

# GRIFFIOEN.

## LAND INFORMATION MEMORANDUM

Statement of Passing Over: This building inspection has been supplied by the vendor in good faith. GRIFFIOEN. (Powered by Ownly Limited, Licensed REAA 2008) is merely passing over this information as supplied to us.

We cannot guarantee its accuracy as we have not checked, audited, or reviewed the information and all intending purchasers are advised to seek your own advice as to the information contained in this document.

Please note this LIM report is provided for informational purposes only. There may be matters relating to pre-1992 consents or permits which may need further investigation in order to determine their relevance.

To the maximum extent permitted by law we do not accept any responsibility to any party for the accuracy or use of the information herein.



# Land Information Memorandum



Property address:  
19 Belfield Street

LIM number: H09425545

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**Christchurch City Council**  
53 Hereford Street, PO Box 73015  
Christchurch 8154, New Zealand  
Tel 64 3 941 8999  
Fax 64 3 941 8984

[www.ccc.govt.nz](http://www.ccc.govt.nz)

## Application details

**Date issued** 17 December 2025  
**Date received** 5 December 2025

## Property details

**Property address** 19 Belfield Street, Dallington, Christchurch  
**Valuation roll number** 22371 13800  
**Valuation information** Capital Value: \$510,000  
Land Value: \$240,000  
Improvements Value: \$270,000  
*Please note: these values are intended for Rating purposes*  
**Legal description** Lot 9 DP 16872  
**Existing owner** Hayley Sanne Sorensen  
19 Belfield Street  
Christchurch 8061

## Council references

**Rate account ID** 73118382  
**LIM number** H09425545  
**Property ID** 1088495

## Document information

This Land Information Memorandum (LIM) has been prepared for the purpose of section 44A of the Local Government Official Information and Meetings Act 1987 (LGOIMA). It is a summary of the information that we hold on the property. Each heading or "clause" in this LIM corresponds to a part of section 44A.

Sections 1 to 10 contain all of the information known to the Christchurch City Council that must be included under section 44A(2) LGOIMA. Any other information concerning the land as the Council considers, at its discretion, to be relevant is included at section 11 of this LIM (section 44A(3) LGOIMA). If there are no comments or information provided in these sections this means that the Council does not hold information on the property that corresponds to that part of section 44A.

The information included in this 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. Please note that other agencies may also hold information relevant to the property, or administer legislation relevant to the use of the land, for example, the Regional Council (Ecan), Heritage New Zealand Pouhere Taonga, and Land Information New Zealand.

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.

A LIM is only valid at the date of issue as information is based only upon information the Council held at the time of that LIM request being made. It is essential that the applicant undertakes their own due diligence to verify the suitability of the property for their intended use.

**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 therein which may be considered to be incorrect or omitted. Please telephone the Customer Call Centre on (03) 941 8999.**

Property address:  
19 Belfield Street

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A search of records held by the Council has revealed the following information:

## 1. Special features and characteristics of the land

*Section 44(A)(2)(aa) LGOIMA. This is information known to the Council but is not apparent from a district plan under the Resource Management Act 1991. It identifies each (if any) special feature or characteristic of the land concerned, including but not limited to the likely presence of hazardous contaminants.*

☎ For enquiries, please phone (03) 941 8999 or visit [www.ccc.govt.nz](http://www.ccc.govt.nz).

### Natural Hazards

*Section 44A(2)(a) LGOIMA. This is information known to the Council about natural hazards that is required by section 44B LGOIMA. This section may also include natural hazard information provided by Environment Canterbury. Christchurch City Council is required to include such information in LIMs where Environment Canterbury considers it meets the criteria under section 44C of LGOIMA.*

*The following statement has been provided by Environment Canterbury:*

This Land Information Memorandum includes natural hazard information deemed by Environment Canterbury to be the most up to date, useful, and relevant, and is provided in accordance with the Local Government (Natural Hazard Information in Land Information Memoranda) Regulations 2025. All due care has been taken to ensure current information required to be provided under the regulations is presented below.

Environment Canterbury may hold superseded or less reliable natural hazards information relating to the land that has not been included in this Land Information Memorandum. Please contact Environment Canterbury if you would like to enquire about this information.

## (a) Coastal Hazards

- Coastal Hazard Inundation

The Council has a report, Coastal Hazard Assessment for Christchurch and Banks Peninsula (2017), that indicates this property or part of this property may be susceptible to coastal flooding (flooding by the sea). The 2017 report considers four sea level rise scenarios through to the year 2120. A copy of the 2017 report and other coastal hazard information can be found at <https://ccc.govt.nz/environment/coast/adapting-to-coastal-hazards/coastalhazards>.

The rate of sea level rise in this area may also be impacted by vertical land movement (a faster rate where land is moving downwards, and a slower rate where land is moving upwards). To find out how your area might be affected go to [https://ccc.govt.nz/assets/Documents/Environment/Coast/Canterbury-VLM-and-Implications-for-Future-SLR-2025\\_FINAL.pdf](https://ccc.govt.nz/assets/Documents/Environment/Coast/Canterbury-VLM-and-Implications-for-Future-SLR-2025_FINAL.pdf) or for more information go to <https://ccc.govt.nz/assets/Documents/Environment/Coast/Factsheets/VLM-and-sea-level-rise-factsheet-Sep-2025.pdf>

Title of Report: Coastal Hazard Assessment for Christchurch and Banks Peninsula (2017)

Purpose of report: To assess the extent to which coastal hazards will impact the Christchurch District under various future sea level rise projections

Scope of Report: District-wide

Where or how to access the report: <https://www.ccc.govt.nz/assets/Documents/Environment/Land/Coastal-Hazards/2017-Coastal-Hazards-Report.pdf>

Date of report: October 2017

Name of person/entity that commissioned report: Christchurch City Council

The name of person/entity that prepared the report: Tonkin and Taylor Ltd

Title of Report: Co-seismic and post-seismic rates of vertical land movement in the Canterbury Region and implications for future changes in sea level

Purpose of report: To build on the 2023/24 reports, by providing a district-wide analysis, filling key knowledge gaps and utilising a more recent and robust satellite data set.

Scope of Report: The Christchurch District and the coastal zone of the wider Canterbury region.

Where or how to access the report: (link to report or spatial portal)

Date of report: 16th April 2025

Name of person/entity that commissioned report: Christchurch City Council

The name of person/entity that prepared the report: GNS Science

## (b) Earthquakes

- Liquefaction Assessment

Christchurch City Council holds indicative information on liquefaction hazard for Christchurch. Information on liquefaction, including an interactive web tool, can be found on the Council website at [ccc.govt.nz/liquefaction](https://ccc.govt.nz/liquefaction). Depending on the liquefaction potential of the area that the property is in, the Council may require site-specific investigations before granting future subdivision or building consent for the property.

- **Regional Liquefaction Information**

Areas where there was evidence of liquefaction were mapped following the 2010/11 Canterbury earthquakes by Tonkin & Taylor for the Earthquake Commission (urban areas) and by a group of researchers for Environment Canterbury (rural, commercial and industrial areas). These are available in the Christchurch Liquefaction Viewer at <https://apps.canterburymaps.govt.nz/ChristchurchLiquefactionViewer/>.

Technical report information:

Title: Review of liquefaction hazard information in eastern Canterbury, including Christchurch City and parts of Selwyn, Waimakariri and Hurunui Districts.

Date: December 2012.

Author: H Brackley (compiler).

Commissioned by: Environment Canterbury.

Purpose of report: To collate liquefaction occurrence during the 2010/11 Canterbury earthquakes, and to determine liquefaction vulnerability. For use in land use planning, subdivision and building consenting.

Study area: Coastal Canterbury from the Waipara River mouth to the Rakaia River mouth, including Banks Peninsula, and inland to Rangiora, Aylesbury, Selwyn and Southbridge.

Accessible at: <https://www.ecan.govt.nz/document/download?uri=1702192>.

## **(c) Flooding**

- **Flooding**

Flood models are used to show the probability and potential location of flooding in Christchurch. These are computer-based models, and use the data on the Council stormwater network, rainfall, topography, hydrology, soil, land-use and historic flooding. They also incorporate outputs of other modelling such as urban growth, ground water, sea level rise and climate change. Detailed reports on the modelling including its assumptions and limitations can be found at <https://ccc.govt.nz/consents-and-licences/property-information-and-lims/land-information-memorandum-lim>.

- **Predicted 1 in 200 Year Flood Extent**

Flood modelling shows this property, or parts of this property, is within a 1-in-200-year flood extent, including impacts of climate change and sea level rise. You can view this on the flood extent map at <https://ccc.govt.nz/flood-and-floor-level-viewer>. If changes such as land development or major infrastructure have occurred on this property, or in the surrounding area since the flood modelling, this may change the flood extent. For more information, please refer to <https://ccc.govt.nz/flooding-and-floor-levels>.

- **Regional Hazard Information: Flood Photographs**

Photographs showing the property during or following past flood events may be available. Flood photographs are available on Environment Canterbury's flood imagery register at <https://apps.canterburymaps.govt.nz/FIR>.

- **Regional Hazard Information: Flood Assessment Request**

You can request a new site-specific flood hazard assessment for the property from Environment Canterbury at: <https://www.ecan.govt.nz/do-it-online/property-information/flood-hazard-assessments>.

## **(d) Landslides**

As at the date of this LIM, Council research found no information under this heading.

## **(e) Subsidence**

- **Consultant Report Available**

Land Information New Zealand (LINZ) engaged Tonkin and Taylor to provide a Geotechnical Report on Ground Movements that occurred as a result of the Canterbury Earthquake Sequence. The report indicates this property may have been effected by a degree of earthquake induced subsidence. The report obtained by LINZ can be accessed on their website at <https://www.linz.govt.nz> and search Information for Canterbury Surveyors.

## **(f) Tsunamis**

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- Property located in Tsunami Risk Zone

This property may be affected by flooding by some tsunami scenarios as shown in reports by GNS and NIWA commissioned by ECan and CCC. Links to reports can be found at <https://ccc.govt.nz/tsunami-evacuation-zones-and-routes/> and on ECan's web site <https://www.ecan.govt.nz> by searching for the terms tsunami hazard.

Title of Report: Multiple scenario tsunami modelling for Canterbury, GNS Science Consultancy Report 2018/198 November 2019

Purpose of report: Modelled inundation of the southern Pegasus Bay coast and Lyttelton Harbour in multiple local, regional and distant tsunami scenarios.

Scope of Report: Christchurch coast from Purau to Pines/Kairaki Beach

Where or how to access the report: <https://www.ecan.govt.nz/document/download?uri=3752435>

Date of report: November 2019

Name of person/entity that commissioned report: Environment Canterbury

The name of person/entity that prepared the report: GNS Science

Title of Report: Multiple scenario tsunami modelling for northern Pegasus Bay and northern Banks Peninsula Bays, GNS Science Consultancy Report 2020/136 November 2020

Purpose of report: Modelled inundation of northern Banks Peninsula coast in multiple local, regional and distant tsunami scenarios.

Scope of Report: Banks Peninsula from Godley Head to Le Bons Bay

Where or how to access the report: <https://www.ecan.govt.nz/document/download?uri=3996252>

Date of report: November 2020

Name of person/entity that commissioned report: Environment Canterbury

The name of person/entity that prepared the report: GNS Science

Title of Report: Multiple scenario tsunami modelling for the Selwyn Coastline, Kaitorete Barrier and Akaroa Harbour, GNS Science Consultancy Report 2020/47 November 2020

Purpose of report: Modelled inundation of southern Banks Peninsula coast and Kaitorete Barrier in multiple local, regional and distant tsunami scenarios.

Scope of Report: Banks Peninsula and Kaitorete Barrier, from Le Bons Bay to Taumutu

Where or how to access the report: <https://www.ecan.govt.nz/document/download?uri=3996251>

Date of report: November 2020

Name of person/entity that commissioned report: Environment Canterbury

The name of person/entity that prepared the report: GNS Science

Title of Report: Land Drainage Recovery Programme: Tsunami Study

Purpose of report: Modelled inundation of the Christchurch City coast in 500 and 2500 year return period tsunami scenarios.

Scope of Report: Christchurch City from Waimakariri River Mouth to Taylors Mistake

Where or how to access the report: <https://ccc.govt.nz/assets/Documents/Environment/Water/Flooding-Land-Drainage/Tsunami-Study-Final-report-June-19.pdf>

Date of report: February 2018

Name of person/entity that commissioned report: Christchurch City Council

The name of person/entity that prepared the report: NIWA

Title of Report: Tsunami inundation modelling for Lyttelton and Akaroa Harbours NIWA Client Report No: 2018111CH May 2018

Purpose of report: Modelled inundation of Lyttelton and Akaroa Harbours in a 500 year return period tsunami scenario.

Scope of Report: Lyttelton Harbour from Godley Head to Adderley Head and Akaroa Harbour from Timutimu Head to Akaroa Head

Where or how to access the report: <https://ccc.govt.nz/assets/Documents/Consents-and-Licences/property-information-and-lims/Tsunami-inundation-modelling-for-Lyttelton-and-Akaroa-Harbours-1-500-year-event-from-South-America-NIWA.pdf>

Date of report: May 2018

Name of person/entity that commissioned report: Christchurch City Council

The name of person/entity that prepared the report: NIWA

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**(g) Volcanic and Geothermal Hazards**

As at the date of this LIM, Council research found no information under this heading.

**(h) Wind**

As at the date of this LIM, Council research found no information under this heading.

**(i) Any Other Natural Hazards**

As at the date of this LIM, Council research found no information under this heading.

**(j) District Plan Natural Hazard Information**

Please refer to *Section 8. Land use and conditions* of this report for District Plan related natural hazard information.

**(k) Building Notices**

Please refer to *Section 5. Consents, certificates, notices, orders, or requisitions affecting the land and buildings* of this report for Building Act notice information.

**Other Special Features or Characteristics of the Land**


As at the date of this LIM, Council research found no information under this heading.

**Related Information**

- The latest soil investigation report for this property is attached for your information

## 2. Private and public stormwater and sewerage drains

*Section 44A(2)(b) LGOIMA. This is information about private and public stormwater and sewerage drains as shown in the Council's records.*

 For stormwater and sewerage enquiries, please phone (03) 941 8999 or visit [www.ccc.govt.nz](http://www.ccc.govt.nz).

### Related Information

- This property is shown to be served by Christchurch City Council Sewer.
- The council plan shows no public stormwater lateral plotted to this site.
- Attached are all drainage plans that Council hold for details of private and public drainage. Not all plans provided are verified by Council, and therefore Council cannot be liable for inaccuracies. Site investigation will be required by owners to determine exact layouts.

## 3. Drinking Water Supply

*Section 44A(2)(ba) and (bb) LGOIMA. This is information notified to the Council about whether the land is supplied with drinking water, whether the supplier is the owner of the land or a networked supplier, any conditions that are applicable, and any information the Council has about the supply.*

Please note the council does not guarantee a particular water quality to its customers. If you require information on current water quality at this property please contact the Three Waters & Waste Unit.

☎ For water supply queries, please phone (03) 941 8999 or visit [www.ccc.govt.nz](http://www.ccc.govt.nz).

### Water supply

Christchurch City Council is the networked supplier of water to this property. This property is connected to the Christchurch City Council Water Supply. The conditions of supply are set out in the Christchurch City Council Water Supply and Wastewater Bylaw (2022), refer to [www.ccc.govt.nz](http://www.ccc.govt.nz).

## 4. Rates

Section 44A(2)(c) LGOIMA. This is information on any rates owing in relation to the land.

☎ For rates enquiries, please phone (03) 941 8999 or visit [www.ccc.govt.nz](http://www.ccc.govt.nz).

### (a) Annual rates

Annual rates to 30/06/2026: \$3,227.11

	Instalment Amount	Date Due
Instalment 1	\$806.74	15/09/2025
Instalment 2	\$806.74	15/12/2025
Instalment 3	\$806.74	15/03/2026
Instalment 4	\$806.89	15/06/2026

Rates owing as at 17/12/2025: \$0.00

### (b) Excess Water Rates

For excess water charge enquiries, please phone (03) 941 8999 or visit [www.ccc.govt.nz/contact-us](http://www.ccc.govt.nz/contact-us).

### (c) Final water meter reading required at settlement?

Property settlements must ensure all water usage and outstanding debts are accurately accounted for.

To advise of a property settlement, please complete the request for settlement information form at [www.ccc.govt.nz/services/rates-and-valuations/solicitors-request](http://www.ccc.govt.nz/services/rates-and-valuations/solicitors-request).

A settlement statement of accounts will be provided on the expected settlement date advised.

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## 5. Consents, certificates, notices, orders, or requisitions affecting the land and buildings

*Section 44A(2)(d) LGOIMA. This is information concerning any consent, certificate, notice, order, or requisition, affecting the land or any building on the land, previously issued by the Council. The information in this section may also cover building consent and/or code compliance information issued by building certifiers under the Building Act 1991 and building consent authorities that are not the Council under the Building Act 2004.*

You can check the property file to identify whether any consent or certificate was issued by a building certifier under the Building Act 1991.

*Section 44A(2)(da) LGOIMA. The information required to be provided to a territorial authority under section 362T(2) of the Building Act 2004. There is currently no information required to be provided by a building contractor to a territorial authority under section 362T(2) of the Building Act 2004. The Building (Residential Consumer Rights and Remedies) Regulations 2014 only prescribed the information that must be given to the clients of a building contractor.*

*Sections 71 to 74 of the Building Act 2004 require the Building Consent Authority to consider natural hazards when it receives a building consent application for the construction or major alteration of a building on land that is subject to, or likely to be subject to, a natural hazard. A building consent for this property may have been issued subject to a section 72 or 73 notice. This means at the time of building consent the Building Consent Authority was not satisfied that adequate provision would be made to protect the building and land from the natural hazard and was subsequently required to notify the Registrar-General of Land to record the natural hazard on the Record of Title. The Building Act 2004 defines natural hazards as erosion (including coastal erosion, bank erosion, and sheet erosion), falling debris (including soil, rock, snow, and ice), subsidence, inundation (including flooding, overland flow, storm surge, tidal effects, and ponding), and slippage.*

*If your property contains a notice under s73 of the Building Act 2004, this will be identified on the building consent decision below (decision under s72 of the Building Act 2004) and on the properties' Record of Title. The Record of Title may also record this as a s36 notice under the Building Act 1991, or a s641A notice under the Local Government Act 1974.*

☎ For building enquiries, please phone (03) 941 8999, email [EPADutyBCO@ccc.govt.nz](mailto:EPADutyBCO@ccc.govt.nz) or visit [www.ccc.govt.nz](http://www.ccc.govt.nz).

### (a) Consents

- BCN/1969/6010 Applied: 09/12/1969 Status: Completed  
19 Belfield Street Dallington  
Permit issued 24/12/1969  
GARAGE- Historical Reference PER69000950
- BCN/1979/4249 Applied: 09/08/1979 Status: Completed  
19 Belfield Street Dallington  
Permit issued 12/09/1979  
ADDITION - SUN ROOM- Historical Reference PER79000875
- BCN/1986/2766 Applied: 16/05/1986 Status: Completed  
19 Belfield Street Dallington  
Permit issued 04/06/1986  
CONSERVATORY- Historical Reference PER86700684
- BCN/1994/3941 Applied: 19/05/1994 Status: Completed  
19 Belfield Street Dallington  
Accepted for processing 19/05/1994  
Building consent granted 26/05/1994  
Building consent issued 26/05/1994  
Code Compliance Certificate Granted 21/06/1994  
Code Compliance Certificate Issued 21/06/1994  
Solid fuel heater Jayline junior - dry- Historical Reference CON94004337

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- BCN/2007/3093 Applied: 27/04/2007 Status: Completed  
19 Belfield Street Dallington  
Accepted for processing 27/04/2007  
Building consent granted 14/06/2007  
PIM Granted 14/06/2007  
PIM Issued 14/06/2007  
Building consent issued 02/07/2007  
Code Compliance Certificate Granted 11/06/2009  
Code Compliance Certificate Issued 11/06/2009  
SLEEPOUT WITH ENSUITE- Historical Reference ABA10076038
- BCN/2025/7826 Applied: 02/10/2025 Status: Completed  
19 Belfield Street Dallington  
Exemption from building consent approved 10/10/2025  
Levelling of foundations

## **(b) Certificates**

Note: Code Compliance Certificates were only issued by the Christchurch City Council since January 1993.

## **(c) Notices**

- Placards issued under the Civil Defence Emergency Management Act 2002 as a result of the 4 September 2010 and 22 February 2011 earthquakes have now expired (by 12 July 2011 if not before). Some civil defence placards were replaced with dangerous building notices issued under section 124 Building Act 2004, and where this has happened the section 124 notice is separately recorded. Many other buildings, although not issued with a section 124 notice, may require structural work or other repairs before they can be occupied again. It is the building owners responsibility to make sure the building is safe for any occupier or visitor. Detailed structural engineering assessments may still be required to be carried out.
- CDB75004176 09/09/2010 19 Belfield Street  
Building evaluation : Building Inspected Under Civil Defence Emergency , Green Placard Issued (a deemed Building Act notice)
- CDB75004176 19/02/2011 19 Belfield Street  
Building evaluation : Building Inspected Under Civil Defence Emergency , Green Placard Issued (a deemed Building Act notice)

## **(d) Orders**

## **(e) Requisitions**

### **Related Information**

- Council holds no record of building permit/consent for dwelling at this address. No information is held by Council relating to the materials, construction or year the dwelling was built.
- Please find an electrical certificate/s attached relating to works that have been carried out on the current building/dwelling at this address.

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## 6. Certificates issued by a building certifier

*Section 44A(2)(e) LGOIMA. This is information notified to the Council concerning any certificate issued by a building certifier pursuant to the Building Act 1991 or the Building Act 2004.*

☎ For building enquiries, please phone (03) 941 8999, email [EPADutyBCO@ccc.govt.nz](mailto:EPADutyBCO@ccc.govt.nz) or visit [www.ccc.govt.nz](http://www.ccc.govt.nz).

## 7. Weathertightness

*Section 44A(2)(ea) LGOIMA. This is information notified to the Council under section 124 of the Weathertight Homes Resolution Services Act 2006.*

 For weathertight homes enquiries, please phone (03) 941 8999 or visit [www.ccc.govt.nz](http://www.ccc.govt.nz).

*If there is no information below this means Council is unaware of any formal Weathertight Homes Resolution Services claim lodged against this property.*

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## 8. Land use and conditions

Section 44A(2)(f) LGOIMA. This is information relating to the use to which the land may be put and conditions attached to that use. The planning information provided below is not exhaustive and reference to the Christchurch District Plan and any notified proposed changes to that plan is recommended: <https://ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/plans/christchurch-district-plan/>.

There may be some provisions of the Christchurch City Plan or Banks Peninsula District Plan that affect this property that are still operative.

☎ For planning queries, please phone (03) 941 8999, email [DutyPlanner@ccc.govt.nz](mailto:DutyPlanner@ccc.govt.nz) or visit [www.ccc.govt.nz](http://www.ccc.govt.nz).

- **Regional plan or bylaw**

There may be objectives, policies or rules in a regional plan or a regional bylaw that regulate land use and activities on this site. Please direct enquiries to Canterbury Regional Council (Environment Canterbury).

### (a)(i) Christchurch City Plan & Banks Peninsula District Plan

#### (ii) Christchurch District Plan

- **Liquefaction Management Area (LMA)**

Property or part of property within the Liquefaction Management Area (LMA) Overlay, which is operative.

- **District Plan Zone**

Property or part of property within the Residential Suburban Zone, which is operative.

- **Flood Management Area**

Property or part of property within the Flood Management Area (FMA) Overlay which is operative.

- **Fixed Minimum Floor Overlay**


This property or parts of the property are located within the Fixed Minimum Floor Overlay level in the Christchurch District Plan, which is operative. Under this plan pre-set minimum floor level requirements apply to new buildings and additions to existing buildings. The fixed minimum floor level can be searched at <http://ccc.govt.nz/floorlevelmap>. For more information please contact a CCC duty planner on 941 8999.

### (b) Resource consents

If there are any land use resource consents issued for this property the Council recommends that you check those resource consents on the property file. There may be conditions attached to those resource consents for the property that are still required to be complied with.

## 9. Other land and building classifications


*Section 44A(2)(g) LGOIMA. This is information notified to the Council by any statutory organisation having the power to classify land or buildings for any purpose.*

 For land and building enquiries, please phone (03) 941 8999 or visit [www.ccc.govt.nz](http://www.ccc.govt.nz).

Please refer to Section 1 for details

## 10. Network utility information

*Section 44A(2)(h) LGOIMA. This is information notified to the Council by any network utility operator pursuant to the Building Act 1991 or the Building Act 2004.*

 For network enquiries, please phone (03) 941 8999 or visit [www.ccc.govt.nz](http://www.ccc.govt.nz).

- **None recorded for this property**

## 11. Other information

Section 44A(3) LGOIMA. This is information concerning the land that the Council has the discretion to include if it considers it to be relevant.

☎ For any enquiries, please phone (03) 941 8999 or visit [www.ccc.govt.nz](http://www.ccc.govt.nz).

### (a) Kerbside waste collection

- Your organics are collected Weekly on Wednesday. Please leave your organics at the Kerbside by 6:00 a.m.
- Your recycling is collected Fortnightly on the Week 2 collection cycle on a Wednesday. Please leave your recycling at the Kerbside by 6:00 a.m. Your nearest recycling depot is the Metro Place EcoDrop.
- Your refuse is collected Fortnightly on the Week 2 collection cycle on a Wednesday. Please leave your rubbish at the Kerbside by 6:00 a.m. Your nearest rubbish depot is the Metro Place EcoDrop.

### (b) Other

#### • Floor Levels Information

Council holds a variety of information on requirements for building or property development. This includes:

- required minimum finished floor levels, which need to be set to meet the surface water requirements in clause E1.3.2 of the Building Code (where this applies); and
- the requirements of the Christchurch District Plan (where a property is in the Flood Management Area).

Where this information has been processed for your property, you can view it online at <https://ccc.govt.nz/flooding-and-floor-levels>.

Otherwise, if you are building or developing on this land, you can request a calculation on required finished floor levels for your proposed building by emailing us at [floorlevels@ccc.govt.nz](mailto:floorlevels@ccc.govt.nz).

#### • Guest Accommodation

Guest accommodation (including whole unit listings on Airbnb; BookaBach; etc.) generally requires a resource consent in this zone when the owner is not residing on the site. For more information, please refer to: <https://ccc.govt.nz/providing-guest-accommodation/>.

#### • Community Board

Property located in Coastal-Burwood-Linwood Community Board.

#### • Tsunami Evacuation Zone

This property is in the yellow tsunami evacuation zone. It could potentially be flooded only in a large distant source tsunami. Evacuation is not necessary after a long or strong earthquake. Evacuation is only necessary under an official Civil Defence Tsunami Warning to evacuate the yellow zone. Tsunami sirens should prompt turning on the radio or visiting <https://ccc.govt.nz/services/civil-defence>. Stay out of the zone until told it is safe to go back. For more information visit <https://ccc.govt.nz/services/civil-defence/hazards/tsunami-evacuation-zones-and-routes/>

#### • Electoral Ward

Property located in Burwood Electoral Ward

#### • Listed Land Use Register

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 publically available database called the Listed Land Use Register (LLUR). The Christchurch City 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](http://www.llur.ecan.govt.nz)

Property address:

19 Belfield Street

LIM number: H09425545

Page 19

Christchurch City Council

53 Hereford Street, PO Box 73015  
Christchurch 8154, New Zealand  
Tel 64 3 941 8999  
Fax 64 3 941 8984

[www.ccc.govt.nz](http://www.ccc.govt.nz)

- **Spatial Query Report**

A copy of the spatial query report is attached at the end of this LIM. The spatial query report lists land use resource consents that have been granted within 100 metres of this property.



**K230406-1**

**29 June 2023**

**Geotechnical Engineering Investigation  
Dwelling Foundation Assessment  
19 Belfield Street  
Dallington  
Christchurch**

**Prepared For:**

Viden Consulting Engineers Ltd  
PO Box 41137  
Ferrymead  
Christchurch 8247

**KGA Geotechnical Group Limited**  
***Supporting the Construction Industry since 1990***

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## REPORT ISSUE AUTHORISATION

**Geotechnical Engineering Investigation**  
**Dwelling Foundation Assessment**  
**19 Belfield Street**  
**Dallington**  
**Christchurch**

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K230406-1

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Director

## EXECUTIVE SUMMARY

### Geotechnical Engineering Investigation

#### Dwelling Foundation Assessment

19 Belfield Street

Dallington, Christchurch

SUB-SOIL CONDITIONS	Lithology	The sub-surface conditions comprise fill material up to 0.5m depth over silts and sands to 1.5m. Low to moderately plastic silts are present to 2.5m with sands to 3.5m, and sandy gravels to 6.5m. Below this are sandy soils to at least 20m depth.	
	Soil Classification as per NZS 1170.5:2004	Class 'D' (Deep or soft soil sites)	
	Groundwater Depth	Encountered at an average depth of approximately 2.0m	
	Bearing Capacity	A geotechnical ultimate bearing capacity (GUBC) of 150kPa was found below 0.5m depth	
SEISMIC ASSESSMENT	Vertical Displacement under Earthquake Ground Motions (Index Value)	SLS	ULS
		Up to 10	Up to 30
	Liquefaction Potential Index (LPI) Value	SLS	ULS
		< 1	Up to 5
	Liquefaction Severity Number (LSN) Index Value	SLS	ULS
		Up to 3	1 to 9
	Horizontal Movement	Lateral Spreading	Lateral Stretch
		Minor	Minor
FOUNDATION RECOMMENDATIONS	Seismic Technical Categorisation	MBIE	TC2
		Site Specific	TC2
	<p>KGA must be provided with any repair/rebuild methodologies prior to implementation, in order to confirm the suitability of our proposed strategies.</p> <p><b>Foundation Repair:</b></p> <ul style="list-style-type: none"> <li>Mechanical rellevelling using underpins seated at 0.5m depth into natural soils with a GUBC of 150kPa.</li> <li>Piles may be re-levelled using jacking and packing methodology as per MBIE Guidance Appendix A.1.1.2, Option 1: Jacking and packing methodology.</li> <li>Localised piles may be replaced to structural engineer design if they exhibit evidence of excessive tilting or settlement; new piles to be seated below any topsoil or fill and designed for an ultimate unfactored soil bearing capacity of 150kPa.</li> <li>Consideration should be given to replacing heavy roofing and concrete patios with lightweight alternatives.</li> </ul> <p><b>Foundation Rebuild:</b></p> <ul style="list-style-type: none"> <li>TC2 - Option Type A or B Timber Floor, designed for a GUBC of 150kPa. Foundation excavation to extend below existing topsoil and fill material (encountered to 0.5m depth during our onsite investigation).</li> <li>Same foundation type to be used across the entire structure, and consideration should be given to replacing heavy roofing and concrete patios with lightweight alternatives.</li> </ul>		
REPORT DISTRIBUTION	A full copy of this report must be provided to all relevant parties involved in the project. This should include, but not be limited to, owner, architectural designers, engineers (civil and structural) and the earthworks/building contractor.		



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#### Attachments:

Site Plan  
Hand Auger and Scala Penetrometer Logs  
Hand Trial Pit Logs  
CPT Log

<b>Appendix A:</b>	Third Party Documents
<b>Appendix B:</b>	Background Information Documents
<b>Appendix C:</b>	Site Photographs
<b>Appendix D:</b>	Event-Specific Liquefaction Analyses
<b>Appendix E:</b>	SLS & ULS Liquefaction Analyses

## 1. INTRODUCTION

At the instruction of Viden Consulting Engineers Ltd (Viden), we have undertaken a geotechnical engineering investigation on the property comprising 19 Belfield Street in Dallington, Christchurch. The work was carried out in accordance with our Agreement dated 2 June 2023.

As part of our investigation, we have undertaken a detailed site and environs walkover inspection, and referenced available information from the New Zealand Geotechnical Database (NZGD), Environment Canterbury (ECan) and Christchurch City Council (CCC) websites. We also conducted a subsurface investigation comprising hand auger boreholes, with associated Scala penetrometer tests, hand trial pits and cone penetrometer testing in order to assess ground conditions and likely behaviour of the ground, as well as to provide guidance on foundation repair and/or replacement strategies for the existing dwelling on the site.

The investigation was carried out with reference to the Ministry of Business, Innovation & Employment (MBIE) Guidance - Version 3, dated December 2012 - "Repairing and rebuilding houses affected by the Canterbury earthquakes" and subsequent updates, as well as the relevant New Zealand Geotechnical Society (NZGS) and MBIE Modules; "Earthquake Geotechnical Engineering Practice".

This report presents our findings and conclusions. It has been prepared in the context of providing geotechnical information for use in assessing options for the proposed foundation remedial works, and for use in structural design as part of a Building Consent application.

## 2. SITE DESCRIPTION

The property is legally described as Lot 9, DP 16872 and has an area of 627m<sup>2</sup>. The property is rectangular in shape and is located on the western side of Belfield Street. It is otherwise bounded by residential properties, as shown on our site plan, attached to this report. The site is located approximately 200m northeast of the Avon River. The site and nearby surroundings are near level.

### **3. EXISTING STRUCTURES AND PROPOSED DEVELOPMENT**

#### **3.1 Existing Structures**

The property is currently occupied by a single storey dwelling, a standalone garage and a sleepout. The dwelling comprises lightweight cladding and heavy roofing, with timber floors supported by internal shallow piles. The main dwelling foundations comprise a combination of external piles with a perimeter facade (Foundation Type A1 as per the MBIE Guidance) and concrete strip footings; the southwestern extension has concrete perimeter foundations supporting heavy cladding (Foundation Type B2). A concrete patio is located at the northwestern corner of the structure. The foundation type of the enclosed sunroom at the centre of the western elevation is unknown.

We understand our report is limited to the dwelling, and that the garage and sleepout structures (located northwest and southwest of the dwelling, respectively) are beyond our scope.

A concrete driveway extends along the northern site boundary to the garage, and concrete pathways are present along the western and southern elevations of the dwelling. Timber decking is present at the southern portion of the eastern elevation (south of the dwelling entry), and the remainder of the site comprises lawn and garden areas, with mature trees east and west of the dwelling.

A review of the historical aerial photographs, as obtained from the ECan database, indicates that the dwelling was constructed in the 1950s, and the garage was constructed in the early 1970s. The dwelling appears to have been extended at the southwestern corner in the early 1980s, with the sunroom constructed at the centre of the western elevation in the (the photographs from this time period are unclear), and the sleepout constructed in the late 2010s.

#### **3.2 Proposed Works**

We understand that the dwelling shows indications of damage despite previous earthquake repair works having been completed following the events of the 2010 and 2011 Canterbury Earthquake Sequence (CES). The existing structural damage is detailed in the assessment report by Viden, described in further detail in Section 4. It is our understanding that the most appropriate foundation repair or replacement strategies will be determined based on the conclusions of this geotechnical report.

## **4. BACKGROUND INFORMATION**

### **4.1 Sources Consulted**

The following third party information sources were consulted and referred to in this report:

- EQC/EQR Documentation
- Cavity Critter Underfloor Inspection Report
- Viden Draft Structural Engineers Report
- New Zealand Geotechnical Database (NZGD)
- Environment Canterbury (ECan)
- Christchurch City Council (CCC)

A summary of our understanding of the third party information is presented below. We note that the below summary of information is limited to that considered relevant to the geotechnical assessment of the property, and is intended to present facts and opinions as contained in third party sources and does not constitute interpretation or endorsement by KGA. Our references to the bedrooms in the house are based on the floor plan contained in the Viden report, included in Appendix A.

### **4.2 EQC / Fletcher EQR Documentation**

EQC / Fletcher EQR issued various documents detailing the recorded earthquake damage and planned remediation work following the major events of the CES. We have provided an overview of relevant information from the following documents.

#### **EQC Full Assessment Report & Scope of Works (CLM/2011/116146) – 13 September 2011**

- Cracking of cladding plaster on all elevations.
- Recommended replacement of 10 piles.
- Recommended replacement of 19 linear meters (1m) of the perimeter foundation.
- Grind out and epoxy fill perimeter beam cracking.
- Cosmetic damage identified within interior linings.
- Realignment recommended for rear external door, and easement recommended for internal kitchen and lounge doors.

### **EQC Opting Out of EQR Letter (CLM/2010/109241 and CLM/2011/116146) – 2 July 2012**

This letter indicates that EQC has provided a repair strategy for identified earthquake damage, and that the Claimant (homeowner) is responsible for arrange those repairs without recourse to EQR.

### **DC Building Contract Quotations – June 2012 to April 2013**

The initial quotation (15 June 2012) indicates that the amount of piles to be replaced has been reduced from ten to six. A subsequent quotation dated 14 January 2013 states that the external work was removed “as requested”; however, a final quotation from 15 April 2013 includes for the external items from the EQC Scope of Works.

### **House Levellers Si Ltd Letter – 9 April 2013**

- 40mm of settlement was recorded along the perimeter foundation piles of the southwestern elevation; these were scheduled to be replaced with new H5 timber piles on concrete pads.
- Up to 30 piles are indicated to require replacement (in the opinion of House Levels Si Ltd).
- The perimeter foundation along the southwestern extension required lifting and underpinning.
- Internal non-load bearing piles were scheduled to be packed.
- Concrete patios were to be removed to allow for access.

### **Tax Invoice from Edifice Ltd (Ref. W03071) – 18 March 2014**

The Edifice Tax Invoice included for cladding repairs, jacking and packing six subfloor piles, and epoxy crack filling along the perimeter foundation and concrete patio.

### **Wrightway Floor Level Survey Plan – 1 November 2022**

- Maximum floor level variation of 42mm, with gradients in excess of MBIE Guidelines.
- High areas are shown near the southeastern corner of the dwelling, with low points along the western elevation.
- Apparent hogging in Lounge, Bedroom 1 and Bedroom 2.

### **4.3 Cavity Critter Underfloor Inspection Report – 6 February 2023:**

- The ground is obscured by polythene damp proof membrane (DPM), and the majority of the subfloor timber is obscured by insulation material.
- Subfloor piles comprise precast concrete. It is unknown if the piles are concreted into the ground due to the presence of the DPM.
- A pile near the centre of the structure (photograph 29) appears to be wicking moisture from the ground up to the timber bearer, suggestive of wet ground conditions below the DPM.

- Signs of historical (possibly repaired) above floor water leaking are present near the centres of the southern and eastern elevations (photographs 40 and 61, respectively). These areas correlate with the Kitchen and Bath, as per the Viden plan. Yellow mould is also shown at the base of the pile near photograph 61, which also indicates wet ground conditions below the DPM.
- A notched and cracked bearer (unreinforced) is present near the centre of the structure (photograph 48); the pile below is also shown to be cracked. An additional notched bearer is shown on photograph 36.
- A second cracked pile is located near the northeastern corner (photograph 54).
- Cracking is present within the perimeter footing near the southwestern corner (photograph 67).

#### **4.4 Viden Structural Engineers Draft Report (226-161) – 3 May 2023**

Viden undertook an earthquake assessment of the dwelling, comprising a review of the EQC and third party documentation (detailed in the previous subsections of this report), site visit and floor level survey, discussion of observed damage and recommended repair strategies.

Viden's site visit and floor level survey indicate the following (for reference, the floor level survey is included within Appendix A of this report):

- Floor dislevelment of 42mm, with the high point near the northeastern corner of the structure (Bedroom 1), and low points at the western elevation (Lounge and Sunroom), as well as the southeastern corner of the dwelling.
- Floor slopes are considered to generally align with windowsills, door heads, lintels and benches.
- Some inbuilt inconsistencies are present between floor levels and adjacent elements, including the lounge sliding door, as well as elements on the interior and exterior frame indicating adjustments at the time of construction.
- Hogging style settlements are apparent within the Lounge, Sunroom and Bedroom 2.
- Homeowner indicated localised relevening was attempted following the CES within the Dining room when floor tiles were installed within the Kitchen. Windows within the Kitchen were also renovated after the CES.

Viden conclude that the dwelling has likely settled down to the western elevation as a result of the CES, and recommend that a geotechnical investigation is conducted in order to confirm the settlement mechanism onsite. Viden consider that levelling can be achieved by mechanical jacking the perimeter foundation and jacking and packing the internal piles.

#### **4.5 New Zealand Geotechnical Database (NZGD) & Environment Canterbury (ECan)**

The NZGD and ECan websites were searched for geotechnical information in the form of relevant well/borehole logs and Cone Penetrometer Test (CPT) data. Two relevant CPTs were found in the vicinity of the property; the locations are indicated on our site plan, and the test logs are reproduced in Appendix B. The data is described further in Section 7.1 of this report.

The ECan website indicates that the site is overlaying a “Coastal Confined Gravel Aquifer System”. According to GNS Science, the median depth to the water table ranges from 2m to 3m below ground level (bgl).

A summary of aerial photography and field observations, as well as the Peak Ground Acceleration (PGA) experienced on the site during the major earthquake events of the Canterbury Earthquake Sequence (CES) is given in Table 1. We have also scaled the PGA to a magnitude 7.5 event to be able to compare the recorded PGA to the ULS and SLS values recommended in the MBIE Guidance ( $PGA_{7.5}(ULS)=0.35g$ ,  $PGA_{7.5}(SLS)=0.13g$ ).

For the magnitude scaling factor assessment, it is important to note that the 13 June and 23 December 2011 aftershocks each comprised two separate earthquakes. In both cases, the second of the two earthquakes was the more damaging, but the first earthquake is inferred to have caused elevated pore water pressure and increased the susceptibility for liquefaction to occur. To take the two earthquakes into consideration for modelling purposes, the Tonkin & Taylor Liquefaction Vulnerability Study considers the second earthquake with an increased magnitude to include the effects of the first one. The design earthquake magnitude for each event is presented in Table 1, and a copy of the Property Summary Report is included in Appendix B.



**Table 1: Summary Desk Study Information**

	<b>September 2010 (M 7.1)</b>	<b>February 2011 (M 6.2)</b>	<b>June 2011 (M 6.0)</b>	<b>December 2011 (M 5.9)</b>
<b>Aerial Photography Liquefaction Interpretation (KGA)</b>	No observed liquefaction ejecta	Minor to moderate observed liquefaction ejecta onsite; moderate to severe liquefaction ejecta observed nearby and within roadway	No observed liquefaction ejecta	No observed liquefaction ejecta
<b>Aerial Photography Liquefaction Interpretation (EQC)</b>	No observed liquefaction ejecta	Moderate to severe observed liquefaction ejecta	Moderate to severe observed liquefaction ejecta	No observed liquefaction ejecta
<b>Ground Observations (EQC)</b>	No observed ground cracking or ejected liquefied material	No lateral spreading but minor to moderate quantities of ejected material (property only)	No lateral spreading but minor to moderate quantities of ejected material (roadway only)	<i>Not mapped</i>
<b>Mapped Ground Cracks</b>	No cracks mapped onsite or nearby			
<b>Lidar Cumulative Vertical Displacement<sup>1</sup></b>	230mm subsidence			
<b>Horizontal Ground Movement<sup>2</sup></b>	220mm (±400mm) southeast			
<b>Groundwater Depth (m)<sup>3</sup></b>	2.6	2.4	2.4	2.3
<b>PGA (g)</b>	0.19	0.41	0.25	0.27
<b>Scaled PGA<sub>7.5</sub> (g)<sup>4</sup></b>	0.17	0.29	0.17	0.18

<sup>1</sup> To February 2012, tectonic vertical changes excluded, may be subject to Lidar accuracy limit

<sup>2</sup> Horizontal Ground Movement – “Local” (Observed – Tectonic)

<sup>3</sup> Interpreted from the “Property Summary Report”

<sup>4</sup> Scaled to M7.5 using Idriss and Boulanger recommendations (2008)

#### **4.6 Christchurch City Council (CCC) – Flooding Risk**

According to email communication with the CCC (included within Appendix B), the property is within a CCC District Plan Flood Management Area, with a Finished Floor Level (FFL) requirement of 12.30m RL, and a recommended FFL of 12.56m RL. According to CCC LiDAR data, ground level onsite ranges from 11.76m RL to 12.25m RL. The CCC should be contacted directly to comment on the floor level requirement, as a full flood risk assessment is outside the scope of this report.

#### **4.7 Environment Canterbury (ECan) – Listed Land Use Register**

ECan has identified sites where hazardous activities and industries have been located throughout Canterbury, and maintains the Listed Land Use Register (LLUR) database which alerts about potential contamination before site works commence. After consultation of the database regarding these sites, the following information was obtained: “The Listed Land Use Register does not currently have any information about a Hazardous Activities and Industries List site on your selected land parcel”. The relevant extracts from the LLUR are presented in Appendix B.

Due to the limited extent of our investigation, we cannot guarantee that contamination is not present.

### **5. SITE OBSERVATIONS**

The following observations were noted during our site walkover on 14 June 2023 (relevant site photographs are included within Appendix C):

- Presence of decking, pathways and concrete driveway adjacent to dwelling foundation limits possible trial pit locations.
- Minor cracking noted to plaster cladding.
- Minor cracking noted within render of perimeter façade, particularly near services / openings / vents.
- Dwelling appears to be well maintained.
- Cracking of concrete walkways and driveway.

## 6. GEOLOGY

The published Geology of the Christchurch urban area (1992) shows the site is underlain by the Yaldhurst Member of the Springston Formation. The Springston Formation was deposited during the Holocene epoch ( $\leq 10,000$  years old), and has accumulated the inland margin of the Christchurch Formation. The Springston Formation contains postglacial fluvial channel and overbank sediments resulting in the deposition of well-sorted gravels, sands and silts sourced from the Southern Alps. Due to the movement of the Waimakariri River channels, the deposits appear as fan shaped wedges or localised lenses, creating extensive layers with varying thicknesses.

The Yaldhurst Member is the most recent deposit of the Springston Formation and was deposited just above the present Waimakariri River flood level during the last 3000 years. It contains three distinct lithological units; alluvial sand and silt overbank deposits; historic river flood channels containing silts, sands and alluvial gravel; and peat deposits.

## 7. GROUND INVESTIGATION

### 7.1 Existing Ground Information

A search of the ECan and NZGD websites identified two CPTs within the vicinity of the site. We considered these tests relevant, and the CPT data was used in our liquefaction analyses. The investigation logs are indicated on the attached site plan and reproduced in Appendix B; the data points are listed in Table 2.

**Table 2: NZGD Data**

NZGD Test Reference	Source	Source Reference	Probe Depth (m)	Approx. Distance From Site (m)
CPT_189374	Geotechnics	CPT02	20.5	25 (southeast)
CPT_19781	McMillan Drilling for T&T	DAL-TC2-CPT010	10.0	30 (northwest)

## 7.2 Current Ground Investigation

In order to supplement the existing nearby ground information, a project specific deep and shallow ground investigation for subsoil identification and bearing capacity purposes was undertaken. The subsurface conditions on site were explored by drilling four hand auger boreholes (HA01 to HA04), performing four Scala penetrometer tests (SP01 to SP04) within the borehole locations, and completing one CPT (CPT-01). To investigate the perimeter foundation embedment and founding soils, two hand dug trial pits (HTP01 to HTP02) were excavated alongside the perimeter foundation wall in conjunction with Scala penetrometer tests (SP05 to SP06).

The shallow ground investigation services were provided by Landform Projects Ltd on behalf of KGA on 14 June 2023, with the CPT undertaken by Ground Investigation Ltd on the same date. An overview of the ground investigations is presented in Table 3 and a description of the testing is given in the following sections.

**Table 3: Schedule of Exploratory Ground Investigation**

Test Type	Test Ref.	Depth (m)	Reason for Termination	Date of Test
Hand Auger	HA01	3.0	Target depth	14 June 2023
	HA02	3.0	Target depth	
	HA03	2.8	Collapsing sand	
	HA04	3.0	Target depth	
Scala Penetrometer (Hand Auger Locations)	SP01	3.0	Target depth	14 June 2023
	SP02			
	SP03			
	SP04			
Hand Dug Trial Pits	HTP01	0.6	Base of foundation located	14 June 2023
	HTP02	0.3		
Scala Penetrometer (Trial Pit Locations)	SP05	1.1	Target depth	14 June 2023
	SP06			
CPT	CPT-01	10.3	Target depth	14 June 2023

The exploratory test locations were selected to provide representative indications of the subsurface ground conditions within the area being assessed. The test locations are shown on our site plan.

### **7.3 Scala Penetrometer Tests and Hand Auger Boreholes**

The Scala penetrometer probe consists of a hand operated dynamic cone penetrometer and is used to evaluate the penetration resistance of a soil. A 9kg hammer weight is dropped over a distance of 510mm driving a 20mm diameter cone into the ground. The number of hammer blows is recorded for each 50mm of penetration. Testing is in accordance with Test 6.5.2:1988 of NZS 4402.

Hand auger boreholes were drilled in conjunction with the Scala penetrometer testing using a 50mm diameter hand auger and a soil description log in accordance with the NZGS Guidelines “Field description of soil and rock” is presented for each borehole. Scala Penetrometer testing was carried out at nominal 1.0m depth intervals with hand auger boreholes drilled over the Scala test points to the same depth to reduce the friction on the rod for subsequent testing.

The hand auger boreholes and Scala penetrometer tests were intended to be taken to 3.0m depth or to a depth where effective refusal was reached, whichever was shallower.

### **7.4 Hand Dug Trial Pits**

The hand dug trial pits were excavated using a shovel at selected points around the perimeter foundation beam. The hand excavations were advanced carefully adjacent to the foundations to prevent any damage, and were extended to at least the underside of the footing. A steel rod was then pushed underneath the footing to confirm that the concrete does not extend deeper in the centre of the foundation than at the exterior.

Scala penetrometer testing was carried out from ground level at the test pit locations, to a depth of 1.0m or refusal, in order to gain an indication of the soil density immediately below the perimeter foundations.

### **7.5 Cone Penetrometer Testing**

The CPT testing was undertaken by Ground Investigation Ltd with a 1.1 tonne Pagani TG63-150, using a cone of 10cm<sup>2</sup> cross-sectional area, and a 150cm<sup>2</sup> friction sleeve area. Continuous measurement of pore water pressure was undertaken during testing (u<sub>2</sub>). The tests were undertaken in accordance with A.S.T.M. Standard D 5778-12 procedure. The test target depth was to a minimum depth of 10m or refusal, whichever came first.

## 7.6 Subsurface Conditions

The subsurface ground conditions encountered are briefly described and summarised in Table 4. For more detailed descriptions, reference should be made to the attached investigation logs. In order to prepare a subsurface model of the site, the subsurface conditions encountered have been inferred between our boreholes. It must be accepted that the conditions are likely to vary between each borehole location, particularly when the distance between test locations is large.

**Table 4: Subsurface Conditions**

	Geotechnical Unit	Depth to Base (m)	Description	Scala Pen. Reading (blows per 100mm)	CPT $q_t$ Value (MPa)
1	TOPSOIL / FILL	0.3 – 0.5	Organic silt with sand and gravel	1 – 5	--
2	Silty SAND / Sandy SILT	1.3 – 1.5	Silty sand / sandy silt, very loose to medium dense	1 – 4	0.6 – 1.2
3	SILT	2.4 – 2.8	Stiff to hard silt, low to moderate plasticity	2 – 10	1 – 3
4	SAND & Sandy SILT	3.5 *	Medium dense to very dense sand and sandy silt	8 – 24	3 – 7
5	* SAND & GRAVEL	6.3	Medium dense to very dense sand and gravel	--	15 – 50+
6	* SAND	10.3+	Medium dense to dense sand	--	12 – 20

\* Unit and/or depth interpreted from onsite CPT with no physical data below hand auger termination depth

## 7.7 Groundwater

Groundwater was encountered between 2.0m to 2.1m depth during our site testing. This is slightly shallower, though generally consistent with GNS water levels inferred in Section 4.5, as well as water level values from the NZGD Property Summary Report, provided in Table 1. Groundwater levels can and will vary with changes in weather patterns, particularly following periods of prolonged wet or dry weather; we note that our investigation was conducted during the winter months when groundwater is generally higher.

## **7.8 Foundation Depths**

Based on observations made within the hand dug trial pits, the perimeter foundation footing elements of the main structure are founded at a depth of approximately 0.45m at HTP01 near the southeastern corner of the dwelling, atop the sandy silt/silty sand of Geotechnical Unit 2. Our test at HTP02 near the northeastern corner of the structure did not encounter the foundation footing of the structure; the test indicates that the perimeter façade appears to be seated at ground level atop topsoil material. The founding depths of the perimeter beam of the southwestern extension, concrete patio/sunroom foundations, and internal/external piles are not known.

## **8. HISTORIC SITE PERFORMANCE & SETTLEMENT MECHANISMS**

### **8.1 Measured Floor Level Variation**

According to the Viden and Wrightway floor level surveys, the dwelling tilts down from the northeastern corner to the western elevation; both surveys measured a maximum vertical variation of 42mm. Measurements from windowsills, door heads, lintels and benches generally correlate well with nearby floor slopes. Hogging style settlements were recorded within the Lounge, Sunroom and Bedroom 2.

We understand that a degree of relevening repairs have been completed, and therefore consider that the measured levels are unlikely to be a perfectly accurate representation of structural settlement following the CES.

### **8.2 Long-Term Historic / Static Settlements**

We note that the western portion of the structure comprises a variety of extensions and additions as well as a heavy concrete patio, and these features comprise several different types of foundations. It is likely that a degree of floor dislevelment may be associated with their construction. Furthermore, it is possible that these features are seated within non-engineered fill material (encountered to a depth of 0.5m during site testing); these soils presents a risk of long term static settlement under structural loads, particular if saturated (as indicated by potentially damp conditions indicated from the Cavity Critter photographs). Due to the presence of concrete driveways and pathways adjacent to the structure in these locations, our testing was unable to be undertaken in order to determine the seating depth of these foundations.

We note that hogging style settlements within several rooms at the western portion of the dwelling may indicate static settlement within shallow founding soils. However, the natural silty and sandy soils present below the fill depths are not considered to present a risk of long term static settlement behaviours under structural loads, based on the strength and consistency of these materials. We therefore consider that portions of the structure may be seated within the unsuitable fill materials, though this was not possible to confirm at the time of our site testing.

### 8.3 Liquefaction Induced Settlements (CES)

The onsite CPT data was assessed against the major earthquakes of the CES, using the magnitude, PGA and water table information presented in Table 1, with the calculated settlement results presented in Table 5 and the analyses outputs provided within Appendix D.

The seismic design requirements adopted for use in the analyses are defined in Part C of the MBIE Guidelines “Repairing and rebuilding houses affected by the Canterbury earthquakes” with the recent update regarding Boulanger & Idriss (2014) liquefaction analysis methodology. These are:

- Boulanger and Idriss (2014) methodology for liquefaction triggering.
- Zhang et al. (2002) volumetric densification calculation.

**Table 5: Liquefaction Settlements Back-Analysis for CES**

Test	Calculation Limit Depth (m)	Calculated Vertical Settlement (mm)			
		Sept 2010	Feb 2011	Jun 2011	Dec 2011
CPT-01	10.3 (MBIE 'Index' depth)	5	25	15	15

Our onsite CPT analyses indicate total cumulative settlements of approximately 60mm within the upper 10m of the soil column for the major events of the CES. This does not correlate well with the LiDAR cumulative vertical displacement of 260mm as indicated on the Property Summary Report, though we note that additional settlement may have occurred below 10m depth, and that the accuracy for LiDAR vertical measurements is  $\pm 100$ mm.

According to the aerial photographs taken following the February 2011 earthquake event, minor to moderate liquefaction ejecta was present onsite, and moderate to severe ejecta was present within the neighbouring sites and roadway. This indicates that our analyses may underestimate the true liquefaction potential of the site.



According to the analyses, the sandy soils between approximately 2.4m and 3.5m (Geotechnical Unit 4 as per Table 4) are likely to have liquefied under the level of shaking experienced during the February 2011 earthquake. Settlements due to liquefaction at this depth would generally present as tilt-style settlement, which correlates well with the general western tilt noted within the floor level survey and Viden report. However, we consider that localised weaknesses within the silty soils of Geotechnical Units 1 and 2 may have also allowed localised 'venting' of ejecta; this mechanism would account for the observed ejecta onsite and in the surrounding area following the February 2011 event.

Post-earthquake general observations show that the empirical calculation of the settlement is uncertain with perhaps a  $\pm 50\%$  margin to the numbers given in Table 5. We therefore recommend that engineering judgment is applied when interpreting the computed settlements.

We point out that the settlements presented in Table 5 describe the settlements of the ground not occupied by a building, but occurring due to dissipation of excess pore water pressure generated during earthquake shaking. Additional settlements may also occur due to yield of the liquefied soils under foundation loading, soil loss of volume (liquefaction ejecta) and lateral spreading, but these components are very difficult to predict. Subsurface conditions may vary across the site, making accurate prediction of future settlements even more difficult.

#### **8.4 Cyclic Softening Induced Settlements (CES)**

There is a tendency for very soft to soft or sensitive clays and silts to undergo cyclic softening (loss of shear strength and stiffness) as a result of strong shaking. However, the density of the onsite soil the silty soils indicates that cyclic softening is unlikely to occur within these materials.

## 8.5 Land and Foundation Performance Conclusions

As noted above, we understand that a degree of repair works have been completed following the CES which may influence the current settlement trend of the dwelling floor. However, we consider that floor dislevelment associated with construction of the western extension/addition elements is likely, particularly as these features comprise different foundation styles than the main/original dwelling. Furthermore, due to the variable foundation styles present across the building footprint and potential for foundation elements to be embedded within topsoil and fill material, it is likely that static behaviour has contributed to the observed settlements at this site. The evidence of hogging within the timber floors suggests relative settlement between the heavier load bearing walls and the light internal floors, which is typically observed in heavyweight dwellings founded on soft, compressible or organic soils and areas subject to shallow liquefaction.

Our liquefaction analyses indicate that liquefaction related settlements are likely to have occurred between roughly 2.5m and 3.5m depth during the February 2011 earthquake event. Our aerial photograph interpretation indicates that the site was subject to minor to moderate amounts of liquefaction ejecta, and that moderate to severe amounts of ejecta were present within the nearby area and roadway. Based on the findings of our liquefaction analyses as well as the 'tilt' style settlement pattern of the dwelling, we consider that the relatively heavier western foundations (including the patio element and possibly the sunroom, should those foundations comprise a heavy concrete pad) may have been more affected by liquefaction related settlements, and have 'dragged' the original portion of the foundation down.

As the current measured floor levels were conducted over ten years after the major events of the CES, the measured settlements likely include construction related variations, historic static settlements, and settlements due to seismic induced liquefaction. We note that it is not possible to accurately quantify the amount of settlement attributable to initial static settlements versus settlements that occurred during seismic shaking or reconsolidation settlements that occurred subsequent to shaking. However, based on the generalised western tilt of the structure and post-earthquake aerial photography evidence of onsite (and nearby) liquefaction ejecta following the February 2011 earthquake, it is our opinion that the dwelling has likely been materially affected as a result liquefaction related settlements during the CES.

## 9. FUTURE LAND PERFORMANCE & DESIGN CONSIDERATIONS

### 9.1 Liquefaction Analysis – General

Liquefaction analyses were completed for both SLS and ULS design criteria, using the CPT data referenced in Tables 2 and 3. Calculations were performed over the full investigation depth, approximately equal to the MBIE 'Index' depth of 10.0m, using the input parameters described in Table 6.

**Table 6: Input Parameters to NZS1170.5:2004 & NZGS/MBIE Module 1**

Input Parameters	Design Event		
	SLS (A)	SLS (B)	ULS
Building Importance Level	IL2		
Soil Class	Class D		
Annual Exceedance Probability	1/25	1/25	1/500
Magnitude	7.5	6.0	7.5
Peak Ground Acceleration	0.13	0.19	0.35

This section presents two parameters commonly used to predict the liquefaction vulnerability; the liquefaction induced settlements, and the characteristics of liquefaction and the resulting ground deformation.

The in situ groundwater level was considered to exist at 2.0m bgl, and the groundwater level during earthquake used for the calculation was conservatively assumed at 1.5m bgl.

### 9.2 Liquefaction Analysis – Estimated Future Settlements

We have analysed the CPT data using the current software 'CLiq' and a copy of the output from the analyses has been included within Appendix E. The software includes for normalisation of the data for overburden pressure and is considered to provide improved indications of liquefaction potential. We have also adopted the same seismic design requirements from the most recent updates of the MBIE Guidance, as listed in Section 8.3. The results are presented in Table 7.

**Table 7: Liquefaction Analysis Results**

Test	Calculation Limit Depth (m)	Calculated Vertical Settlement (mm)		
		SLS (A)	SLS (B)	ULS
CPT-01	10.3 (MBIE 'Index' depth)	5	10	30
CPT_189374	10.0 (MBIE 'Index' depth)	< 5	< 5	5
	20.5 (Full depth)	< 5	< 5	10
CPT_19781	10.0 (MBIE 'Index' depth)	< 5	5	50

The above calculated settlements for onsite CPT-01 generally fall within a TC2 categorisation as defined by the MBIE Guidance. As previously discussed in Section 8.3, our liquefaction analysis is considered to potentially under-estimate liquefaction related settlements, and the values in Table 7 may not fully represent the risk of liquefaction across the site.

As described in Section 8.3, the empirical calculation of the settlement is uncertain with perhaps a  $\pm 50\%$  margin to the numbers given in Table 7. Subsurface conditions may also vary across the site. Our calculations pertain to the ground not occupied by a building, but occurring due to dissipation of excess pore water pressure generated during earthquake shaking. We therefore recommend that engineering judgment is applied when interpreting the computed settlements.

### 9.3 Liquefaction Induced Ground Deformation

Guidance on expected levels of liquefaction-induced ground deformation is provided within Section 5.4 of Module 3 of the Earthquake Geotechnical Engineering Practice documents issued by MBIE and NZGS. This provides a summary of expected performance levels for liquefied soil deposits, based on the liquefaction triggering factor, LPI and LSN. The LPI and LSN are indices that quantify liquefaction-induced damage by taking into consideration the severity, thickness and depth of the liquefiable layers within the soil profile. The expected level of ground performance is summarised in Table 5.1 of Module 3, defined as six performance levels as a consequence of liquefaction (L0 – 'Insignificant' to L5 – 'Very severe'). We have analysed the CPT data using CLiq and the calculated LPI and LSN values are presented in Table 8.

It should be noted that LPI and LSN indices are typically applied to area-wide screening, and are considered to have reasonable predictive capacity when applied this way; however, they may misrepresent performance in approximately 20% to 30% of cases. Therefore the expected performance levels provided in Table 8 below are only intended as general guidance, and the uncertainties and/or non-uniformities of ground deformation should be considered in any subsequent design.

**Table 8: General Performance Levels**

Test	SLS (B)		Effect from Liquefaction	ULS		Effect from Liquefaction
	LPI	LSN		LPI	LSN	
<b>CPT-01</b>	<1	3	Insignificant	5	9	Mild to moderate
<b>CPT_189374</b>	<1	<1	Insignificant	<1	1	Insignificant
<b>CPT_19781</b>	<1	2	Insignificant	7	15	Moderate to high

For onsite CPT-01, the LPI and LSN values in Table 8 indicate a performance level of L0 ('insignificant' effect from excess pore water pressure and liquefaction) for the SLS case and L1 to L2 ('mild' to 'moderate') for the ULS case. The ULS performance levels indicate up to 10% of the deposit may liquefy, with liquefaction occurring in layers of limited thickness, and ground deformation resulting in relatively minor differential settlements. As indicated above, based on the degree of liquefaction ejecta present onsite and nearby following the February 2011 earthquake, we consider that our analyses are likely to underestimate the true liquefaction potential and overall performance of the site and a site performance in line with "high" effects from excess pore water pressure and liquefaction from Table 5.1 of Module 3 may be more representative of expected site performance. Reference should be made to the aforementioned Table and Module for a full description of the expected characteristics and consequences of liquefaction.

#### 9.4 Potential for Lateral Spreading

The inferred lateral movement from LiDAR (NZGD) indicates that the site has experienced 220mm ( $\pm 400$ mm) of horizontal movement to the southeast during the CES. Ground observations by the EQC for the February and June 2011 earthquakes indicate the site was not subject to lateral spreading. Furthermore, no cracks were mapped in the vicinity of the site. Based on these considerations, we believe site presents potential for minor global lateral movement of the ground across the site.

## 9.5 Shrink-Swell Characteristics

Based on the near-surface silt and sand based alluvium soils, as noted in our boreholes, and our experience of similar soils elsewhere, the shallow soils are considered to be susceptible to minor swelling and shrinking movements under seasonal variations of water content.

## 10. SITE DESIGNATION & TECHNICAL CATEGORY

We have assessed the site subsoil class as Class “D” – (Deep or soft soil) for structural design purposes in accordance with Clause 3.1.3 of the New Zealand design standard NZS 1170.5:2004. This assumption is based on the following:

- Our ground investigation did not encounter very soft or very loose soils for a thickness greater than 10.0m below this site. We therefore consider that Class “E” soil conditions are not present.
- Based on our knowledge of the local geology and the GNS geological map data, we infer that dense to very dense sand and gravel type soils extend to depths of greater than 100m below this site.

EQC mapping from the NZGD indicated that moderate to severe liquefaction was observed following the February 2011 event; our own aerial photograph interpretation indicates that onsite ejecta was minor to moderate, whilst moderate to severe quantities of ejecta were observed within the roadway and at nearby properties.

The site experienced  $M_w$  7.5 scaled peak ground accelerations (PGAs) of 0.17g to 0.29g, as per Table 1. Therefore, the site may be classified as ‘sufficiently tested’ for an SLS event according to Section 13.5 of the MBIE Guidance document.

The site is situated in a TC2 area as per the MBIE mapping available on the NZGD. Our liquefaction analysis and lateral spreading assessment in Section 9 suggest that a TC2 classification is applicable to the site in accordance with Table 3.1 of the MBIE Guidance. Based on the above and the observed site performance during the past events of the CES, we believe that a TC2 classification is suitable for the purposes of foundation design.

## **11. GEOTECHNICAL CONSIDERATIONS FOR FOUNDATION REPAIR/REBUILD**

### **11.1 Geotechnical Considerations**

Based on our investigation results and observations, the following information should be considered for any foundation repair / replacement works:

- Topsoil and fill were identified up to 0.5m depth at investigation points.
- A geotechnical ultimate bearing capacity of 150kPa may be considered in the natural soil below the topsoil and fill.
- The local groundwater level was encountered at approximately 2.0m bgl.
- According to our assessment, the property is likely to behave as equivalent to a TC2 site as defined in the MBIE Guidance document for residential sites.

We point out that decision to repair or rebuild is contingent upon a structural engineering assessment. As such, this report offers solutions for either scenario. We note that our assessments and conclusions are based on our interpretations of the data available at the time of writing this report, and are not intended to represent a definitive account of the geotechnical performance of the site. Therefore, the proposed strategies may be subject to revision should additional information become available. KGA must be provided with any repair / rebuild methodologies prior to implementation in order to confirm the suitability of the proposed strategies from a geotechnical perspective.

### **11.2 Foundation Repair Solution**

If a foundation repair is considered suitable for the structure, the structure may be releveled by using a performance-based underpinning methodology, with underpins based into natural soils below 0.5m depth where a geotechnical ultimate bearing capacity (GUBC) of 150kPa may be assumed. From a geotechnical perspective we consider that a repair strategy is suitable for the site on the basis that the existing foundations of the dwelling did not perform poorly. Following repair works, we expect that future seismic behaviour will not be worse than those observed in the past.

The shallow piles may be releveled using jacking and packing methodology as per MBIE Guidance Appendix A.1.1.2, Option 1: Jacking and packing methodology. Localised piles may be replaced to structural engineer design if they exhibit evidence of excessive tilting or settlement, or if excessive packing would be required. New piles should be seated below 0.5m depth and designed for a GUBC of 150kPa.

A mechanical releveling strategy for perimeter footings, strip foundations and any heavily loaded internal elements of the dwelling must be assessed by the structural engineer, and reinforcement works to the perimeter footing may be necessary prior to lifting attempts. Reference should be made to Update 10 of the MBIE Guidance (June 2018). Structural repairs to the perimeter foundation should be in accordance with Part A, Appendix A4 of the MBIE Guidance and in consultation with the structural engineer.

Removing the heavy roofing and replacing it with a light-weight option is not explicitly required at this site; however, we consider that replacing the heavy elements with an equivalent light-weight alternative is likely to result in a foundation with better performance overall (following completion of the releveling works). Likewise, replacing the heavy concrete patio at the southwestern elevation with a timber decking alternative would be beneficial for future structural performance.

### **11.3 Foundation Rebuild Solution**

If the structural engineer considers that a new foundation is necessary for the dwelling, suitable foundation options would be Type A or B of the MBIE Guidance (Section 5.3.2), based into natural soils below 0.5m depth. These options consist of a standard NZS 3604:2011 type foundation with timber piles (Type A) or timber piles and concrete perimeter foundations (Type B). These foundations should be specifically designed for an ultimate unfactored bearing capacity of 150kPa.

All topsoil and fill should be removed from the foundation excavations, and any loose materials within the excavations should be removed or compacted using tamping techniques. The bearing capacity in the exposed excavations must be confirmed onsite prior to foundation construction works.

We recommend that the same foundation type is used across the entire structure, and that the existing concrete patio is replaced with a timber decking alternative. Additionally, consideration should be given to replacing heavy elements (roofing) with equivalent light-weight alternatives.



## **12. INFRASTRUCTURE DESIGN**

### **12.1 Services**

Underground service pipes and connections should be designed in accordance with the relevant recommendations contained in the MBIE Guidance (particularly Section 5.7), CCC Infrastructure Design Standards (IDS), and the CCC Construction Standard Specification (CSS).

### **12.2 Landscaping**

Where trees are proposed for landscaping, these should be planted a minimum distance of the radius of the expected canopy or half the height of the mature tree (whichever is greater) from any proposed foundations. This will prevent any adverse effects on the foundations caused by tree roots.

## **13. FURTHER WORKS**

In order to ensure consistency with the recommendations contained within this report, we recommend that KGA or a Chartered Professional Engineer with experience in the geotechnical field is asked to review the foundation design drawings with respect to geotechnical elements. We also recommend that founding conditions are checked at the time of construction to confirm or otherwise the assumed bearing capacity and advise on any modifications deemed necessary to ensure that all foundations are in competent soils.

Territorial Authorities also often require specific engineering observations and PS4 Producer Statement documentation as part of Building/Resource Consent conditions and subsequent Code Compliance Certification. To this end, we recommend liaising with KGA to undertake the necessary observations required to ensure that the foundation construction is consistent with the assumptions made in this geotechnical report.

## 14. LIMITATIONS

Our report was prepared in line with the current MBIE Guidance. To satisfy the requirements of the Building Code and the New Zealand Standard “NZS 1170 - Structural Design Actions”, foundations must be designed so that the building must remain functional under SLS level loads; minor damage is acceptable provided the damage is readily repairable, and the building does not collapse under ULS level loads, but could suffer moderate to significant structural damage.

Desk study data was obtained from several investigation and modelling study sources made available to the public and engineering industry post the Canterbury earthquake sequence. Acknowledgment is given regarding the free use of the New Zealand Geotechnical Database, Christchurch City Council and Environment Canterbury websites. The data is used in good faith and no responsibility can be taken for the accuracy or completeness of the data.

This report was prepared in the context defined in Section 1 above and must not be relied upon by any other party other than our Client, for whom it was prepared, and the relevant Territorial Authority. It has been compiled with respect to the brief given to us, and must not be relied upon in any other context, recreated for any other purpose, or used by any person who is not our Client without first obtaining our written permission.

We point out that our conclusions are based on desk study material, a visual surface inspection of the site, third party investigation data from nearby sites and discrete exploratory hole positions. Ground conditions may vary between investigation points. The recommendations given in this report are provided as an overall strategy to minimise risks from geotechnical hazards. It should be noted that they are unlikely to remain effective if they are adopted in a piecemeal manner.

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## ATTACHMENTS





- Legend**
- Site Boundary
  - Hand Auger Boreholes and Scala Penetrometer Test Location (Landform Projects on behalf of KGA, 14 June 2023)
  - Hand-dug Trial Pit and Scala Penetrometer Test Location (Landform Projects on behalf of KGA, 14 June 2023)
  - CPT Location (Ground Investigation Ltd on behalf of KGA, 14 June 2023)
  - NZGD CPT Locations

0 5 m 10 m  
LINZ CC BY 4.0 © Imagery Basemap contributors



Produced by Datanest.earth

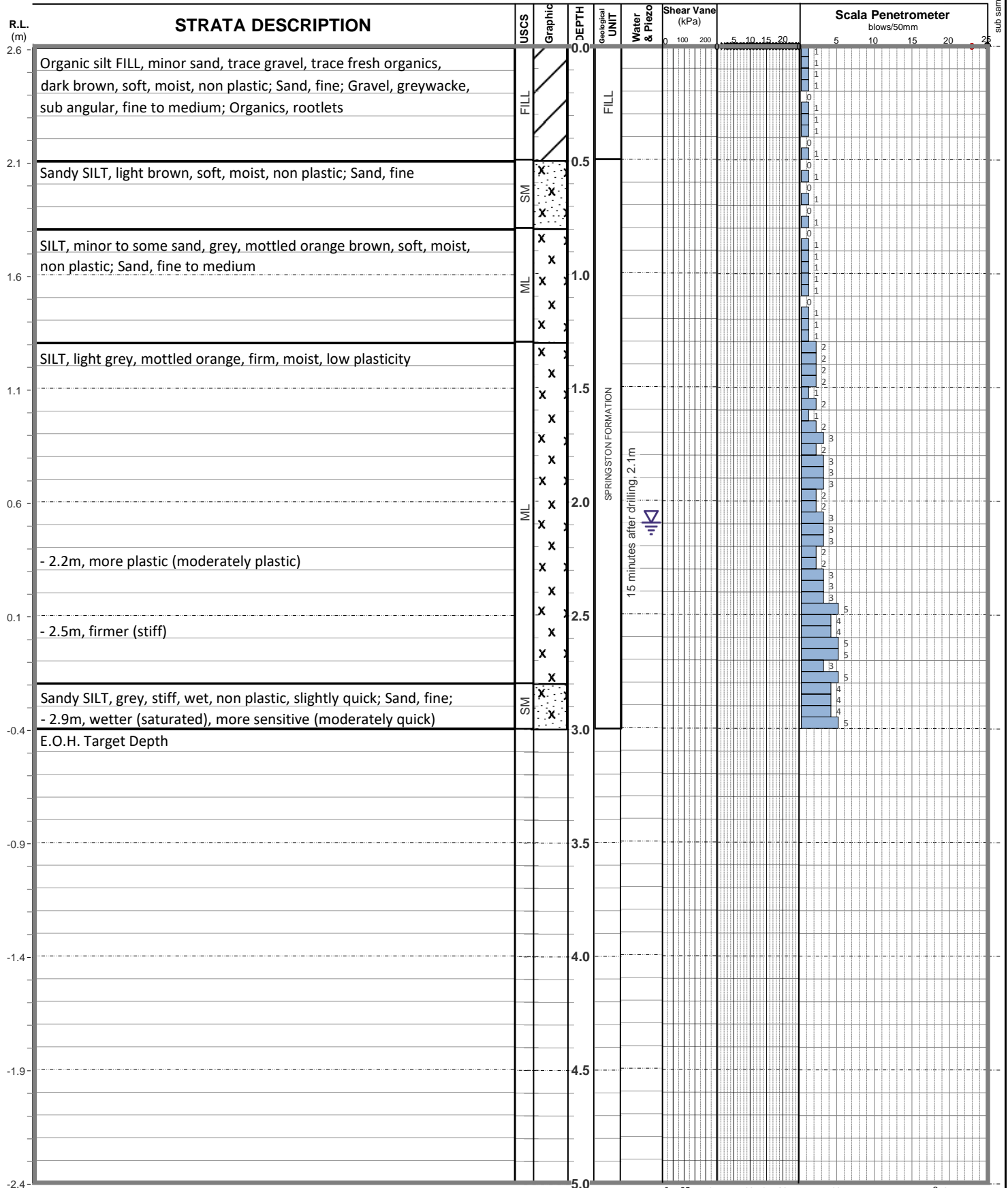
Title: Site Plan		
Client: Viden Consulting Engineers Ltd		Figure No.: 1 Size: A4
Project: 19 Belfield Street	Drawn: EC	
Date: 29-06-2023	Checked: AN	Version: FINAL
Proj No.: K230406	Scale: 1:400	

# BOREHOLE LOG

Hole # **HA01/SP01**

Project: 19 Belfield Street  
 For: KGA Geotechnical Group Ltd.  
 Project #: K230406  
 Co-ordinates: 1573384.131, 5182225.720  
 Drill method: Hand Auger  
 Hole depth: 3.00  
 Grid system: NZTM2000 (E, N)  
 Contractor: LFP  
 Equipment: HA + SP

LFP Ref #: 1794  
 Date started: 14/06/2023  
 Date finished: 14/06/2023  
 R.L.: 2.6 m NZVD(2016)  
 Logged by: CLS  
 Checked By: RBW



Notes: R.L. sourced from RTK survey

x peak (kPa)  
 residual (kPa)  
 Size: mm  
 #:

Borehole logged in accordance with the "Guidelines for the Classification and Description of Soil and Rock for Engineering Purposes" Dec 2005 NZGS.  
 R.L. is inferred and/or interpolated unless otherwise stated.

Shear Vane performed and corrected as per NZGS Guidelines.  
 Scale Penetrometer Test carried out to NZS 4402: Test 6.5.2 & field measured as mm per blow(s).

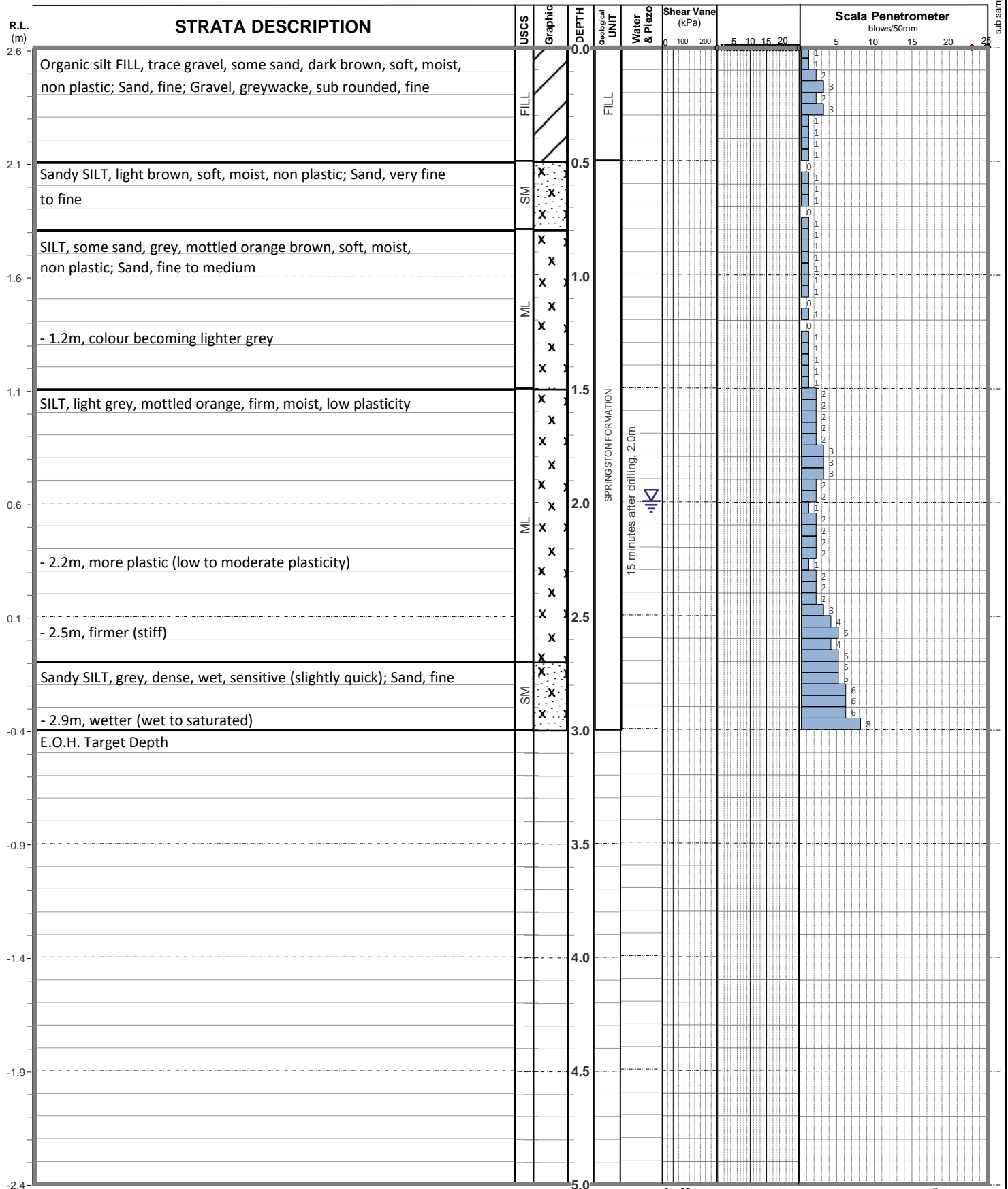


# BOREHOLE LOG

Hole # **HA02/SP02**

Project: 19 Belfield Street  
 For: KGA Geotechnical Group Ltd.  
 Project #: K230406  
 Co-ordinates: 1573381.063, 5182222.582  
 Drill method: Hand Auger  
 Hole depth: 3.00  
 Grid system: NZTM2000 (E, N)  
 Contractor: LFP  
 Equipment: HA + SP

LFP Ref #: 1794  
 Date started: 14/06/2023  
 Date finished: 14/06/2023  
 R.L: 2.6 m NZVD(2016)  
 Logged by: CLS  
 Checked By: RBW



Notes: R.L. sourced from RTK survey

x peak (kPa)  
 residual (kPa)  
 Size: mm  
 #:

Borehole logged in accordance with the "Guidelines for the Classification and Description of Soil and Rock for Engineering Purposes" Dec 2005 NZGS.  
 R.L. is inferred and/or interpolated unless otherwise stated.

Shear Vane performed and corrected as per NZGS Guidelines.  
 Scala Penetrometer Test carried out to NZS 4402: Test 6.5.2 & field measured as mm per blow(s).

# BOREHOLE LOG

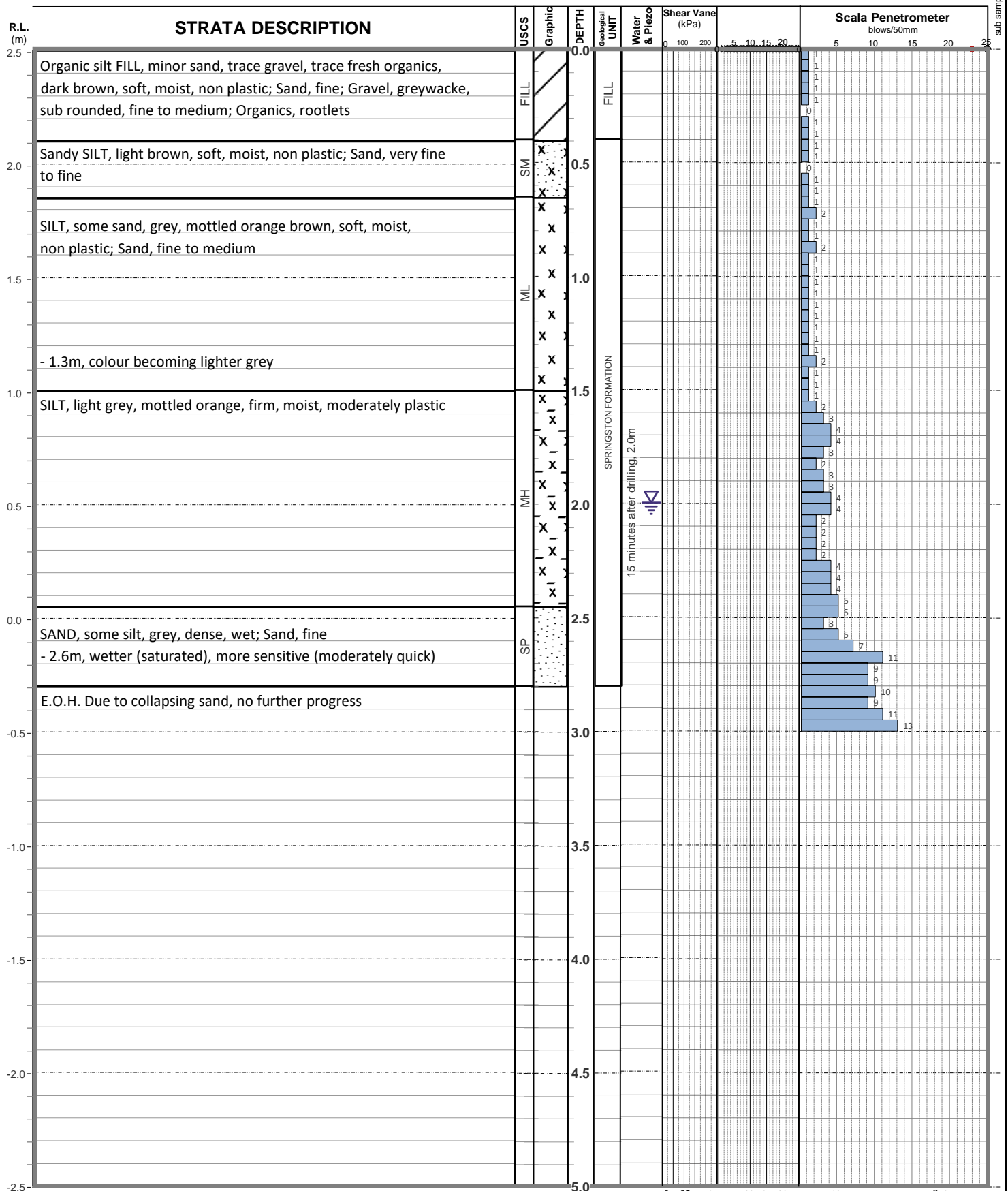
Hole #

HA03/SP03

Project: 19 Belfield Street  
For: KGA Geotechnical Group Ltd.  
Project #: K230406  
Co-ordinates: 1573399.882, 5182227.061  
Drill method: Hand Auger  
Hole depth: 2.80

Grid system: NZTM2000 (E, N)  
Contractor: LFP  
Equipment: HA + SP

LFP Ref #: 1794  
Date started: 14/06/2023  
Date finished: 14/06/2023  
R.L.: 2.5 m NZVD(2016)  
Logged by: SAS  
Checked By: RBW



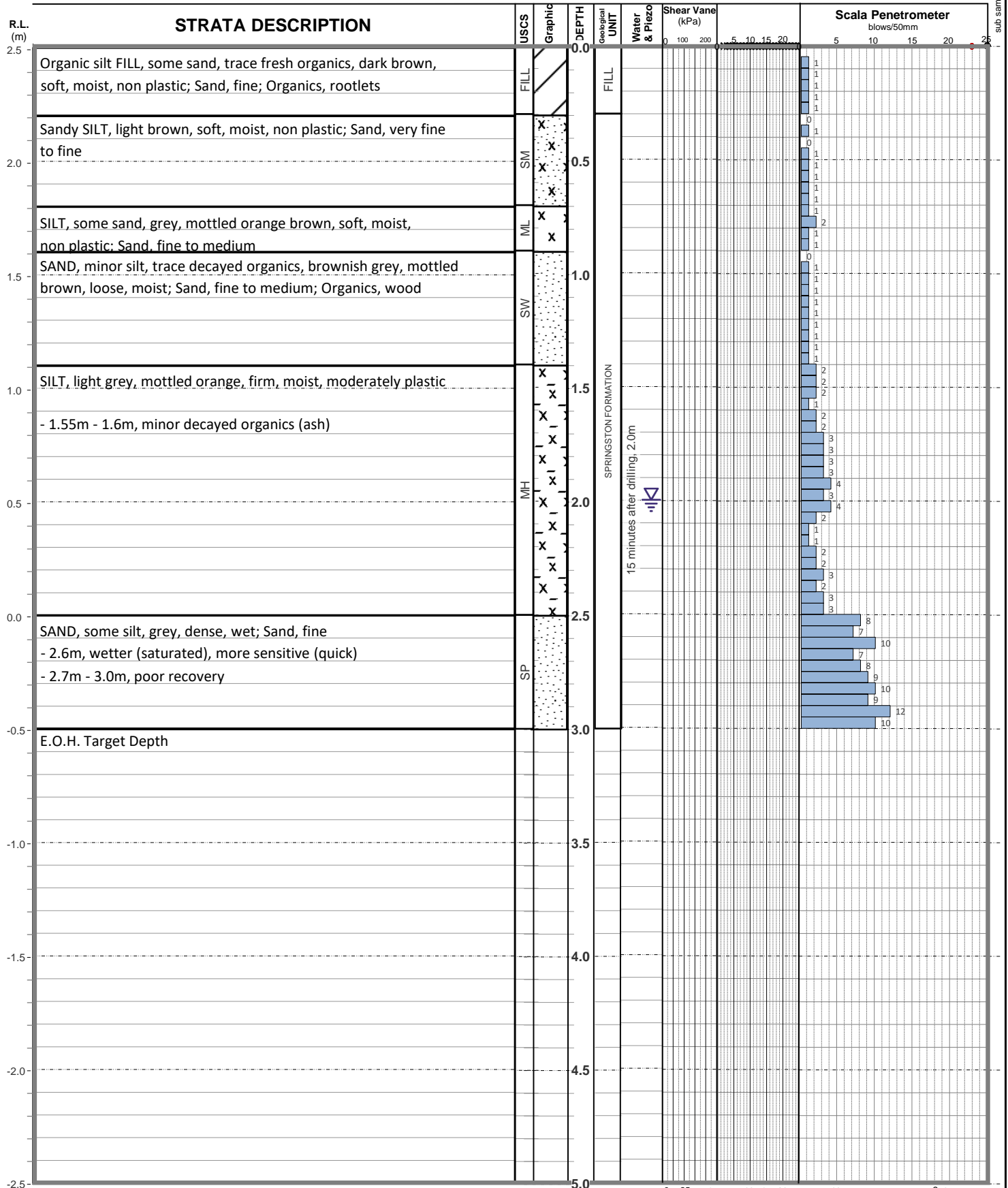


# BOREHOLE LOG

Hole # **HA04/SP04**

Project: 19 Belfield Street  
 For: KGA Geotechnical Group Ltd.  
 Project #: K230406  
 Co-ordinates: 1573400.699, 5182221.623  
 Drill method: Hand Auger  
 Hole depth: 3.00  
 Grid system: NZTM2000 (E, N)  
 Contractor: LFP  
 Equipment: HA + SP

LFP Ref #: 1794  
 Date started: 14/06/2023  
 Date finished: 14/06/2023  
 R.L.: 2.5 m NZVD(2016)  
 Logged by: SAS  
 Checked By: RBW





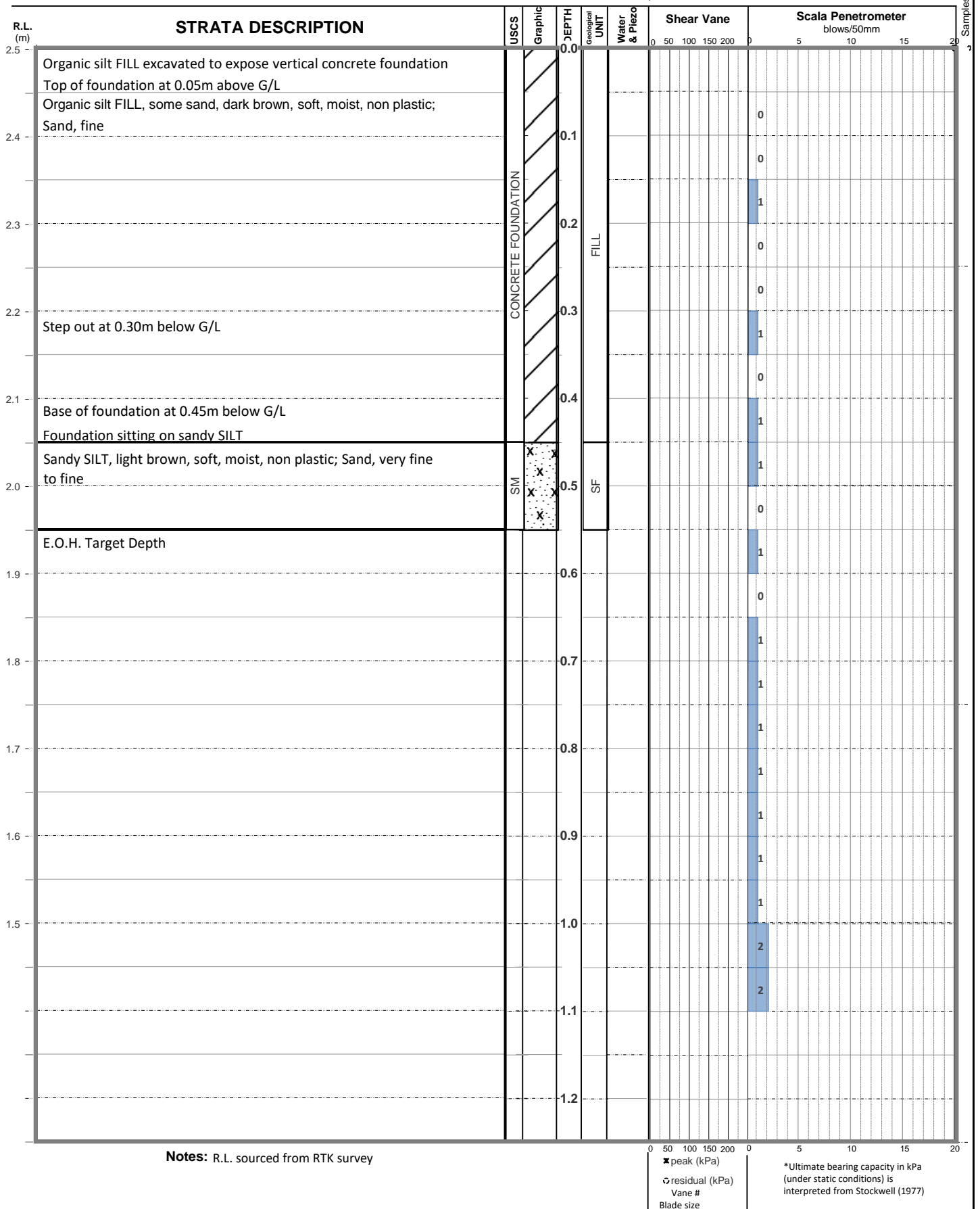
# SHALLOW TRIAL PIT LOG

Hole # **HTP01/SP05**

Project: 19 Belfield Street  
For: KGA Geotechnical Group Ltd.  
Client Ref #: K230406  
Co-ordinates: 1573396.477, 5182218.342  
Drill method: Hand Dig & Scala  
Hole depth: 0.55

Grid system: NZTM2000 (E, N)  
Contractor: LFP  
Equipment: Spade & Scala

Job #: 1794  
Date started: 14/06/2023  
Date finished: 14/06/2023  
R.L.: 2.5 m NZVD(2016)  
Logged by: CLS  
Checked By: RBW



Borehole logged in accordance with the "Guidelines for the Classification and Description of Soil and Rock for Engineering Purposes" Dec 2005 NZGS.  
R.L. is inferred and/or interpolated unless otherwise stated.

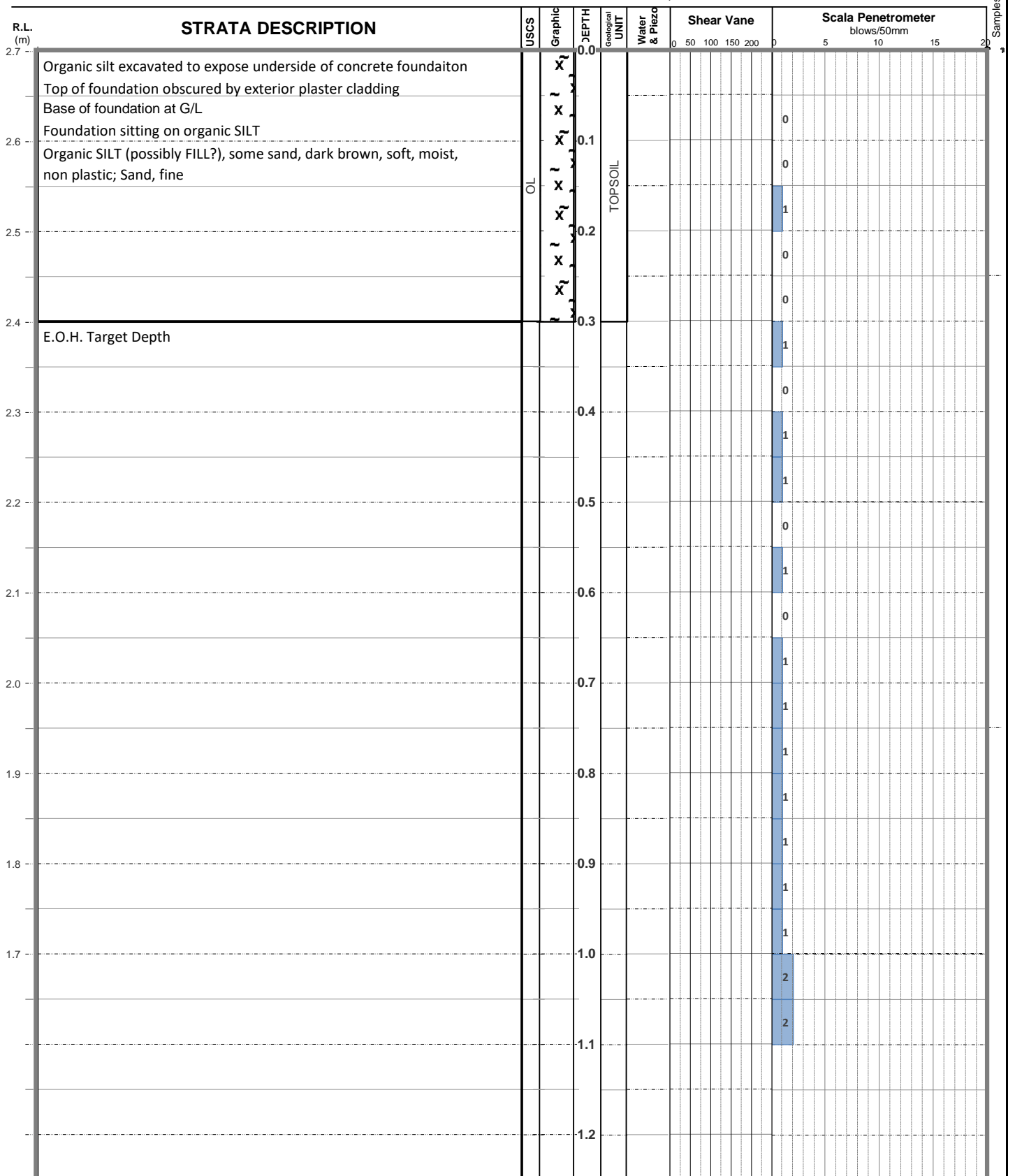
Shear Vane performed and corrected as per NZGS Guidelines.  
Scala Penetrometer Test carried out to NZS 4402: Test 6.5.2 (recorded & reported as blows/50mm)



# SHALLOW TRIAL PIT LOG

Hole # **HTP02/SP06**

Project: 19 Belfield Street  
For: KGA Geotechnical Group Ltd.  
Client Ref #: K230406  
Co-ordinates: 1573396.305, 5182226.821  
Drill method: Hand Dig & Scala  
Hole depth: 0.30  
Grid system: NZTM2000 (E, N)  
Contractor: LFP  
Equipment: Spade & Scala  
Job #: 1794  
Date started: 14/06/2023  
Date finished: 14/06/2023  
R.L.: 2.7 m NZVD(2016)  
Logged by: CLS  
Checked By: RBW



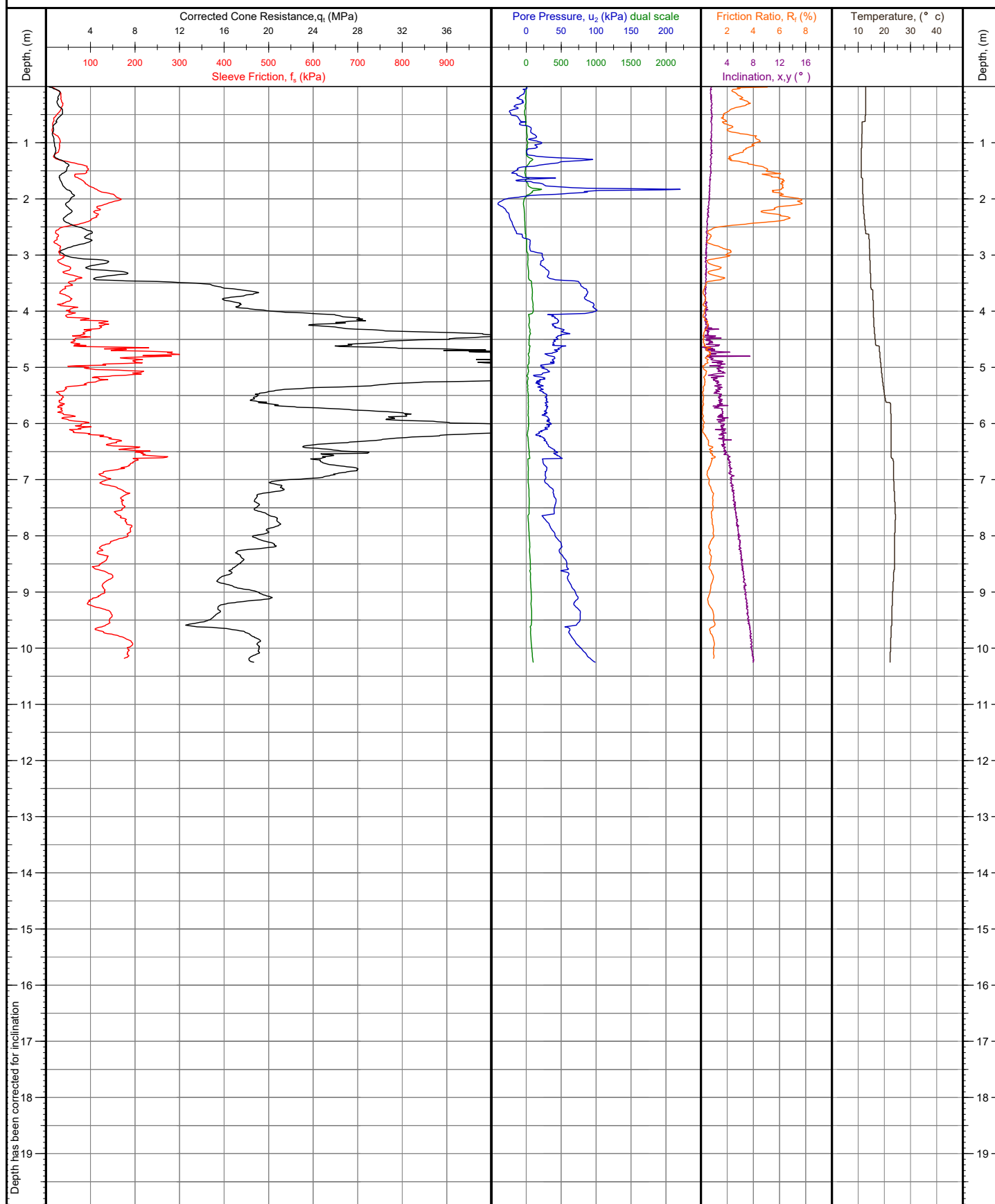
Notes: R.L. sourced from RTK survey

0 50 100 150 200 0 5 10 15 20  
■ peak (kPa)  
○ residual (kPa)  
Vane #  
Blade size  
\*Ultimate bearing capacity in kPa (under static conditions) is interpreted from Stockwell (1977)

Borehole logged in accordance with the "Guidelines for the Classification and Description of Soil and Rock for Engineering Purposes" Dec 2005 NZGS.  
R.L. is inferred and/or interpolated unless otherwise stated.

Shear Vane performed and corrected as per NZGS Guidelines.  
Scala Penetrometer Test carried out to NZS 4402: Test 6.5.2 (recorded & reported as blows/50mm)

# CONE PENETRATION TEST (CPT) LOG



**Project:** 19 Belfield Street

**Location:** Dallington, Christchurch

**Comments:**

**NZTM 2000 N, E (m):** 5182224.51, 1573383.20

**WGS84 (deg):** -43.512439, 172.670697

**Location Method:** Handheld GPS

**Elevation (m):** Unknown

**Operator:** Adam Cron

**Cone Ref:** 000309

**Cone Type:** 10cm<sup>2</sup> Compression

**Date of Test:** 14/06/2023

**Depth (m):** 10.37

**Termination Reason:** Target depth

**Test Number:**

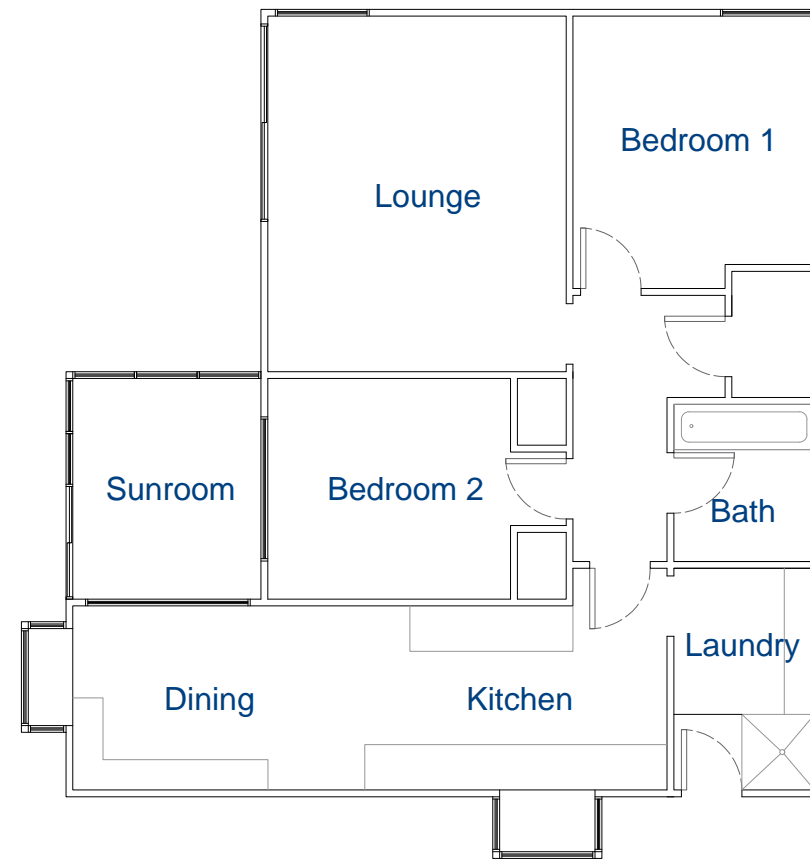
**CPT-01**

**G.I. Job Ref:**  
230533

Where possible GWL is measured after testing, or estimated in the office. This may not represent the true GWL

## **APPENDIX A**

### Third Party Documents



EASTERN ELEVATION

 FLOOR LAYOUT - MAIN DWELLING  
scale 1:100

ISSUE:

REVISION:

DRAWN BY: YR

SCALE: 1:100 @A3

PAGE:

FLOOR  
LAYOUT PLAN

A01

March 2023

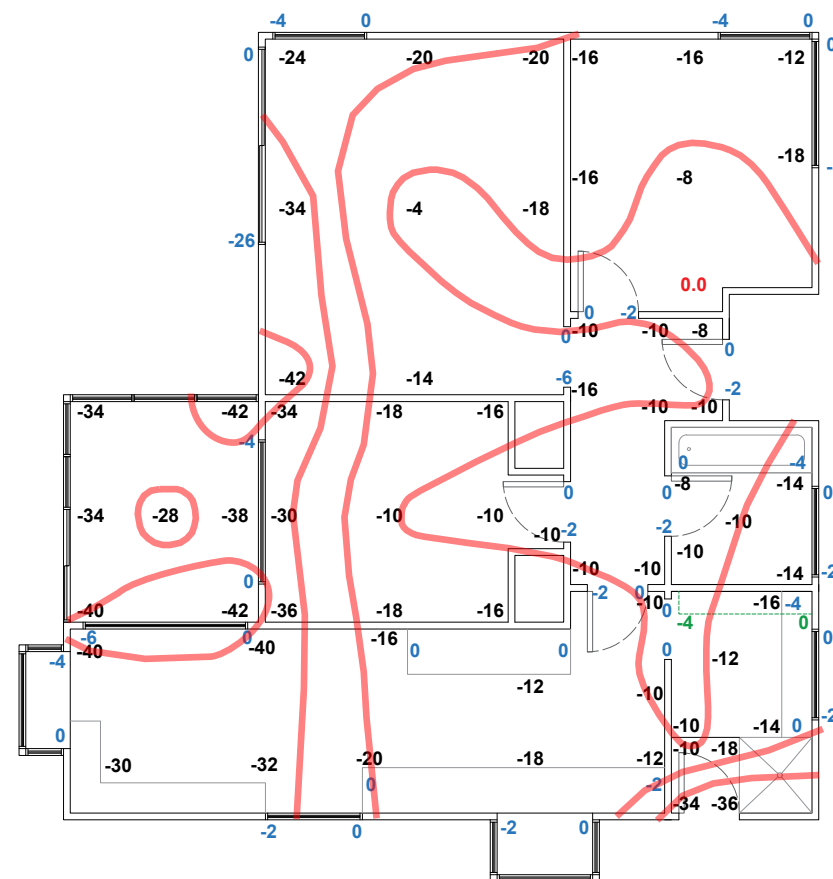
COPYRIGHT : ALL PLANS AND DESIGNS ARE SUBJECT TO COPYRIGHT AND SHALL NOT BE COPIED, REPRODUCED OR USED FOR CONSTRUCTION WITHOUT WRITTEN PERMISSION FROM Viden Consulting Engineers Ltd.



**LEGEND**

LEVELS TAKEN ON WINDOW SILLS, DOOR HEADS, LINTELS AND BENCHES INDICATED IN **BLUE**

LEVELS UNDERNEATH THE CUPBOARDS INDICATED IN **GREEN**



LEVEL SURVEY - MAIN DWELLING  
scale 1:100

ISSUE:

REVISION:

DRAWN BY: **YR**

SCALE: **1:100 @A3**

PAGE:

**LEVEL SURVEY  
PLAN**

**A02**

March 2023

ISSUE:

REVISION:

DRAWN BY: YR

SCALE: 1:100 @A3

PAGE:

FLOOR  
RELEVELLING  
PLAN

A03

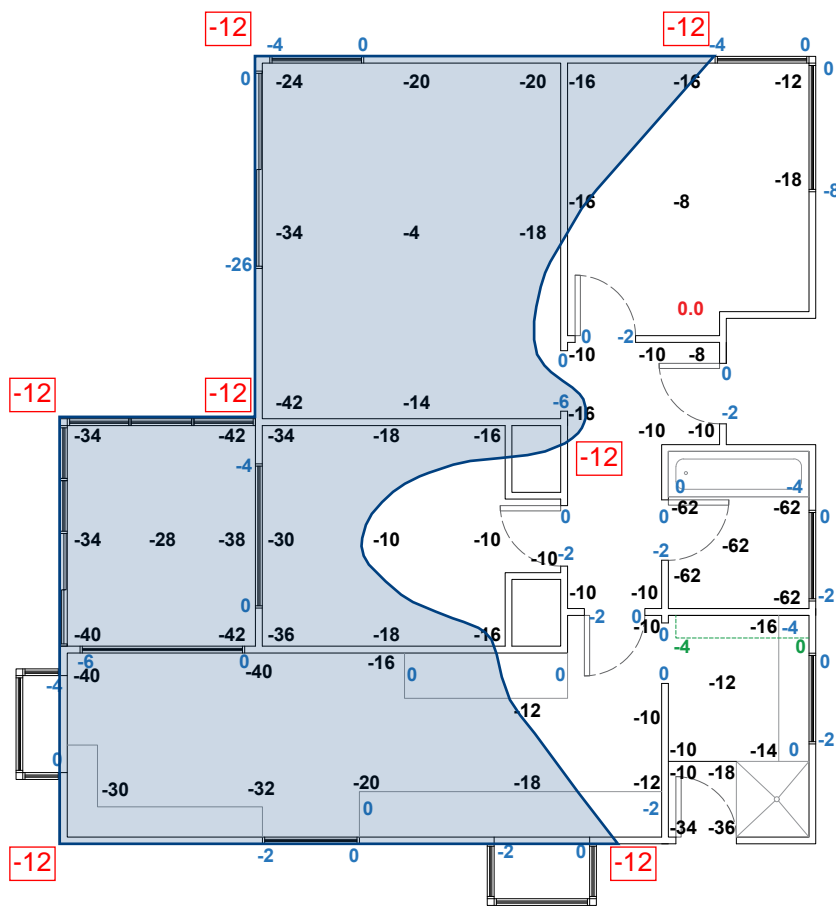
March 2023



LEGEND

LEVELS TAKEN ON WINDOW SILLS, DOOR HEADS, LINTELS AND  
BENCHES INDICATED IN BLUE

LEVELS UNDERNEATH THE CUPBOARDS INDICATED IN GREEN



Legend:

Relevelling by underpinning the perimeter  
foundation and jacking and packing the piles  
See A04 for underpinning details  
See A05 for packing details

Target levels

LEVEL SURVEY - MAIN DWELLING  
scale 1:100

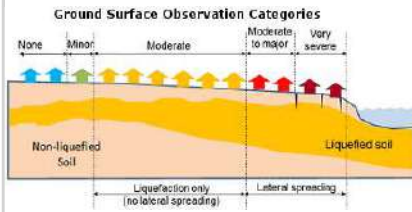
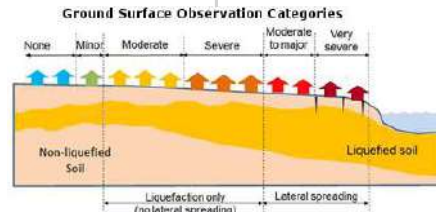
Note: The recommendation to relevel and the proposed  
relevelling strategy is subject to a geotechnical investigation.



## **APPENDIX B**

### Background Information Documents

# New Zealand Geotechnical Database: Property Summary Report

General Property Information					
Property Address	19 Belfield St				
QPID #	1210230	Suburb	Dallington		
Valuation Reference No	22371/13800	DPID #			
Legal Description	LOT 9 DP 16872				
Easting (NZTM)	1573392	Northing (NZTM)	5182223		
CERA Zone	Green	MBIE Technical Category	TC2		
Liquefaction Observations					
Earthquake	4 Sept 2010		22 Feb 2011	13 June 2011	
Liquefaction Observed [from aerial photos]	None		Moderate to Severe	Moderate to Severe	
Ground Surface Observation Category	None		Moderate Liquefaction	Refer to Road Map	
<div><div><p>Ground Surface Observation Categories</p></div><div><p>Ground Surface Observation Categories</p></div></div>					
Discrepancies are possible between observations from aerial photography and ground based observations. Refer to notes 1 & 2.					
Property Surface Elevation from LiDAR Surveys (m LVD37)					
Survey Dates	Pre Quake	5 Sep 2010	8 Mar-30 May 2011	18 Jul - 3 Sep 2011	17 - 18 Feb 2012
Maximum Elevation	3.55	3.37	3.23	3.24	3.09
95 percentile	3.46	3.29	3.16	3.11	3.04
Mean Elevation	3.26	3.15	3.03	2.99	2.91
5 percentile	3.02	2.97	2.87	2.83	2.78
Minimum Elevation	2.97	2.89	2.75	2.72	2.58
Refer to note 3.					
Cumulative Property Elevation Changes from LiDAR Surveys (m LVD37)					
Period: Pre Quake -	to 5 Sep 2010	to 30 May 2011	to 3 Sep 2011	to 18 Feb 2012	
Surface Change	- 0.11	- 0.23	- 0.27	- 0.35	
Other Change	- 0.10	- 0.14	- 0.14	- 0.23	
Tectonic Change	- 0.01	- 0.09	- 0.13	- 0.12	
Refer to note 3.					
Interpolated Ground Water Surface Elevation at the time of each Earthquake (m LVD37)					
Earthquake	Sep 2010	Feb 2011	Jun 2011	Dec 2011	
Surface Elevation	0.56	0.67	0.59	0.63	
For back analysis purpose only. Refer to note 4.					
Design Ground Water Surface Elevations (m LVD37)					
	Median surface	Median with surrogates	85 percentile offset	15 percentile offset	
Surface Elevation	0.54	0.54	0.38	- 0.47	
Refer to note 5.					

# CPT02 14 Belfield Street, Dallington, Christchurch - 02 December, 2022

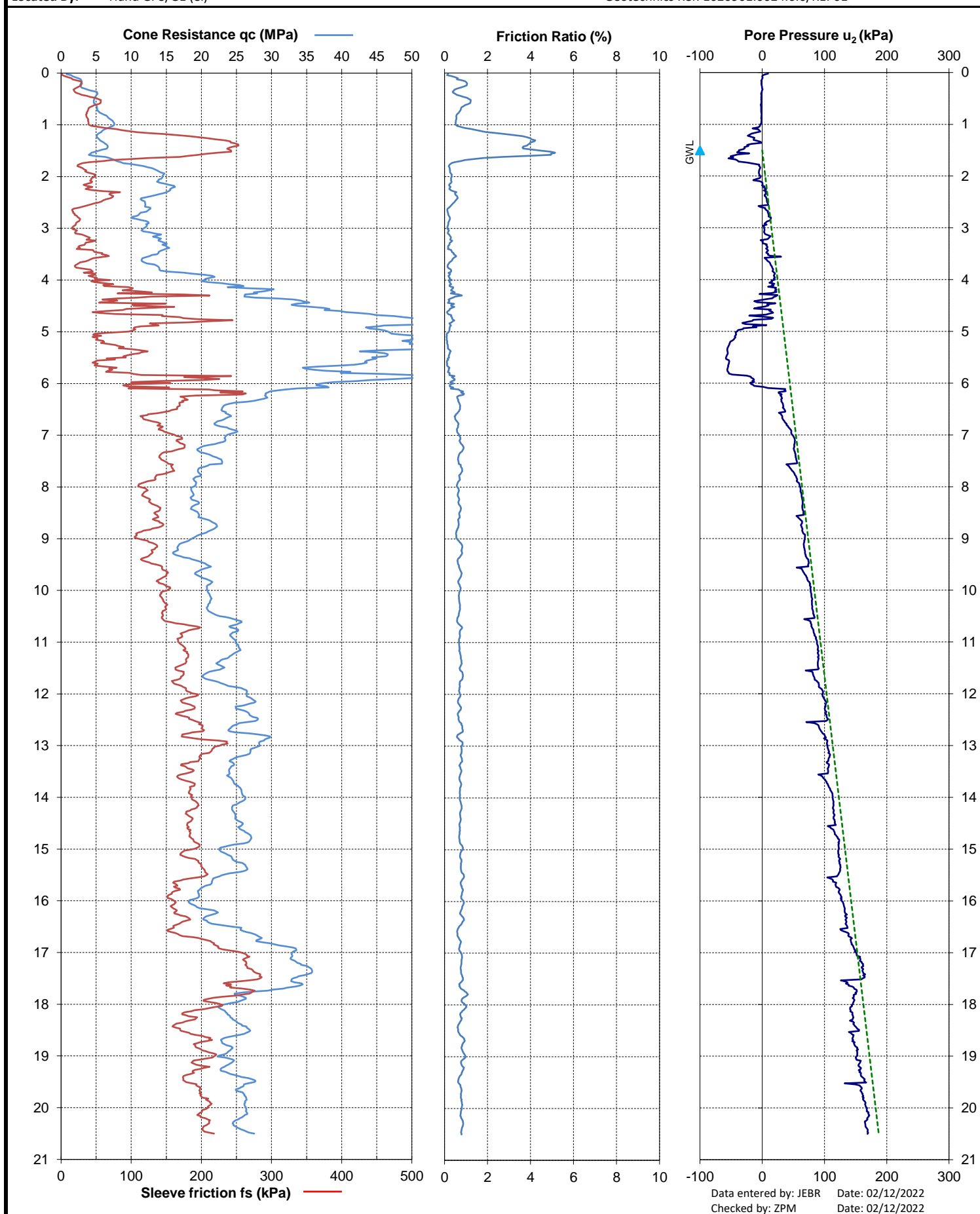
Pre-Drill: 0m NZTM 1573436mE 5182208mN 5m(amsl)  
 Measured GWL: 1.5m (BGL) Other Tests: None  
 Operator: JEBR Comments: Target depth reached  
 Located By: Hand GPS/GE (el)

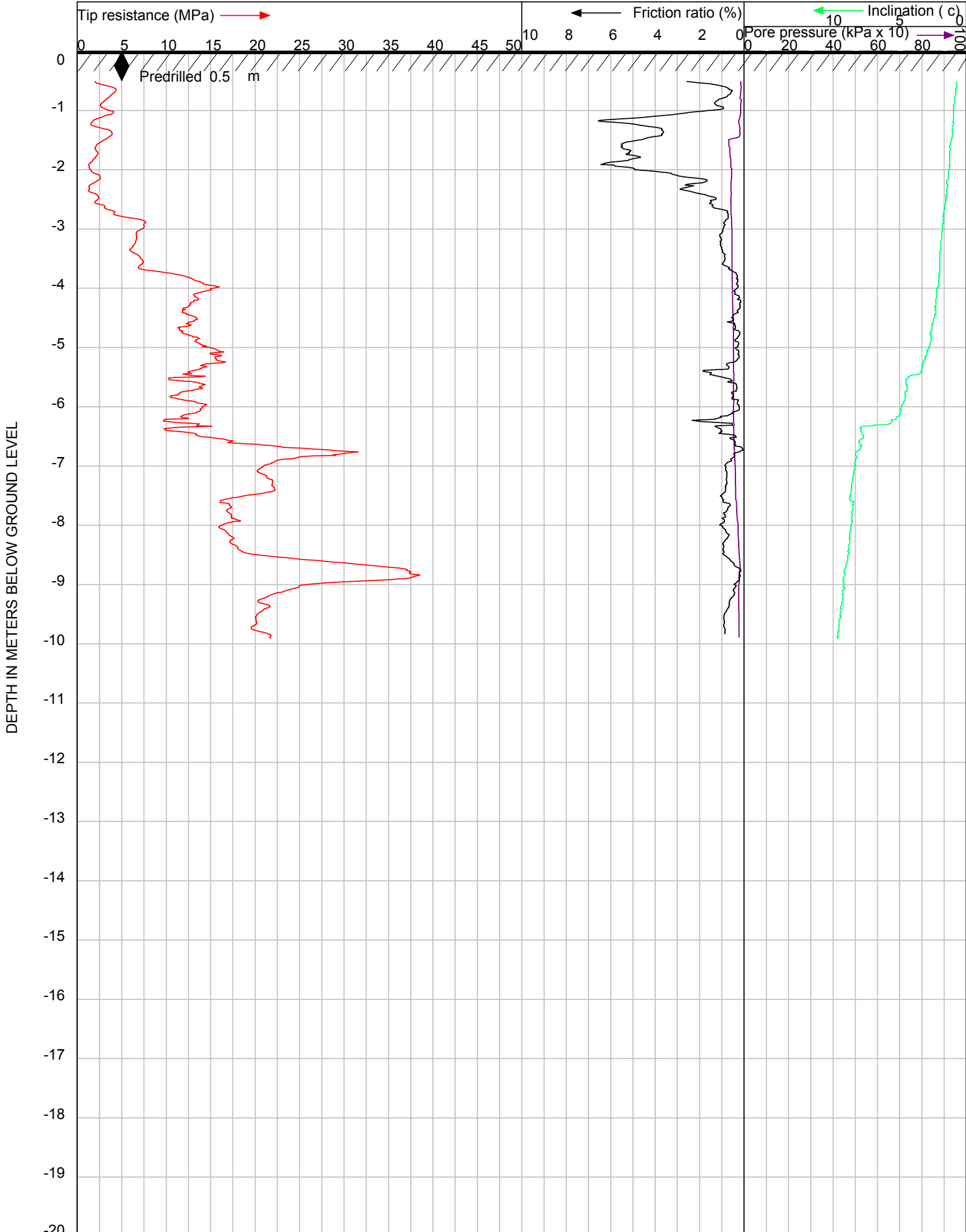
45a Parkhouse Rd, Christchurch  
 e. christchurch@geotechnics.co.nz  
 p.+64 (0)3 361 0300



Geotechnics Ref: 1020961.0024.0.0/REP01

GEOTECHNICS





CLIENT : Tonkin & Taylor Ltd  
LOCATION : Land Classified TC3 (ChCh wide)  
DATE : 18-3-2013  
OPERATOR : M. Pickworth  
REMARK 1 : DAL-TC201-CPTu010  
REMARK 2 : Target Depth

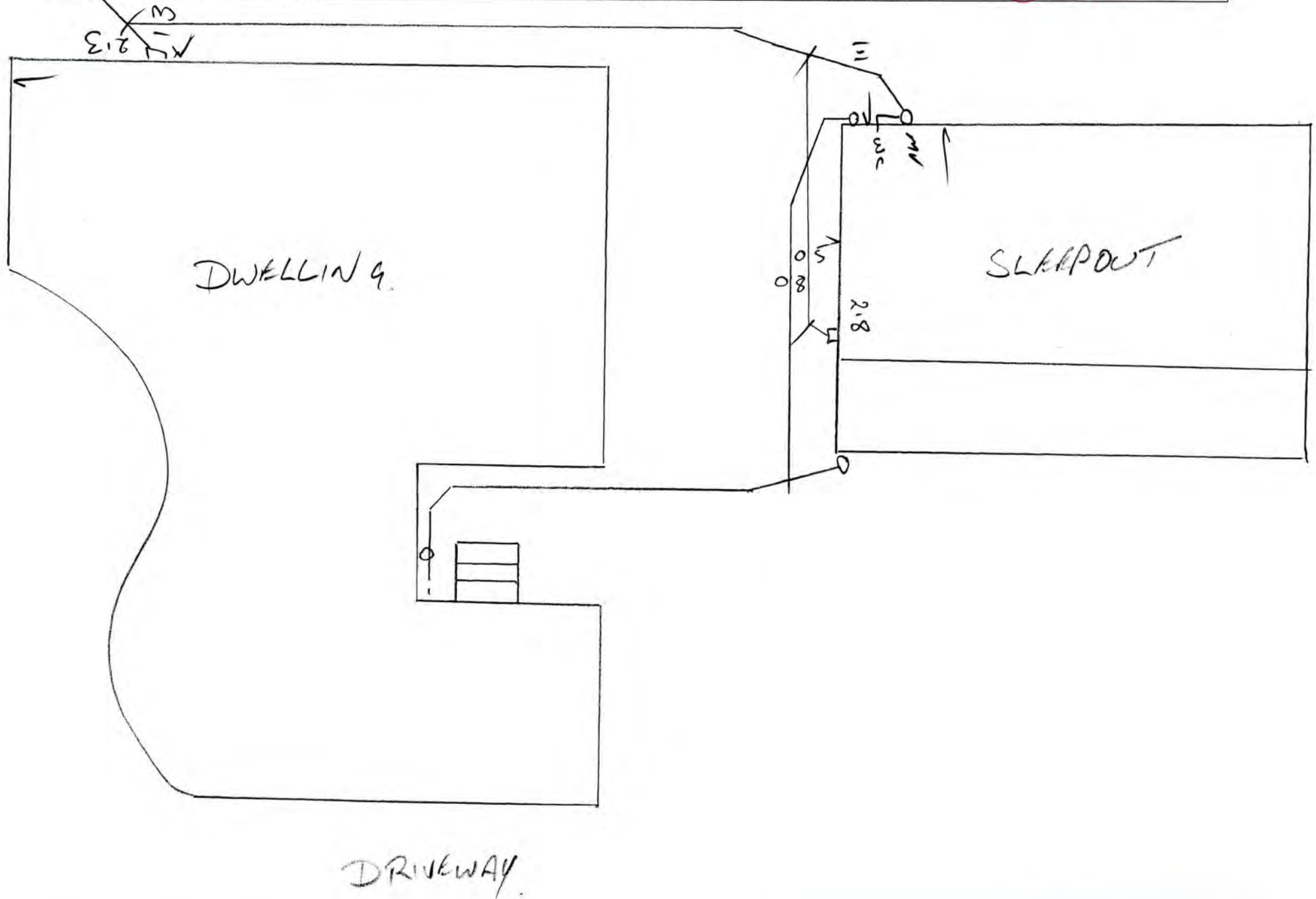
JOB # : 10553  
TEST # : CPTu010  
CONE TYPE/SERIAL # : I-CFXYP20-10/071017T

**McMILLAN**  
DRILLING SERVICES  
120 High St Southbridge CANTERBURY NZ  
Ph +64 3 324 2571 Fax +64 3 324 2431  
www.drilling.co.nz



- Buildings
- StreetAddress
- WwEye**
  - Eye
- WwLateralFitting**
  - Lateral Fitting
- WwPipeFlowDirection
- WwPipe**
  - NominalDiameter
    - Diameter is 200mm or smaller
  - WwLateral
- WwLateral (non CCC)**
  - In Service
  - Abandoned
- SwInlet**
  - Single Sump
  - SwPipeFlowDirection
- SwPipe**
  - NominalDiameter
    - Diameter is 450mm or smaller
  - SwPipe (non CCC)
  - In Service
- WsValve**
  - Gate
  - Sluice
  - WsHydrant
- WsConnection**
  - Meter
- WsFitting**
  - End Cap
  - Connector
  - Connector
  - Connector
- WsPipe**
  - NominalDiameter
    - Diameter is 110mm or smaller
  - WsLateral
- WsLateral (non CCC)**
  - In Service
  - RatingUnit

 <b>CHRISTCHURCH</b> <small>CITY COUNCIL · YOUR PEOPLE · YOUR CITY</small>	DRAINAGE PICKUP		CONNECTION NUMBER
	Address: <u>19 BELFIELD ST</u>	Owner: .....	<div style="color: red; font-size: 2em; font-weight: bold;">COPY</div>
	Project No: <u>10076038</u>	Drainlayer: <u>K+T</u>	
Date: <u>25-10-7</u>	Inspector: <u>FISH</u>		







# Electrical Certificate of Compliance

for prescribed electrical work that is carried out on electrical installations and involves the placing or positioning or the replacing or repositioning of conductors (including fittings attached to those conductors).

**To be completed whether or not an inspection is required.**

No. **2512020**

No. of attachments

DATE

WVO/GI 10

9/1/2007

2460

## CUSTOMER INFORMATION - PLEASE PRINT CLEARLY

Name of customer **P. Skende**

Phone: **3852567**

Address of installation **19 Bedford St Clack**

Postal address of customer (if not as above)

## WORK DETAILS

**6.** No. of lighting outlets

☒ No. of ranges

Please tick (✓) as appropriate where work includes:

**5.** No. of socket outlets

**1.** No. of water heaters

☒ Mains

☒ Main earthing system

Was any installation work carried out by the homeowner?

☒ Yes

☒ No

☒ Switchboard

☒ Electric lines

Description **Wire Sloopant.**

**6m<sup>2</sup> TAE Submain to house sw/bd.**

**Sw/bd c/w RCDs MCB's**

**4 x DBI p/pts**

**1 x Exterior p/pt**

**5 x B/Hdr lights 1 x Exterior Bulbhead.**

It is recommended that test results be recorded here:

Visual Examination



Earth Continuity



Bonding



Polarity



Insulation Resistance **+2.** Mohm

Other

If necessary attach any pages with sketches of work done

## CERTIFICATION OF WORK

I certify that the above electrical work has been carried out in accordance with the requirements of the Electricity Act 1992 and Electricity Regulations 1997.

### ELECTRICAL WORKER DETAILS

Name **G Nordmeyer**

Registration no. **EG584**

Company **CN Electrical Ltd.**

Signature **[Signature]**

Date **30/10/07**

Contact Ph No. **0272206597**

### CERTIFICATION OF ELECTRIC LINES

(to be completed where a separate electrical worker has installed the electric line portion of the mains)

Name

Registration no.

Company

Signature

Date

Contact Ph No.

### INSPECTION DETAILS Electrical work requiring inspection by a registered electrical inspector

☐ New mains

☐ Switchboard

☐ Earthing system

☐ Installation work in hazardous areas

I certify that the inspection has been carried out in accordance with the requirements of regulation 41 of the Electricity Regulations 1997.

Name

Registration no.

Signature

Date

Daytime Contact Ph No.

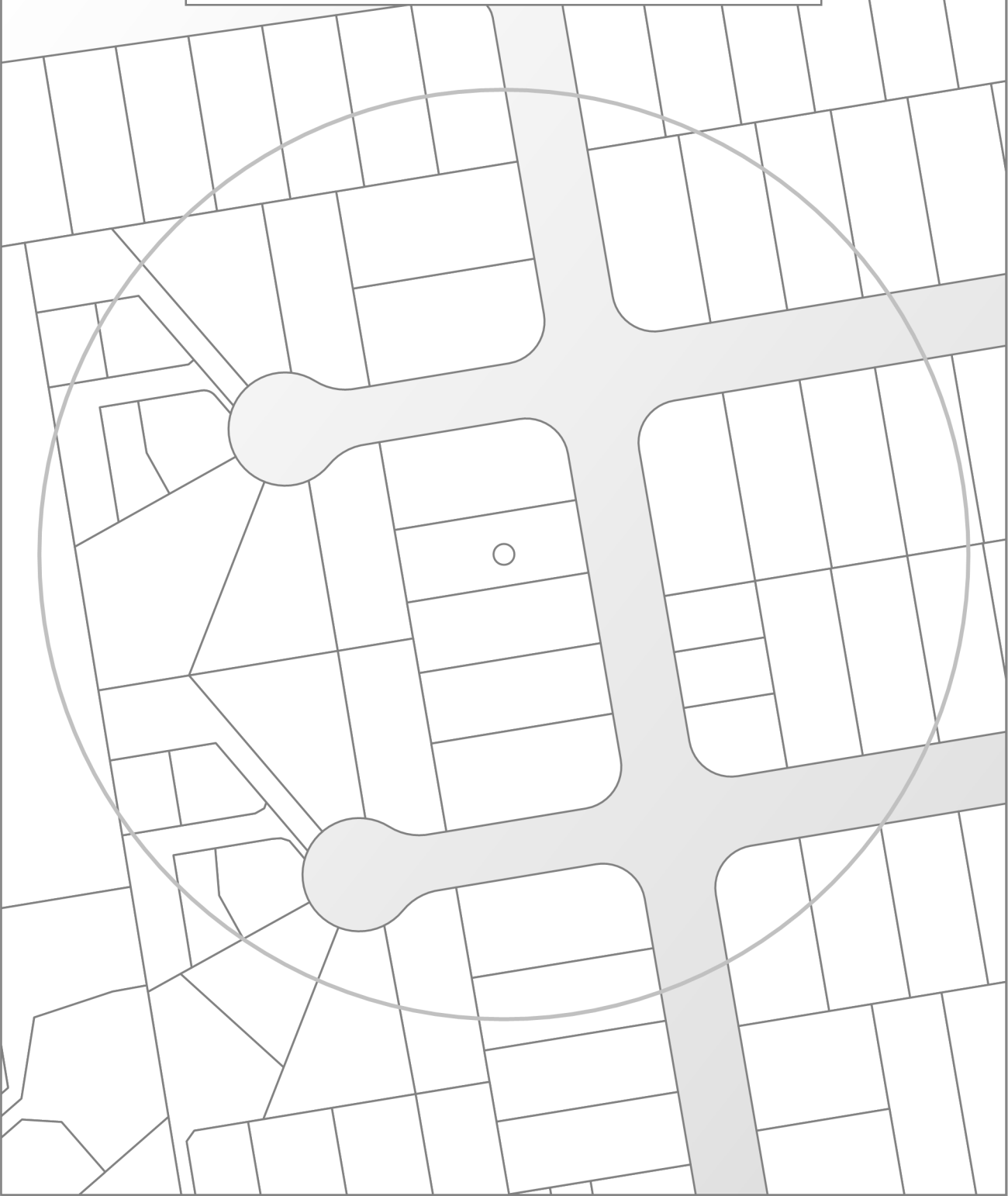
**CUSTOMER COPY - THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED**

## 19 Belfield Street Land Use Consents





**19 Belfield Street  
Subdivision Consents**



## Land Use Resource Consents within 100 metres of 19 Belfield Street

Note: This list does not include subdivision Consents and Certificates of Compliance issued under the Resource Management Act.

---

### 1/1 Bramwell Street

RMA/2021/684

Fee simple subdivision - six lots

Processing complete

Applied 22/03/2021

s223 Certificate issued 27/04/2022

s224 Certificate issued 21/11/2022

Decision issued 14/04/2021

Granted 09/04/2021

### 1/2 Westcott Street

RMA/2020/1587

To construct six social housing units

Processing complete

Applied 29/07/2020

Decision issued 08/09/2020

Granted 08/09/2020

Within scope amendment accepted 06/10/2021

Within scope amendment decision issued 06/10/2021

RMA/2021/148

Fee simple subdivision - six lots

Processing complete

Applied 27/01/2021

s223 Certificate issued 03/06/2022

s224 Certificate issued 03/06/2022

Decision issued 02/03/2021

Granted 26/02/2021

## **14 Belfield Street**

RMA/2023/2454

Subdivision - Fee simple - Three lots

Processing complete

Applied 20/09/2023

s223 Certificate issued 05/07/2024

s224 Certificate issued 16/10/2024

Decision issued 18/10/2023

Granted 12/10/2023

RMA/2023/72

Construct three residential dwellings - Social Housing Complex

Processing complete

Applied 17/01/2023

Decision issued 31/01/2023

Granted 31/01/2023

Within scope amendment accepted 12/06/2023

Within scope amendment decision issued 12/06/2023

## **15 Belfield Street**

RMA/2019/1045

Construction of a Residential Dwelling

Processing complete

Applied 14/05/2019

Decision issued 27/05/2019

Granted 27/05/2019

RMA/2019/187

To Construct a Dwelling

Not accepted for processing

Applied 01/02/2019

Not accepted for processing 11/02/2019

## **16 Belfield Street**

RMA/2023/2454

Subdivision - Fee simple - Three lots

Processing complete

Applied 20/09/2023

s223 Certificate issued 05/07/2024

s224 Certificate issued 16/10/2024

Decision issued 18/10/2023

Granted 12/10/2023

RMA/2023/72

Construct three residential dwellings - Social Housing Complex

Processing complete

Applied 17/01/2023

Decision issued 31/01/2023

Granted 31/01/2023

Within scope amendment accepted 12/06/2023

Within scope amendment decision issued 12/06/2023

## **19 Bramwell Street**

RMA/1998/745

To erect a side entry garage 2 metres from the road boundary. - Historical Reference RES980755

Processing complete

Applied 20/03/1998

Decision issued 02/04/1998

Granted 02/04/1998

## **2/1 Bramwell Street**

RMA/2020/1586

Construct a social housing complex comprising six residential units, with associated earthworks and disturbance of contaminated soil

Processing complete

Applied 29/07/2020

Decision issued 08/09/2020

Granted 08/09/2020

Within scope amendment accepted 11/10/2021

Within scope amendment decision issued 11/10/2021

RMA/2021/684

Fee simple subdivision - six lots

Processing complete

Applied 22/03/2021

s223 Certificate issued 27/04/2022

s224 Certificate issued 21/11/2022

Decision issued 14/04/2021

Granted 09/04/2021

## **2/2 Westcott Street**

RMA/2020/1587

To construct six social housing units

Processing complete

Applied 29/07/2020

Decision issued 08/09/2020

Granted 08/09/2020

Within scope amendment accepted 06/10/2021

Within scope amendment decision issued 06/10/2021

RMA/2021/148

Fee simple subdivision - six lots

Processing complete

Applied 27/01/2021

s223 Certificate issued 03/06/2022

s224 Certificate issued 03/06/2022

Decision issued 02/03/2021

Granted 26/02/2021

## **21 Belfield Street**

RMA/1979/502

To erect a garage 5.13m from the boundary. attached to the existing dwelling - Historical Reference RES9219641

Processing complete

Applied 23/07/1979

Decision issued 31/07/1979

Granted 31/07/1979

RMA/1999/1126

The corner of the proposed extension intrudes into the 4.5m front yard. - Historical Reference RES9219643

Processing complete

Applied 01/01/1999

Decision issued 28/09/1976

Granted 28/09/1976

### **3/1 Bramwell Street**

RMA/2020/1586

Construct a social housing complex comprising six residential units, with associated earthworks and disturbance of contaminated soil

Processing complete

Applied 29/07/2020

Decision issued 08/09/2020

Granted 08/09/2020

Within scope amendment accepted 11/10/2021

Within scope amendment decision issued 11/10/2021

RMA/2021/684

Fee simple subdivision - six lots

Processing complete

Applied 22/03/2021

s223 Certificate issued 27/04/2022

s224 Certificate issued 21/11/2022

Decision issued 14/04/2021

Granted 09/04/2021

### **3/2 Westcott Street**

RMA/2020/1587

To construct six social housing units

Processing complete

Applied 29/07/2020

Decision issued 08/09/2020

Granted 08/09/2020

Within scope amendment accepted 06/10/2021

Within scope amendment decision issued 06/10/2021

RMA/2021/148

Fee simple subdivision - six lots

Processing complete

Applied 27/01/2021

s223 Certificate issued 03/06/2022

s224 Certificate issued 03/06/2022

Decision issued 02/03/2021

Granted 26/02/2021

#### **4/1 Bramwell Street**

RMA/2020/1586

Construct a social housing complex comprising six residential units, with associated earthworks and disturbance of contaminated soil

Processing complete

Applied 29/07/2020

Decision issued 08/09/2020

Granted 08/09/2020

Within scope amendment accepted 11/10/2021

Within scope amendment decision issued 11/10/2021

RMA/2021/684

Fee simple subdivision - six lots

Processing complete

Applied 22/03/2021

s223 Certificate issued 27/04/2022

s224 Certificate issued 21/11/2022

Decision issued 14/04/2021

Granted 09/04/2021

#### **4/2 Westcott Street**

RMA/2020/1587

To construct six social housing units

Processing complete

Applied 29/07/2020

Decision issued 08/09/2020

Granted 08/09/2020

Within scope amendment accepted 06/10/2021

Within scope amendment decision issued 06/10/2021

RMA/2021/148

Fee simple subdivision - six lots

Processing complete

Applied 27/01/2021

s223 Certificate issued 03/06/2022

s224 Certificate issued 03/06/2022

Decision issued 02/03/2021

Granted 26/02/2021

### **5/1 Bramwell Street**

RMA/2020/1586

Construct a social housing complex comprising six residential units, with associated earthworks and disturbance of contaminated soil

Processing complete

Applied 29/07/2020

Decision issued 08/09/2020

Granted 08/09/2020

Within scope amendment accepted 11/10/2021

Within scope amendment decision issued 11/10/2021

RMA/2021/684

Fee simple subdivision - six lots

Processing complete

Applied 22/03/2021

s223 Certificate issued 27/04/2022

s224 Certificate issued 21/11/2022

Decision issued 14/04/2021

Granted 09/04/2021

### **5/2 Westcott Street**

RMA/2020/1587

To construct six social housing units

Processing complete

Applied 29/07/2020

Decision issued 08/09/2020

Granted 08/09/2020

Within scope amendment accepted 06/10/2021



Within scope amendment decision issued 06/10/2021

RMA/2021/148

Fee simple subdivision - six lots

Processing complete

Applied 27/01/2021

s223 Certificate issued 03/06/2022

s224 Certificate issued 03/06/2022

Decision issued 02/03/2021

Granted 26/02/2021

## **6/1 Bramwell Street**

RMA/2020/1586

Construct a social housing complex comprising six residential units, with associated earthworks and disturbance of contaminated soil

Processing complete

Applied 29/07/2020

Decision issued 08/09/2020

Granted 08/09/2020

Within scope amendment accepted 11/10/2021

Within scope amendment decision issued 11/10/2021

RMA/2021/684

Fee simple subdivision - six lots

Processing complete

Applied 22/03/2021

s223 Certificate issued 27/04/2022

s224 Certificate issued 21/11/2022

Decision issued 14/04/2021

Granted 09/04/2021

## **6/2 Westcott Street**

RMA/2020/1587

To construct six social housing units

Processing complete

Applied 29/07/2020

Decision issued 08/09/2020

Granted 08/09/2020

Within scope amendment accepted 06/10/2021

Within scope amendment decision issued 06/10/2021

RMA/2021/148

Fee simple subdivision - six lots

Processing complete

Applied 27/01/2021

s223 Certificate issued 03/06/2022

s224 Certificate issued 03/06/2022

Decision issued 02/03/2021

Granted 26/02/2021

## **9 Westcott Street**

RMA/2023/72

Construct three residential dwellings - Social Housing Complex

Processing complete

Applied 17/01/2023

Decision issued 31/01/2023

Granted 31/01/2023

Within scope amendment accepted 12/06/2023

Within scope amendment decision issued 12/06/2023

## **91 Banks Avenue**

RMA/1995/2810

Outline Plan for Banks Avenue School - Historical Reference RES955806

Processing complete

Applied 03/11/1995

Decision issued 14/11/1995

Outline plan accepted 14/11/1995

RMA/1996/2651

Outline Plan for Banks Avenue School. - Historical Reference RES963057

Processing complete

Applied 14/10/1996

Decision issued 18/11/1996

Outline plan accepted 18/11/1996

RMA/1997/2523

To erect an outdoor classroom 1m from the boundary and intrude into the 6m site boundary setback. - Historical Reference RES972899

Processing complete

Applied 10/10/1997

Decision issued 15/12/1997

Granted 15/12/1997

RMA/2000/1196

Outline plan for a new two storey administration building at Banks Avenue School. - Historical Reference RMA20001897

Processing complete

Applied 08/05/2000

Decision issued 17/05/2000

Outline plan accepted 12/05/2000

RMA/2000/959

Outline plan for replacement of coal-fired boiler with a diesel-fired boiler and above-ground diesel storage tank. - Historical Reference RMA20001640

Processing complete

Applied 08/04/2000

Decision issued 27/04/2000

Outline plan accepted 19/04/2000

RMA/2005/2325

Outline Plan for a new Oscar building - Historical Reference RMA20021205

Processing complete

Applied 07/10/2005

Decision issued 28/10/2005

Outline plan accepted 26/10/2005

RMA/2008/297

Outline plan to replace school playground - Historical Reference RMA92011089

Processing complete

Applied 15/02/2008

Decision issued 04/03/2008

Outline plan accepted 04/03/2008

RMA/2009/1553

Outline PLan new information centre and rooms - Historical Reference RMA92015029

Processing complete

Applied 16/10/2009

Decision issued 27/11/2009

Outline plan accepted 27/11/2009

RMA/2012/1455

TEMPORARY ACCOMMODATION - Administrative accommodation - Historical Reference RMA92020860

Processing complete

Applied 13/09/2012

Decision issued 20/09/2012

Granted 20/09/2012

RMA/2014/840

DEMOLISH AND REMOVE SURPLUS AND DEFECTIVE AT SCHOOLS - Historical Reference RMA92025472

Processing complete

Applied 08/04/2014

Decision issued 29/04/2014

Outline plan accepted 23/04/2014

RMA/2022/3221

Demolition of Banks Avenue School

Processing complete

Applied 13/10/2022

Decision issued 22/11/2022

Granted 22/11/2022

**Data Quality Statement**

### **Land Use Consents**

All resource consents are shown for sites that have been labelled with an address. For sites that have been labelled with a cross (+) no resource consents have been found. Sites that have no label have not been checked for resource consents. This will be particularly noticeable on the margins of the search radius. If there are such sites and you would like them included in the check, please ask for the LIM spatial query to be rerun accordingly. This will be done free of charge although there may be a short delay. Resource consents which are on land occupied by roads, railways or rivers are not, and currently cannot be displayed, either on the map or in the list. Resource consents that relate to land that has since been subdivided, will be shown in the list, but not on the map. They will be under the address of the land as it was at the time the resource consent was applied for. Resource consents that are listed as Non-notified and are current, may in fact be notified resource consents that have not yet been through the notification process. If in doubt. Please phone (03)941 8999.

The term “resource consents” in this context means land use consents. Subdivision consents and certificates of compliance are excluded.

### **Subdivision Consents**

All subdivision consents are shown for the sites that have been labelled with consent details. For Sites that have been labelled with a cross (+) no records have been found. Sites that have no label have not been checked for subdivision consents. This will be particularly noticeable on the margins of the search radius. If there are such sites and you would like them included in the check, please ask for the LIM spatial query to be rerun accordingly. This will be done free of charge although there may be a short delay.

The term “subdivision consents” in this context means a resource consent application to subdivide land. Non subdivision land use resource consents and certificates of compliance are excluded.

This report will only record those subdivision applications which have not been completed i.e once a subdivision has been given effect to and the new lots/properties have been established the application which created those lots will not be shown

All subdivision consent information is contained on the map and no separate list is supplied