Land Information Memorandum L241140

Application

Kerry Watson
Yoursection FV Ltd
PO Box 9301
Tower Junction
Christchurch 8149

No.	L241140
Application date	12/06/24
Issue date	21/06/24
Phone	021341363

Property

Valuation No.	2405514300
Location	153 Lincoln Rolleston Road
Legal Description	LOT 2 DP 568976
Owner	Yoursection FV Limited
Area (hectares)	10.6750

No certificate of title was submitted with this application, a copy can be obtained from Land Information New Zealand 112 Tuam Street, such as to check for covenants, easements, etc.

Rates

Rateable Value

The date of Selwyn's last General Revaluation was 1/09/21. For further information please contact Council's Rates Department.

Revaluation Year	2021
Land	$8,580,000
Capital Value	$8,580,000
Improvements	$ 0

Current Rates Year 2023 to 2024

Annual Rates	$ 12,207.55
Current Instalment	$ 3,051.85
Current Year - Outstanding Rates	$ 0.00
Arrears for Previous Years	$ 0.00
Next Instalment Due	00

Next Revaluation Due 2024.

The rates listed for this property are correct as at the date of this report being issued.

If this property is vacant land, and the applicant intends building a house or making other improvements, additional rates and charges will be added. Such rates and charges are for the

operation of the District libraries, local community centre and recreation reserves, sewerage and water systems and refuse collections and recycling.

If a ratepayer in the district purchases additional properties, that ratepayer maybe eligible for certain rating exemptions due to multiple ownership. The exemptions would only apply to uniform library charges on bare land blocks and an exemption from the uniform annual general charge if contiguous or same use land is purchased.

Please contact the Councils rates team if you require clarification on 0800 SELWYN (735 996).

Note: Rates are charged in four equal instalments for the period commencing 1 July and ending 30 June each year.

Planning/Resource Management

Partially Operative District Plan: MRZ

Operative District Plan Zoning: Rolleston Living MD1

The Council has undertaken a review of the Operative District Plan and through this process it has developed a New District Plan ('The Partially Operative District Plan') which provides clear objectives, policies and rules to manage the effects of land use activities on the environment, but also sets a clear direction for our district's development and reflects our communities' needs and expectations. It also incorporates any changes in legislation, national and regional policy statements, environmental standards and other regulations.

The period for lodging appeals against decisions on the Partially Operative District Plan closed on the 6th of October 2023 and the Council released the Appeals Version of the Partially Operative District Plan on 27th November 2023. Many provisions in Partially Operative District Plan are now beyond challenge and are operative/treated as operative (pursuant cl 103 of Schedule 1 and s86F of the Resource Management Act (1991). The Operative District Plan now only applies where a relevant provision in the Partially Operative District Plan remains subject to appeal. For more information visit https://selwyn.govt.nz/property-And-building/planningstrategies-and-plans/selwyn-district-plan/selwyn-district-plan-review

1/09/23	Resource Consent 235511
	Change Of Conditions To Cancel Conditions Of Subdivision
	Consent Rc235161
	Decision Notified 24/11/23
	Granted By Local Authority Officer 24/11/23
28/08/23	Resource Consent 235500
	Change Of Conditions To Cancel Conditions Of
	Subdivision Consent Rc225866
	Decision Notified 24/11/23
	Granted By Local Authority Officer 24/11/23

30/06/23	Resource Consent 235357 To Undertake A Subdivision Creating 71 Residential Lots, Roads, Reserves And Shared Accessways Within A Flood Management Overlay Section 224 Issued 8/04/24 Granted By Local Authority Officer 24/11/23
30/06/23	Resource Consent 235358 Consent Is Sought To Undertake Earthworks, And Establish An Accessway, Roads And A Wastewater Pump Station Decision Notified 24/11/23 Granted By Local Authority Officer 24/11/23
	Resource Consent R301583 The Extraction & Screening Of Shingle To A Depth Of 8 Metres Withdrawn 25/08/23

Planning Notes

The information provided on this LIM has come from the information lodged against the property file/information and GIS at the time of processing. Please note that the resource consents, fill certificates and other relevant property files listed are based on what is available on our general property information, and that there may be other documents for the property which have not yet been added to the property record.

Resource Consents often contain a multitude of information and reports that are not ordinarily separately referenced or included in the LIM itself. Information identifying each (if any) special feature or characteristic of the land concerned, including but not limited to potential erosion, falling debris, subsidence, slippage, alluvion, or inundation, or likely presence of hazardous contaminants.

Preliminary Site Investigation Reports, Detailed Investigation Site Reports and Geotechnical Reports are submitted as part of the subdivision Resource Consent Process it is not likely to be currently of relevance in relation to the "land concerned", otherwise it would be elsewhere noted on the LIM to the extent any issues still apply following subdivision).

Any resource applications or consents that may contain information relating to the land which is not otherwise included in the LIM, including Geotechnical, Environmental and other expert reports, can be obtained via Selwyn District Council Information Management team on information.management@selwyn.govt.nz

DEV-RO10 - This property has been identified in the Partially Operative District Plan as being located within a Development Area which spatially identifies and manages an area where additional place-based provisions may apply to subdivision and development. For further information visit https://eplan.selwyn.govt.nz/review or contact the duty planner on 0800 SELWYN (0800735996)

Building

19/05/88	Building Permit F017493 Install S/Fuel Heater Permit Only
13/04/87	Building Permit E003268 Erect Dwelling Permit Only
10/04/87	Building Permit 3238p / 3239d Plumbing / Drainage & Septic Tank To Dwelling Permit Only
9/12/86	Building Permit E003159 Erect Garage / Workshop Permit Only
4/12/86	Building Permit 3185p / 3186d Plumbing / Drainage & Septic Tank To Garage / Workshop Permit Only

No Code Compliance Certificate is required for a Building Permit. For those Building Consents with numbers that follow on from R410707 a Code Compliance Certificate is required. Consent R410707 is the first Building Consent issued by this Council which was not necessarily for this property.

Buildings erected prior to 1965 may not have a building permit record or had inspections carried out.

All building products and materials have a designed life, and must be maintained in accordance with the manufacturer's specifications.

In the case of building permits and building consents no further inspections have been carried out by the council since these structures were completed.

Any concerns of this nature should be referred to an organization that carries out property checks or the product manufacturers.

Schedule 1 Exempt Building Work

Under section 42A of the Building Act 2004 building owners can carry out certain types of building work specified in Schedule 1 of the Building Act 2004 without need to obtain building consent approval. Where Council holds any information provided by a property owner in relation to exempt works undertaken on the property it is important to note that Council do not check or review the documentation for compliance, it is simply filed for record keeping purposes and not to satisfy any statutory obligation. Any information held of this nature has been provided at Councils discretion under Section 44A (3) of the Local Government Official Information and Meetings Act 1987 without any representation or warranty.

Services

Water

Council water scheme is not available. Please contact the developer directly.

Own potable water supply required.

For those properties not connected to a Council reticulated water supply, it is encouraged that the quality of the domestic water supply be regularly tested to ensure that it is to a potable standard. If the same water supply is also used for irrigation or stock water, check that there is a backflow protection device to prevent any contamination of water supply.

Sewer

Council sewer scheme is not available. Please contact the developer directly.

On-site sewage treatment and disposal.

The property is not serviced through Council sewer network. Any onsite wastewater treatment or changes to it will require Environment Canterbury consent.

If there is an existing domestic onsite wastewater treatment system on this property, the owner is responsible for ensuring regular maintenance and servicing is carried to ensure it continues to function satisfactorily.

Any new or replacement of domestic onsite wastewater treatment system will need to meet the requirements of Rule 5.8 of the Canterbury Land and Water Regional Plan to be considered a permitted activity and will require a building consent from Selwyn District Council prior to installation.

Any property with onsite sewage treatment and disposal, animal effluent disposal or water extraction for irrigation may have or require consent from Environment Canterbury and may require consent from the surrounding properties for a variety of discharges. This could have an adverse effect on the neighbouring property in relation to odour, potable water supply quality, or be of a general nuisance factor.

Information regarding what consents have been granted for this or surrounding properties can be obtained by contacting the issuing authority Environment Canterbury.

Land used to dispose of waste or to spread effluent or treated sewage, may be contaminated due to the concentrations or mix of material deposited onto the land over time. If any soil tests have been carried out, please forward a copy to the Council in order for the records to be updated.

For those properties not connected to a Council reticulated sewer system, it is important that the effluent system is regularly checked and maintained. You should also be aware of the limits on what can and should not be disposed of through these systems. Any concerns should be referred to an organization that carries out checks and maintenance or to the product manufacturers.

Stormwater

Stormwater to Disposal to be determine with new subdivision

This property may be located within an area covered by Environment Canterbury stormwater consent. It is the responsibility of the property owner to contact Environment Canterbury customer services to ensure that any activity undertaken on site complies with the relevant consent conditions.

Note – the above describes the current roof water disposal type and does not reflect the future situation, which should be determined as part of the subdivision (if applicable). For more information please contact Council.

Copy of drainage plan attached.

If you have any questions about the Water, Sewage or Stormwater information above please contact the Selwyn District Council Water Department at 0800 SELWYN or contactus@selwyn.govt.nz

Kerbside Waste Collections

Due to subdivision development, future refuse scheme to be confirmed.

The Council provides refuse and recycling collection services for most residential and rural residential properties where these properties occur alongside maintained public roads. Private roads and Right of Ways (as maybe referenced in the Transportation Notes pertaining to this LIM) will not be directly serviced as these access ways are not usually of a sufficient standard to be used safely and efficiently by the collection vehicles. This could also apply to other public roads or streets that are narrow and/or have a lack of vehicle turning facilities. Rural and high country areas and settlements are not covered by regular collection services however localised refuse drop off facilities maybe available for use in specific areas. For further details and advice on refuse collection and recycling services as they may pertain to the property please phone the Council's Asset department on phone 3472 800.

Land and Building Classifications

Energy Infrastructure and Transport

None known

Hazard and Risk

Reference: Plains Flood Management Overlay

This property is identified in the Partially Operative District Plan as being located within a Natural Hazard Overlay. For further information visit https://apps.canterburymaps.govt.nz/SelwynNaturalHazards/ or contact the duty planner on 0800SELWYN (0800735996)

Reference: Liquefaction Unlikely Overlay

This property is identified in the Partially Operative District Plan as being located within a Natural Hazard Overlay. For further information visit http://eplan.selwyn.govt.nz/review or contact the duty planner on 0800SELWYN (0800735996)

Culture and Heritage

None known

Natural Environment

None known

District-wide matters

None known

Area-specific matters

None known

Land Notes

Land Notes: The flight paths for the Christchurch International Airport takes air traffic over this general area.

Land Notes: This property is within the area encompassed by the 2007 Christchurch, Rolleston, and Environs Transportation Study (CRETS). The published Strategy outlines a range of strategic transportation initiatives to cater for long term growth in this area of the district. This includes the upgrading of existing roads and the provision of new roads which may affect private property. Further information on this Study can be viewed on the Councils website www.selwyn.govt.nz under “Transportation and Roading”.

Land Notes: This property is located within the area encompassed by the Greater Christchurch Urban Development Strategy (UDS). The UDS is a joint initiative to plan and manage the growth of the Greater Christchurch Region over the next 35 years and is a partnership between the Christchurch City Council, Environment Canterbury, the Waimakariri District Council, Selwyn District Council, and Waka Kotahi NZ Transport Agency.

The Selwyn District Council is developing several strategic documents that seek to implement the UDS that may have an impact on this property in the future. Further information on Council projects can be found on the Council's website www.selwyn.govt.nz or by contacting the planning department on 0800 SELWYN (0800735996).

Land Notes: Council holds the following reports: Please find attached copies.

- 15/01/2021 – PC75 Geotech peer Review Report – Geotech Consulting Ltd
- June 2023 – Cultural Advice Report – Mahaanui Kuraraiao Ltd
- August 2022 – Soil Contamination Risk, Detailed Site Investigation Report and Remediation Action Plan – Momentum Environmental Ltd

Please contact our Information Management Team at Information.Management@selwyn.govt.nz for further information.

Listed Land Use Register (LLUR):

Hazardous activities and industries involve the use, storage or disposal of hazardous substances. These substances can sometimes contaminate the soil. Environment Canterbury identifies land that is used or has been used for hazardous activities and industries. This information is held on a publicly available database administered by Environment Canterbury called the Listed Land Use Register (LLUR). The Selwyn District Council may not hold information that is held on the LLUR, therefore, it is recommended that you check Environment Canterbury's online database at www.llur.ecan.govt.nz.

Residential Swimming Pool

No pool registered to this property.

Land Transport Requirement

Lincoln Rolleston Road is a formed and sealed artetial road maintained by Selwyn District Council.

This property maybe effected by proposed roading and access changes relating to the Waka Kotahi NZ Transport Agency Rolleston Flyover and State Highway Access Improvement Project. Further information and contact details can be found at www.nzta.govt.nz/rollestonflyover

Special Land Features

	NZS3604:2011	**AS/NZS1170:2002**
Wind Region	A	A7
Snow Zone	N4	N4 Sub-alpine
Earthquake	Zone: 2	Z Factor: 0.3
Approximate Altitude (Amsl)	38m	-
Exposure Zone	B	-

Exposure Zone Descriptions

Zone B: Low

Inland areas with little risk from wind blown sea-spray salt deposits

Zone C: Medium

Inland coastal areas with medium risk from wind blown sea-spray salt deposits. This zone covers mainly coastal areas relatively low salinity. The extent of the affected area varies significantly with factors such as winds, topography and vegetation.

Zone D: High

Coastal areas with high risk wind blown sea-spray salt deposits. This is defined as within 500 m of the sea including harbours, or 100 m from tidal estuaries and sheltered inlets.

Flooding

Flood Management Area - 500 year event

The Council is undertaking a District Plan Review and through this process the Council has obtained and holds information showing that this property may be susceptible to flooding from the Selwyn River and/or in heavy rainfall events. The two reports are outlined below and can be found at https://apps.canterburymaps.govt.nz/SelwynNaturalHazards/:

ECan report R19/41 – Selwyn River/Waikirikiri floodplain investigation. The report identifies areas that may be affected by flooding from the Selwyn River/Waikirikiri.

DHI Water and Environment Ltd report – Regional Policy Statement Modelling for SDC – District Plan. The report identifies areas that may be affected by flooding in heavy rainfall events in the Selwyn District. For more information, please contact the Selwyn District Council: phone: 0800 SELWYN (735 996), email contactus@selwyn.govt.nz or visit 2 Norman Kirk Drive, Rolleston.

Alluvion

None known

Avulsion

None known

Erosion

None known

Land Fill

None known

Slippage

None known

Ground Water Level

Less than 30m below ground

Soil Type

Templeton moderately deep fine sandy loam

Eyre shallow silt loam

Liquefaction and Subsidence

Council does not hold site specific information on subsoil classifications or ground bearing capacities. Therefore, the applicant will need to carry out site subsoil investigations to verify 'Good Ground' can be achieved on the site and to determine the subsoil classification in accordance with NZS1170. Verification of site investigation data will need to be submitted as part of the documentation for Building Consent.

The definition of 'Good Ground' can be found in the Definitions section of the NZ Building Code Handbook, and appropriate test methods are detailed in either NZS3604, or NZBC B1/VM4.

Licences/Environmental Health

No information located.

Network Utility Operators

Information related to the availability of supply, authorisations etc. (e.g. electricity or gas) can be obtained from the relevant Network Utility Operator.

Other Information

1. The applicant is advised that the Environment Canterbury may have other information in relation to this property including, but not limited to:

   a) Discharge consents.

   b) Well permits.

   c) Consents to take water.

   d) The existence of contamination and/or hazardous sites.

   e) Flooding.

   f) Clean air discharge compliance.

Further information may be obtained from Environment Canterbury by requesting a Land Information Request (LIR). To find out more contact the Environment Canterbury on 0800 ECINFO (0800 324 636) or at http://www.ecan.govt.nz/

2. The following further information is supplied on the basis set out in note 2 below.

Notes

1. The information supplied in the sections of this report, other than 'Other Information', is made available to the applicant pursuant to Section 44A(2) of the Local Government and Official Information Act 1987 by reference to Council files and records. No property inspection, or title search, has been undertaken. To enable the Council to measure the accuracy of this LIM document based on our current records we would appreciate your response should you find any information contained herein which may be considered to be incorrect or omitted. Please telephone the Council on 0800 SELWYN (375 996).
2. The information or documents supplied to the applicant and referred to in the 'Other Information' section of this report has been supplied to the Council by property owners, their agents and other third parties. That information is made available pursuant to section 44A(3) of the Local Government and Official Information Act 1987 on the basis that:
   a) The information may be relevant to the purposes for which this report is obtained;
   b) The Council does not warrant or represent the accuracy or reliability of the information. If the subject matter of that information is important to the applicant it is recommended that relevant professional advice should be taken before reliance is placed upon that information.
3. The information included in the LIM is based on a search of Council records only and there may be other information relating to the land which is unknown to the Council. Council records may not show illegal or unauthorised building or works on the property. The applicant is solely responsible for ensuring that the land is suitable for a particular purpose.
4. Schedule 1 Exempt Building Work

   Building owners can carry out certain types of building work without needing to obtain a building consent. This exempt building work is listed in Schedule 1 of the Building Act 2004.

   It is the owners' responsibility to ensure that any exempt building work done complies with the Building Code and fits within the provisions of the schedule before they carry out the work.

   Please note that Council do not check or review documentation for compliance where information on exempt work has been provided by a property owner to Council. This information is simply filed for record keeping purposes and not to meet any statutory obligation.

   Any information of this nature held by Council has been provided at Councils discretion under Section 44A (3) of the Local Government Official Information and Meetings Act 1987 without any representation or warranty.

5. The Council has used its best endeavors to ensure that all information provided in this LIM report is correct and complete in all material respects. In the event that a material error or omission can be proven the Council's liability, whether in contract or in tort shall be limited to the fee paid to Council to obtain this report.
6. This information reflects the Selwyn District Council's current understanding of the site, which is based only on the information thus far provided to it and held on record concerning the site. It is released only as a copy of those records and is not intended to provide a full, complete or totally

accurate assessment of the site. As a result the Council is not in a position to warrant that the information is complete or without error and accepts no liability for any inaccuracy in, or omission from, this information.

7. The information contained in this Land Information Memorandum is current at the date the memorandum is issued. Further relevant information may come into the Council's possession subsequent to the date of issue.

Information Management Team

Date: 21 June 2024

Legend

Subdivision_Areas
- Subdivision areas

Address
- Addresses (LINZ)

Boundaries
- District Boundary
- Township Boundary

Railway
- Railway

Road
- Selwyn Roads
- All Road Labels

Rating
- Ratepayer Information
- Title Owners

Land_Owners
- Selwyn District Council

Other
- DoC
- Environment Canterbury
- North Canty Fish and Game Council

Water
Water_pt
- EQUIPMENT - BORE
- EQUIPMENT _ GENERATOR
- EQUIPMENT - SAMPLE TAP
- EQUIPMENT - OTHER
- FACILITY
- FIRE PLANT
- HYDRANT
- IRRIGATION
- NODE
- OBSOLETE
- SUPPLY POINT
- TANK
- VALVE

Water_ln
- DIM LINE
- DUCT
- IRRIGATION
- NON SDC SERVICE
- OBSOLETE
- OUTLINE
- PIPE - TREATED
- PIPE - UNTREATED
- PIPE - SEWER
- SITE_BOUNDARY

Sewer
- Manhole Labels

Sewer_pt
- CHAMBER
- EQUIPMENT
- FACILITY
- MANHOLE
- NODE
- VALVE

Sewer_ln
- OUTLINE
- DIM LINE
- DUCT
- IRRIGATION
- NON SDC SERVICE
- OBSOLETE
- OUTLINE
- PIPE_GRAVITY
- PIPE_RISINGMAIN
- SITE_BOUNDARY

Stormwater
Storm_pt
- CHAMBER
- EQUIPMENT
- FACILITY
- INLET/OUTLET
- MANAGEMENT
- MANHOLE
- NODE
- SOAKHOLE
- SUMP
- VALVE

Storm_ln
- CHANNEL
- DIM LINE
- MANAGEMENT
- NON SDC SERICE
- OBSOLETE
- OUTLINE
- PIPE
- SITE_BOUNDARY
- Soakhole w/Hoz Soakage
- StopBank

Storm_py
- CATCHMENTS
- CONSENT AREA
- GROUNDWATER LESS 6M
- OUTLINE OF BASIN
- RATED AREA
- Stormwater Management Area
- Storm_ln_Labels

WaterRaces
WRace_pt
- DISCHARGE
- DIVIDE
- EQUIPMENT
- GATE
- GRILL
- HEADWALL
- MANHOLE
- NODE
- POND
- SITE
- SHAFT
- SOAKHOLE

WRace_ln
- AQUEDUCT
- CULVERT
- DIM LINE
- EMERGENCY DISCHARGE
- INTAKE
- LATERAL
- LOCAL
- MAIN
- OBSOLETE
- OUTLINE
- SIPHON
- TUNNEL
- SDC Cleaned

Drain
CDrain_pt
- GATE
- Site
- WEIR

CDrain_ln
- DRAIN
- ECan
- OUTLINE
- StopBank
- Site Boundary
- CDrain_ln Label

Well
- Springs - SPRGSV
- Wells - WELLFV
- Assessed For Groundwater Quality - QGWV
- Assessed For Surface Water Quality - QSWV
- Community Drinking Water Protection Zones - ECAN

LiquefactionReview
- Project Extent
- Boundary Between Liquefaction Assessment Zones

Liquefaction Susceptibility
- DBH TC Zoned Area
- Damaging liquefaction unlikely
- Liquefaction assessment needed

Biodiversity
- Canterbury Plains SDC AB and C Classes
- Endangered Flora and Fauna
- Potentially Significant Sites
- Confirmed SNA Sites
- Significant Natural Areas (Final 115)

Zones
- West Melton Observatory Zone

Planning Zones
- High Country
- Port Hills
- Existing Devlopment Area
- Living 1
- Living 2
- Living 3
- Living X
- Living West Melton (North)
- Living Z
- Deferred Living
- Business 1
- Business 2
- Business 3
- Inner Plains
- Outer Plains
- Malvern Hills
- Key Activity Centre
- Living West Melton (South)

Proposed CPW
- Headrace
- Sheffield Pond Flood Extent
- Distribution Network
- Command Area (Ex. H & D Network)

UDSZones
- UDS Traffic Zones
- CRETS

LLUR
- Activities
- Investigations
- Sites

Potentially Contaminated Sites
- Verified Note
- Verified Comment
- Not Verified

Designations
- Designations

Floods
- Estimated 2013 Flood Photo Locations
- 2.7M AMSL
- GW Spring Holes
- SDC Recorded Flood Sites
- Ecan Defined Flood Zones

Tsunami Evacuation zone
- Tsunami Initial Evacuation Area

Refuse
- Refuse Dropoff points
- Organic Route

Rubbish/Recycling Route
- Monday Week 1
- Monday Week 2
- Tuesday Week 1
- Tuesday Week 2
- Wednesday Week 1
- Wednesday Week 2
- Thursday Week 1
- Thursday Week 2
- Friday Week 1
- Friday Week 2
- No Collection
- Organic Bin
- Rubbish Bin
- Day Unknown

Recycling Bin & Pick Up Schedule
- Monday, Recycling week 1
- Monday, Recycling week 2
- Tuesday, Recycling week 1
- Tuesday, Recycling week 2
- Wednesday, Recycling week 1
- Wednesday, Recycling week 2
- Thursday, Recycling week 1
- Thursday, Recycling week 2
- Friday, Recycling week 1
- Friday, Recycling week 2
- General Refuse Charge

Pools
Swimming Pools
- Error, Empty, Expired, In Progress, Complaint, NonC
- Removed

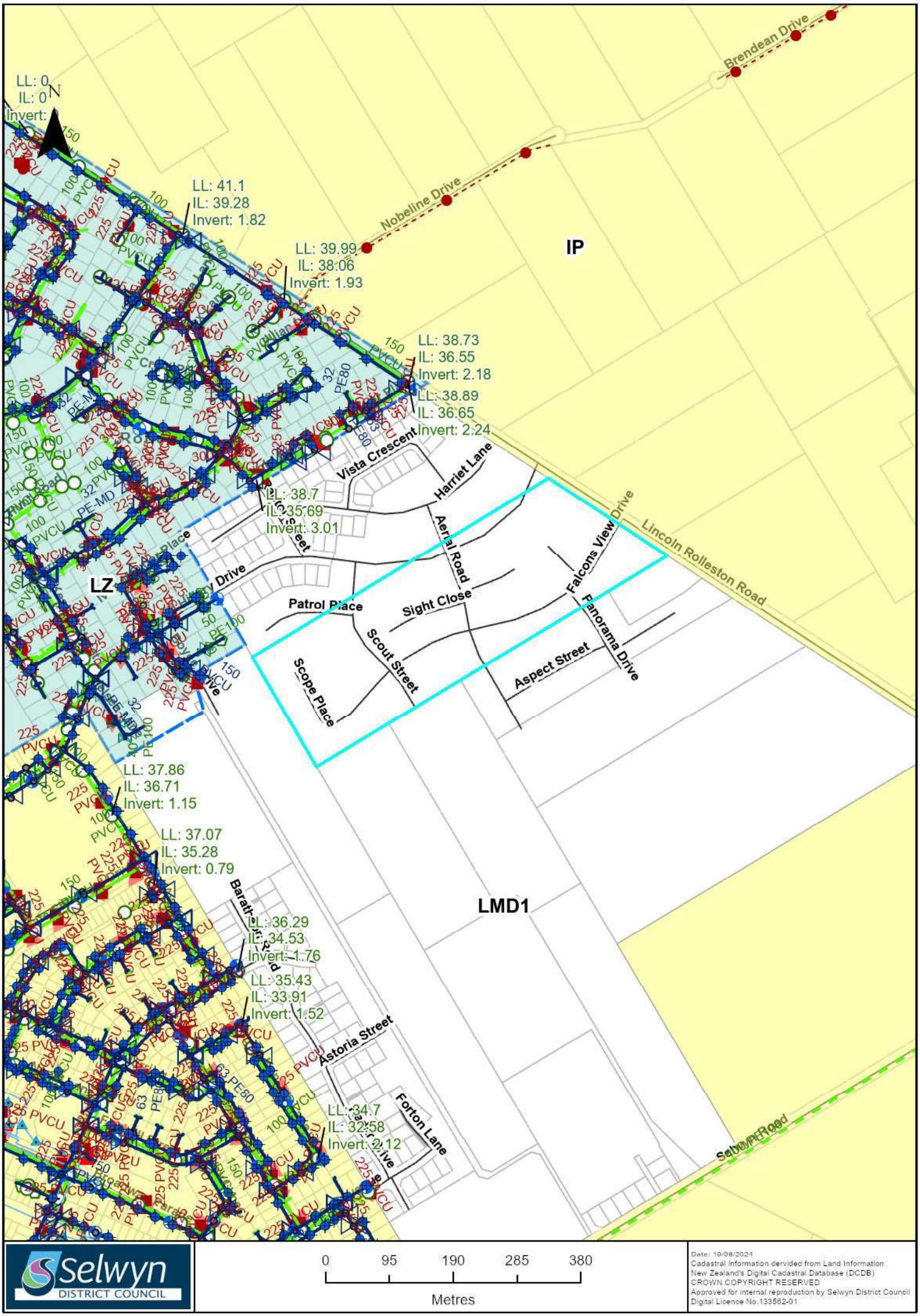
PlanningMisc
- NZ Defence Force Buffer
- Māori Freehold Land
- RRS14 Preliminary Locations

EcanRiverProtectionScheme
- Properties Beside Rivers
- Halswell Staff Gauges
- Halswell Floodgates
- Halswell Drainage

GreendaleFault
- Greendale Fault 50m Buffer
- Fault Lines (GNS 2013)
- Folds (GNS 2013)

HororataHeightRestrictions
- Final Height Splays
- Runways
- Hororata Airport Land Parcel

LIM REPORT - Zone and Water Services



Selwyn DISTRICT COUNCIL

Date: 19/08/2021
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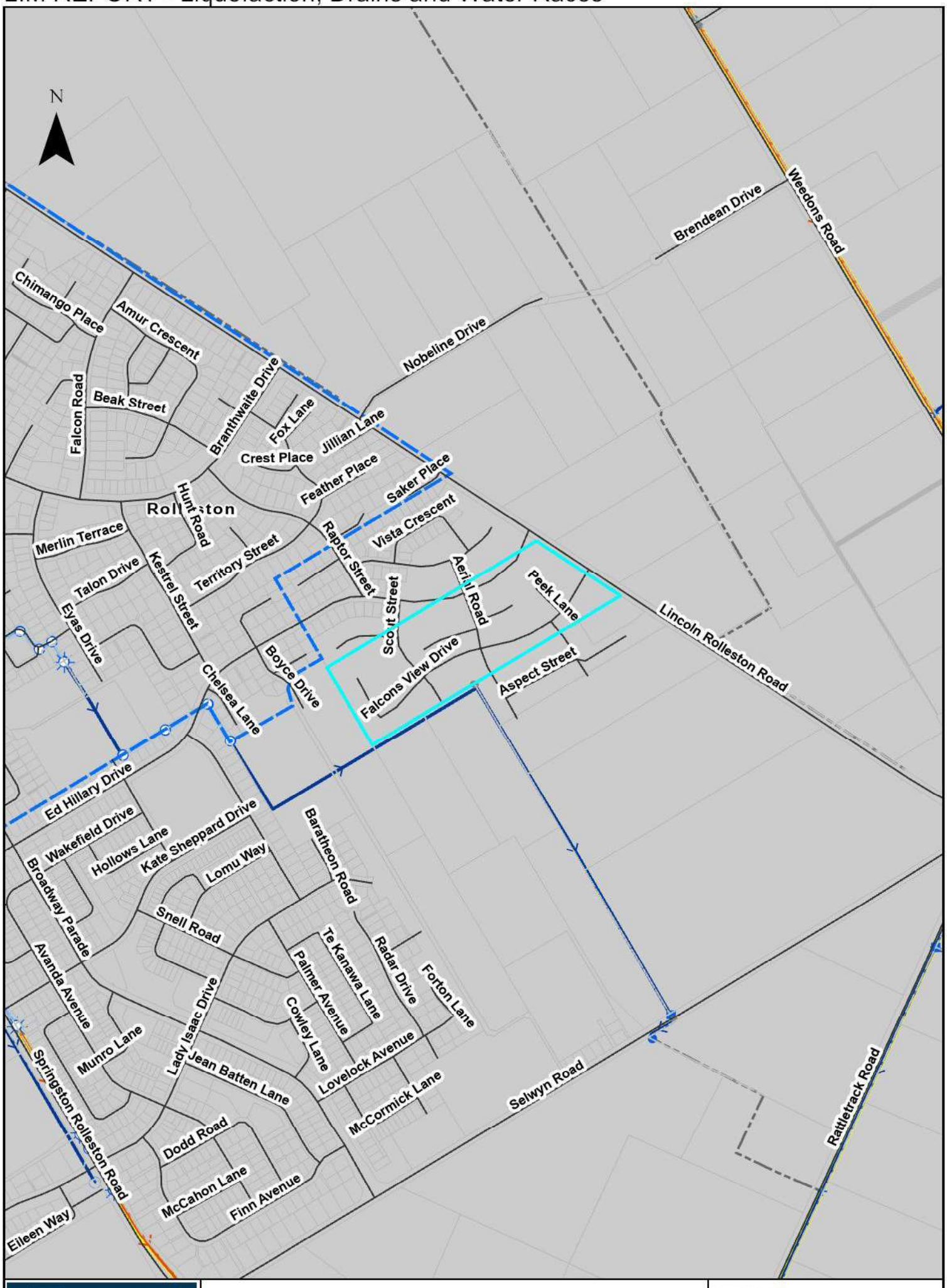
LIM REPORT - Liquefaction, Drains and Water Races



Selwyn DISTRICT COUNCIL

0 140 280 420 560

Metres

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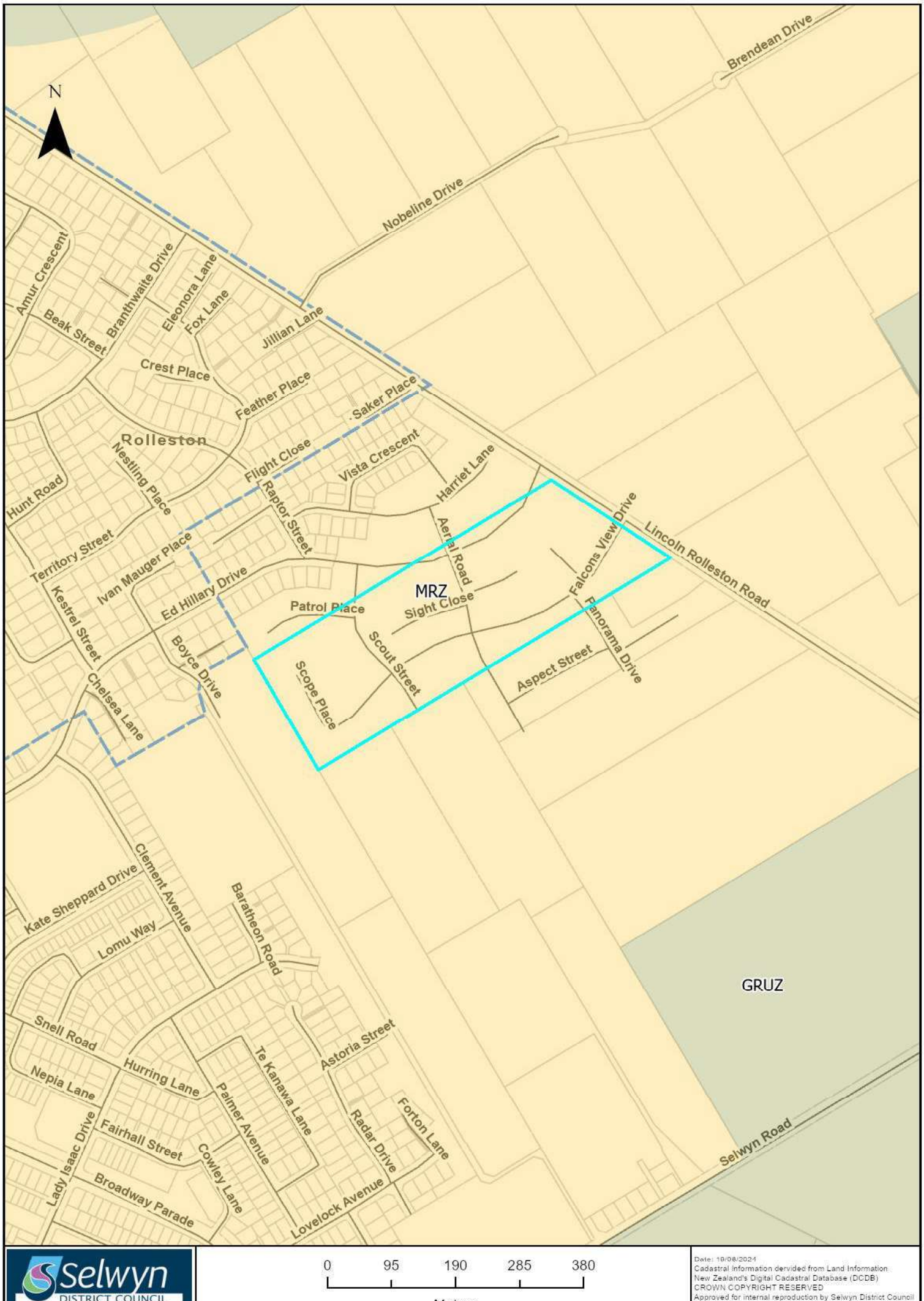
LIM REPORT - PODP Zone and Precinct



RESOURCE CONSENT INFORMATION

This document is one of three pages titled “Resource Consent Information” which should be read together.

- Because of the large number of resource consents only consents which fall within the red buffer as identified on the map have been included with this report.

- If further information is required please contact the Council’s Planning Department – Phone Direct 03 3472 868.

- Every effort is made by the Council to identify resource consent in proximity to the property subject to this LIM application. However, it is suggested that a site inspection be undertaken by prospective purchasers to identify any land uses of interest. These may include uses which have existing use rights or other uses which are permitted under the Council’s District Plan.

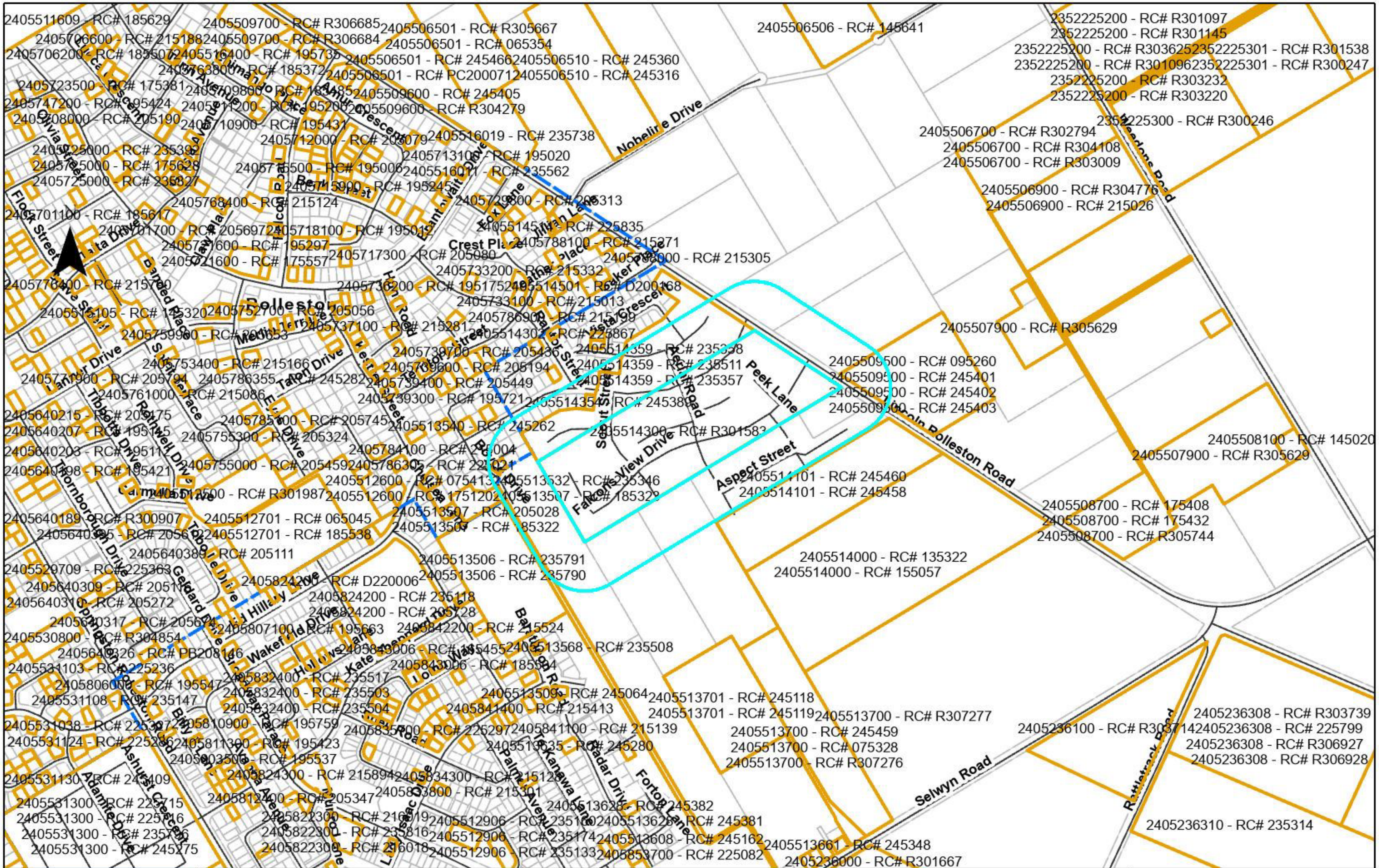
Resource Consent Status Codes:

GHP	Granted by Hearing
GEC	Granted by Environment Court
GDEL	Granted by Delegation
GCOM	Granted by Commissioner
DCOM	Declined by Commissioner
DHP	Declined by Hearing
WD	Withdrawn application
AP	Approved
DC	Declined
Blank	No decision issued
DN	Decision Notified

ADN	Appeal Decision Notified
AE	Appeal expiry
AEC	Appeal Heard by Environment
AN	Abatement Notice
AR	Appeal received
ARI	Application returned incomplete
AWD	Appeal withdrawn
CC	Cancelled
CCI	Certificate Compliance Issued
D37	Deferred under s.37
D37E	s.37 deferral ends
D91	Deferred under s.91
D91E	s.91 deferral ends
ECDN	Environment Court Decision notified
FI	Further Information
FICR	Further Information request - no clock restart
FR	Formally received
HD	Hearing Date
HH	Hearing held
INV	Invoiced
IR	Information received
LAPS	Lapsed
LD	Lodged
LN	Limited Notified
LS	Lapsed
ODN	Objection decision notified
OH	On Hold
OR	Objection received

PA	Pre- application
PN	Publically notified
PS	Process suspended
RAD	Recommendation adopted by Council
RRA	Recommendation to required authority
S223	Section 223
S224	Section 224
SC	submissions closed
WAR	Written Approval Requested
WARE	Written Approvals Received

2405514300



Selwyn DISTRICT COUNCIL

Date: 19/06/2024
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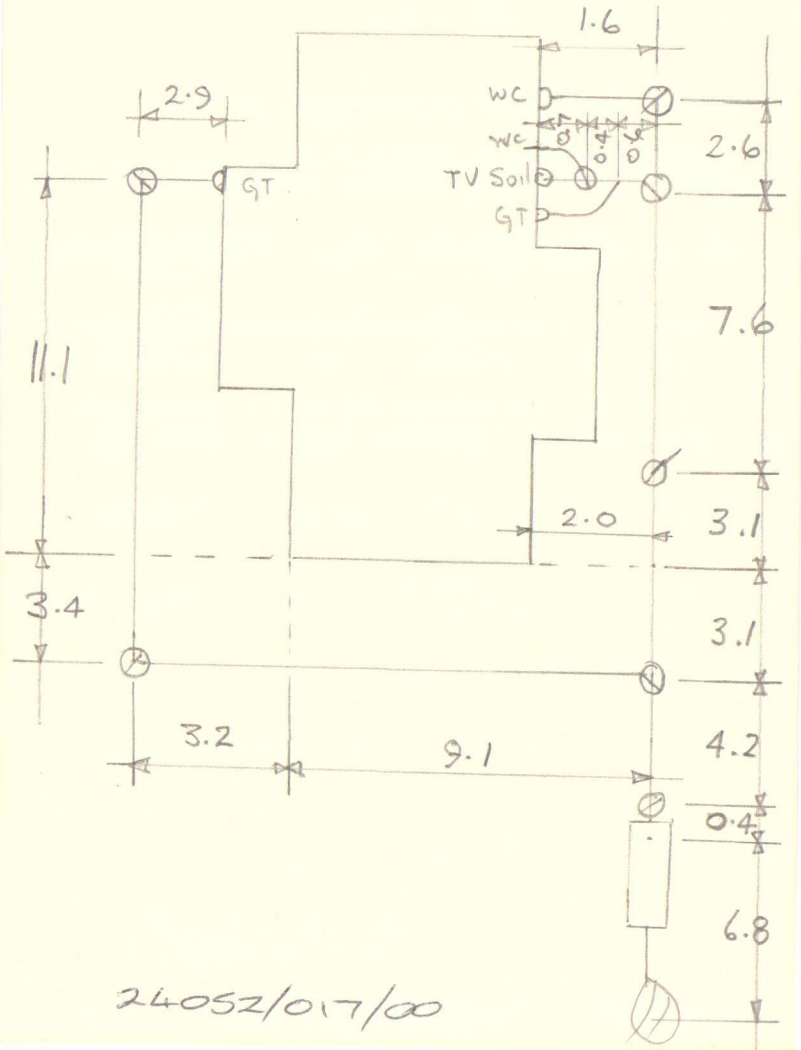
Assessment_ID	RC Number	Proposal	Decision Date
2405513507	185322	To undertake a subdivision to create 44 residential lots. L/U185323	2018-08-15
2405513507	185323	To undertake earthworks exceeding the maximum volume permitted. NES. S/D185322	2018-08-15
2405513507	205028	VARIATION â€“ To change conditions of resource consent RC185322 to defer service connections.	2020-02-14
2405513509	245064	To undertake a subdivision to create three lots	
2405513532	235346	MDRS: To erect a dwelling with non-compliant outlook space and glazing	2023-07-28
2405514300	R301583	THE EXTRACTION & SCREENING OF SHINGLE TO A DEPTH OF 8 METRES	
2405514354	245389	To erect a residential unit with non-complying outlook space and non-complying vehicle crossing from an intersection	
2405514359	235358	Consent is sought to undertake earthworks, and establish an accessway, roads and a wastewater pump station	2023-11-24
2405514359	235511	Change of conditions to cancel conditions of subdivision consent RC235161	2023-11-24
2405514359	235357	To undertake a subdivision creating 71 residential lots, roads, reserves and shared accessways within a Flood Management Overlay	2023-11-24
2405509500	095260	SUBDIVIDE TO CREATE 3 X 4HA LOTS	2009-11-04
2405509500	245403	Land Use consent under the NES to subdivide a site containing a HAIL site and change the use of that site associated with subdivision RC245401.	
2405509500	245401	To undertake a subdivision to create 265 residential lots (Falcon's East)	

2405509500	245402	To undertake earthworks, roading/access and OPD non-compliances associated with subdivision RC245401	

B.E Pullin
Lincoln-Rolleston Road.
Rolleston.

B. Lay.
17-11-87



24052/017/00

4415
15 January 2021

Selwyn District Council
PO Box 90
Rolleston

GEOTECH
consulting ltd

Attention: Jocelyn Lewes,

Dear Ms Lewes,

RE: Plan Change 75
Yoursection Ltd
151-153 Lincoln – Rolleston Road, Rolleston
Geotechnical Report Peer Review

Geotech Consulting has been asked to carry out a peer review on the geotechnical report for the proposed plan change from Inner Plains to Living Z. In particular the peer review is to ensure compliance with the MBIE guidelines for the geotechnical assessment of subdivisions. The geotechnical reports is:

- *Geotechnical Report for Proposed Plan Change, Falcons Subdivision Proposed Extension*, dated 25 November 2020, by Miyomoto International NZ Ltd, for Yoursection Ltd

The reports is specifically to support land use change.

The site is essentially level and is made up of titles Lot 1 DP 50631 Blks III IV Leeston SD & Lot 1 DP 357634, at 151 & 153 Lincoln Rolleston Road, with an area of about 24.7 ha.

The report is based on 27 test pits with associated scala penetrometer tests from across the site, but this is supplemented with a further 12 test pits to between 1.6m and 2.6m depth, two hand auger bores to 0.8m & 3m depth, and four well logs from the Ecan data base, all within a short distance of the site boundary. The site is essentially underlain with 0.2 – 0.4m of topsoil over a sandy silt to between 0.3m and 1.1m depth where gravelly sand grading into sandy gravel is found. Although the tests on site do not extend far into the gravel, some of the test pits on adjacent land do, and the well logs all show gravel dominated soils to the extent of the logs at 37m to 48m depth. The water table is indicated at being at about 10m to 13m depth, with shallowest nearby level recorded at about 6m depth.

The liquefaction hazard is assessed as being low, given the gravel soils and the 10m depth to water table. The site is equivalent Foundation Technical Category TC1. Natural hazards have been considered but the site is unlikely to be subject to any of them. It appears that the majority of the site should fulfill the requirements of “good ground” as defined in NZS3604.

Dr. Mark Yetton **E-mail** myetton@geotech.co.nz
Nick Traylen **E-mail** ntraylen@geotech.co.nz
Ian McCahon **E-mail** mccahon@geotech.co.nz

Tel (03) 9822 538
Fax (03) 3257 555
PO Box 130 122
4 / 6 Raycroft Street
Christchurch 8141 New Zealand

Conclusions

We agree that there is minimal to no liquefaction potential at the site. We note that although the report describes the soils as Holocene aged, the gravels at more than a few metres depth will be of older Pleistocene age and therefore much less susceptible to any seismic consolidation effects. We agree with the conclusion that the site is equivalent TC1 Technical Land classification.

The extent of work reported complies with the intent of the MBIE Subdivision Guidance for a site subject to plan change, in our opinion, given the consistency of the ground conditions identified. The report is sufficient for subdivision consent, although further geotechnical investigations may be needed for subdivision design. Site specific shallow testing may be needed on each house site at building consent stage.

Yours faithfully
Geotech Consulting Limited

Ian McCahon

226 Antigua Street, Central Christchurch, Telephone: +64 3 377 4374
Website:www.mkt.co.nz

CULTURAL ADVICE REPORT

J5573 – 153 Lincoln Rolleston Road

To: Selwyn District Council

Contact: Richard Bigsby

1.0 Mana Whenua Statement

Ngāi Tahu are tangata whenua of the Canterbury region and hold ancestral and contemporary relationships with Canterbury. The contemporary structure of Ngāi Tahu is set down through the Te Rūnanga o Ngāi Tahu Act 1996 (TRoNT Act). The TRoNT Act and Ngāi Tahu Claims Settlement Act (NTCSA) 1998 sets the requirements for recognition of tangata whenua in Canterbury.

The Te Rūnanga o Ngāi Tahu Act 1996 and the NTCSA 1998 gives recognition to the status of Papatipu Rūnanga as kaitiaki and mana whenua of the natural resources within their takiwā boundaries. Each Papatipu Rūnanga has their own respective takiwā, and each is responsible for protecting the tribal interests in their respective takiwā, not only on their own behalf of their own hapū, but again on behalf of the entire tribe.

The following Rūnanga hold mana whenua over the project's location, as it is within their takiwā:

- Ngāi Tūāhuriri Rūnanga
- Te Taumutu Rūnanga

2.0 Summary of Proposal

The Applicant seeks the following Selwyn District Council (SDC) resource consents:

1. RC235161 – To undertake a subdivision creating 200 residential lots, two balance allotments, 11 allotments to vest as road, 2 allotments to vest as a reserve, 12 access lots and one allotment for future business development.
2. RC235162 – To undertake earthworks and establish non-compliant roads, accessways and crossings, in addition to consent under the NESCS.

This consent is part of the wider Falcons View Subdivision, covering stages 7-17.

3.0 Mahaanui Iwi Management Plan 2013

The Mahaanui Iwi Management Plan (IMP) is a written expression of kaitiakitanga, setting out how to achieve the protection of natural and physical resources according to Ngāi Tahu values, knowledge,

and practices. The plan has the mandate of the six Papatipu Rūnanga, and is endorsed by Te Rūnanga o Ngāi Tahu, as the iwi authority.

Natural resources – water (waterways, waipuna (springs), groundwater, wetlands); mahinga kai; indigenous flora and fauna; cultural landscapes and land - are taonga to mana whenua and they have concerns for activities potentially adversely affecting these taonga. These taonga are integral to the cultural identity of ngā rūnanga mana whenua and they have a kaitiaki responsibility to protect them. The policies for protection of taonga that are of high cultural significance to ngā rūnanga mana whenua are articulated in the IMP.

The policies in this plan reflect what Papatipu Rūnanga support, require, encourage, or actions to be taken with regard to resolving issues of significance in a manner consistent with the protection and enhancement of Ngāi Tahu values, and achieving the objectives set out in the plan.

The relevant Policies of the IMP to this proposal have been identified as:

5.3 WAI MĀORI

WATER QUALITY

Controls on land use activities to protect water quality

WM6.17 To require the development of stringent and enforceable controls on the following activities given the risk to water quality:

(b) Subdivision and development adjacent to waterways.

DRAIN MANAGEMENT

Ngā Kaupapa / Policy

WM14.1 To require that drains are managed as natural waterways and are subject to the same policies, objectives, rules and methods that protect Ngāi Tahu values associated with freshwater, including:

(a) Inclusion of drains within catchment management plans and farm management plan

(b) Riparian margins are protected and planted;

(c) Stock access is prohibited;

(d) Maintenance methods are appropriate to maintaining riparian edges and fish passage; and

(e) Drain cleaning requires a resource consent.

Comment: *Water is a significant cultural resource, connecting Ngāi Tahu to the landscape and culture and traditions of the tūpuna. Wai is a taonga, and a life giver of all things. The protection and enhancement of wai is, therefore, of upmost importance to tāngata whenua. The health and mauri of the wai must be prioritised, giving effect to Te Mana o Te Wai – the fundamental concept in the National Policy Statement for Freshwater Management 2020.*

5.4 PAPATŪĀNUKU

SUBDIVISION AND DEVELOPMENT

Basic principles and design guidelines

P4.3 To base tāngata whenua assessments and advice for subdivision and residential land development proposals on a series of principles and guidelines associated with key issues of importance concerning such activities, as per Ngāi Tahu subdivision and development guidelines.

STORMWATER

Ngā Kaupapa / Policy

P6.1 To require on-site solutions to stormwater management in all new urban, commercial, industrial and rural developments (zero stormwater discharge off site) based on a multi-tiered approach to stormwater management:

(a) Education - engaging greater general public awareness of stormwater and its interaction with the natural environment, encouraging them to take steps to protect their local environment and perhaps re-use stormwater where appropriate;

(b) Reducing volume entering system - implementing measures that reduce the volume of stormwater requiring treatment (e.g. rainwater collection tanks);

(c) Reduce contaminants and sediments entering system - maximising opportunities to reduce contaminants entering stormwater e.g. oil collection pits in carparks, education of residents, treat the water, methods to improve quality; and

(d) Discharge to land based methods, including swales, stormwater basins, retention basins, and constructed wetponds and wetlands (environmental infrastructure), using appropriate native plant species, recognising the ability of particular species to absorb water and filter waste.

P6.2 To oppose the use of existing natural waterways and wetlands, and drains, for the treatment and discharge of stormwater in both urban and rural environments.

CONTAMINATED LAND

Ngā Kaupapa / Policy

P10.1 The management of contaminated land must recognise and provide for specific cultural issues, including:

(a) The location of contaminated sites;

(b) The nature of the contamination;

(c) The potential for leaching and run-off;

(d) Proposed land use changes; and

(e) Proposed remediation or mitigation work.

EARTHWORKS

P11.1 To assess proposals for earthworks with particular regard to:

(a) Potential effects on wāhi tapu and wāhi taonga, known and unknown;

(b) Potential effects on waterways, wetlands and waipuna;

(c) Potential effects on indigenous biodiversity;

(d) Potential effects on natural landforms and features, including ridge lines;

(e) Proposed erosion and sediment control measures; and

(f) Rehabilitation and remediation plans following earthworks.

Indigenous vegetation

P11.8 To require the planting of indigenous vegetation as an appropriate mitigation measure for adverse impacts that may be associated earthworks activity.

Erosion and sediment control

P11.9 To require stringent and enforceable controls on land use and earthworks activities as part of the resource consent process, to protect waterways and waterbodies from sedimentation, including but not limited to:

(a) The use of buffer zones;

(b) Minimising the extent of land cleared and left bare at any given time; and

(c) Capture of run-off, and sediment control.

Comment: *Papatūānuku is the birthplace of all things of the world and the place to which they return. The protection of the mauri of Papatūānuku, and the enhancement of mauri where it has been degraded, is therefore of upmost importance to Ngāi Tahu. Subdivision and development activities can compromise the mauri of the land and the life it supports if not managed appropriately. Subdivision and development activities must implement low impact, innovative, and sustainable solutions to water, stormwater, and energy issues.*

5.8 NGĀ TŪTOHU WHENUA

WĀHI TAPU ME WĀHI TAONGA

CL3.1 All taonga within the takiwā of Ngāi Tahu, accidental discovery or otherwise, belong to the Papatipu Rūnanga/ Te Rūnanga o Ngāi Tahu.

Protecting wāhi tapu and wāhi taonga

CL3.8 To require, where a proposal is assessed by tāngata whenua as having the potential to affect wāhi tapu or wāhi taonga, one or more of the following:

(a) Low risk to sites:

(i) Accidental discovery protocol (ADP).

Comment: *Wāhi tapu and wāhi taonga are sites and places that are culturally and spiritually significant to tāngata whenua history and identity, and include sites such as urupā, pā, and midden. Papatipu Rūnanga may have different ways of defining, identifying, and classifying significant sites in their takiwā. In some cases, these are reflected in district planning processes. The management and the protection of wāhi tapu and wāhi taonga in specific areas must therefore be based on engagement with Papatipu Rūnanga.*

3.1 Guidance to Avoid, Remedy, or Mitigate any Effects on Cultural Values

The above policies from the Mahaanui IMP provide a framework for assessing the potential adverse effects of the proposed activity on cultural values and provide guidance on how these effects can best be avoided, mitigated, and/or remedied.

The proposal is considered to be mostly consistent with the provisions in the Mahaanui IMP. The consent conditions and advice notes in Section 5.0 have been provided to further align this proposal with the Mahaanui IMP.

The proposed subdivision and development will involve disturbance to the ground that may potentially disturb or damage previously unrecorded archaeological material of Māori origin. To ensure the protection of culturally sensitive material, an Accidental Discovery Protocol (ADP) must be in place during all earthwork activity.

Earthworks are a key concern for tāngata whenua as they can compromise the mauri of the whenua and the wai through erosion and sedimentation if appropriate measures are not in place. Policy P11.9 in Mahaanui IMP states that stringent erosion and sediment controls must be in place during any land use and earthwork activities. A total of approximately 40,000m^3 of excavation and fill is required to provide for the formation and shaping of the residential allotments, the formation of roads, and installation of services. An Erosion and Sediment Control Plan must be prepared by a suitably qualified and experienced professional following the best practices, techniques, inspections, and monitoring for erosion and sediment controls as contained in Environment Canterbury's *Erosion and Sediment Control Toolbox.* All contractors must be familiar with this plan and strictly adhere to it. If the measures prove to be inadequate, works must cease until appropriate and effective measures are in place.

Contaminated material can have adverse effects on the environment and on Ngāi Tahu cultural associations. Contaminated sites or areas may be on, near, or adjacent to land with mahinga kai, wāhi tapu, or historical associations. It is understood that the site has been identified as hazardous activities and industries list (HAIL) site and that soil sampling has shown exceedances in arsenic concentrations above the residential guideline values within stockpiled material surrounding the existing rubbish pit. The Detailed Site Investigation (DSI) recommended that all arsenic affected soils be remediated prior to the development of the site for residential use and that a Site Validation Report be produced following successful remediation and validation. In addition, the DSI recommended an

accidental contamination discovery protocol be implemented during earthwork activity. These recommendations are supported by the rūnanga and must be implemented.

Water is a significant cultural resource, connecting Ngāi Tahu to the landscape and culture and traditions of the tūpuna. Objective 1 in section 5.3 of the Mahaanui IMP, states the water management must provide for the taonga status of water. The is achieved by prioritising the health and mauri of the wai, giving effect to Te Mana o Te Wai.

The application states there is a water race located at the southern boundary of the site. It is understood that the neighbouring developer has applied to have this water race closed but that this subdivision will need to provide for the ongoing operation of the water race. To ensure the protection of this water race, a 10m setback from the water race must be maintained (unless the water race is closed). If the water race is to be closed, Mahaanui Kurataiao Ltd must have the opportunity to receive and provide feedback on the water race closure application.

Indigenous vegetation should be incorporated into the overall development of this site. Indigenous vegetation provides a multitude benefits such as the sequestering carbon and the binding of soil – all of which support a healthy environment. Alongside these environmental benefits, indigenous biodiversity, and landscapes and ecosystems that support it, is a fundamental part of the culture, identity and hertiage of Ngāi Tahu.

The *Ngāi Tahu Subdivision and Development Guidelines* found in Section 5.4 in the Mahaanui IMP provide a framework for Papatipu Rūnanga to influence subdivision and development activities positively and proactively within their takiwā, while also enabling developers and council to identify issues of importance to tāngata whenua and their desired outcomes for protecting the landscape. The proposal to subdivide and develop this land should align with these guidelines as far as practicable particularly in regard to stormwater, landscaping, and earthworks.

In terms of stormwater, it is understood that stormwater runoff within the road corridors will be via kerb and channel into sumps which will be connected to rapid soakage trenches/soak pits. Further, all lots will have individual soak pits. Tāngata whenua support discharge to land over discharge to water due to the natural ability of Papatūānuku to cleanse and filter contaminants. However, this support is provisional on appropriate management of the activity. Stormwater discharge must not result in the oversaturation or overburdening of soils with contaminants. The future development of the individual lots should incorporate sustainable urban design features to reduce stormwater runoff such as rainwater collection tanks, permeable paving, grass cover and indigenous vegetation, and using land-based stormwater treatment methods (i.e., swales).

4.0 Rūnanga – Affected Party or Not

The Kaitiaki representatives of Ngāi Tūāhuriri Rūnanga and Te Taumutu Rūnanga have reviewed this application and provided the consent conditions and advice notes outlined in Section 5.0 to align this proposal more closely with the provisions in the Mahaanui IMP. If the consent conditions are provided for, the Rūnanga will not consider themselves to be an adversely affected party.

5.0 Consent Conditions

If a resource consent is granted, the following conditions are recommended to mitigate the effects of this proposed activity on mana whenua values:

1. An Accidental Discovery Protocol (ADP) must be in place for the entirety of works and all contractors made familiar with this protocol as per policy CL3.8 in the MIMP.
2. An Erosion and Sediment Control Plan (ESCP) must be prepared, inspected, and maintained in accordance with Environment Canterbury's *Erosion and Sediment Control Toolbox* for Canterbury.
    a. If the erosion and sediment controls prove to be inadequate, works must cease until appropriate and effective measures are in place.
3. All contaminated material must be removed prior to development and taken off site to an appropriate licensed facility.
4. A Site Validation Report must be produced following successful remediation and validation. This report must be provided to SDC and ECan.
5. An accidental contamination discovery protocol must be implemented during earthwork activity.
6. A 10m setback from the water race must be maintained (unless the water race is closed).

The following advice notes must be included in final decision:

1. The ecological values of the water race should be assessed prior to the termination of the water race and any ecological values determined in the water race should be protected and in agreement with tāngata whenua before the any decision is made. Further, Mahaanui Kurataiao must have the opportunity to receive and provide feedback on the water race closure application.
2. The Applicant should plant indigenous vegetation on-site to help with the uptake of nutrients, binding of soils, and to increase biodiversity in the area.
3. The future development of the dwellings should align with the *Ngāi Tahu Subdivision and Development Guidelines* to the greatest practical extent.
4. The future development of the Lots must incorporate sustainable urban design features with respect to stormwater runoff including:
    a. Rainwater capture and reuse (i.e., rainwater collection tanks).
    b. Minimising imperious cover (e.g., using permeable paving and maintaining grass cover).
    c. The use of rain gardens and swales (or other land-based methods) rather than standard kerb and channel.
    d. Avoiding the use of building material known to generate contaminants such as copper guttering and roofing.

On behalf of Mahaanui Kurataiao Ltd (MKL), this report has been prepared by Rebecca Adolph | Mahaanui Kurataiao Ltd Environmental Advisor, and peer reviewed by Megan Hickey | Mahaanui Kurataiao Ltd Senior Environmental Advisor.

Date: 9th of June 2023

APITIHANGA TAHI / Appendix 1: Accidental Discover Protocol (ADP)

PRIOR TO COMMENCEMENT OF ANY WORKS, A COPY OF THIS ADP SHOULD BE MADE AVAILABLE TO ALL CONTRACTORS WORKING ON SITE.

Purpose

This Accidental Discovery Protocol (ADP) sets out the procedures that must be followed in the event that taonga (Māori artefacts), burial sites/kōiwi (human remains), or Māori archaeological sites are accidentally discovered. The Protocol is provided by Ngāi Tūāhuriri Rūnanga and Te Taumutu Rūnanga. Ngāi Tūāhuriri Rūnanga and Te Taumutu Rūnanga are the representative body of the tangata whenua who hold mana whenua in the proposed area.

Background

Land use activities involving earthworks have the potential to disturb material of cultural significance to tangata whenua. In all cases such material will be a taonga, and in some cases such material will also be tapu. Accidental discoveries may be indicators of additional sites in the area. They require appropriate care and protection, including being retrieved and handled with the correct Māori tikanga (protocol).

Under the *Heritage New Zealand Pouhere Taonga Act 2014*, an archaeological site is defined as any place associated with pre-1900 human activity, where there is material evidence relating to the history of New Zealand. It is unlawful for any person to destroy, damage or modify the whole or any part of an archaeological site (known or unknown) without the prior authority of the Heritage New Zealand Pouhere Taonga (HNZPT). This is the case regardless of the legal status of the land on which the site is located, whether the activity is permitted under the District or Regional Plan or whether a resource or building consent has been granted. The HNZPT is the statutory authority for archaeology in New Zealand.

Note that this ADP does not fulfil legal obligations under the Heritage New Zealand Pouhere Taonga Act 2014 regarding non-Māori archaeology. Please contact the HNZPT for further advice.

Immediately following the discovery of material suspected to be a taonga, kōiwi or Māori archaeological site, the following steps shall be taken:

1. All work on the site will cease immediately.

2. Immediate steps will be taken to secure the site to ensure the archaeological material is not further disturbed.

3. The contractor/works supervisor/owner will notify the Kaitiaki Rūnanga and the Area Archaeologist of the HNZPT. In the case of kōiwi (human remains), the New Zealand Police must be notified.

4. The Kaitiaki Rūnanga and HNZPT will jointly appoint/advise a qualified archaeologist who will confirm the nature of the accidentally discovered material.

5. If the material is confirmed as being archaeological, the contractor/works supervisor/owner will ensure that an archaeological assessment is carried out by a qualified archaeologist, and if appropriate, an archaeological authority is obtained from HNZPT before work resumes (as per the *Heritage New Zealand Pouhere Taonga Act 2014*).

6. The contractor/works supervisor/owner will also consult the Kaitiaki Rūnanga on any matters of tikanga (protocol) that are required in relation to the discovery and prior to the commencement of any investigation.

7. If kōiwi (human remains) are uncovered, in addition to the steps above, the area must be treated with utmost discretion and respect, and the kōiwi dealt with according to both law and tikanga, as guided by the Kaitiaki Rūnanga.

8. Works in the site area shall not recommence until authorised by the Kaitiaki Rūnanga, the HNZPT (and the NZ Police in the case of kōiwi) and any other authority with statutory responsibility, to ensure that all statutory and cultural requirements have been met.

9. All parties will work towards work recommencing in the shortest possible time frame while ensuring that any archaeological sites discovered are protected until as much information as practicable is gained and a decision regarding their appropriate management is made, including obtaining an archaeological authority under the *Heritage New Zealand Pouhere Taonga Act 2014* if necessary. Appropriate management may include recording or removal of archaeological material.

10. Although bound to uphold the requirements of the Protected Objects Act 1975, the contractor/works supervisor/owner recognises the relationship between Ngāi Tahu whānui, including its Kaitiaki Rūnanga, and any taonga (Māori artefacts) that may be discovered.

IN DOUBT, STOP AND ASK; TAKE A PHOTO AND SEND IT TO THE HNZPT ARCHAEOLOGIST

Contact Details

HNZPT Archaeologist: (03) 357 9615 archaeologistcw@historic.org.nz

HNZPT Southern Regional Office (03) 357 9629 infosouthern@historic.org.nz

HNZPT Māori Heritage Advisor (03) 357 9620 mhadvisorcw@historic.org.nz

Kaitiaki Rūnanga:

Ngāi Tūāhuriri Rūnanga: (03) 313 5543, Tuahiwi.Marae@ngaitahu.iwi.nz

Te Taumutu Rūnanga: 03 371 2660, taumutu@ngaitahu.iwi.nz

Soil Contamination Risk
Detailed Site Investigation Report
and Remediation Action Plan

153 Lincoln Rolleston Road,
Rolleston, Canterbury

August 2022

Quality Control and Certification Sheet

Client: Your Section Ltd

Date of Issue: 31 August 2022

Report written by:

Hollie Griffith, Environmental Scientist, BEMP, CEnvP
(6 years contaminated land experience)

Signed: 

Email: hollie@momentumenviro.co.nz
Phone: 027 513 4057

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

Nicola Peacock, Principal Environmental Engineer, NZCE, CEnvP
(13 years contaminated land experience within 29 years environmental experience)

Signed: 

Email: nicola@momentumenviro.co.nz
Phone: 021 1320 321

CONTENTS

APPENDICES

1 Executive Summary

The subject of this investigation is located at 153 Lincoln Rolleston Road in Rolleston, Canterbury, from herein referred to as 'the site'. It is proposed to subdivide the site for residential use and therefore an assessment under the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NESCS) is required. It is also noted that Momentum Environmental Ltd is obligated to consider the requirements of Section 10 (4) of the Health and Safety at Work (Asbestos) Regulations 2016. This report details the work undertaken to assess the risks.

A Preliminary Site Investigation (PSI) undertaken by Malloch Environmental Ltd (now Momentum Environmental Ltd, MEL) in November 2020 determined that there was a potential risk of contamination in soils associated with a build-up of vehicles, dismantled vehicle parts, machinery and general waste at the site. On-site rubbish pits, alongside large stockpiles of fill material and varied topography across the entire yard area indicated ongoing disposal of waste to land. Several potential asbestos containing material (ACM) fragments were identified along the vehicle track and within the demolition rubble of a stockpile. In conjunction with this, the PSI determined there was an isolated risk posed by fuel storage in tanks and drums across the yard area. It was also noted that an L-shaped workshop only partially contained a concrete base and therefore any fuel or chemical leaks may have impacted the base soils.

Based on the investigation undertaken, the following activities as per the Hazardous Activities and Industries List (HAIL) were identified for the site:

- *HAIL A17 – Storage tanks and drums for fuel, chemicals or liquid waste*
- *HAIL D5 – Engineering workshops with metal fabrication*
- *HAIL E1 – Asbestos products manufacture or disposal including sites with buildings containing asbestos products known to be in a deteriorated condition*
- *HAIL G4 – Scrap yards including automotive dismantling, wrecking or scrap metal yards*
- *HAIL G5 – Waste disposal to land*

Soil sampling undertaken as part of this Detailed Site Investigation has shown arsenic concentrations exceeded the 'residential 10% produce' soil guideline values (SGVs) of 20mg/kg at test pit location TP1 within stockpiled material surrounding an existing rubbish pit. The arsenic concentration at test pit location TP1 was 38.7mg/kg. The elevated arsenic concentrations are likely associated with the burning of treated timber, which is consistent with the blackened ashy soils and anthropogenic material identified in the stockpile.

The remaining sample results have shown contaminant concentrations are below the 'residential 10% produce' SGVs and no asbestos was detected in the soil samples collected from the site.

Based on the moderate risk to human health associated with the isolated arsenic contamination, it is recommended the arsenic affected soils surrounding the existing rubbish pit are remediated prior to the development of the site for residential use. The recommended remediation method is excavation and off-site disposal to an authorised disposal facility. Following successful remediation and validation, a Site Validation Report will be produced and provided to Selwyn District Council and ECan.

The remainder of the site is considered suitable for future residential development with no remediation required.

In order to ensure the safety of workers on-site and future residents, it is recommended that an accidental contamination discovery protocol is implemented throughout the general earthworks programme and that those on-site are aware of the requirements to report such unexpected finds.

Resource consent is not required under the NESCS for the remediation works as the expected volume is well within the permitted activity volumes. The status of any future subdivision in terms of the NESCS will depend on the levels of contamination remaining after remediation.

Contaminant concentrations are above expected background values in two large mounds of soil at the site. As a result, it is unlikely that soils from these locations will meet cleanfill criteria. These soils are suitable to remain on-site however if off-site disposal is required, soils should be disposed of at an authorised disposal facility suitable for receipt of such material.

2 Objectives of the Investigation

This report has been written in general accordance with the Ministry for the Environment's (MfE) "Contaminated Land Management Guidelines No 1: Reporting on Contaminated Sites in New Zealand, revised 2021" (CLMG) and the "New Zealand Guidelines for Assessing and Managing Asbestos in Soils" (NZ GAMAS). The report includes all requirements for a Detailed Site Investigation Report and Remediation Action Plan.

The objective of this investigation is to:

- Collect and assess information from multiple sources to understand previous and current land uses.
- Describe the site's physical and environmental features to understand potential pathways and receptors.
- Collect and analyse site information, including soil sampling and testing, to determine the extent of any contamination present to inform remediation or site management options.
- Provide remediation or site management recommendations to the client based on identified human health and/or environmental risks.

3 Scope of Work Undertaken

The scope of the work undertaken has included:

- Review of previous investigations undertaken on the site.
- Designing a sampling and analysis plan based on the identified contaminant risks.
- On site soil sampling and laboratory testing for contaminants of concern.
- Analysis of results against applicable soil guidelines values (SGVs).
- Preparation of this report in accordance with MfE guidelines.

4 Site Identification

The subject of this investigation is located at 153 Lincoln Rolleston Road in Rolleston, Canterbury, from herein referred to as 'the site'. The site is legally described Lot 1 DP 50631 BLKS III IV Leeston SD and is 20.68ha, as shown in Figure 1 below.

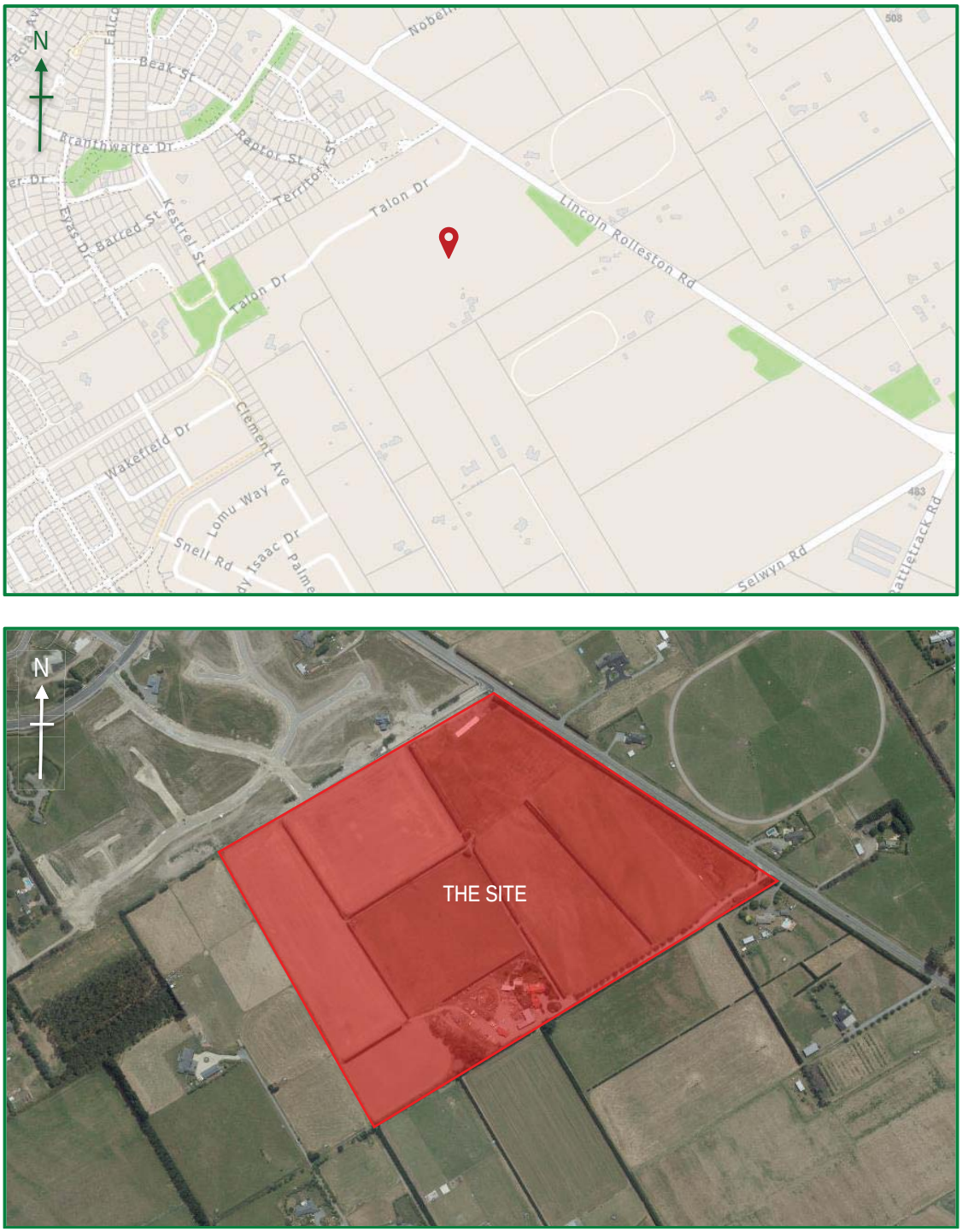


Figure 1 – Location Plan

5 Site Description

5.1 Environmental Setting

Table 1 – Environmental Setting

Topography	The site is generally flat land.
Geology	The ECan GIS database describes the soils as a combination of the Templeton moderately deep silt and the Eyre shallow loam. Wells in the area indicate that topsoils are underlain by layers of gravel and clay bound gravel, followed by sand and sandy gravel.
Soil Trace Elements	According to the ECan GIS database, natural concentrations of trace elements for the site are predominantly those within the 'Regional, Recent' soil group.
Groundwater	The site lies over the unconfined and semi-confined gravel aquifer system. Groundwater levels recorded on nearby bore logs are between 10m and 14m deep. The direction of groundwater flow is generally in a south-easterly direction.
Surface Water	A water race and small pond are located close to the southern boundary of the site.

5.2 Site Layout and Current Site Uses

The site contains a dwelling, garage and several outbuildings. The property contains a large yard area currently operated as an automotive engineering business and a base for other business activities. The balance of the property is currently used for stock grazing purposes.

5.3 Surrounding Land Uses

The site is bound by newly subdivided residential properties to the west and north-west, while rural and rural residential land dominates the area to the south and east. The Rolleston township is located approximately 2km to the north-west of the site, while the Lincoln Township is located approximately 6km south-east of the site.

6 Proposed Site Use

The site is the subject of a residential subdivision which will involve the change of use of the land, soil disturbance and possible disposal of soils off-site.

7 Summary of Preliminary Site Investigation

A Preliminary Site Investigation (PSI) was undertaken by Malloch Environmental Ltd (now Momentum Environmental Ltd, MEL) in November 2020. The PSI was undertaken for a larger area of land which included 151 Lincoln Rolleston Road, the neighbouring property to the south of the site. No potentially contaminating activities, as per the Hazardous Activities and Industries List (HAIL), were identified for 151 Lincoln Rolleston Road. Therefore, no further investigations of 151 Lincoln Rolleston Road were required.

The PSI determined that the site had a long-standing history associated with pastoral farming activities and was vacant of structures until subdivision and development in the early 1990's. The commercial area of the site was utilised for an automotive engineering business and a base for other business activities. This resulted in a build-up of vehicles, dismantled vehicle parts, machinery and general waste. Two large pits were discovered at the site, alongside large stockpiles of fill material and varied topography across the entire yard area, indicating ongoing

disposal to land. Several potential asbestos containing material (ACM) fragments were identified along the vehicle track and within the demolition rubble of a stockpile. In conjunction with the above, the PSI determined there was an isolated risk posed by fuel storage in tanks and drums across the yard area. It was also noted that an L-shaped workshop only partially contained a concrete base and therefore any fuel or chemical leaks may have impacted the base soils.

The PSI stated that areas of disturbed soils were present within the north-western paddock. This may have included introduction of fill material from other sites.

Based on the investigation undertaken, the following activities were identified for the site:

- *HAIL A17 – Storage tanks and drums for fuel, chemicals or liquid waste*
- *HAIL D5 – Engineering workshops with metal fabrication*
- *HAIL E1 – Asbestos products manufacture or disposal including sites with buildings containing asbestos products known to be in a deteriorated condition*
- *HAIL G4 – Scrap yards including automotive dismantling, wrecking or scrap metal yards*
- *HAIL G5 – Waste disposal to land*

The PSI concluded that there was a potential risk to human health from the above activities and further investigation in the form of a Detailed Site Investigation (DSI) was recommended. The recommendation for further investigation was restricted to 153 Lincoln Rolleston Road, specifically the risk area associated with the yard and the area of disturbance/introduced fill in the north-western paddock. The risk areas associated with the site are shown in Figure 2 below.

The PSI Site Inspection Plan is attached in Appendix A.

8 Sampling and Analysis Plan

8.1 Sampling Design

Figure 2 below outlines the potential risk areas which will form the basis of the sampling methodology. Each risk area has different historical land uses, with differing modes of contamination and contaminants of concern. Each risk area has the same proposed use, residential. For the purpose of sampling design, the risk areas have been separated into two exposure areas as detailed in Tables 2-3 and outlined dashed red on Figure 2 below.

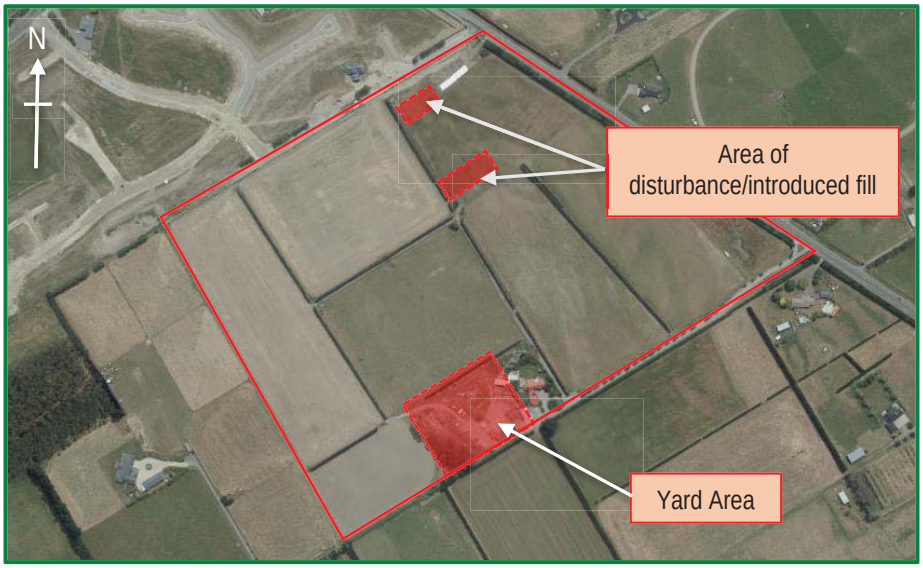


Figure 2 – Risk Areas Plan

Table 2 – Sampling Design in Yard Area

Contaminants of concern	Heavy metals, asbestos and hydrocarbons.
Number of sample locations	An approximate grid layout consisting of approximately 20 sample locations. The grid layout will be adjusted where necessary to ensure mounds of fill material are characterised.
Depth of samples	Samples will be collected at varying depths across each test pit based on in-field observations and geological changes. At a minimum, samples will be collected from the surface soils, within the centre portion of the test pit and at the base of the test pit. Within the mounds of fill material samples will be collected at varying depths across each test pit based on in-field observations to provide sufficient information to characterise each mound. At a minimum, samples will be collected from the surface soils (0-250mm), within the centre portion of the test pit and at the base of the test pit.
Testing methodology	Within the grid sample locations, all surface samples will be submitted for heavy metal and asbestos presence/absence analysis with semi-quantitative analysis to follow any positive results. Deeper samples will be held cold and selected for analysis based on contaminant concentrations identified in the surface soils. Within the mounds of fill material all samples will be submitted for heavy metal analysis and asbestos presence/absence analysis with semi-quantitative analysis to follow any positive results. Selected samples will be submitted for polycyclic aromatic hydrocarbon (PAH) analysis based on in-field observations.
Field sampling technique	A digger is to be used to excavate each test pit. Samples are to be collected from the walls of the test pit or directly from the bucket using a stainless-steel spade, trowel or fresh disposable nitrile gloves.

Table 3 – Sampling Design in Disturbed/Introduced Fill Area

Contaminants of concern	Heavy metals and asbestos.
Number of sample locations	Two test pits excavated within the potential disturbed/introduced fill areas in the north-western paddock. The test pits will be excavated across the risk area so a full visual assessment of the soils can be made.
Depth of samples	Samples will be collected at varying depths across each test pit based on in-field observations and geological changes. At a minimum, samples will be collected from the surface soils and at the base of the test pit
Testing methodology	All surface samples will be submitted for heavy metal and asbestos presence/absence analysis with semi-quantitative analysis to follow any positive results. Deeper samples will be held cold and selected for analysis based on contaminant concentrations identified in the surface soils.
Field Sampling Technique	A digger is to be used to excavate each test pit. Samples are to be collected from the walls of the test pit or directly from the bucket using a stainless-steel spade, trowel or fresh disposable nitrile gloves.

8.2 Soil Guideline Values

Human health soil contaminant standards for a group of 12 priority contaminants were derived under a set of five land-use scenarios and are legally binding under The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Health) Regulations 2011 (NES). These standards have been applied where applicable. The regulations describe these as Soil Contaminant Standards. For contaminants other than the 12 priority contaminants, the hierarchy as set out in the Ministry for the Environment Contaminated Land Management Guidelines No 2 has been followed. These are generally described as Soil Guideline Values. For simplicity, this report uses the terminology Soil Guideline Values (SGV) when referring to the appropriate soil contaminant standard or other derived value from the hierarchy. For soil, guideline values are predominantly risk based, in that they are typically derived using designated exposure scenarios that relate to different land uses. For each exposure scenario, selected pathways of exposure are used to derive guideline values. These pathways typically include soil ingestion, inhalation and dermal adsorption. The guideline values for the appropriate land use scenario relate to the most critical pathway.

The land-use scenarios applicable for the proposed residential development of the site would be 'residential 10% produce'. The 'commercial/industrial' land use scenario is used as a proxy for workers involved in disturbing soils.

The adopted trigger value used to determine need for assessment of ecological receptors (including stormwater disposal areas) also referred to as Ecological Guideline Values (EGVs) is the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (online) – Sediment GV-high (ANZWQ).

For comparison of site concentrations against expected background levels the following published concentrations will be used:

- Heavy metal concentrations will be assessed against the expected background levels as published in *Background Concentrations in Canterbury soils*, Tonkin and Taylor, July 2007.
- Polycyclic aromatic hydrocarbons (PAH) results will be assessed against the concentrations published in *Background Concentrations of Polycyclic Aromatic Hydrocarbons in Christchurch Urban Soils,* Tonkin and Taylor, Nov 2007.

8.3 Quality Assurance and Quality Control

Field quality assurance measures as described in Section 4.3.1 of the "Contaminated Land Management Guidelines No 5: Site Investigation and Analysis of Soils, revised 2021" (CLMG) are to be followed. These include using trained staff, choosing appropriate sample containers, accurate and individual labelling and recording of locations, completing appropriate laboratory chain of custody forms, chilling of samples as appropriate and timely delivery to laboratories. All non-disposable sampling equipment should be decontaminated between samples using Decon 90 and rinsed with tap water. All samples are to be submitted to IANZ accredited laboratories. Quality control to ensure freedom from sample cross-contamination is to be measured by the appropriate use of duplicate and rinsate blank samples.

9 Sampling Results

9.1 Summary of Works/Field Observations

Soil sampling was undertaken on 08 August 2022 in general accordance with the proposed sampling plan. The owner of the site was available during sampling to answer any questions regarding the site's history.

The owner stated that the pit in the north-eastern corner of the yard area was the only rubbish pit used at the site. This is inconsistent with information obtained from the site inspection completed as part of the PSI, however excavations in the area where an additional pit was thought to be did not identify any fill or rubbish material. The existing pit contained blackened, ashy material which appeared to be burnt rubbish and a tree stump, red brick, some building rubble, general household rubbish and organics. Surface soils directly surrounding the pit were also dark and appeared to have been impacted by the burning of rubbish, however underlying soils appeared visually clean and unaffected by the rubbish pit and burning of material. Soil samples were collected from the stockpiled material surrounding the pit and from the pit itself.

Photo 1 & 2 – Existing rubbish pit (sample location TP1)

Photo 3 & 4 – Test pit within existing rubbish pit (sample location TP1)

Samples collected from test pit locations TP6, TP7, TP9, TP11 and TP17 represented soils from large stockpiles. The owner stated that no soils had been brought onto site. A large amount of bricks had been brought onto the site and had been stockpiled in test pit location 6 and test pit location 10, as shown in the photos below. The remaining stockpiles of material were generally topsoils and gravels excavated from different areas of the site intended to be used for levelling or filling lower areas of the yard. The samples collected from the stockpiles were in-field composite samples. This was considered an appropriate sampling technique as each stockpile originated from the same source and allowed for good representation of the stockpile as a whole.

Photo 5 – Test pit location 6

Photo 6 – Test pit location 7

Photo 7 – Test pit location 9

Photo 8 – Test pit location 10

Photo 9 – Test pit location 11

Photo 10 – Test pit location 17

Samples collected from test pit location TP19 represent soils adjacent to the smoko/office room and an area used for machinery storage. Soils from this location were stained and appeared to have been impacted by adjacent oil/fuel storage. Samples collected from test pit location TP20

represent soils adjacent to the engineering workshop. An adjacent intermediate bulk container (IBC) with used oil was leaking and had impacted surrounding soils, as such soils from this location were stained and had a strong hydrocarbon odour.

There was no evidence of ACM at the site as previously noted in the PSI site inspection. Stockpiles containing red brick and some demolition rubble were present however these appeared to be free of visual potential ACM.. It is considered likely that the owner removed any potential asbestos containing materials from the site prior to soil sampling being undertaken.


Photo 11 & 12 – Test pit location 19


Photo 13 & 14 – Test pit location 20

The owner of the site stated that the two areas of disturbance/introduced fill in the north-western paddock were locations where the owner had excavated pits to access the gravel and backfilled with topsoils from other areas of the site and potting mix. Two trenches were excavated in locations advised by the owner, which were consistent with the historical aerial images as areas of soil disturbance. There was no evidence of refuse material or any other anthropogenic material in either trench. The soils from both trenches consisted of brown topsoils with some sand and rounded gravels. Soil samples were collected from both of the trenches at depths of 0-100mm and 400mm.

Photo 15 & 16 – Test pit location 24

Photo 17 & 18 – Test pit location 25

The owner also advised of a large stockpile of soil located along the entrance to the site. The soils were sourced from the yard area, which were stripped before the yard was gravelled. In-field composite samples were also collected from this stockpile. The soils in this stockpile consisted of brown topsoils with some sand and rounded gravels. In-field composite samples were also collected from this stockpile. This was considered an appropriate sampling technique as each stockpile originated from the same source and allowed for good representation of the stockpile as a whole.

Photo 19 – Test pit location 27

A total of 60 samples were collected from 27 test pit locations for a combination of heavy metal, PAH and total petroleum hydrocarbon (TPH) analysis or to be held cold. An additional 29 samples were collected from 27 test pit locations for asbestos presence/absence analysis, with semi-quantitative analysis to follow any positive results.

A series of Sample Location Plans are included in Appendix B.

9.2 Evaluation of Results

The laboratory sample results showed arsenic concentrations exceeded the 'residential 10% produce' soil guideline values (SGV) of 20mg/kg at test pit location TP1 within the stockpiled material surrounding the existing rubbish pit. The arsenic concentration at test pit location TP1 was 38.7mg/kg. The arsenic concentration reduced to below expected background values at 250mm within the pit itself. There were no other exceedances of the 'residential 10% produce' SGV in samples collected from across the site.

There were no exceedances of the ecological guideline value (EGV).

Five test pit locations, including TP1 above, contained concentrations of one or more analytes above expected background values. Two of these locations, TP7 and TP14, contain concentrations of lead and zinc only marginally above expected background values and within the laboratory uncertainty of measurement. As such, these are considered to be generally at expected background values. The remaining two locations are the two largest mounds of soil, TP17 and TP27 and contain concentrations of lead and/or zinc above expected background values.

PAH analysis undertaken on soils from test pit locations TP19 and TP20 showed BaP concentrations significantly below the 'residential 10% produce' SGV of 10mg/kg with a result of 0.3mg/kg. TPH analysis undertaken on soils from test pit locations TP19 and TP20 showed concentrations below the applicable residential standards.

No asbestos was detected in the soil samples collected from the site.

Tables of Laboratory Results are included in Appendix C and copies of the Laboratory Reports are included in Appendix D.

9.3 Results of Field & Laboratory Quality Assurance and Quality Control

No quality control issues were identified during sampling. The Relative Percentage Differences (RPD) for the duplicate samples were generally ranging from 0-29%. Two results were higher at 37% and 47% and these were further assessed. They both related to results near expected background concentrations and could be attributed to the non-homogeneity of the soils, as typical for a yard area.

All laboratory tested samples were submitted to Analytica Laboratories for analysis. Analytica Laboratories hold IANZ accreditation. As part of holding accreditation the laboratory follows appropriate testing and quality control procedures. No quality control issues were identified.

10 Risk Assessment

The soil sampling results have shown one area of arsenic contamination within stockpiled material surrounding an existing rubbish pit. The elevated arsenic concentrations are likely associated with the burning of treated timber, which is consistent with the blackened ashy soils and anthropogenic material identified in the stockpile. One sample collected from the wall of the pit itself contained concentrations of contaminants below expected background values and the soils were visually clean with no obvious signs of contamination.

The remaining sample results have shown contaminant concentrations are below the 'residential 10% produce' SGV and no asbestos was detected in the soil samples collected from the site.

Table 4 – Conceptual Site Model

Conceptual Site Model				
Source	Pathways		Receptor	Risk Assessment
Arsenic concentrations above the 'residential 10% produce' SGV at one sample location within the north-eastern corner of the yard area.	Human	Dermal contact, ingestion and inhalation	Future site occupiers / land users	Moderate risk to human health associated with the arsenic affected soils, should the impacted soils be reused in a residential setting.
			Workers involved in soil disturbance at the site	Low risk to human health as the 'commercial/industrial' SGV was not exceeded.
	Ecological	Infiltration through soils to groundwater	Groundwater is likely to be between 10m and 14m deep at the site	Low risk when considering the depth to groundwater. Also, heavy metals bind well to the soils and are likely to be limited to the stockpiled material surrounding the existing rubbish pit.
		Surface runoff to waterways	Water race and pond along the southern boundary of the site.	Low to moderate risk which should be managed through the implementation of an appropriate Erosion and Sediment Control Plan.

Based on the moderate risk to human health associated with the isolated arsenic contamination, it is recommended the arsenic affected soils surrounding the existing rubbish pit are remediated prior to the development of the site for residential use.

The remainder of the site is considered suitable for future residential development with no remediation required.

11 Scope and Purpose of Remediation

11.1 Remediation Objectives

The remediation objectives for the site are to remove any pathways between the contaminants and the receptors of significance. Based on the results for this site the significant receptors are primarily the future site residents. There are multiple ways to achieve this objective including, but not limited to, removal of the contaminated material, capping to create a barrier between the contaminated material and the receptor, mixing to dilute contaminants, or by implementing ongoing site management measures to reduce the risk.

Other ancillary objectives include:

- To ensure that appropriate site management measures are in place to protect workers from exposure to contaminants contained in the soils.
- To ensure that soil management controls are in place to prevent tracking of contaminants, dust, stormwater runoff and erosion.
- To ensure that any contaminated soils removed off-site are disposed of to an appropriate location.

It is noted that the remediation objectives do not intend to leave the site as 'clean', which is defined as having all contaminant concentrations below expected natural background levels. This may mean that off-site disposal of soils from future development works will not qualify for disposal to cleanfill facilities.

11.2 Summary of Remedial Options

The remediation options considered include:

- Excavating and removing all contaminated soils to an alternative location on site, such as a managed bund or similar.
- Excavating and removing all contaminated soils to an approved disposal facility.

Excavation and disposal of the contaminated soils to an approved disposal facility is the simplest and most time efficient option for the developer due to the very small quantities. The following methodology and Site Management Plan has been developed for this option.

The remediation area is shown on the Sample Location Plan (Yard Area) included in Appendix B of this report.

11.3 Proposed Standard of Remediation

The standard of remediation for the site is to ensure all soils containing arsenic concentrations above the 'residential 10% produce' SGV of 20mg/kg have been excavated and remaining soils contain concentrations below the 'residential 10% produce' SGV.

11.4 Proposed Remediation Methodology

The proposed remediation methodology below is to be planned and carried out as a separate work programme prior to bulk earthworks and other development related earthworks to avoid any risks of cross-contamination and delays to main earthworks programmes.

The remediation of the site is to occur as follows:

1. A site meeting between the contractors on-site representative and Momentum Environmental Ltd is to take place prior to any remediation work commencing.
2. Set up all site controls and equipment as required in the Site Management Plan detailed below in Section 12.
3. Excavate contaminated soils in accordance with the objectives set out above and within the area highlighted on the Sample Location Plan (Yard Area) attached in Appendix B. Dispose of soils to a suitable disposal location, as per Section 11.7 below.
4. Following excavation works, the excavated areas including walls (where applicable) and base, should be tested by XRF to confirm the remediation goal has been achieved. When the XRF results indicate success, laboratory validation sampling should be undertaken.
5. Decontaminate all equipment prior to commencing other site earthworks.
6. Implement an accidental contamination discovery protocol for subsequent earthworks at the site.

11.5 Remediation Volumes

The following estimated volumes have been provided in good faith to assist in consenting and estimating the extent and cost of works required. The likely affected volumes are based on the current known or expected extent of contamination found and is not to be taken as the final or maximum likely volume. All remediation of contaminated soils has the risk of extending further out or deeper due to hidden areas of contamination.

The arsenic contaminated stockpile and directly surrounding blackened soils is approximately 10-15m^3.

The remediation area is shown on the Sample Location Plan (Yard Area) included in Appendix B of this report.

11.6 Regulatory Requirements

Soil sampling has shown contamination levels exceed the applicable standards in Regulation 7 of the NESCS. Therefore, any activities that trigger the NESCS may require resource consent.

The remediation will include the activities of soil disturbance and off-site disposal. NESCS Regulation 8(3) provides criteria by which soil disturbance activities may be considered a ‘permitted activity’. The permitted activity volumes are compared with the expected remediation volumes in the table below:

Table 4 – Maximum Permitted Volume Assessment

		Remediation Soil Disturbance Volume	Complies?
Area of the 'piece of land'	11,500m^2 (yard area)		
Permitted soil disturbance volume - 25 m^3 per 500m^2	575m^3	10-15m^3	Yes
Permitted removal volume - 5m^3 per 500m^2 per year	115m^3 (230m^3 over two years)	10-15m^3	Yes

Based on the above the soil disturbance associated with the remediation can be carried out as a permitted activity. The status of any future subdivision in terms of the NESCS will depend on the levels of contamination remaining after remediation.

It is recommended that a planner fully assess all proposed activities associated with the development against the Land and Water Regional Plan to determine whether consents from ECan are necessary due to the identification of contaminated land.

11.7 Disposal Location

The following table identifies the main disposal locations in Canterbury for the identified contaminants of concern at the time of writing this report.

Table 5 – Potential Disposal Locations

Landfill	Contaminant		Suitability of Soils for Disposal
	Asbestos	Heavy Metals	
Kate Valley Landfill	Asbestos accepted	Arsenic - 100mg/kg or 5mg/l	Soils qualify for disposal at Kate Valley Landfill.
Burwood Landfill	No asbestos accepted	Arsenic – 80mg/kg	Soils qualify for disposal at Burwood Landfill.
Hororata Managed Fill Facility (note figures based on new consent but not commercially advertised or confirmed at date of writing)	A maximum allowable concentration of 5% asbestos in soils	Arsenic - 140mg/kg	Soils qualify for disposal at Hororata Managed Fill Facility.
Wheatsheaf Selwyn Quarries	No asbestos accepted	Arsenic – 17mg/kg Lead – 160mg/kg Zinc – 7,400mg/kg	The mounds of material containing contaminant concentrations above expected background values represented by test pit locations TP17 and TP27, are suitable for disposal at this location.

11.8 Disposal Documentation

For any off-site disposal, all weighbridge/disposal dockets are to be retained and a copy provided to the SQEP to include in the final validation report and to show compliance with any resource consent conditions.

12 Site Management Plan

12.1 Site Setup

Prior to any works commencing the following should be in place on site:

- The contaminated area should be clearly identified with site entry and exits, and paths to the disposal location planned before works commence.
- Appropriate washing facilities should be put in place to clean any equipment exposed to contaminated soils.
- Hand washing facility must be available for all workers, in the immediate area of the work site.
- Remediation should be planned in advance to ensure it occurs in a staged approach/ methodical manner to ensure that vehicles do no track contaminated soils onto clean areas.

12.2 Stormwater and Soil Management

Remediation work should not take place during heavy rain or high wind. If rainfall occurs and tracking of wet contaminated soils to other parts of the site becomes a risk, work will cease. Soil will be loaded directly onto trucks and will not be stockpiled on site, other than within the excavated area.

Appropriate controls should be in place to ensure unintentional tracking or movement of contaminated soils to other parts of the subject site does not occur.

12.3 Dust Control

Water is to be made available at the remediation site with operators available and should be used to keep the dust emissions to an acceptable level to protect human health as required.

All vehicles transporting soils will use tarpaulins to prevent dust emissions if required.

12.4 Occupational Safety and Health Issues and Measures

The contractor shall prepare a site-specific Health and Safety Plan covering all relevant matters and all workers will be inducted prior to site works beginning. As a minimum, the following matters will need to be included:

- Appropriate personal protection gear which should include as a minimum, head to toe clothing, the use of gloves for any worker handling soil, dust masks to be available to prevent ingestion of contaminated dust particles, safety footwear, hard hats and hi-vis vests.
- Appropriate hand washing measures to prevent ingestion of contaminated soil particles.
- Truck loading procedures and spill prevention.
- Decontamination measures for all equipment.

12.5 Unexpected Contamination Discovery Protocols

Based on the land use activities that have occurred at the site, there is a possibility that soil contamination exists outside of the sampled locations and may be buried in ground or obscured by the extensive storage that is occurring at the site. In order to ensure the safety of workers on-site and future residents, it is recommended that an accidental contamination discovery protocol is implemented throughout the general earthworks programme and that those on-site are aware of the requirements to report such unexpected finds.

During the excavation works if any other hazardous material is encountered in significant volumes that pose a threat to the health of workers on site, all works should cease until the hazardous material has been assessed by a suitably qualified and experienced practitioner (SQEP) in accordance with MfE guidelines.

Signs that would indicate further assessment is required include visually discoloured soils, olfactory evidence of hydrocarbons or other potential contaminants, oily greasy soils, asbestos containing materials or significant rubbish items.

13 Site Validation Strategy

Following remediation excavation works, the excavated areas including walls (if applicable) and base, shall be tested by XRF to confirm the extent of any remaining contamination or to confirm remediation has been successful. Laboratory sampling will be required to support the XRF readings.

Where sampling reveals the goals have not been achieved, further remediation works shall be carried out by further excavation.

A Site Validation Report will be produced and provided to Selwyn District Council and ECan.

14 Conclusions

A previous Preliminary Site Investigation undertaken in November 2020 identified risks at the site associated with a build-up of vehicles, dismantled vehicle parts, machinery and general waste at the site. On-site rubbish pits, alongside large stockpiles of fill material and varied topography across the entire yard area, indicated ongoing disposal to land. Several potential asbestos containing material (ACM) fragments were identified along the vehicle track and within the demolition rubble of a stockpile. In conjunction with the above, the PSI determined there was an isolated risk posed by fuel storage in tanks and drums across the yard area. It was also noted that an L-shaped workshop only partially contained a concrete base and therefore any fuel or chemical leaks may have impacted the base soils.

Soil sampling undertaken as part of this Detailed Site Investigation has shown one area of arsenic contamination within stockpiled material surrounding an existing rubbish pit. The remaining sample results have shown contaminant concentrations are below the ‘residential 10% produce’ SGV and no asbestos was detected in the soil samples collected from the site.

Based on the moderate risk to human health associated with the isolated arsenic contamination, it is recommended the arsenic affected soils surrounding the existing rubbish pit are remediated prior to the development of the site for residential use. The recommended remediation option is excavation and off-site disposal to an authorised disposal facility.

The remainder of the site is considered suitable for future residential development with no remediation required.

Resource consent is not required under the NESCS for the remediation works as the expected volume is well within the permitted activity volumes. The status of any future subdivision in terms of the NESCS will depend on the levels of contamination remaining after remediation.

Contaminant concentrations are above expected background values in two large mounds of soil at the site represented by test pit locations TP17 and TP27, also shown on the Sample Location Plan (Yard Area) and Sample Location Plan (Mound) included in Appendix B of this report. As a result, it is unlikely that soils from these locations will meet cleanfill criteria. These soils are suitable to remain on-site however if off-site disposal is required, soils should be disposed of at an authorised disposal facility suitable for receipt of such material.

15 Limitations

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

Opinions and judgments expressed in this report are based on an understanding and interpretation of regulatory standards at the time of writing and should not be construed as legal opinions. As regulatory standards are constantly changing, conclusions and recommendations considered to be acceptable at the time of writing, may in the future become subject to different regulatory standards which cause them to become unacceptable. This may require further assessment and/or remediation of the site to be suitable for the existing or proposed land use activities. There is no investigation that is thorough enough to preclude the presence of materials at the site that presently or in the future may be considered hazardous.

This report does not attempt to describe all risks or possible outcomes resulting from carrying out remediation works. Any party carrying out remediation works shall be responsible for all such works, including implementing all health and safety precautions as appropriate. Momentum Environmental Limited disclaims all liability whatsoever for any loss or damages, if any, suffered by any party as a result of any remediation works undertaken.

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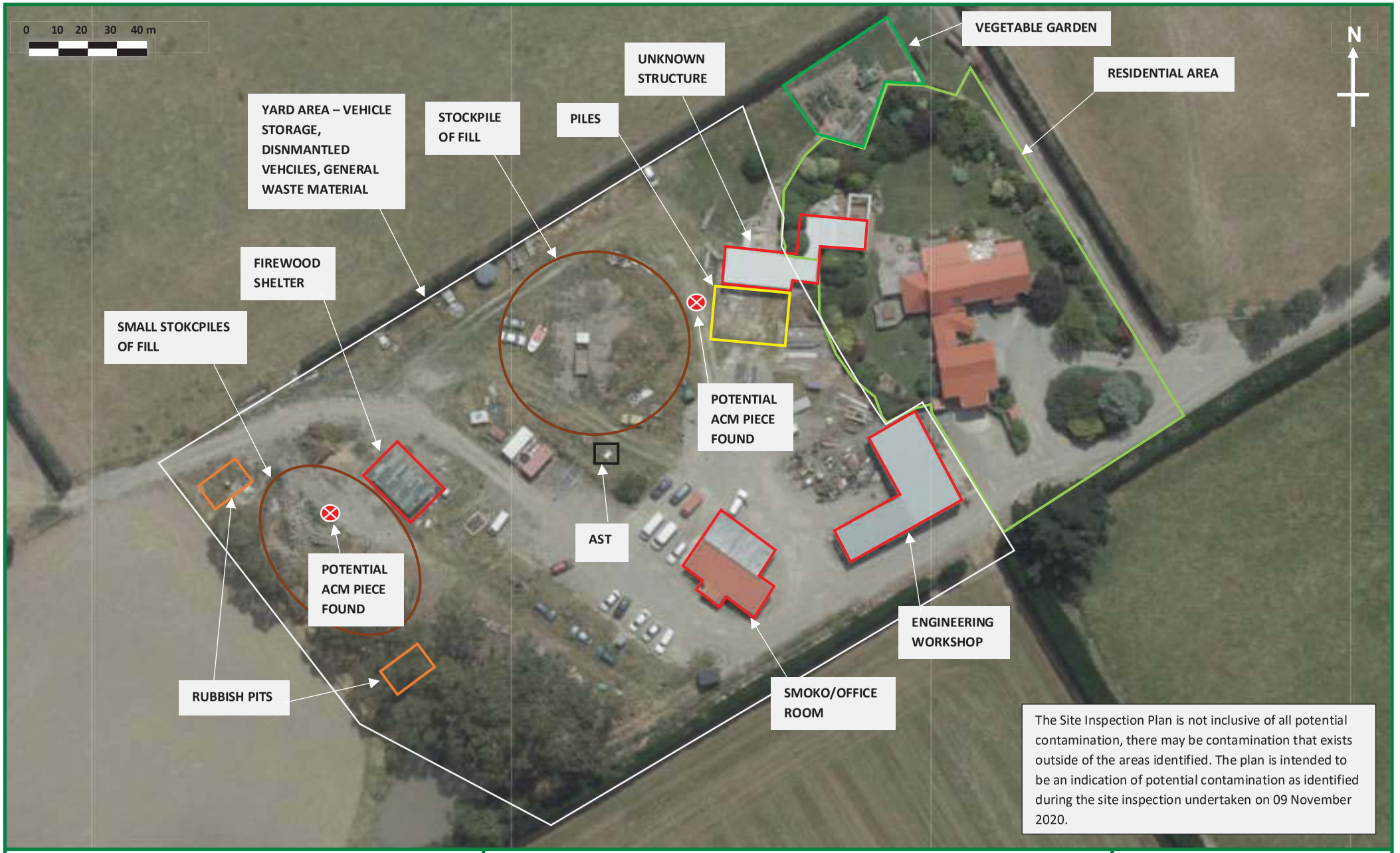
Appendix A – PSI Site Inspection Plan



Malloch Environmental Ltd
19 Robertsons Road, Kirwee
RD1, Christchurch 7671
021 132 0321
www.mallochenviro.co.nz

Site Inspection Plan
153 Lincoln Rolleston Road, Rolleston

Scale: NTS
Date: 10 November 2020
Drawing No: 01512/1

Appendix B – Sample Location Plans

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Specialist soil contamination experts, keeping your project moving.

www.momentumenviro.co.nz

LEGEND

• TP1	Soil sample location
• TP1*	Soil sample location tested for asbestos
▭	Approximate trench location

PLAN MUST BE PRINTED IN COLOUR

Graphic scale is approximate only

0 10 20 30 40 50m

Date: 24 August 2022 Drawing No: 512/4

Sample Location Plan (Disturbed/Introduced Fill Area)

153 Lincoln Rolleston Road, Rolleston

Notes:

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

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LEGEND

• TP1	Soil sample location
• TP1*	Soil sample location tested for asbestos
	Mound of material contains contaminants above expected background concentrations/ requires disposal at managed fill facility

PLAN MUST BE PRINTED IN COLOUR

Graphic scale is approximate only

0 5 10 15 20 25m

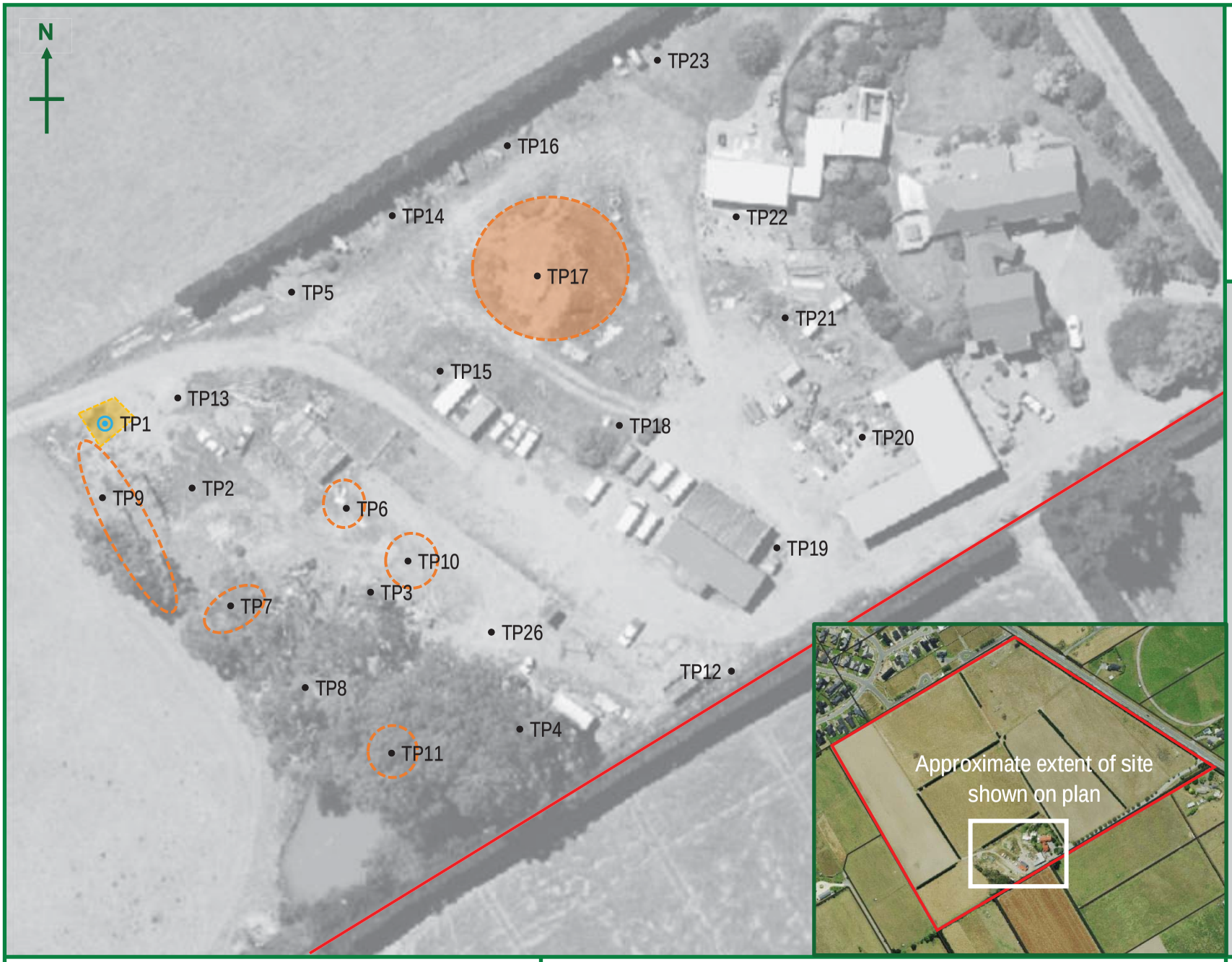
Date: 24 August 2022 Drawing No: 512/3

Sample Location Plan (Mound)

153 Lincoln Rolleston Road, Rolleston

Notes:

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



MOMENTUM ENVIRONMENTAL LTD.

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LEGEND

• TP1	Soil sample location
• TP1*	Soil sample location tested for asbestos
⊙ TP1	Soil sample location exceeds residential SGV for arsenic
	Approximate extent of remediation area based on visibly affected material
	Approximate extent of mounds of material
	Mound of material contains contaminants above expected background concentrations/ requires disposal at managed fill facility

PLAN MUST BE PRINTED IN COLOUR

Graphic scale is approximate only

0 5 10 15 20 25m

Date: 16 August 2022 Drawing No: 512/2

Sample Location Plan (Yard)

153 Lincoln Rolleston Road, Rolleston

Notes:

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

Appendix C – Table of Laboratory Results

Table of Laboratory Results - 153 Lincoln Rolleston Road, Rolleston

Date of sampling: 08 August 2022

Analyte	Sample Name:	TP1.1	TP1.2	TP2.1	TP2.2	TP3.1	TP4.1	TP5.1	TP6.1	RPD	Soil Guideline Values					
Soil Results	Lab Number:	22-29179-1	22-29179-2	22-29179-4	22-29179-5	22-29179-7	22-29179-9	22-29179-11	22-29179-13	TP2.1 & TP2.2	Residential 10% Produce	Commercial/ Industrial	Reference	Ecological Receptors	Reference	Background$_1$
	Depth (mm)	Stockpile	250	0-50	0-50	0-50	0-100	0-50	Stockpile							
Heavy Metals																
Arsenic	mg/kg dry wt	38.7	5.8	4.5	4.2	5.2	5.3	5.6	6.4	7%	20	70	NES	70	ANZWQ	12.58
Cadmium	mg/kg dry wt	0.28	0.085	0.054	0.049	0.085	0.13	0.15	0.1	10%	3	1,300	NES	10	ANZWQ	0.19
Chromium	mg/kg dry wt	35.3	16.8	13.6	13.4	16.1	16.7	17.7	16.7	1%	460	6,300	NES	370	ANZWQ	22.70
Copper	mg/kg dry wt	33.6	6.2	5.9	5.6	5.6	5.3	6.5	6.8	5%	>10,000	>10,000	NES	270	ANZWQ	20.30
Lead	mg/kg dry wt	58.2	18.7	14.2	12.7	21.6	18.3	20.1	26.5	11%	210	3,300	NES	220	ANZWQ	40.96
Nickel	mg/kg dry wt	11.2	12.1	11.3	10.8	12.3	11.8	13.5	11.5	5%	400	6,000	NEPM	52	ANZWQ	20.70
Zinc	mg/kg dry wt	176	71	45.4	41	61.7	66.7	78.2	75.3	10%	7,400	400,000	NEPM	410	ANZWQ	93.94

Analyte	Sample Name:	TP6.2	TP7.1	TP7.2	TP8.1	TP9.1	TP9.2	TP10.1	TP10.2	TP11.1	Soil Guideline Values					
Soil Results	Lab Number:	22-29179-14	22-29179-15	22-29179-16	22-29179-17	22-29179-19	22-29179-20	22-29179-21	22-29179-22	22-29179-23	Residential 10% Produce	Commercial/ Industrial	Reference	Ecological Receptors	Reference	Background$_1$
	Depth (mm)	Stockpile	0-100	300	0-50	0-50	250	Stockpile	Stockpile	Stockpile						
Heavy Metals																
Arsenic	mg/kg dry wt	6.1	5.5	4.8	5.4	5.9	5.1	5.3	5.5	5.7	20	70	NES	70	ANZWQ	12.58
Cadmium	mg/kg dry wt	0.12	0.098	0.081	0.088	0.12	0.14	0.074	0.079	0.092	3	1,300	NES	10	ANZWQ	0.19
Chromium	mg/kg dry wt	16	16.4	15.2	16.9	15.8	16.4	14.7	15.3	19.8	460	6,300	NES	370	ANZWQ	22.70
Copper	mg/kg dry wt	7.5	5.4	5	5.6	9.43	6.5	6.6	7.2	8.17	>10,000	>10,000	NES	270	ANZWQ	20.30
Lead	mg/kg dry wt	32.7	41.5	18	18.1	22.8	19.3	21.1	24.6	26.8	210	3,300	NES	220	ANZWQ	40.96
Nickel	mg/kg dry wt	11.2	11	10.4	12.1	10.8	11.2	11.3	11.7	13.6	400	6,000	NEPM	52	ANZWQ	20.70
Zinc	mg/kg dry wt	78	70	75.4	65	85.4	70.9	61.4	70.8	87.8	7,400	400,000	NEPM	410	ANZWQ	93.94

Analyte	Sample Name:	TP11.2	TP12.1	TP13.1	TP13.2	TP14.1	TP15.1	TP16.1	TP17.1	TP17.2	Soil Guideline Values					
Soil Results	Lab Number:	22-29179-24	22-29179-25	22-29179-27	22-29179-28	22-29179-29	22-29179-31	22-29179-33	22-29179-35	22-29179-36	Residential 10% Produce	Commercial/ Industrial	Reference	Ecological Receptors	Reference	Background$_1$
	Depth (mm)	Stockpile	0-50	0-50	250	0-50	0-50	0-50	0	1-5m						
Heavy Metals																
Arsenic	mg/kg dry wt	7.1	8	4.8	5.7	5.6	6.1	5.5	6.4	5.9	20	70	NES	70	ANZWQ	12.58
Cadmium	mg/kg dry wt	0.12	0.1	0.094	0.13	0.17	0.17	0.13	0.15	0.11	3	1,300	NES	10	ANZWQ	0.19
Chromium	mg/kg dry wt	19.1	19.5	14.1	19.2	19.1	19.6	19.3	18.6	18.5	460	6,300	NES	370	ANZWQ	22.70
Copper	mg/kg dry wt	9.03	12.9	7.6	5.8	7.2	6.8	5.6	11.5	6.9	>10,000	>10,000	NES	270	ANZWQ	20.30
Lead	mg/kg dry wt	23.8	19.4	17.8	20.3	20.2	21.5	19.5	20.4	20.7	210	3,300	NES	220	ANZWQ	40.96
Nickel	mg/kg dry wt	12.3	11.9	10.4	13.6	14	14.4	13.8	13.9	13.7	400	6,000	NEPM	52	ANZWQ	20.70
Zinc	mg/kg dry wt	93	88.6	63.9	72.2	95.2	86.3	72.3	108	78.9	7,400	400,000	NEPM	410	ANZWQ	93.94

Indicates result exceeds 'residential' guideline value
Indicates result exceeds ecological guideline value
Indicates result exceeds background value for soil type

NES - National Environmental Standard for Assessing and Managing Contaminants in Soils, MfE
NEPM - National Environmental Protection Measures 2013, Formerly NEPC, Australia
ANZWQ - Australian and New Zealand - Guidelines for Fresh and Marine Water Quality (online)- Sediment GV-high
$_1$ Concentrations for "Regional, Recent" soil group from Background concentrations in Canterbury soils, Tonkin and Taylor, July 2007

Table of Laboratory Results - 153 Lincoln Rolleston Road, Rolleston

Date of sampling: 08 August 2022

Analyte	Sample Name:	TP17.3	TP18.1	TP19.1	TP20.1	TP20.2	TP21.1	TP21.2	TP22.1	RPD	Soil Guideline Values					
Soil Results	Lab Number:	22-29179-37	22-29179-38	22-29179-40	22-29179-42	22-29179-43	22-29179-45	22-29179-46	22-29179-48	TP21.1 & TP21.2	Residential 10% Produce	Commercial/ Industrial	Reference	Ecological Receptors	Reference	Background$_1$
	Depth (mm)	3.0m	0-50	0-50	0-50	150	0-50	0-50	0-50							
Heavy Metals																
Arsenic	mg/kg dry wt	5.3	6	5.1	5.1	5.3	7.9	4.9	5.2	47%	20	70	NES	70	ANZWQ	12.58
Cadmium	mg/kg dry wt	0.049	0.17	0.041	0.038	0.075	0.051	0.045	0.16	13%	3	1,300	NES	10	ANZWQ	0.19
Chromium	mg/kg dry wt	16.7	21.5	14.9	17.9	19.6	20.9	15.6	18.9	29%	460	6,300	NES	370	ANZWQ	22.70
Copper	mg/kg dry wt	7.76	7.4	7.3	8.11	9.29	8.32	6.2	6.1	29%	>10,000	>10,000	NES	270	ANZWQ	20.30
Lead	mg/kg dry wt	16.3	20.2	15	16.3	18.4	13	12.7	18.5	2%	210	3,300	NES	220	ANZWQ	40.96
Nickel	mg/kg dry wt	12.1	15	12.1	12.9	13.8	14	12.2	13.1	14%	400	6,000	NEPM	52	ANZWQ	20.70
Zinc	mg/kg dry wt	55	77.4	48.4	64.1	84.6	67.8	46.7	73.5	37%	7,400	400,000	NEPM	410	ANZWQ	93.94

Analyte	Sample Name:	TP23.1	TP24.1	TP24.2	TP25.1	TP25.2	TP26.1	TP26.2	TP27.1	TP27.2	RPD	Soil Guideline Values					
Soil Results	Lab Number:	22-29179-50	22-29179-52	22-29179-53	22-29179-54	22-29179-55	22-29179-56	22-29179-57	22-29179-59	22-29179-60	TP26.1 & TP26.2	Residential 10% Produce	Commercial/ Industrial	Reference	Ecological Receptors	Reference	Background$_1$
	Depth (mm)	0-50	0-100	400	0-100	400	0-50	0-50	Stockpile	Stockpile							
Heavy Metals																	
Arsenic	mg/kg dry wt	5.4	5.6	5.3	5.3	5.1	6.5	5.8	6.3	5.3	11%	20	70	NES	70	ANZWQ	12.58
Cadmium	mg/kg dry wt	0.16	0.11	0.097	0.12	0.092	0.13	0.13	0.17	0.12	0%	3	1,300	NES	10	ANZWQ	0.19
Chromium	mg/kg dry wt	19.6	18.2	18.6	19.9	18.6	19.9	20.1	19.3	15.3	1%	460	6,300	NES	370	ANZWQ	22.70
Copper	mg/kg dry wt	6.4	6.5	5.9	5.9	7.2	6.8	6.1	30.7	26.6	11%	>10,000	>10,000	NES	270	ANZWQ	20.30
Lead	mg/kg dry wt	18.8	19.7	19.2	19	17.3	29.7	25.7	18.3	16.7	14%	210	3,300	NES	220	ANZWQ	40.96
Nickel	mg/kg dry wt	13.5	13.2	13.1	14.3	12.5	13.9	14.1	11.5	10.2	1%	400	6,000	NEPM	52	ANZWQ	20.70
Zinc	mg/kg dry wt	72	78.4	77.4	74.3	81.6	90.4	83.3	274	187	8%	7,400	400,000	NEPM	410	ANZWQ	93.94

Indicates result exceeds 'residential' guideline value
Indicates result exceeds ecological guideline value
Indicates result exceeds background value for soil type

NES - National Environmental Standard for Assessing and Managing Contaminants in Soils, MfE
NEPM - National Environmental Protection Measures 2013, Formerly NEPC, Australia
ANZWQ - Australian and New Zealand - Guidelines for Fresh and Marine Water Quality (online)- Sediment GV-high
$_1$ Concentrations for "Regional, Recent" soil group from Background concentrations in Canterbury soils, Tonkin and Taylor, July 2007

Table of Laboratory Results - 153 Lincoln Rolleston Road, Rolleston

Date of sampling: 08 August 2022

Analyte	Sample Name:	TP19.1	TP20.1	TP20.2	Soil Guideline Values		
Soil Results	Lab Number:	22-29179-40	22-29179-42	22-29179-43	Residential 10% Produce	Reference	Background$_1$
	Depth (mm):	0-50	0-50	150			
Polycyclic Aromatic Hydrocarbons (PAHs)							
1-Methylnaphthalene	mg/kg dry wt	<0.010	<0.010	<0.010	18	USEPA	-
2-Methylnaphthalene	mg/kg dry wt	<0.010	<0.010	<0.010	24	USEPA	-
Acenaphthene	mg/kg dry wt	<0.010	<0.010	<0.010	800	GAS	0.055
Acenaphthylene	mg/kg dry wt	<0.010	<0.010	<0.010	500	GAS	0.069
Anthracene	mg/kg dry wt	<0.010	<0.010	<0.010	9,000	GAS	0.113
Benz[a]anthracene	mg/kg dry wt	<0.020	<0.020	<0.020	-	-	0.47
Benzo[a]pyrene	mg/kg dry wt	<0.010	<0.010	<0.010	1	GAS	0.595
Benzo[b]&[j] fluoranthene	mg/kg dry wt	<0.020	<0.020	<0.020	-	-	0.947
Benzo[g,h,i]perylene	mg/kg dry wt	<0.020	<0.020	0.14	-	-	0.459
Benzo[k]fluoranthene	mg/kg dry wt	<0.010	<0.010	<0.010	-	-	0.296
Chrysene	mg/kg dry wt	<0.010	<0.010	<0.010	-	-	0.539
Dibenz(a,h)anthracene	mg/kg dry wt	<0.010	<0.010	<0.010	-	-	0.112
Fluoranthene	mg/kg dry wt	<0.020	<0.020	<0.020	3,200	GAS	1.345
Fluorene	mg/kg dry wt	<0.010	<0.010	<0.010	800	GAS	0.06
Indeno(1,2,3-cd)pyrene	mg/kg dry wt	<0.010	<0.010	0.067	-	-	0.385
Naphthalene	mg/kg dry wt	<0.010	<0.010	<0.010	17	GAS	0.029
Phenanthrene	mg/kg dry wt	<0.010	<0.010	<0.010	900	GAS	0.703
Pyrene	mg/kg dry wt	<0.020	<0.020	0.29	1,500	GAS	1.362
Benzo[a]pyrene TEQ (LOR)	mg/kg dry wt	0.03	0.03	0.03	10	NES	0.922
Benzo[a]pyrene TEQ (Zero)	mg/kg dry wt	<0.010	<0.010	0.01	10	NES	0.922
Total Petroleum Hydrocarbons (TPHs)							
C7-C9	mg/kg dry wt	<10	<10	<10	500	PHCS	-
C10-C14	mg/kg dry wt	<15	<15	83	510	PHCS	-
C15-C36	mg/kg dry wt	184	90	6,030	NA	PHCS	-
C7-C36 (Total)	mg/kg dry wt	184	90	6,113	NA	PHCS	-

Indicates result exceeds 'residential' guideline value

Indicates result exceeds background value for soil type

NES - National Environmental Standard for Assessing and Managing Contaminants in Soils, MfE

USEPA - Regional Screening Levels for Chemical Contaminants at Superfund Sites (US EPA regions 3, 6 and 9 (accessed Oct 2012))

GAS - Users' Guide to the Guidelines for Assessing and Managing Contaminated Gasworks Sites in New Zealand (MfE, 1997)

PHCS - Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand (MfE 1999)

$_1$ Background concentrations of polycyclic aromatic hydrocarbons in Christchurch urban soils, Tonkin and Taylor, Nov 2007

Table of Laboratory Results - 153 Lincoln Rolleston Road, Rolleston

Date of sampling: 08 August 2022

Asbestos in Soils			Qualitative
Sample Name:	Lab Number	Depth	Fibre Types
TP1.1 PA/SQ	22-28909-1	Stockpile	Asbestos NOT Detected,Organic Fibres
TP1.2 PA/SQ	22-28909-2	250	Asbestos NOT Detected,Organic Fibres
TP2.1 PA/SQ	22-28909-3	0-50	Asbestos NOT Detected,Organic Fibres
TP3.1 PA/SQ	22-28909-4	0-50	Asbestos NOT Detected,Organic Fibres
TP4.1 PA/SQ	22-28909-5	0-100	Asbestos NOT Detected,Organic Fibres
TP5.1 PA/SQ	22-28909-6	0-50	Asbestos NOT Detected,Organic Fibres
TP6.1 PA/SQ	22-28909-7	Stockpile	Asbestos NOT Detected,Organic Fibres
TP7.1 PA/SQ	22-28909-8	0-100	Asbestos NOT Detected,Organic Fibres
TP8.1 PA/SQ	22-28909-9	0-50	Asbestos NOT Detected,Organic Fibres
TP9.1 PA/SQ	22-28909-10	0-50	Asbestos NOT Detected,Organic Fibres
TP10.1 PA/SQ	22-28909-11	Stockpile	Asbestos NOT Detected,Organic Fibres
TP11.1 PA/SQ	22-28909-12	Stockpile	Asbestos NOT Detected,Organic Fibres
TP12.1 PA/SQ	22-28909-13	0-50	Asbestos NOT Detected,Organic Fibres
TP13.1 PA/SQ	22-28909-14	0-50	Asbestos NOT Detected,Organic Fibres
TP13.2 PA/SQ	22-28909-15	250	Asbestos NOT Detected,Organic Fibres
Soil Guideline Values	Residential		-
	Reference		-

Indicates asbestos is present
Indicates result exceeds 'residential' guideline value
NZGAMAS - New Zealand Guidelines for Assessing and Managing Asbestos in Soils, BRANZ, Nov. 2017

Table of Laboratory Results - 153 Lincoln Rolleston Road, Rolleston

Date of sampling: 08 August 2022

Asbestos in Soils			Qualitative
Sample Name:	Lab Number	Depth	Fibre Types
TP14.1 PA/SQ	22-28909-16	0-50	Asbestos NOT Detected,Organic Fibres
TP15.1 PA/SQ	22-28909-17	0-50	Asbestos NOT Detected,Organic Fibres
TP16.1 PA/SQ	22-28909-18	0-50	Asbestos NOT Detected,Organic Fibres
TP17.1 PA/SQ	22-28909-19	0	Asbestos NOT Detected,Organic Fibres
TP18.1 PA/SQ	22-28909-20	0-50	Asbestos NOT Detected,Organic Fibres
TP19.1 PA/SQ	22-28909-21	0-50	Asbestos NOT Detected,Organic Fibres
TP20.1 PA/SQ	22-28909-22	0-50	Asbestos NOT Detected,Organic Fibres
TP21.1 PA/SQ	22-28909-23	0-50	Asbestos NOT Detected,Organic Fibres
TP22.1 PA/SQ	22-28909-24	0-50	Asbestos NOT Detected,Organic Fibres
TP23.1 PA/SQ	22-28909-25	0-50	Asbestos NOT Detected,Organic Fibres
TP24.1 PA/SQ	22-28909-26	0-100	Asbestos NOT Detected,Organic Fibres
TP25.1 PA/SQ	22-28909-27	0-100	Asbestos NOT Detected,Organic Fibres
TP26.1 PA/SQ	22-28909-28	0-50	Asbestos NOT Detected,Organic Fibres
TP27.1 PA/SQ	22-28909-29	Stockpile	Asbestos NOT Detected,Organic Fibres
Soil Guideline Values	Residential		-
	Reference		-

Indicates asbestos is present
Indicates result exceeds 'residential' guideline value
NZGAMAS - New Zealand Guidelines for Assessing and Managing Asbestos in Soils, BRANZ, Nov. 2017

Appendix D – Laboratory Reports

Analytica Laboratories Limited
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Christchurch
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www.analytica.co.nz

Certificate of Analysis

Momentum Environmental Ltd
19 Robertsons Road, Kirwee
Christchurch 7671
Attention: Nicola Peacock
Phone: 027 513 4057
Email: hollie@momentumenviro.co.nz

Lab Reference: 22-28909
Submitted by: Hollie Griffith
Date Received: 08/08/2022
Testing Initiated: 9/08/2022
Date Completed: 10/08/2022
Order Number: N/A
Reference: 512

Sampling Site: 153 Lincoln Rolleston Road, Rolleston
Description of Work: Combo - 512

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at Analytica Laboratories. Samples were in acceptable condition unless otherwise noted on this report.
Specific testing dates are available on request.

Asbestos in Soil (Qualitative)

Sample Details

Laboratory ID	Client Sample ID	Sample Location	Sample Description	Date Sampled	Date Analysed
22-28909-1	TP1.1 Stockpile		Soil	08/08/2022	09/08/2022
22-28909-2	TP1.2 250		Soil	08/08/2022	09/08/2022
22-28909-3	TP2.1 0-50		Soil	08/08/2022	09/08/2022
22-28909-4	TP3.1 0-50		Soil	08/08/2022	09/08/2022
22-28909-5	TP4.1 0-100		Soil	08/08/2022	09/08/2022
22-28909-6	TP5.1 0-50		Soil	08/08/2022	09/08/2022
22-28909-7	TP6.1 Stockpile		Soil	08/08/2022	09/08/2022
22-28909-8	TP7.1 0-100		Soil	08/08/2022	09/08/2022
22-28909-9	TP8.1 0-50		Soil	08/08/2022	09/08/2022
22-28909-10	TP9.1 0-50		Soil	08/08/2022	09/08/2022
22-28909-11	TP10.1 Stockpile		Soil	08/08/2022	09/08/2022
22-28909-12	TP11.1 Stockpile		Soil	08/08/2022	09/08/2022
22-28909-13	TP12.1 0-50		Soil	08/08/2022	10/08/2022
22-28909-14	TP13.1 0-50		Soil	08/08/2022	10/08/2022
22-28909-15	TP13.2 250		Soil	08/08/2022	09/08/2022
22-28909-16	TP14.1 0-50		Soil	08/08/2022	09/08/2022
22-28909-17	TP15.1 0-50		Soil	08/08/2022	09/08/2022
22-28909-18	TP16.1 0-50		Soil	08/08/2022	09/08/2022
22-28909-19	TP17.1 0		Soil	08/08/2022	09/08/2022
22-28909-20	TP18.1 0-50		Soil	08/08/2022	10/08/2022
22-28909-21	TP19.1 0-50		Soil	08/08/2022	09/08/2022

All tests reported herein have been performed in accordance with the laboratory's scope of accreditation with the exception of tests marked *, which are not accredited.
This test report shall not be reproduced except in full, without the written permission of Analytica Laboratories.

Asbestos in Soil (Qualitative)

Sample Details

Laboratory ID	Client Sample ID	Sample Location	Sample Description	Date Sampled	Date Analysed
22-28909-22	TP20.1 0-50		Soil	08/08/2022	09/08/2022
22-28909-23	TP21.1 0-50		Soil	08/08/2022	09/08/2022
22-28909-24	TP22.1 0-50		Soil	08/08/2022	09/08/2022
22-28909-25	TP23.1 0-50		Soil	08/08/2022	10/08/2022
22-28909-26	TP24.1 0-100		Soil	08/08/2022	10/08/2022
22-28909-27	TP25.1 0-100		Soil	08/08/2022	10/08/2022
22-28909-28	TP26.1 0-50		Soil	08/08/2022	10/08/2022
22-28909-29	TP27.1 Stockpile		Soil	08/08/2022	10/08/2022

Information in the above table supplied by the client: Client Sample ID, Sample Location, Date Sampled.

Laboratory ID	Client Sample ID	Fibre Types	Trace Asbestos (Presence / Absence)	Asbestos (Presence / Absence)
	Units			
22-28909-1	TP1.1 Stockpile	Asbestos NOT Detected. Organic Fibres Synthetic Mineral Fibres	Absent	Absent
22-28909-2	TP1.2 250	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-3	TP2.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-4	TP3.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-5	TP4.1 0-100	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-6	TP5.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-7	TP6.1 Stockpile	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-8	TP7.1 0-100	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-9	TP8.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-10	TP9.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-11	TP10.1 Stockpile	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-12	TP11.1 Stockpile	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-13	TP12.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-14	TP13.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-15	TP13.2 250	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-16	TP14.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-17	TP15.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-18	TP16.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-19	TP17.1 0	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-20	TP18.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-21	TP19.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent

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Laboratory ID	Client Sample ID	Fibre Types	Trace Asbestos (Presence / Absence)	Asbestos (Presence / Absence)
	Units			
22-28909-22	TP20.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-23	TP21.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-24	TP22.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-25	TP23.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-26	TP24.1 0-100	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-27	TP25.1 0-100	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-28	TP26.1 0-50	Asbestos NOT Detected. Organic Fibres	Absent	Absent
22-28909-29	TP27.1 Stockpile	Asbestos NOT Detected. Organic Fibres	Absent	Absent

Information in the above table supplied by the client: Client Sample ID.

Asbestos in Soil (Qualitative) Approver:

Ashleigh England
Laboratory Technician

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Method Summary

Asbestos Fibres in Soil (Qualitative)	Sample analysis was performed using polarised light microscopy with dispersion staining in accordance with AS4964-2004 Method for the qualitative identification of asbestos in bulk samples. Note 1: The reporting limit for this analysis is 0.1g/kg (0.01%) by application of polarised light microscopy, dispersion staining and trace analysis techniques. Note 2: Trace asbestos is indicative that freely liberated respirable fibres are present and dust control measures should be implemented or increased on site. This is not the sole indicator for the friable nature of the asbestos present. Note 3: If mineral fibres of unknown type are detected, by PLM and dispersion staining, these may or may not be asbestos fibres. To confirm the identity of this fibre, another independent analytical technique such as XRD analysis is advised. Note 4: The laboratory does not take responsibility for the sampling procedure or accuracy of sample location description.

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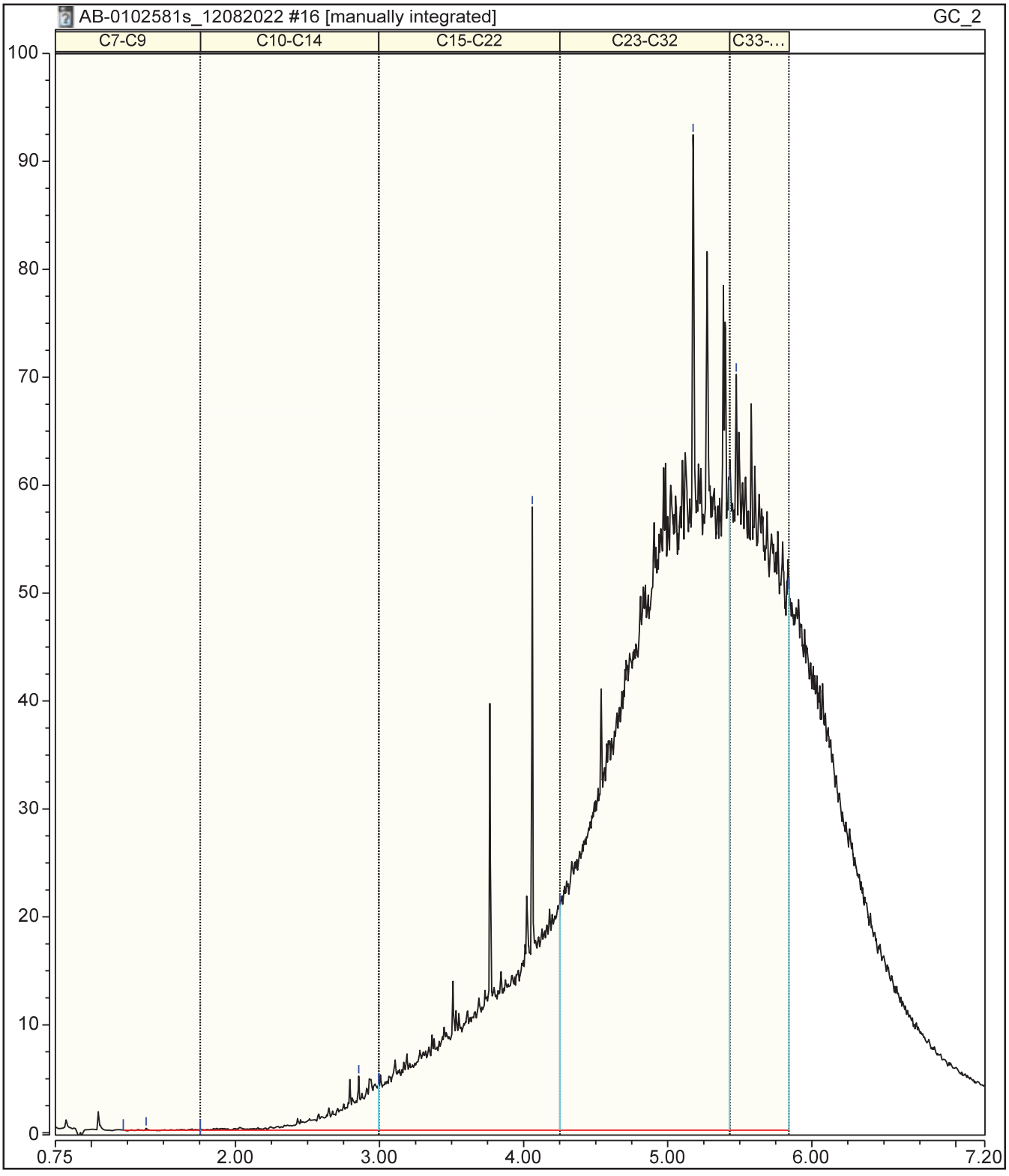
Chromatogram

22-29179-43



Chromeleon (c) Dionex
Version 7.2.5.9624

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Certificate of Analysis

Momentum Environmental Ltd
19 Robertsons Road, Kirwee
Christchurch 7671

Attention: Nicola Peacock
Phone: 027 513 4057
Email: hollie@momentumenviro.co.nz

Lab Reference: 22-29179
Submitted by: Hollie Griffith
Date Received: 10/08/2022
Testing Initiated: 10/08/2022
Date Completed: 15/08/2022
Order Number:
Reference: 512

Sampling Site: 153 Lincoln Rolleston Road, Rolleston

Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at Analytica Laboratories. Samples were in acceptable condition unless otherwise noted on this report.
Specific testing dates are available on request.

Heavy Metals in Soil

		Client Sample ID	TP1.1 Stockpile	TP1.2 250	TP2.1 0-50	TP2.2 0-50	TP3.1 0-50
		Date Sampled	08/08/2022	08/08/2022	08/08/2022	08/08/2022	08/08/2022
Analyte	Unit	*Reporting Limit*	22-29179-1	22-29179-2	22-29179-4	22-29179-5	22-29179-7
Arsenic	mg/kg dry wt	*0.125*	38.7	5.8	4.5	4.2	5.2
Cadmium	mg/kg dry wt	*0.005*	0.28	0.085	0.054	0.049	0.085
Chromium	mg/kg dry wt	*0.125*	35.3	16.8	13.6	13.4	16.1
Copper	mg/kg dry wt	*0.075*	33.6	6.2	5.9	5.6	5.6
Lead	mg/kg dry wt	*0.25*	58.2	18.7	14.2	12.7	21.6
Nickel	mg/kg dry wt	*0.05*	11.2	12.1	11.3	10.8	12.3
Zinc	mg/kg dry wt	*0.05*	176	70.8	45.4	41.1	61.7

Heavy Metals in Soil

		Client Sample ID	TP4.1 0-100	TP5.1 0-50	TP6.1 Stockpile	TP6.2 Stockpile	TP7.1 0-100
		Date Sampled	08/08/2022	08/08/2022	08/08/2022	08/08/2022	08/08/2022
Analyte	Unit	*Reporting Limit*	22-29179-9	22-29179-11	22-29179-13	22-29179-14	22-29179-15
Arsenic	mg/kg dry wt	*0.125*	5.3	5.6	6.4	6.1	5.5
Cadmium	mg/kg dry wt	*0.005*	0.13	0.15	0.10	0.12	0.098
Chromium	mg/kg dry wt	*0.125*	16.7	17.7	16.7	16.0	16.4
Copper	mg/kg dry wt	*0.075*	5.3	6.5	6.8	7.5	5.4
Lead	mg/kg dry wt	*0.25*	18.3	20.1	26.5	32.7	41.5
Nickel	mg/kg dry wt	*0.05*	11.8	13.5	11.5	11.2	11.0
Zinc	mg/kg dry wt	*0.05*	66.7	78.2	75.3	77.8	70.0

All tests reported herein have been performed in accordance with the laboratory's scope of accreditation with the exception of tests marked *, which are not accredited.
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Heavy Metals in Soil

	Client Sample ID		TP7.2 300	TP8.1 0-50	TP9.1 0-50	TP9.2 250	TP10.1 Stockpile
	Date Sampled		08/08/2022	08/08/2022	08/08/2022	08/08/2022	08/08/2022
Analyte	Unit	*Reporting Limit*	22-29179-16	22-29179-17	22-29179-19	22-29179-20	22-29179-21
Arsenic	mg/kg dry wt	*0.125*	4.8	5.4	5.9	5.1	5.3
Cadmium	mg/kg dry wt	*0.005*	0.081	0.088	0.12	0.14	0.074
Chromium	mg/kg dry wt	*0.125*	15.2	16.9	15.8	16.4	14.7
Copper	mg/kg dry wt	*0.075*	5.0	5.6	9.43	6.5	6.6
Lead	mg/kg dry wt	*0.25*	18.0	18.1	22.8	19.3	21.1
Nickel	mg/kg dry wt	*0.05*	10.4	12.1	10.8	11.2	11.3
Zinc	mg/kg dry wt	*0.05*	75.4	65.0	85.4	70.9	61.4

Heavy Metals in Soil

	Client Sample ID		TP10.2 Stockpile	TP11.1 Stockpile	TP11.2 Stockpile	TP12.1 0-50	TP13.1 0-50
	Date Sampled		08/08/2022	08/08/2022	08/08/2022	08/08/2022	08/08/2022
Analyte	Unit	*Reporting Limit*	22-29179-22	22-29179-23	22-29179-24	22-29179-25	22-29179-27
Arsenic	mg/kg dry wt	*0.125*	5.5	5.7	7.1	8.0	4.8
Cadmium	mg/kg dry wt	*0.005*	0.079	0.092	0.12	0.10	0.094
Chromium	mg/kg dry wt	*0.125*	15.3	19.8	19.1	19.5	14.1
Copper	mg/kg dry wt	*0.075*	7.2	8.17	9.03	12.9	7.60
Lead	mg/kg dry wt	*0.25*	24.6	26.8	23.8	19.4	17.8
Nickel	mg/kg dry wt	*0.05*	11.7	13.6	12.3	11.9	10.4
Zinc	mg/kg dry wt	*0.05*	70.8	87.8	92.9	88.6	63.9

Heavy Metals in Soil

	Client Sample ID		TP13.2 250	TP14.1 0-50	TP15.1 0-50	TP16.1 0-50	TP17.1 0
	Date Sampled		08/08/2022	08/08/2022	08/08/2022	08/08/2022	08/08/2022
Analyte	Unit	*Reporting Limit*	22-29179-28	22-29179-29	22-29179-31	22-29179-33	22-29179-35
Arsenic	mg/kg dry wt	*0.125*	5.7	5.6	6.1	5.5	6.4
Cadmium	mg/kg dry wt	*0.005*	0.13	0.17	0.17	0.13	0.15
Chromium	mg/kg dry wt	*0.125*	19.2	19.1	19.6	19.3	18.6
Copper	mg/kg dry wt	*0.075*	5.8	7.2	6.8	5.6	11.5
Lead	mg/kg dry wt	*0.25*	20.3	20.2	21.5	19.5	20.4
Nickel	mg/kg dry wt	*0.05*	13.6	14.0	14.4	13.8	13.9
Zinc	mg/kg dry wt	*0.05*	72.2	95.2	86.3	72.3	108

Heavy Metals in Soil

	Client Sample ID		TP17.2 1-5m	TP17.3 3.0m	TP18.1 0-50	TP19.1 0-50	TP20.1 0-50
	Date Sampled		08/08/2022	08/08/2022	08/08/2022	08/08/2022	08/08/2022
Analyte	Unit	*Reporting Limit*	22-29179-36	22-29179-37	22-29179-38	22-29179-40	22-29179-42
Arsenic	mg/kg dry wt	*0.125*	5.9	5.3	6.0	5.1	5.1
Cadmium	mg/kg dry wt	*0.005*	0.11	0.049	0.17	0.041	0.038
Chromium	mg/kg dry wt	*0.125*	18.5	16.7	21.5	14.9	17.9
Copper	mg/kg dry wt	*0.075*	6.9	7.76	7.4	7.3	8.11
Lead	mg/kg dry wt	*0.25*	20.7	16.3	20.2	15.0	16.3
Nickel	mg/kg dry wt	*0.05*	13.7	12.1	15.0	12.1	12.9
Zinc	mg/kg dry wt	*0.05*	78.9	54.9	77.4	48.4	64.1

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Heavy Metals in Soil

	Client Sample ID		TP20.2 150	TP21.1 0-50	TP21.2 0-50	TP22.1 0-50	TP23.1 0-50
	Date Sampled		08/08/2022	08/08/2022	08/08/2022	08/08/2022	08/08/2022
Analyte	Unit	*Reporting Limit*	22-29179-43	22-29179-45	22-29179-46	22-29179-48	22-29179-50
Arsenic	mg/kg dry wt	*0.125*	5.3	7.9	4.9	5.2	5.4
Cadmium	mg/kg dry wt	*0.005*	0.075	0.051	0.045	0.16	0.16
Chromium	mg/kg dry wt	*0.125*	19.6	20.9	15.6	18.9	19.6
Copper	mg/kg dry wt	*0.075*	9.29	8.32	6.2	6.1	6.4
Lead	mg/kg dry wt	*0.25*	18.4	13.0	12.7	18.5	18.8
Nickel	mg/kg dry wt	*0.05*	13.8	14.0	12.2	13.1	13.5
Zinc	mg/kg dry wt	*0.05*	84.6	67.8	46.7	73.5	71.7

Heavy Metals in Soil

	Client Sample ID		TP24.1 0-100	TP24.2 400	TP25.1 0-100	TP25.2 400	TP26.1 0-50
	Date Sampled		08/08/2022	08/08/2022	08/08/2022	08/08/2022	08/08/2022
Analyte	Unit	*Reporting Limit*	22-29179-52	22-29179-53	22-29179-54	22-29179-55	22-29179-56
Arsenic	mg/kg dry wt	*0.125*	5.6	5.3	5.3	5.1	6.5
Cadmium	mg/kg dry wt	*0.005*	0.11	0.097	0.12	0.092	0.13
Chromium	mg/kg dry wt	*0.125*	18.2	18.6	19.9	18.6	19.9
Copper	mg/kg dry wt	*0.075*	6.5	5.9	5.9	7.2	6.8
Lead	mg/kg dry wt	*0.25*	19.7	19.2	19.0	17.3	29.7
Nickel	mg/kg dry wt	*0.05*	13.2	13.1	14.3	12.5	13.9
Zinc	mg/kg dry wt	*0.05*	78.4	77.4	74.3	81.6	90.4

Heavy Metals in Soil

	Client Sample ID		TP26.2 0-50	TP27.1 Stockpile	TP27.2 Stockpile
	Date Sampled		08/08/2022	08/08/2022	08/08/2022
Analyte	Unit	*Reporting Limit*	22-29179-57	22-29179-59	22-29179-60
Arsenic	mg/kg dry wt	*0.125*	5.8	6.3	5.3
Cadmium	mg/kg dry wt	*0.005*	0.13	0.17	0.12
Chromium	mg/kg dry wt	*0.125*	20.1	19.3	15.3
Copper	mg/kg dry wt	*0.075*	6.1	30.7	26.6
Lead	mg/kg dry wt	*0.25*	25.7	18.3	16.7
Nickel	mg/kg dry wt	*0.05*	14.1	11.5	10.2
Zinc	mg/kg dry wt	*0.05*	83.3	274	187

Total Petroleum Hydrocarbons - Soil

	Client Sample ID		TP19.1 0-50	TP20.1 0-50	TP20.2 150
	Date Sampled		08/08/2022	08/08/2022	08/08/2022
Analyte	Unit	*Reporting Limit*	22-29179-40	22-29179-42	22-29179-43
C7-C9	mg/kg dry wt	*10*	<10	<10	<10
C10-C14	mg/kg dry wt	*15*	<15	<15	83
C15-C36	mg/kg dry wt	*25*	184	90	6,030
C7-C36 (Total)	mg/kg dry wt	*50*	184	90	6,113

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Polycyclic Aromatic Hydrocarbons - Soil

			Client Sample ID	TP19.1 0-50	TP20.1 0-50	TP20.2 150
			Date Sampled	08/08/2022	08/08/2022	08/08/2022
Analyte		Unit	*Reporting Limit*	22-29179-40	22-29179-42	22-29179-43
1-Methylnaphthalene		mg/kg dry wt	*0.01*	<0.010	<0.010	<0.010
2-Methylnaphthalene		mg/kg dry wt	*0.01*	<0.010	<0.010	<0.010
Acenaphthene		mg/kg dry wt	*0.01*	<0.010	<0.010	<0.010
Acenaphthylene		mg/kg dry wt	*0.01*	<0.010	<0.010	<0.010
Anthracene		mg/kg dry wt	*0.01*	<0.010	<0.010	<0.010
Benz[a]anthracene		mg/kg dry wt	*0.02*	<0.020	<0.020	<0.020
Benzo[a]pyrene		mg/kg dry wt	*0.01*	<0.010	<0.010	<0.010
Benzo[b]&[j] fluoranthene		mg/kg dry wt	*0.02*	<0.020	<0.020	<0.020
Benzo[g,h,i]perylene		mg/kg dry wt	*0.02*	<0.020	<0.020	0.14
Benzo[k]fluoranthene		mg/kg dry wt	*0.01*	<0.010	<0.010	<0.010
Chrysene		mg/kg dry wt	*0.01*	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene		mg/kg dry wt	*0.01*	<0.010	<0.010	<0.010
Fluoranthene		mg/kg dry wt	*0.02*	<0.020	<0.020	<0.020
Fluorene		mg/kg dry wt	*0.01*	<0.010	<0.010	<0.010
Indeno(1,2,3-cd)pyrene		mg/kg dry wt	*0.01*	<0.010	<0.010	0.067
Naphthalene		mg/kg dry wt	*0.01*	<0.010	<0.010	<0.010
Phenanthrene		mg/kg dry wt	*0.01*	<0.010	<0.010	<0.010
Pyrene		mg/kg dry wt	*0.02*	<0.020	<0.020	0.29
Benzo[a]pyrene TEQ (LOR)		mg/kg dry wt	*0.03*	0.030	0.030	0.030
Benzo[a]pyrene TEQ (Zero)		mg/kg dry wt	*0.01*	<0.010	<0.010	0.010
Anthracene-d10 (Surrogate)		%	*1*	95	100	95

Moisture Content

		Client Sample ID	TP19.1 0-50	TP20.1 0-50	TP20.2 150
		Date Sampled	08/08/2022	08/08/2022	08/08/2022
Analyte	Unit	*Reporting Limit*	22-29179-40	22-29179-42	22-29179-43
Moisture Content	%	*1*	6	15	15

Method Summary

Elements in Soil

Samples dried and passed through a 2 mm sieve followed by acid digestion and analysis by ICP-MS. In accordance with in-house procedure based on US EPA method 200.8.

TPH in Soil

Solvent extraction, silica cleanup, followed by GC-FID analysis. (C7-C36). (In accordance with in-house procedure based on US EPA 8015).

PAH in Soil

Solvent extraction, silica cleanup, followed by GC-MS analysis.
Benzo[a]pyrene TEQ (LOR): The most conservative TEQ estimate, where a result is reported as less than the limit of reporting (LOR) the LOR value is used to calculate the TEQ for that PAH.
Benzo[a]pyrene TEQ (Zero): The least conservative TEQ estimate, PAHs reported as less than the limit of reporting (LOR) are not included in the TEQ calculation.
Benzo[a]pyrene toxic equivalence (TEQ) is calculated according to *'Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health'*. Ministry for the Environment. 2011. (In accordance with in-house procedure).

Moisture

Moisture content is determined gravimetrically by drying at 103 °C.

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Patricia Buencamino, BSc
Technician

Divya Goundar DipSciTech
Technician

Adam Ang
Team Leader

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IMPORTANT INFORMATION TO ALL NEW HOME/LAND OWNERS

STREET TREES AND IRRIGATION

The Selwyn District Council would like to make all new home/land owners and their contractors aware of the process of gaining approval to relocate/remove street trees, or alter Council irrigations systems.

In some areas of the Selwyn District, various types of linked dripper irrigation systems are installed to water establishing street trees. In some cases, the system has not been installed very deep in the ground. It is particularly important that any contractors who are going to be excavating within road berms are aware of this and excavate carefully to locate irrigation lines or drippers, or seek assistance from Council as to their presence/location before excavating. Similarly, care should be taken when excavating near street trees to avoid damage to tree roots.

The developer has put a lot of effort into enhancing the streetscape and providing an attractive environment within your subdivision. It is accepted that in some cases when a new home is built, a planted street tree and associated irrigation system may need to be shifted or removed to facilitate vehicle access to the site. Upon formal request, Council will consider giving approval for such changes to the initial planting plan or irrigation system on a case by case basis, after exploring all alternative options available.

Where is has been qualified that trees can be removed or relocated and/or an irrigation system needs to be shifted, then these works are to be organised by Council and/or the Developer and carried out by one of their approved contractors. All costs associated with these works are to be borne by the requesting land owner.

Please be aware, that in some situations, street trees can be removed and landscaping in a subdivision might still be under the management of the developer. In such cases, Council should still be contacted in the first instance, who will forward the request onto the developer for a response.

The following procedure is to be followed by a land owner who is wanting to request removal or relocation of a street tree and/or associated irrigation systems, in order to facilitate vehicle accessto their property.

Requests for the removal or shifting of a tree must be made in writing to the Council Reserves Department stating:

- Street address of the property and the lot number;
- Name of the contact person;
- Contact details;
- Reason for the tree to be removed

On receipt of this formal request, Council staff will assess the following:

- Quality of the tree and whether or not the tree can successfully be moved;
- Whether an irrigation system is present and also needs shifting or decommissioning;
- Any conditions of sale by the developer;
- Any Resource Consent conditions;
- Streetscape theme and amenity value contribution of the tree.

If a tree is not able to be shifted and has to be removed, the landowner may also be required to pay for the cost to plant another tree of the same species and of similar size within the road berm as a replacement.

If an agent of the land owner makes the request to Council, then the agent is deemed to the person responsible for the payment of all expenses relating to this procedure.

CARE FOR ESTABLISHING STREET TREES

Although the Developer and/or Council endeavours to water in newly planted street trees during their initial establishment years, the public is encouraged to assist with watering trees on your road berm. Establishing a tree in an urban environment faces many challenges so give your tree the best chance of reaching its full potential and value.

Council implements an annual programme of street tree inspections and maintenance throughout the district. Street tree maintenance is the responsibility of the Council, who employs a contractor to provide arboricultural services. It is critical that any other tree maintenance required is undertaken by our appointed contractor to ensure consistency in both quality and tree form.

Please contact us by lodging a Service request if you tree requires any tree maintenance.

Thank you for your assistance and co-operation

Reserves Maintenance Staff
Selwyn District Council

Be water wise

Reducing water use is important as Selwyn households tend to be high users of water. Residential properties connected to a Council supply used an average of 1,470 litres of water per day in 2012/13 and 1,386 litres per day in 2011/12. As a comparison, typical household use in New Zealand is around 675 litres per day.

Part of the reason why Selwyn households have higher water consumption is because properties tend to have large sections and over dry summers water use can increase significantly. Additional bores can be added to increase the capacity of Council water supplies, but this is costly and unsustainable.

Over summer, demand for water is much higher than in winter, as people use more water to maintain their lawns. When demand for water is very high during dry summers, water restrictions can be introduced if necessary.

Demand is especially high at the peak times of 6–9am in the morning and 4–9pm in the evening, when people use water for cooking, washing and dishwashers, and often water their lawns at the same time.

We are asking everyone to be careful about how they use water, especially in summer when there is more demand for water. Some areas like Rolleston and Darfield also pay for their water based on metered use so reducing your water consumption will mean you spend less on water bills.

How much water do you use?

This chart shows the amount of water typically used for different household activities. Once you know where your water is going, you can think about how you could reduce your water use. If your water is metered and billed this will help reduce how much you spend on water.

Kitchen—Activity	Water used	Buckets
Dishwashing by Hand	12 to 15 litres per wash	1 – 1½
Dishwasher	20 to 60 litres per wash	2 – 6
Drinking, Cooking, Cleaning	8 litres per person	¾ – 1
Bathroom—Activity	Water used	Buckets
Toilet	4.5 to 11 litres per flush	½–1
Bath	50 to 120 litres (half full)	5 – 12
Shower (8 minutes)	70 to 160 litres per 8 minutes	7 – 16
Handbasin	5 litres	½
Tap Running (Cleaning teeth, washing hands)	5 litres	½
Leaking Tap	200 litres	20
Laundry—Activity	Water used	Buckets
Washing Machine (Front loading)	23 litres per kg of dry clothing	4 – 5
Washing Machine (Top Loading)	31 litres per kg of dry clothing	5 – 6
Outside—Activity	Water used	Buckets
Hand Watering by Hose	600 to 900 litres per hour	60 – 90
Garden Sprinkler	Up to 1500 litres per hour	150
Car Wash with Hose	100 to 300 litres	10 – 30
Filling Swimming Pool	20,000 to 50,000 litres	2,000–5,000
Leaking Pipe (1.5mm hole)	300 litres per day	30

Tips for managing your water use

You can help manage your water consumption wisely by following these tips:

Your garden and lawn

- Water your garden and lawn every few days rather than every day. Wetting the soil surface every day encourages roots to develop at the surface, making them more vulnerable to hot dry spells.
- Water your garden and lawn outside of peak water usage hours (avoid 6am–9am, and 4pm–9pm). Watering in the early morning (before 6am) or late evening (after 9pm) will minimise evaporation loss. Also avoid watering in a Nor' West wind as the water will quickly evaporate.
- Using a watering can or hand watering plants by hose often uses far less water than a sprinkler.
- Use a timer to avoid overwatering as it makes plants more susceptible to fungus diseases and will leach out soil nutrients.
- Use mulch or cover the soil with a layer of organic matter to keep the soil moist. Mulches help protect plant roots from drying effects of sun and wind and also reduce weed growth.
- Check if the soil needs watering by digging down with a trowel and having a look. This is a more accurate way to see if watering is needed than looking at the surface.
- Check you have the right head for your sprinkler. Sprinklers should apply water gently so that it seeps into the soil. Some sprinklers apply water faster than the soil can absorb.
- When planting choose drought resistant plants that don't require a lot of water.

Outdoors

- Wash your car with a bucket of water rather than a hose.
- Use a broom rather than hosing down paths and driveways.
- Inspect hoses and taps both indoors and outdoors to check for leaks which waste water.
- Collect rainwater for use watering gardens and lawns.
- If you have a swimming pool, keep it covered to stop the water evaporating.

Indoors

- Reduce your water consumption at the peak times of 6-9am and 4-9pm. Easy ways to do this include using your washing machine after 9pm at night, and putting your dishwasher on just before you go to bed.
- Take a short shower instead of a bath.
- Don't switch on the dishwasher or washing machine until you have a full load.
- Use a half flush when using the toilet.

Land Information Memorandum L230329

Application

Yoursection FV Ltd		No.	L230329
Yoursection FV Limited		Application date	2/03/23
PO Box 9301		Issue date	13/03/23
Tower Junction		Phone	021 341 363
Christchurch 8149		Fax	-

Property

Valuation No.	2405514301
Location	Lincoln Rolleston Road
Legal Description	Lot 1 DP 568976
Owner	Yoursection FV Limited
Area (hectares)	10.0000

The certificate of title submitted with this application, shows easements, covenants, encumbrances or caveats registered on the title, for further information a copy of these can be obtained from Land Information New Zealand 112 Tuam Street.

Rates

Rateable Value

The date of Selwyn's last General Revaluation was 1/09/21. For further information please contact Council's Rates Department.

Revaluation Year	2021
Land	$10,000,000
Capital Value	$10,000,000
Improvements	$ 0

Current Rates Year 2022 to 2023	
Annual Rates	$8,206.80
Current Instalment	$2,051.70
Current Year - Outstanding Rates	$2,051.70
Arrears for Previous Years	$ 0.00
Next Instalment Due	15/03/23

Next Revaluation Due 2024.

The rates listed for this property are correct as at the date of this report being issued.

If this property is vacant land, and the applicant intends building a house or making other improvements, additional rates and charges will be added. Such rates and charges are for the operation of the District libraries, local community centre and recreation reserves, sewerage and water systems and refuse collections and recycling.

If a ratepayer in the district purchases additional properties, that ratepayer maybe eligible for certain rating exemptions due to multiple ownership. The exemptions would only apply to uniform library charges on bare land blocks and an exemption from the uniform annual general charge if contiguous or same use land is purchased.
Please contact the Councils rates team if you require clarification on 0800 SELWYN (735 996).

Note: Rates are charged in four equal instalments for the period commencing 1 July and ending 30 June each year.

Planning/Resource Management
Operative District Plan Zoning: Living Z

The Council has undertaken a review of the Operative District Plan and through this process it has developed a Proposed District Plan which provides clear objectives, policies and rules to manage the effects of land use activities on the environment, but also sets a clear direction for our district's development and reflects our communities' needs and expectations. It also incorporates any changes in legislation, national and regional policy statements, environmental standards and other regulations.

As a result, some of the Proposed rules apply from the date of notification – 5 October 2020. These are generally rules that relate to the thigs we look after, like listed historic notable trees, Sites and Areas of Significance to Māori, indigenous biodiversity and provisions associated with protecting the natural character of surface water bodies. In some cases, resource consent may be required under either or both the operative and proposed district plans.

Variation 1 amends the Proposed District Plan in response to the Resource Management (Enabling House Supply and Other Matters) Amendment Act 2021, which requires Council to adopt Medium Density Residential Standards (MDRS) in Rolleston, Lincoln and Prebbleton. The affected areas are shown on the Proposed District Plan maps as a new Medium Density Residential Zone (MRZ).

Some of the provisions in Variation 1 to the Proposed District Plan have immediate legal effect from the date of notification – 20 August 2022.

Your current property zoning may also change as a result of the District Plan Review and the bulk and location requirements for your zone may also change, therefore we recommend you read the Proposed District Plan in full to see what the potential impacts may be.

The Proposed District Plan can be viewed in ePlan format at:

www.selwyn.govt.nz/proposedplan

Alternatively a summary guide which outlines the key changes between the Proposed and Operative plans and more information about the District Plan Review process can be found at:

www.selwyn.govt.nz/districtplanreview

Please note this information is subject to change following the close of submissions and decisions/appeals

Please refer to this link https://eplan.selwyn.govt.nz/review/default.html#Rules/0/217/1/0/0 for relationship between spatial layers.

3/09/21 Resource Consent 215692
To Undertake A Two Lot Subdivision. L/U 215693
Section 224 Issued 3/11/21
Granted By Local Authority Officer 28/09/21

3/09/21 Resource Consent 215693
Consent Is Sough Under The Nes. S/D Rc215692
Decision Notified 28/09/21
Granted By Local Authority Officer 28/09/21

Resource Consent Pc200075
Rezone Approximately 24.7 Hectares Of Rural Inner Plains Zoned Land To Living Z At Rolleston.
Plan Change Operative 7/09/22
Granted By Council 13/04/22

Resource Consent R301583
The Extraction & Screening Of Shingle To A Depth Of 8 Metres
Further Information Required 1/05/95

Planning Notes

The information provided on this LIM has come from the information lodged against the property file/information and GIS at the time of processing. Please note that the resource consents, fill certificates and other relevant property files listed are based on what is available on our general property information, and that there may be other documents for the property which have not yet been added to the property record.

Resource Consents often contain a multitude of information and reports that are not ordinarily separately referenced or included in the LIM itself. Information identifying each (if any) special feature or characteristic of the land concerned, including but not limited to potential erosion, falling debris, subsidence, slippage, alluvion, or inundation, or likely presence of hazardous contaminants.

Preliminary Site Investigation Reports, Detailed Investigation Site Reports and Geotechnical Reports are submitted as part of the subdivision Resource Consent Process it is not likely to be currently of relevance in relation to the "land concerned", otherwise it would be elsewhere noted on the LIM to the extent any issues still apply following subdivision).

Any resource applications or consents that may contain information relating to the land which is not otherwise included in the LIM, including Geotechnical, Environmental and other expert reports, can be obtained via Selwyn District Council Information Management team on information.management@selwyn.govt.nz

PDP Zonings: GRUZ

MRZ: MRZ – NILE

There is a consent notice on the Certificate of Title to this property.

Reference: Plains Flood Management Overlay
The District Plan Review has considered the potential effects of Natural Hazards such as flooding, tsunami, wildfire and geotechnical hazards such as land instability, liquefaction and fault lines on properties across the District. This property is identified by the Proposed District Plan as being located within a Natural Hazard Overlay. For further information visit https://apps.canterburymaps.govt.nz/SelwynNaturalHazards/ or contact the duty planner on 0800 SELWYN (0800735996).

Reference: Liquefaction Unlikely Overlay
The District Plan Review has considered the potential effects of Natural Hazards such as flooding, tsunami, wildfire and geotechnical hazards such as land instability, liquefaction and fault lines on properties across the District. This property is identified by the Proposed District Plan as being located within a Natural Hazard Overlay. For further information contact the duty planner on 0800 SELWYN (0800735996).

Property on LLUR.

PC75.

Building
There are no known buildings sited on this property at the time of issuing this report

Buildings erected prior to 1965 may not have a building permit record or had inspections carried out.

All building products and materials have a designed life, and must be maintained in accordance with the manufacturer's specifications.

In the case of building permits and building consents no further inspections have been carried out by the council since these structures were completed.

Any concerns of this nature should be referred to an organization that carries out property checks or the product manufacturers.

Schedule 1 Exempt Building Work

Under section 42A of the Building Act 2004 building owners can carry out certain types of building work specified in Schedule 1 of the Building Act 2004 without need to obtain building consent approval. Where Council holds any information provided by a property owner in relation to exempt works undertaken on the property it is important to note that Council do not check or review the documentation for compliance, it is simply filed for record keeping purposes and not to satisfy any statutory obligation. Any information held of this nature has been provided at Councils discretion under Section 44A (3) of the Local Government Official Information and Meetings Act 1987 without any representation or warranty.

Services

Water The Council Water Supply is not available

Own potable water supply required

For those properties not connected to a Council reticulated water supply, it is encouraged that the quality of the domestic water supply be regularly tested to ensure that it is to a potable standard. If the same water supply is also used for irrigation or stock water, check that there is a backflow protection device to prevent any contamination of water supply.

Sewer The Council Sewer Scheme is not available
On-site sewage treatment and disposal

The property is not serviced through Council sewer network. Any onsite waste water treatment or changes to it will require Environment Canterbury consent.

If there is an existing domestic onsite wastewater treatment system on this property, the owner is responsible for ensuring regular maintenance and servicing is carried to ensure it continues to function satisfactorily.

Any new or replacement of domestic onsite wastewater treatment system will need to meet the requirements of Rule 5.8 of the Canterbury Land and Water Regional Plan to be considered a permitted activity and will require a building consent from Selwyn District Council prior to installation.

Any property with onsite sewage treatment and disposal, animal effluent disposal or water extraction for irrigation may have or require consent from Environment Canterbury and may require consent from the surrounding properties for a variety of discharges. This could have an adverse effect on the neighbouring property in relation to odour, potable water supply quality, or be of a general nuisance factor.

Information regarding what consents have been granted for this or surrounding properties can be obtained by contacting the issuing authority Environment Canterbury.

Land used to dispose of waste or to spread effluent or treated sewage, may be contaminated due to the concentrations or mix of material deposited onto the land over time. If any soil tests have been carried out, please forward a copy to the Council in order for the records to be updated.

For those properties not connected to a Council reticulated sewer system, it is important that the effluent system is regularly checked and maintained. You should also be aware of the limits on what can and should not be disposed of through these systems. Any concerns should be referred to an organization that carries out checks and maintenance or to the product manufacturers.

Stormwater Disposal to be determine with new subdivision. Please contact the Asset Department for more information

This property may be located within an area covered by Environment Canterbury stormwater consent. It is the responsibility of the property owner to contact Environment Canterbury customer services to ensure that any activity undertaken on site complies with the relevant consent conditions.

Note – the above describes the current roof water disposal type and does not reflect the future situation, which should be determined as part of the subdivision (if applicable). For more information please contact Council.

If you have any questions about the Water, Sewage or Stormwater information above please contact the Selwyn District Council Water Department at 0800 SELWYN or contactus@selwyn.govt.nz

Kerbside Waste Collections Council refuse, organic and recycling collection is available on Wednesday.

The Council provides refuse and recycling collection services for most residential and rural residential properties where these properties occur alongside maintained public roads. Private roads and Right of Ways (as maybe referenced in the Transportation Notes pertaining to this LIM) will not be directly serviced as these access ways are not usually of a sufficient standard to be used safely and efficiently by the collection vehicles. This could also apply to other public roads or streets that are narrow and/or have a lack of vehicle turning facilities. Rural and high country areas and settlements are not covered by regular collection services however localised refuse drop off facilities maybe available for use in specific areas. For further details and advice on refuse collection and recycling services as they may pertain to the property please phone the Council's Asset department on phone 3472 800.

Land and Building Classifications

Archaeological Sites: None known

Historical Places: None known

Historical Trees: None known

Land Notes: The flight paths for the Christchurch International Airport takes air traffic over this general area.

Land Notes: This property is located within the Lowes Road ODP Area (Appendix 34), or High Street Southbridge ODP Area (Appendix 45) or a Living Z Zone. All fencing on your property must comply with Rule 4.13 of the District Plan, which prevents the height of any fence between the front building façade and the street, or a private Right of Way or shared access (over which the allotment has legal access), exceeding 1 metre. For allotments with frontage to more than one road, any fencing on the secondary road boundary is to be no higher than 1.8m. Side boundary fences must drop down to a maximum of 1m in height at least 3 metres back from the front boundary. If you fencing proposal does not comply with the maximum heights specified a resource consent will be required.

Land Notes: This property is within the area encompassed by the 2007 Christchurch, Rolleston and Environs Transportation Study (CRETS). The published Strategy outlines a range of strategic transportation initiatives to cater for long term growth in this area of the District. This includes the upgrading of existing roads and the provision of new roads which may affect private property. Further information on this Study can be viewed on the Councils website www.selwyn.govt.nz under “Transportation and Roading”.

Land Notes: This property is located within the area encompassed by the Greater Christchurch Urban Development Strategy (UDS). The UDS is a joint initiative to plan and manage the growth of the Greater Christchurch Region over the next 35 years and is a partnership between the Christchurch City Council, Environment Canterbury, the Waimakariri District Council, Selwyn District Council, and Waka Kotahi NZ Transport Agency.

The Selwyn District Council is developing several strategic documents that seek to implement the UDS that may have an impact on this property in the future. Further information on Council projects can be found on the Council’s website www.selwyn.govt.nz or by contacting the planning department on 0800 SELWYN (0800735996)

Land Notes: Council holds the following reports

- 08/2022 Detailed Site Investigation Report from Momentum Environmental ltd
- 25/11/2020 Geotech Report from Miyamoto

Please contact our Information Management Team at Information.Management@selwyn.govt.nz for further information.

Listed Land Use Register (LLUR):
Hazardous activities and industries involve the use, storage or disposal of hazardous substances. These substances can sometimes contaminate the soil. Environment Canterbury identifies land that is used or has been used for hazardous activities and industries. This information is held on a publicly available database administered by Environment Canterbury called the Listed Land Use Register (LLUR). The Selwyn District Council may not hold information that is held on the LLUR, therefore, it is recommended that you check Environment Canterbury's online database at www.llur.ecan.govt.nz.

Residential Swimming Pool
No pool registered to this property.

Land Transport Requirement
Lincoln Rolleston Road is a formed and sealed arterial road maintained by Selwyn District Council.

This property maybe effected by proposed roading and access changes relating to the Waka Kotahi NZ Transport Agency Rolleston Flyover and State Highway Access Improvement Project. Further information and contact details can be found at www.nzta.govt.nz/rollestonflyover

Special Land Features

	NZS3604:2011	**AS/NZS1170:2002**
Wind Region	A	A7
Snow Zone	N4	N4 Sub-Alpine
Earthquake	Zone: 2	*Z* Factor: 0.3
Approximate Altitude (Amsl)	39 M	-
Exposure Zone	B	-

Exposure Zone Descriptions

Zone B: Low

Inland areas with little risk from wind blown sea-spray salt deposits

Zone C: Medium

Inland coastal areas with medium risk from wind blown sea-spray salt deposits. This zone covers mainly coastal areas relatively low salinity. The extent of the affected area varies significantly with factors such as winds, topography and vegetation.

Zone D: High

Coastal areas with high risk wind blown sea-spray salt deposits. This is defined as within 500 m of the sea including harbours, or 100 m from tidal estuaries and sheltered inlets.

Flooding: Flood Management Area - 500 year event
The Council is undertaking a District Plan Review and through this process the Council has obtained and holds information showing that this property may be susceptible to flooding from the Selwyn River and/or in heavy rainfall events. The two reports are outlined below and can be found at https://apps.canterburymaps.govt.nz/SelwynNaturalHazards/:

ECan report R19/41 – Selwyn River/Waikirikiri floodplain investigation. The report identifies areas that may be affected by flooding from the Selwyn River/Waikirikiri.

DHI Water and Environment Ltd report – Regional Policy Statement Modelling for SDC – District Plan. The report identifies areas that may be affected by flooding in heavy rainfall events in the Selwyn District. For more information please contact the Selwyn District Council: phone: 0800 SELWYN (735 996), email contactus@selwyn.govt.nz or visit 2 Norman Kirk Drive, Rolleston.

Alluvion: None known

Avulsion: None known

Erosion: None known

Land Fill: None known

Slippage: None known

Ground Water Level: Less than 30 metres below ground

Soil Type: Templeton moderately deep fine sandy loam
Eyre shallow silt loam

Liquefaction and Subsidence: Council does not hold site specific information on subsoil classifications or ground bearing capacities. Therefore the applicant will need to carry out site subsoil investigations to verify 'Good Ground' can be achieved on the site and to determine the subsoil classification in accordance with NZS1170. Verification of site investigation data will need to be submitted as part of the documentation for Building Consent.

The definition of 'Good Ground' can be found in the Definitions section of the NZ Building Code Handbook, and appropriate test methods are detailed in either NZS3604, or NZBC B1/VM4.

Licences/Environmental Health
No information located.

Network Utility Operators
Information related to the availability of supply, authorisations etc. (e.g. electricity or gas) can be obtained from the relevant Network Utility Operator.

Other Information
1. The applicant is advised that the Environment Canterbury may have other information in relation to this property including, but not limited to:

a) Discharge consents.

b) Well permits.

c) Consents to take water.

d) The existence of contamination and/or hazardous sites.

e) Flooding.

f) Clean air discharge compliance.

Further information may be obtained from Environment Canterbury by requesting a Land Information Request (LIR). To find out more contact the Environment Canterbury on 0800 ECINFO (0800 324 636) or at http://www.ecan.govt.nz/

2. The following further information is supplied on the basis set out in note 2 below.

Notes
1. The information supplied in the sections of this report, other than 'Other Information', is made available to the applicant pursuant to Section 44A(2) of the Local Government and Official Information Act 1987 by reference to Council files and records. No property inspection, or title search, has been undertaken. To enable the Council to measure the accuracy of this LIM document based on our current records we would appreciate your response should you find any information contained herein which may be considered to be incorrect or omitted. Please telephone the Council on 0800 SELWYN (375 996).
2. The information or documents supplied to the applicant and referred to in the 'Other Information' section of this report has been supplied to the Council by property owners, their agents and other third parties. That information is made available pursuant to section 44A(3) of the Local Government and Official Information Act 1987 on the basis that:

   a) The information may be relevant to the purposes for which this report is obtained;

   b) The Council does not warrant or represent the accuracy or reliability of the information. If the subject matter of that information is important to the applicant it is recommended that relevant professional advice should be taken before reliance is placed upon that information.
3. The information included in the LIM is based on a search of Council records only and there may be other information relating to the land which is unknown to the Council. Council records may not show illegal or unauthorised building or works on the property. The applicant is solely responsible for ensuring that the land is suitable for a particular purpose.
4. **Schedule 1 Exempt Building Work**

   Building owners can carry out certain types of building work without needing to obtain a building consent. This exempt building work is listed in Schedule 1 of the Building Act 2004.

   It is the owners' responsibility to ensure that any exempt building work done complies with the Building Code and fits within the provisions of the schedule before they carry out the work.

Please note that Council do not check or review documentation for compliance where information on exempt work has been provided by a property owner to Council. This information is simply filed for record keeping purposes and not to meet any statutory obligation.

Any information of this nature held by Council has been provided at Councils discretion under Section 44A (3) of the Local Government Official Information and Meetings Act 1987 without any representation or warranty.

5. The Council has used its best endeavors to ensure that all information provided in this LIM report is correct and complete in all material respects. In the event that a material error or omission can be proven the Council's liability, whether in contract or in tort shall be limited to the fee paid to Council to obtain this report.
6. This information reflects the Selwyn District Council's current understanding of the site, which is based only on the information thus far provided to it and held on record concerning the site. It is released only as a copy of those records and is not intended to provide a full, complete or totally accurate assessment of the site. As a result the Council is not in a position to warrant that the information is complete or without error and accepts no liability for any inaccuracy in, or omission from, this information.
7. The information contained in this Land Information Memorandum is current at the date the memorandum is issued. Further relevant information may come into the Council's possession subsequent to the date of issue.

Name:_____Kate Lewis_____ K Lewis _____ Date: 13 March 2023

Legend

Subdivision_Areas
- Subdivision areas

Address
- Addresses (LINZ)

Boundaries
- District Boundary
- Township Boundary

Railway
- Railway

Road
- Selwyn Roads
- All Road Labels

Rating
- Ratepayer Information
- Title Owners

Land_Owners
- Selwyn District Council

Other
- DoC
- Environment Canterbury
- North Canty Fish and Game Council

Water
Water_pt
- EQUIPMENT - BORE
- EQUIPMENT _ GENERATOR
- EQUIPMENT - SAMPLE TAP
- EQUIPMENT - OTHER
- FACILITY
- FIRE PLANT
- HYDRANT
- IRRIGATION
- NODE
- OBSOLETE
- SUPPLY POINT
- TANK
- VALVE

Water_ln
- DIM LINE
- DUCT
- IRRIGATION
- NON SDC SERVICE
- OBSOLETE
- OUTLINE
- PIPE - TREATED
- PIPE - UNTREATED
- PIPE - SEWER
- SITE_BOUNDARY

Sewer
- Manhole Labels

Sewer_pt
- CHAMBER
- EQUIPMENT
- FACILITY
- MANHOLE
- NODE
- VALVE

Sewer_ln
- OUTLINE
- DIM LINE
- DUCT
- IRRIGATION
- NON SDC SERVICE
- OBSOLETE
- OUTLINE
- PIPE_GRAVITY
- PIPE_RISINGMAIN
- SITE_BOUNDARY

Stormwater
Storm_pt
- CHAMBER
- EQUIPMENT
- FACILITY
- INLET/OUTLET
- MANAGEMENT
- MANHOLE
- NODE
- SOAKHOLE
- SUMP
- VALVE

Storm_ln
- CHANNEL
- DIM LINE
- MANAGEMENT
- NON SDC SERICE
- OBSOLETE
- OUTLINE
- PIPE
- SITE_BOUNDARY
- Soakhole w/Hoz Soakage
- StopBank

Storm_py
- CATCHMENTS
- CONSENT AREA
- GROUNDWATER LESS 6M
- OUTLINE OF BASIN
- RATED AREA
- Stormwater Management Area
- Storm_ln_Labels

WaterRaces
WRace_pt
- DISCHARGE
- DIVIDE
- EQUIPMENT
- GATE
- GRILL
- HEADWALL
- MANHOLE
- NODE
- POND
- SITE
- SHAFT
- SOAKHOLE

WRace_ln
- AQUEDUCT
- CULVERT
- DIM LINE
- EMERGENCY DISCHARGE
- INTAKE
- LATERAL
- LOCAL
- MAIN
- OBSOLETE
- OUTLINE
- SIPHON
- TUNNEL
- SDC Cleaned

Drain
CDrain_pt
- GATE
- Site
- WEIR

CDrain_ln
- DRAIN
- ECan
- OUTLINE
- StopBank
- Site Boundary
- CDrain_ln Label

Well
- Springs - SPRGSV
- Wells - WELLFV
- Assessed For Groundwater Quality - QGWV
- Assessed For Surface Water Quality - QSWV
- Community Drinking Water Protection Zones - ECAN

LiquefactionReview
- Project Extent
- Boundary Between Liquefaction Assessment Zones

Liquefaction Susceptibility
- DBH TC Zoned Area
- Damaging liquefaction unlikely
- Liquefaction assessment needed

Biodiversity
- Canterbury Plains SDC AB and C Classes
- Endangered Flora and Fauna
- Potentially Significant Sites
- Confirmed SNA Sites
- Significant Natural Areas (Final 115)

Zones
- West Melton Observatory Zone

Planning Zones
- High Country
- Port Hills
- Existing Devlopment Area
- Living 1
- Living 2
- Living 3
- Living X
- Living West Melton (North)
- Living Z
- Deferred Living
- Business 1
- Business 2
- Business 3
- Inner Plains
- Outer Plains
- Malvern Hills
- Key Activity Centre
- Living West Melton (South)

Proposed CPW
- Headrace
- Sheffield Pond Flood Extent
- Distribution Network
- Command Area (Ex. H & D Network)

UDSZones
- UDS Traffic Zones
- CRETS

LLUR
- Activities
- Investigations
- Sites

Potentially Contaminated Sites
- Verified Note
- Verified Comment
- Not Verified

Designations
- Designations

Floods
- Estimated 2013 Flood Photo Locations
- 2.7M AMSL
- GW Spring Holes
- SDC Recorded Flood Sites
- Ecan Defined Flood Zones

Tsunami Evacuation zone
- Tsunami Initial Evacuation Area

Refuse
- Refuse Dropoff points
- Organic Route

Rubbish/Recycling Route
- Monday Week 1
- Monday Week 2
- Tuesday Week 1
- Tuesday Week 2
- Wednesday Week 1
- Wednesday Week 2
- Thursday Week 1
- Thursday Week 2
- Friday Week 1
- Friday Week 2
- No Collection
- Organic Bin
- Rubbish Bin
- Day Unknown

Recycling Bin & Pick Up Schedule
- Monday, Recycling week 1
- Monday, Recycling week 2
- Tuesday, Recycling week 1
- Tuesday, Recycling week 2
- Wednesday, Recycling week 1
- Wednesday, Recycling week 2
- Thursday, Recycling week 1
- Thursday, Recycling week 2
- Friday, Recycling week 1
- Friday, Recycling week 2
- General Refuse Charge

Pools
Swimming Pools
- Error, Empty, Expired, In Progress, Complaint, NonC
- Removed

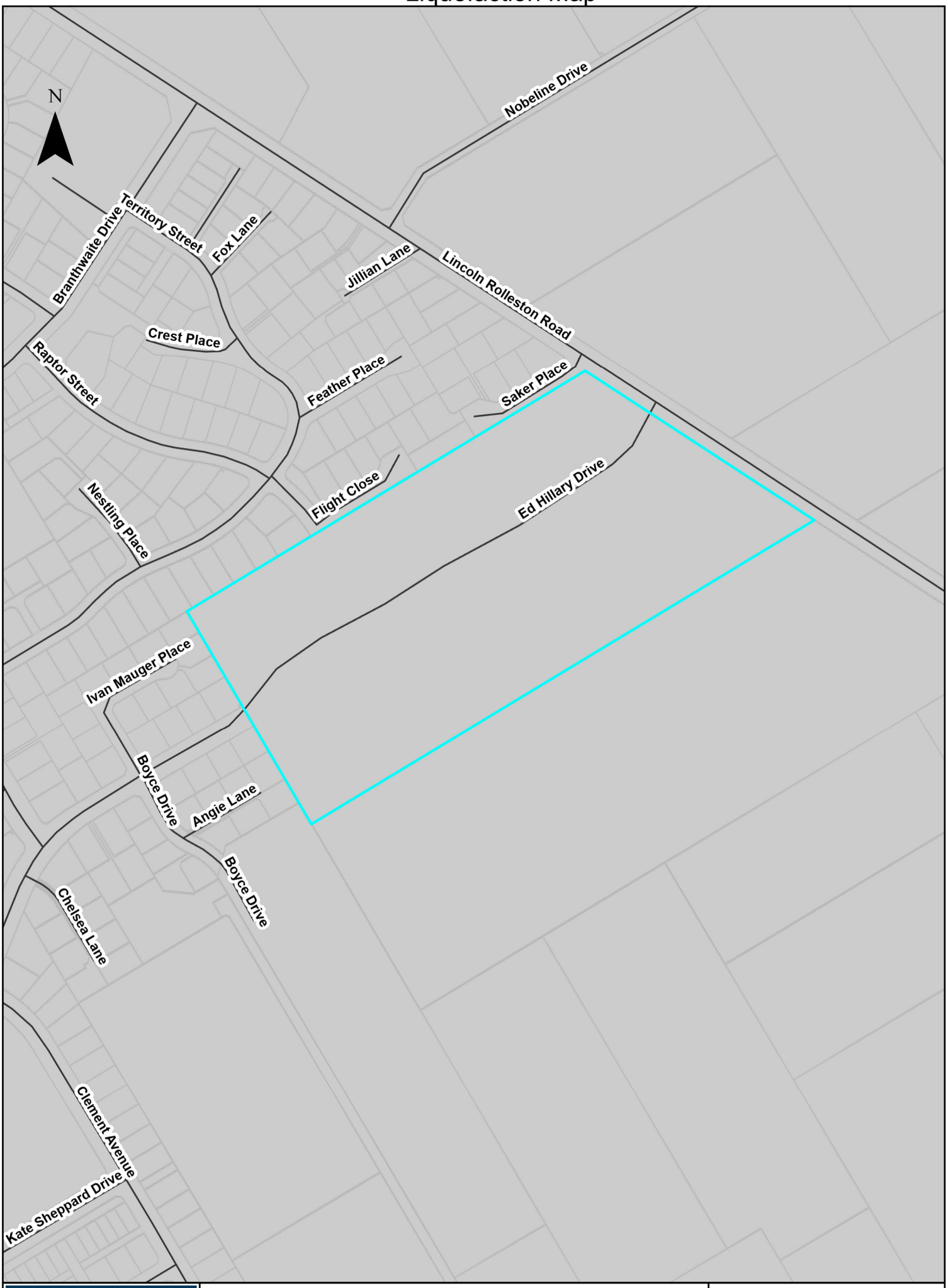
PlanningMisc
- NZ Defence Force Buffer
- Māori Freehold Land
- RRS14 Preliminary Locations

EcanRiverProtectionScheme
- Properties Beside Rivers
- Halswell Staff Gauges
- Halswell Floodgates
- Halswell Drainage

GreendaleFault
- Greendale Fault 50m Buffer
- Fault Lines (GNS 2013)
- Folds (GNS 2013)

HororataHeightRestrictions
- Final Height Splays
- Runways
- Hororata Airport Land Parcel

Liquefaction Map



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0 55 110 165 220

Metres

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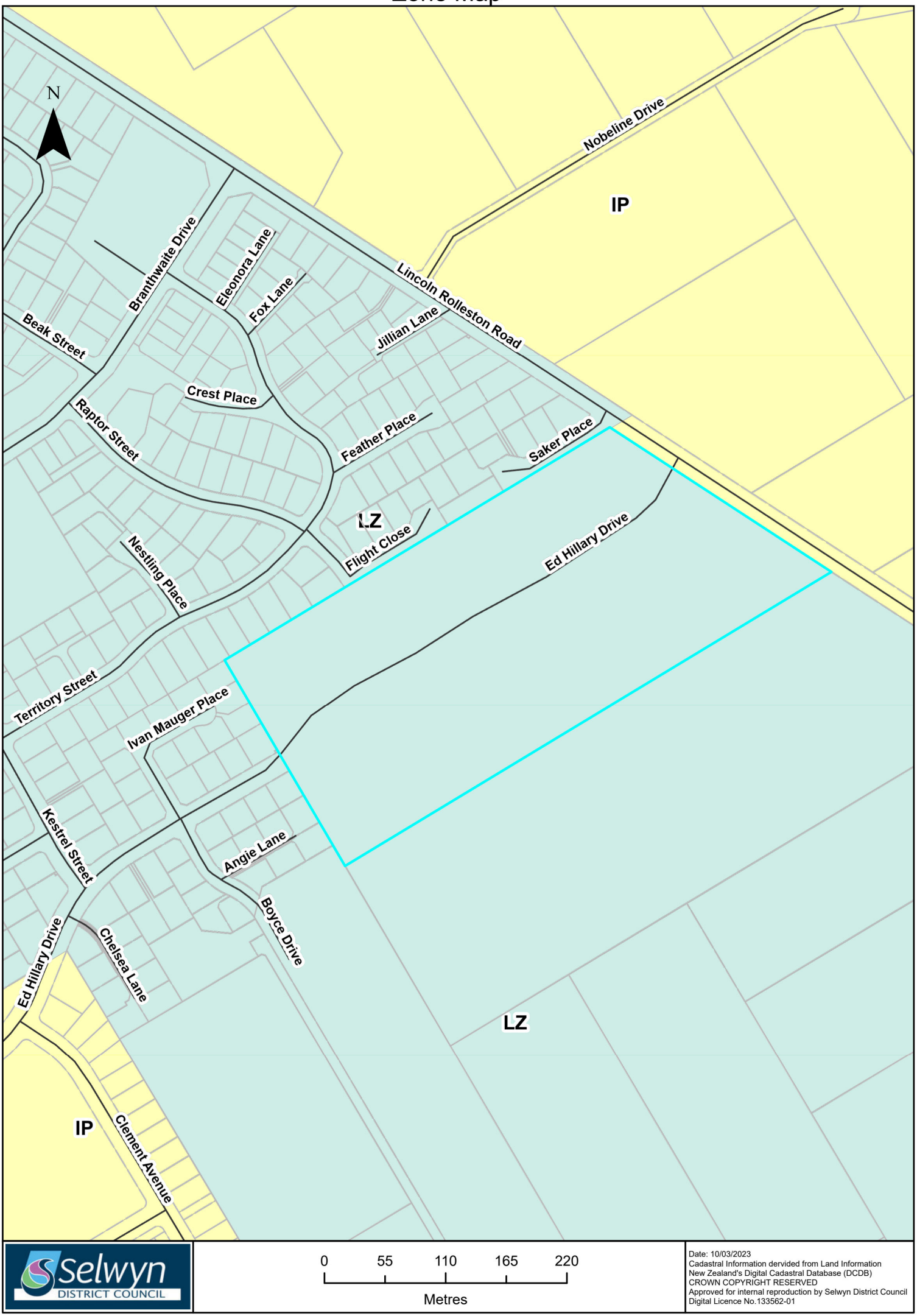
Zone Map



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RESOURCE CONSENT INFORMATION

This document is one of three pages titled “Resource Consent Information” which should be read together.

- Because of the large number of resource consents only consents which fall within the red buffer as identified on the map have been included with this report.

- If further information is required please contact the Council’s Planning Department – Phone Direct 03 3472 868.

- Every effort is made by the Council to identify resource consent in proximity to the property subject to this LIM application. However, it is suggested that a site inspection be undertaken by prospective purchasers to identify any land uses of interest. These may include uses which have existing use rights or other uses which are permitted under the Council’s District Plan.

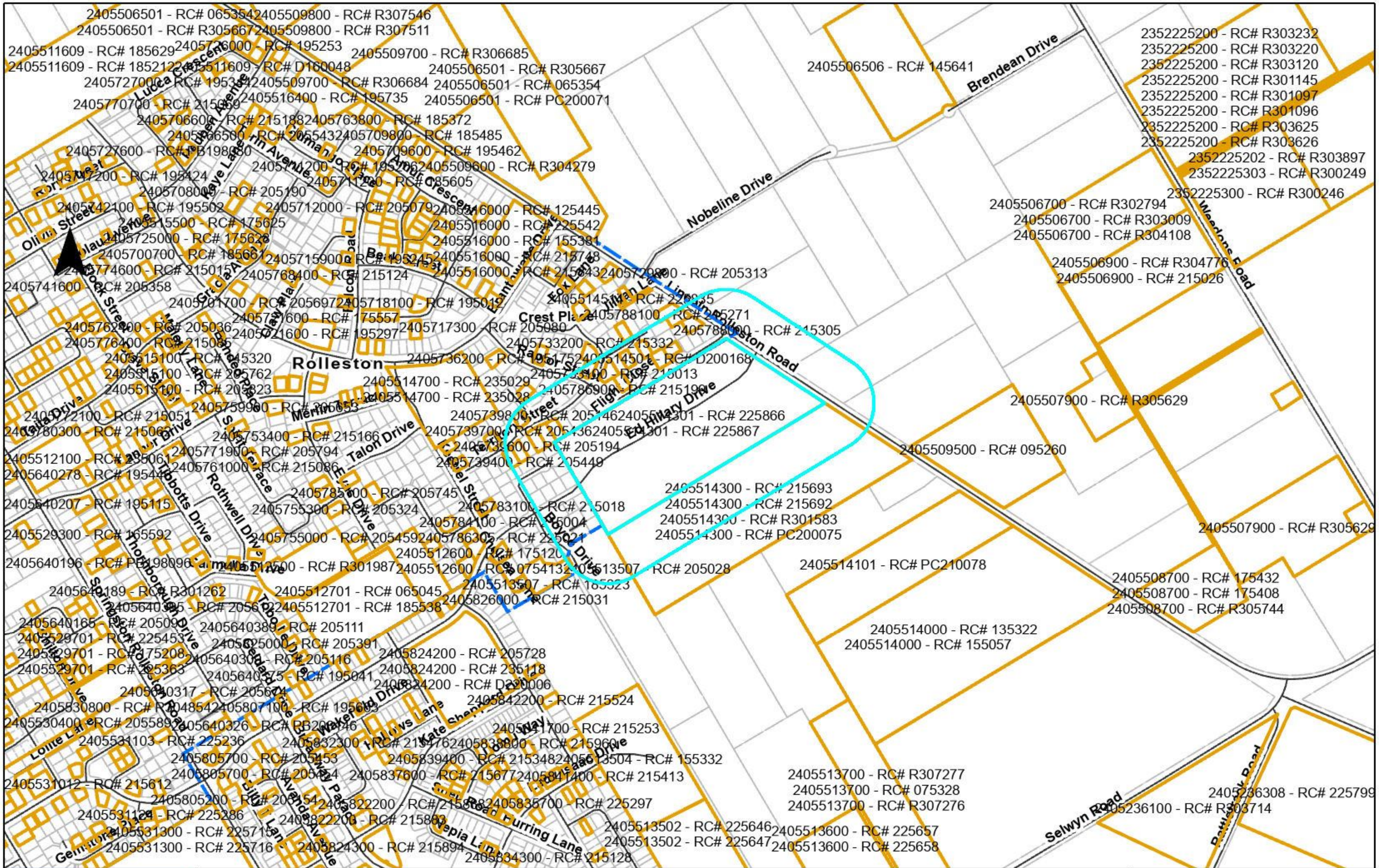
Resource Consent Status Codes:

GHP	Granted by Hearing
GEC	Granted by Environment Court
GDEL	Granted by Delegation
GCOM	Granted by Commissioner
DCOM	Declined by Commissioner
DHP	Declined by Hearing
WD	Withdrawn application
AP	Approved
DC	Declined
Blank	No decision issued
DN	Decision Notified

ADN	Appeal Decision Notified
AE	Appeal expiry
AEC	Appeal Heard by Environment
AN	Abatement Notice
AR	Appeal received
ARI	Application returned incomplete
AWD	Appeal withdrawn
CC	Cancelled
CCI	Certificate Compliance Issued
D37	Deferred under s.37
D37E	s.37 deferral ends
D91	Deferred under s.91
D91E	s.91 deferral ends
ECDN	Environment Court Decision notified
FI	Further Information
FICR	Further Information request - no clock restart
FR	Formally received
HD	Hearing Date
HH	Hearing held
INV	Invoiced
IR	Information received
LAPS	Lapsed
LD	Lodged
LN	Limited Notified
LS	Lapsed
ODN	Objection decision notified
OH	On Hold
OR	Objection received

PA	Pre- application
PN	Publically notified
PS	Process suspended
RAD	Recommendation adopted by Council
RRA	Recommendation to required authority
S223	Section 223
S224	Section 224
SC	submissions closed
WAR	Written Approval Requested
WARE	Written Approvals Received

2405514301



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Assessment_ID	RC Number	Proposal	Decision Date
2405513507	185323	To undertake earthworks exceeding the maximum volume permitted. NES. S/D185322	2018-08-15
2405513507	205028	VARIATION – To change conditions of resource consent RC185322 to defer service connections.	2020-02-14
2405514300	PC200075	Rezone approximately 24.7 hectares of Rural Inner Plains zoned land to Living Z at Rolleston.	2022-04-13
2405514300	R301583	THE EXTRACTION & SCREENING OF SHINGLE TO A DEPTH OF 8 METRES	
2405514300	215692	To undertake a two lot subdivision. L/U 215693	2021-09-28
2405514300	215693	Consent is sough under the NES. S/D RC215692	2021-09-28
2405514301	225866	To undertake a subdivision to create 57 residential lots and ri cancel a consent notice (Stages 1-6) - LU RC225867	2023-02-16
2405514301	225867	For earthworks exceeding the maximum volume and for roading formation non-compliances. SD RC225866	2023-02-16
2405514501	D200168	To designate land as SDC-160 Rolleston (S) Flight Close Wastewater Pump Station for Wastewater Pump Station purposes.	
2405732700	195437	To construct a vehicle crossing in a non-complying position	2019-08-05
2405732900	195474	To construct a four bedroom dwelling with attached garage and a vehicle crossing in a non-complying position	2019-09-01
2405733100	215013	To erect a non-compliant fence	2021-01-22
2405733200	215332	To construct a non-complying fence	2021-06-01

2405735600	195666	To construct a vehicle crossing in a non-complying position	2019-10-29
2405738100	205773	To construct a vehicle crossing with more than 1m distance but less than 7m to the neighbouring vehicle crossing.	2020-12-22
2405739300	195721	To construct a vehicle crossing in a non-complying position in relation to an existing vehicle crossing.	2019-12-03
2405739400	205449	To construct a vehicle crossing in a non-complying position in relation to an existing vehicle crossing	2020-08-12
2405739600	205194	To construct a vehicle crossing within the required setback from an intersection.	2020-04-29
2405739700	205436	To establish a vehicle crossing in a non-complying position in relation to an intersection an adjoining crossing.	2020-08-11
2405739800	205146	To construct a vehicle crossing in a non-complying position in relation to an existing vehicle crossing.	2020-04-06
2405786900	215308	To erect a dwelling with a non-complying internal boundary setback	
2405786900	215199	To establish a dwelling infringing the recession plane and locate a vehicle crossing in a non-complying position	2021-04-30
2405787300	215865	To erect a garage that does not comply with the setback rule	2021-11-18
2405787900	215334	To construct a vehicle crossing in a non-complying position in relation to an intersection	2021-05-11
2405788000	215305	To construct a vehicle crossing with a non-complying intersection setback	2021-05-25
2405788100	215271	To construct a vehicle crossing that does not comply with vehicle crossing setbacks.	2021-04-29

FENCE DESIGNS THAT WORK

Open style fencing

Open fences often consist of pool fencing along reserves or parks. This type of fencing works well when being alternated with close-board fencing or plantings to increase privacy.

Benefits are:

- Less potential for graffiti
- Sturdy
- Clearly defines boundary, while providing openness
- Allows for informal passive surveillance
- Can be used to keep the pets/kids in

Best practice design

Use dark colours for fence to merge into landscape.

Support and soften open fence with complementary plantings.

FENCE DESIGNS THAT WORK

Low fencing

This type of fence consists of small or low level fencing that is supported by plantings. Hedges and gardens offer many of the same benefits as taller fences and are cost effective in comparison to enclosed tall fences. They also offer the following advantages:

- Less potential for graffiti
- Perceived extension of property
- Softer appearance to edges that adds to attractive neighbourhoods
- Complementary to the Selwyn context: leafy, green, open
- Can be individually designed to change with the seasons

Best practice design

Continue planting themes from reserves onto your property.

Frame vies from you property out across the park to visually increase the size of your property.

URBAN FENCING

in the Selwyn District

A best practice guide to residential fencing

WHO DOES THIS FENCING GUIDE APPLY TO?

Fencing within **a Living Z** area or within the **Lowes Road Outline Development Plan area.**

Selwyn DISTRICT COUNCIL

PUTTING UP A NEW FENCE ?

Fences are more than just physical barriers marking your private property. In whatever shape, form, style or construction, fences play an important role and can:

- Provide security and privacy
- Add to attractive neighbourhood street scenes
- Support creating safe spaces for children
- Assist in keeping pets safe
- Reduce the impact from traffic noise
- Provide wind shelter
- Complement the built form of house & garage

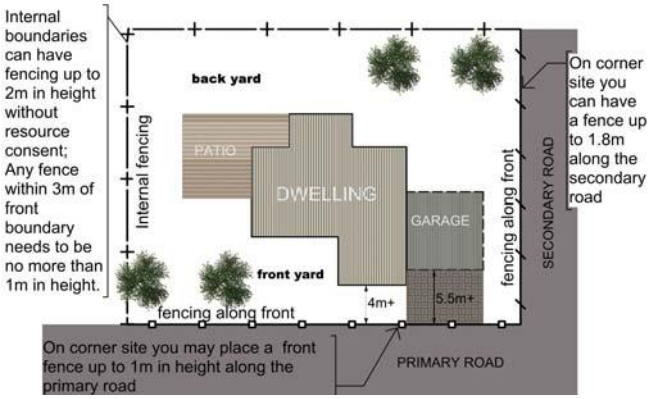
The style one uses for their fencing largely depends on its location and the intended purpose. By choosing a fence style that complies with the CPTED (Crime Prevention through Environmental Design) guidelines and the District Plan rules, one can contribute to a safer, more attractive neighbourhood.

Contrary to common belief, a higher fence doesn't make your property safer. High close-board fences tempt taggers, help burglars to hide their activities from passing foot traffic or neighbours and can cause traffic issues, if positioned on corners. Informal passive surveillance achieved by open views between the street or the reserve and your house promotes safer environments that are ultimately more enjoyable to explore.

Selwyn Council wants to encourage fencing options along the street and reserves that are practical, are attractive and help to reduce crime by increasing surveillance between public and private spaces.

GOOD PRACTICE IN FENCE DESIGN

Rule 4.13 Fencing along the road boundary



Rule 4.13

√ All fencing between the front building façade and the street shall be a max. of 1m in height

√ All fencing between the front building façade and a private right of way shall be a max. of 1m in height

√ All fencing between the front building façade and a shared access over which the allotment has legal access shall be a max. of 1m in height

For further examples & information, please contact the Duty Planner on:

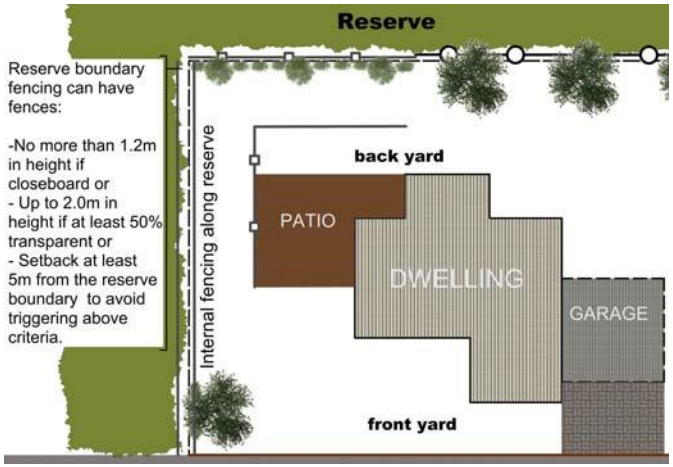
Selwyn District Council

Policy and Strategy Team, Environmental Services

Phone: 03 347 2800

GOOD PRACTICE IN FENCE DESIGN

Rule 4.17 Fencing along reserve boundary



Rule 4.17

√ All fencing of any allotment that shares a boundary with a public reserve or a walkway shall be limited to a single fence to be erected within 5m of that boundary and

√ All fencing of any allotment that shares a boundary with a public reserve or a walkway shall be a max. of 1.2m in height and

√ All fencing of any allotment that shares a boundary with a public reserve or a walkway shall be at least 50% transparent where it exceeds 1.2m in height