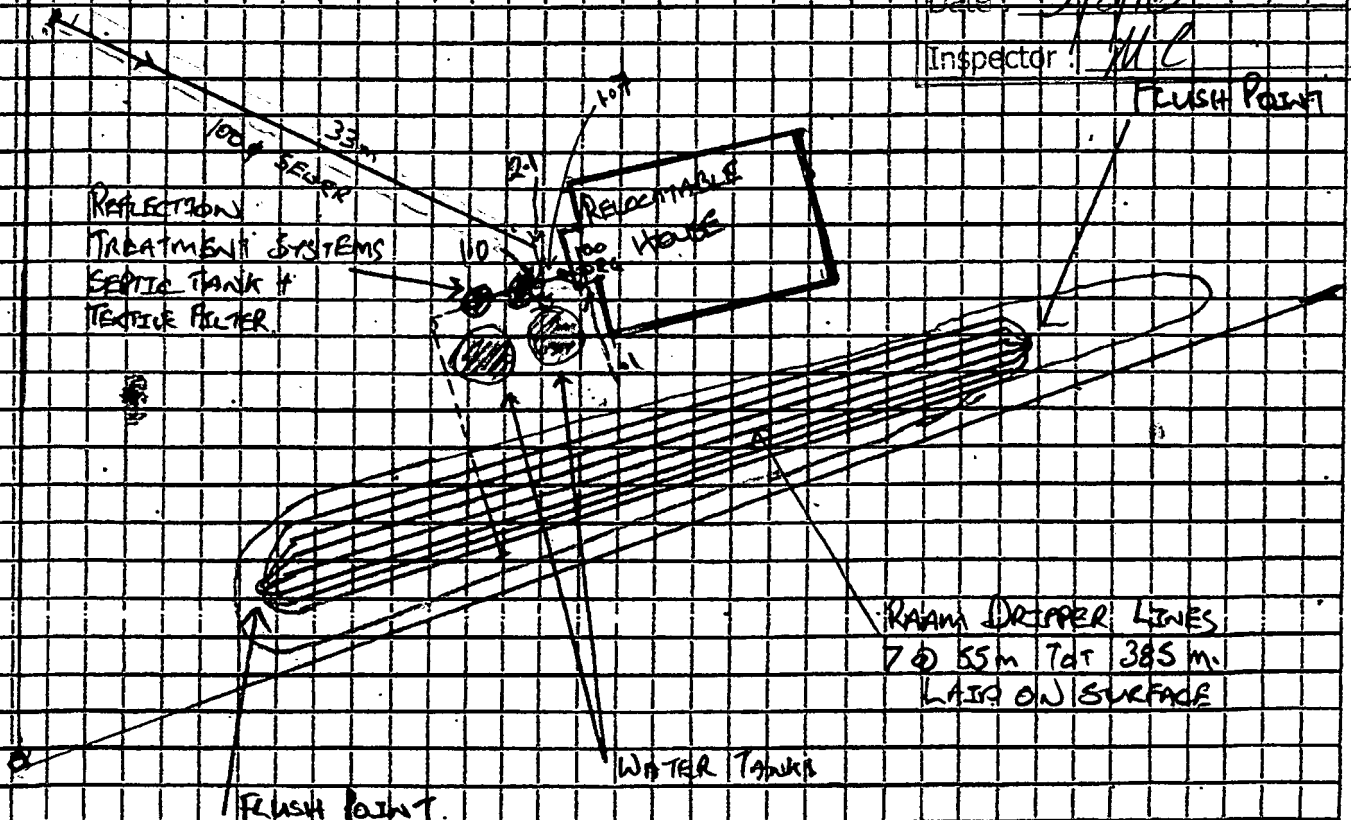
Permit # 1020950

MINOR VARIATION APPROVED

Date: 5/3/16

Inspector: M/C

FLUSH POINT



REFLECTION
TREATMENT SYSTEMS
SEPTIC TANK &
TRENCH FILTER

RELOCATABLE
HOUSE

RAINFALL DRIPPER LINES
7 x 55m Tot 385m
LAYS ON SURFACE

WATER TANK

FLUSH POINT

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK ALL LEVELS, DIMENSIONS AND RECORD TO SPOT LOCATIONS ON SITE BEFORE COMMENCING WORK.

SITE DETAILS

**Section 9 SO 308591, Section 10 SO 308591
Section 19 SO 308591 and Part Allotment
210 Parish of Okura SO 18072**

Zoning - General Residential Plan
Future Urban - Lifestyle Plan
- District
- SMA Plan 1

Site Coverage and Easements
Rate Review Consent ECR201
REGD. 42523
REGD. 42592

WATER ZONE - High
CORROSION ZONE -
(Enquire at 09 478 0000)

FIGURES PIPE #2627348

DEPTH (mm)
W10 55 @ 1.07400
W12 55 @ 1.07400
W14 55 @ 1.07400
W16 55 @ 1.07400
W18 55 @ 1.07400
W20 55 @ 1.07400
W22 55 @ 1.07400
W24 55 @ 1.07400
W26 55 @ 1.07400
W28 55 @ 1.07400
W30 55 @ 1.07400
W32 55 @ 1.07400
W34 55 @ 1.07400
W36 55 @ 1.07400
W38 55 @ 1.07400
W40 55 @ 1.07400
W42 55 @ 1.07400
W44 55 @ 1.07400
W46 55 @ 1.07400
W48 55 @ 1.07400
W50 55 @ 1.07400
W52 55 @ 1.07400
W54 55 @ 1.07400
W56 55 @ 1.07400
W58 55 @ 1.07400
W60 55 @ 1.07400
W62 55 @ 1.07400
W64 55 @ 1.07400
W66 55 @ 1.07400
W68 55 @ 1.07400
W70 55 @ 1.07400
W72 55 @ 1.07400
W74 55 @ 1.07400
W76 55 @ 1.07400
W78 55 @ 1.07400
W80 55 @ 1.07400
W82 55 @ 1.07400
W84 55 @ 1.07400
W86 55 @ 1.07400
W88 55 @ 1.07400
W90 55 @ 1.07400
W92 55 @ 1.07400
W94 55 @ 1.07400
W96 55 @ 1.07400
W98 55 @ 1.07400
W100 55 @ 1.07400

ALL DIMENSIONS SHOWN ARE TO THE CENTRE UNLESS OTHERWISE SPECIFIED.
ALL DIMENSIONS TO BE CHECKED BY THE CONTRACTOR.

NOTES

1. This site plan is a preliminary plan. It is subject to the approval of the Council and the Department of Building and Construction.
2. All dimensions are to the centre of the pipe unless otherwise specified.
3. All dimensions are to the centre of the pipe unless otherwise specified.
4. All dimensions are to the centre of the pipe unless otherwise specified.
5. All dimensions are to the centre of the pipe unless otherwise specified.
6. All dimensions are to the centre of the pipe unless otherwise specified.
7. All dimensions are to the centre of the pipe unless otherwise specified.
8. All dimensions are to the centre of the pipe unless otherwise specified.
9. All dimensions are to the centre of the pipe unless otherwise specified.
10. All dimensions are to the centre of the pipe unless otherwise specified.

GENERAL NOTES

A. This is a preliminary plan. It is subject to the approval of the Council and the Department of Building and Construction.
B. All dimensions are to the centre of the pipe unless otherwise specified.
C. All dimensions are to the centre of the pipe unless otherwise specified.
D. All dimensions are to the centre of the pipe unless otherwise specified.
E. All dimensions are to the centre of the pipe unless otherwise specified.

F. All dimensions are to the centre of the pipe unless otherwise specified.

G. All dimensions are to the centre of the pipe unless otherwise specified.

H. All dimensions are to the centre of the pipe unless otherwise specified.

I. All dimensions are to the centre of the pipe unless otherwise specified.

J. All dimensions are to the centre of the pipe unless otherwise specified.

K. All dimensions are to the centre of the pipe unless otherwise specified.

L. All dimensions are to the centre of the pipe unless otherwise specified.

M. All dimensions are to the centre of the pipe unless otherwise specified.

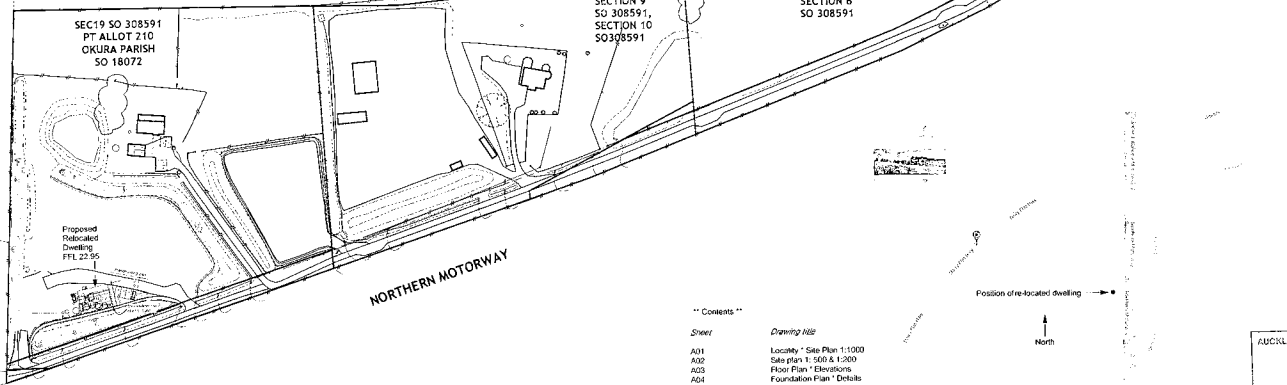
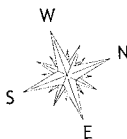
N. All dimensions are to the centre of the pipe unless otherwise specified.

O. All dimensions are to the centre of the pipe unless otherwise specified.

P. All dimensions are to the centre of the pipe unless otherwise specified.

Q. All dimensions are to the centre of the pipe unless otherwise specified.

R. All dimensions are to the centre of the pipe unless otherwise specified.



FULL SITE PLAN 1:1000

“Contents”

Sheet	Drawing title
A01	Locality / Site Plan 1:1000
A02	Site plan 1: 500 & 1:200
A03	Floor Plan / Elevations
A04	Foundation Plan / Details

Position of relocated dwelling →



Locality Plan



PROPOSED RELOCATED HOUSE
for Karepiro Investments Ltd
at 1744-1748 Dairy Flat Highway
Silverdale

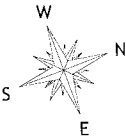
Notes
1. This site plan is a preliminary plan. It is subject to the approval of the Council and the Department of Building and Construction.
2. All dimensions are to the centre of the pipe unless otherwise specified.
3. All dimensions are to the centre of the pipe unless otherwise specified.
4. All dimensions are to the centre of the pipe unless otherwise specified.
5. All dimensions are to the centre of the pipe unless otherwise specified.
6. All dimensions are to the centre of the pipe unless otherwise specified.
7. All dimensions are to the centre of the pipe unless otherwise specified.
8. All dimensions are to the centre of the pipe unless otherwise specified.
9. All dimensions are to the centre of the pipe unless otherwise specified.
10. All dimensions are to the centre of the pipe unless otherwise specified.

Full Site Plan
DRAWN Michelle Hayward
DATE May 2015

SHEET
A01
SHEET 1 OF 4
JOB # GP 4

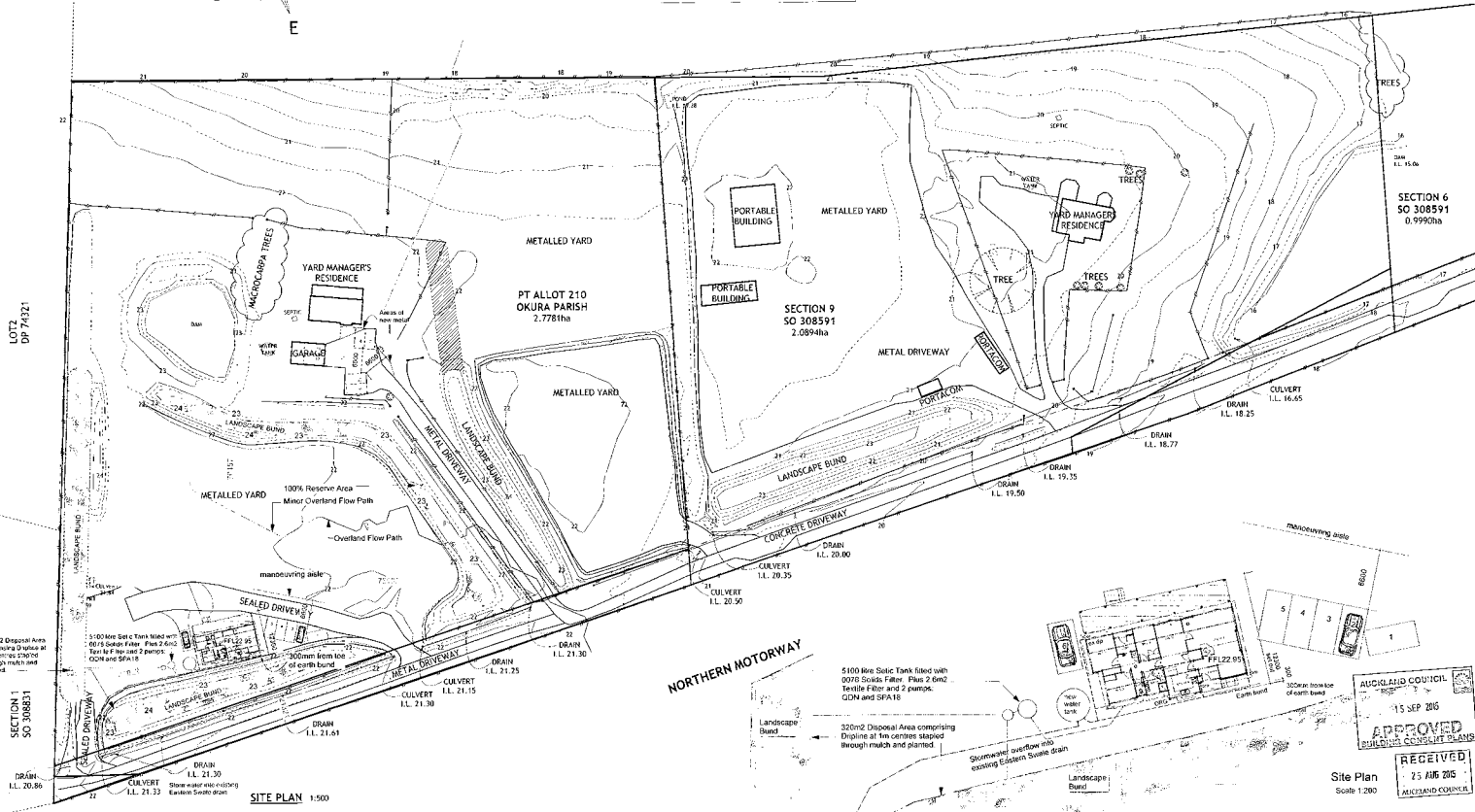


IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK ALL LEVELS, EMBANKMENTS & PROPOSED GRADES BEFORE COMMENCING WORK.



REFLECTION TREATMENT SYSTEM INSTALL NOTES:

- Exact location of installation to be defined on day of installation.
- Invert on septic tank 600mm below finished ground level.
- Confirm all stormwater discharge and pipe work is clear of system.
- No fill to be placed on irrigation area. No machinery to drive over system or irrigation area.



SECTION 6
SO 308591
0.9990ha

AUSLAND COUNCIL
15 SEP 2015
APPROVED
BUILDING COMPLIANCE PLANS
RECEIVED
25 AUG 2015
Site Plan
Scale 1:200
AUSLAND COUNCIL

PROPOSED RELOCATED HOUSE
for Karepiro Investments Ltd
at 1744-1748 Dairy Flat Highway
Silverdale

Part Site Plan	A02
DRAWN	Michelle Hayward
DATE	May 2015
SCALE	1:500 - A1
SHEET	2 of 4
JOB #	404

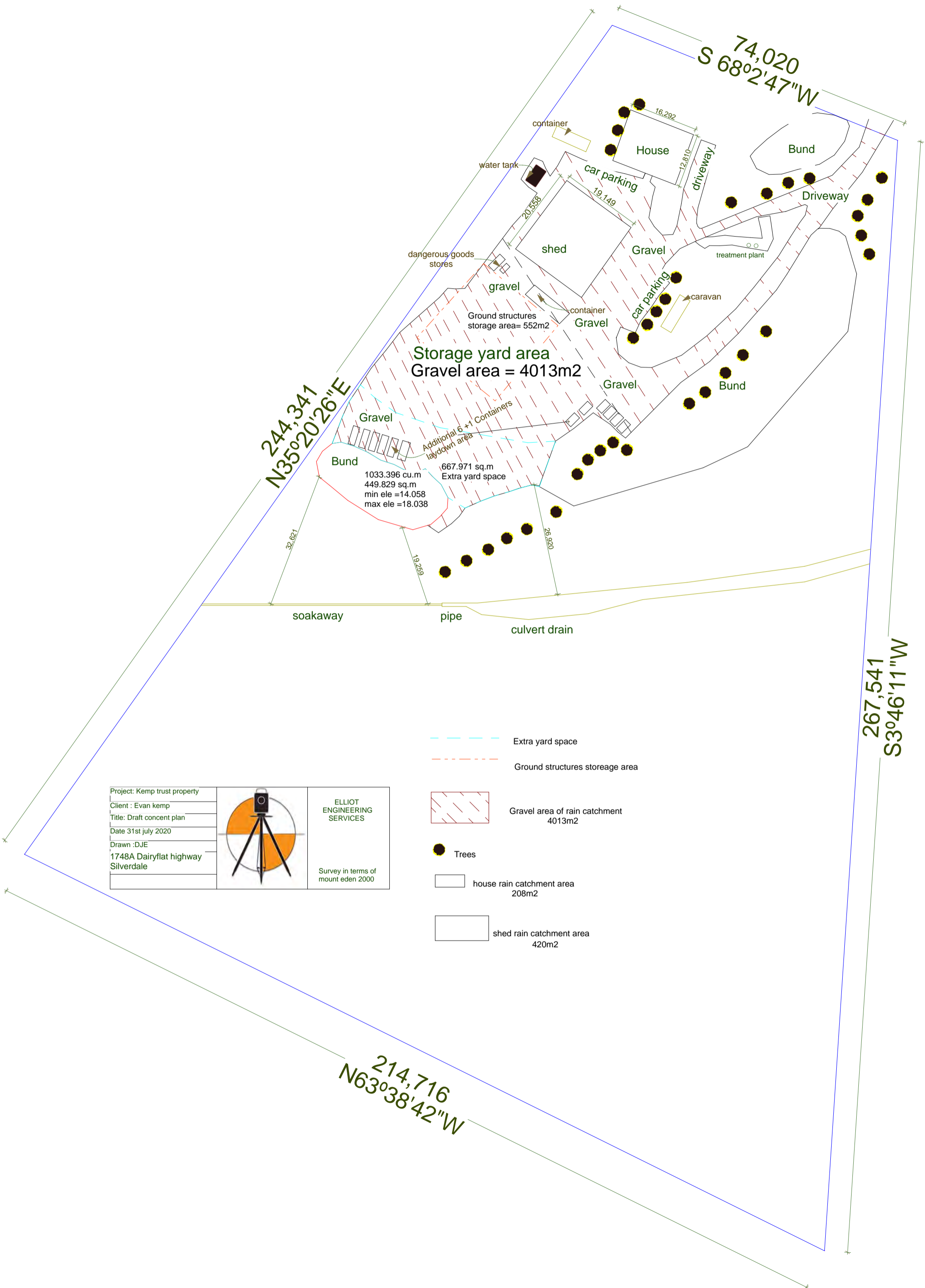



Plan: 012 2021 Web: 011 61 11159 Email: enquiries@planplans.co.nz







Notes
1. All dimensions are in millimetres unless otherwise stated.
2. All dimensions are to the centre of the pipe unless otherwise stated.
3. All dimensions are to the finished ground level unless otherwise stated.
4. All dimensions are to the finished ground level unless otherwise stated.
5. All dimensions are to the finished ground level unless otherwise stated.
6. All dimensions are to the finished ground level unless otherwise stated.
7. All dimensions are to the finished ground level unless otherwise stated.
8. All dimensions are to the finished ground level unless otherwise stated.
9. All dimensions are to the finished ground level unless otherwise stated.
10. All dimensions are to the finished ground level unless otherwise stated.

1748A Dairy Flat Highway

Date	Reference	Description
2003	33865	Project information memorandum associated with application for new detached dwelling and workshop - noted that "the site is recorded by the Council as being located in the vicinity of land containing an earthworks dumpsite which may not meet "good ground" criteria". Records indicated that the building sites were within the earth dump site. The workshop was originally intended to be for the building of a large catamaran for personal use.
2004	40185	Building consent for construction of new dwelling, associated waste water disposal system and workshop building. Report by Geotech Professionals Ltd did not record the presence of fill at the building sites
2007	52586	Retrospective resource consent application to establish and operate a research and development facility which will involve boatbuilding, brickmaking and stainless steel fabricating . Refused but reversed on appeal.
2010	284	Resource consent for construction of two passing bays along site right of way.
2018	Corresp.	Auckland Council noted that a site visit on 18 May 2018 confirmed the site had been extended using concrete based fill and stockpiling of asphalt road material. It was noted that the extension was to be set up for an earthmoving machinery depot (North Shore Plant & Civil). Instructed to cease activities and apply for resource consent for a managed fill disposal site.
2020	21487016	Abatement notice in respect of using the property as a depot. Noted that the site had been rented to "Black and White Container Hire" and "Ground Structures "who were both using the site as a depot for the business.
2020	60003278 & 60362683	Land use consent application to allow use of the site as a depot and retrospective land use consent for earthworks over an area of 500 m ² the volume of 1000 m ³ (including forming an earth bund).



Project: Kemp trust property		ELLIOT ENGINEERING SERVICES Survey in terms of mount eden 2000
Client : Evan kemp		
Title: Draft concent plan		
Date 31st july 2020		
Drawn :DJE		
1748A Dairyflat highway Silverdale		

-  Extra yard space
-  Ground structures storage area
-  Gravel area of rain catchment 4013m²
-  Trees
-  house rain catchment area 208m²
-  shed rain catchment area 420m²

Appendix C
Historic Aerial Photographs & Observations

Groundwater and Environmental Services

1636 Dairy Flat Highway	
1940	No coverage
1957	<p>The property is mainly in pasture.</p> <p>A driveway enters the property from Dairy Flat Highway at around the same location as the present day driveway.</p> <p>A dwelling is located south of the driveway, approximately 50 m from the road frontage.</p> <p>A farm shed is located immediately north of the driveway, approximately 70 m from the road frontage.</p> <p>Another shed (most likely the milking shed) is located south of the driveway, approximately 150 m from the road frontage.</p> <p>A large pond is located north of the driveway in this area.</p> <p>A farm shed is located on the south side of the driveway/track, around 220 m from the road frontage</p> <p>There may be another farm shed immediately north of the farm track, approximately 350 m from the road frontage.</p> <p>The farm track extends south-east through two thirds of the property.</p> <p>Surrounding properties are mainly in pasture.</p>
1961	<p>The bulk of the property is unchanged from the previous photograph.</p> <p>Another farm shed has been constructed on the north side of the main farm track, around 100 m from the road frontage.</p>
1963	<p>The layout of the property is similar to that from the 1957 photograph.</p> <p>A tanker track loop has been added on the south side of the main farm track west of the milking shed.</p>
1968	No visible changes from the previous photograph at the scale of this photograph.
1970	Unchanged from the previous photograph
1975	No visible changes from the previous photograph at the scale of this photograph.
1981	Unchanged from the previous photograph
1988	No visible changes from the previous photograph at the scale of this photograph.
1996	<p>Two rectangular waste water ponds are visible south of the milking shed.</p> <p>Recent earthworks have been undertaken south and west of the milking shed, around the outside of the tanker track.</p> <p>The bulk of the property is largely unchanged.</p>
1999	<p>The Northern motorway is under construction to the east of the property.</p> <p>The property remains largely unchanged from the previous photograph.</p>
2001	Partial coverage. The eastern part of the property remains unchanged from the previous photograph.
2003	Unchanged from the previous photograph.
2006	No coverage
2008	No coverage
2010	Unchanged from the previous photograph
2017	Unchanged from the previous photograph
2019	Unchanged from the previous photograph
2021	<p>The farm shed has been removed from the area south of the farm track, 220 m from the road frontage.</p> <p>The balance of the property appears unchanged from the previous photograph.</p>

Groundwater and Environmental Services

1686 Dairy Flat Highway	
1940	No coverage
1957/1958	Dwelling located in the south-west of the property. Recent earthworks/disturbed ground immediately north east of the dwelling. Possible small shed in the paddock east of the dwelling.
1961	Largely unchanged from the previous photograph. No shed visible east of the dwelling. Possible shed or garage north-east of the dwelling.
1963	Unchanged from the previous photograph
1968	No visible changes from the previous photograph at the scale of this photograph.
1970	Unchanged from the previous photograph
1975	No visible changes from the previous photograph at the scale of this photograph.
1981	Unchanged from the previous photograph
1988	Unchanged from the previous photograph
1996	Unchanged from the previous photograph
1999	Unchanged from the previous photograph
2001	Unchanged from the previous photograph
2003	Unchanged from the previous photograph.
2006	No coverage
2008	No coverage
2010	New dwelling attached to the south side of the original dwelling. No other visible changes.
2019	Unchanged from the previous photograph
2021	Unchanged from the previous photograph
1700 Dairy Flat Highway	
1940	No coverage
1957/1958	The property is mostly in pasture, with areas of bush/scrub in the south-east and close to the southern boundary.
1961	Unchanged from the previous photograph
1963	Unchanged from the previous photograph
1968	Unchanged from the previous photograph
1970	The bulk of the property is in pasture with minor bush around the stream gully in the south-east of the property.
1975	Partial coverage – Unchanged from the previous photograph
1981	There is a farm shed in the north of the property. A dwelling has been constructed in the south-west of the property, with a driveway entrance from Dairy Flat Highway.
1988	Unchanged from the previous photograph
1996	A garage has been constructed immediately southeast of the dwelling. There appears to have been some recent clearing of vegetation in the south of the property. The bulk of the property remains in pasture.
1999	The property remains largely unchanged from the previous photograph.
2001	Unchanged from the previous photograph.
2003	Unchanged from the previous photograph.
2006	Limited coverage – eastern portion unchanged from the previous photograph.

Groundwater and Environmental Services

2008	Limited coverage – eastern portion unchanged from the previous photograph.
2010	Unchanged from the previous photographs
2019	Largely unchanged from the previous photograph.
2021	More bush/scrub in the south and east of the property. The balance of the property is largely unchanged.
1732 Dairy Flat Highway	
1940	The property is in a mix of scrub and pasture. There is a small building (possibly a dwelling) in the north-west of the property, close to Dairy Flat Highway
1957/1958	There are shelter trees around the dwelling, with possible fruit trees north of the dwelling. A small farm building is visible south-west of the dwelling. The balance of the property is largely unchanged, with the majority being in bush/scrub.
1961	Bush/scrub has been cleared from the northern part of the property however it remains in the south and east.
1963	Unchanged from the previous photograph
1968	Unchanged from the previous photograph
1970	The bulk of the property is in pasture and additional bush/scrub has been cleared from the south-east of the property. Bush remains along the margins of the stream gullies through the property.
1975	Unchanged from the previous photograph
1981	Earthworks have been undertaken in the areas southwest of the dwelling and immediately southeast of the dwelling. A farm track leads to a roughly rectangular area of earthworks approximately 150 m south of the dwelling beside the gully edge. The bulk of the property remains in pasture.
1988	Unchanged from the previous photograph
1996	Additional buildings are visible south of the dwelling. There is an area of cleared ground south-west of the dwelling. The rectangular area 150 m south of the dwelling appears to be bare earth. The bulk of the property remains in pasture.
1999	The Northern motorway and Silverdale Interchange are under construction. Earthworks are visible on properties to the east. The property remains largely unchanged from the previous photograph.
2001	A new building is visible south-west of the dwelling. A circular horse training area is visible south of the dwelling. The balance of the property appears largely unchanged.
2003	Unchanged from the previous photograph.
2006	Unchanged from the previous photograph.
2008	There appears to be an area of recent fill south-west of the dwelling. The rectangular area of bare earth south of the dwelling appears to still be in use. The bulk of the property remains unchanged.
2010	Filling may still be going on in the area south-west of the dwelling. The bulk of the property remains unchanged. Earthworks are visible on properties to the east.

Groundwater and Environmental Services

2013	Filling may still be going on in the area south-west of the dwelling. Off-road vehicle race tracks have been constructed on land in the south-east of the property, east of the main stream. A pond was visible in the middle of the racetrack area later in 2013. The remainder of the property appears largely unchanged.
2015	Earthworks were undertaken in the paddock between 1700 Dairy Flat Highway and the main stream through the property. The earthworks may be associated with filling and/or the off-road vehicle course. In late 2015, the off-road vehicle courses seem to have been renewed and/or extended. An additional course has been constructed in the southern paddock immediately west of the main stream.
2017	Recent earthworks have been undertaken in the paddock between 1700 and 1686 Dairy Flat Highway.
2019	Largely unchanged from the previous photograph.
2021	Two large buildings have been constructed east of the driveway entrance located south-west of the dwelling. The balance of the property appears largely unchanged.
1738 Dairy Flat Highway	
1940	Bush/scrub across the property and on surrounding land.
1957/1958	Property and surrounding ground are in pasture.
1961	Property and surrounding ground are in pasture.
1963	Property and surrounding ground are in pasture.
1968	No coverage
1970	Property and surrounding ground are in pasture.
1975	No coverage
1981	Property and surrounding ground are in pasture.
1988	Property and surrounding ground are in pasture.
1996	Property and surrounding ground are in pasture.
1999	Significant earthworks have been undertaken over the property as part of the Northern Motorway construction. An access road has been constructed on the south-west side of the property that extends to 1744 and 1748 dairy flat Highway.
2001	Property is in grass/pasture
2003	Property is in grass/pasture
2006	Property is in grass/pasture
2008	Property is mainly in grass with two small structures located at the northern end.
2010	Property is mainly in grass with one small structure located at the northern end.
2016	Property is mainly in grass with one small structure located at the northern end.
2017	The bulk of the property is paved or gravelled, with one small structure located at the northern end. Property appears to be used as a trucking depot during 2017. Stormwater pond located at the southern end of the property. Evidence for earthworks in the southern half of the property.
2019	Building on paving at the northern end of the property. Soil/metal stockpiling on the paved area. Grass cover over in the southern part of the property
2021	Bulk of the property is paved. No buildings present on site.
Lot 2 DP 480626	

Groundwater and Environmental Services

1940	Mixture of scrub and pasture across property and in the surrounding area. A stream gully cuts across the property.
1957/1958	Unchanged from the previous photograph
1961	The property and surrounding ground is in pasture
1963	Unchanged from the previous photograph
1968	No coverage
1970	Unchanged from the 1963 photograph
1975	Unchanged from the previous photographs
1981	Unchanged from the previous photographs
1988	Unchanged from the previous photographs
1996	Unchanged from the previous photographs
1999	Significant earthworks have been undertaken over the property as part of the Northern Motorway construction and construction of an access road to the east of the property that extends to 1744 and 1748 dairy flat Highway.
2001	Unchanged from the previous photographs
2003	Unchanged from the previous photographs
2006	Unchanged from the previous photographs
2008	Unchanged from the previous photographs
2010	Unchanged from the previous photographs
2016	Unchanged from the previous photographs
2017	Unchanged from the previous photographs
2019	Unchanged from the previous photographs
2021	Unchanged from the previous photographs
Sec 6 SO 308591	
1940	Property is in pasture. Land to the west is in scrub.
1957/1958	Unchanged from the previous photo
1961	Unchanged from the previous photo
1963	Unchanged from the previous photo
1968	No coverage
1970	Unchanged from the 1963 photo
1975	Unchanged from the previous photo
1981	The bulk of the property remains in pasture A circular training track extends into part of the property from the east.
1988	The property is mostly in pasture. The training track is no longer visible at the resolution of the photo.
1996	Unchanged from the previous photo
1999	The Northern motorway is under construction. Earthworks have been undertaken across the property (possibly for the construction of ponds). An access road has been constructed immediately to the east of the property. Recent earthworks are also visible on land to the south.
2001	A large pond takes up the bulk of the property, with a smaller pond in the north-west of the property
2003	Unchanged from previous photo
2006	The property is largely unchanged.

Groundwater and Environmental Services

	Planting has been undertaken to the east and south-east of the large pond.
2008	Unchanged from the previous photograph
2010	Unchanged from the previous photograph
2013	Unchanged from the previous photograph
2015	Unchanged from the previous photograph
2016	Unchanged from the previous photograph
2017	Unchanged from the previous photograph
2019	Unchanged from the previous photograph
2021	Unchanged from the previous photograph
1744 Dairy Flat Highway	
1940	Property and surrounding land to the north, east and south is in pasture. Land to the west is in low scrub.
1957/1958	Unchanged from the previous photo
1961	Unchanged from the previous photo
1963	The property is unchanged from the previous photo. A pond appears to have been constructed on land to the east, close to Small Road (now under the Northern Motorway).
1968	No coverage
1970	Unchanged from the 1963 photo
1975	The property is unchanged from the previous photo. Bush has been cleared from much of the neighbouring property to the west. A circular track has been constructed on land to the northeast
1981	The property is unchanged from the previous photo. A circular track has been constructed on land to the north.
1988	The property is mostly in pasture and there appears to be a dwelling accessed via a driveway from Small Road.
1996	Unchanged from the previous photo
1999	The Northern motorway is under construction. Earthworks are visible at the northern end of the property and in the southern half. Earthworks are also visible across the property to the north.
2001	The property is in pasture and still has the single dwelling on it.
2003	Recent earthworks better been carried out in parts of the property.
2006	The property still appears to be used for lifestyle/residential purposes.
2008	Unchanged from the previous photograph
2010	Recent earthworks have been undertaken in the west of the property and across the property south of the dwelling.
2013	The southern part of the property appears to be used as a depot and there are two larger buildings present on the property. Smaller portacom buildings are located in the north-east of this area.
2015	The smaller of the two main buildings has been removed and another large building has been constructed in the south of the property. Part of the neighbouring property to the south also appears to be used as a yard/depot. In November 2015, further earthworks had been carried out in the northern part of the property. Extensive earthworks had also been carried out across 1748 Dairy Flat Highway.

Groundwater and Environmental Services

	Off-road vehicle race tracks have been constructed on the neighbouring property to the west.
2016	The northern part of the property (apart from the area immediately around the dwelling) now also appears to be used as a depot/yard. 1748 Dairy Flat Highway appears to be used as a truck depot and yard.
2017	Both 1744 and 1748 Dairy Flat Highway are used as depots/yards.
2019	Unchanged from the previous photo
2021	The former buildings have been removed from the southern part of the property. There appear to be some soil gravel stockpiles in part of this area while most of the rest of this area appeared unoccupied. Additional buildings been constructed in the northern half of the property. A June 2021 photograph shows the part of the southern half of the property is used as a gravel/soil supply yard.
1748 Dairy Flat Highway	
1940	Property and surrounding ground are in pasture.
1957/1958	Property and surrounding land to the north, east and south is in pasture. Land to the west is in bush/scrub.
1961	Unchanged from previous photo
1963	The property is unchanged from the previous photo. A pond appears to have been constructed on land to the east, close to Small Road (now under the Northern Motorway).
1968	No coverage
1970	Unchanged from the 1963 photo
1975	The property is unchanged from the previous photo. Bush has been cleared from much of the neighbouring property to the west.
1981	Unchanged from the previous photo.
1988	Unchanged from the previous photo
1996	Two buildings appear to have been constructed approximately in the middle of the property. There are areas of earthworks south of the buildings and in the north-west corner of the property. The disturbance south of the buildings may be a small pond.
1999	The Northern motorway is under construction. Earthworks are visible on the property to the north.
2001	Unchanged from the previous photograph
2003	Unchanged from the previous photograph.
2006	Unchanged from the previous photograph. A shed and dwelling have been constructed on the neighbouring property to the south
2008	Unchanged from the previous photograph
2010	Unchanged from the previous photograph. Recent earthworks have been undertaken on the neighbouring property to the north.
2014	Significant earthworks have been undertaken in the eastern half of the property. An area in the north-east appears to have been sealed and earthworks better be ongoing in the south-east. The property to the north is being used as a depot/yard.
2015	Part of the property appears to be used as a yard/depot.

Groundwater and Environmental Services

	In November 2015, further earthworks had been carried out in the western half of the property. Off-road vehicle race tracks have been constructed on the neighbouring property to the west.
2016	The property appears to have been gravelled or sealed and is used as a depot/yard.
2017	The property is used as depots/yards. The area in the south-east of the property appears to be used as an aggregate supply yard.
2019	Largely unchanged from the previous photograph.
2021	The property continues to be used as depots/yards. Additional buildings have been constructed in the north of the property.
1748a Dairy Flat Highway	
1940	Property and surrounding ground are in pasture.
1957/1958	Unchanged from the previous photo
1961	Unchanged from the previous photo
1963	Unchanged from the previous photo
1968	No coverage
1970	Unchanged from the 1963 photo
1975	Unchanged from the previous photo
1981	Unchanged from the previous photo
1988	Unchanged from the previous photo
1996	The property appears unchanged from the previous photo. Two buildings have been constructed on the neighbouring property to the north and a pond has been constructed south of the buildings.
1999	Unchanged from the previous photo. The Northern motorway is under construction.
2001	Unchanged from the previous photograph
2003	Unchanged from the previous photograph.
2006	A shed and dwelling have been constructed on the property. Earthworks have been carried out for a driveway entrance to the shed/dwelling and a turning area east of the shed.
2008	There appears to be a new soil bund east of the driveway.
2013	A larger earth bund has been constructed further east and south of the driveway.
2015	The yard area has been extended south of the shed (possibly with filling)
2017	The yard appears to have been recently extended further to the south-west from the previous extent.
2019	The yard has been extended further to the south-west.
2021	The area south and south-west of the shed is used as a depot/yard.



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1940



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1958



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1961

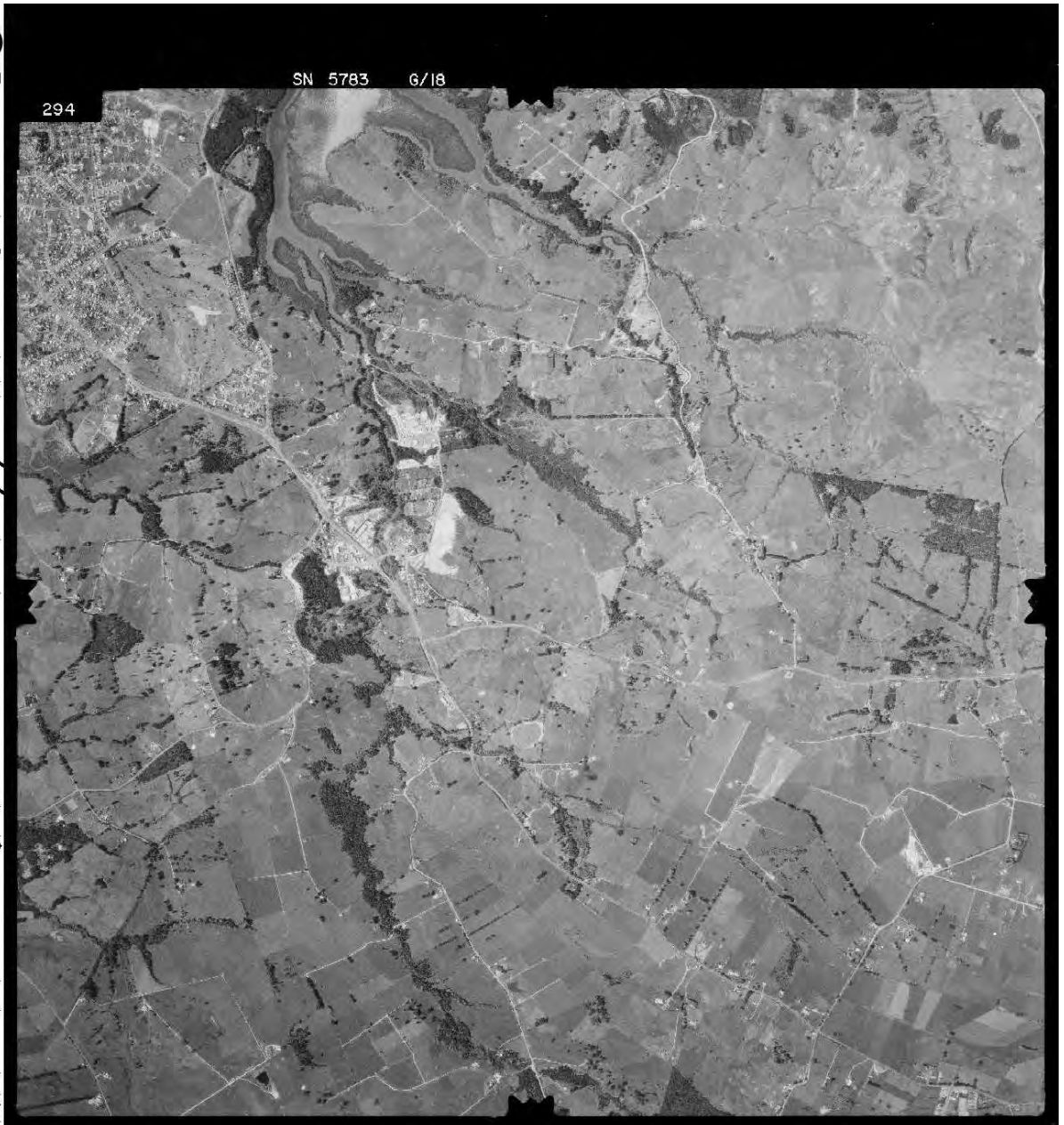


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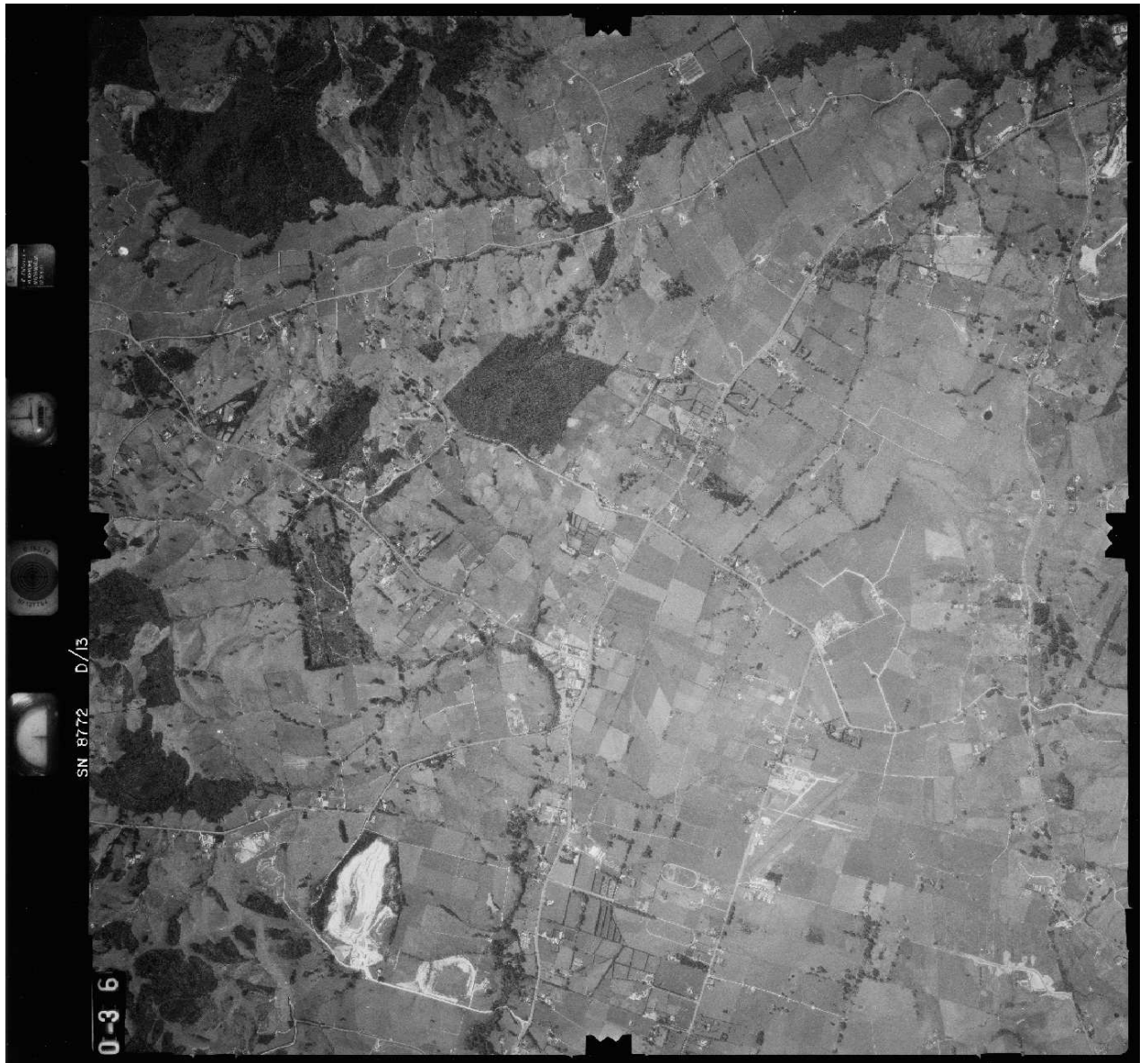


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1981



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1988

Appendix D
Site Observations and Photographs

2 September 2022

1636 Dairy Flat Highway

1. Disused small red galvanised iron shed with raised wooden floor. Lean-to galvanised iron garage (more recent) with concrete floor on south-east side.
2. Galvanised iron farm shed with earth floor. Farm equipment & materials stored inside.
3. Pond with earth bund and pump shed.
4. Stock loading ramp.
5. Milking shed. Concrete block with concrete foundations with **fibrolite** used for the vat room cladding. Yard on southeast side of shed. Switchboard could potentially contain **asbestos**. Water tank on SE corner of shed.
6. Soil stockpile between pond and milking shed.
7. Pond with earth bund.
8. Area of raised earth (possible fill) among trees. Stock in area so unable to inspect. This was a former barn location.
9. Main farm track to east
10. Stream crossing. Large diameter steel pipe under track.
11. Paddocks in east of property.
12. Paddocks in southeast of property.
13. Paddocks in northeast of 193 Wilks Road.
14. Paddock in west of property.
15. Dwelling & garage in northwest of property.
16. Main driveway entrance into property from Dairy Flat Highway.

1638 Dairy Flat Highway – no site access

1. 20 L containers in an enclosure in the south-east corner of the adjacent property at 1638 Dairy Flat Highway.
2. Paddock in north of property.
3. Animal shelters & view towards dwelling with water tank.
4. Vegetation pile in northeast of property.
5. Dwelling in middle of property with detached garage located north of the dwelling. Mature trees around west, south, and east sides of dwelling.

1646 Dairy Flat Highway – no site access

1. Galvanised iron fencing along part of southern boundary.
2. Sheds & chicken runs in south of property.
3. Dwelling and garage near to middle of southern boundary.
4. Majority of property is in pasture.
5. Trees alongside most of north, east and south boundaries

1686 Dairy Flat Highway – no site access

1. Single-level weatherboard dwelling.

Groundwater and Environmental Services

2. Mature trees around the property boundaries and immediately east of the dwelling.

1700 Dairy Flat Highway – no site access

1. Paddock with some mature trees around dwelling.
2. Recent earth bunds and drainage works in the north of property - photographed from 1732 Dairy Flat Highway.
3. Open-sided (north and east sides) barn in paddock in north of property. Roof-water collection tank by west side of barn.
4. Split-level dwelling and shed in south of property.
5. Mature vegetation (trees and scrub) in east and south of property.

1732 Dairy Flat Highway

1. Soil and vegetation piles located in paddock south of the road entrance. No potentially contaminated material identified in the stockpile.
2. Fill platform and temporary car and truck storage area. No visible indications of potentially contaminated material on the ground surface.
3. Asphalt, concrete and gravel stockpile on the ground south-east of the farm track corner. Some general rubbish visible within the stockpile.
4. Rubbish pile north of fill area.
5. Rubbish burning pit (2 m x 2 m). Burnt steel, plastic and insulation material visible in the pit.
6. Stock loading ramp and small yard. Appears to be of relatively recent construction – this was confirmed by the site tenant.
7. Small pond with earth bund.
8. Area of significant earthworks in paddock. Appears to be an off-road vehicle course. The majority of the raised of stockpiles there to consist of silt and soil although occasional concrete and gravel pieces were observed. Rare brick and steel (1) pieces observed in parts of the stockpiles.
9. Pond with earth bund. Piles of cleared gorse and blackberry in paddock between 1686 and 1700 Dairy Flat Highway
10. Crossing over John's Creek to paddocks in the east of the property.
11. Soil/silt stockpile.
12. Ponds with earth bunds. Some galvanised iron sheet pieces and polystyrene noted on the surface downstream of the second pond. Remains of a brick chimney on the first pond edge. Galvanised iron sheet upstream of first pond.
13. Rubbish pile (6 m x 6 m). Visible rubbish includes beds, cabinetry, plastic, steel, and treated timber.
14. Excavated yard with soil bund on south side. Stock handling yard on west side.
15. Pond with earth bund in NE paddock.

Groundwater and Environmental Services

16. Fill platform covered with soil and lime gravel. Up to 2 m high on the south-east face. Current tenant indicated that the platform contains refuse.
17. Stock yards and ramp.
18. Rubbish pile on ground surface. Visible rubbish includes timber, galvanised iron, wire and plastic.
19. Shed/stable with mixed **fibrolite** cladding (broken in places) and a galvanised iron roof. A drain outside the east end of the sheds discharges under the farm track to the south. Concrete floor down the centre of the interior of the shed with earth floor inside stables.
20. Lean to shed with galvanised iron roof.
21. Container shed. Appears to be used for digger/forklift servicing. Minor oil staining by NE end of concrete pad. Compressor located in small shed on the north-east end of container shed.
22. Dangerous goods store on concrete west of container shed. No visible signs of leaks to ground around the DG store.
23. Rectangular steel bin used for rubbish burning (1.5 x 1.2 x 1.2 m high) beside blue shipping container.
24. Hardstand/fill platform area. A bus parked on the area is used for accommodation. The current tenant noted this as an area of fill.
25. Split-level dwelling with garages/carports on SW side. Some visible fibrolite cladding on side of garage/carport. Dog grooming business in part of dwelling.
26. Sign by western entrance. Elite Blasting and Painting. Procut Earthworks. Procut Construction.
27. Container shed for sandblasting and painting business. Sand accumulated around the outside of the shed on the east, west and north sides. The shed has a concrete floor inside. Drainage channel located around the north side of the shed.

1738 Dairy Flat Highway

1. The property consisted mostly of sealed ground with bund around their northern and eastern margins. No potentially contaminating activities observed.

Sec 6 SO 308591

1. The property is mostly taken up with two large stormwater ponds.
2. A gravel entrance enters the northern part of the property and extends around the western side of the larger pond.
3. No potentially contaminating activities were observed on the property.

1744 and 1748 Dairy Flat Highway

1. Single level weatherboard dwelling (old). Three aboveground water tanks southwest of dwelling.

Groundwater and Environmental Services

2. Hopper Construction (Yard 4).
3. Diggers and Diesel (mobile electrical and mechanical) workshop/yard. No indications of oil leaks to ground.
4. Tire storage.
5. Aggregate soil and concrete yard (Yard 5b). Mender Construction.
6. Portable building/relocatable construction (Yard 5).
7. Stone Living. Decorative stone storage and cutting. Compressor located on west side of building.
8. Landscaping Direct (LSD) scoria yard (Yard16).
9. Dynatron.co.nz - scaffolding (Yard 7).
10. Scaffolding (Yard 8 & 9).
11. Universal Scaffolding Limited (Yard 11). Scaffold and timber storage.
12. Site Safety Temporary Fencing (Yard 12). Fencing storage.
13. Efficient Bobcats Ltd (Yard 15).
14. Traffix - cable storage (Yard 13).
15. Scaffolding (Yard 14).
16. Sand and aggregate depot.

1748A Dairy Flat Highway

1. Machinery & equipment/materials storage area (Ground Structures). The property owner noted that there was no vehicle maintenance carried out on site.
2. Container storage area in south of gravel yard. Three drums stored by one container – no signs of leaks to ground from drums.
3. Small asphalt stockpile by bund end at southeast end of yard.
4. Rubbish burning area on top of asphalt chip seal in southwest of yard.
5. Four metal drums used as incinerators in the southwest of the yard. Some ash on the adjacent bank.
6. Compressor at rear (west side) of large shed. Traces of oil on the ground beside the compressor.
7. Soil bund. Reportedly constructed with imported clean clay fill.
8. Soil bund. Constructed using soil excavated from adjacent hard stand area.
9. Kayak moulds left on site from a former tenant. The kayak manufacturer carried out his work upstairs in the large shed.
10. Large shed. Fabrication carried out in shed. No indications of potential contaminant leaks to ground from work carried out in the shed.
11. Dwelling.

Groundwater and Environmental Services

1636 Dairy Flat Highway



#1 – Shed with wooden floor



#1 – Lean-to garage



#1 – Shed with wooden floor



#2 GI farm sheds with earth floors



#1 – Inside lean-to shed



#2 GI farm shed with earth floor



#1 – Shed & lean-to garage



#2 GI farm shed with earth floor

Groundwater and Environmental Services



#2 GI farm shed with earth floor



#4 – Stock loading ramp



#2 GI farm shed with earth floor



#5 – Milking shed



#3 – Pond with earth bund & pump shed



#5 – Milking shed



#3 - Pond with earth bund



#5 – Vat room fibrolite cladding

Groundwater and Environmental Services



#5 – Yard on SE side of milking shed



#5 – Water tank on SE corner of shed



#5 – Yard on SE side of milking shed



#6 - Stockpile SW of milking shed



#5 – Interior of milking shed



#7 – Treatment pond with earth bund



#5 – Milking shed switchboard



#8 Raised/fill area (Former barn location)

Groundwater and Environmental Services



#8 Raised/fill area (Former barn location)



#11 Paddocks in east of property



#9 Main farm track to east



#11 Paddocks in east of property



#10 - Stream crossing



#11 Paddocks in east of property



#11 Paddocks in east of property



#12 Paddocks in southeast of property

Groundwater and Environmental Services



#12 Paddocks in southeast of property



#15 Dwelling in northwest of property



#13 Paddocks in NE of 193 Wilks Rodd



#15 Dwelling & garage in northwest



#14 Paddock in west of property



#16 Main driveway entrance



#15 Dwelling in northwest of property

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1638 Dairy Flat Highway



#1 20l containers in in SE corner



#2 Paddock in north of property



#3 Animal shelters & dwelling



#4 Vegetation pile in NE of property

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1646 Dairy Flat Highway



#1 GI fencing along southern boundary



#2 Sheds/runs in south of property



#2 Sheds/runs in south of property

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1700 Dairy Flat Highway



#1 - View across paddock to dwelling



#2 – Recent earth bunds and drainage works in paddock in N of property

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1732 Dairy Flat Highway



#1 - soil mounds by driveway entry



#1 Paddock south of driveway



#1 Soil mound by driveway



#2 – Fill platform & vehicle storage area



#3 Asphalt, concrete & gravel stockpile/fill area



#4 Rubbish pile north of fill area



#5 Rubbish burning pit



#6 Loading ramp & yard

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#7 - Small pond in paddock S of driveway



#8 – Earthworks area – off-road course



#8 – Earthworks area – off-road course



#9 – Pond with earth bund



#8 – Earthworks area – off-road course



#10 John's Creek crossing



#8 – Earthworks area – off-road course



#10 Paddock east of John's Creek

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#10 Paddock east of John's Creek



#12 – Area around pond



Eastern property boundary



#12 – Area around pond



#11 – soil/silt stockpile by E boundary



#12 – Pond with earth bund



#12 – Area around pond



#12 – Pond with earth bund

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#12 – Pond with earth bund



#13 Rubbish pile



#12 – Pond with earth bund



#14 Stock handling yard



#13 Rubbish pile



#14 Stock handling yard



#13 Rubbish pile



#14 Excavated/levelled yard & bund

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#15 – Pond in NE paddock



#16 – Fill platform



#17 – Stock yards & ramp



#19 – Shed/stable



#19 – Shed/stable (broken fibrolite)



#19 – Shed/stable with fibrolite cladding



#19 – Drain on NE side of shed/stable



#20 – Lean-to shed

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#20 – Lean-to shed



#21 – Container shed



#21 – Container shed - servicing



#21 – Container shed oil staining



#21 – Compressor shed



#21 – Compressor shed



#21/22/23 View to east to shed, DG store & rubbish burning bin

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#22 – Dangerous goods store



#25 Dwelling



#23 – Rubbish burning bin by container



#25 Dog grooming salon in dwelling



#23 – Rubbish burning bin



#25 – Garage/carport on dwelling



#24 – Fill Platform



#25 – Fibrolite on SW side of dwelling

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#26 - Sign by western entrance



#27 – sand on W side of shed



#27 – Container shed for blasting and painting business



#27 – sand on W side of shed



#27 – sand on N side of shed



#27 – sand on N side of shed

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1744 Dairy Flat Highway



#1 Concrete water tanks SW of dwelling



Scaffold depot



#1 Single-level weatherboard dwelling



#5 Aggregate soil and concrete yard



#1 Driveway entry & dwelling



#5 Aggregate & soil yard (Yard 5b)



#3 Diggers & Diesel workshop



Storage yard

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#5 Bunded soil store (Yard 5B)



#6 Portable building construction (Yard 5)



#6 Portable building construction (Yard 5)



#6 Portable building construction (Yard 5)

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Entry to yard



#11 Scaffold & Timber Storage



@8 Scoria depot (Landscaping Direct, Yard 16)



#11 Scaffold & Timber Storage



#10 Scaffolding Depot – Dynatron Nz (Yard 7)



#14 Cable Storage – Traffix (Yard 13)



#14 Cable Storage – Traffix (Yard 13)

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#16 Sand & aggregate depot



#16 Sand & aggregate depot



#16 Sand & aggregate depot

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1748A Dairy Flat Highway



#1 Machinery parking SW of shed



#2 Containers & drums



#1 Digger , tyres & timber storage



#3 Asphalt stockpile & bund edge



#1 Pipe, polystyrene & tyres



#4 Rubbish burning area on asphalt chip



#2 Container storage in S of yard



#5 Metal drum incinerators

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#6 Compressor on west side of shed

Appendix E
Statement of Qualification

Groundwater and Environmental Services

My full name is **Andrew James MacDonald**. I am an environmental consultant trading as **Groundwater and Environmental Services (GES)**.

I certify that I meet the requirements to operate as a suitably qualified and experienced practitioner (SQEP) under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NES) in contaminated land and groundwater assessment, management, and remediation.

I hold Bachelor of Science and Master of Science Honours degrees from Auckland University.

I have worked as a consultant in the field of contaminated land and groundwater assessment, management, and remediation since 1991. In that time, I have dealt with contamination issues at numerous industrial, commercial, horticultural, rural and residential sites throughout New Zealand on behalf of commercial, local government and central government clients.

CAPABILITIES

Environmental Site Investigation
Remediation of Contaminated Land
Environmental Effects Assessment
Contaminated Site Consents
Groundwater Investigation
Contaminant Transport Modelling
Groundwater Contamination Remediation

EDUCATION

Bachelor of Science (Geology)	University of Auckland, 1989
Master of Science, Hons (Geology)	University of Auckland, 1991
Environmental Law (COP)	University of Auckland, 1993
Resource Management (Planning) Law (COP)	University of Auckland, 1993

PROFESSIONAL HISTORY

1995 - Groundwater and Environmental Services, Principal
1991 - 1995 Woodward-Clyde (NZ) Ltd, Environmental Scientist

REPRESENTATIVE EXPERIENCE

- Preliminary and detailed environmental site investigations of a wide range of potentially contaminated sites.
- Remedial action/site management plans for contaminated sites.
- Organisation and supervision of remediation at contaminated sites.
- Validation of remediation at contaminated sites.
- Long term contaminated site monitoring and management plans.
- Resource consents for site remediation and ongoing discharges of contaminants to ground at contaminated sites.
- Provision of expert evidence related to contamination issues.

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- Peer review of contaminated site investigations.
- Drilling supervision, soil sampling and groundwater monitoring well installation at a range of sites for investigations of contaminated ground and groundwater.
- Computer modelling of groundwater contaminant transport and associated environmental effects.