Te Kaunihera o Te Hiku o te Ika
Far North District Council

Office Use Only
Application Number:

Application for resource consent or fast-track resource consent

Or Associated Consent Pursuant to the Resource Management Act 1991 (RMA)) (If applying for a Resource Consent pursuant to Section 87AAC or 88 of the RMA, this form can be used to satisfy the requirements of Form 9). Prior to, and during, completion of this application form, please refer to Resource Consent Guidance Notes and Schedule of Fees and Charges — both available on the Council's web page.

1. Pre-Lodgement Meeting

Have you met with a council Resource Consent representative to discuss this application prior to lodgement?

◯ **Yes** ☑ **No**

2. Type of consent being applied for

(more than one circle can be ticked):

☑ **Land Use**

◯ **Fast Track Land Use***

◯ **Change of Consent Notice (s.221(3))**

◯ **Certificate of Compliance (s.139)**

◯ **Extension of time (s.125)**

◯ **Discharge:** Total voume = _____ m³
Note; volumes >3m³ requires NRC Consent.

◯ **Subdivision**

◯ **Existing Use Certicicate (s.139A)**

◯ **Consent under National Environmental Standard**
(e.g. Assessing and Managing Contaminants in Soil)

☑ **Other (please specify)** Change of conditions (s127): 2170377-RMACOM Decision C, Conditions 1, 2, 3, 5, 6

**The fast track is for simple land use consents and is restricted to consents with a controlled activity status.*

3. Would you like to opt out of the fast track process?

☑ **Yes** ◯ **No**

4. Consultation

Have you consulted with Iwi/Hapū? ◯ **Yes** ☑ **No**

If yes, which groups have you consulted with?

Who else have you consulted with? FNDC (Form 4s and s127 route); NRC (APP.047605.01.01)

For any questions or information regarding iwi/hapū consultation, please contact:
The Resource Consents Planning Technicians, **planning_technicians@fndc.govt.nz**

5. Applicant details

Name/s: WBC Developers Limited c/o Pete and Tiss Hendl

Email:

Phone number:

Postal address:
(or alternative method of service under section 352 of the act)

Postcode

Have you been the subject of abatement notices, enforcement orders, infringement notices and/or convictions under the Resource Management Act 1991? ◯ **Yes** ✔ **No**

If yes, please provide details.

6. Address for correspondence

Name and address for service and correspondence (if using an Agent write their details here)

Name/s: Paul Wright (Magpie Design)

Email:

Phone number: Home

Postal address:
(or alternative method of service under section 352 of the act)

Postcode

All correspondence will be sent by email in the first instance. Please advise us if you would prefer an alternative means of communication.

7. Details of property owner/s and occupier/s

Name and Address of the owner/occupiers of the land to which this application relates (where there are multiple owners or occupiers please list on a separate sheet if required)

Name/s: WBC Developers Limited c/o Pete and Tiss Hendl

Property address/ location:

8. Application site details

Location and/or property street address of the proposed activity:

Name/s: Pete and Tiss Hendl

Site address/ location: 20 Klinac Lane, Waipapa 0230

Postcode

Legal description: Sec 3 SO 438821 **Val Number:** 00213-14224

Certificate of title: CT-574944

Please remember to attach a copy of your Certificate of Title to the application, along with relevant consent notices and/or easements and encumbrances (search copy must be less than 6 months old)

Site visit requirements:

Is there a locked gate or security system restricting access by Council staff? ◯ **Yes** ☑ **No**

Is there a dog on the property? ◯ **Yes** ☑ **No**

Please provide details of any other entry restrictions that Council staff should be aware of, e.g. health and safety, caretaker's details. This is important to avoid a wasted trip and having to re-arrange a second visit.

9. Description of the proposal

Please enter a brief description of the proposal here. Please refer to Chapter 4 of the *District Plan, and Guidance Notes*, for further details of information requirements.

Three new detached single-storey large-format retail buildings (2,000 m2 GFA), with access and earthworks: PDP-AV TRAN-R1/S1, TRAN-R9, NH-R3/NH-R7, EW-R1 (Form 4s 9 Sep, 19 Oct 2026).

Also s127 change to 2170377-RMACOM Conditions 1, 2, 3, 5 and 6. Refer Planning Report MDRC-090926-V1.0.

If this is an application for a Change or Cancellation of Consent Notice conditions (s.221(3)), please quote relevant existing Resource Consents and Consent Notice identifiers and provide details of the change(s), with reasons for requesting them.

The proposal has been prepared in accordance with the following version of the FNDC Engineering Standards:

◯ **2009** ◯ **2023**

10. Would you like to request public notification?

◯ **Yes** ☑ **No**

11. Other consent required/being applied for under different legislation

(more than one circle can be ticked):

☑ **Building Consent** Enter BC ref # here (if known)

☑ **Regional Council Consent (ref # if known)** Ref # here (if known)

◯ **National Environmental Standard Consent** Consent here (if known)

◯ **Other (please specify)** Specify 'other' here

12. National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health:

The site and proposal may be subject to the above NES. In order to determine whether regard needs to be had to the NES please answer the following:

Is the piece of land currently being used or has it historically ever been used for an activity or industry on the Hazardous Industries and Activities List (HAIL)? ◯ **Yes** ☑ **No** ◯ **Don't know**

Is the proposed activity an activity covered by the NES? Please tick if any of the following apply to your proposal, as the NESCS may apply as a result? ◯ **Yes** ☑ **No** ◯ **Don't know**

- ◯ **Subdividing land**
- ☑ **Disturbing, removing or sampling soil**
- ◯ **Changing the use of a piece of land**
- ◯ **Removing or replacing a fuel storage system**

13. Natural hazards (National Policy Statement for Natural Hazards 2025)

Is the site subject to known or potential natural hazards (for example, flooding, coastal inundation, erosion, or unstable land), as contemplated by the National Policy Statement for Natural Hazards 2025? ☑ **Yes** ◯ **No**

If yes, please identify the relevant natural hazard(s) by ticking the applicable box(es) below:

- ☑ **Flooding**
- ◯ **Landslips**
- ◯ **Coastal Erosion**
- ◯ **Coastal Inundation**
- ◯ **Active Faults**
- ◯ **Liquefaction**
- ◯ **Tsunami**

Please ensure all relevant technical reports are submitted with the application.

14. Assessment of environmental effects:

Every application for resource consent must be accompanied by an Assessment of Environmental Effects (AEE). This is a requirement of Schedule 4 of the Resource Management Act 1991 and an application can be rejected if an adequate AEE is not provided. The information in an AEE must be specified in sufficient detail to satisfy the purpose for which it is required. Your AEE may include additional information such as written approvals from adjoining property owners, or affected parties.

Your AEE is attached to this application ☑ **Yes**

15. Draft conditions:

Do you wish to see the draft conditions prior to the release of the resource consent decision? ☑ **Yes** ◯ **No**

IIf yes, please be advised that the timeframe will be suspended for 5 working days as per s107G of the RMA to enable consideration for the draft conditions.

16. Billing Details:

This identifies the person or entity that will be responsible for paying any invoices or receiving any refunds associated with processing this resource consent. Please also refer to Council's Fees and Charges Schedule.

Name/s: (please write in full) Pete and Tiss Hendl

Email:

Phone number: Home

Postal address:
(or alternative method of service under section 352 of the act)

Postcode 0294

Fees Information
An instalment fee for processing this application is payable at the time of lodgement and must accompany your application in order for it to be lodged. Please note that if the instalment fee is insufficient to cover the actual and reasonable costs of work undertaken to process the application you will be required to pay any additional costs. Invoiced amounts are payable by the 20th of the month following invoice date. You may also be required to make additional payments if your application requires notification.

Declaration concerning Payment of Fees
I/we understand that the Council may charge me/us for all costs actually and reasonably incurred in processing this application. Subject to my/our rights under Sections 357B and 358 of the RMA, to object to any costs, I/we undertake to pay all and future processing costs incurred by the Council. Without limiting the Far North District Council's legal rights if any steps (including the use of debt collection agencies) are necessary to recover unpaid processing costs I/we agree to pay all costs of recovering those processing costs. If this application is made on behalf of a trust (private or family), a society (incorporated or unincorporated) or a company in signing this application I/we are binding the trust, society or company to pay all the above costs and guaranteeing to pay all the above costs in my/our personal capacity.

Name: (please write in full) Peter Clifford Hendl

Signature:
(signature of bill payer)

Date 20 August 2026

MANDATORY

17. Important Information:

Note to applicant
You must include all information required by this form. The information must be specified in sufficient detail to satisfy the purpose for which it is required.

You may apply for 2 or more resource consents that are needed for the same activity on the same form.

You must pay the charge payable to the consent authority for the resource consent application under the Resource Management Act 1991.

Fast-track application
Under the fast-track resource consent process, notice of the decision must be given within 10 working days after the date the application was first lodged with the authority, unless the applicant opts out of that process at the time of lodgement.

A fast-track application may cease to be a fast-track application under section 87AAC(2) of the RMA.

Privacy Information:
Once this application is lodged with the Council it becomes public information. Please advise Council if there is sensitive information in the proposal. The information you have provided on this form is required so that your application for consent pursuant to the Resource Management Act 1991 can be processed under that Act. The information will be stored on a public register and held by the Far North District Council. The details of your application may also be made available to the public on the Council's website, **www.fndc.govt.nz** These details are collected to inform the general public and community groups about all consents which have been issued through the Far North District Council.

18. Declaration

The information I have supplied with this application is true and complete to the best of my knowledge.

Name (please write in full) Paul Wright

Signature

Date 29 Oct 26

A signature is not required if the application is made by electronic means

See overleaf for a checklist of your information...

Checklist of your information

Please tick if information is provided

- ☐ Payment (cheques payable to Far North District Council)
- ☑ A current Certificate of Title (Search Copy not more than 6 months old)
- ☐ Details of your consultation with Iwi and hapū
- ☑ Copies of any listed encumbrances, easements and/or consent notices relevant to the application
- ☑ Applicant / Agent / Property Owner / Bill Payer details provided
- ☑ Location of property and description of proposal
- ☑ Assessment of Environmental Effects
- ☐ Written Approvals / correspondence from consulted parties
- ☑ Reports from technical experts (if required)
- ☑ Copies of other relevant consents associated with this application
- ☑ Location and Site plans (land use) AND/OR
- ☐ Location and Scheme Plan (subdivision)
- ☑ Elevations / Floor plans
- ☑ Topographical / contour plans

Please refer to Chapter 4 of the District Plan for details of the information that must be provided with an application. Please also refer to the RC Checklist available on the Council's website. This contains more helpful hints as to what information needs to be shown on plans.

Resource Consent Application

PLANNING REPORT & ASSESSMENT OF ENVIRONMENTAL EFFECTS

Proposed Earthworks: 20 Klinac Lane, Waipapa

ISSUED BY

MAGPIE DESIGN

AUTHOR

Paul Wright Director & Planner

Report Overview

Report Type	Planning: Resource Consent - Earthworks
Report Prepared for	WBC Developers Limited
Consent Authorities	Northland Regional Council and Far North District Council
Report Prepared by	Paul Wright, Director & Planner, Magpie Design
Report Reference	MDRC-110826-V1.0
Issue	V1.0
Date	20 August 2026

EXECUTIVE SUMMARY

This application seeks resource consent from Northland Regional Council (NRC) and Far North District Council (FNDC) for earthworks associated with three new single-storey commercial retail buildings at 20 Klinac Lane, Waipapa. This report is a single Assessment of Environmental Effects for both applications, lodged separately to each council.

The site lies within the NRC Priority River Flood Hazard Zones, both the 10-year extent (RFHZ1) and the 100-year CC extent (RFHZ3). Engineered fill is required to raise ground levels to comply with FNDC Engineering Standards for commercial floor levels above the 1% AEP flood event. Fill depths range from 0.3 m to 1.14 m per the Earthworks Plan (drawing BC30) and the geotechnical investigation (Initia, April 2026). A preload surcharge of approximately 1 m is required for Building 3 to address a settlement risk identified in the geotechnical report.

The total volume of fill to be placed is 3,187 m^3 (1,398 m^3 building platform fill and 1,789 m^3 paving fill), of which 912 m^3 lies within the 10-year flood zone; the entire volume lies within the 100-year CC zone. A further 739 m^3 of topsoil is stripped from natural ground, (existing hardstand is not being stripped), giving approximately 3,926 m^3 of earth moved or placed. This strip figure is an estimate; as the fill volume alone exceeds both permitted thresholds, any variation does not affect the activity status. All earthworks will be undertaken in a single construction period.

The activity status is as follows:

- **NRC:** The volume of earth moved or placed within the 100-year CC flood hazard zone (approximately 3,926 m^3) exceeds the 1,000 m^3 controlled activity threshold under Rule C.8.3.3. The earthworks are a **discretionary activity** under Rule C.8.3.4 of the Proposed Regional Plan for Northland (PRPN).
- **FNDC:** The earthworks volume (approximately 3,926 m^3 of earth moved or placed, including 3,187 m^3 of fill) exceeds the 500 m^3 permitted activity threshold for the Light Industrial zone under standard EW-S1 of the Far North District Plan (DP, Appeals Version 20 August 2026). The earthworks provisions relied on are not the subject of any appeal and are treated as operative under s86F(1) of the RMA (refer Section 1.3A). The earthworks are a **restricted discretionary activity** under Rule EW-R1.

The Whiriwhiritoa Stream runs along the northern boundary. Surveyed by Donaldson Surveyors (13 July 2026) at an average width of 2.5 m, it carries a 10 m river margin under the DP definitions. All buildings, surfaces, and earthworks lie outside that margin, as shown on the revised site plan (BC03, 16 July 2026). No works are proposed within the stream or its banks.

All adverse environmental effects are assessed as less than minor. Non-notified processing is requested for both applications.

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1. INTRODUCTION

1.1. Purpose of Application

This application seeks resource consent for earthworks associated with the construction of three new single-storey retail buildings at 20 Klinac Lane, Waipapa. Resource consent is required from two consent authorities:

- **Northland Regional Council**, pursuant to Rule C.8.3.4 of the Proposed Regional Plan for Northland (PRPN). The proposed earthworks volumes within the 100-year CC River Flood Hazard Zone (approximately 3,926 m^3 of earth moved or placed) exceed the 1,000 m^3 controlled activity ceiling under Rule C.8.3.3. The earthworks are a discretionary activity under Rule C.8.3.4.
- **Far North District Council**, pursuant to Rule EW-R1 of the Far North District Plan (DP, Appeals Version 20 August 2026). The proposed earthworks volume (approximately 3,926 m^3 of earth moved or placed) exceeds the 500 m^3 permitted activity threshold for the Light Industrial zone under standard EW-S1. The earthworks are a restricted discretionary activity under Rule EW-R1.

1.2. Scope of the Report

This assessment and report accompanies resource consent applications to both NRC and FNDC, and is provided in accordance with Section 88 and Schedule 4 of the Resource Management Act 1991. A single AEE is provided for both applications to ensure consistency and to reflect the fact that both consents relate to the same earthworks activity on the same site. Separate application forms and fees are lodged with each council. The information provided is considered commensurate with the scale and significance of the activity for which consent is being sought. Applicant details are set out in the Application Forms.

1.3. Statutory Framework

This application is assessed under the following statutory framework:

- Resource Management Act 1991
- Proposed Regional Plan for Northland 2024 (PRPN) - Rule C.8.3.4
- Regional Policy Statement for Northland 2016 (RPS)
- Far North District Plan (DP, Appeals Version 20 August 2026) - Rule EW-R1
- National Policy Statement for Freshwater Management 2020 (NPS-FM)

1.3A. District Plan Status — Appeals Version

FNDC notified its decisions on the Proposed District Plan on 30 June 2026. The appeal period closed on 12 August 2026. Under s86F(1) of the RMA, any provision of the PDP that

is not the subject of an appeal must be treated as operative from the close of the appeal period, and the equivalent Operative District Plan (ODP) provision becomes inoperative.

A review of all 27 notices of appeal lodged with the Environment Court has been undertaken to determine whether any appeal impacts the earthworks provisions or zoning applicable to this site. The findings are as follows:

(a) Earthworks chapter (EW)

The Earthworks chapter provisions relied on in this application, Rule EW-R1, the Light Industrial zone thresholds in standard EW-S1 (500 m^3 volume, 2,500 m^2 area), and standards EW-S2 through EW-S9, are not the subject of any appeal. The EW-S1 Appeals Version confirms the appeal indicator sits on the Natural Open Space / Rural Residential / Settlement row and the exemptions list at the foot of the standard, not on the Light Industrial row.

Accordingly, the earthworks provisions applied in this assessment are treated as operative under s86F(1). No assessment against the equivalent ODP earthworks rules is required.

(b) Zone: Light Industrial

This application proceeds on the basis that the site is zoned Light Industrial under the PDP Appeals Version. The Light Industrial zoning has legal effect as a proposed provision and is applied to the activity status assessment at Section 4.3.

1.4. Background and Consenting History

A Project Information Memorandum (PIM) application was lodged with FNDC under building consent reference EBC-2026-800/0 for three new detached single-storey retail buildings at 20 Klinac Lane, Waipapa.

The approved FNDC Form 4, dated 8 April 2026, identified the requirement for resource consent for earthworks within the River Flood Hazard Zones mapped over the site. The Form 4 confirmed the applicable NRC rules as C.8.3.1 (permitted thresholds), C.8.3.3 (controlled activity threshold), and C.8.3.4 (discretionary). The volume thresholds cited in the Form 4 (50 m^3 and 100 m^3) are consistent with the permitted activity thresholds in Rule C.8.3.1 Table 15.

A subsequent FNDC Form 4, dated 26 June 2026, under building consent reference EBC-2026-1042/0, confirmed the requirement for resource consent under District Plan Rule 12.7.6.1.2 (setback from waterbodies), Rule 12.3.6.1.3 (earthworks volume), and the NRC regional plan earthworks rules. The stream setback issue has since been resolved by survey (see Section 2.2). This application addresses the earthworks consent requirement only. Setback and wastewater matters have been resolved separately.

FNDC have confirmed that resource consent must be granted prior to any building works or earthworks commencing.

2. THE SITE AND SURROUNDING ENVIRONMENT

2.1. Property Details

Site Address	20 Klinac Lane, Waipapa 0230
Legal Description	Section 3 Survey Office Plan 438821
Certificate of Title	574944
Title Type	Freehold Fee Simple
Site Area	12,148 m^2 (1.2148 ha)
Property ID	3356415
Owner	WBC Developers Limited
FNDC Zone (DP)	Light Industrial (Appeals Version)

A copy of the Record of Title is provided at Appendix B.

2.2. The Site

The site is located at 20 Klinac Lane within the Waipapa commercial precinct, Far North District. The site is legally described as Section 3 Survey Office Plan 438821, being an area of approximately 12,148 m^2 (1.2148 ha). The Certificate of Title is 574944, being a Freehold Fee Simple title issued 13 January 2012.

The site is generally flat, with existing ground levels ranging from approximately 76.7 m RL to 77.7 m RL across the development footprint. The site is currently vacant, with some remnant pavement in portions of the site.

Site boundaries are:

- **North:** Whiriwhiritoa Stream
- **West:** Maritime Lane
- **South/East:** Klinac Lane

An easement boundary crosses the northern/eastern portion of the site, associated with a service lane and access. A green space/future development area occupies the eastern portion of the site outside the current development footprint.

The site is zoned **Light Industrial** under the FNDC District Plan (Appeals Version, 20 August 2026).

Whiriwhiritoa Stream and setback

The Whiriwhiritoa Stream runs along the northern boundary of the site. A survey of the stream location and width was undertaken by Bob Donaldson, Registered Professional Surveyor (Donaldson Surveyors), on 13 July 2026. The survey confirms:

- Average width of the watercourse: **2.5 metres**

- Offset from the site boundary: **25 metres**

Under the DP definitions, a river margin for a river smaller than 3 m average width is the area of land within **10 m** of the river. All proposed buildings, impermeable surfaces, and earthworks are located outside the 10 m river margin, as shown on the revised site plan (BC03, 16 July 2026, Appendix F). No works are proposed within the stream, its banks, or the 10 m river margin.

Figure 1: 20 Klinac Lane, Waipapa



2.3. The Surrounding Environment

The Waipapa commercial precinct surrounds the site on all sides. Land uses in the immediate vicinity are commercial and light industrial throughout. There are no residential properties adjoining or in the immediate vicinity of the site.

2.4. Flood Hazard Context

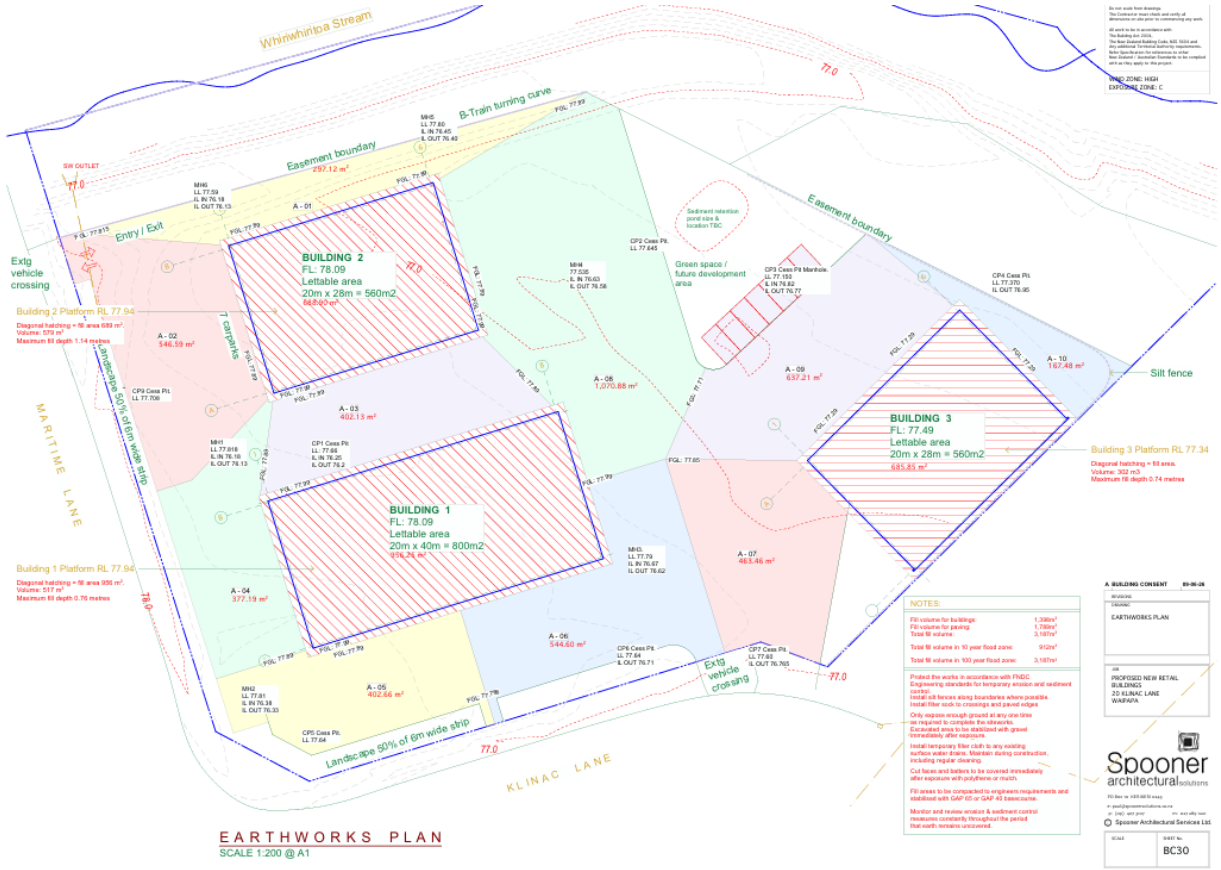
The site is subject to two NRC Priority River Flood Hazard Zones as mapped by NRC and confirmed in the NRC River Flood Level Report (Anna Talbot, NRC Natural Hazards Analyst, March 2026):

River Flood Hazard Zone 1. 10% AEP (10-year extent) Covers the northern portion of the site, including part of the Building 2 footprint and surrounding hardstand and paving. Maximum flood level within this zone: 77.84 m RL.

River Flood Hazard Zone 3. 1% AEP with Climate Change (100-year CC extent) Covers the majority of the site including the Building 1, Building 2, and Building 3 footprints and all paving and hardstand areas. Maximum flood level within this zone: 77.98 m RL.

The flood hazard zone boundaries as they apply to this site are shown on the Earthworks Plan (BC30, Appendix E).

Figure 2: Earthworks Plan 20 Klinac Lane, Waipapa



3. THE PROPOSAL

3.1. Development Overview

The applicant proposes to construct three new single-storey commercial retail buildings at 20 Klinac Lane, Waipapa, comprising:

- **Building 1:** 20 m × 40 m = 800 m^2 lettable area. Floor Level 78.09 m RL.
- **Building 2:** 20 m × 28 m = 560 m^2 lettable area. Floor Level 78.09 m RL.
- **Building 3:** 20 m × 28 m = 560 m^2 lettable area. Floor Level 77.49 m RL.

The areas stated above are lettable areas as shown on drawing BC30. Roof and building footprint areas shown on the coverage drawing (BC04) differ, as they measure different extents. The development includes carparks, loading bays, service lanes, access, and landscaping. The architectural drawings are provided at Appendix B. Floor levels are as set by the project architect and confirmed in the building consent process.

3.2. Earthworks Description

Engineered fill is required beneath the three building platforms and beneath paved and hardstand areas to raise ground levels to those required by FNDC Engineering Standards and the geotechnical investigation. Fill depths and volumes are as calculated on the Earthworks Plan (Spooner Architectural Solutions drawing BC30, Appendix E).

Building platform fill

Building	Platform RL (m RL)	Fill Area (m^2)	Volume (m^3)	Max Fill Depth (m)
Building 1	77.94	956	517	0.76
Building 2	77.94	689	579	1.14
Building 3	77.34	686	302	0.74
Building fill total			**1,398**	**1.14**

All levels are in terms of New Zealand Vertical Datum (NZVD) 2016.

Paving and hardstand fill

Fill is also required beneath paved and hardstand areas across the site to achieve the required finished ground levels. The paving fill volumes are calculated on drawing BC30. Note some of this paving fill is the preload quantity after the preload activity is complete.

Item	Volume (m^3)
Paving fill	1,789
Paving fill total	**1,789**

Topsoil stripping

Topsoil stripping is required beneath building platforms and paved areas where the existing ground surface is natural topsoil. Areas of existing hardstand (remnant pavement and compacted hardfill from the former storage yard) are not stripped; engineered fill is placed directly on the existing hardstand surface following geotechnical inspection. The geotech report identifies a topsoil layer of 0.2–0.3 m thickness across the site where natural ground is present (Initia Section 4.3.1). The estimated topsoil strip volume is approximately 739 m^3, based on a strip area of 2,955 m^2 at an average depth of 0.25 m. This volume is approximate. Any variation in actual strip quantities does not affect the activity status of either application, as the fill volume alone exceeds both councils' permitted thresholds.

3.3. Preloading: Building 3

The geotechnical investigation identified that long-term static settlements beneath Building 3 are estimated to be 80–120 mm, beyond the acceptable tolerances for a building of this type (Initia Table 5-6). This is due to the presence of up to 14 m of soft alluvial and colluvial soils beneath the Building 3 footprint, where the basalt substrate present beneath Buildings 1 and 2 is absent (Initia Section 4.3).

To mitigate this settlement risk, the Initia geotechnical report recommends a preload of 1 m height above the design subgrade level, maintained for a minimum hold period of 6 months with continuous settlement monitoring.

The preload is placed across the full Building 3 footprint (560 m^2) once fill has been placed to design subgrade level. Once the supervising geotechnical engineer confirms settlement rates have attenuated to acceptable levels, the preload material is removed from above the design subgrade level and redistributed across the site as pavement subbase fill. No preload material leaves the site.

The preload volume (560 m^3) is included within the total paving fill volume stated on drawing BC30, as the preload material is subsequently redistributed as pavement fill on site. The total volume of material imported to site is 3,187 m^3. The preload does not increase this figure.

3.4. Fill Specification

All fill is to be placed in accordance with the Initia geotechnical earthworks specification (Appendix D). Key requirements include:

- Topsoil, uncontrolled fill, soft or unsuitable materials, organics and debris stripped and removed from beneath building platforms and paved areas prior to fill placement.
- Stripped subgrade to be inspected and approved by the supervising geotechnical engineer, including proof rolling and shear vane testing, prior to placing any fill.

- Where localised soft spots or organics are identified, undercutting and backfill with engineered fill is required.
- Fill to be placed in compacted layers in accordance with the specification.
- Subgrade to be protected from trafficking and adverse weather during construction.
- Fill platform edges to be formed at a batter not steeper than 1V:3H, compacted to engineered standards, and grassed or otherwise protected against erosion.
- Proposed fill source to be approved by the geotechnical engineer prior to importing to site.

3.5. Earthworks Volumes

Volume summary (from Spooner Architectural Solutions drawing BC30)

Item	Volume (m^3)
Fill volume for buildings	1,398
Fill volume for paving	1,789
Total fill volume	**3,187**

Volumes by flood hazard zone

Flood Hazard Zone	Fill Volume (m^3)
Total fill volume in 10-year flood zone (RFHZ1)	912
Total fill volume in 100-year flood zone (RFHZ3)	3,187

Note: The 100-year zone figure represents the total site fill volume, as the entire development footprint falls within the 100-year CC extent. The 10-year zone is a subset of the 100-year zone, so volumes are not additive.

Maximum fill depth: 1.14 m (Building 2). This is within the 1.5 m permitted depth under DP standard EW-S2.

Topsoil strip volume: Approximately 739 m^3. This volume is in addition to the fill volumes above and represents earth removed, not fill placed.

Total volume of earth moved or placed: Approximately 3,926 m^3 (3,187 m^3 fill placed plus 739 m^3 topsoil stripped in one 12 month period.

4. ACTIVITY STATUS

4.1. Summary

Consent Authority	Plan / Rule	Activity	Classification
Northland Regional Council	PRPN Rule C.8.3.3	Earthworks within RFHZ1 (10-year extent) - 912 m^3 fill placed (refer Section 4.2)	**Controlled activity**
Northland Regional Council	PRPN Rule C.8.3.4	Earthworks within RFHZ3 (100-year CC extent) - approximately 3,926 m^3 of earth moved or placed	**Discretionary activity**
Far North District Council	DP Rule EW-R1	Earthworks exceeding EW-S1 volume threshold (500 m^3)	**Restricted discretionary activity**

The overall activity status for the NRC consent is **Discretionary.**

The overall activity status for the FNDC consent is **Restricted Discretionary**.

4.2. NRC - Proposed Regional Plan for Northland

Rule C.8.3.1 - Permitted activity thresholds

Rule C.8.3.1 sets permitted activity thresholds for earthworks under Table 15. For Priority River Flood Hazard Zones the thresholds are:

- High-risk flood hazard area (RFHZ1 - 10-year): 50 m^3 moved or placed in any 12-month period.
- Flood hazard area (RFHZ3 - 100-year CC): 100 m^3 moved or placed in any 12-month period.

The proposed earthworks volumes, whether measured as fill placed (3,187 m^3) or total earth moved or placed (approximately 3,926 m^3), exceed both permitted activity thresholds. Resource consent is required.

Rule C.8.3.3 - Controlled activity ceiling

Rule C.8.3.3 provides that earthworks in a high-risk flood hazard area involving more than 50 m^3, or earthworks in a flood hazard area involving more than 100 m^3 but not more than 1,000 m^3 of earth moved or placed in any 12-month period, are controlled activities.

The volume of fill placed within RFHZ1 is 912 m^3. Topsoil strip volumes have not been separately apportioned between the 10-year and 100-year flood zones, as the site lies wholly within RFHZ3 and the overall NRC activity status is determined by the RFHZ3 volume. On a fill-only basis the RFHZ1 volume falls within the controlled activity ceiling; if a portion of the strip volume within RFHZ1 were to take that figure above 1,000 m^3, the

earthworks in that zone would also fall to be assessed under Rule C.8.3.4. The proposed earthworks within RFHZ3 (approximately 3,926 m^3 of earth moved or placed) exceed the 1,000 m^3 ceiling for a controlled activity. The fill volume alone (3,187 m^3) exceeds this ceiling. The earthworks in RFHZ3 are therefore not a controlled activity, and the overall NRC activity status is discretionary. A single NRC consent is sought.

Rule C.8.3.4 - Discretionary activity

Rule C.8.3.4 provides that earthworks outside the bed of a river or lake, a wetland, or the coastal marine area, and any associated damming and diversion of stormwater and discharge of stormwater, that are not a permitted or controlled activity under another rule in C.8.3, are discretionary activities.

The proposed earthworks within RFHZ3 are not a permitted or controlled activity and therefore fall to Rule C.8.3.4. The overall NRC activity status is **discretionary**.

4.3. FNDC - Far North District Plan

The site is zoned Light Industrial under the DP (Appeals Version, 20 August 2026). The earthworks provisions relied on in this application are not the subject of any appeal (refer Section 1.3A) and are treated as operative under s86F(1) of the RMA. The proposed retail development is a permitted activity under the Light Industrial zone.

Rule EW-R1 - Earthworks

Rule EW-R1 provides that earthworks are a permitted activity where the earthworks comply with standards EW-S1 through EW-S9. Where compliance is not achieved, the activity is a restricted discretionary activity.

Standards assessment:

Standard	Requirement	Compliance	Comment
EW-S1 Maximum earthworks thresholds	Light Industrial: 500 m^3 per calendar year, 2,500 m^2 area	**Does not comply** - approximately 3,926 m^3 of earth moved or placed (3,187 m^3 fill) exceeds 500 m^3, and earthworks area exceeds 2,500 m^2	Consent required
EW-S2 Maximum depth	1.5 m max cut or fill	**Complies** - max fill depth 1.14 m	N/A
EW-S3 Accidental discovery protocol	Protocol to be followed on discovery of sensitive material	**Complies** - protocol included in proposed conditions	N/A
EW-S4 Site reinstatement	Reinstatement within 6 months of commencement	**Complies** - condition proposed	N/A
EW-S5 Erosion	In accordance with	**Complies** - ESCP to be prepared	N/A

Standard	Requirement	Compliance	Comment
and sediment control	GD2016/005	and approved prior to commencement (proposed condition)	
EW-S6 Setback	1.5 m (retaining) / 3 m (unretained) from boundary	**Complies** - fill batters within site	N/A
EW-S7 Land stability	No instability beyond site boundary	**Complies** - geotechnical supervision	N/A
EW-S8 Nature of filling material	Clean fill only	**Complies** - engineered fill to geotech spec	N/A
EW-S9 Flood and coastal hazards	No diversion of flood flow or loss of flood storage	**Does not comply** - the proposed fill displaces flood storage volume within the flood hazard area and no equivalent flood storage is provided. Effects assessed as less than minor at Section 5.2	See below

The earthworks do not comply with EW-S1 (volume and area) and EW-S9 (flood storage). The activity is a **restricted discretionary activity** under Rule EW-R1.

The earthworks do not comply with EW-S9(2) (loss of flood storage). The proposed fill displaces flood storage volume within the flood hazard area and no equivalent flood storage is provided. The earthworks comply with EW-S9(1) as no flood flows are diverted onto other properties. The effects of the flood storage displacement are assessed in Section 5.2 and found to be less than minor. The FNDC statutory assessment at Section 6.5 addresses the relevant matters of discretion.

4.4. Resource Consents Required

Consent Authority	Consent Type	Rule	Activity Status
Northland Regional Council	Land use consent - earthworks	PRPN Rule C.8.3.4	Discretionary
Far North District Council	Land use consent - earthworks	DP Rule EW-R1	Restricted discretionary

4.5. Combined Application

This AEE supports both applications. Each is lodged separately to its respective consent authority with the appropriate application form and fees. The applications relate to the same activity on the same site and are assessed against the same factual base. A single AEE ensures that the earthworks description, volumes, and effects assessment are consistent across both applications.

The applicant does not seek a joint hearing or combined processing under s102 of the RMA. Each council is requested to process the application on its own track.

4.6. NES-CS: Contaminated Land (HAIL)

The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 (NES-CS) apply to land on which an activity or industry on the Hazardous Activities and Industries List (HAIL) is being, or has been, undertaken, where soil disturbance, a change of use, or subdivision is proposed. The NES-CS provides a complete rules framework for contaminated land; the DP does not contain independent contaminated land rules but provides objectives and policies (CL-O1, CL-P1, CL-P2) for assessing any NES-CS consent.

Site history

A review of the site's land use history has been undertaken using the historical aerial photography assessment in the Initia Geotechnical Investigation Report. The findings are:

- **1953:** The site was undeveloped and in use for agricultural/pastoral purposes.
- **1981–1982:** A farm track was present. No buildings or industrial activity on the site.
- **2005:** Klinac Lane was formed. Surrounding land was more developed; the site itself remained undeveloped.
- **2020s:** A gravel hardstand area was formed in the centre of the site for use as a storage yard.
- **Present:** The site is vacant with remnant hardstand pavement.

No industrial, manufacturing, or processing activity has been undertaken on the site at any time in the available aerial record. The site was in pastoral use from at least 1953 until the 2020s and has not been used for horticulture, orcharding, market gardening, sheep dipping, fuel storage, waste disposal, or any other activity that would fall within the HAIL categories. The storage yard use (shipping containers and gravel hardstand) does not involve the storage of hazardous substances and is not a HAIL activity.

NRC Selected Land-use Register (SLUR)

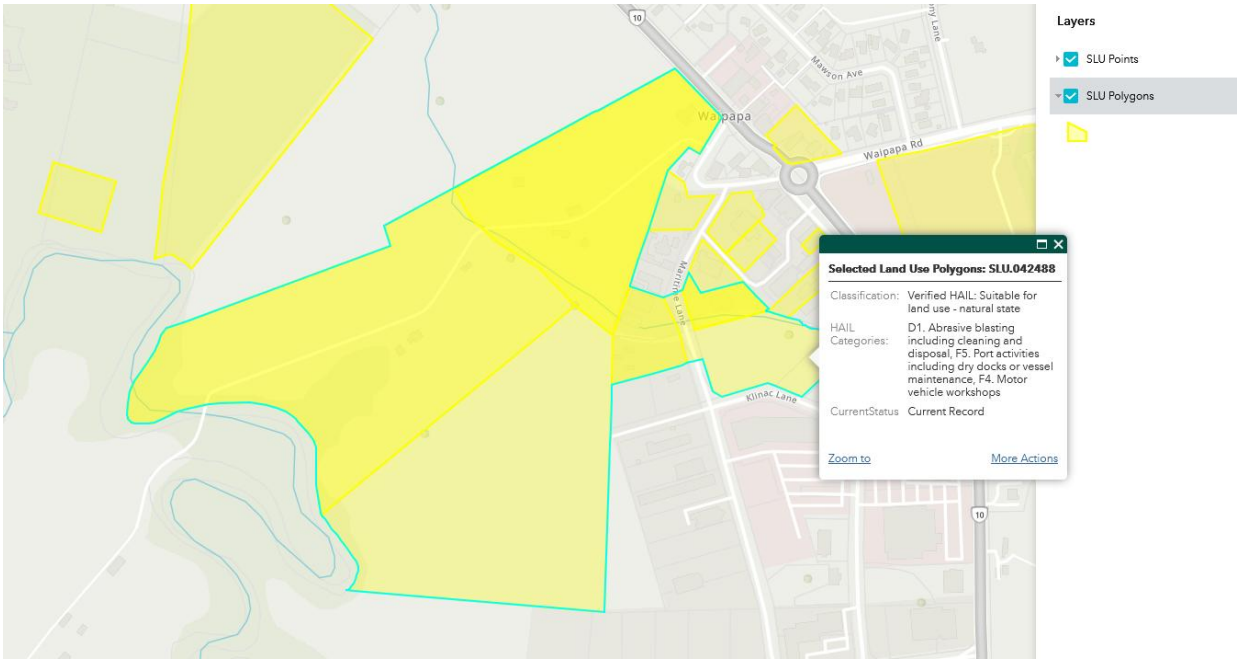
A search of the NRC Selected Land-use Register has been undertaken. The site at 20 Klinac Lane (Section 3 SO 438821) falls within SLU.042488, a precinct-scale polygon covering the wider Waipapa commercial area including multiple properties along Maritime Lane, Skippers Lane, and surrounding roads.

SLU.042488 is classified as "Verified HAIL: Suitable for land use – natural state." The listed HAIL categories are D1 (abrasive blasting including cleaning and disposal), F5 (port activities including dry docks or vessel maintenance), and F4 (motor vehicle workshops).

These HAIL categories are consistent with the marine service and vehicle workshop activities historically located on other properties within the polygon, not with the subject site. The site history set out above confirms that no activity corresponding to any listed HAIL category has been undertaken on this land. The polygon reflects NRC's practice of mapping a broad precinct area rather than individually delineating the specific properties on which the HAIL activities occurred.

The "Verified – suitable for land use – natural state" classification is the highest SLUR clearance. It indicates that the area has been investigated and that contamination levels are at or below those acceptable for any land use, including sensitive uses.

Figure 3: SLUR Image 20 Klinac Lane, Waipapa



Geotechnical observations

The geotechnical investigation undertaken by Initia included hand augering and cone penetration testing across the site (Sections 3.2 and 3.3 of the Initia report). The subsurface conditions encountered comprise natural topsoil (dark brown silt with minor clay, 0.2–0.3 m thickness), underlain by Late Quaternary alluvial and colluvial soils and Kerikeri Volcanic Group basalt. In the storage yard area, compacted hardfill gravels were present to approximately 0.4 m depth. No visual or olfactory evidence of contamination was noted in any of the investigation logs. No discolouration, staining, odour, or foreign materials indicative of hazardous substance contamination were recorded.

Conclusion

Based on the site history, the SLUR record, and the geotechnical investigation findings, no HAIL activity has been or is being undertaken on the site. The HAIL categories listed for SLU.042488 relate to activities on other properties within the precinct-scale polygon. The NES-CS does not apply, and no resource consent is required under the NES-CS.

In the alternative, if the consent authority considers the NES-CS is triggered by the site's location within SLU.042488, the "Verified – suitable for land use – natural state" classification supports the application of Regulation 5(8), which disapplies the NES-CS where a detailed site investigation demonstrates that contaminants are at or below background concentrations. A copy of the NRC verification report is available from NRC on request.

The proposed development further mitigates any residual risk by placing 0.3 m to 1.14 m of clean imported engineered fill across the full building and pavement footprint, effectively capping the existing ground surface. Topsoil stripped from natural ground areas will be disposed of to an authorised facility or reused in on-site landscaping areas.

5. ASSESSMENT OF ENVIRONMENTAL EFFECTS

The assessment of environmental effects has been prepared in accordance with Section 88(2) and Schedule 4 of the RMA. The proposed activity is described in detail in Section 3.

5.1. Positive Effects

The proposed earthworks are necessary to enable commercial development compliant with FNDC Engineering Standards for floor levels above the 1% AEP flood event. Raising the site directly reduces flood hazard risk to the buildings and their future occupants, a positive outcome from a natural hazard risk management perspective.

The development will provide commercial retail activity within the Waipapa precinct, contributing to the economic wellbeing of the Far North community.

5.2. Flood Storage and Conveyance

Flood storage displacement

The proposed fill raises building platforms and paving areas above existing ground levels within the flood hazard zones. The total fill volume across the site is 3,187 m^3, of which 912 m^3 is within the 10-year flood zone and the full 3,187 m^3 is within the 100-year CC flood zone.

This volume is considered less than minor relative to the flood storage capacity of the wider Whiriwhiritoa catchment, for the following reasons:

- The site is located on the fringe of the floodplain, not within a constricted floodway or channel.
- The stream corridor itself is not narrowed, as the 10 m river margin from the Whiriwhiritoa Stream is maintained and no works are proposed within it.
- The maximum fill depth is 1.14 m, tapering across the site. The fill raises levels modestly rather than creating a significant obstruction within the floodplain.
- The surrounding commercial area is largely developed, limiting the marginal floodplain storage value of this site.
- The fill is spread across the full development footprint at relatively shallow depths and does not concentrate displacement in a confined area.

Effects on flood conveyance

No works are proposed within the bed or banks of the Whiriwhiritoa Stream. No fill, structures, or bunds are located in a position that would redirect or impede flood flows along the stream corridor. The proposed fill raises the site levels but does not create any barrier to flood flows across the floodplain. The site layout maintains open flow paths between and around the buildings.

Conclusion: Less than minor.

5.3. Water Quality and the Whiriwhiritoa Stream

The site is set back a minimum of 10 m from the bank of the Whiriwhiritoa Stream. The 10 m river margin is shown on the revised architectural site plan (BC03, 16 July 2026, Appendix F). No works are proposed within the stream, its banks, or the 10 m river margin.

The primary construction risk is sediment-laden runoff during earthworks. This risk will be managed by an Erosion and Sediment Control Plan (ESCP) prepared by the earthworks contractor and submitted to council for certification prior to the commencement of works. The ESCP will be prepared in accordance with GD2016/005 and will include as a minimum:

- Silt fencing along the northern boundary between the earthworks area and the stream.
- Sediment retention measures to capture runoff before it leaves the site.
- Construction entrance stabilisation.
- Progressive earthworks management to limit the area of exposed ground at any time.
- Inspection and maintenance of all controls after each rainfall event.

Silt fence locations are shown indicatively on the Earthworks Plan (BC30, Appendix E). The sediment retention pond size and location will be confirmed in the ESCP.

No contaminants other than sediment are expected from the proposed earthworks. The fill material is imported granular and cohesive fill to the geotechnical specification. No dewatering is required. The maximum fill depth (1.14 m above existing ground) does not involve excavation below the groundwater table.

Conclusion: Less than minor, subject to compliance with the ESCP.

5.4. Tangata Whenua

The proposed activity has been assessed against the triggers for an analysis of effects on tangata whenua and their taonga under the PRPN. None are engaged.

No works are proposed within the bed or banks of the Whiriwhiritoa Stream or within the 10 m river margin. No discharge to the stream is proposed. Erosion and sediment controls are maintained between the earthworks area and the stream throughout construction. The physical separation, commercial context, and sediment controls ensure no adverse effects on mahinga kai or access to mahinga kai.

No wāhi tapu, sites of customary value, ancestral sites, or Sites and Areas of Significance to Tāngata Whenua are identified on or adjacent to the site in FNDC District Plan or PRPN mapping. No tāiapure, mātaitai, or Māori non-commercial fisheries are identified at this location. No protected customary rights under the Marine and Coastal Area (Takutai

Moana) Act 2011 apply to this site or the Whiriwhiritoa Stream at this location. No works are proposed in the bed of any waterbody, and no adverse effects on indigenous biodiversity in waterbodies arise.

Conclusion: No tangata whenua assessment or Cultural Impact Assessment is required. Nil.

5.5. Neighbouring Properties

The proposed earthworks are confined to the subject site. All surrounding land uses are commercial or light industrial. No residential properties adjoin the site.

The proposed fill will not redirect surface water or flood flows onto any neighbouring property. Stormwater will be managed in accordance with the stormwater report prepared in support of the FNDC building consent application.

Conclusion: Nil.

5.6. Construction Effects

Construction effects are temporary and limited to the duration of earthworks operations. These include:

- **Noise and dust:** earthworks machinery will generate noise and potential dust. Works will be carried out during standard construction hours. Dust suppression will be applied during dry conditions.
- **Traffic:** truck movements for fill importation will temporarily increase heavy vehicle movements on Klinac Lane and Maritime Lane. A traffic management plan will be prepared if required by FNDC.
- **Site security:** the site will be fully fenced with a 2 m high temporary security fence with lockable gates throughout construction.

These effects are minor, temporary, and consistent with commercial development activity in a commercial precinct.

Conclusion: Less than minor.

5.7. Visual and Amenity Effects

The proposed earthworks are preparatory to a commercial building development within a Light Industrial zone. The fill raises site levels by a maximum of 1.14 m, which is not visually perceptible as an adverse change in the context of a flat commercial site that will shortly be built on. During construction, exposed earth will be visible from Klinac Lane and Maritime Lane, but this is a normal and expected part of commercial construction and is temporary.

Fill platform batters will be grassed or otherwise stabilised on completion. All areas not covered by buildings, paving, or hardstand will be landscaped.

Conclusion: Less than minor.

5.8. Land Stability

All earthworks are to be undertaken under the observation and supervision of a suitably qualified geotechnical engineer in accordance with the Initia Geotechnical Investigation Report. Fill placement, compaction, and batter formation are to the geotechnical specification. The maximum fill depth (1.14 m) is well within the 1.5 m permitted threshold under DP standard EW-S2 and does not require retaining structures.

The geotechnical report confirms that fill can be placed on the site subject to the specified foundation preparation and compaction requirements. There is no risk of instability at or beyond the site boundary.

Conclusion: Nil.

5.9. Effects Summary and Conclusion

Environmental Factor	Effect Level	AEE Section
Flood storage and conveyance	Less than Minor	5.2
Water quality - Whiriwhiritoa Stream	Less than Minor	5.3
Tangata whenua	Nil	5.4
Neighbouring properties	Nil	5.5
Construction effects	Less than Minor	5.6
Visual and amenity effects	Less than Minor	5.7
Land stability	Nil	5.8
OVERALL EFFECTS	**LESS THAN MINOR**	

The proposed earthworks generate less than minor adverse environmental effects. All works are set back a minimum of 10 m from the Whiriwhiritoa Stream, no in-stream works are proposed, erosion and sediment controls are in place, and no persons are adversely affected.

6. STATUTORY ASSESSMENT

6.1. Introduction

The following statutory assessment addresses the relevant national, regional, and district policy framework for both consent authorities. The NRC assessment is undertaken under s104(1) of the RMA (discretionary activity). The FNDC assessment is undertaken under s104C of the RMA (restricted discretionary activity).

6.2. Part 2 of the RMA

Section 5 of the RMA requires the sustainable management of natural and physical resources. The proposed earthworks enable commercial development which provides for the economic wellbeing of the community while managing the effects of that development on the flood hazard environment.

Section 6(h) requires that all persons exercising functions under the Act shall recognise and provide for the management of significant risks from natural hazards. The proposed earthworks directly address flood hazard risk by raising floor levels to the standard required by FNDC Engineering Standards above the 1% AEP flood event.

Section 7(i) requires particular regard to the effects of climate change. The proposed floor levels have been set with reference to the 100-year CC (climate change) flood level data provided by NRC, ensuring the development accounts for projected increases in flood levels.

The proposed activity is consistent with the purpose and principles of Part 2 of the RMA.

6.3. NRC - Section 104 Assessment (Proposed Regional Plan for Northland)

The proposed earthworks are a discretionary activity under Rule C.8.3.4 of the PRPN. Under s104(1) of the RMA, the consent authority must have regard to:

(a) Effects on the environment

The effects of the proposed earthworks on the environment are assessed in Section 5 and are summarised at Section 5.9. All adverse effects are less than minor. In particular:

- Total fill volume is 3,187 m^3 (approximately 3,926 m^3 of earth moved or placed), spread across the full development footprint at a maximum depth of 1.14 m. The displacement of flood storage is minor relative to the Whiriwhiritoa catchment capacity.
- No works are proposed within the bed or banks of the Whiriwhiritoa Stream or within the 10 m river margin.
- Erosion and sediment controls will prevent sediment discharge to the stream during construction.

- No flood flows will be diverted onto other property.
- No persons are adversely affected.

(b) Relevant provisions of statutory planning documents

The relevant provisions of the PRPN, the RPS, and the NPS-FM are addressed below.

PRPN objectives and policies

Although the earthworks exceed the controlled activity threshold, the matters identified in Rule C.8.3.3 remain relevant to the assessment of effects and the adequacy of the proposal. These matters, and how the application addresses each, are set out below:

Matter	Assessment
1. The design and adequacy of erosion and sediment control measures	An ESCP will be prepared in accordance with GD2016/005 and certified by NRC prior to commencement. The design and content of the ESCP is described at Section 5.3. Silt fence locations are shown indicatively on drawing BC30.
2. Effects of flood hazard risks, land instability and land subsidence on other property	The proposed fill is confined to the subject site. No fill is placed in a position that redirects or exacerbates flood flows onto other property. The 10 m river margin from the Whiriwhiritoa Stream is maintained. No adverse effects on other property are anticipated.
3. The location, extent, timing, and duration of earthworks	Earthworks are confined to the development footprint as shown on Appendix E. All earthworks will be completed in a single construction period. A lapse period of 2 years and an earthworks completion period of 3 years from the date of grant are proposed (refer proposed NRC conditions at Section 8.3).
4. The adequacy of site rehabilitation and revegetation measures	All exposed earth not covered by permanent surfacing will be revegetated or stabilised within 30 days of completion of earthworks in each area. Platform batters to be grassed or otherwise protected per the Initia geotechnical specification.
5. Adverse effects on water bodies and coastal water	The site is set back a minimum of 10 m from the Whiriwhiritoa Stream. No works within the stream or its banks. No discharge to the stream is proposed. ESCP controls prevent sediment discharge during construction. Adverse effects on the stream are less than minor.
6. Management of flooding effects and avoiding increased natural hazard risks on other property	Total fill volume is 3,187 m^3 across the development footprint. The displacement of flood storage is less than minor relative to the Whiriwhiritoa catchment. No fill is placed in a floodway or in a position that diverts flood flows onto other property. The earthworks do not increase flood hazard risk on any other property.

Matter	Assessment
7a. Adverse effects on wāhi tapu in adjacent freshwater bodies or the coastal marine area	No wāhi tapu are identified in PRPN mapping over or adjacent to this site or the Whiriwhiritoa Stream at this location.
7b. Adverse effects on mapped Sites and Areas of Significance to Tāngata Whenua	No Sites and Areas of Significance to Tāngata Whenua are mapped in the PRPN over or adjacent to this site.

Supporting objectives and policies

Provision	Assessment
Objective F.1.10 - Natural hazard risk	The proposed earthworks raise the site above flood levels, directly reducing flood hazard risk to buildings and occupants. Consistent.
Policy D.2.3 - Climate change and development	Floor levels have been set with reference to the 100-year CC flood level data provided by NRC. Consistent.
Policy D.2.20 - Precautionary approach	Effects on flood storage and conveyance are less than minor. The ESCP applies a precautionary approach to construction management. Consistent.

(c) Any other matter

The earthworks are required to achieve compliance with FNDC Engineering Standards for flood level compliance and to address geotechnical requirements identified in the Initia report. These are legitimate and well-documented engineering requirements imposed by the regulatory framework itself. The earthworks represent the minimum fill required to achieve safe, compliant building floor levels on a site subject to river flood hazard.

6.4. NRC - Regional Policy Statement for Northland 2016

The relevant RPS policies direct that development in hazard-prone areas should minimise risks to people and property. The proposed development addresses this by raising the site to floor levels required by FNDC Engineering Standards above the 1% AEP flood event. The activity is consistent with the relevant RPS natural hazard policies.

6.5. FNDC - Section 104C Assessment (Far North District Plan)

The proposed earthworks are a restricted discretionary activity under Rule EW-R1. Under s104C of the RMA, the consent authority may only consider the matters of discretion specified in Rule EW-R1. These are set out below with an assessment of each:

Matter of Discretion	Assessment
(a) the location, scale and volume	The earthworks are located within the development footprint of a Light Industrial-zoned site at 20 Klinac Lane, Waipapa. The total volume of fill placed is 3,187 m^3, with approximately 739 m^3 of topsoil stripped, giving approximately 3,926 m^3 of earth moved or placed. The earthworks are the minimum required to achieve compliant floor levels and pavement formation in a flood hazard area. The scale is appropriate for commercial site development.
(b) depth and height of cut and fill	Maximum fill depth is 1.14 m (Building 2), within the 1.5 m permitted threshold under EW-S2. Cut is limited to topsoil stripping of 0.2–0.3 m in areas of natural ground, well within the permitted depth. No bulk excavation or retaining is proposed. Fill depths taper across the site.
(c) the nature of filling material and whether it is compacted	All fill is imported engineered fill to the Initia geotechnical specification, being granular and cohesive fill, free of contaminants, organics, and deleterious material. Fill is placed in compacted layers under geotechnical supervision. Complies with EW-S8.
(d) the extent of exposed surfaces or stockpiling of fill	Earthworks will be managed progressively to limit exposed surfaces at any time. Fill will be placed directly and compacted. Long-term stockpiling is not proposed. The ESCP manages exposed surfaces during construction.
(e) erosion, dust and sediment controls	An ESCP will be prepared by the earthworks contractor in accordance with GD2016/005 and certified by council prior to commencement. Silt fencing, sediment retention, construction entrance stabilisation, and inspection protocols will be specified. Dust suppression will be applied during dry conditions. Consistent with EW-S5.
(f) the risks of natural hazards, particularly flood events	The earthworks are undertaken to address flood hazard risk. Floor levels are raised to comply with FNDC Engineering Standards above the 1% AEP flood event. Fill does not divert flood flows onto other property. Flood storage displacement is less than minor relative to the catchment.
(g) stormwater controls	Stormwater will be managed in accordance with the stormwater report prepared in support of the building consent. The ESCP manages construction-phase stormwater.
(h) flood storage, overland flow paths and drainage patterns	Fill placement raises levels modestly across the development footprint. No bunds, walls, or features that would obstruct overland flow paths are created. The site layout maintains open flow paths between and around buildings. Loss of flood storage is less than minor in the context of the wider

Matter of Discretion	Assessment
	catchment.
(i) the stability of land, buildings and infrastructure	All earthworks under geotechnical supervision per the Initia report. Maximum fill depth 1.14 m, within EW-S2. No risk of instability at or beyond site boundaries.
(j) natural character, landscape, natural features, historic heritage, spiritual and cultural values	No works within the 10 m river margin of the Whiriwhiritoa Stream. No scheduled heritage resources or sites of significance affected. The site is within a commercial precinct, and no natural character or landscape values are affected by the earthworks.
(k) the life-supporting capacity of soils	Topsoil is stripped only where natural ground is present; existing hardstand areas are not stripped. Stripped topsoil is either stockpiled for reinstatement in landscaped areas or removed from site to an authorised facility. Fill areas are covered by buildings, paving, or stabilised surfaces. The earthworks do not diminish the life-supporting capacity of soils in a meaningful way given the commercial zoning and existing site condition.
(l) the location and use of infrastructure	Existing stormwater infrastructure on site (cess pits, manholes, SW outlets) is incorporated into the development design. No adverse effects on infrastructure.
(m) temporary or permanent nature of any adverse effect	Construction effects (noise, dust, traffic, exposed surfaces) are temporary. Permanent effects (flood storage displacement, site level changes) are less than minor.
(n) traffic and noise effects	Truck movements for fill importation are temporary and consistent with commercial precinct activity. Earthworks machinery noise is temporary and within standard construction hours.
(o) time of year earthworks will be carried out and duration of the activity	Earthworks are proposed to commence Oct 2026. Duration is estimated at 12 Months. Works will be carried out during standard construction hours. The ESCP addresses seasonal and weather-related construction management.
(p) impact on visual and amenity values	The earthworks raise site levels by a maximum of 1.14 m in a Light Industrial zone, not visually perceptible as an adverse change. Construction activity is temporary and consistent with the commercial context.

6.6. FNDC - Earthworks Policies EW-P1 to EW-P8

The earthworks are consistent with policies EW-P1 to EW-P8. The earthworks enable commercial retail development within an appropriately zoned site, providing for economic wellbeing (EW-P1). All adverse effects are managed through geotechnical supervision, the ESCP, and the stormwater design; the earthworks address rather than exacerbate flood

hazard risk (EW-P2). Fill depth, boundary setbacks, drainage, dust, and sediment are all within the policy parameters (EW-P3, EW-P4). An accidental discovery protocol is proposed as a condition of consent (EW-P5). Land stability is confirmed by the Initia geotechnical report (EW-P6). All earthworks on the site are assessed in a single coordinated application (EW-P7). The matters listed in EW-P8 substantially replicate the EW-R1 matters of discretion and are assessed in full at Section 6.5. Consistent.

7. s95A–E ASSESSMENT

7.1. NRC - Notification Assessment

The NRC application is for a discretionary activity. Under s95A(2), public notification is not requested and no special circumstances exist. Under s95A(9), having regard to the assessment at Section 5, the adverse effects of the earthworks are less than minor. There is no basis for public notification.

Under s95B and s95E, no persons have been identified as adversely affected. The earthworks are confined to the subject site, all surrounding properties are in commercial or light industrial use, and the Whiriwhiritoa Stream is set back a minimum of 10 m from the nearest proposed works. No written approvals are sought. Non-notified processing is requested.

Non-notified processing is requested.

7.2. FNDC - Notification Assessment

The FNDC application is for a restricted discretionary activity. The adverse effects are less than minor and there is no basis for public notification under s95A. Under s95B, the assessment of effects on persons is limited to the matters of discretion under EW-R1. Having regard to those matters at Section 6.5, no persons are adversely affected. All surrounding properties are in commercial or light industrial use. Non-notified processing is requested.

Non-notified processing is requested.

7.3. Notification Conclusion

Neither application requires notification under s95A or s95B. The environmental effects are less than minor, no persons are adversely affected, and the site is within a commercial context with adequate setbacks from the Whiriwhiritoa Stream. Non-notified processing is requested for both applications.

Non-notified processing is requested for both applications.

8. CONCLUSION

8.1. Summary of Proposal

This application seeks resource consent from Northland Regional Council (discretionary activity, Rule C.8.3.4 PRPN) and Far North District Council (restricted discretionary activity, Rule EW-R1 DP) for earthworks associated with three commercial retail buildings at 20 Klinac Lane, Waipapa. The earthworks comprise 3,187 m^3 of engineered fill and approximately 739 m^3 of topsoil stripping, with a maximum fill depth of 1.14 m. All adverse environmental effects are less than minor.

The earthworks are the minimum required to achieve compliant building floor levels on a site subject to river flood hazard, a requirement imposed by the FNDC Form 4, Engineering Standards, and the geotechnical investigation. The activity is consistent with the relevant objectives and policies of the PRPN, the RPS, and the DP. No persons are adversely affected. Non-notified processing is requested for both applications.

8.2. Recommendation

Based on the assessment provided in this application, it is respectfully requested that:

- Northland Regional Council grant resource consent for the proposed earthworks at 20 Klinac Lane, Waipapa, pursuant to Rule C.8.3.4 of the PRPN, subject to appropriate conditions.
- Far North District Council grant resource consent for the proposed earthworks at 20 Klinac Lane, Waipapa, pursuant to Rule EW-R1 of the DP, subject to appropriate conditions.

Proposed NRC Conditions

- Notify NRC's monitoring officer in writing at least 5 working days prior to commencement.
- Submit an ESCP to NRC for certification at least 10 working days prior to commencement, prepared in accordance with GD2016/005.
- All earthworks in accordance with drawing BC30 (Appendix E) and the approved ESCP.
- All erosion and sediment controls installed prior to commencement, maintained throughout, and inspected after each rainfall event of 10 mm or greater.
- No fill to redirect or divert flood flows onto any other property. The 10 m river margin from the Whiriwhiritoa Stream maintained throughout. No works within the bed or banks of the stream.
- All earthworks under geotechnical supervision in accordance with the Initia report (Ref: P-003194 Rev B). Written confirmation at each hold point.

- Continuous settlement monitoring throughout Building 3 preloading. Preload not to be removed until the geotechnical engineer confirms settlement rates are acceptable. Minimum hold period 6 months.
- Preload material redistributed on site as pavement subbase fill. No preload material to leave the site.
- All exposed earth revegetated or stabilised within 90 days of completion of earthworks in that area. Fill batters grassed or protected per the geotechnical specification. This requirement is more stringent than the six-month period under DP standard EW-S4 and applies in addition to it.

Proposed FNDC Conditions

- All earthworks in accordance with drawing BC30 (Appendix E) and the certified ESCP.
- Submit an ESCP to FNDC at least 10 working days prior to commencement, prepared in accordance with GD2016/005.
- The maximum depth of fill shall not exceed 1.5 m at any point, in accordance with DP standard EW-S2.
- All erosion and sediment controls installed prior to commencement and maintained throughout.
- All earthworks under geotechnical supervision in accordance with the Initia report.
- Accidental discovery protocol (EW-S3) to be followed on discovery of any suspected sensitive material.
- Site reinstatement in accordance with EW-S4 within 12 months of commencement.
- Earthworks shall not divert flood flow onto other properties or increase flood hazard beyond the site boundaries.
- All fill material to comply with EW-S8 (clean fill only).

8.4. Final Statement

The earthworks represent the minimum fill required to achieve safe, compliant building floor levels on a site subject to river flood hazard, a requirement imposed by the regulatory framework itself through the FNDC Form 4, Engineering Standards, and geotechnical investigation. The activity is consistent with the statutory framework and does not adversely affect any person.

The applicant is committed to working cooperatively with both councils to address any matters arising during the processing of this application and to ensure compliance with all conditions of consent.

APPENDICES

Appendix A - Record of Title *LINZ Record of Title, Title 574944, Section 3 SO 438821, Freehold Fee Simple, 1.2148 ha, issued 13 January 2012*

Appendix B - Architectural Site Plan BC03 (Revised 16 July 2026) Spooner Architectural Solutions

Appendix C - NRC River Flood Level Report, *Parcel ID 7315854, March 2026, including 10-year, 50-year, and 100-year CC flood maps*

Appendix D - Geotechnical Investigation Report *Initia Geotechnical Investigation Report, Ref: P-003194 Rev B, April 2026*

Appendix E - Earthworks Plan BC30: 20 Klinac Lane, Waipapa

Appendix F - Donaldson Surveyors - Stream Survey: 20 Klinac Lane, Waipapa surveyor's plan and report, showing stream location, average width (2.5 m), offset from boundary (25 m), dated 13 July 2026

Appendix G - EW-S1 Appeals Version (20 August 2026)

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**574944**
Land Registration District	**North Auckland**
Date Issued	13 January 2012

Prior References
154050

Estate	Fee Simple
Area	1.2148 hectares more or less
Legal Description	Section 3 Survey Office Plan 438821
Registered Owners	

WBC Developers Limited

Interests

6076987.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 13.7.2004 at 9:00 am

Land Covenant in Easement Instrument 6167615.1 - 1.10.2004 at 9:00 am

9523920.3 Mortgage to Bank of New Zealand - 17.10.2013 at 9:47 am

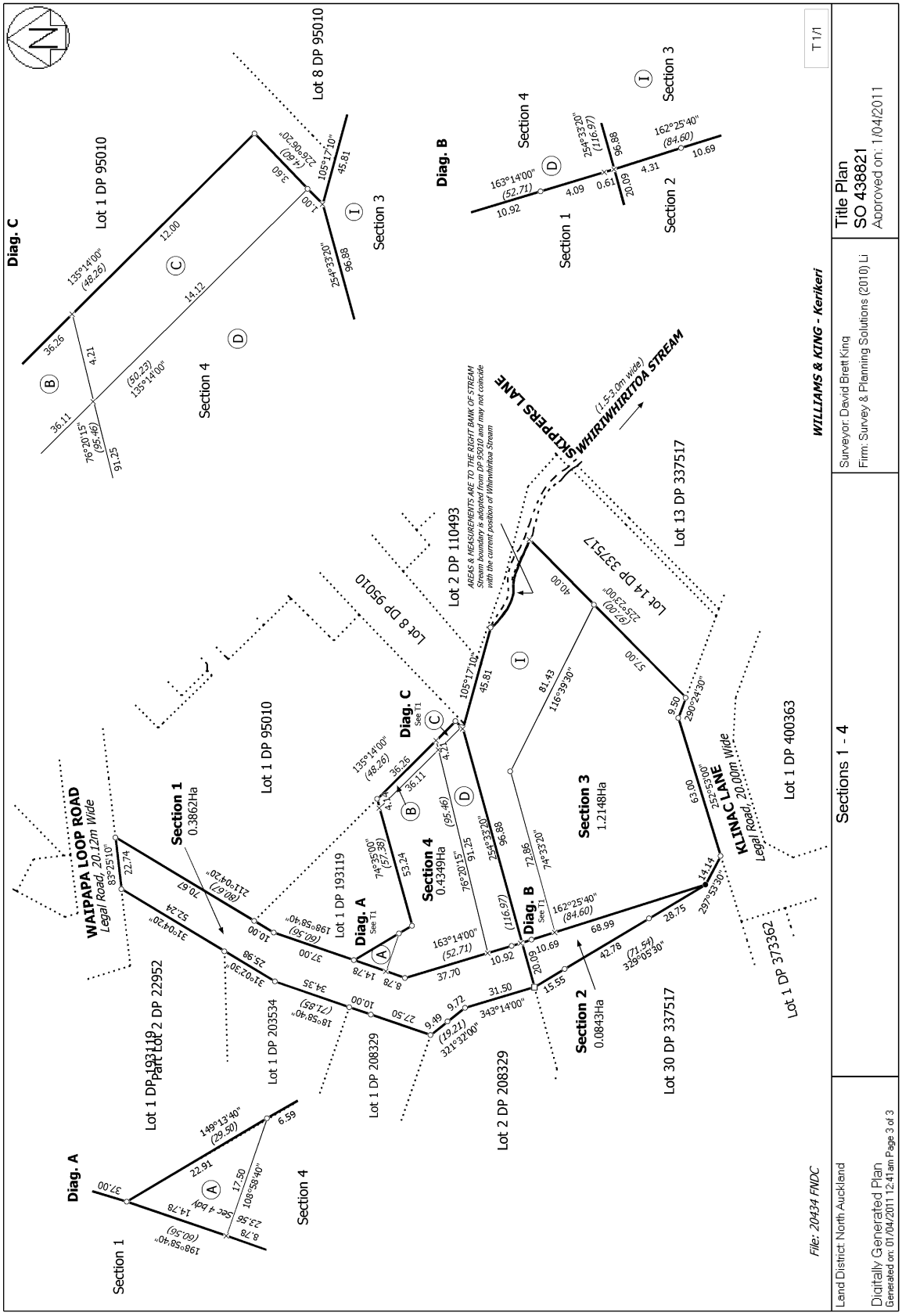
10296683.1 Variation of Mortgage 9523920.3 - 28.1.2016 at 10:58 am

Subject to a right to discharge treated sewage over part marked D on DP 514002 created by Easement Instrument 11260659.9 - 10.4.2019 at 12:57 pm

The easements created by Easement Instrument 11260659.9 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right to convey electricity over part marked A on DP 584355 created by Easement Instrument 12626241.1 - 16.12.2022 at 2:28 pm

Subject to a right (in gross) to drain water over part marked A on SO 570424 in favour of Far North District Council created by Easement Instrument 12721288.1 - 15.6.2023 at 12:58 pm


Diag. C
Lot 1 DP 95010
Lot 8 DP 95010
Section 3
Section 4
Diag. B
Section 1
Section 2
WHIRIWHIRITTOA STREAM
(1.5-3.0m wide)
SKIPPERS LANE
Lot 13 DP 337517
Lot 14 DP 337517
Lot 2 DP 110493
Lot 8 DP 95010
Lot 1 DP 95010
Lot 1 DP 193119
Lot 1 DP 203534
Lot 1 DP 208329
Lot 2 DP 208329
Lot 30 DP 337517
Lot 1 DP 400363
Lot 1 DP 373362
Lot 1 DP 193118
Part Lot 2 DP 22952
WAIPAPA LOOP ROAD
Legal Road, 20.12m Wide
KLINAC LANE
Legal Road, 20.00m Wide
Section 1
0.3862Ha
Section 4
0.4349Ha
Section 3
1.2148Ha
Section 2
0.0843Ha
Diag. A
Diag. C
Diag. B
AREAS & MEASUREMENTS ARE TO THE RIGHT BANK OF STREAM
Stream boundary is adopted from DP 95010 and may not coincide with the current position of Whiriwhiritoa Stream
WILLIAMS & KING - Kerikeri
T1/1
Sections 1 - 4
Title Plan
SO 438821
Approved on: 1/04/2011
Surveyor: David Brett King
Firm: Survey & Planning Solutions (2010) Li
Land District: North Auckland
Digitally Generated Plan
Generated on: 01/04/2011 12:41am Page 3 of 3
File: 20434 FNDC

Do not scale from drawings.
The Contractor must check and verify all dimensions on site prior to commencing any work.

All work to be in accordance with
The Building Act 2004,
The New Zealand Building Code, NZS 3604 and
Any additional Territorial Authority requirements.
Refer Specification for references to other
New Zealand / Australian Standards to be complied with as they apply to this project.

WIND ZONE: HIGH
EXPOSURE ZONE: C

N

LEGAL DESCRIPTION:
Identifier: 574944
Section 3
Survey Office Plan 438821
Area: 12,148sqm

Whiriwhiritoa Stream
Average width of stream 2.5m
10m setback
B-Train turning curve
Easement boundary
Service lane
Entry / Exit
SW OUTLET
Street light
Extg vehicle crossing
Extg vehicle crossing
Landscape 50% of 6m wide strip
MARITIME LANE
KLINAC LANE
Truck park / loading space
Green space / future development area
Loading bay
Rubbish
Silt fence
Garden
Extg vehicle crossing
Entry / Exit
Hydrant
SWMH
WM
CP

BUILDING 1
FL: 78.09
Lettable area
20m x 40m = 800m2

BUILDING 2
FL: 78.09
Lettable area
20m x 28m = 560m2

BUILDING 3
FL: 77.49
Lettable area
20m x 28m = 560m2

12 carparks
24 carparks
7 carparks
4 carparks

SITE PLAN
SCALE 1:200 @ A1

GENERAL NOTES:

- Entire site to be fenced with 2m high temporary security fence for the duration of the works with lockable gates at entrances.
- Landscaped areas to be fully planted in lawn or other plantings.
- No signage included in this application.
- Wastewater disposal to existing established treatment plant and disposal area per wastewater report.
- Stormwater from site in accordance with stormwater report.

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
SITE PLAN

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

Spooner architectural solutions
PO Box 10 KERIKERI 0245
e: paul@spoonersolutions.co.nz
p: (09) 407 3107 m: 027 289 1221
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SCALE 1:100
SHEET No. BC03

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The Contractor must check and verify all dimensions on site prior to commencing any work.

All work to be in accordance with
The Building Act 2004,
The New Zealand Building Code, NZS 3604 and
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Refer Specification for references to other
New Zealand / Australian Standards to be complied with as they apply to this project.

WIND ZONE: HIGH
EXPOSURE ZONE: C

N

LEGAL DESCRIPTION:
Identifier: 574944
Section 3
Survey Office Plan 438821
Area: 12,148sqm

Whiriwhiritoa Stream
10m setback
10m setback
10m setback
5.11
2.03
2.64
6.30
77.0
77.0
77.0
78.0
SW OUTLET
Street light
Entry / Exit
Extg vehicle crossing
B-Train turning curve
MARITIME LANE
KLINAC LANE
Silt fer

BUILDING 1
FL: 78.09

BUILDING 2
FL: 78.09

BUILDING 3
FL: 77.49

7 carparks
654.22 m²

MH5
LL 77.013
IL IN 76.45
IL OUT 76.40

CP10 Cess Pit.
LL 77.644
IL IN 76.25
IL OUT 76.20

MH6
LL 77.59
IL IN 76.18
IL OUT 76.13

MH
LL: 78.15
IL: 76.02

CP9 Cess Pit.
LL 77.708

MH
LL: 78.03
IL: 76.09

MH1
LL 77.818
IL IN 76.18
IL OUT 76.13

CP1 Cess Pit
LL: 77.66
IL IN 76.25
IL OUT 76.2

MH4
77.535
IL IN 76.63
IL OUT 76.58

CP2 Cess Pit.
LL 77.645

CP3 Cess Pit Manhole.
LL 77.150
IL IN 76.82
IL OUT 76.77

CP4 Cess Pit.
LL 77.370
IL OUT 76.95

MH3.
LL 77.79
IL IN 76.67
IL OUT 76.62

CP6 Cess Pit.
LL 77.64
IL OUT 76.71

CP7 Cess Pit.
LL 77.60
IL OUT 76.765

CP8 Cess Pit.
LL 77.747

MH2
LL 77.81
IL IN 76.38
IL OUT 76.33

CP5 Cess Pit.
LL 77.64

SWMH
SWMH
SWMH
CP
CP
WM
WM
Hydrant
Hydrant
Street light

DP2 - 01
DP2 - 02
DP2 - 03
DP2 - 04
DP2 - 05
DP2 - 06
DP1 - 01
DP1 - 02
DP1 - 03
DP1 - 04
DP1 - 05
DP1 - 06
DP3 - 01
DP3 - 02
DP3 - 03
DP3 - 04
DP3 - 05

BRANCH 1, 22m 375Ø @ 1:200
BRANCH 3, 36m 200Ø @ 1:200
BRANCH 2, 22m
375Ø @ 1:200 29m
26m 375Ø @ 1:200
28m 300Ø @ 1:200
150Ø @ 1:200 26m
14m
11m
13.1m 300Ø @ 1:200
300Ø @ 1:200 30m
48m 300Ø @ 1:200
9m
19m 200Ø @ 1:200
6.4m

FGL: 77.815
FGL: 77.99
FGL: 77.89
FGL: 77.766
FGL: 77.71
FGL: 77.29
FGL: 77.39
Kerb
Fall
Fall 1:200

STORMWATER LEGEND

DOWNPIPES BUILDING ONE

DP NO.	SIZE/FALL	CATCHMENT	MODIFIED CATCHMENT
DP1 - 01	150Ø @ 1:200	208m²	245m²
DP1 - 02	150Ø @ 1:200	208m²	246m²
DP1 - 03	150Ø @ 1:200	208m²	246m²
DP1 - 04	100Ø @ 1:100	14m²	17m²
DP1 - 05	150Ø @ 1:200	208m²	245m²
DP1 - 06	100Ø @ 1:100	10m²	12m²

DOWNPIPES BUILDING TWO

DP NO.	SIZE/FALL	CATCHMENT	MODIFIED CATCHMENT
DP2 - 01	150Ø @ 1:200	147m²	174m²
DP2 - 02	150Ø @ 1:200	147m²	174m²
DP2 - 03	150Ø @ 1:200	147m²	174m²
DP2 - 04	100Ø @ 1:100	14m²	17m²
DP2 - 05	150Ø @ 1:200	147m²	174m²
DP2 - 06	100Ø @ 1:100	10m²	12m²

DOWNPIPES BUILDING THREE

DP NO.	SIZE/FALL	CATCHMENT	MODIFIED CATCHMENT
DP3 - 01	150Ø @ 1:200	193m²	228m²
DP3 - 02	100Ø @ 1:100	10m²	12m²
DP3 - 03	150Ø @ 1:200	193m²	228m²
DP3 - 04	150Ø @ 1:200	193m²	228m²
DP3 - 05	100Ø @ 1:100	14m²	17m²

CESS PITS

CP NO.	LID LEVEL	CATCHMENT	MODIFIED CATCHMENT
CP1	77.66	461m²	545m²
CP2	77.645	1,077m²	1,273m²
CP3	77.15	654m²	771.72m²
CP4	77.37	176m²	208m²
CP5	77.64	403m²	477m²
CP6	77.64	571m²	675m²
CP7	77.60	471m²	556m²
CP8	77.747	374m²	442m²
CP9	77.708	368m²	435m²
CP10	77.644	328m²	388m²

STORMWATER PLAN
SCALE 1:200 @ A1

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
STORMWATER PLAN

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

Spooner architectural solutions
PO Box 10 KERIKERI 0245
e: paul@spoonersolutions.co.nz
p: (09) 407 3107 m: 027 289 1221
Spooner Architectural Services Ltd.

SCALE

SHEET No.
BC06

Do not scale from drawings.
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All work to be in accordance with
The Building Act 2004,
The New Zealand Building Code, NZS 3604 and
Any additional Territorial Authority requirements.
Refer Specification for references to other
New Zealand / Australian Standards to be complied with as they apply to this project.

WIND ZONE: HIGH
EXPOSURE ZONE: C

Whiriwhiritoa Stream

5.11
2.03
2.64
2.12
1.89
10m setback
1.65
1.11
10m setback
Average width of stream 2.5m
3.15
10m setback
1.55
2.15
10m setback
5.30

77.0

SW OUTLET
77.0

MH5
LL 77.80
IL IN 76.45
IL OUT 76.40

B-Train turning curve

FGL: 77.89

297.12 m²

MH6
LL 77.59
IL IN 76.18
IL OUT 76.13

A - 01

FGL: 77.89

FGL: 77.815

Entry / Exit

Extg vehicle crossing

BUILDING 2
FL: 78.09
Lettable area
20m x 28m = 560m2
688.90 m²

77.0

Building 2 Platform RL 77.94

Diagonal hatching = fill area 689 m².
Volume: 579 m³
Maximum fill depth 1.14 metres

A - 02
546.59 m²

7 carparks

FGL: 77.89

FGL: 77.99

FGL: 77.89

CP9 Cess Pit.
LL 77.708

MH4
77.535
IL IN 76.63
IL OUT 76.58

CP2 Cess Pit.
LL 77.645

Sediment retention pond size & location TBC

Green space / future development area

CP3 Cess Pit Manhole.
LL 77.150
IL IN 76.82
IL OUT 76.77

CP4 Cess Pit.
LL 77.370
IL OUT 76.95

FGL: 77.89

A - 08
1,070.88 m²

A - 09
637.21 m²

FGL: 77.29

FGL: 77.29

A - 10
167.48 m²

Silt fence

A - 03
402.13 m²

MH1
LL 77.818
IL IN 76.18
IL OUT 76.13

CP1 Cess Pit
LL: 77.66
IL IN 76.25
IL OUT 76.2

FGL: 77.89

FGL: 77.99

FGL: 77.99

BUILDING 1
FL: 78.09
Lettable area
20m x 40m = 800m2
956.25 m²

BUILDING 3
FL: 77.49
Lettable area
20m x 28m = 560m2
685.85 m²

FGL: 77.85

Building 3 Platform RL 77.34

Diagonal hatching = fill area.
Volume: 302 m3
Maximum fill depth 0.74 metres

MH3.
LL 77.79
IL IN 76.67
IL OUT 76.62

A - 07
463.46 m²

Building 1 Platform RL 77.94

Diagonal hatching = fill area 956 m².
Volume: 517 m³
Maximum fill depth 0.76 metres

78.0

A - 04
377.19 m²

FGL: 77.89

FGL: 77.99

FGL: 77.89

A - 06
544.60 m²

CP6 Cess Pit.
LL 77.64
IL OUT 76.71

CP7 Cess Pit.
LL 77.60
IL OUT 76.765

77.0

MH2
LL 77.81
IL IN 76.38
IL OUT 76.33

A - 05
402.66 m²

FGL: 77.766

CP5 Cess Pit.
LL 77.64

77.0

EARTHWORKS PLAN
SCALE 1:200 @ A1

NOTES:

Fill volume for buildings:	1,398m³
Fill volume for paving:	1,789m³
Total fill volume:	3,187m³
Total fill volume in 10 year flood zone:	912m³
Total fill volume in 100 year flood zone:	3,187m³

Protect the works in accordance with FNDC Engineering standards for temporary erosion and sediment control.
Install silt fences along boundaries where possible.
Install filter sock to crossings and paved edges

Only expose enough ground at any one time as required to complete the siteworks.
Excavated area to be stabilized with gravel immediately after exposure.

Install temporary filter cloth to any existing surface water drains. Maintain during construction, including regular cleaning.

Cut faces and batters to be covered immediately after exposure with polythene or mulch.

Fill areas to be compacted to engineers requirements and stabilised with GAP 65 or GAP 40 basecourse.

Monitor and review erosion & sediment control measures constantly throughout the period that earth remains uncovered.

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
EARTHWORKS PLAN

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

Spooner architectural solutions
PO Box 10 KERIKERI 0245
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p: (09) 407 3107 m: 027 289 1221
Spooner Architectural Services Ltd.

SCALE

SHEET No.
BC30

FNDC - Approved Project Information Memorandum Document - EBC-2026-800/0 - 08/04/2026 - Pg 1 of 10 - LMare

Subject: RE: River Flood hazard, 20 Klinac Lane Waipapa
Date: Tuesday, 3 March 2026 at 2:56:54 PM New Zealand Daylight Time
From: Duty Building Officers
To: Paul Spooner
Attachments: image008.png, image009.png, image010.png, image011.png, image012.png, image013.png, image020.png

Hi Paul.

The minimum floor level is set by the FNDC Engineering Standards.

Habitable buildings floor heights set 500mm above 1% AEP flood level (100 year flood level)

Commercial buildings floor heights set 300mm above 1% AEP flood event

Regards,

Rachel

Duty Building Officers

dutybuildingofficers@fndc.govt.nz
Te Kaunihera o Te Hiku o te Ika | Far North District Council

Pokapū Kōrero 24-hāora | 24-hour Contact Centre 0800 920 029
fndc.govt.nz

From: Paul Spooner <Paul@spoonersolutions.co.nz>
Sent: Monday, 2 March 2026 3:53 pm
To: Planning Support <Planning.Support@fndc.govt.nz>; Building Support <Building.Group@fndc.govt.nz>
Subject: River Flood hazard, 20 Klinac Lane Waipapa

CAUTION: This email originated from outside Far North District Council.
Do not click links or open attachments unless you recognise the sender and know the content is safe.

Hi there
The NRC have provided modelling for the above site, declaring the river floor levels for 10, 50 and 100 year events.
Can you please advise what the minimum floor height is required to be above a flood level?
The proposed use of future buildings on the site is retail.
NRC have advised that the minimum floor level is something that FNDC sets.

Regards

Paul.

FNDC - Approved Project Information Memorandum Document - EBC-2026-800/0 - 08/04/2026 - Pg 2 of 10 - LMare

Spooner architectural solutions

https://spoonersolutions.co.nz/ I p. 027 289 1221 PO Box 10 Kerikeri 0245

FNDC - Approved Project Information Memorandum Document - EBC-2026-800/0 - 08/04/2026 - Pg 3 of 10 - LMare

Subject: REQ 630584 Spooner Architecture River flood hazard levels 20 Klinac Lane Waipapa
Date: Monday, 2 March 2026 at 3:06:30 PM New Zealand Daylight Time
From: Anna Talbot
To: Paul Spooner
Attachments: Outlook-hd4tqves.png, Outlook-lv0u0i5a.png, Outlook-bc3rdc1q.png, Outlook-pwkn2kyg.png, Outlook-3eje1lfh.png, Outlook-2viu1d5o.png, FLR_7315854.pdf

Kia ora Paul,

Attached is a flood level report for 20 Klinac Lane, Waipapa which displays the priority river flood levels in 0.2m intervals. It will give the maximum and minimum river flood level found for each event (10yr, 50yr and 100yr CC) within the property's boundary.

As for the minimum floor levels, these are set by the district council.

Our modelling disclaimers are linked below:
Coastal Flood Hazard Disclaimer
River Flood Map Disclaimer

Please let me know if you have any questions.

Ngā mihi,

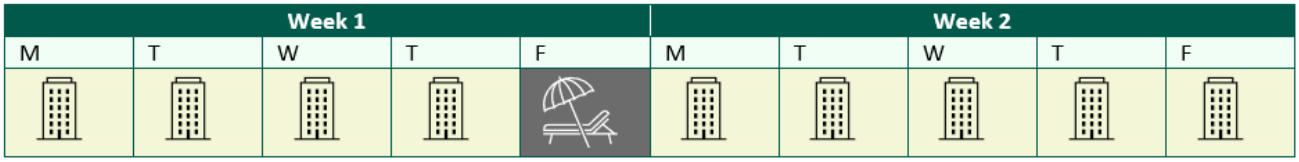
Anna Talbot
Natural Hazards Analyst
Northland Regional Council » Te Kaunihera a rohe o Te Taitokerau

Mobile: 027 251 3731

Northland REGIONAL COUNCIL
Te Kaunihera ā rohe o Te Taitokerau

P 0800 002 004 » **W** www.nrc.govt.nz

At NRC we value and encourage flexible working and I recognise that my working hours may be different to yours. I'm sending this message at a time that suits me. I don't expect you to read, respond or action it outside of your normal working hours.



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Flood Level Report

Northland REGIONAL COUNCIL
Te Kaunihera ā rohe o Te Taitokerau

FNDC - Approved Project Information Memorandum Document - EBC-2026-800/0 - 08/04/2026 - Pg 5 of 10 - LMare



Parcel ID: 7315854

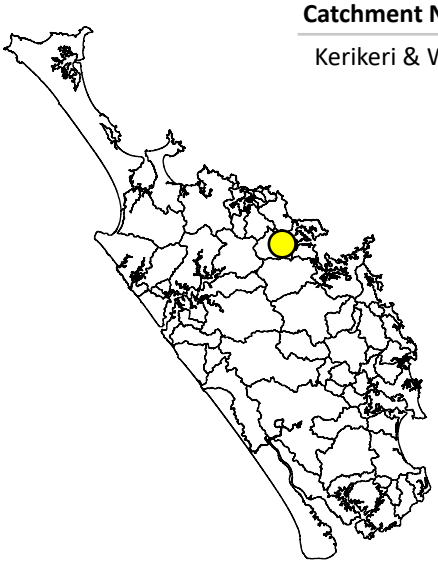
Title: 574944

Appellation: Section 3 SO 438821

Survey Area: 12,148 m²

Catchment Name(s)

Kerikeri & Waipapa



Date Exported: 2/03/2026

Report Reference: 20260302_110359

FNDC - Approved Project Information Memorandum Document - EBC-2026-800/0 - 08/04/2026 - Pg 6 of 10 - LMare

Useful Flood Information Definitions

Annual Exceedance Probability (AEP) - The probability of a flood event of a given size occurring in any one year, usually expressed as a percentage annual chance.

1% AEP - A flood of this size or larger has a 1 in 100 chance or a 1% probability of occurring in any year.
2% AEP - A flood of this size or larger has a 1 in 50 chance or a 2% probability of occurring in any year.
5% AEP - A flood of this size or larger has a 1 in 20 chance or a 5% probability of occurring in any year.
10% AEP - A flood of this size or larger has a 1 in 10 chance or a 10% probability of occurring in any year.

NZVD2016 - New Zealand Vertical Datum - The reference level used in our flood models to define ground level.
Flood Levels - Flood levels are used from our modelled flood level rasters. The flood levels are calculated above NZVD 2016 Datum.
Climate Change (CC) - NZCPS (2010) requires that the identification of coastal hazards includes consideration of sea level rise over at least a 100-year planning period. Climate change impacts, such as increased rain intensity, have been included in the flood scenarios. You can read more about the Climate Change forecasts included in each flood model in the technical reports on the NRC website.
Mean high water spring (MHWS) - describes the highest level that spring tides reach, on average.

Coastal Flood Hazard Zones (CFHZ)

Coastal flood hazard zones are derived using a range of data including tide gauge analysis, wind and wave data and models, and use empirical calculations to estimate extreme water levels around the coastline. The calculations include projected sea level rise scenarios based on the latest Ministry for the Environment guidance.

CFHZ 0 Coastal Flood Hazard Zone 0 - area currently susceptible to coastal inundation (flooding by the sea) in a 1-in-100 year storm event
CFHZ 1 Coastal Flood Hazard Zone 1 - an area susceptible to coastal inundation (flooding by the sea) in a 1-in-50 year storm event, taking into account a projected sea-level rise of 0.6m over the next 50 years
CFHZ 2 Coastal Flood Hazard Zone 2 - an area susceptible to coastal inundation (flooding by the sea) in a 1-in-100 year storm event, taking into account a projected sea-level rise of 1.2m over the next 100 years
CFHZ 3 Coastal Flood Hazard Zone 3 - an area susceptible to coastal inundation (flooding by the sea) in a 1-in-100 year storm event, taking into account a projected sea-level rise of 1.5m over the next 100 years (rapid sea level rise scenario)

REGIONWIDE and PRIORITY - RIVER FLOOD HAZARD ZONES (RFHZ)

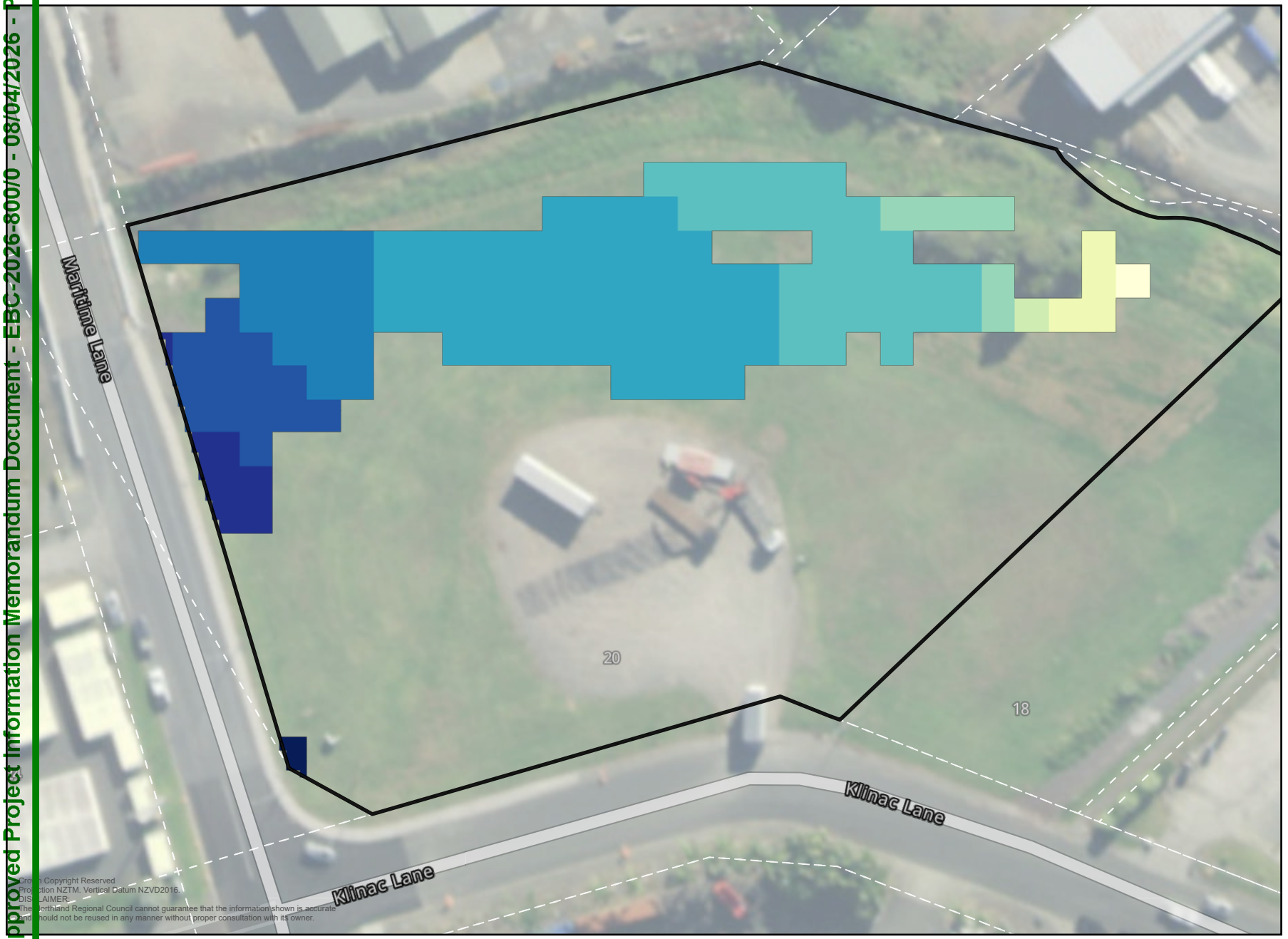
River flood hazard zones are created to raise awareness of where flood hazard areas are identified, inform decision-making and to support the minimisation of the impacts of flooding in our region. The river flood hazard zones have been created using an assessment of best current available information, engaging national and international experts in the field, using national standards and guidelines and has been peer reviewed. This will provide a good indication of the areas at potential risk of flooding from a regional perspective. However, flood mapping is a complex process which involves some approximation of the natural features and processes associated with flooding.

River Flood Hazard Zone 1 – 10% AEP flood extent: an area with a 10% chance of flooding annually
River Flood Hazard Zone 2 – 2% AEP flood extent: an area with a 2% chance of flooding annually
River Flood Hazard Zone 3 – 1% AEP flood extent: an area with a 1% chance of flooding annually with the inclusion of potential Climate Change (CC) impact

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River Flooding

10 Year



Maximum	Minimum
77.84 m	75.52 m

Max Min flood levels are for the raster extent shown on the map

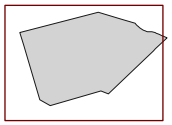
10 Year

m NZVD

- 75.52 - 75.75
- 75.75 - 75.98
- 75.98 - 76.21
- 76.21 - 76.44
- 76.45 - 76.68
- 76.68 - 76.91
- 76.91 - 77.14
- 77.14 - 77.37
- 77.37 - 77.61
- 77.61 - 77.84

Parcel

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Projection NZTM. Vertical Datum NZVD2016.
DISCLAIMER:
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N

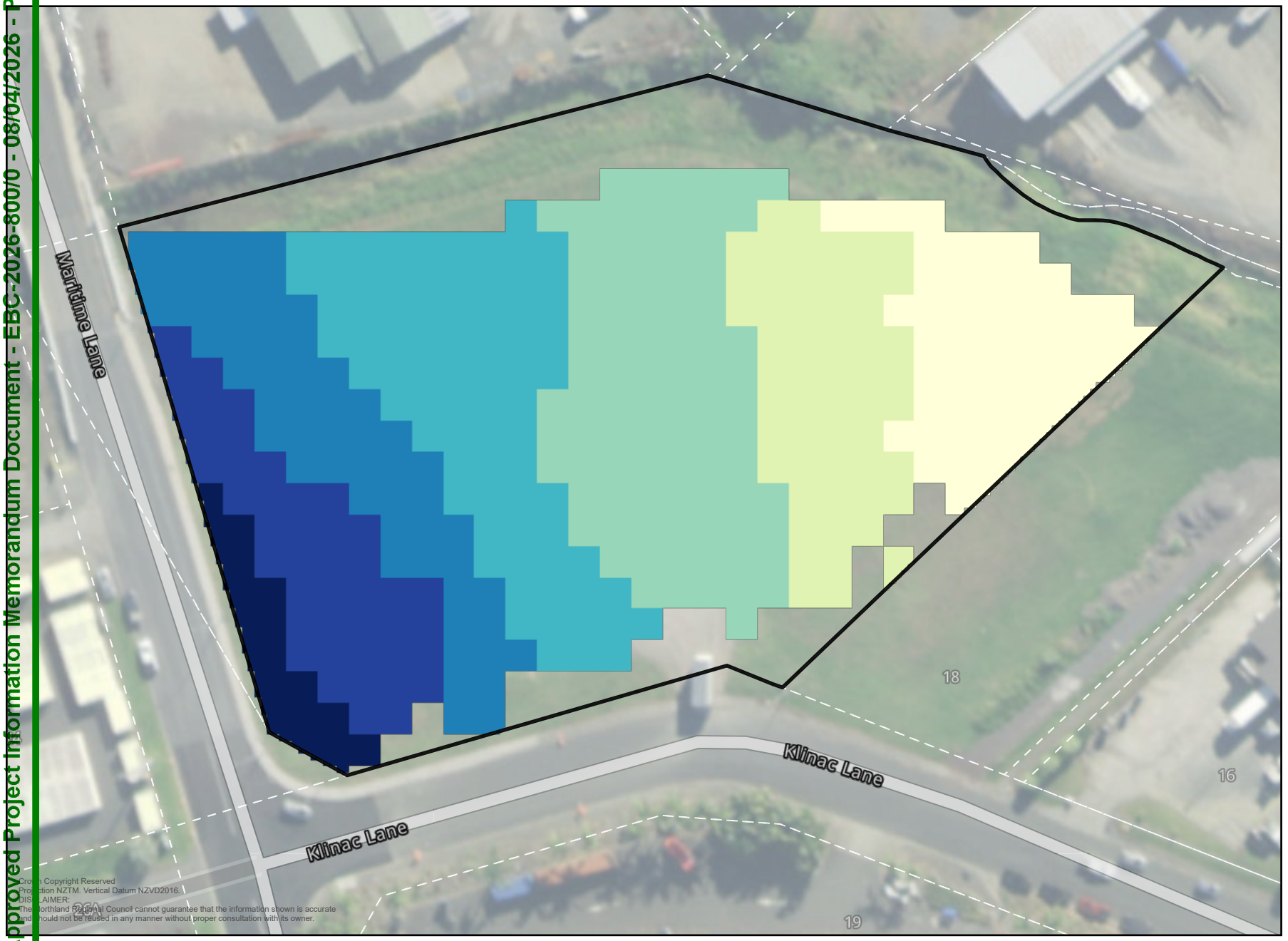
0 12.5 25 50 75 m

Report Reference:

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River Flooding

50 Year



Maximum	Minimum
77.88 m	76.54 m

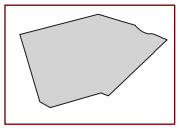
Max Min flood levels are for raster extent shown on the map

50 Year

m NZVD

- 76.54 - 76.74
- 76.74 - 76.94
- 76.94 - 77.14
- 77.14 - 77.34
- 77.34 - 77.54
- 77.54 - 77.74
- 77.74 - 77.94

Parcel



N

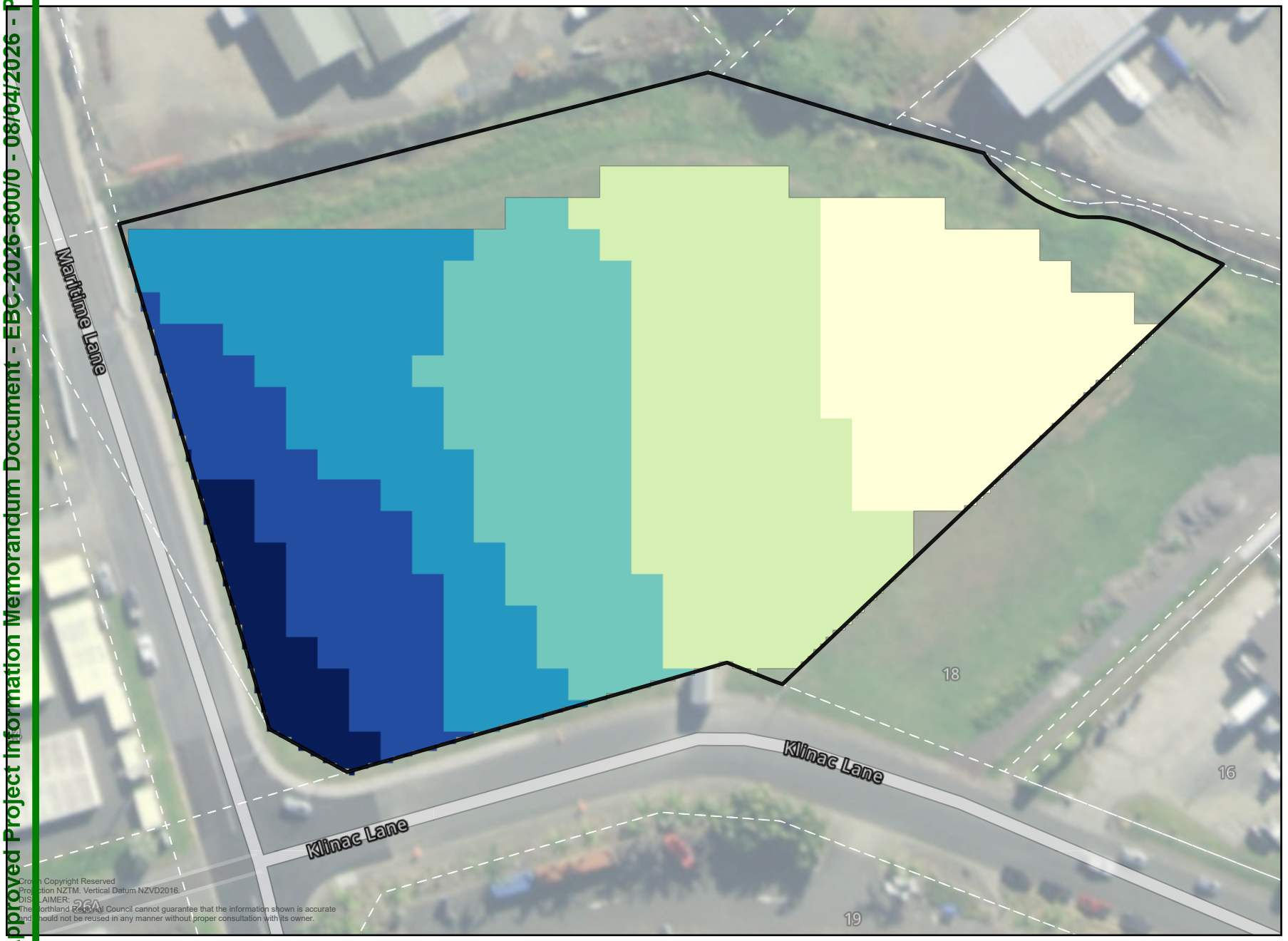
0 15 30 60 90 m

Report Reference:

FNDC - Approved Project Information Memorandum Document - EBC-2026-800/0 - 08/04/2026 - Pg 9 of

River Flooding

100 Year + CC



Maximum	Minimum
77.98 m	76.79 m

Max Min flood levels are for raster extent shown on the map

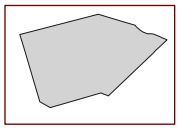
100 Year + CC

m NZVD

- 76.79 - 76.99
- 76.99 - 77.19
- 77.19 - 77.39
- 77.39 - 77.59
- 77.59 - 77.79
- 77.79 - 77.99

Parcel

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N

0 15 30 60 90 m

Report Reference: 20260302_111622

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Disclaimers

Our modelling disclaimers are linked below:
https://www.nrc.govt.nz/media/ko2dkgxn/coastal-hazard-maps-disclaimer-june-2017.pdf
https://www.nrc.govt.nz/media/cqnnw12y/flood-map-disclaimer-2021.pdf

Our regionwide modelling reports are linked below:
https://www.nrc.govt.nz/environment/river-flooding-and-coastal-hazards/river-flooding/river-flood-hazard-maps/regionwide-river-catchments-analysis-technical-reports

ARE YOU FLOOD READY?



01

Know your risk

Check what potential flood risks and other hazards that may impact your property.

The Natural Hazards Portal is a great place to start. It's a 'one-stop-shop' of information related to natural hazards within our region: www.nrc.govt.nz/environment/natural-hazards-portal

The Environmental Data Hub provides river level and flow data, as well as warning levels, rainfall data, water quality, and more: www.nrc.govt.nz/environment/environmental-data/environmental-data-hub

02

Have a plan

Make sure you have an evacuation plan, emergency kit and important phone numbers ready. Check out: https://getready.govt.nz/en/prepared/ for tips on how to get ready.

03

Stay up to date

In a civil defence emergency situation, follow the updates on the Northland CDEM Group's Facebook page: www.facebook.com/civildefencenorthland

Or follow updates from the embedded feed on the regional council website: www.nrc.govt.nz/civildefence

04

In an emergency

Remember, if life is threatened dial 111 to contact emergency services.



INITIA

GEOTECHNICAL SPECIALISTS

WAIPAPA CENTRE LIMITED

PROPOSED NEW RETAIL BUILDINGS: 20 KLINAC LANE, WAIPAPA

GEOTECHNICAL INTERPRETATIVE REPORT

INITIA REF P-003194 REV B

APRIL 2026

Your Report Summary

This summary outlines the principal geotechnical issues, design considerations and advice for the proposed retail buildings at 20 Klinac Lane, Waipapa, and is intended for our client, Waipapa Centre Limited. It is important that all designers and constructors refer to relevant sections in the main body of the report for further detail.

Geotechnical Consideration	Summary Advice/Recommendations
Ground Conditions & Geology	The site is underlain by topsoil and/or existing fill over soft to very stiff Late Quaternary alluvial and colluvial silts and clays. Basalt of the Kerikeri Volcanic Group underlies these soils at depths ranging from less than 1 m to over 14 m bgl. Soil depths are greatest at southern site of Building 3. The basalt flow appears to be discontinuous in this area, and the site has been infilled with a thick deposit of low strength alluvium.
Groundwater	Groundwater was measured at 0.8–2.2 m bgl. Levels are likely influenced by the adjacent Whiriwhiritoa Stream.
Site seismicity & liquefaction susceptibility	A site Subsoil Class C is recommended for seismic design of the buildings. This is based on an assumption that there is at least 3 m of soil present beneath each building (including beneath the basalt rock, where this is present at near surface levels). Liquefaction risk is negligible and no specific liquefaction design is required.
Earthworks	With reference to proposed development plans, between 0.3 and 1.0 m of fill is required to form building platforms. All topsoil, uncontrolled fill, and soft or organic materials must be stripped and removed. The prefill subgrade should be inspected and approved by the geotechnical engineer prior to filling. Fill related settlement of up to 100 mm may occur where 1 m of fill is placed in the area of the site where the basalt rock is absent, at Building 3 (refer Figure 3194-G01). The fill induced settlement is likely to occur over a period of up to 12 months.
Settlements	Settlements from the combined fill and building surcharges – in the area where the upper basalt is absent (refer Figure 3194-G01) - are expected to exceed the tolerances for buildings of this nature. Therefore, ground improvement (preloading) will be required for Building 3. Settlements for Buildings 1 and 2 are estimated within acceptable limits (10–30 mm) and no mitigation is expected to be required.
Foundations	Shallow foundations are expected to be suitable for all three buildings. However preloading will be required prior to construction for Building 3.
Subgrade conditions – Floor slab and pavements	A subgrade CBR of 3% can be assumed for design of floor slabs bearing on grade and pavements. Subgrades must be protected from trafficking and poor weather during construction.

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1. Introduction

1.1 General

This report has been prepared to provide geotechnical advice and recommendations for design and consenting of the proposed retail building development at 20 Klinac Lane, Waipapa. This report is intended to support all design and consenting (Resource and Building Consent) stages for the project.

1.2 Proposed Development

Based on the current architectural drawings[1], the proposed development comprises the construction of three new single storey retail buildings with associated carpark/canopy and paved driveway. Building 1, in the southwestern corner of the site is proposed with Floor Level (FL) at RL 78.09 m and a building area of 800 m^2 (20 m x 40 m). Building 2 and Building 3 are located at northwestern and eastern parts of the site, respectively, with a proposed FL at RL 78.09 m and RL 77.49 m. Both Building 2 and Building 3 have a proposed building area of 560 m^2 (20 m x 28 m).

Car parking and access roads are proposed between the building locations and around site perimeter.

A plan of the proposed development is presented in Figure 1-1 below.

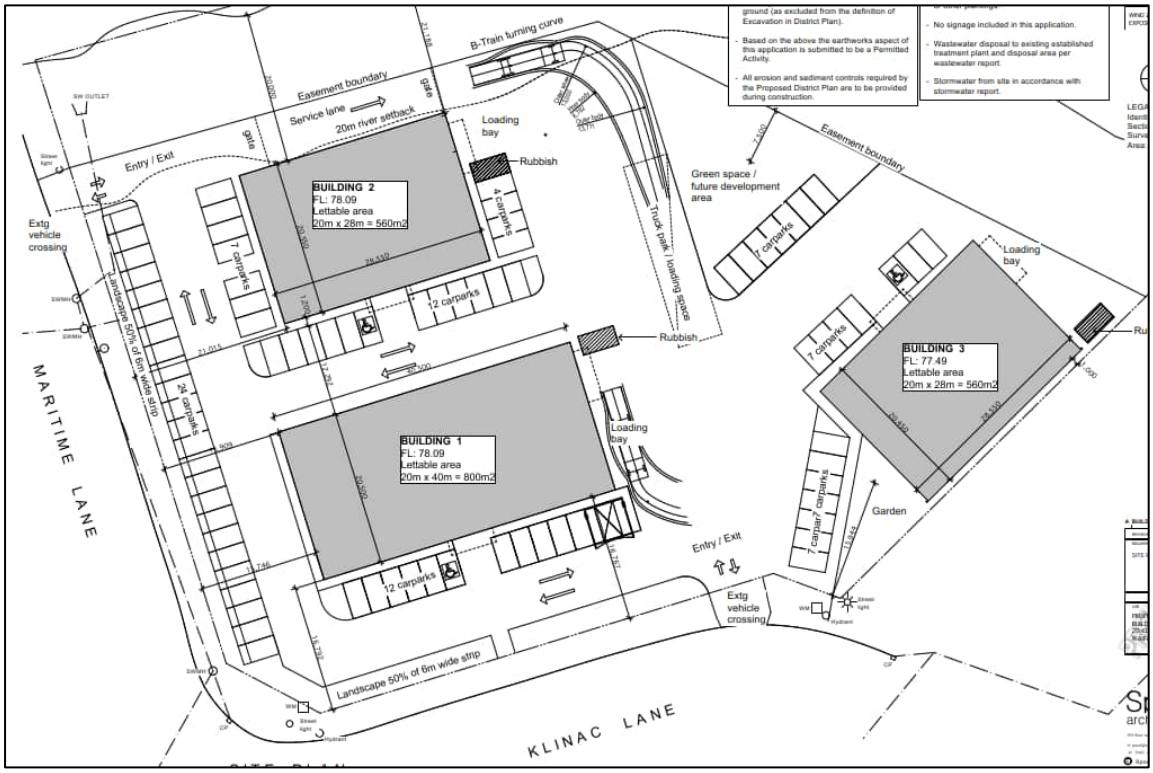


Figure 1-1: Site plan of proposed retail buildings

Based on the proposed floor levels and available local council GIS data, fill is likely required to be required to lift site levels to design subgrade level. Fill depths are expected to range from approximately 0.3 m to 1.0 m.

The buildings are proposed to comprise portal frame structures supported on strip footings (edge thickening) and floor slabs on grade.

[1] Proposed New Retail Buildings, 20 Klinac Lane, Waipapa. Spooner Architectural Solutions. Dated 10/04/2026.

2. Site Overview

2.1 Site Description

The project site is located at 20 Klinac Lane, Waipapa with a total site area of approximately 1.22 hectares. The property is located in a commercial/industrial properties area, and bounded by Maritime Lane and Klinac Lane to the west and south, respectively. The Whiriwhiritoa Stream runs along the northern site boundary. A vacant property is present to the southeast. Figure 2-1 presents the site boundary, pertinent features, and council Lidar contours.

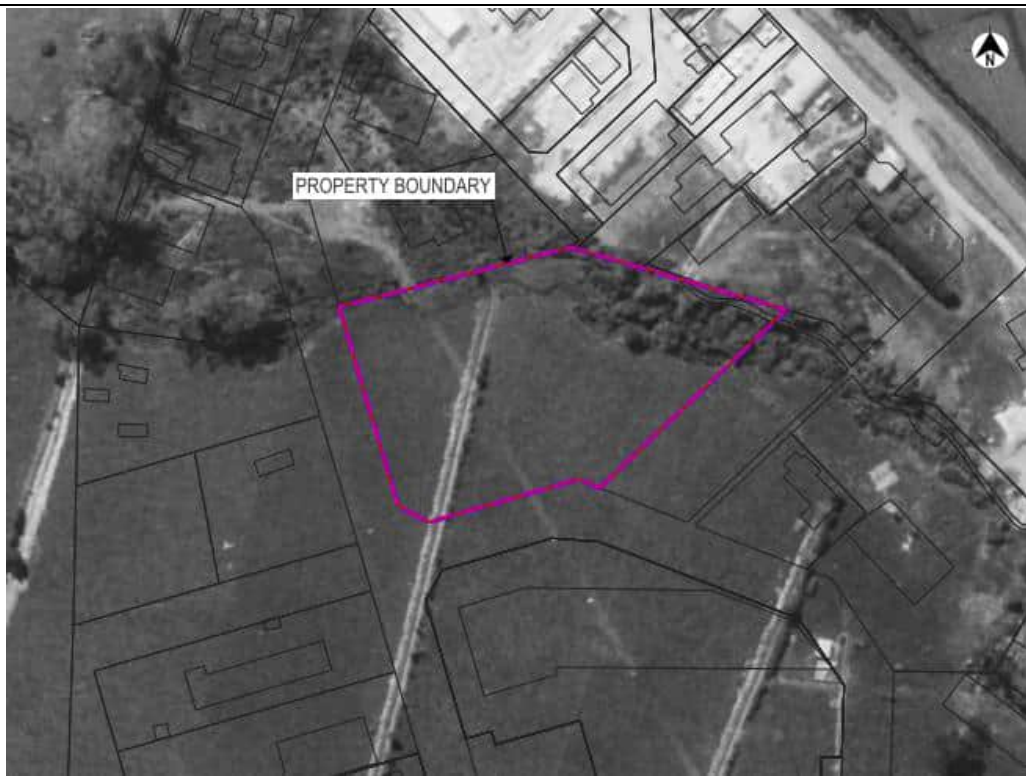
Topography at the site is very gently sloping downwards northeast, from approximately RL 78 m at southwestern corner, to approximately RL 76 m at the northern boundary. The stream has an invert level of approximately RL75 to 73.5 m adjacent to the northern boundary, grading down to the east.

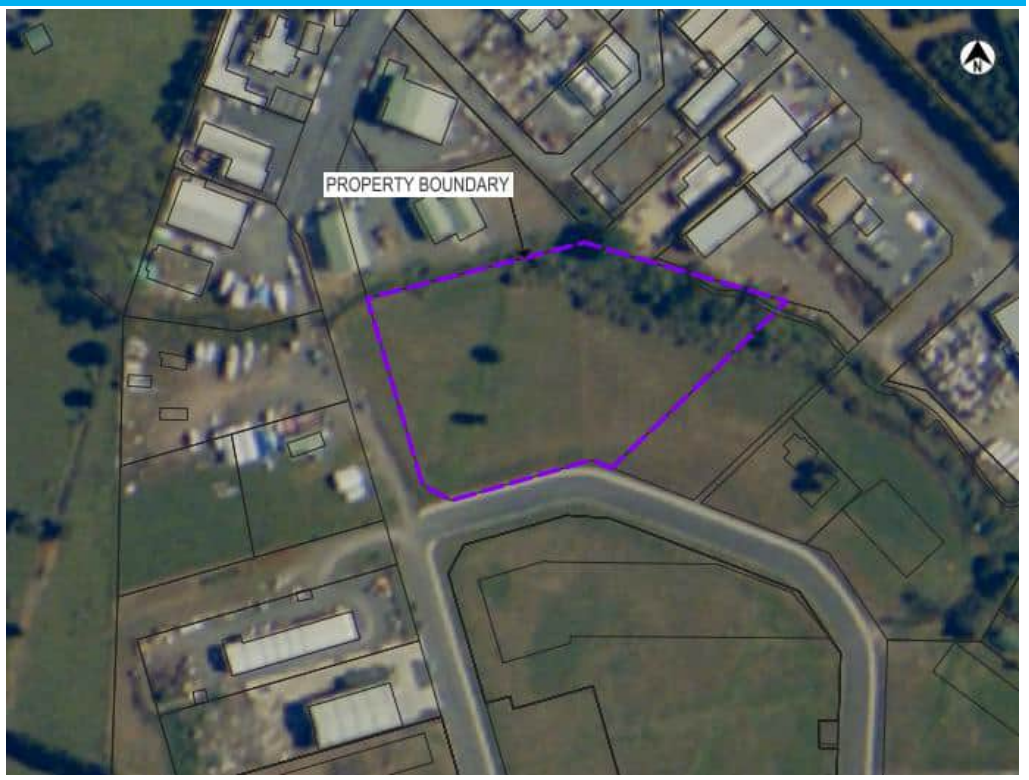


Figure 2-1: Site Location and Pertinent Features

2.2 Historic Imagery Review

Based on a review of historic aerial photographs sourced from Retrolens and Basemap records from 1953 up to now, the site remained undeveloped until sometime in 2020s. Prior to this period, the land was utilised for agricultural purposes. The middle southern site was repurposed for use as a shipping container yard around 2020s. Refer below for a summary of relevant historical aerial photographs.

Date & Description	Historical Aerial Photography
1953	 The sites has not been developed and appears to be mainly in use for agricultural purposes.
1981-1982	 A farm track is present. Northern neighbouring sites have been developed with buildings.

Date & Description	Historical Aerial Photography
2005	 Klinac Lane is formed and surrounding land is significantly more developed.
2020s	 A gravel hard standing area has been formed in the centre of the site. Land to the east and south is now developed.

2.3 Published Geology

Based on a review of the published geological map of the area[2] (see Figure 2-2) the site is inferred to be underlain by Kerikeri Volcanic Group basalt. The material typically comprises basalt lava, volcanic plugs and minor tuff. Early Pleistocene to Middle Pleistocene estuary, river and swamp deposits is mapped approximately 450 m south of the site.

The site-specific investigations generally encountered clayey SILT alluvium overlying basalt rock.

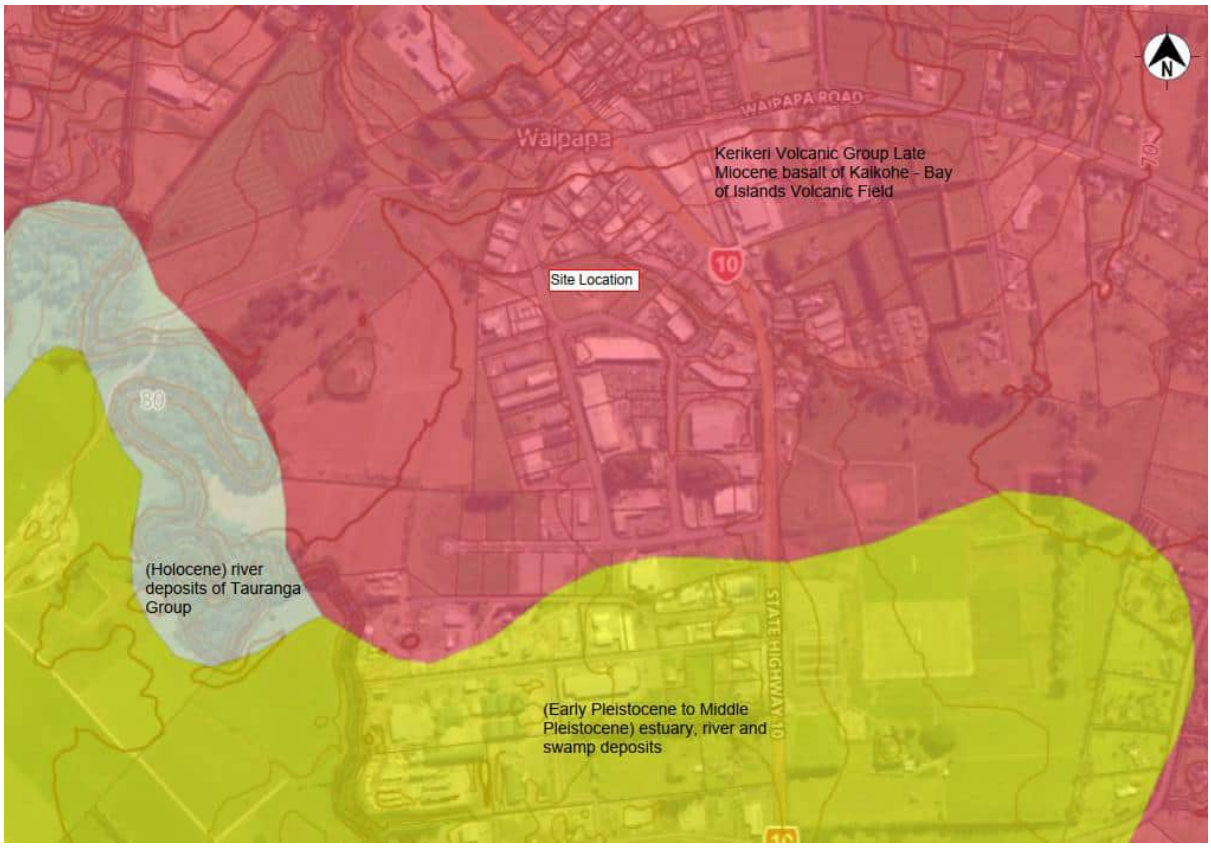


Figure 2-2: Published Geological Map of the area

[2] GNS Science: New Zealand Geology Web Map – https://data.gns.cri.nz/geology/

3. Geotechnical Investigations

3.1 NZTA Historical Investigations

New Zealand Transport Agency (NZTA) conducted site investigations for the Whiriwhiritoa Stream crossing located at northwestern corner of the project site[3]. These site investigations were carried out by WSP Ltd on the 2nd and 3rd of September 2019. The site investigation included:

- 4 No. Cone Penetration Tests (referred to as CPT1 to CPT4) to refusal at 2.2 m to 3.0 m bgl.
- 1 No. Machine Borehole (referred to as BH19-01) undertaken to 10 m bgl.

The results of the investigation confirmed the presence of alluvial deposits. The recorded composition and density are variable with depth. Basalt of the Kerikeri Volcanic Field was encountered at depth ranging from 2.3m to 3.0 m bgl.

Groundwater level was recorded at 1.0 m bgl in the machine borehole.

3.2 Initia Historical Investigations

Initia undertook site investigations for a previously proposed development on the site between November 2022 and June 2023, which included:

- 5 No. hand auger undertaken up to 4 m below ground level (referred to as HA01 to HA05)
- 8 No. Cone Penetration Tests (referred to as CPT01 to CPT08) to refusal at 1.2 m to 6.3 m bgl or target depth of 15 m bgl.
- 6 No. Scala Penetrometer tests up to 0.3 m in the storage yard area (referred to as SC1)

3.3 Initia Supplementary Investigations

Initia undertook a supplementary site investigations at the south eastern site of Building 1 and south western site of Building 3 in April 2026, which included 7 No. Cone Penetration Tests (referred to as CPT101 to CPT107) to refusal at 2.5 m to 14.1 m bgl. The purpose of the supplementary investigations was to further evaluate the area of the site where the upper layer of basalt rock is discontinuous.

All investigations were supervised by a qualified Initia geotechnical engineer / engineering geologist. All recovered soils were logged in accordance with the New Zealand Geotechnical Society (NZGS) guidelines.

Investigation locations are presented on Figure 3194-G01 in Appendix A and the investigation logs are presented in Appendix B. The investigations are summarised in Table 3-1 below.

[3] Whiriwhiritoa Stream Crossing Geotechnical Factual Report, Ref: GS 2019, WSP Opus Ltd, dated 6th September 2019.

Table 3-1: Summary of Historical Investigations.

Investigation ID	Source & Date	Investigation Type	Co-ordinates (NZTM)[1]		Ground Surface Elevation[2] (m RL)	Termination Depth (m BGL)
			Easting (mE)	Northing (mN)		
CPT1	WSP 09/2019	Cone Penetration Test	1683393	6103467	77.7	2.4
CPT2		Cone Penetration Test	1683389	6103464	77.7	2.2
CPT3		Cone Penetration Test	1683385	6103481	78.3	3.0
CPT4		Cone Penetration Test	1683391	6103486	78.2	2.4
BH19-01		Machine Auger Borehole	1683391	6103466	77.7	10.0
CPT01	Initia 11/2022 - 06/2023	Cone Penetration Test	1683428	6103395	77.9	3.1
CPT02		Cone Penetration Test	1683416	6103442	77.5	1.5
CPT03		Cone Penetration Test	1683472	6103464	76.8	2.0
CPT04		Cone Penetration Test	1683520	6103445	76.7	1.2
CPT05		Cone Penetration Test	1683503	6103411	77.1	6.3
CPT06		Cone Penetration Test	1683496	6103439	76.9	13.8
CPT07		Cone Penetration Test	1683441	6103427	77.5	2.7
CPT08		Cone Penetration Test	1683438	6103459	77.1	0.9
HA01		Hand Auger Borehole	1683426	6103397	77.8	3.5
HA02		Hand Auger Borehole	1683420	6103437	77.5	1.0
HA03		Hand Auger Borehole	1683471	6103463	76.8	3.8
HA04		Hand Auger Borehole	1683520	6103446	76.7	1.5
HA05		Hand Auger Borehole	1683505	6103410	77.1	4.0
SC1		Scala Penetrometer Test	-	-	-	-
CPT101	Initia 04/2026	Cone Penetration Test	1683468	6103417	77.3	4.9
CPT102		Cone Penetration Test	1683464	6103441	77.1	3.8
CPT103		Cone Penetration Test	1683507	6103445	76.8	2.5
CPT104		Cone Penetration Test	1683511	6103416	77.1	7.0
CPT105		Cone Penetration Test	1683519	6103428	76.9	14.1
CPT106		Cone Penetration Test	1683499	6103433	77.0	5.8
CPT107		Cone Penetration Test	1683451	6103416	77.5	3.3

Note 1: Co-ordinate system – NZTM 2016. NZTA test location coordinates extracted from WSP Opus factual report, Initia test between November 2022 and June 2023 location coordinates determined using a GPS unit with an estimated horizontal accuracy of +/- 500 mm, Initia test in April 2026 location coordinates determined from proposed locations

Note 2: Datum – NZVD 2016. Ground surface elevations of NZTA test locations extracted from WSP Opus factual report, ground surface elevations of Initia tests location determined from existing contours based on recorded/inferred coordinates.

4. Subsurface Conditions

4.1 General

The geotechnical model presented in this report is based on available information obtained from both historical and current geotechnical investigations at point locations by Initia and WSP. The nature and continuity of the subsoil conditions away from the investigation locations are inferred and it must be appreciated that the actual soil conditions may vary from the assumed model.

4.2 Stratigraphy

The results of the historical geotechnical investigations indicate that the site is underlain by the following geological units, in order of increasing age (youngest to oldest):

- **Topsoil** and/or **Existing Fill**; overlying
- **Late Quaternary alluvial and colluvial soils;** overlying
- **Kerikeri Volcanic Group Basalt.**

Geological cross sections are presented on Figure 3194-G10 in Appendix A.

As presented on Figure 3194-G01, there is an area of deeper alluvial soils present in the eastern area of the site, extending beneath Building 3. This is inferred to be an area between two discontinuous surface basalt flows. A deeper basalt rock layer is inferred below the upper layer at a depth of approximately 14m below ground level. The extent of this historical feature is inferred on Figures 3194-G01 and G10 in Appendix A, based on currently available investigation data.

A detailed description of the geological units is presented in Section 4.3 below with a summary of the site stratigraphy, geological units and in situ test results presented in Table 4-1 to Table 4-3.

4.3 Soil Units

4.3.1 Topsoil and Existing Fill

A surface layer of topsoil, generally 0.2 m to 0.3 m in thickness, was encountered across the site. The topsoil generally consists of dark brown SILT with minor clay.

At the southern site where storage yard was present, hardfill materials are present, extending to at least 0.4 m bgl. These materials likely comprise compacted gravels.

4.3.2 Late Quaternary Alluvium and Colluvium

Below the topsoil and / or fill, the site is underlain by the Late Quaternary alluvial and colluvial soils. These soils are variable with depth and strength and comprise interbedded layers of clay/silt, sandy silt and silty sand materials. The alluvial and colluvial deposits have been sub-divided into sub-units based on composition and density as follows:

- **Unit 1A:** This sub-unit predominantly comprises interbedded stiff to hard silt and clay. Undrained shear strengths range from 49 kPa to UTP (Unable to Penetrate) and cone tip resistance, q_c varies from 0.5 MPa to greater than 7 MPa.

- **Unit 1B:** This unit is inferred to comprise soft to firm silt and clay with thin lense loose silty sand. This unit has a typical CPT cone tip resistance q_c of 0.2-0.8 MPa.

The alluvium and colluvium soils are thick in the south eastern quadrant of the site but appear to be shallow elsewhere (1-2 m thick, overlying basalt).

4.3.3 Kerikeri Volcanic Group Basalt

Basalt rock of unknown thickness, quality, and strength underlies the alluvial and colluvial soils across the site. Its presence has been inferred from refusal conditions encountered in both hand augers and cone penetration tests (CPTs); however, the rock was not directly appraised on site by core sampling but was visually appraised in the NZTA machine borehole BH19-01 (north western corner of the site) at 2.3 m depth. Basalt boulders and outcrops were also observed in the stream bank and bed during our site visit.

Given the locations of the proposed buildings, and the spatial variability of the overlying alluvial and colluvial soils and depth to basalt, the site stratigraphy and in situ test results are summarised for each below.

Table 4-1: Summary of site stratigraphy and in situ testing at proposed Building No 1 (Southwest).

Geological Unit	Soil/Rock Type	Depth to Top of Unit (m, bgl)	Elevation to top of unit (m RL)	Typical layer Thickness (m) [mean]	In Situ Strength Parameters Range [Typical value]	
					Su (kPa)	CPT q_c (MPa)[1]
Topsoil/Existing Fill	*SILT with minor clay and / or GRAVELs*	0.0	76.8-77.9	0.2-0.4 [0.3]	-	1.0-30 [5.0]
Late Quaternary Alluvium and Colluvium	***Unit 1A:** Stiff to very stiff clayey SILT, SILT and silty CLAY*	0.2-2.7	74.6-77.7	0.8-3.0 [1.6]	63-230 [70]	0.4-3.0 [1.0]
	***Unit 1B**: Soft to firm CLAY and silty CLAY, with thin lenses loose silty SAND*	0.8-2.5	75.0-76.5	0.6-2.4 [1.4]	-	0.1-1.0 [0.4]
Kerikeri Volcanic Group	*Highly to slightly Weathered Basalt*	0.9-4.8	72.5-76.6	Unproven	-	>25

Table 4-2: Summary of site stratigraphy and in situ testing at proposed Building No 2 (Northwest).

Geological Unit	Soil/Rock Type	Depth to Top of Unit (m, bgl)	Elevation to top of unit (m RL)	Typical layer Thickness (m) [mean]	In Situ Strength Parameters Range [Typical value]	
					Su (kPa)	CPT q_c (MPa)[1]
Topsoil/Existing Fill	*SILT with minor clay and / or GRAVELs*	0.0	76.8-77.7	0.2-0.4 [0.3]	-	

Geological Unit	Soil/Rock Type	Depth to Top of Unit (m, bgl)	Elevation to top of unit (m RL)	Typical layer Thickness (m) [mean]	In Situ Strength Parameters Range [Typical value]	
					Su (kPa)	CPT q_c (MPa)[1]
Late Quaternary Alluvium and Colluvium	***Unit 1A:*** *Stiff to very stiff clayey SILT, SILT and silty CLAY*	0.2-0.3	76.6-77.5	0.6-1.3 [0.9]	94-165 [100]	0.4-3.0 [1.0]
	Unit 1B*: Soft to firm CLAY and silty CLAY, with thin lenses loose silty SAND*	0.6-1.3	75.8-76.7	0.9-2.4 [1.4]	-	0.2-0.6 [0.4]
Kerikeri Volcanic Group	*Highly to slightly Weathered Basalt*	0.8-3.4	73.4-76.6	Unproven	-	>25

Table 4-3: Summary of site stratigraphy and in situ testing at proposed Building No. 3 (Southeast).

Geological Unit	Soil/Rock Type	Depth to Top of Unit (m, bgl)	Elevation to top of unit (m RL)	Typical layer Thickness (m) [mean]	In Situ Strength Parameters Range [Typical value]	
					Su (kPa)	CPT q_c (MPa)[1]
Topsoil/Existing Fill	*SILT with minor clay and / or GRAVELs*	0.0	76.7-77.1	0.2-0.4 [0.3]	-	
Late Quaternary Alluvium and Colluvium	***Unit 1A:*** *Stiff to very stiff clayey SILT, SILT and silty CLAY*	0.2-4.0	72.9-76.9	0.7-10.2 [3.1]	49-230 [70]	0.4-15.0 [1.0]
	Unit 1B*: Soft to firm CLAY and silty CLAY, with thin lenses loose silty SAND*	0.9-3.0	74.0-76.2	1.0-4.6 [2.3]	-	0.1-1.2 [0.4]
Kerikeri Volcanic Group	*Highly to slightly Weathered Basalt*	1.0-14.0	62.9-75.7	Unproven	-	>25

4.4 Groundwater

Groundwater was encountered at 0.8 m bgl to 2.2 m bgl (RL 74.6 m to RL 76.7 m) during the site investigations. The groundwater measurements are summarised in Table 4-4 below.

Given the site is situated above and adjacent to the Whiriwhiritoa Stream which runs along the northern site boundary, the groundwater levels are likely to be governed by water levels in the stream. Measured water levels are therefore likely to be perched.

Table 4-4: Groundwater level measurements

Borehole ID	Depth to Groundwater (m bgl)	Elevation of Groundwater (m RL)
CPT1	-	-
CPT2	-	-
CPT3	-	-
CPT4	-	-
BH19-01	1.0	76.7
CPT01	1.4	76.5
CPT02	1.0	76.5
CPT03	0.9	75.9
CPT04	0.9	75.8
CPT05	1.1	76.0
CPT06	1.0	75.9
CPT07	1.0	76.5
CPT08	0.8	76.3
HA01	1.4	76.4
HA02	-	-
HA03	0.9	75.9
HA04	0.9	75.8
HA05	1.1	76.0
CPT101	1.1	76.2
CPT102	1.5	75.6
CPT103	2.2	74.6
CPT104	1.1	76.0
CPT105	1.1	75.8
CPT106	1.0	76.0
CPT107	0.9	76.6

5. Geotechnical Considerations

5.1 General

The following geotechnical considerations are pertinent to the design and construction of the proposed development:

- Site seismicity/site subsoil class;
- Liquefaction susceptibility and consequential effects;
- Settlement due to fill and building loads;
- Foundation type and design parameters; and
- Subgrade strengths for floor slabs and pavements.

These geotechnical considerations are addressed in the following subsections.

5.2 Seismic Considerations

5.2.1 Subsoil Class

The site is underlain by varying depths of soft to very stiff Late Quaternary alluvial and colluvial deposits comprising silts and clays, which were proven to extend to depths of approximately 1.0 m to 14.0 m bgl during the investigations. Below these deposits, highly to slightly weathered basalt of the Kerikeri Volcanic Group is inferred to be present to unknown depths.

Based on the geotechnical investigations within and adjacent to each proposed building footprint, the site should be considered as site Subsoil Class C (Shallow Soil Site) in terms of NZS 1170.5:2004.

5.2.2 Geotechnical Seismic Design Parameters

Design peak ground accelerations for purposes of structural design have been assessed in accordance with the recommendations presented in MBIE Module 1 – Earthquake geotechnical engineering practice (November 2021) for Importance Level 2 (IL2) structures. A summary of the design PGAs is presented in Table 5-1 below.

Table 5-1: Summary of design peak ground acceleration (PGA)

Design Case	Return period Event	Design Life	Peak ground acceleration, PGA (g)	Effective Earthquake Magnitude (M_{eff})
SLS	25 years	50 years	0.03	5.8
ULS	500 years	50 years	0.19	6.5

5.3 Earthworks

5.3.1 General

From review of the preliminary architectural drawings provided and available site contours, it is understood that fill earthworks will be required to lift the site to the desired floor levels (FL) and site levels. Bulk fill depths are expected to range between 0.3 and 1.0 m above existing ground levels. Specific fill levels beneath the proposed building footprints are presented in Table 5-2 below.

Table 5-2: FL, EGL and required bulk fill depth for the proposed development.

Building No.	FL (m RL)	EGL (m RL) (1)	Proposed Fill Depths (m) (2)
Building 1	78.09	77.1 – 77.7	0.3 – 0.8
Building 2	78.09	76.9 – 77.5	0.4 – 1.0
Building 3	77.49	76.7 – 77.0	0.3 – 0.6

Notes:

(1) The levels are assumed in terms of the New Zealand Vertical Datum (NZVD) 2016.
(2) Assuming a slab thickness of 150 mm.

Prior to any bulk fill placement, the subgrade should be inspected by a geotechnical engineer, with a combination of proof rolling and shear vane testing to confirm ground conditions.

Should any localised soft spots/organics be identified, there will require undercutting and backfill with engineered fill.

5.3.2 Subgrade Preparation

It is not known whether the area of the site currently occupied by hardstanding was stripped of topsoil prior to placing the hardfill. Prior to placing any new fill in this area, it is recommended that a grid of shallow test pits be completed to assess the nature of the near surface soils. If topsoil and uncontrolled fill is identified beneath the hardfill, then the hardfill will need to stripped/removed to enable remnant topsoil and uncontrolled fill to be stripped and removed/remediated. All debris and vegetation should also be removed from the building site.

It is important that the stripped subgrade be inspected and approved by the supervising Geotechnical Engineer prior to placing any fill.

5.3.3 Subgrade Protection

The subgrade should not be exposed for any prolonged period and should be covered with a minimum of 100mm of granular fill such as GAP 65 or basecourse, as soon as possible following approval. The subgrade should also be graded, or temporary drainage should be installed to prevent ponding of stormwater.

If subgrade degradation occurs by either excessive drying resulting of desiccation shrinkage or excessive subgrade softening after a period of wet weather resulting in weakened soils, then it will be necessary to remediate the subgrade by either reworking or undercutting and replacing with compacted hardfill.

5.3.4 Fill Specification

It is anticipated that fill will need to be imported to site to lift site levels. The bulk fill earthwork can be completed using imported either cohesive fill or hardfill.

All fills should be placed in layers of a maximum of 200 mm compacted thickness and placed to an engineered specification. If dry, hardfill should be placed with some wetting to aid compaction and ensure the above criteria are met.

The following compaction criteria are recommended:

Hardfill Compaction Specification:

Clegg Hammer:	Minimum CIV:	25
	Average CIV:	28 (5 consecutive tests)

and

Maximum Dry Density – NDM: Minimum Dry Density 95%

Imported Cohesive Fill:

Undrained shear strength: Minimum Su: 120 kPa

Average Su: 140 kPa (5 consecutive tests)

and

Air voids: Maximum value 10%

Average value 8%

Testing should be undertaken on these materials at intervals agreed by the geotechnical engineer.

A batter not steeper than 1V:3H shall be maintained at the edge of the proposed fills. The batter shall be compacted to engineered standards and the surface be appropriately grassed or otherwise protected to prevent erosion.

It is recommended that the proposed fill source be approved by the geotechnical engineer prior to importing to site.

5.4 Liquefaction Potential

5.4.1 General

Liquefaction occurs when soil loses shear resistance under cyclic seismic loading (cyclic shear strains). For liquefaction to develop, the following conditions must be present:

- Material with the potential to densify under cyclic loading (typically loose sand and non-plastic silts).
- Saturated ground (soils located below the groundwater level).
- Sufficient cyclic shear loading (usually due to a seismic event).

5.4.2 Liquefaction Potential

A liquefaction triggering analysis for SLS and ULS design seismic events has been undertaken on the site-specific CPT data. The analysis was undertaken using the CLiq software package utilising the Boulanger and Idriss (2014) assessment method. The default Soil Behaviour Type Index cut-off I_c = 2.6 was adopted. A groundwater level of 1 m below the existing ground level was assumed for the analysis based on the measured groundwater level during investigations. The liquefaction analysis outputs are presented in Appendix C.

Due to the spatial variability of the site soils and varying basalt rock depths, CPTs within or nearby each building platform were adopted for the liquefaction analysis for each proposed building site. The CPTs adopted for the liquefaction analysis for each building are list in Table 5-2 below.

Table 5-3: CPTs adopted for liquefaction and settlement analysis for each building.

Building No.	CPTs
Building 1 (Southwest)	CPT01, CPT02, CPT07, CPT101, CPT102, CPT107
Building 2 (Northwest)	CPT02, CPT03, CPT07, CPT08, CPT102
Building 3 (Southeast)	CPT04-CPT06, CPT103-106

Effects of Proposed Earthworks

Based on the preliminary architectural plans and existing contours, fill of varying depth (0.3 m to 1.0 m) is required to form the platforms for the proposed buildings. The fill earthworks will be beneficial in reducing the liquefaction effects by increasing the crust thickness. This is further discussed below.

Liquefaction effects

To assess liquefaction consequences on the site we have referenced the following index parameters in accordance with MBIE Earthquake Geotechnical Engineering Practice Module 3 (2021):

- Liquefaction Potential Index (LPI) derived by Iwasaki et al. (1978);
- Liquefaction Severity Number (LSN) derived by Van Ballegooy et al (2013); and
- Liquefaction induced; one dimensional vertical reconsolidation settlement (index settlement) has been estimated using the methodology developed by Zhang et al. (2002)

Calculated liquefaction indices are presented in Table 5-4. These values have been compared with performance criteria outlined in Table 5.1 of the MBIE Earthquake geotechnical engineering practice Module 3.

Table 5-4: Summary of Liquefaction Analysis Index Parameters at Building 3

Design Case Scenario	LSN [Typical]	LPI [Typical]	Index Settlement [Typical] (mm)	Performance Level (MIBE Guidelines Module 3)
25-year (SLS)	<1	<1	<10	L0 (Insignificant)
500-year (ULS)(1)	1 – 6 [2]	<2	<25	L0 (Insignificant)
500-year (ULS)(2)	4 – 6 [5]	6 – 10 [8]	60 – 80 [70]	L1 (Mild) to L2 (Moderate)

Notes:

(1) The analyses are based on all CPTs except CPT06 and CPT105.
(2) The analyses are based on CPT06 and CPT105 only.

The analysis indicates negligible risk of liquefaction occurring under a SLS seismic event for all CPTs. Under ULS loading, the analysis indicates negligible risk of liquefaction for all CPTs except CPT06 and CPT105. Based on performance criteria, analysis of CPT06 and CPT105 indicates mild to moderate liquefaction effects under ULS loading. In addition, the liquefiable soils in CPT06 and CPT105 are at a depth of at least 6.0 m bgl. The consequential effects of any liquefaction to the proposed buildings are therefore likely to insignificant, due to the presence of a thick non-liquefiable crust.

Specific design for liquefaction effects is not required for the proposed buildings

5.4.3 Lateral Spread Risk

Lateral spreading is generally defined as horizontal displacement of blocks of material towards an open slope face (e.g., stream banks) as a result of the underlying soils losing strength during a liquefaction event. The presence of a continuous liquefiable layer of sufficient thickness is required for significant spreading to occur.

While the Whiriwhiritoa Stream, which runs along the northern boundary, presents a potential free face for lateral spreading, site investigations confirmed the presence of basalt rock outcropping at the stream bed and banks. The depth of the overlying alluvial and colluvial soils decreases toward the stream, resulting in a minimal thickness of soil in this area. Since there is no continuous liquefiable stratum extending to the free face, the risk of lateral spreading is considered unlikely.

5.5 Long Term Static Settlement Assessment

5.5.1 General

The site is underlain by moderately to highly compressible materials present at relatively shallow depths across most of the site (0.9 m to 2.2 m below current ground level). These materials are considered susceptible to long term static settlements under new surcharges. The main sources of potential ground settlements are as follows:

- Placement of fill to achieve the design levels;
- Self-weight of the floor slab.
- Floor slab live loads.

The primary and secondary settlements analyses were undertaken based on the historical investigations, using the software CPeT-IT, based on Boussinesq load distribution.

5.5.2 Load & Design Assumptions

The proposed building finished floor levels, existing ground levels and inferred bulk fill depths are presented on Table 5-2.

Table 5-5 below summarises the proposed building platform dimensions and floor loads assumed for settlement analyses.

Table 5-5: Settlement analysis assumptions – building floor slabs.

Building No.	Dimensions (1)	Dead Load (2)	Live Load (2)
Building 1	40 m (L) x 20 m (W)	4 kPa	5 kPa
Building 2	28 m (L) x 20 m (W)	4 kPa	5 kPa
Building 3	28 m (L) x 20 m (W)	4 kPa	5 kPa

Notes:

(1) Dimensions are based on the provided plans by Spooner Architectural Solutions, dated 20th March 2026.

(2) The dead load is based on assumption of 150 mm thick concrete slab and a unit weight for concrete of 25 kN/m^3, with a slab live load of 5 kPa assumed for retail buildings.

5.5.3 Settlement Assessment

As noted in Sections 4.3 and 5.4.2, the CPT profiles were adopted for settlement analysis for each building.

Consolidation settlement and secondary (creep) settlement was assessed over a period of 50 years (600 months) i.e., the design life of the proposed buildings. The estimated settlement results are presented below.

Table 5-6: Static settlement results for each building

Building No.	Estimated Total Settlement
Building 1 (Southwest)	10mm to 30mm
Building 2 (Northwest)	10mm to 20mm
Building 3 (Southeast)	10mm to 120mm (CPT05, CPT06)

For proposed Building 3, the largest total settlement is estimated to be in the order of 80mm to 120 mm (CPT05 and CPT06), which is likely beyond the acceptable limits for buildings of this type. Furthermore, differential settlements may be as steep as 1 in 100 to 1 in 200 given variability in ground conditions.

As Buildings 1 and 2 are sited over basalt rock, with a nominal capping layer of alluvium/colluvium, estimated total settlements for these building are within the acceptable limits. Therefore, these buildings do not require specific ground improvement to mitigate settlement risk.

To mitigate the long-term static settlement for Building 3, it is recommended that a preload be formed across the entire building footprint, following completion of bulk earthworks (i.e. once fill has been placed to design levels). Based on the currently available investigations data, a preload of 1 m height (above the design subgrade level) would need to be placed over the platform and maintained for a minimum hold period of 6 months prior to slab construction. Continuous settlement monitoring will be required during this period to verify that settlement rates have attenuated to acceptable limits.

Detailed design and detailing of the preload is required prior to commencement of these works.

5.6 Foundations

5.6.1 General

As discussed in Section 5.5, the estimated long-term static settlement for Buildings 1 and 2 are expected to be within the normal tolerances of buildings of this type, though this should be confirmed by the structural engineer.

Estimated settlements for proposed Building 3 exceed generally acceptable limits for buildings and therefore this building is to be preloaded.

On the basis of the above, shallow foundations with a floor slab bearing on grade is suitable for all Buildings (Buildings 1 and 2 without ground improvement, and Building 3 following ground improvement).

5.6.2 Shallow Foundations

The design bearing capacity values for shallow pad/strip foundations and raft foundations are presented in Table 5-7 below.

These values are based on the following assumptions:

i. For Building 3, foundations bearing on engineered cohesive fill or granular fill (following preloading).
ii. For Buildings 1 and 2, foundation bearing on natural Late Quaternary colluvial and alluvial soils, with typical undrained shear strengths of greater than 60 kPa.
iii. Any topsoil, soft, or unsuitable fill, organics, or other weak surficial materials identified at founding level is to be undercut and replaced with compacted hardfill or site concrete.
iv. Strip/pad foundations are embedded a minimum of 600 mm below finished ground level.
v. Raft foundations may be designed for a Class M in accordance with AS2870 if in cohesive material.

Table 5-7: Design Bearing Capacity for Shallow Footings

Geotechnical Ultimate Bearing Capacity (unfactored)	Design Bearing Pressure for ULS Design (Including a strength reduction factor of 0.5)	Allowable Bearing Pressure for SLS design Loads
300 kPa	150 kPa	100 kPa

During construction, foundation subgrade excavations should be observed and tested by a suitably qualified geotechnical engineer to confirm strengths are consistent with those assumed in the design.

5.7 Floor Slabs and Pavements

The subgrade for floor slabs at Building 3 is expected to consist of new engineered fill over consolidated alluvial soils (following preloading). The subgrade for the floor slab at Buildings 1 and 2 is expected to generally consist of new engineered fill. A subgrade CBR of 3% can be assumed for the design of the building slab.

For the majority of the proposed pavement area, the subgrade is expected to generally consist of natural colluvial and alluvial silt and clay, with typical undrained shear strengths of greater than 60kPa. A subgrade CBR of 3% can be assumed for the design of pavements. This assumes that all unsuitable material has been stripped and removed as part of site preparation.

It is noted that settlements of approximately 80 mm may occur following fill placement of up to 1 m in the area of deep alluvial/colluvial soils as indicated in the Figure 3194-G01. Pavements in this area should be designed/detailed for differential settlements, i.e. with a flexible pavement, allowance for settlement bowls in surface drainage design etc. Geogrid should also be considered in bulk fill placed to lift site levels in this area.

For pavement design within the storage yard area, as outlined in Section 5.3.2, if topsoil and uncontrolled fill is identified beneath the hardfill, then the hardfill will need to stripped/removed to enable remnant topsoil and uncontrolled fill to be stripped and removed/remediated.

It is important that the subgrade be protected from trafficking and disturbance during construction, particularly during the winter months and periods of poor weather. We therefore recommend that the subgrade be protected with a wearing layer of hardfill as soon as it has been exposed and approved.

Drainage should also be maintained to ensure water does not pond at the basecourse/subgrade interface during construction.

5.8 Further Work

5.8.1 Design and Pre-Construction

The completed structural drawing set should be provided to Initia for review, prior to submission for building consent. This is to confirm the advice and recommendations outlined in this report have been appropriately interpreted and detailed for consent and construction.

The preload for Building 3 is subject to detailed geotechnical analysis and detailing.

5.8.2 Construction Monitoring

During earthworks construction, geotechnical observation and testing should be undertaken to confirm that the ground conditions are consistent with those outlined in this report and upon which recommendations and advice are based. Geotechnical observation and monitoring are also likely to be required so that a Producer Statement – Construction Review (PS4) can be prepared to support the application for a code of compliance at completion of construction.

Construction monitoring and testing requirements are presented in Appendix D for the various stages of earthworks and construction. The detail in this table is provisional and should be confirmed and revised prior to construction when design has been completed.

6. Conclusions

The following conclusions and recommendations are made for the proposed retail building development at 20 Klinac Lane, Waipapa:

Site and Ground Conditions

1. The site is underlain by topsoil and/or existing fill (0.2–0.3 m thick), overlying Late Quaternary alluvial and colluvial soils comprising stiff to very stiff clayey silt and silt (Unit 1A) and soft to firm clay and silty clay with thin lenses of loose silty sand (Unit 1B). Highly to slightly weathered basalt of the Kerikeri Volcanic Group underlies these deposits at depths ranging from approximately 1.0 m to 14.0 m bgl, with significant spatial variability across the site.
2. The depth to basalt is greatest in the vicinity of CPT105 and CPT06, at the southern site of Building 3, where the upper basalt flow encountered elsewhere on site is discontinuous.
3. Groundwater was measured at 0.8 m to 2.2 m bgl (RL 74.6 m to RL 76.7 m) during the investigations. Groundwater levels are likely governed by the adjacent Whiriwhiritoa Stream and should be expected to fluctuate seasonally in response to rainfall and stream levels.

Seismic and Liquefaction

4. The site should be taken as Site Subsoil Class C (Shallow Soil Site) in accordance with NZS 1170.5:2004. Design seismic parameters are presented in Table 5-1.
5. Liquefaction risk is negligible. No specific liquefaction design is required for any of the three buildings.
6. Lateral spreading is considered unlikely, given the absence of a continuous liquefiable stratum extending to the stream bank.

Settlement

7. Total settlements from bulk filling and building loads are expected to be between 20 and 30 mm except at the eastern end of the site (refer Figure 3194-G01), including beneath Building 3, where there is up to 14 m of alluvial/colluvial soils.
8. Long-term static settlements of 80 mm to 120 mm are estimated at test locations CPT105 and CPT06 at Building 3. This magnitude of settlement is expected to exceed allowable tolerances for Building 3.
9. It is recommended that the Building 3 platform be improved (e.g. by preloading) prior to construction of the Building 3.

Ground Improvement — Building 3

8. Based on the available investigation data, a preload of approximately 1 m above design subgrade level is likely to be required, with a minimum hold period of 6 months. Continuous settlement monitoring would be required throughout the preloading period to verify that settlement rates have attenuated to acceptable levels before construction proceeds.
9. The preload is subject to detailed analysis and detailing.

Foundations

10. Shallow strip/pad or raft foundations are considered suitable for all three buildings, provided platform for Building 3 is ground improved.
11. A geotechnical ultimate bearing capacity of 300 kPa (150 kPa for ULS design) is recommended for all buildings.

Floor Slabs and Pavements

12. A subgrade CBR of 3% may be assumed for design of floor slabs and for general pavement areas across the site.
13. If fill is placed to form pavement levels to the north and west of Building 3, settlement is expected to occur. Flexible pavements are recommended, and allowance should be made in drainage design for settlement bowls.

7. Applicability

This report has been prepared for our client, Waipapa Centre Limited, with respect to the brief provided to us. The advice and recommendations presented in this report should not be applied to any other project or used in any other context without prior written approval from Initia Limited.

Report prepared by:



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Document Control Record

Report Title		Proposed New Retail Buildings: Geotechnical Interpretative Report		20 Klinac Lane, Waipapa	
Initia Project Reference		P-003194			
Client		Waipapa Centre Limited			
Revision	Date	Revision Detail	Author	Reviewer	Approved By
A	10-04-2026	First Issue	H. Zhang	N. Speight	N. Speight
B	27-04-2026	Update with supplementary investigations	H. Zhang	N. Speight	N. Speight
Current Revision		B			

Appendix A Figures

LEGEND

INITIA INVESTIGATIONS (APR 2026)

- CONE PENETRATION TEST — CPT101

INITIA INVESTIGATIONS (NOV 2022)

- HAND AUGER — HA01
- CONE PENETRATION TEST — CPT01

HISTORICAL INVESTIGATIONS

- CONE PENETRATION TEST (OPUS - SEP 2019) — CPT1
- MACHINE BOREHOLE (OPUS - SEP 2019) — BH19-01
- SITE BOUNDARY
- 0.5 EXISTING GROUND CONTOUR (0.5m INTERVAL)
- PROPOSED BUILDING EXTENT
- INFERRED AREA WHERE UPPER BASALT LAYER IS ABSENT

INFERRED AREA WHERE UPPER BASALT LAYER IS ABSENT

NOTES
1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. COORDINATE DATUM: MT EDEN 2000
3. LEVEL DATUM: NEW ZEALAND VERTICAL DATUM 2016 (NZVD2016)
4. AERIAL IMAGE, PROPERTY BOUNDARY AND LIDAR CONTOUR TAKEN FROM LINZ DATA.
5. PROPOSED LAYOUT REFERENCED "BC03 SITE PLAN[20].pdf" DATED 2026.04.10

SCALE A3 1:750

0 10 20 30 40m

INFORMATION ONLY

Rev	Revision Description	Designed	Drawn	Checked
B	REVISED ISSUE (20/04/2026)	NS	JG	NS
A	FIRST ISSUE (10/04/2026)	HZ	GG	NS

NOT FOR CONSTRUCTION

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APPROVED:

DATE:

Scale AS SHOWN Original Size A3

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WAIPAPA CENTRE LIMITED

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GEOTECHNICAL INVESTIGATION LOCATION PLAN

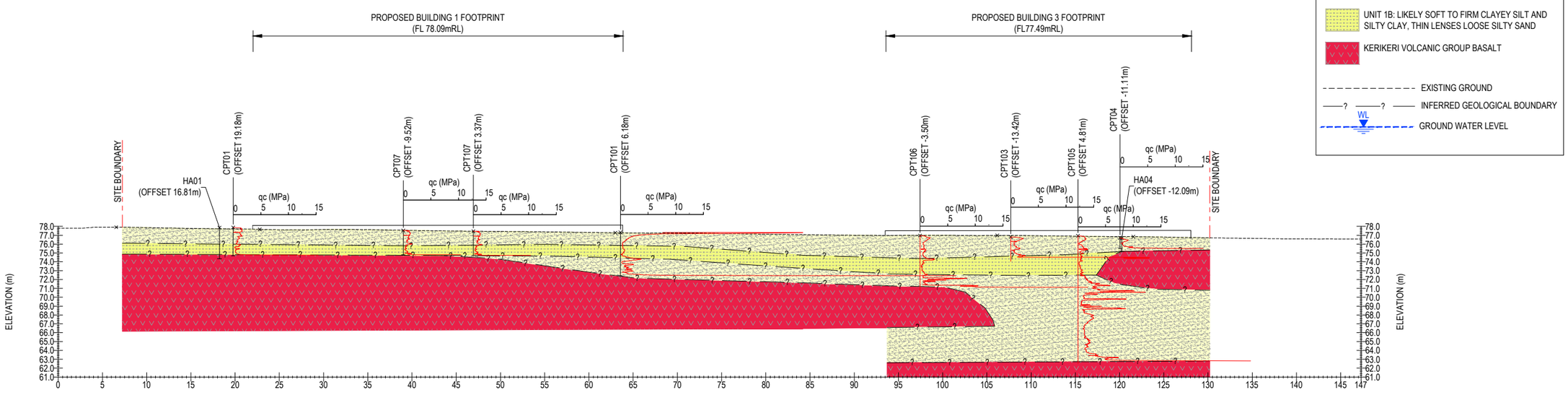
Initia Project ref: P003194

Figure Number 3194-G01

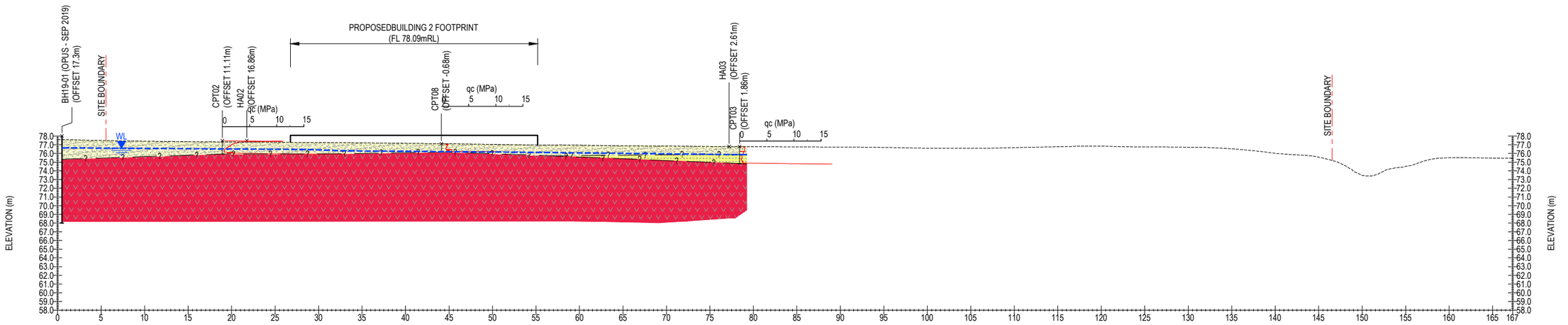
Revision B

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D:\ONEDRIVE - INITIA LIMITED\3100_3199\P-003194 - KLINAC 20\CAD\2. WORKING FILES\3194-G01-2026.04.20.DWG, 4/20/2026 3:00 PM



1 / G01 SECTION
SCALE 1:500 (A3)



2 / G01 SECTION
SCALE 1:500 (A3)

SCALE A3 1:500
0 5 10 15 20 25m

INFORMATION ONLY

Rev	Revision Description	Designed	Drawn	Checked
B	REVISED ISSUE (20/04/2026)	HZ	GG	NS
A	FIRST ISSUE (10/04/2026)	HZ	GG	NS

NOT FOR CONSTRUCTION
THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED AS APPROVED
APPROVED:
DATE:
Scale AS SHOWN Original Size A3

INITIA GEOTECHNICAL SPECIALISTS
Unit 6, Level 1, 114 St Georges Bay Road Parnell, Auckland, 1052
Phone: +64 09 977 0460
Email: enquiries@initia.co.nz

WAIPAPA CENTRE LIMITED

20 KLINAC LANE, WAIPAPA

GEOTECHNICAL INVESTIGATION
GEOLOGICAL SECTION 1 AND 2

Initia Project ref: P003194
Figure Number 3194-G10
Revision B

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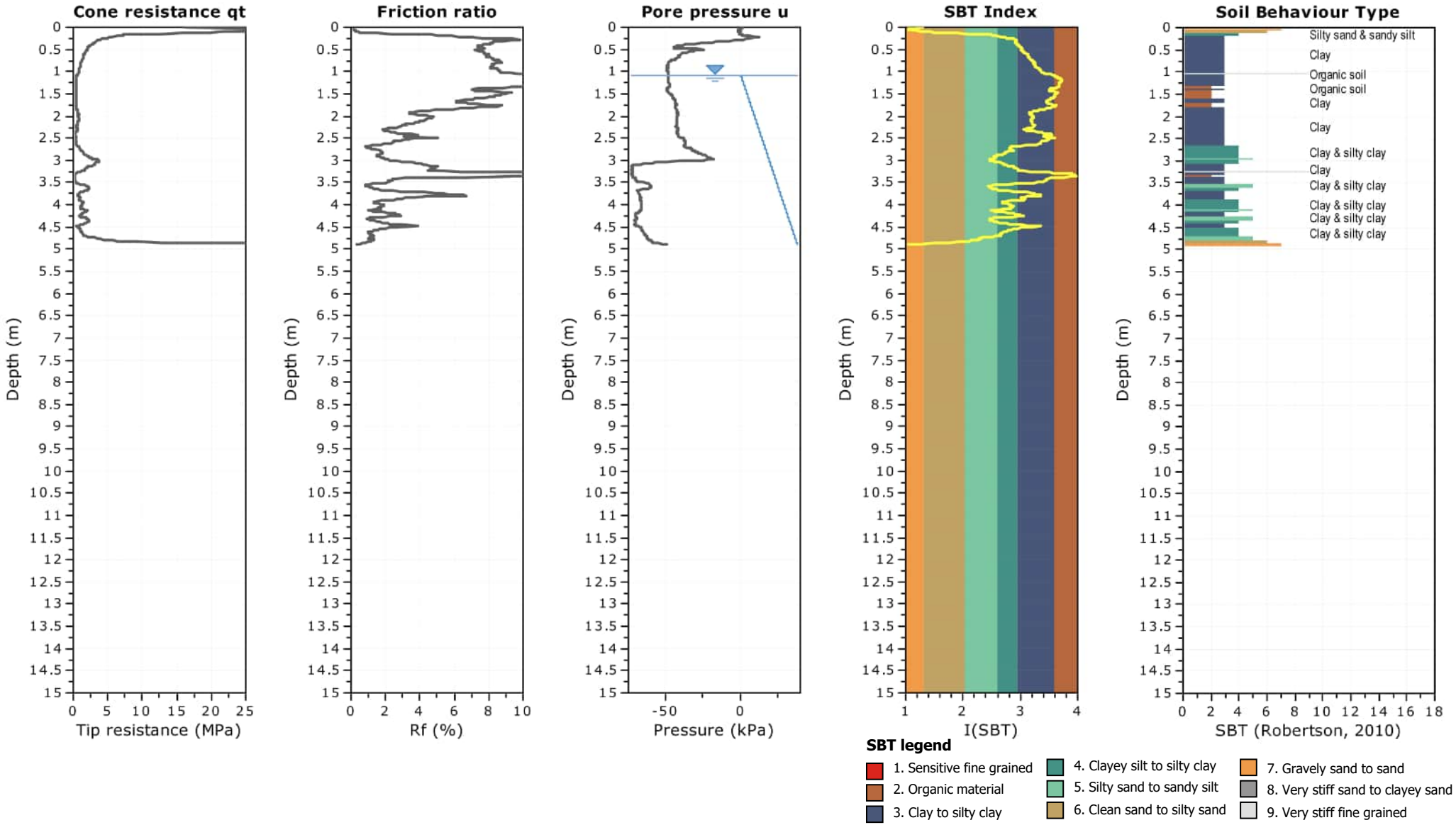
Appendix B Borehole and CPT Logs

Initia Site Investigation CPT Logs (04/2026)

Initia Limited
Geotechnical Specialists
Unit 6, Level 1, 114 St Georges Bay Road, Parnell, Auckland 1052
http://www.initia.co.nz

CPT: CPT101
Total depth: 4.90 m, Date: 19/04/2026
Surface Elevation: 0.00 m, Est. GWL: 1.10 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

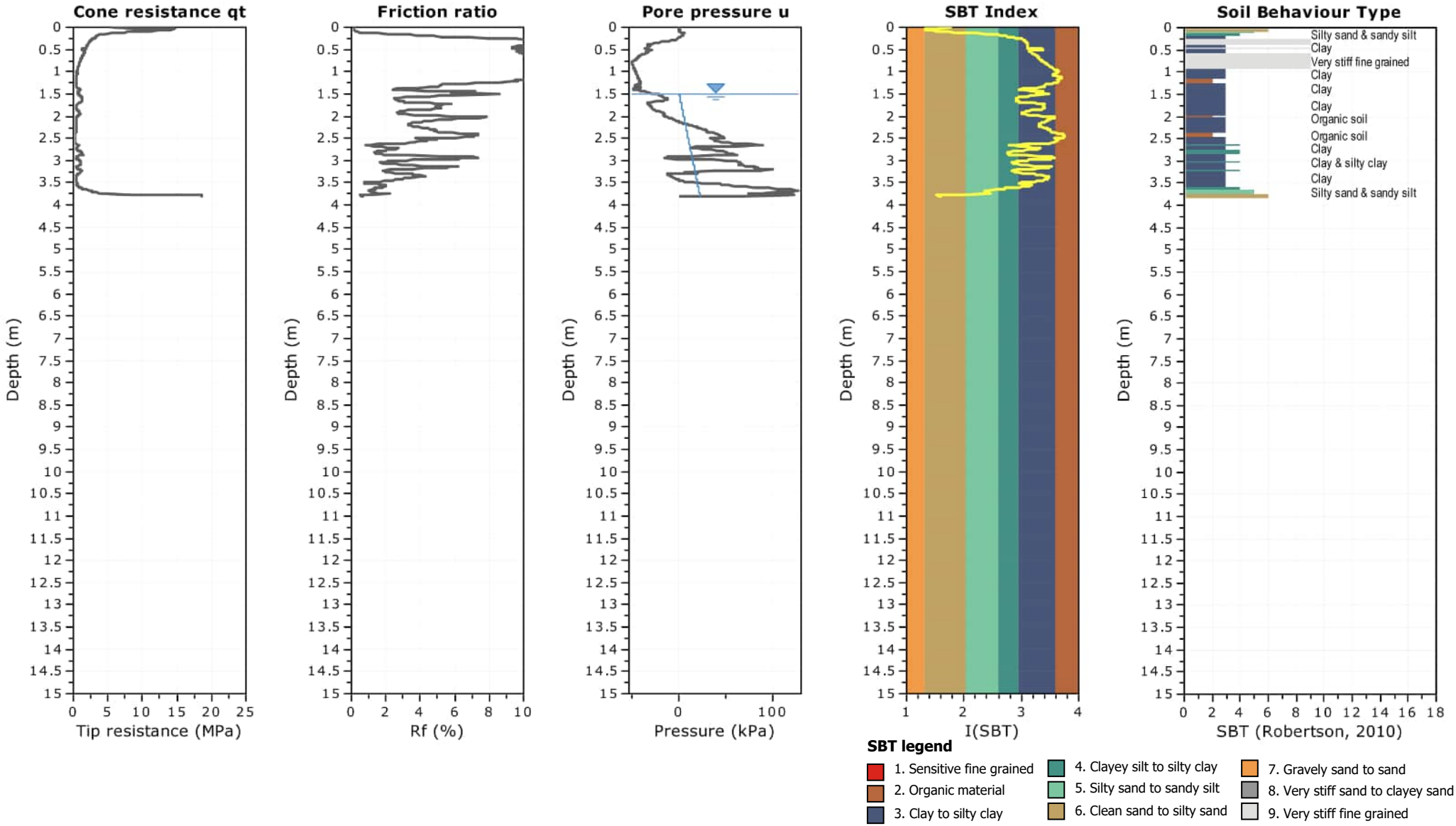
Project: **Waipapa Development**
Location: **P-003194**



Initia Limited
Geotechnical Specialists
Unit 6, Level 1, 114 St Georges Bay Road, Parnell, Auckland 1052
http://www.initia.co.nz

CPT: CPT102
Total depth: 3.80 m, Date: 19/04/2026
Surface Elevation: 0.00 m, Est. GWL: 1.50 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

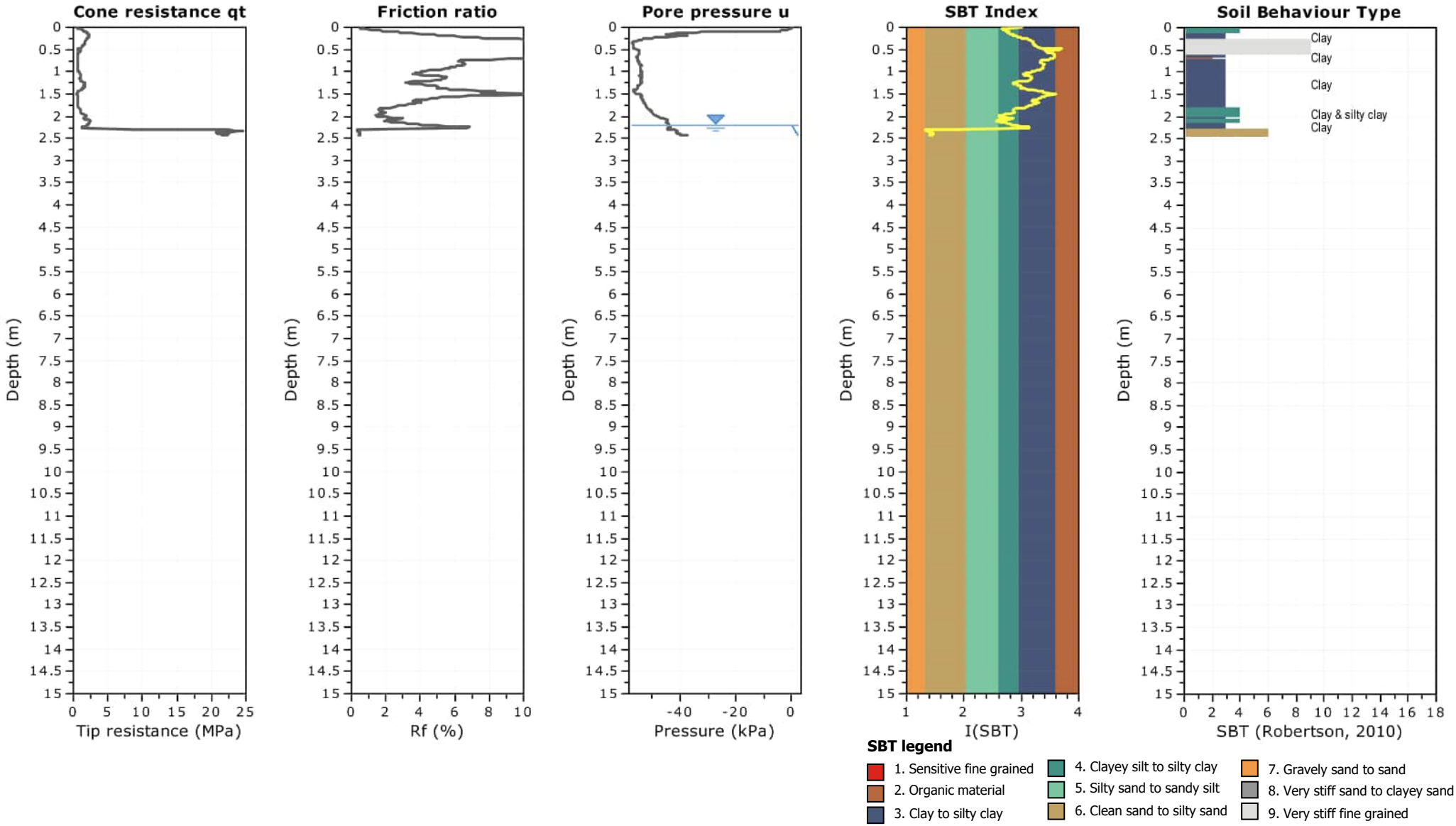
Project: **Waipapa Development**
Location: **P-003194**



Initia Limited
Geotechnical Specialists
Unit 6, Level 1, 114 St Georges Bay Road, Parnell, Auckland 1052
http://www.initia.co.nz

CPT: CPT103
Total depth: 2.44 m, Date: 19/04/2026
Surface Elevation: 0.00 m, Est. GWL: 2.20 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

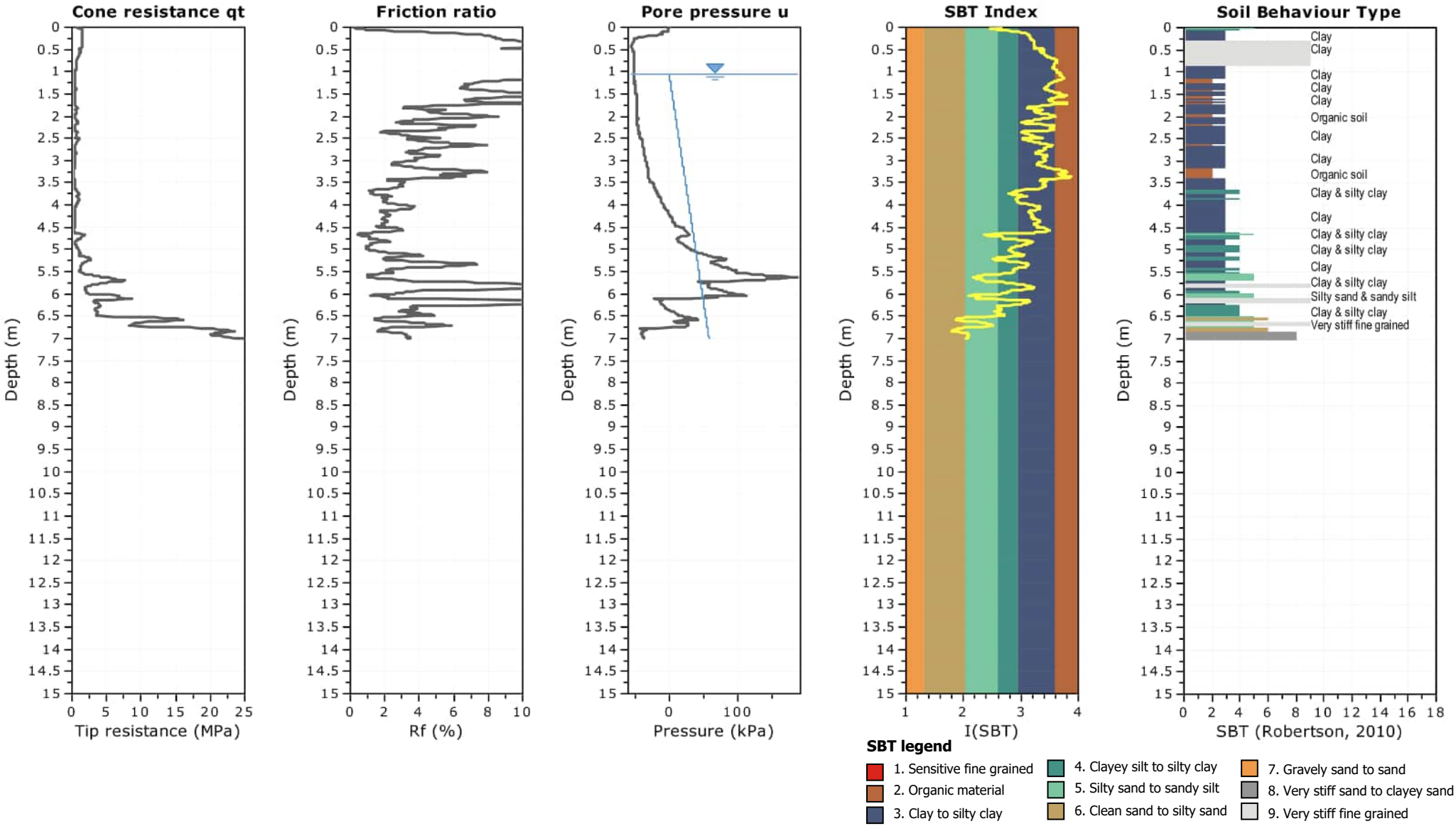
Project: **Waipapa Development**
Location: **P-003194**



Initia Limited
Geotechnical Specialists
Unit 6, Level 1, 114 St Georges Bay Road, Parnell, Auckland 1052
http://www.initia.co.nz

CPT: CPT104
Total depth: 7.02 m, Date: 19/04/2026
Surface Elevation: 0.00 m, Est. GWL: 1.05 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

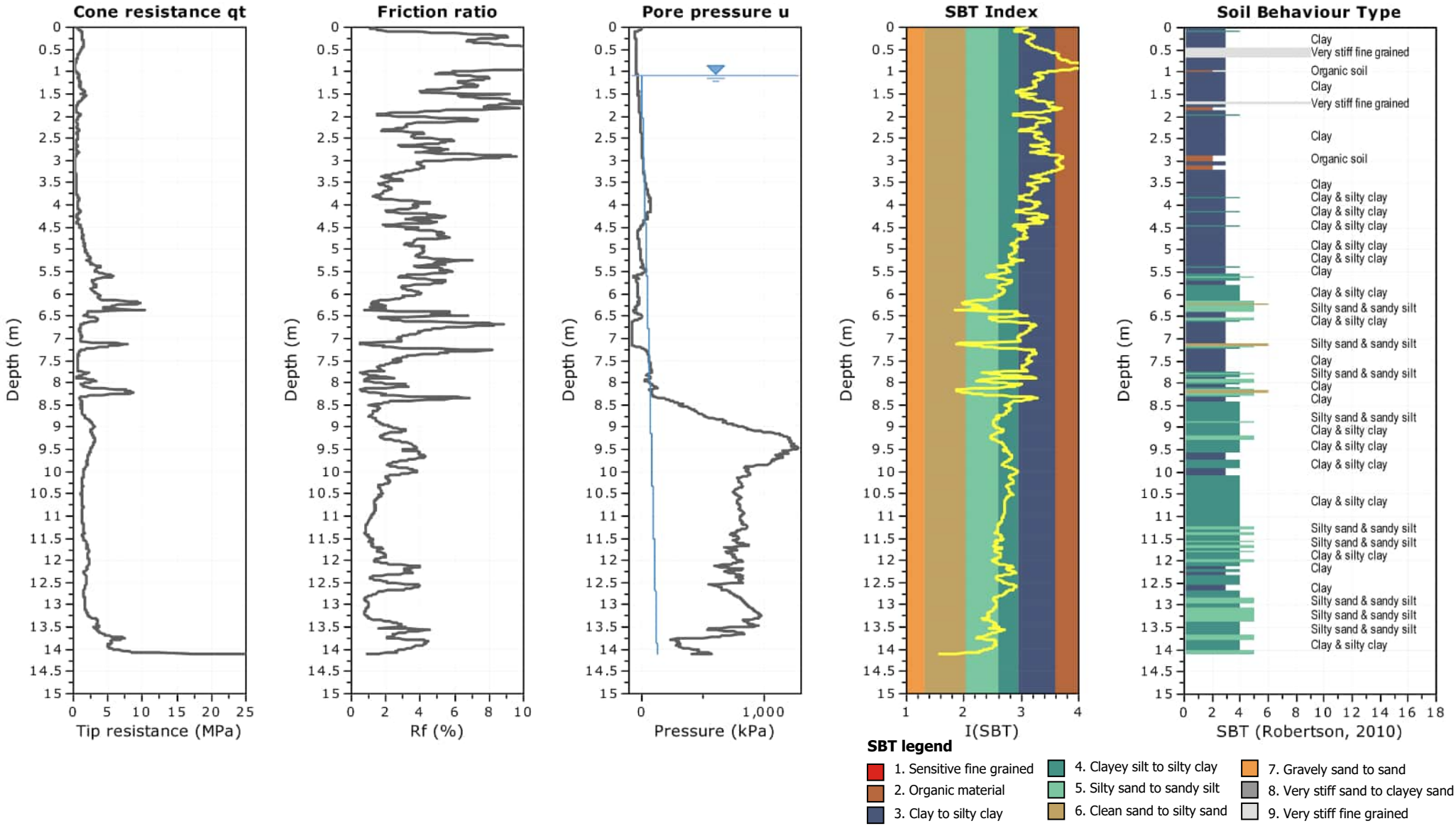
Project: **Waipapa Development**
Location: **P-003194**



Initia Limited
Geotechnical Specialists
Unit 6, Level 1, 114 St Georges Bay Road, Parnell, Auckland 1052
http://www.initia.co.nz

CPT: CPT105
Total depth: 14.12 m, Date: 19/04/2026
Surface Elevation: 0.00 m, Est. GWL: 1.10 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

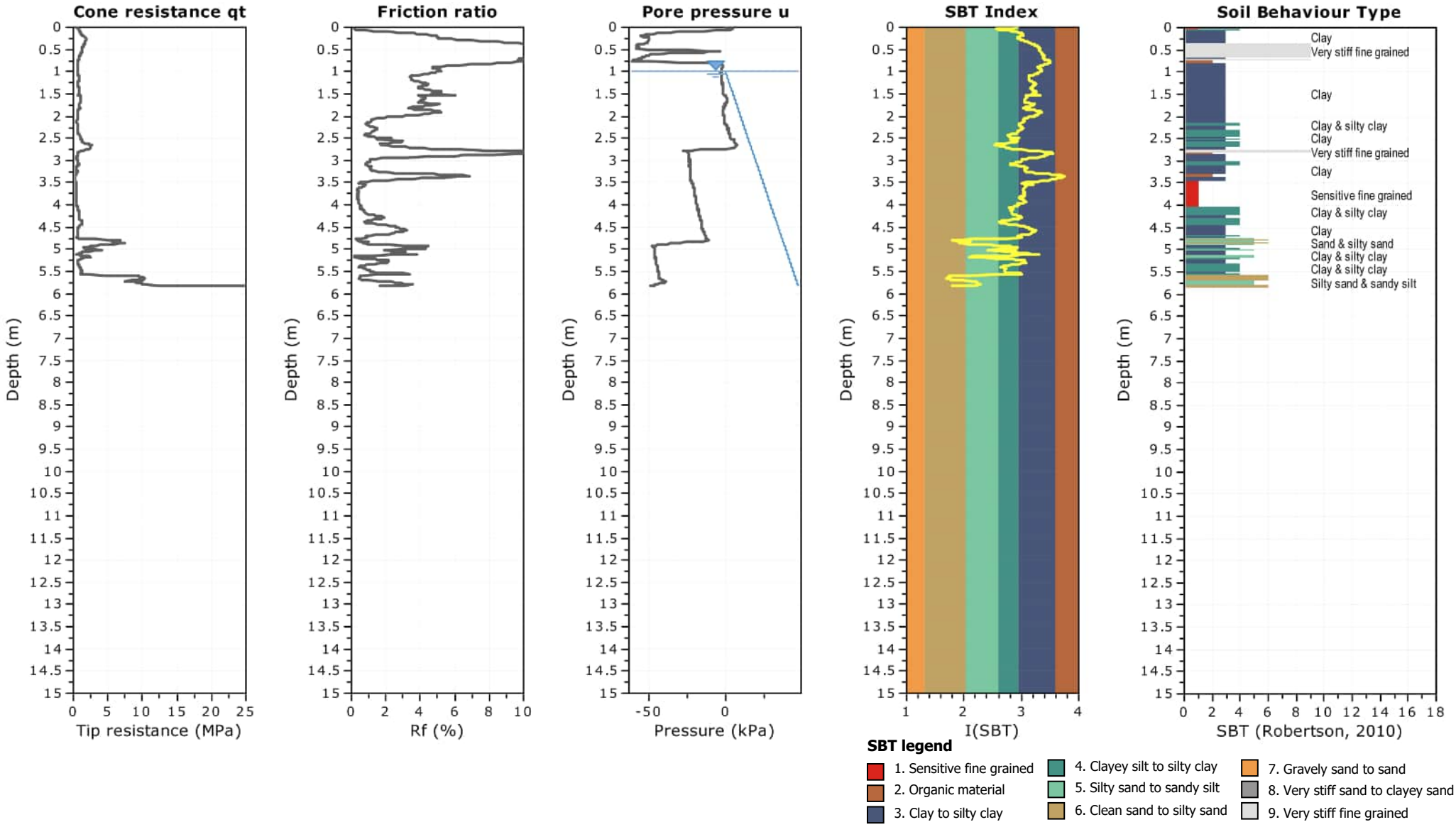
Project: **Waipapa Development**
Location: **P-003194**



Initia Limited
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Unit 6, Level 1, 114 St Georges Bay Road, Parnell, Auckland 1052
http://www.initia.co.nz

CPT: CPT106
Total depth: 5.83 m, Date: 19/04/2026
Surface Elevation: 0.00 m, Est. GWL: 1.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

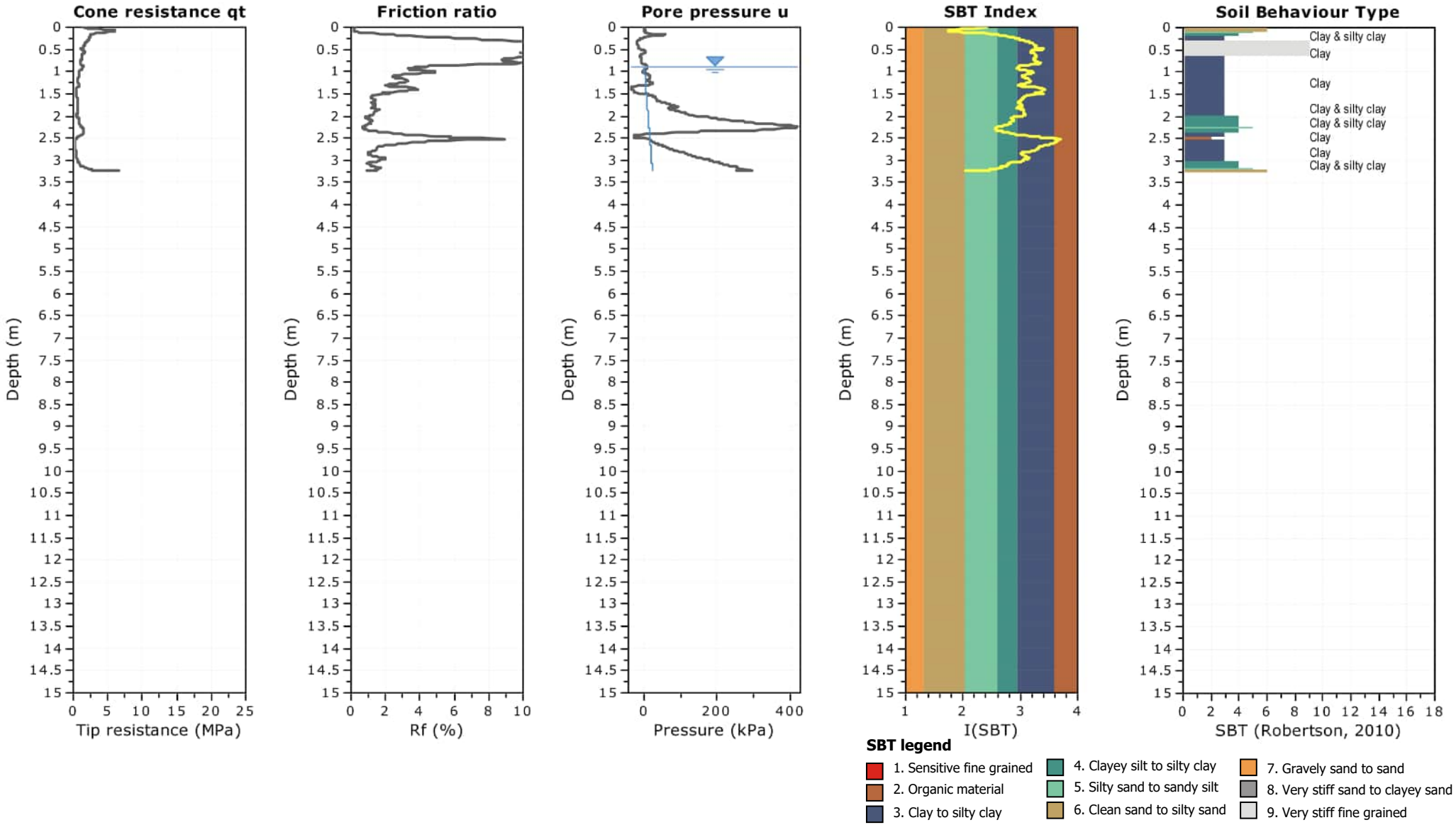
Project: **Waipapa Development**
Location: **P-003194**



Initia Limited
Geotechnical Specialists
Unit 6, Level 1, 114 St Georges Bay Road, Parnell, Auckland 1052
http://www.initia.co.nz

CPT: CPT107
Total depth: 3.24 m, Date: 19/04/2026
Surface Elevation: 0.00 m, Est. GWL: 0.90 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **Waipapa Development**
Location: **P-003194**

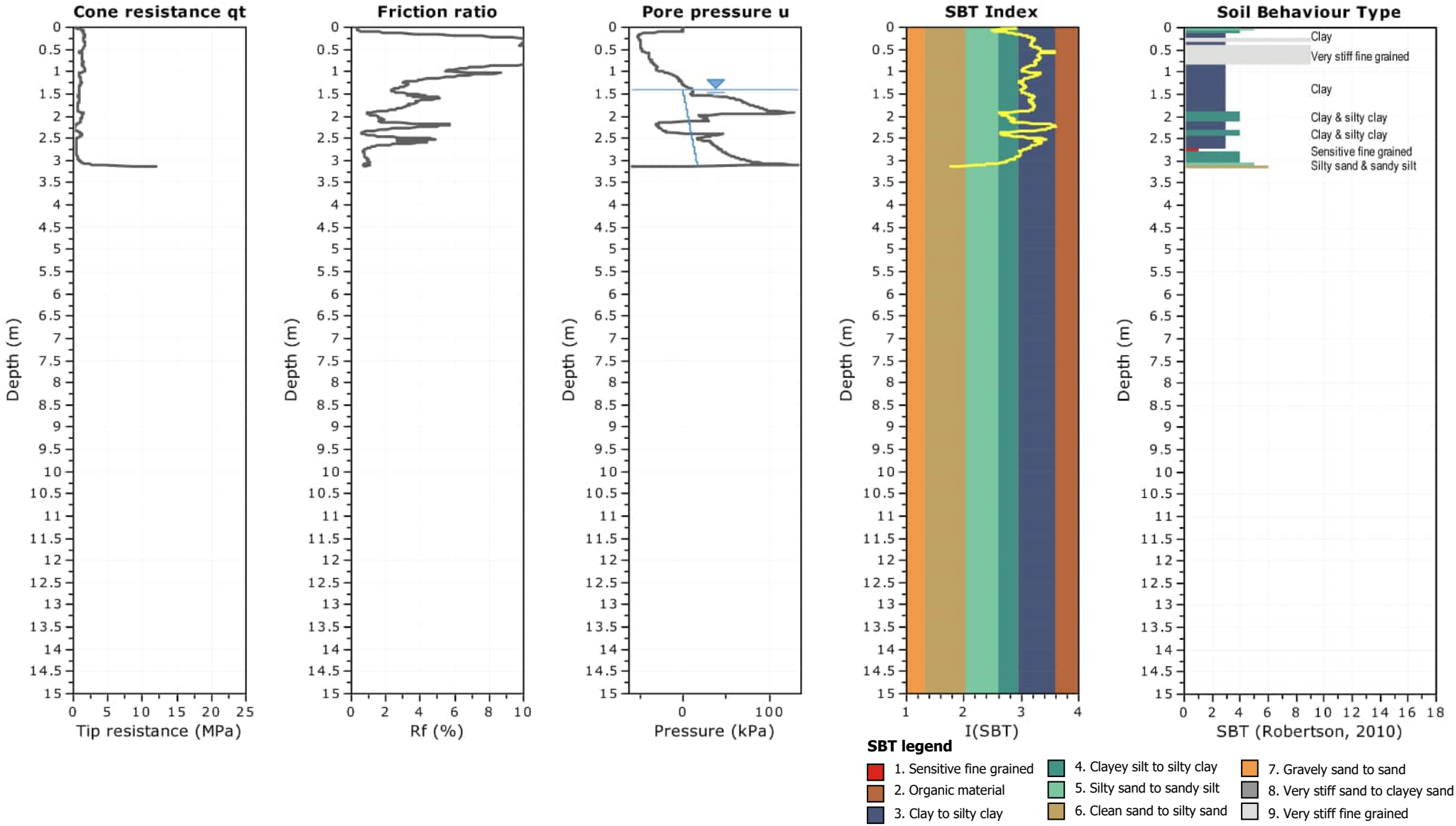


Initia Site Investigation Borehole and CPT Logs (11/2022 - 06/2023)

Initia Limited
Geotechnical Specialists
Unit 6, Level 1, 114 St Georges Bay Road, Parnell, Auckland 1052
http://www.initia.co.nz

Project: **Waipapa Development**
Location: **P-003194**

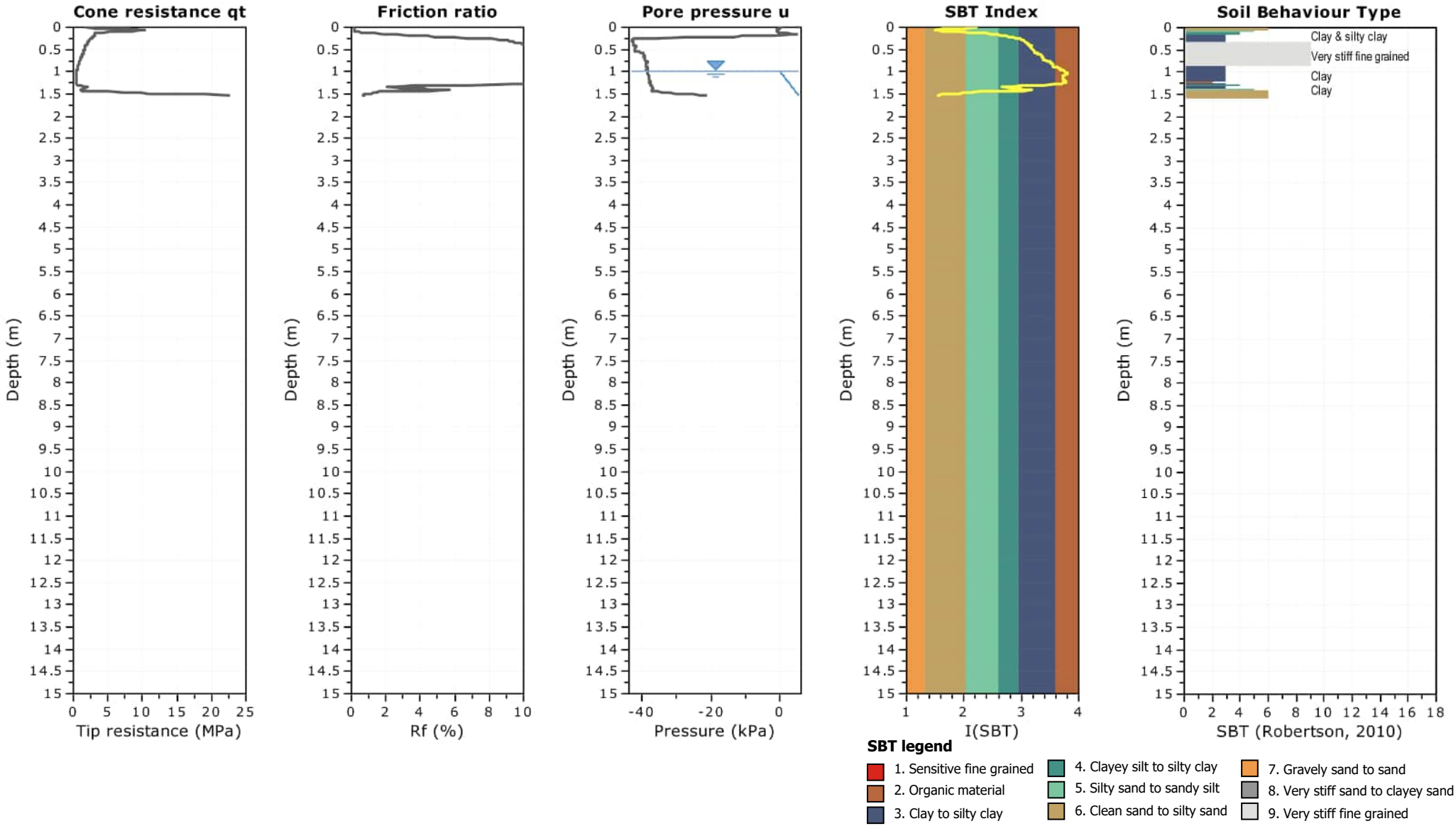
CPT: CPT01
Total depth: 3.13 m, Date: 15/11/2022
Surface Elevation: 0.00 m, Est. GWL: 1.40 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:



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Project: **Waipapa Development**
Location: **P-003194**

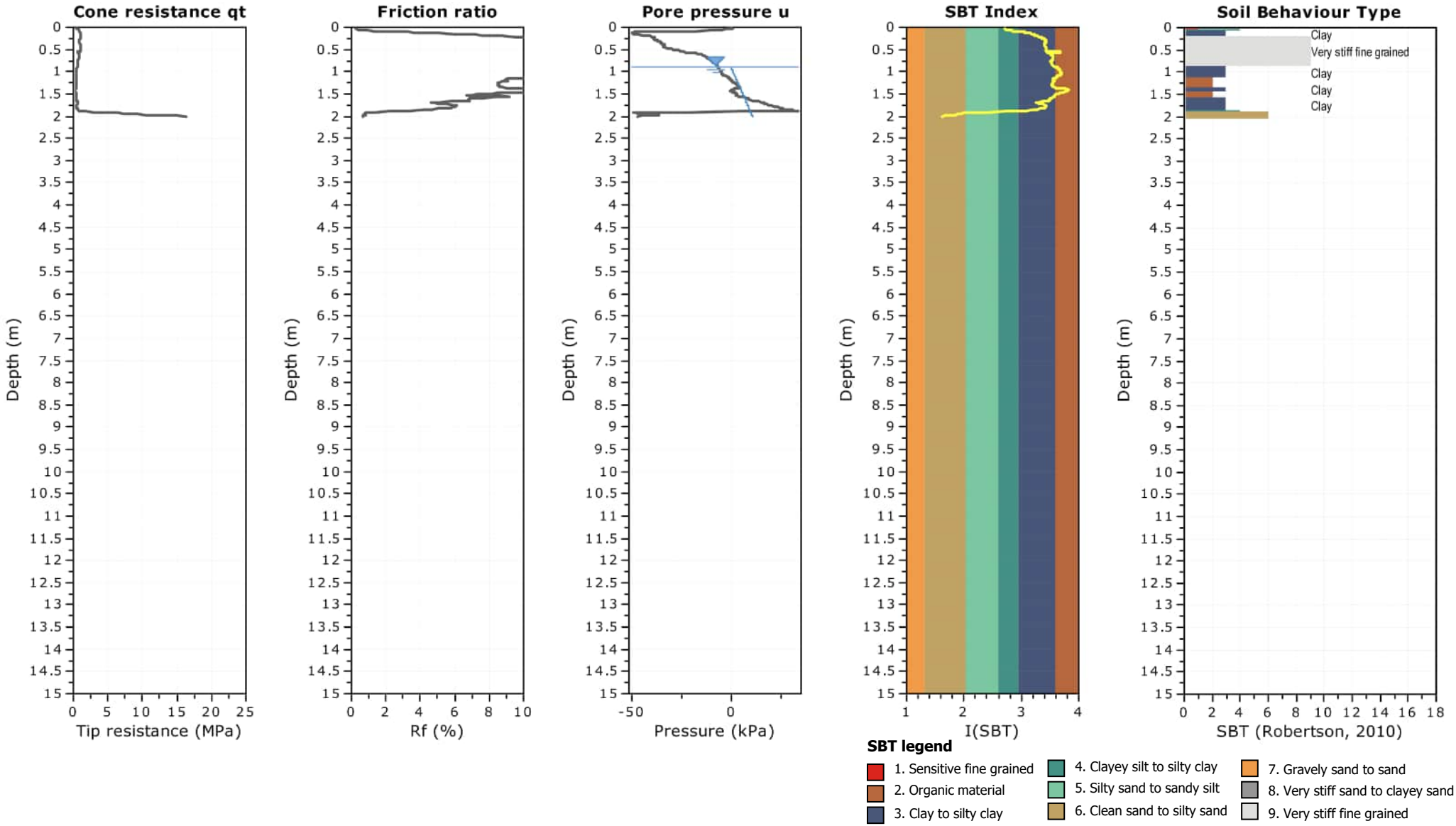
CPT: CPT02
Total depth: 1.53 m, Date: 15/11/2022
Surface Elevation: 0.00 m, Est. GWL: 1.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:



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CPT: CPT03
Total depth: 2.00 m, Date: 15/11/2022
Surface Elevation: 0.00 m, Est. GWL: 0.90 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

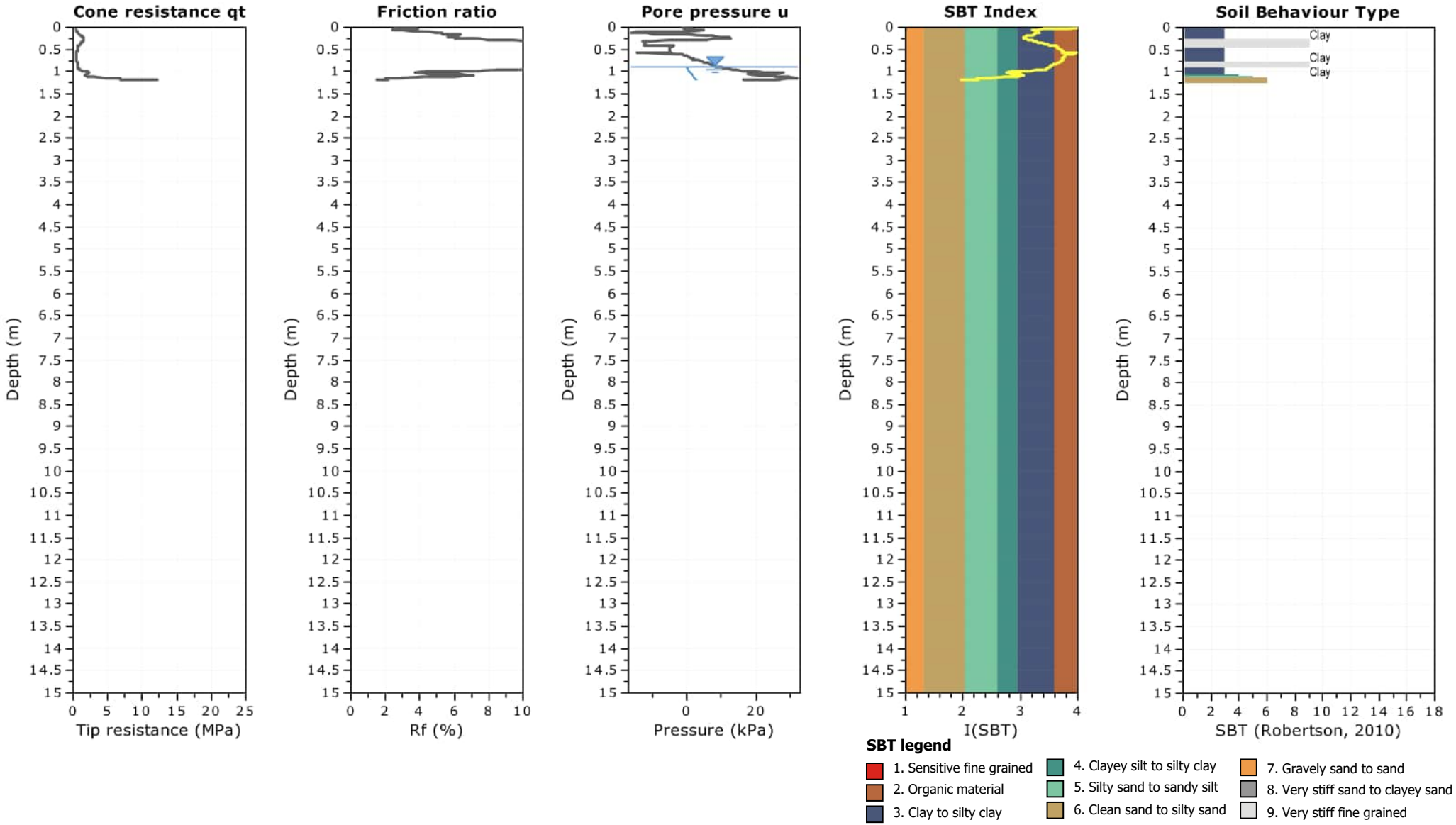
Project: **Waipapa Development**
Location: **P-003194**



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Unit 6, Level 1, 114 St Georges Bay Road, Parnell, Auckland 1052
http://www.initia.co.nz

CPT: CPT04
Total depth: 1.19 m, Date: 15/11/2022
Surface Elevation: 0.00 m, Est. GWL: 0.90 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

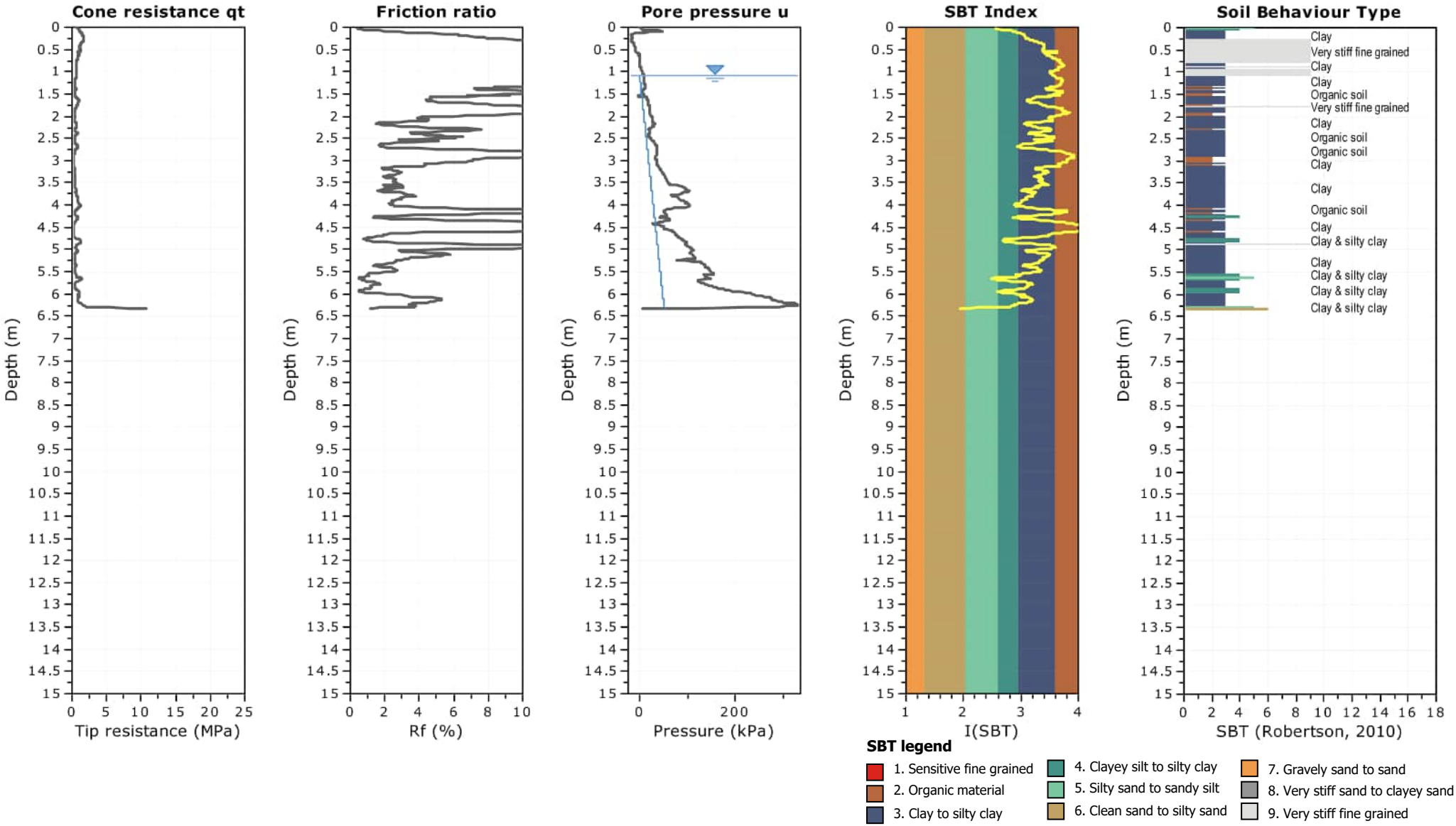
Project: **Waipapa Development**
Location: **P-003194**



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Project: **Waipapa Development**
Location: **P-003194**

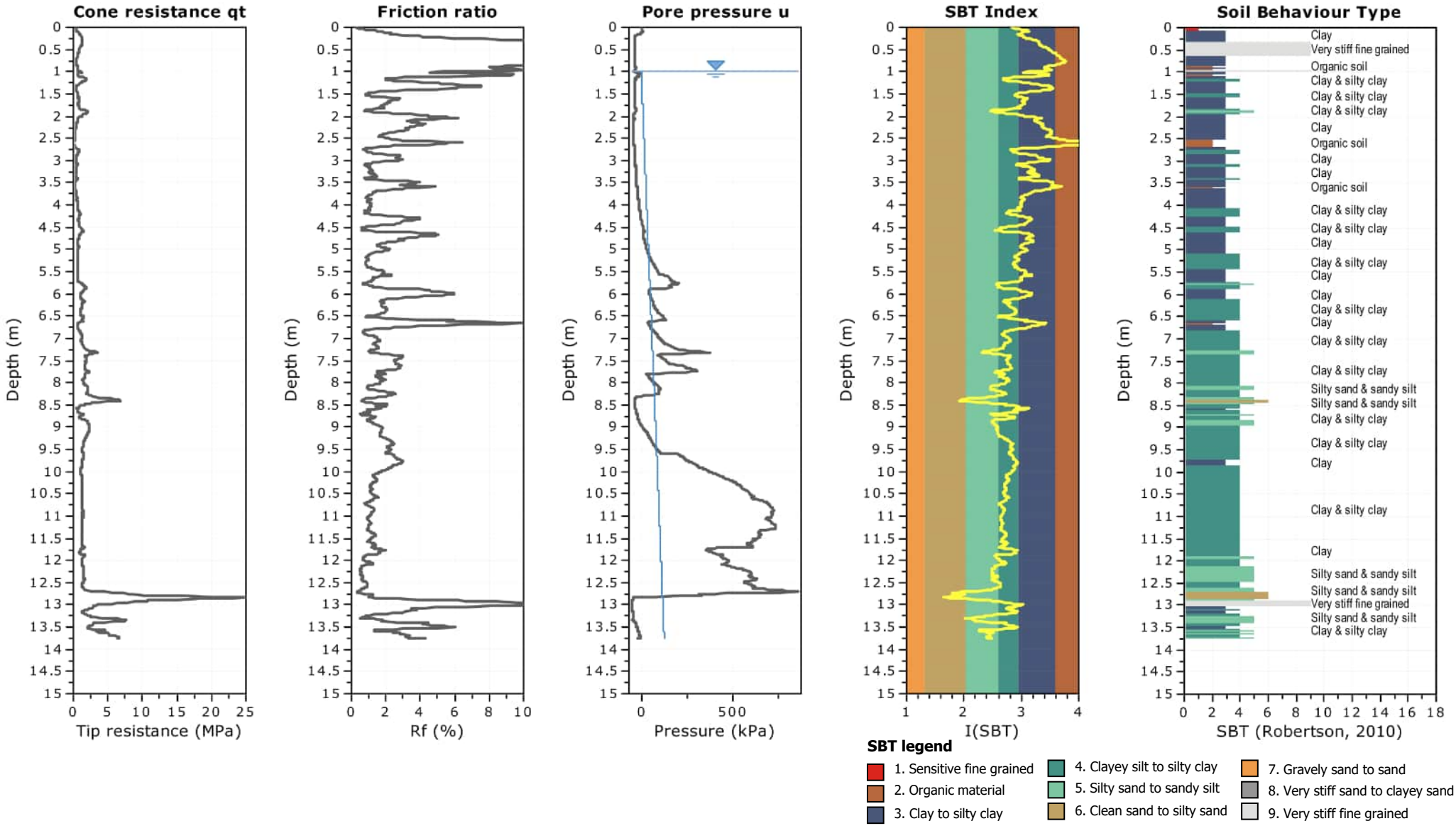
CPT: CPT05
Total depth: 6.33 m, Date: 15/11/2022
Surface Elevation: 0.00 m, Est. GWL: 1.10 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:



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CPT: CPT06
Total depth: 13.76 m, Date: 15/11/2022
Surface Elevation: 0.00 m, Est. GWL: 1.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

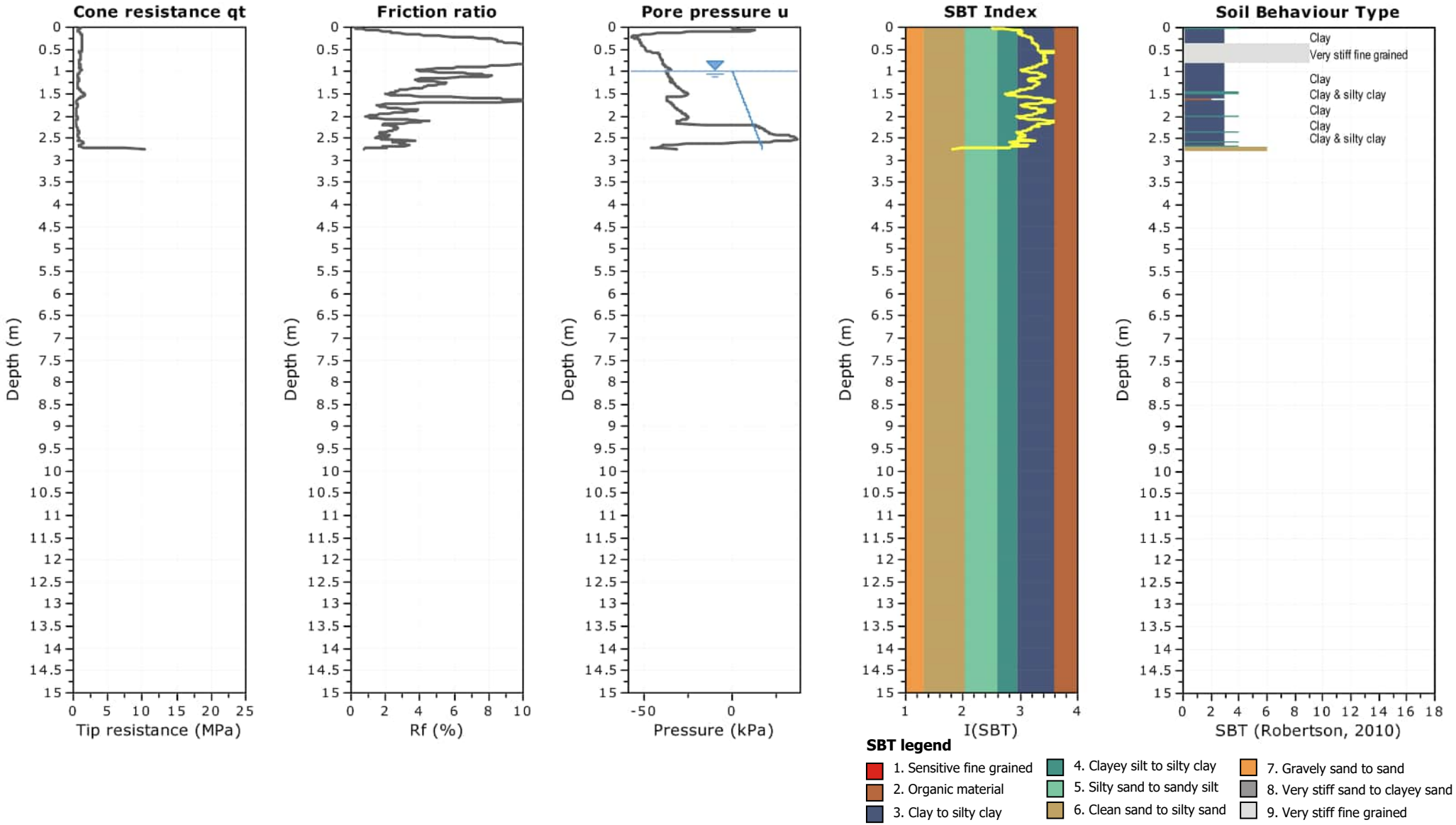
Project: **Waipapa Development**
Location: **P-003194**



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http://www.initia.co.nz

Project: **Waipapa Development**
Location: **P-003194**

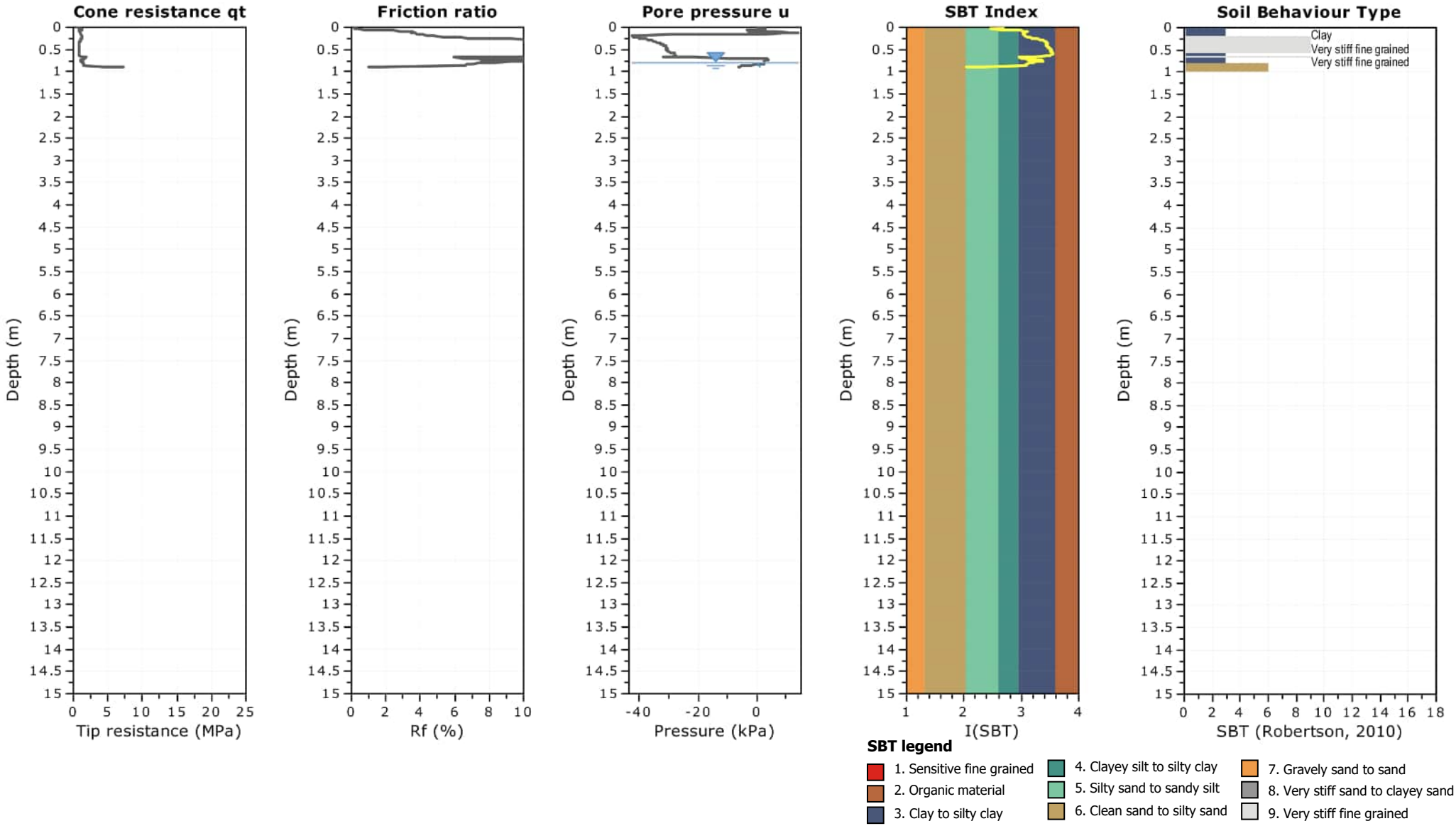
CPT: CPT07
Total depth: 2.74 m, Date: 15/11/2022
Surface Elevation: 0.00 m, Est. GWL: 1.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:



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CPT: CPT08
Total depth: 0.89 m, Date: 31/03/2026
Surface Elevation: 0.00 m, Est. GWL: 0.80 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **Waipapa Development**
Location: **P-003194**



HAND AUGER LOG

HOLE NO.: HA01

CLIENT: Peter Swan Consulting Engineers **SITE LOCATION:** 20 Klinac Lane, Waipapa
PROJECT: Waipapa Bidfood

Project Ref.: P-003194

CO-ORDINATES: 1683426.00mE, 6103397.00mN **ELEVATION:** 85m
Co-ordinate system: NZTM **Datum:** NZVD2016
Location method: GPSH **Level method:** GPSH

START DATE: 03/11/2022
END DATE: 03/11/2022
LOGGED BY: FPT
CHECKED BY: APK

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)
Topsoil	SILT, with minor clay; dark brown. Very stiff; low plasticity; moist; trace fresh rootlets.		0.0
Late Quaternary alluvium and colluvium	Clayey SILT; brownish grey, streaked brown. Very stiff; high plasticity; moist.		0.4
	SILT, with some clay; grey. Stiff; low plasticity; moist.		1.0
	1.2m: Grades to minor silt clasts. 1.3m: Grades to light grey, speckled white. 1.4m: Becomes saturated.		1.2
	2.00m - 2.80m: No Recovery		2.0
	Silty SAND, with minor clay; bluish grey. loose; low plasticity; saturated; sand, fine to medium.		2.8
	2.90m - 3.40m: No Recovery		3.4
	EOH: 3.50m		3.5

LEGEND

SCALA PENETROMETER (Blows / 0mm)

VANE SHEAR STRENGTH (kPa) Vane: 3591

Values
132
49
198
46
63
10
64
20
76
20
86
13

WATER: 03/11/2022



REMARKS

Ground water measured at the completion of the borehole.

Hand auger terminated on practical refusal at 3.50m.

WATER
- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE
- [x] Hand Auger
- [ ] Test Pit

Ver 2. Generated with CORE-GS by Geroc - Hand Auger_Initia - 15/11/2022 4:36:06 PM

HAND AUGER LOG

HOLE NO.: HA02

CLIENT: Peter Swan Consulting Engineers
PROJECT: Waipapa Bidfood
SITE LOCATION: 20 Klinac Lane, Waipapa

Project Ref.: P-003194

CO-ORDINATES: 1683420.00mE, 6103437.00mN
Co-ordinate system: NZTM
Location method: GPSH

ELEVATION: 86m
Datum: NZVD2016
Level method: GPSH

START DATE: 03/11/2022
END DATE: 03/11/2022
LOGGED BY: FPT
CHECKED BY: APK

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 50mm)	VANE SHEAR STRENGTH (kPa) Vane: 3591	Values	WATER
Top soil	SILT, with minor clay; dark brown. Very stiff; low plasticity; moist; Trace fresh rootlets.		0.0	TS TS	2 4 6 8 10 12 14 16 18	50 100 150 200	165	Groundwater Not Encountered
Late Quaternary alluvium and colluvium	Clayey SILT; grey. Very stiff; high plasticity; moist.		0.2				82	
			0.4				128	
			0.6				69	
	0.9m: Grades to hard.		0.8				UTP	
	EOH: 1.00m		1.0		20		-	
			1.2					
			1.4					
			1.6					
			1.8					
			2.0					
			2.2					
			2.4					
			2.6					
			2.8					
			3.0					
			3.2					
			3.4					
			3.6					
			3.8					
			4.0					
			4.2					
			4.4					
			4.6					
			4.8					



REMARKS

Ground Water Not Encountered

Hand auger terminated on practical refusal at 0.95m.

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Ver 2. Generated with CORE-GS by Geroc - Hand Auger_Initia - 15/11/2022 4:36:08 PM

HAND AUGER LOG

HOLE NO.: HA03

CLIENT: Peter Swan Consulting Engineers
PROJECT: Waipapa Bidfood
SITE LOCATION: 20 Klinac Lane, Waipapa

Project Ref.: P-003194

CO-ORDINATES: 1683471.00mE, 6103463.00mN
Co-ordinate system: NZTM
Location method: GPSH

ELEVATION: 85m
Datum: NZVD2016
Level method: GPSH

START DATE: 03/11/2022
END DATE: 03/11/2022
LOGGED BY: FPT
CHECKED BY: APK

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)
Topsoil	SILT, with minor clay; dark brown. Very stiff; low plasticity; moist; Trace fresh rootlets..		0.0
Late Quaternary alluvium and colluvium	Clayey SILT; grey. Very stiff; high plasticity; moist.		0.2
	0.6m: Grades to stiff.		0.6
	SILT, with minor clay; light grey. Stiff; low plasticity; saturated.		0.8
	1.2m: Grades to firm.		1.2
	1.5m: Grades to stiff.		1.4
	1.60m - 2.60m: No Recovery		1.6
	Silty SAND, with minor clay; bluish grey. loose; low plasticity; saturated; sand, fine to medium.		2.6
	3.00m- 3.35m: No Recovery		3.0
	EOH: 3.80m		3.4

LEGEND

SCALA PENETROMETER (Blows / 50mm)

VANE SHEAR STRENGTH (kPa) Vane: 3591

Values
128
69
99
33
94
30
36
20
79
33

WATER: 03/11/2022



REMARKS

Ground water measured at the completion of the borehole.

Scala from 2.70m.

Hand auger terminated on practical refusal at 3.35m

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Ver 2. Generated with CORE-GS by Geroc - Hand Auger_Initia - 15/11/2022 4:36:10 PM

HAND AUGER LOG

HOLE NO.: HA04

CLIENT: Peter Swan Consulting Engineers **SITE LOCATION:** 20 Klinac Lane, Waipapa
PROJECT: Waipapa Bidfood

Project Ref.: P-003194

CO-ORDINATES: 1683520.00mE, 6103446.00mN **ELEVATION:** 85m
Co-ordinate system: NZTM **Datum:** NZVD2016
Location method: GPSH **Level method:** GPSH

START DATE: 04/11/2022
END DATE: 04/11/2022
LOGGED BY: FPT
CHECKED BY: APK

INITIA
GEOTECHNICAL SPECIALISTS

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 50mm)	VANE SHEAR STRENGTH (kPa) Vane: 3591	Values	WATER
Top soil	SILT, with minor clay; dark brown. Very stiff; low plasticity; moist; Trace fresh rootlets..		0.0	TS				
Late Quaternary alluvium and colluvium	Clayey SILT; grey, streaked light grey brown. Very stiff; high plasticity; moist.		0.2				148	
			0.4				66	
	0.6m: Grades to stiff.		0.6				63	
			0.8				-	
			1.0				49	
			1.2				-	
			1.4				63	
							16	
	SILT, with minor clay, with trace sand; reddish brown. Hard; low plasticity; saturated; sand, fine.						UTP	
	EOH: 1.50m		1.6				-	
			1.8					
			2.0					
			2.2					
			2.4					
			2.6					
			2.8					
			3.0					
			3.2					
			3.4					
			3.6					
			3.8					
			4.0					
			4.2					
			4.4					
			4.6					
			4.8					

04/11/2022



REMARKS

Ground water measured at the completion of the borehole.

Hand auger terminated on practical refusal at 1.45m.

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Ver 2. Generated with CORE-GS by Geroc - Hand Auger_Initia - 15/11/2022 4:36:12 PM

HAND AUGER LOG

HOLE NO.: HA05

CLIENT: Peter Swan Consulting Engineers
PROJECT: Waipapa Bidfood
SITE LOCATION: 20 Klinac Lane, Waipapa

Project Ref.: P-003194

CO-ORDINATES: 1683505.00mE, 6103410.00mN
Co-ordinate system: NZTM
Location method: GPSH

ELEVATION: 85m
Datum: NZVD2016
Level method: GPSH

START DATE: 04/11/2022
END DATE: 04/11/2022
LOGGED BY: FPT
CHECKED BY: APK

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: 3591	Values	WATER
Topsoil	SILT, with minor clay; dark brown. Very stiff; low plasticity; moist.		0.0	TS				
Late Quaternary alluvium and colluvium	Clayey SILT; brownish grey, with occasional orange brown streaks. Very stiff; high plasticity; moist.		0.2				168	
	0.6m - 0.8m: Grades to brownish grey, streaked orange brown, minor fine to coarse sand.		0.4				82	
	0.9m: Grades to stiff.		0.6				181	
	1.1m: Grades to grey.		0.8				63	
	1.2m: Grades to very stiff.		1.0				69	
	1.5m: Grades to hard.		1.2				13	
	1.70m - 4.00m: No Recovery		1.4				178	
			1.6				21	
			1.8	N/R			230+	
			2.0	N/R			-	
			2.2	N/R				
			2.4	N/R				
			2.6	N/R				
			2.8	N/R				
			3.0	N/R				
			3.2	N/R				
			3.4	N/R				
			3.6	N/R				
			3.8	N/R				
	EOH: 4.00m		4.0	N/R				
			4.2					
			4.4					
			4.6					
			4.8					

04/11/2022



REMARKS

Ground water measured at the completion of the borehole.

Hand auger terminated at target depth of 4.00m

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

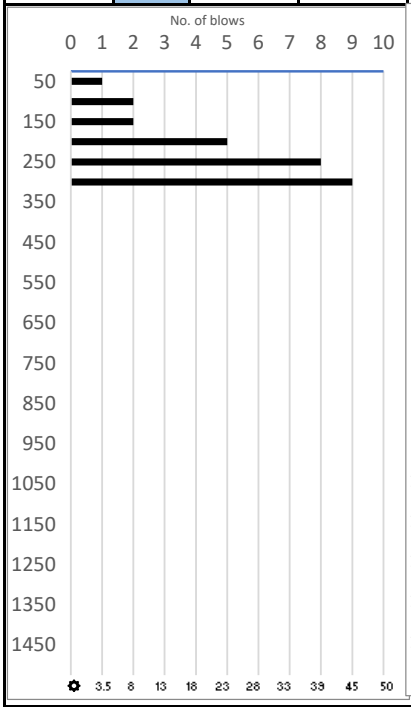
Ver 2. Generated with CORE-GS by Geroc - Hand Auger_Initia - 15/11/2022 4:36:14 PM

Scala Report - Up to 1.5m Bgl Tests

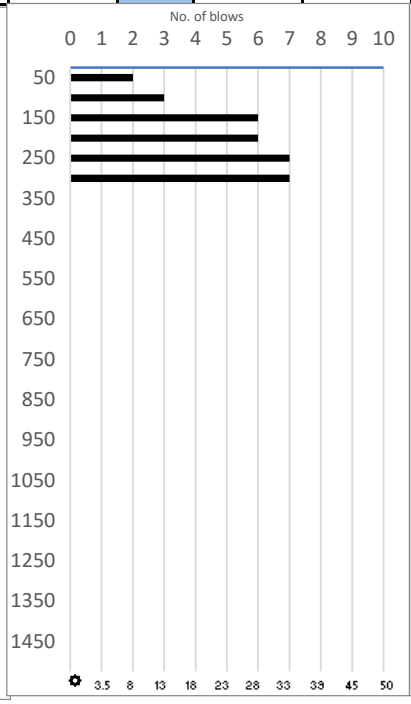
Form #	Scala501

Site	Bidfood	Date	13/06/2023
Project Ref	P-001500	Equipment ID	SC1
Staff Member	Thomas Overy		

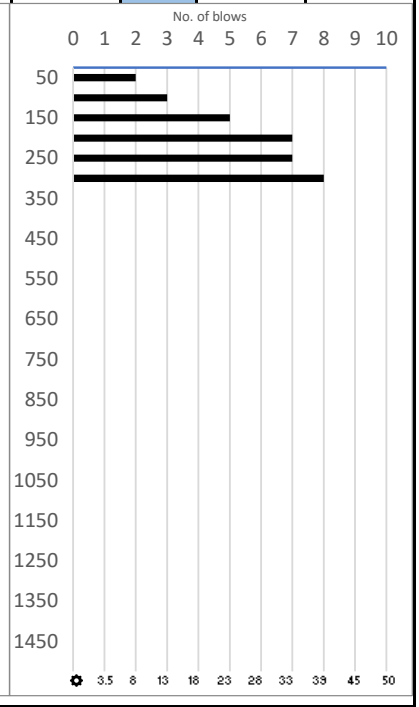
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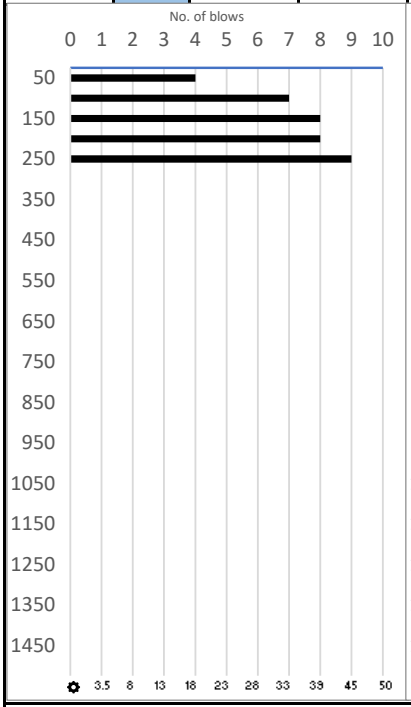
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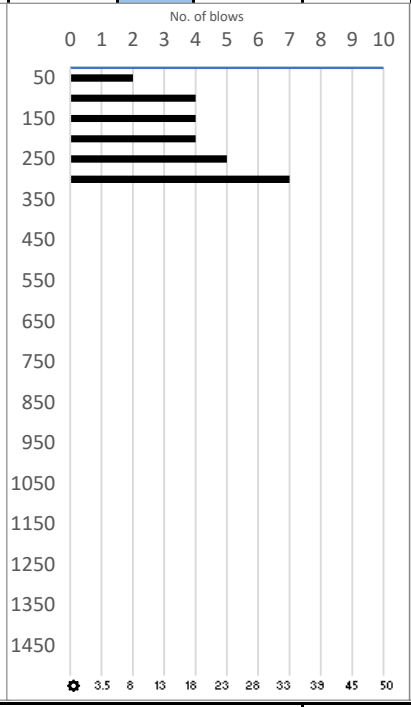
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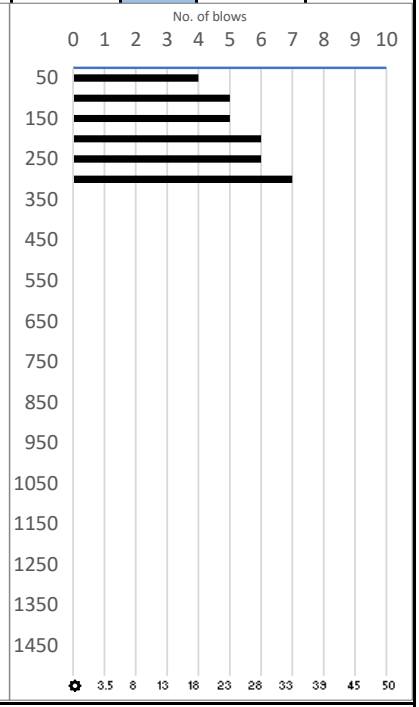
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Test Location / number	5	Start Depth Bgl	0.00



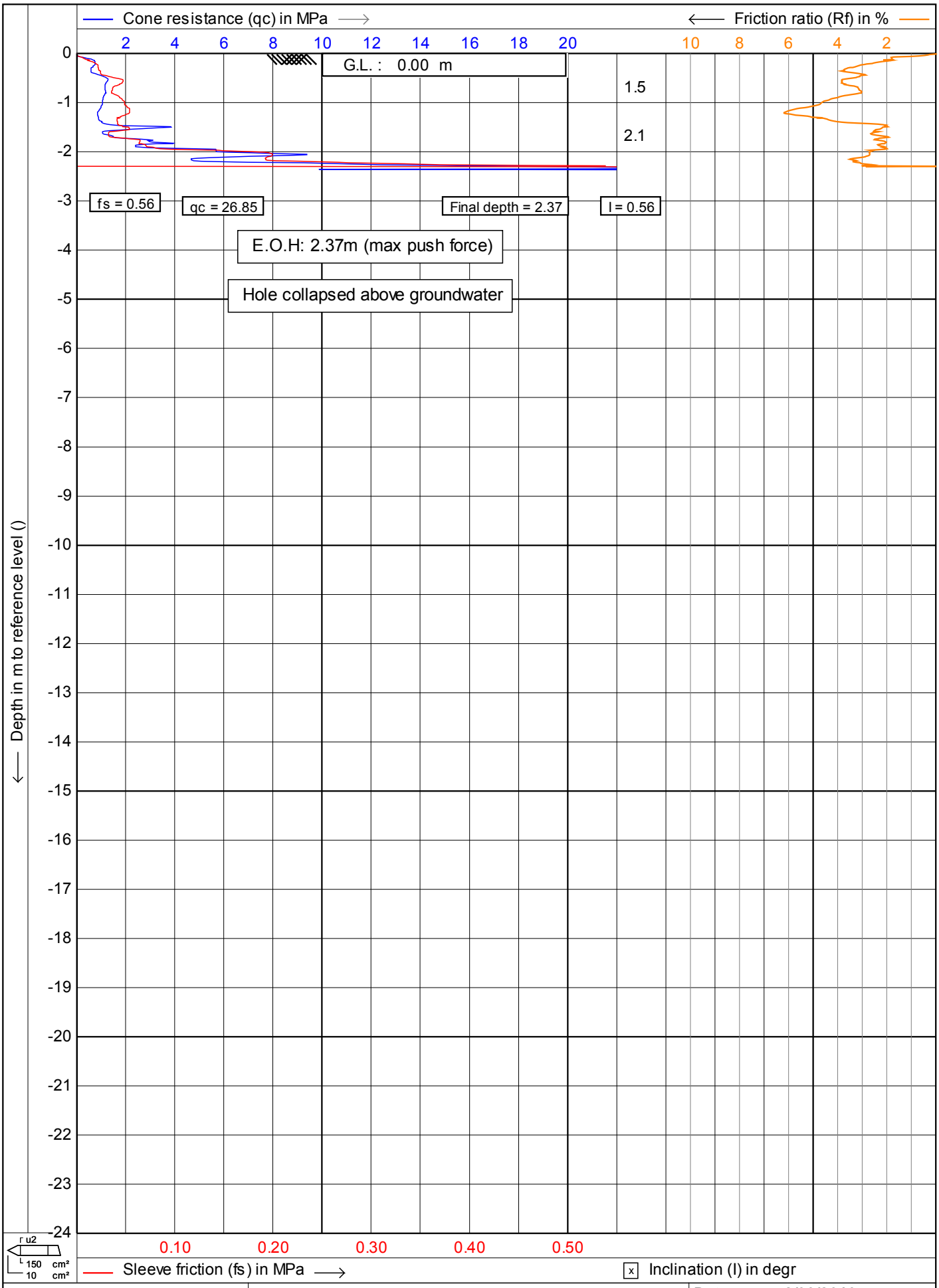
Test Location / number	6	Start Depth Bgl	0.00



The estimated CBR Values on the corresponding graph are based on Figure 5.3, Correlation of Dynamic Cone Penetration and CBR taken form AUSTROADS 2004- Pavement Design - A Guide to the Structural Design of Road Pavements.

Tested By	T.O	Checked By	0

NZTA Site Investigation Borehole and CPT Logs



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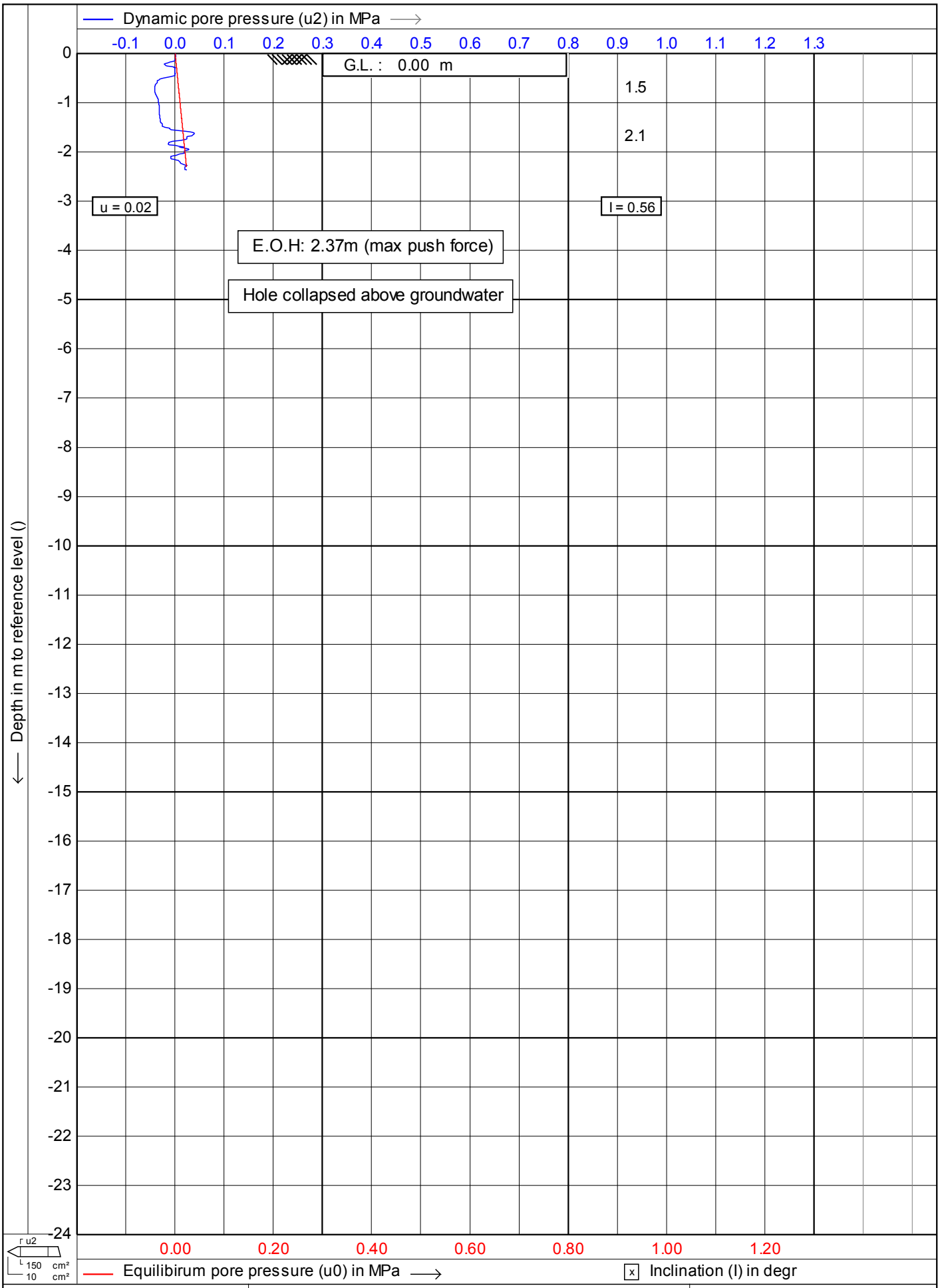
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** 1/15

1.45



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Test acc NZ class

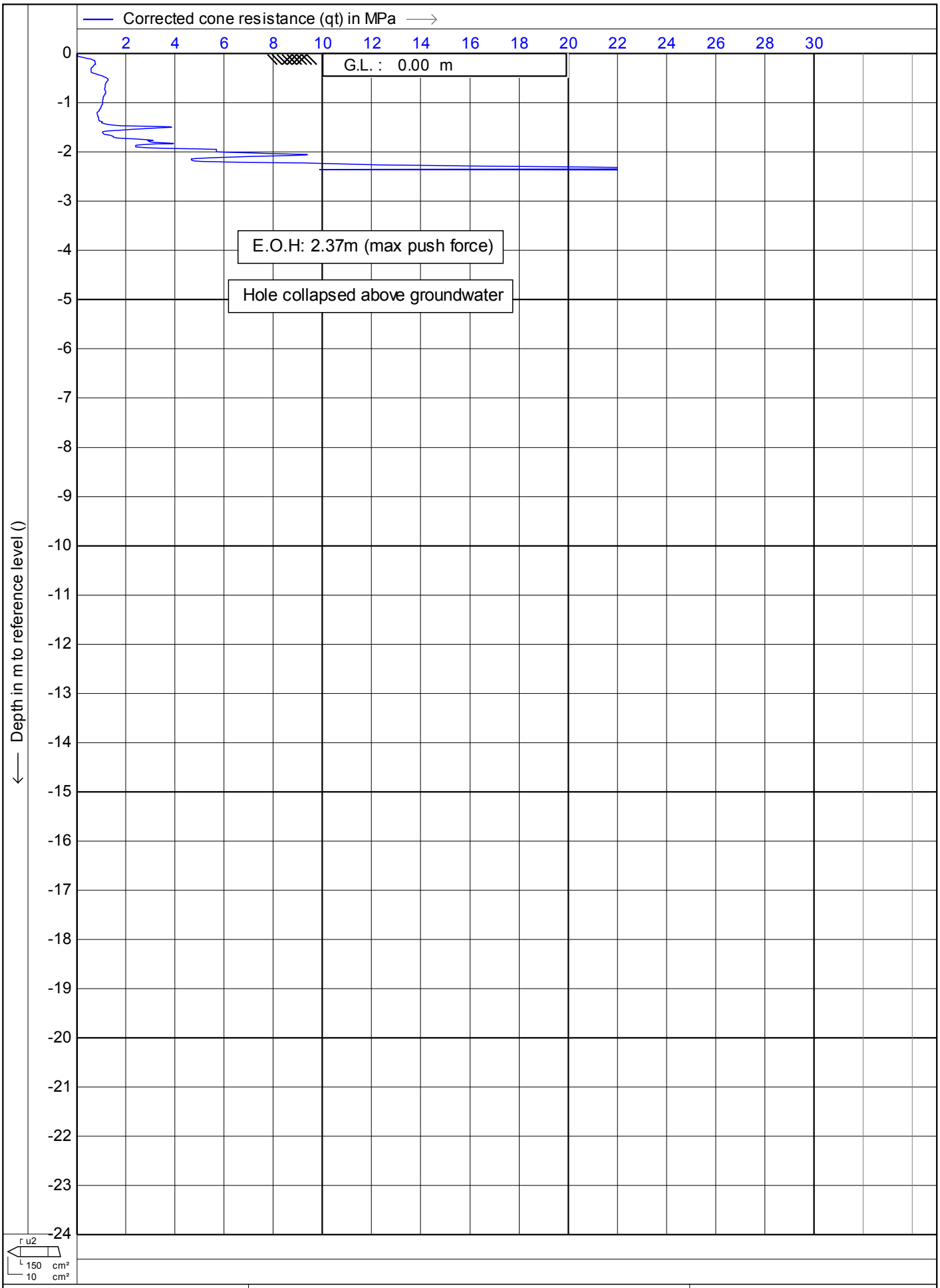
Project : **20 Klinac Lane**

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Position: **173.9162, -35.20834 Garmin EXTREX 10**

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Cone no.	: **S10CFIIP.S15297**
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1.45



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Test acc NZ class

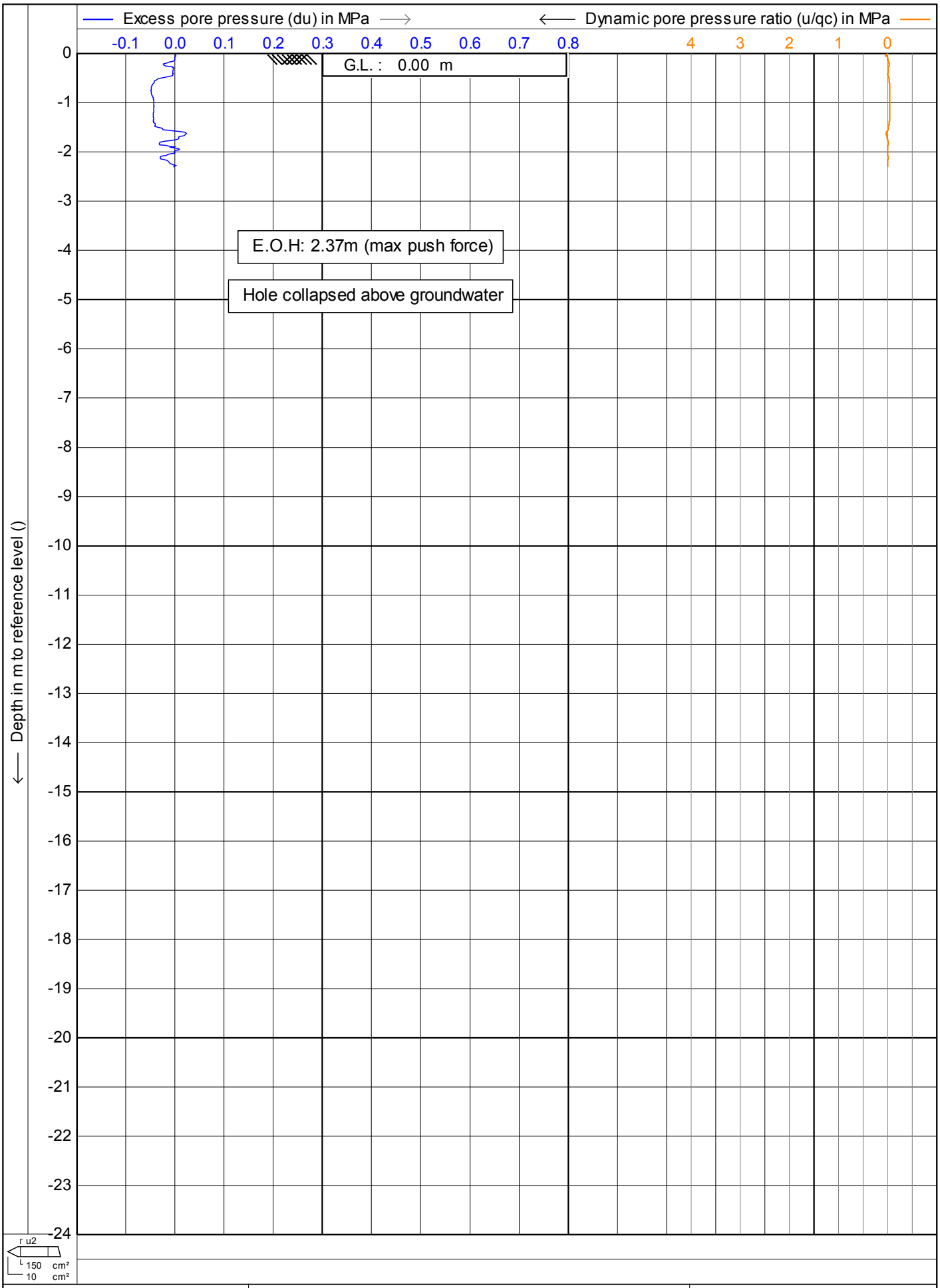
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Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** **3/15**

1.45



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Test acc NZ class

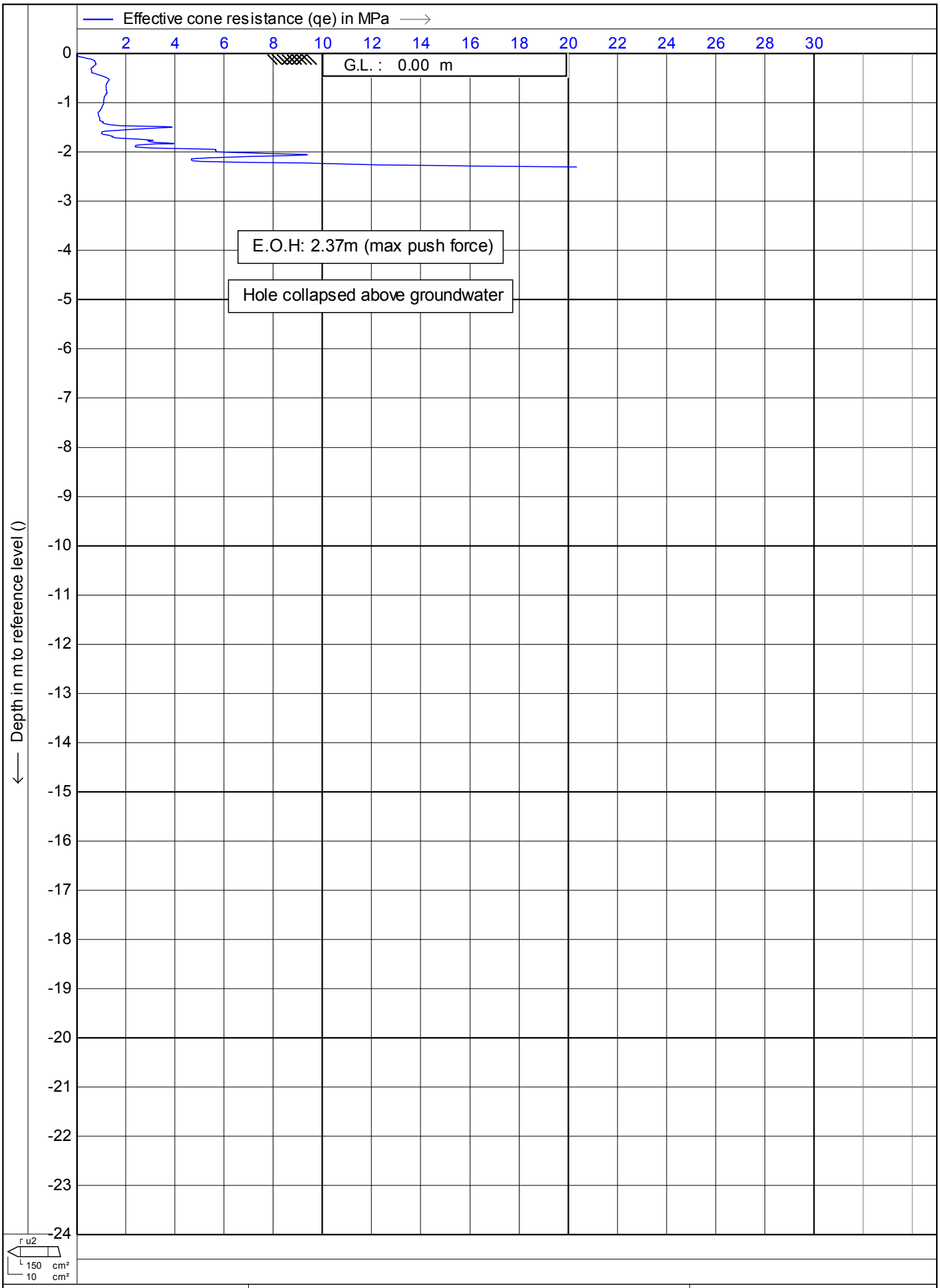
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Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
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Project no.	: **DF19GE167**
CPT no.	: **CPT_01** **4/15**

1.45



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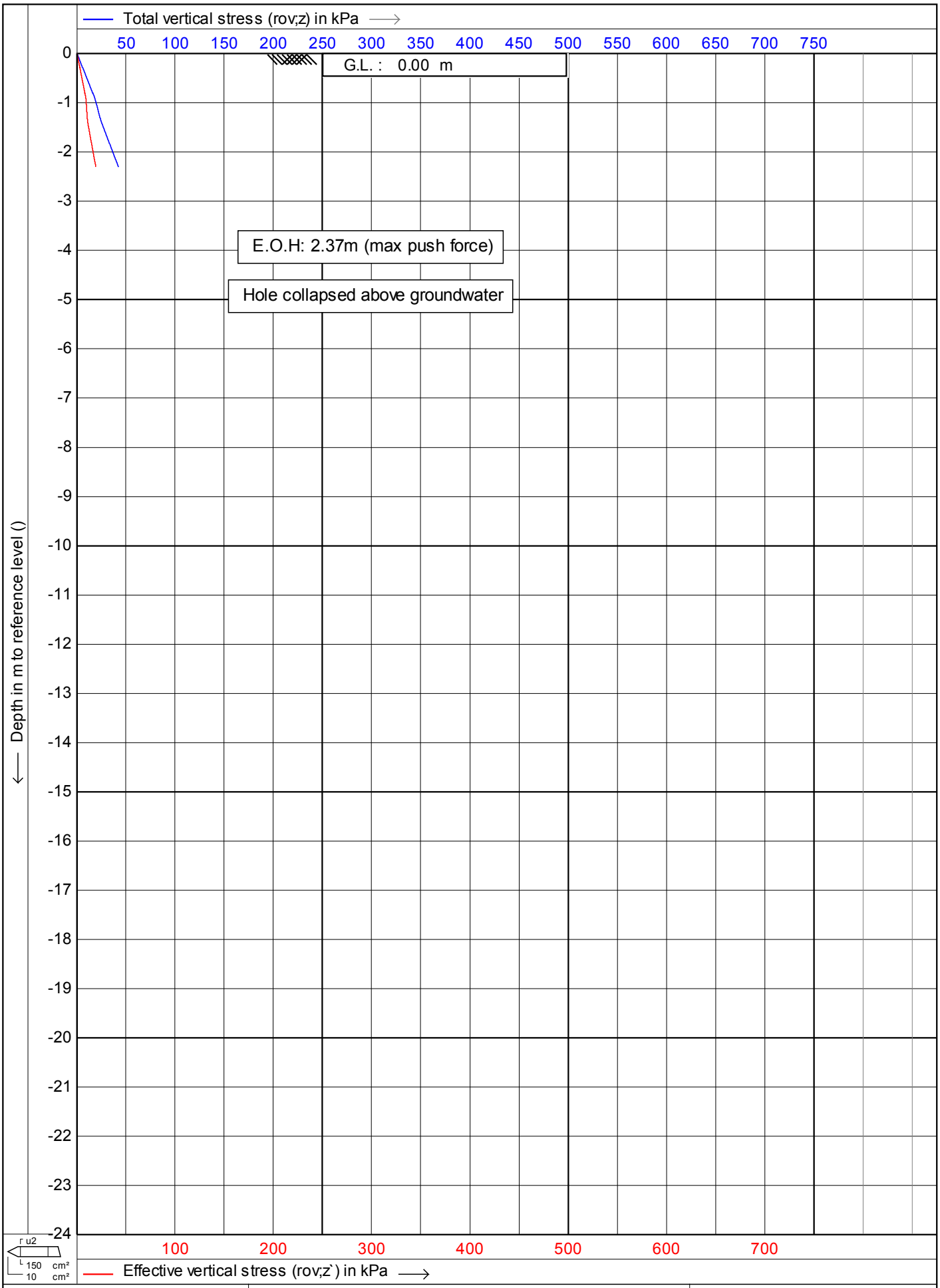
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Project no.	: **DF19GE167**
CPT no.	: **CPT_01** **5/15**

1.45



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Test acc NZ class

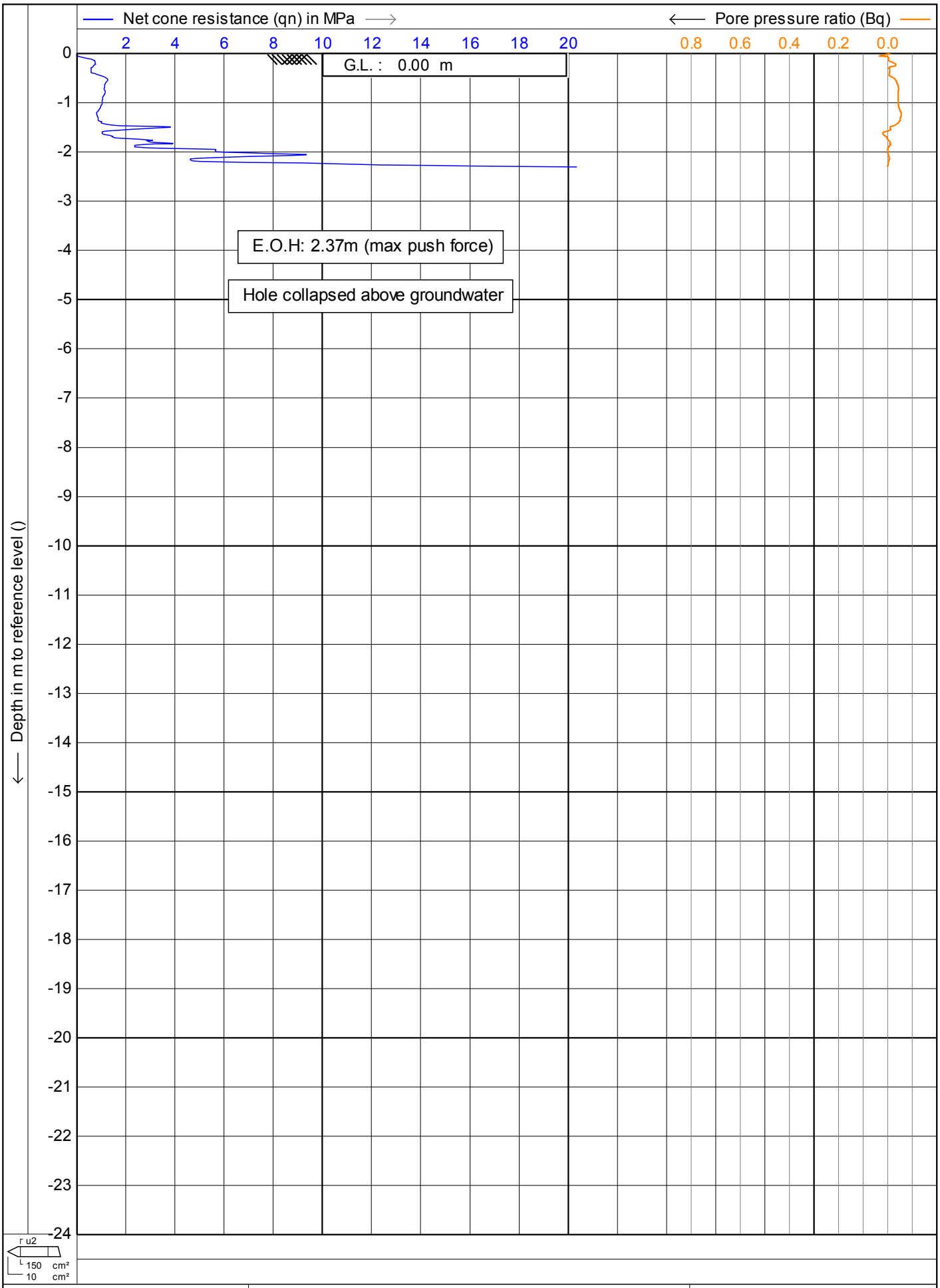
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Location: **20 Klinac Lane, Waipapa**

Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** **6/15**

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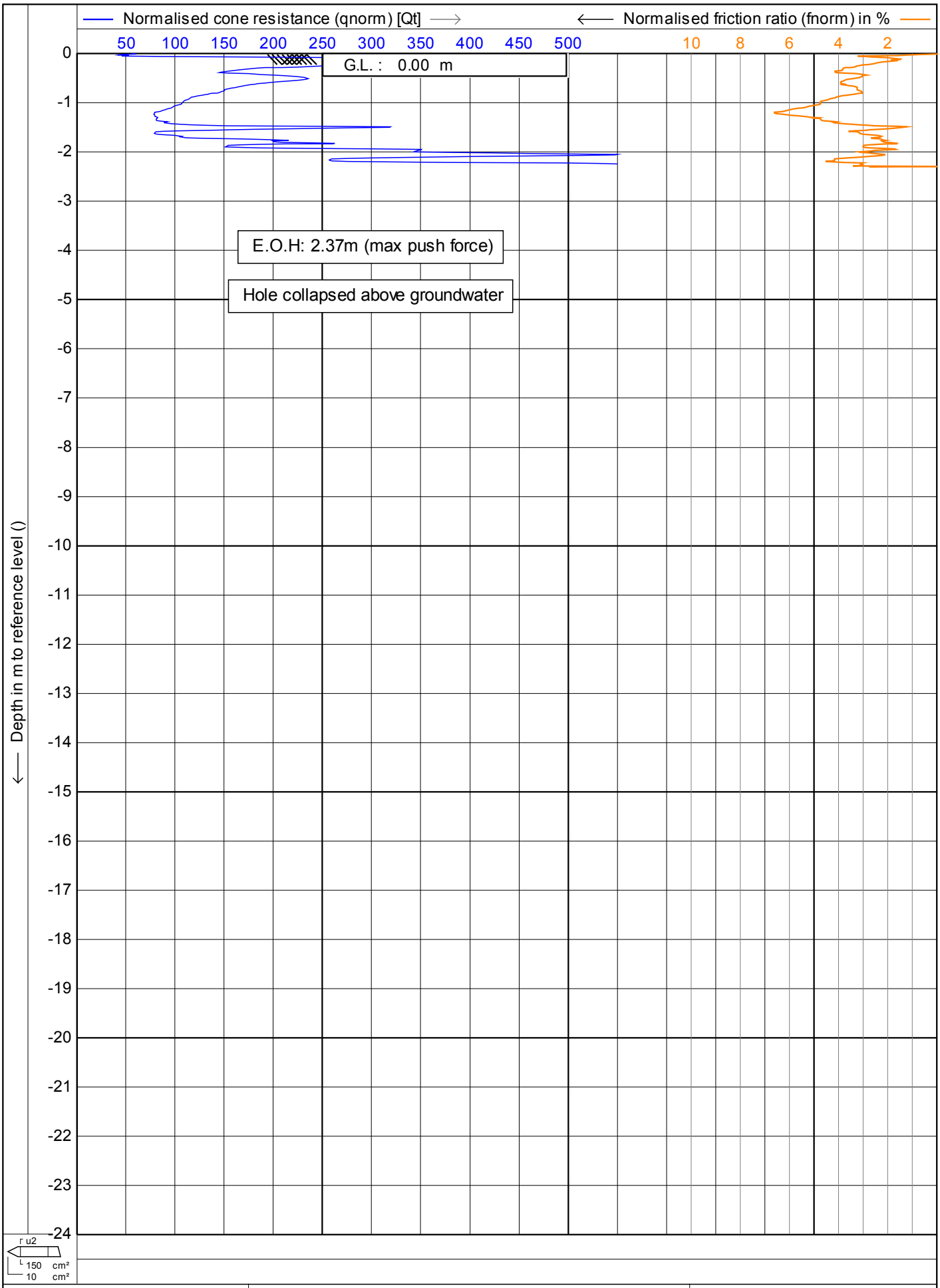
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CPT no.	: **CPT_01** 7/15

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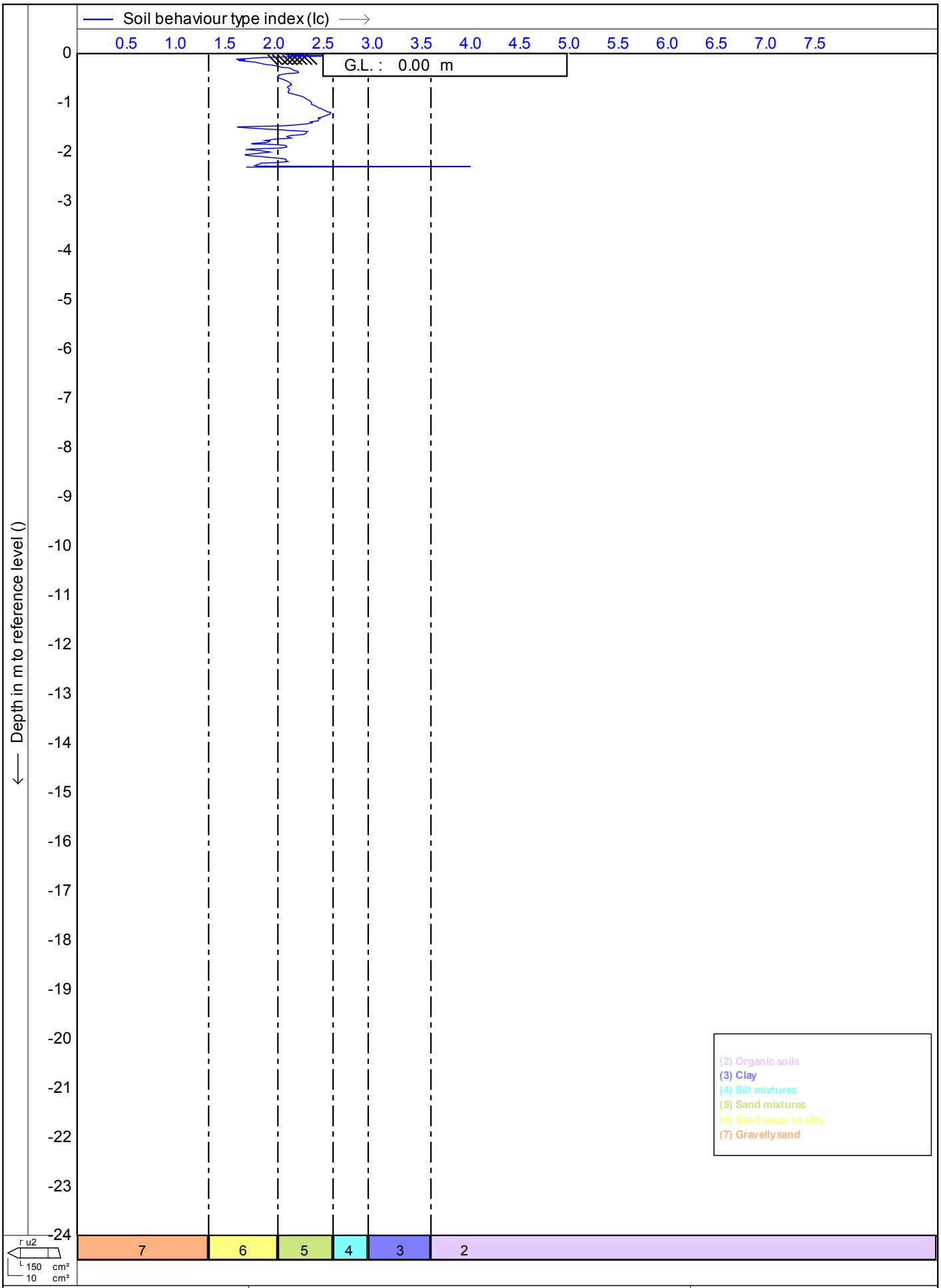
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CPT no.	: **CPT_01** 8/15

1.45



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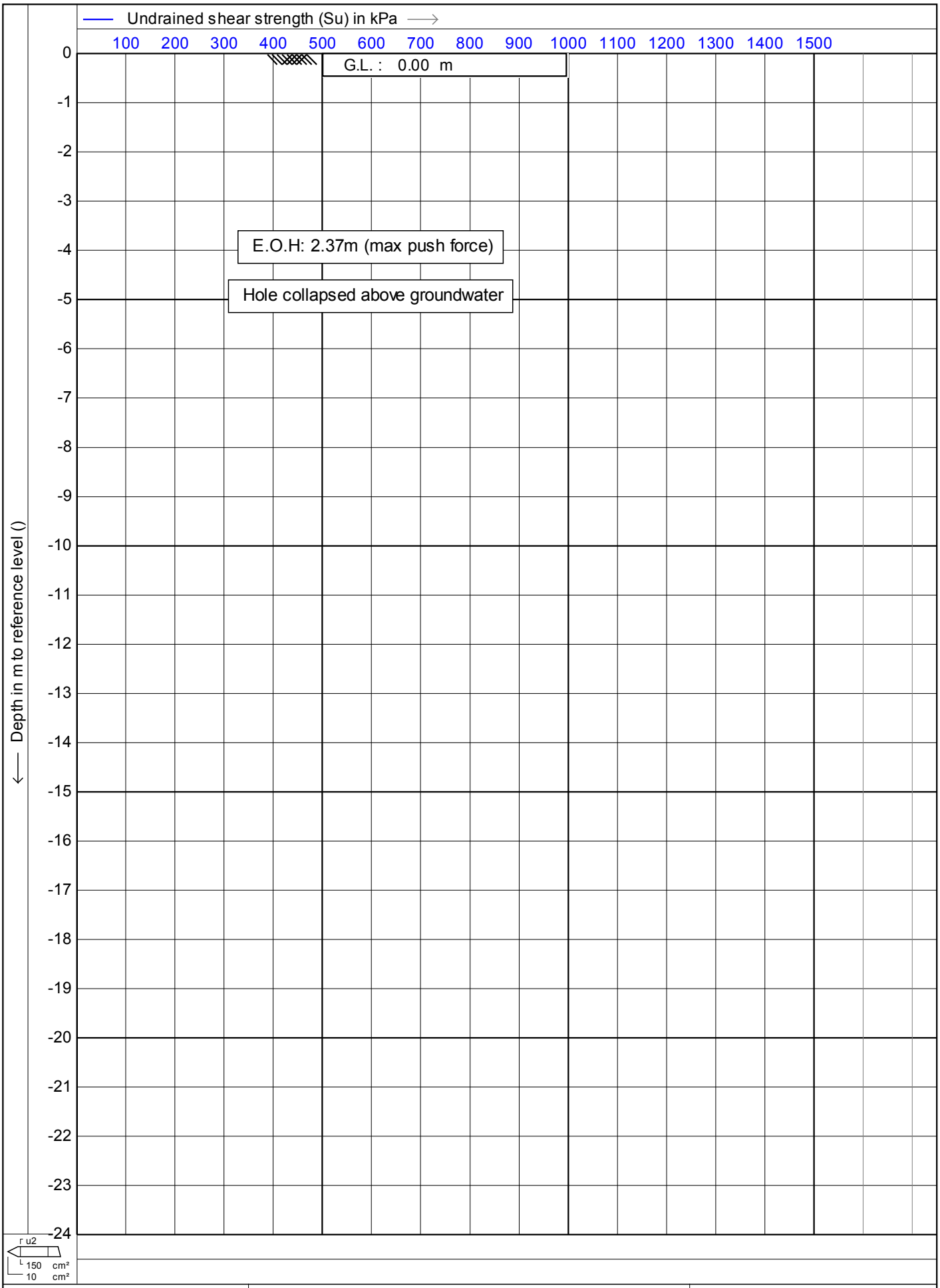
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** **9/15**

1.45



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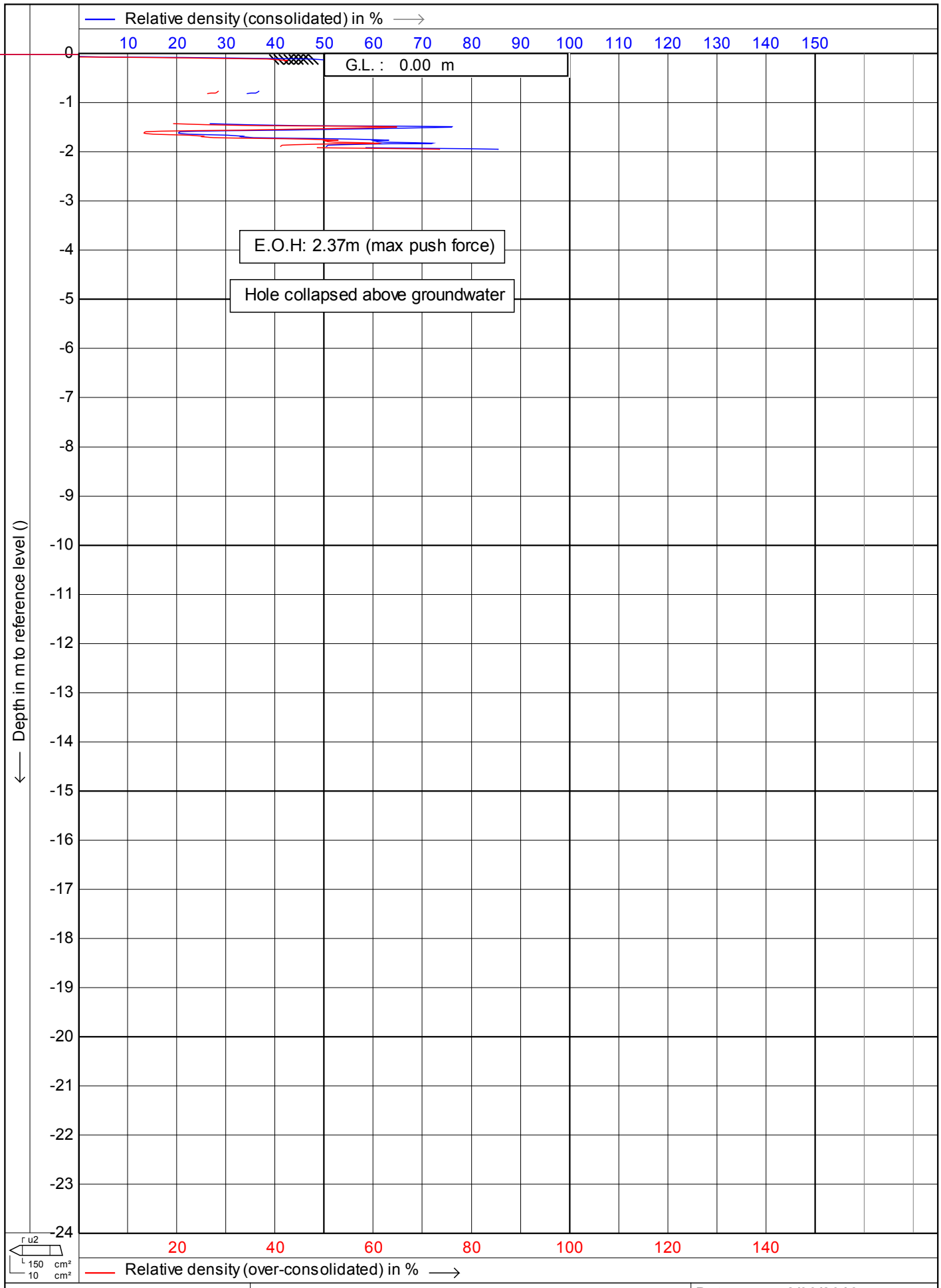
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Position: **173.9162, -35.20834 Garmin EXTREX 10**

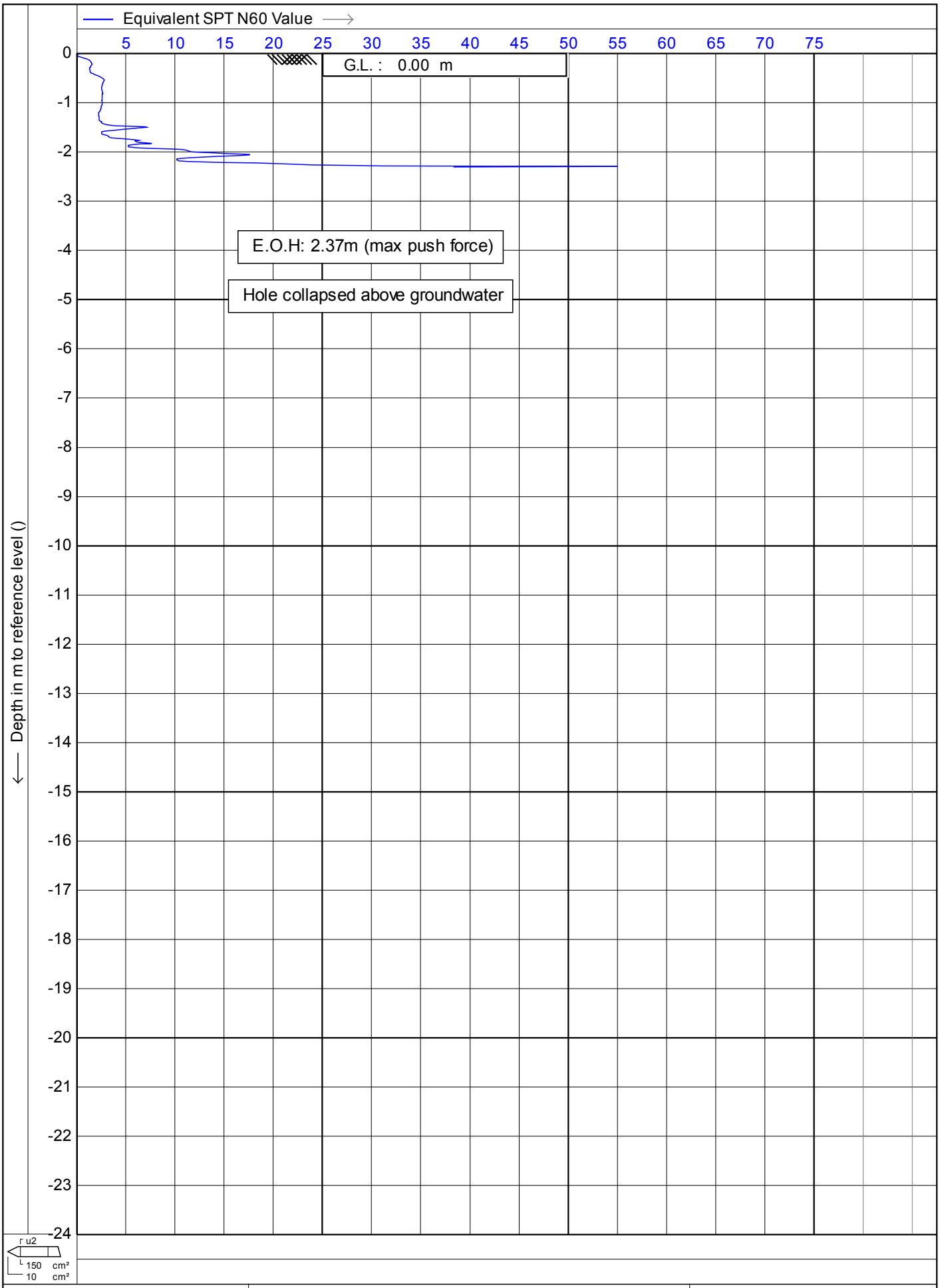
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Project no.	: **DF19GE167**
CPT no.	: **CPT_01** **10/15**

1.45



DRILLFORCE THE DRILLING SPECIALISTS	Test acc NZ class	Date : **2/09/2019**
	Project : **20 Klinac Lane**	Cone no. : **S10CFIIP.S15297**
	Location: **20 Klinac Lane, Waipapa**	Project no. : **DF19GE167**
	Position: **173.9162, -35.20834 Garmin EXTREX 10**	CPT no. : **CPT_01** 11/15

1.45



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Test acc NZ class

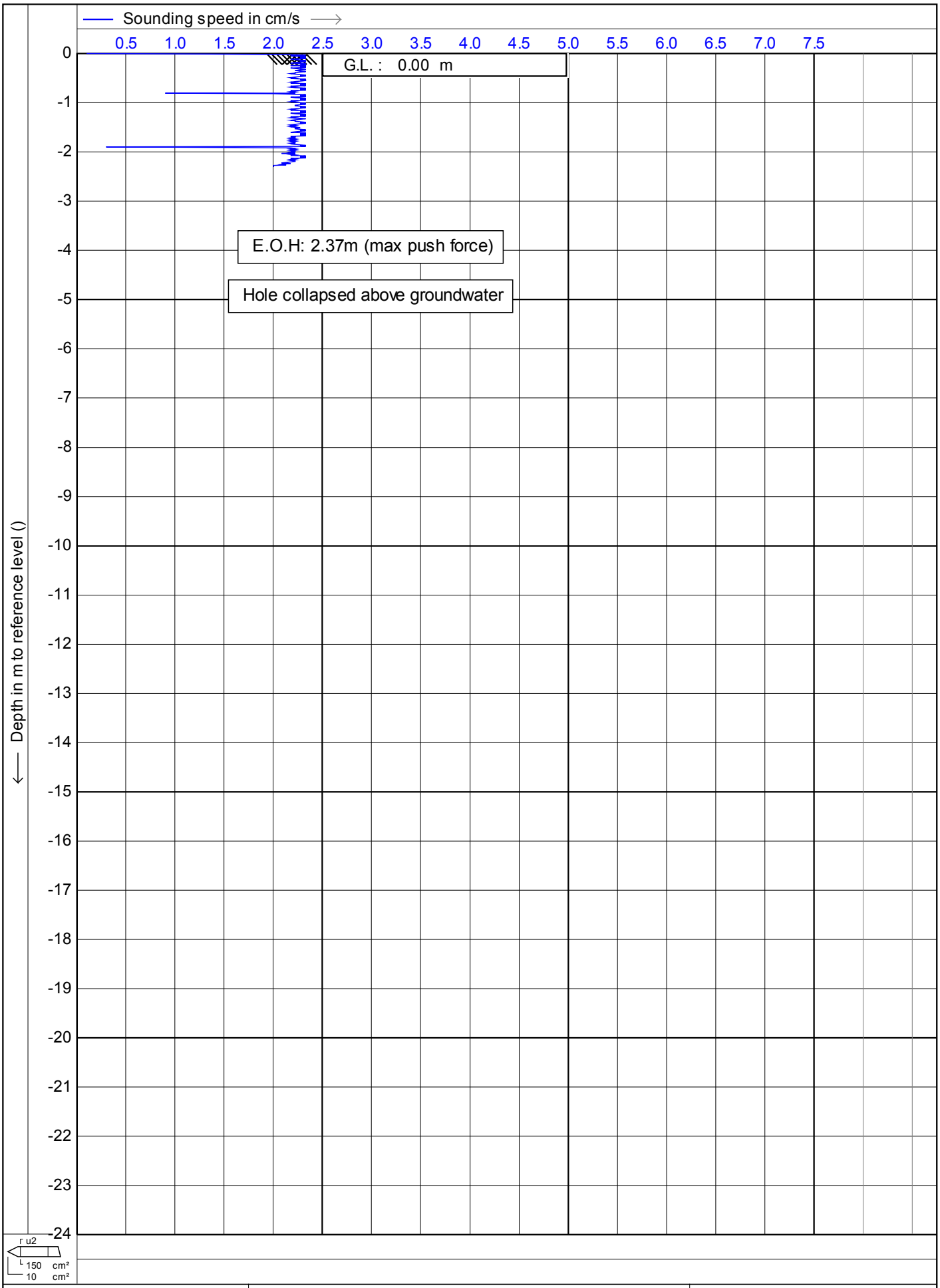
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01**

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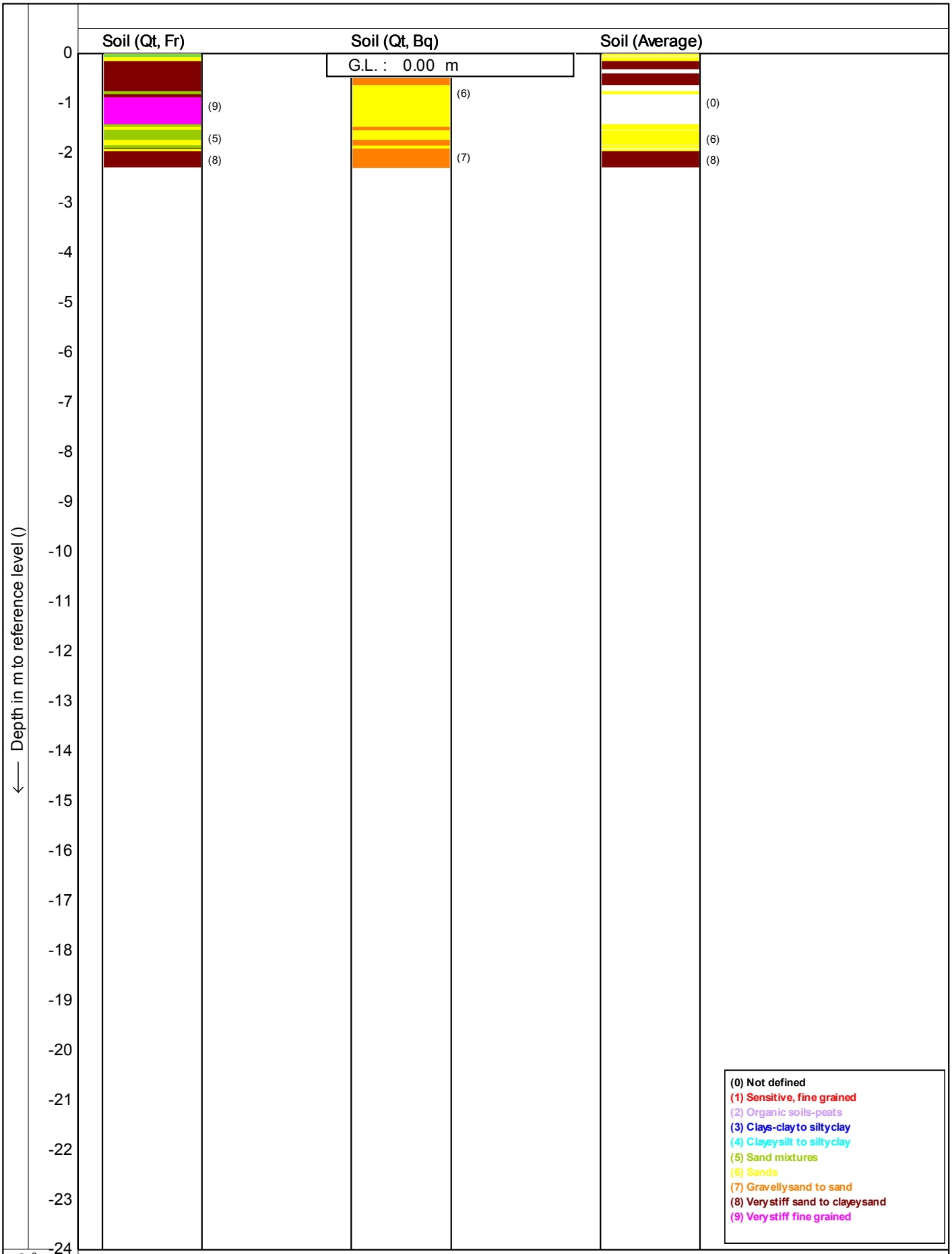
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01**

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Soil behaviour type classification after Robertson 1990

r u2
150 cm²
10 cm²

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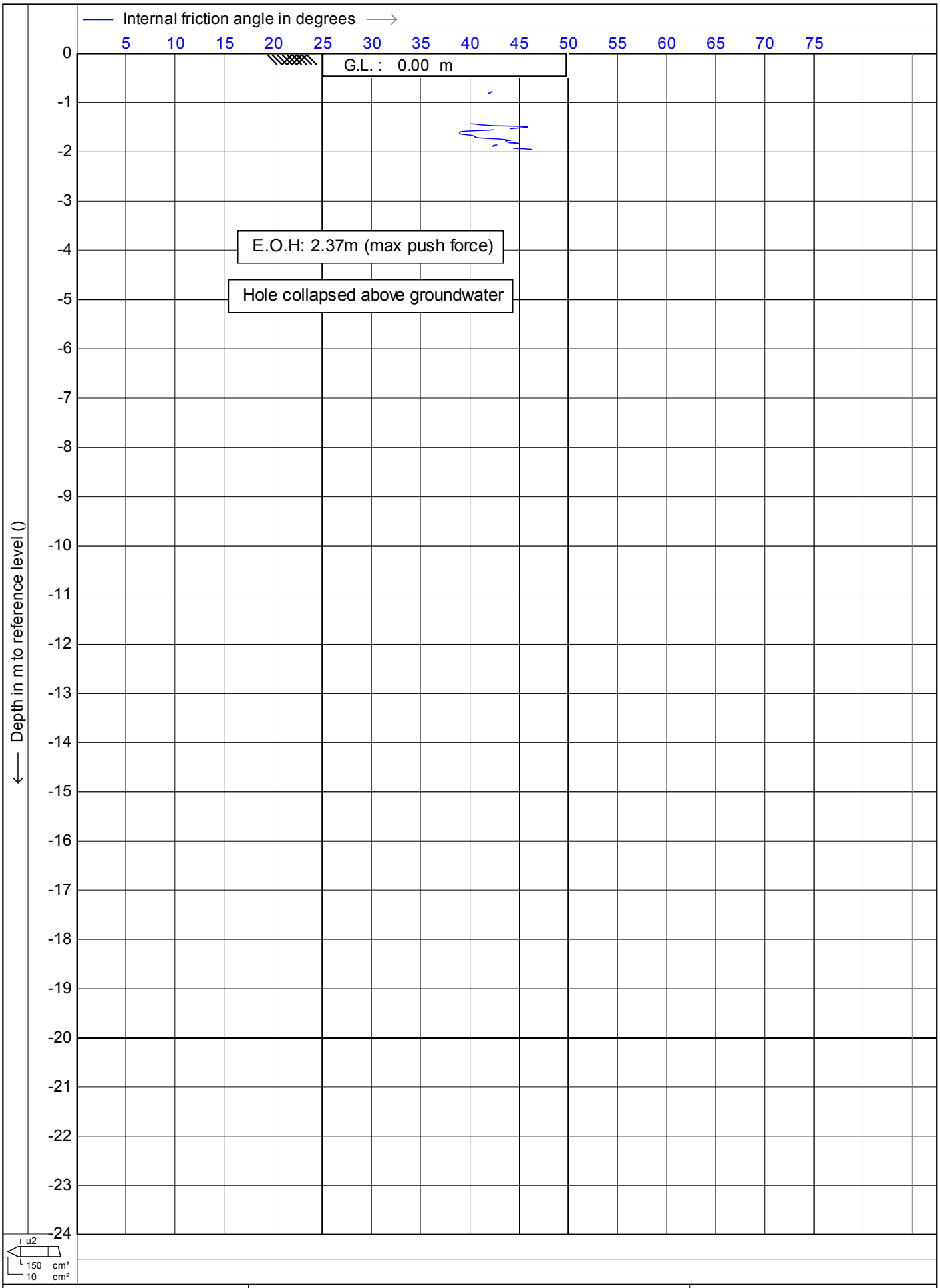
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Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** **14/15**

1.45



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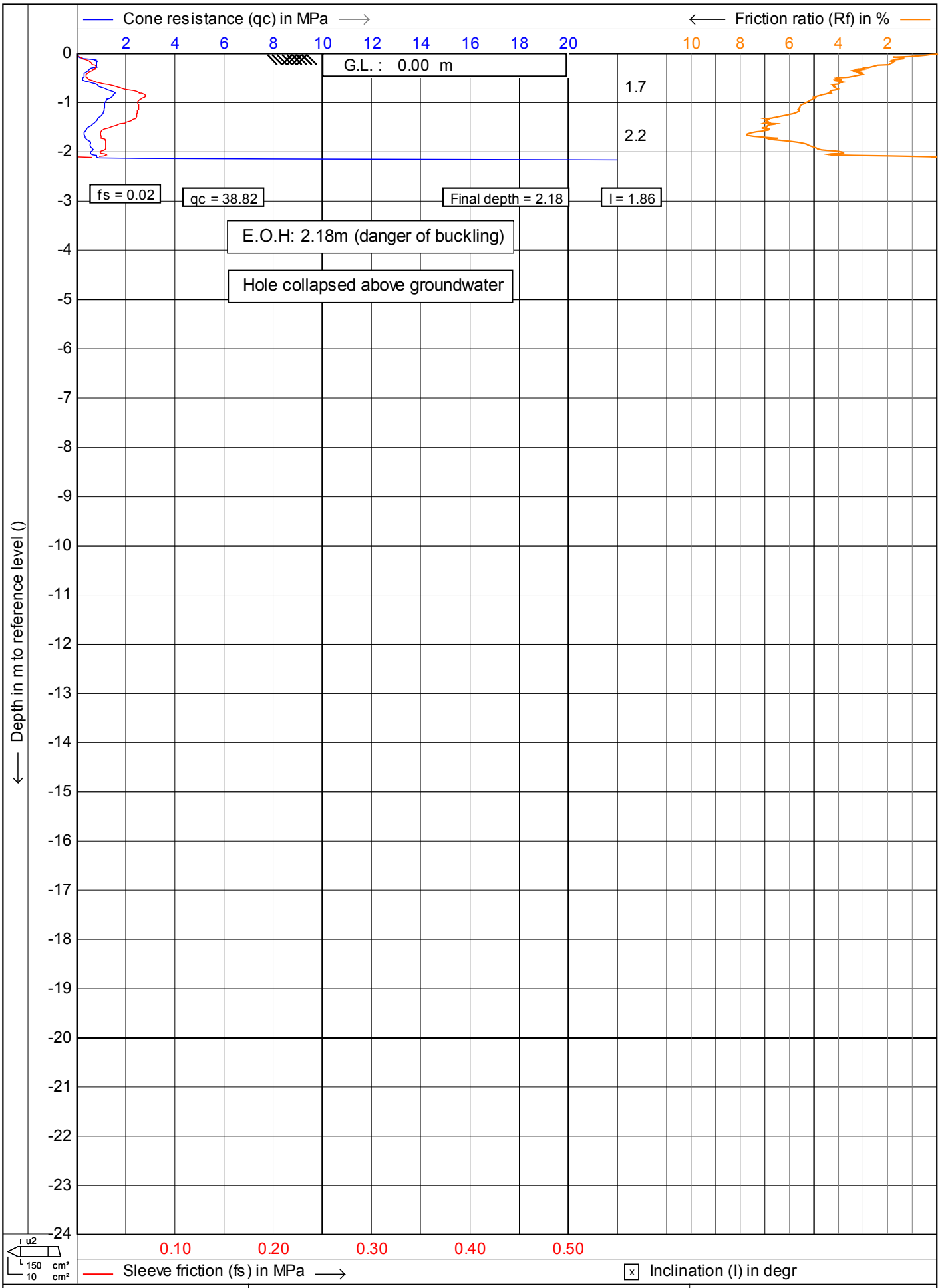
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Location: **20 Klinac Lane, Waipapa**

Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** **15/15**

1.45



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Test acc NZ class

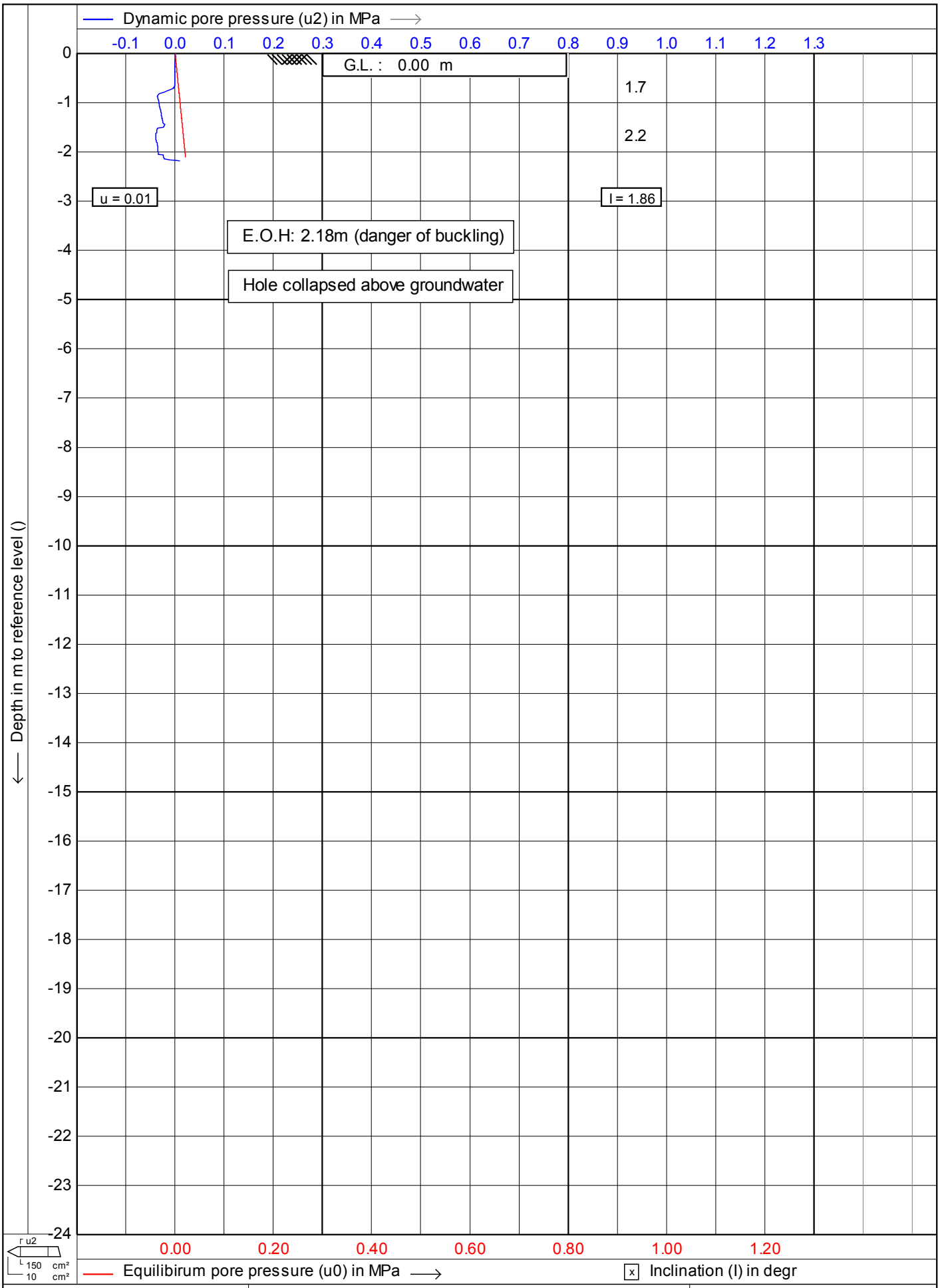
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91615, -35.20837 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_02** 1/15

1.45



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Test acc NZ class

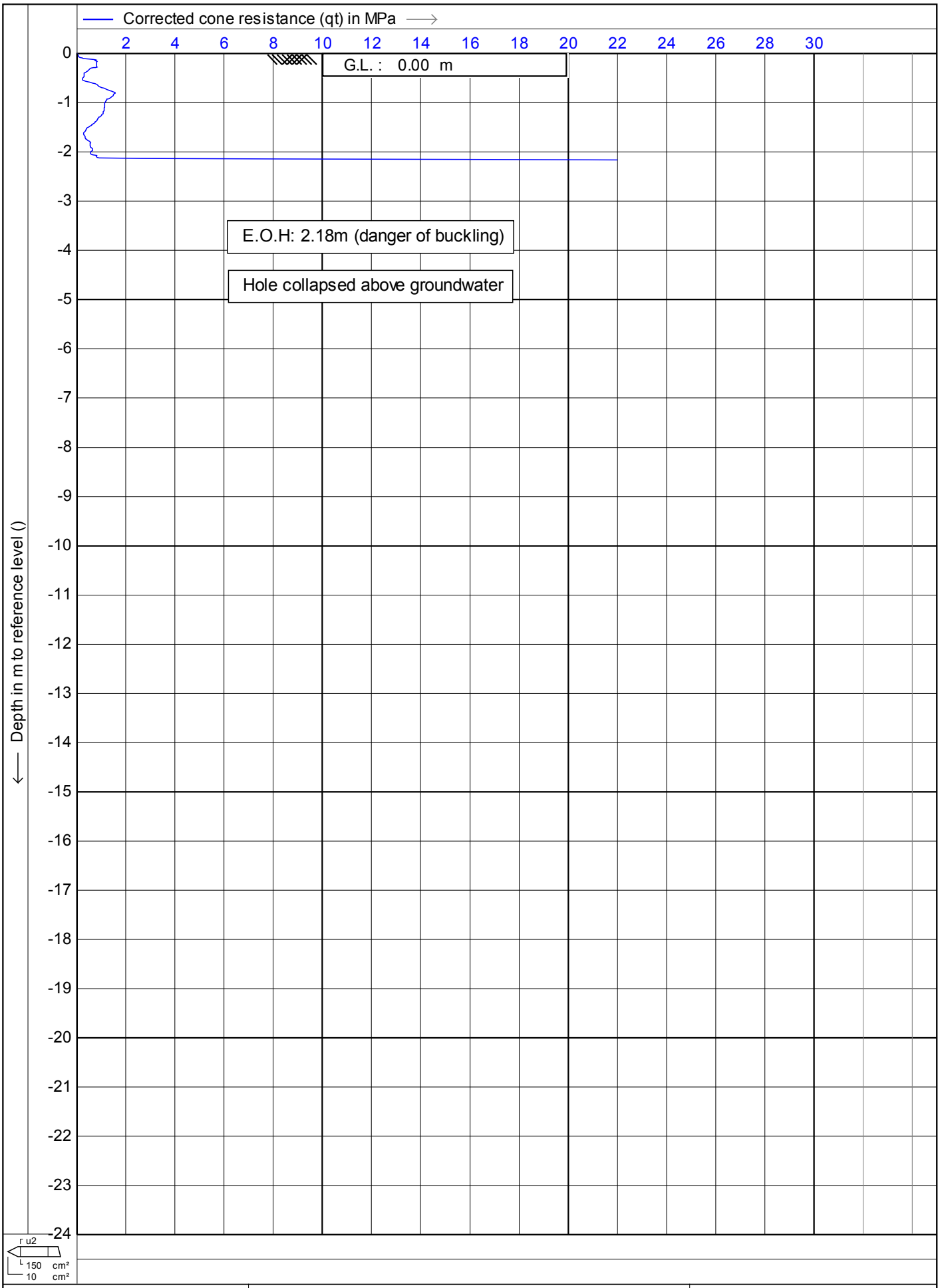
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91615, -35.20837 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_02**

1.45



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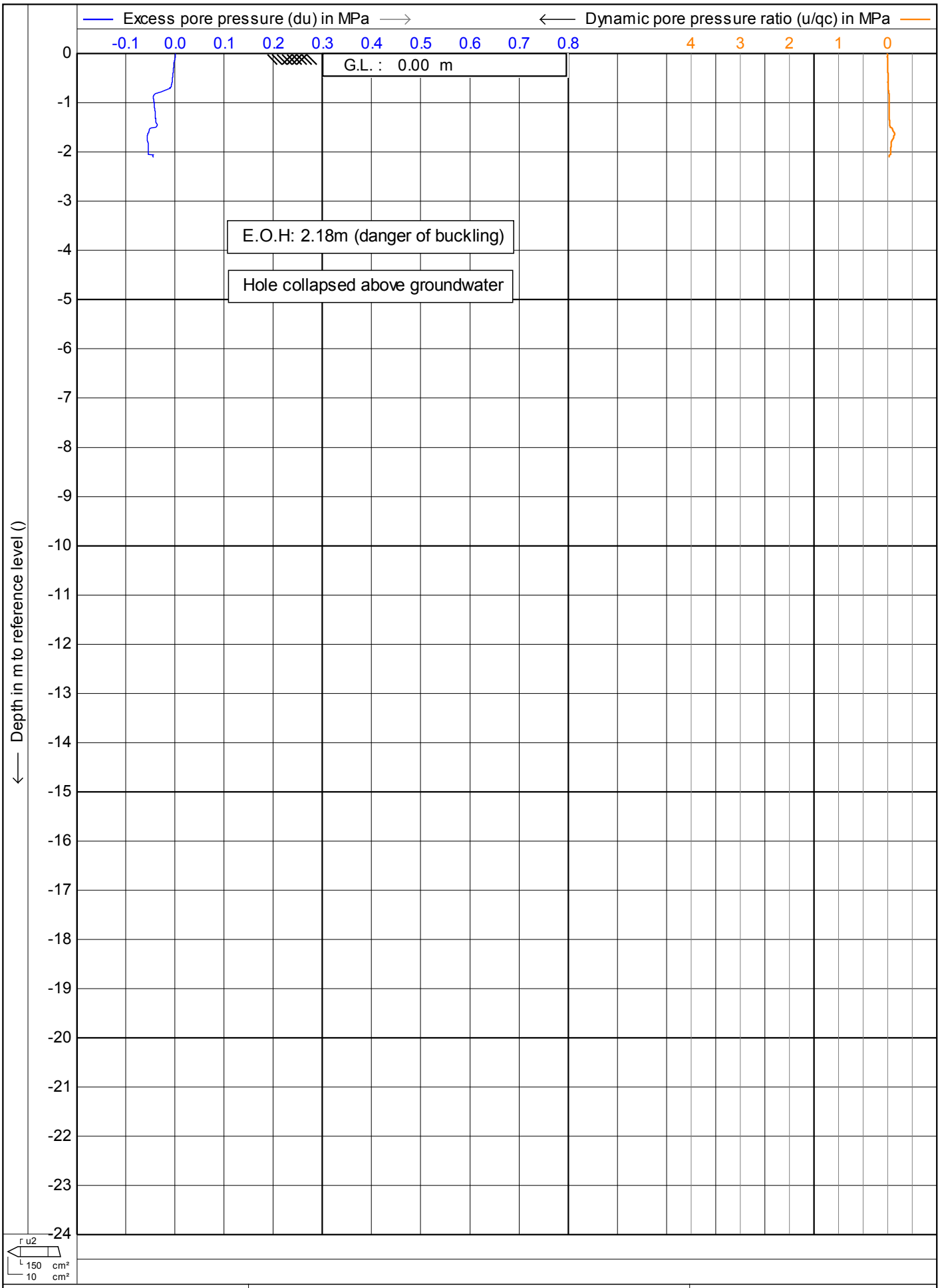
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Location: **20 Klinac Lane, Waipapa**

Position: **173.91615, -35.20837 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_02** **3/15**

1.45



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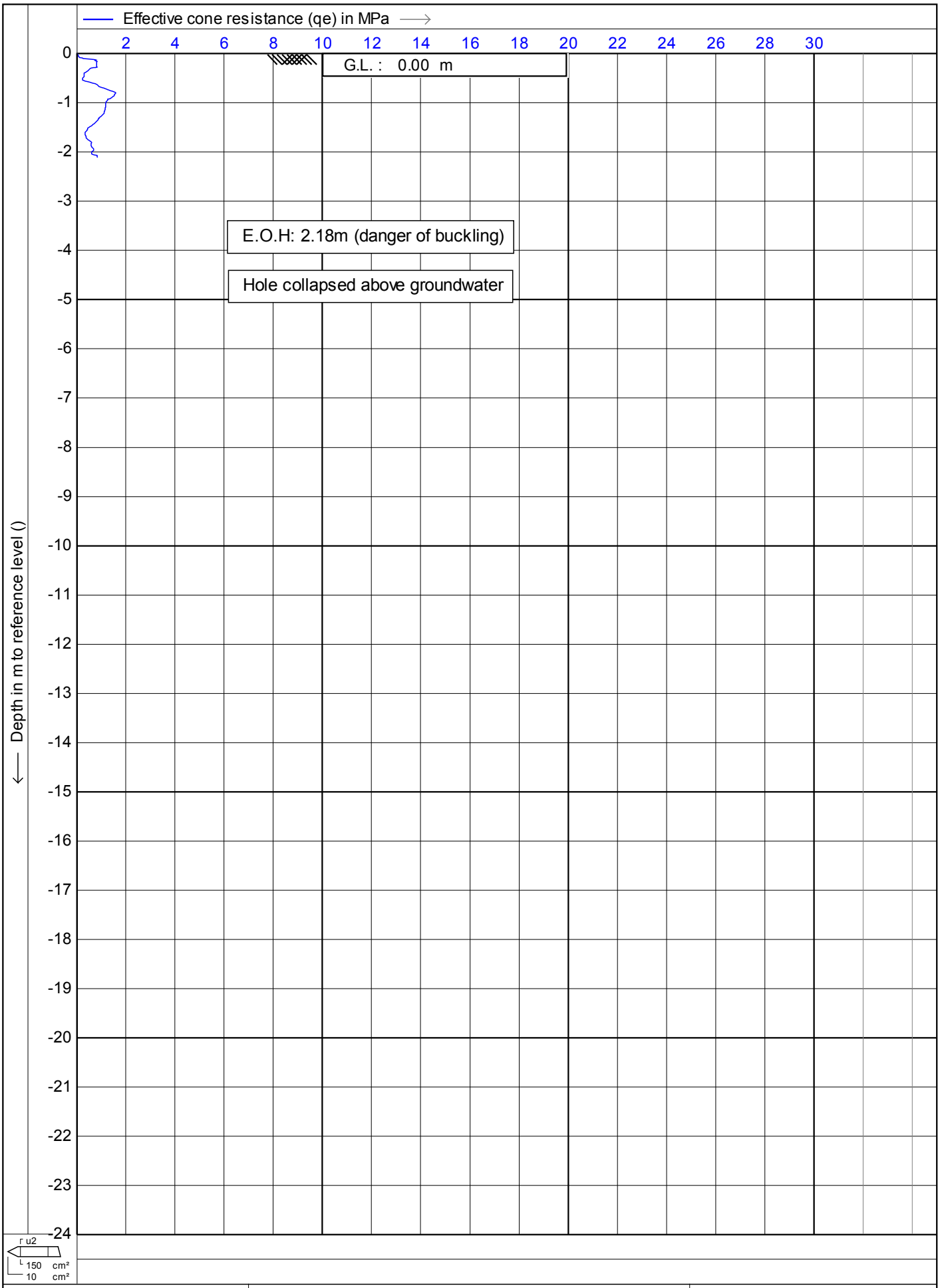
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Project no.	: **DF19GE167**
CPT no.	: **CPT_02** 4/15

1.45



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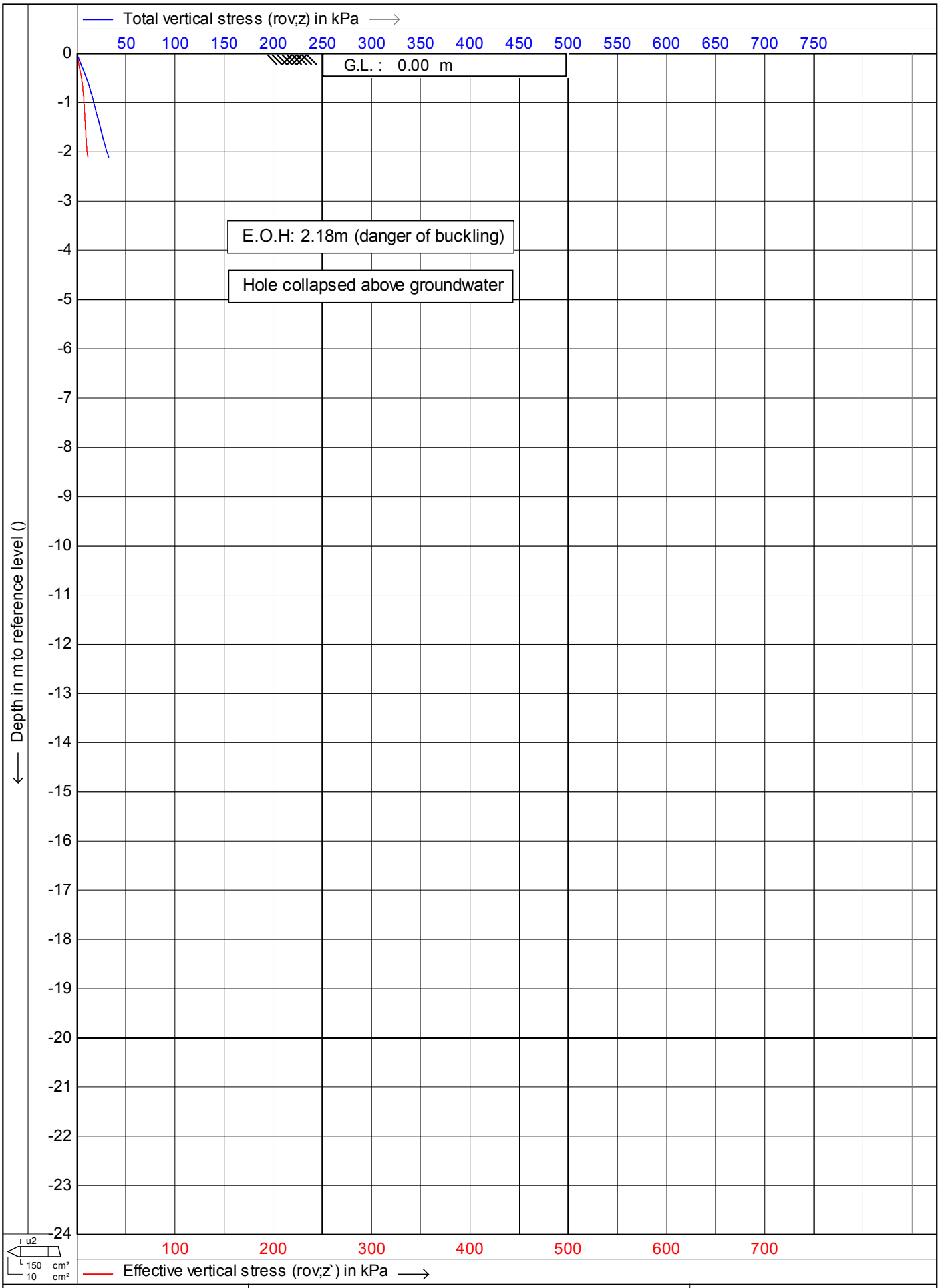
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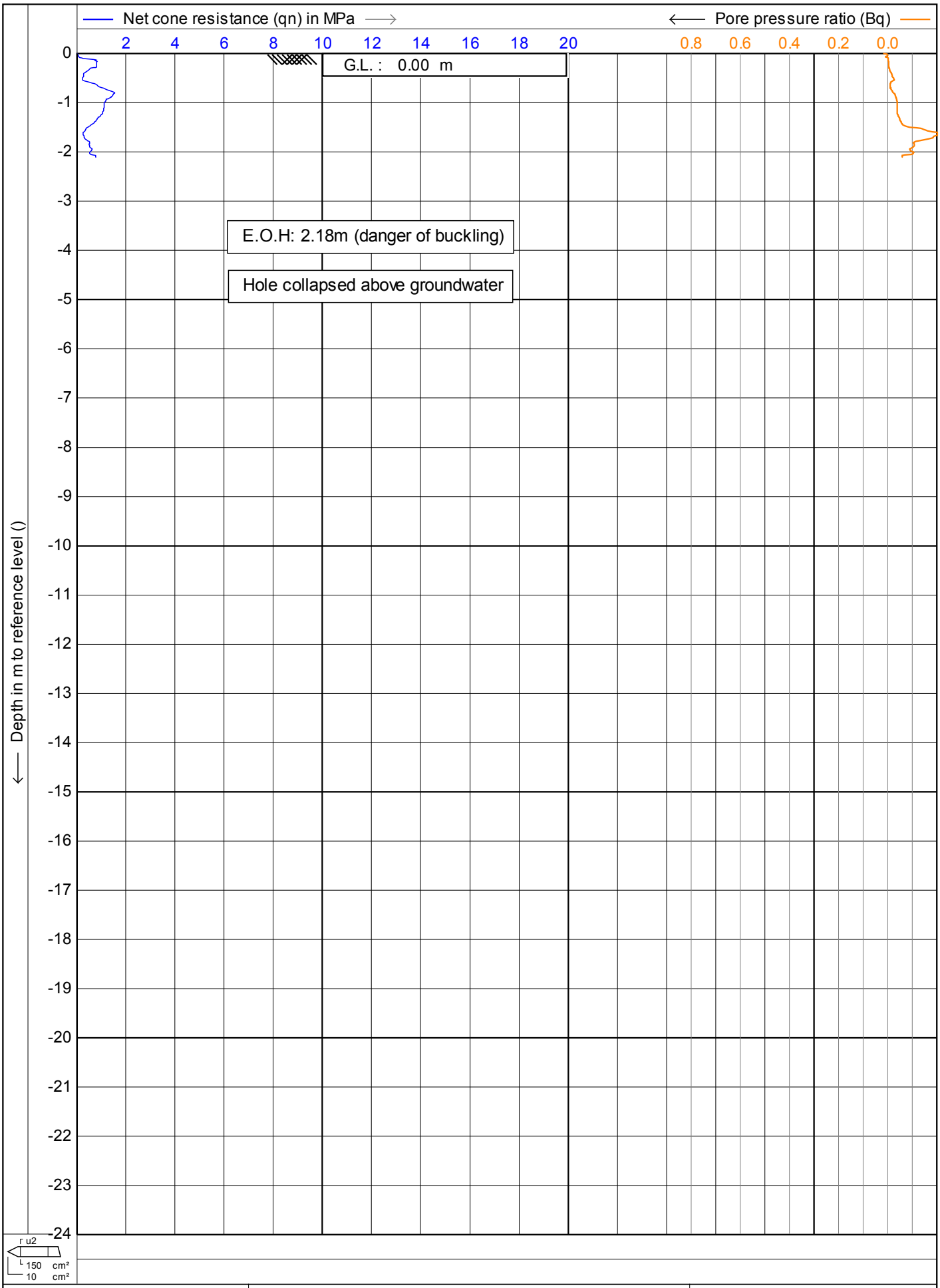
Project : **20 Klinac Lane**

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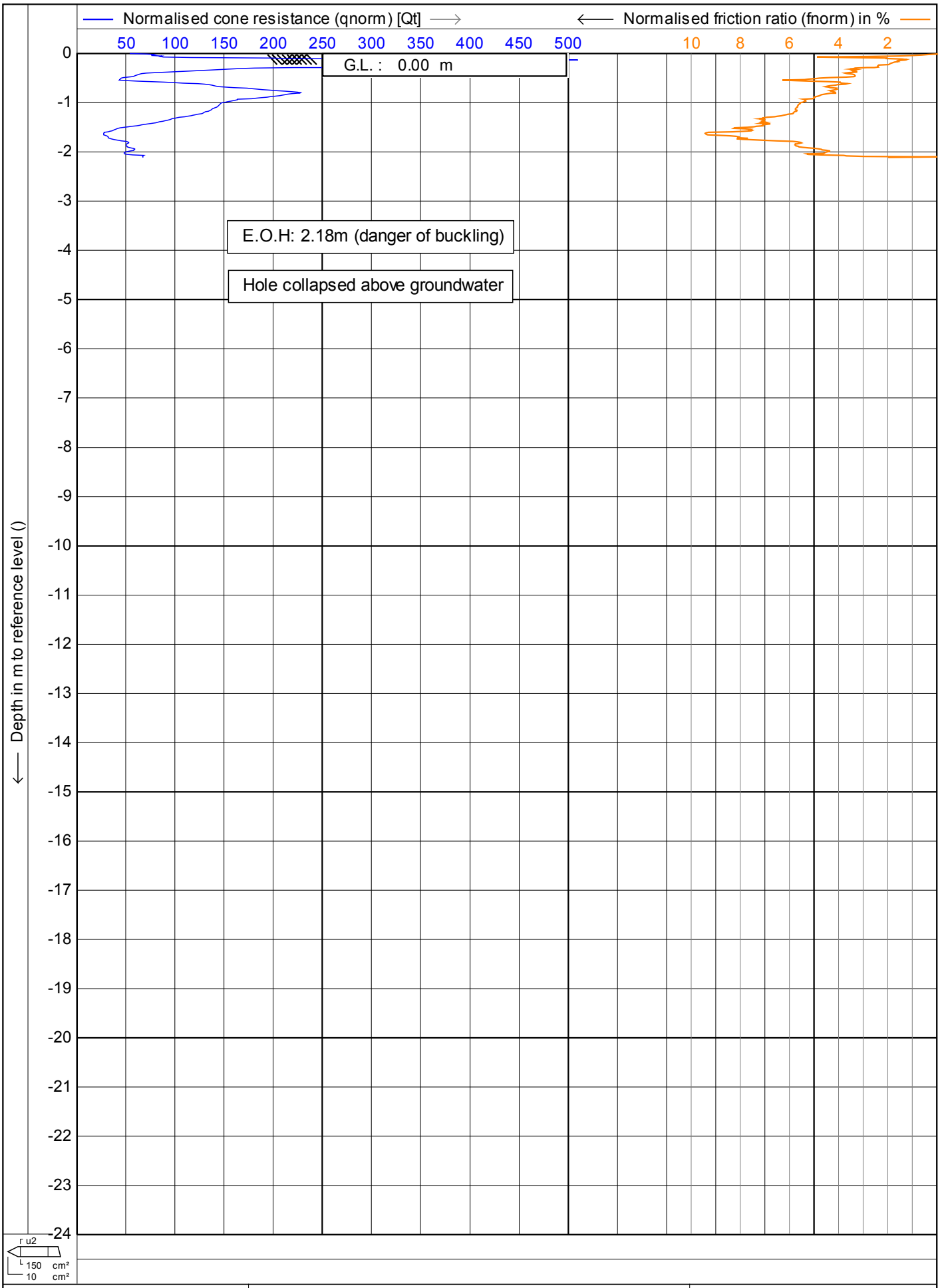
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1.45



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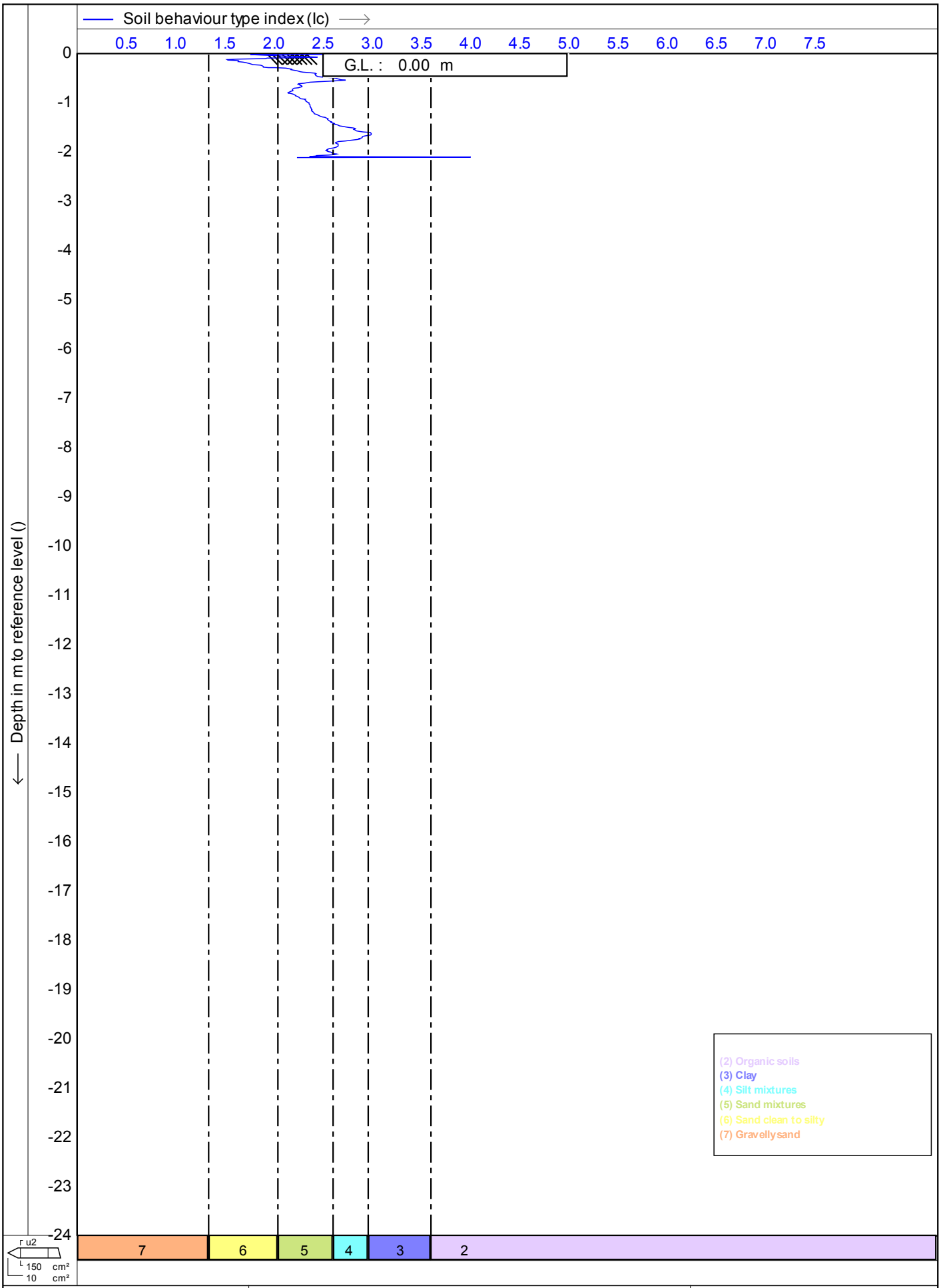
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1.45



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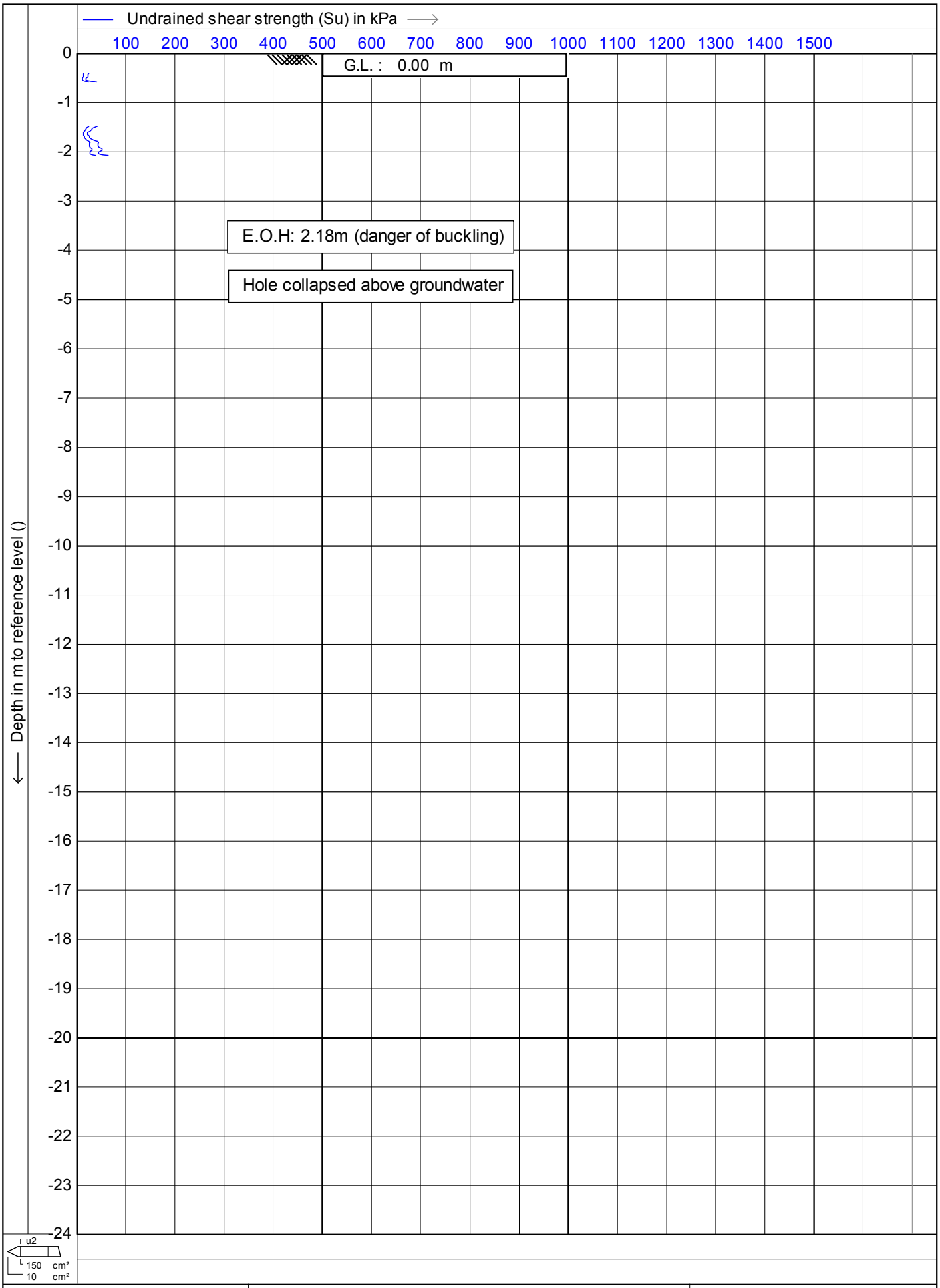
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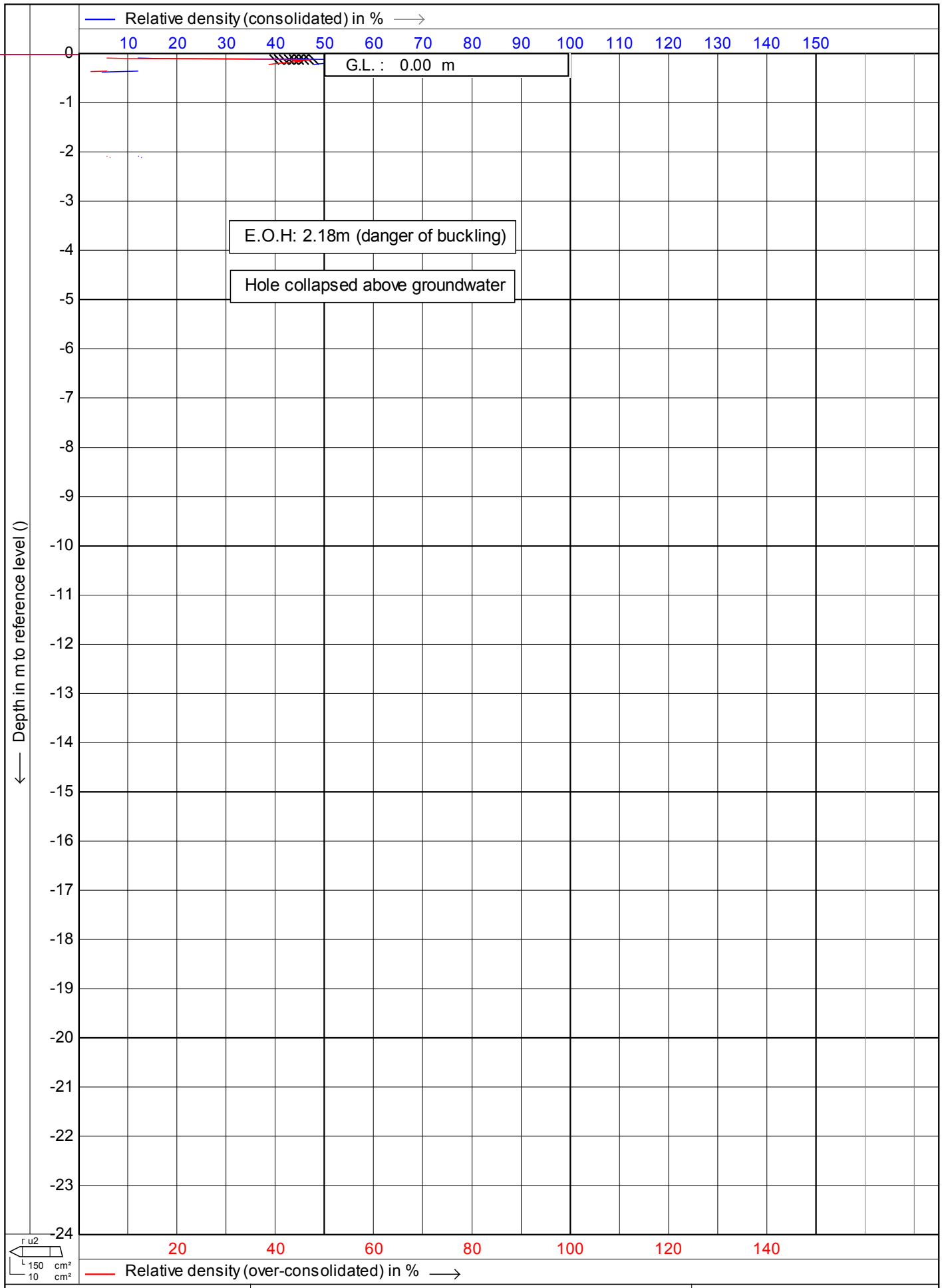
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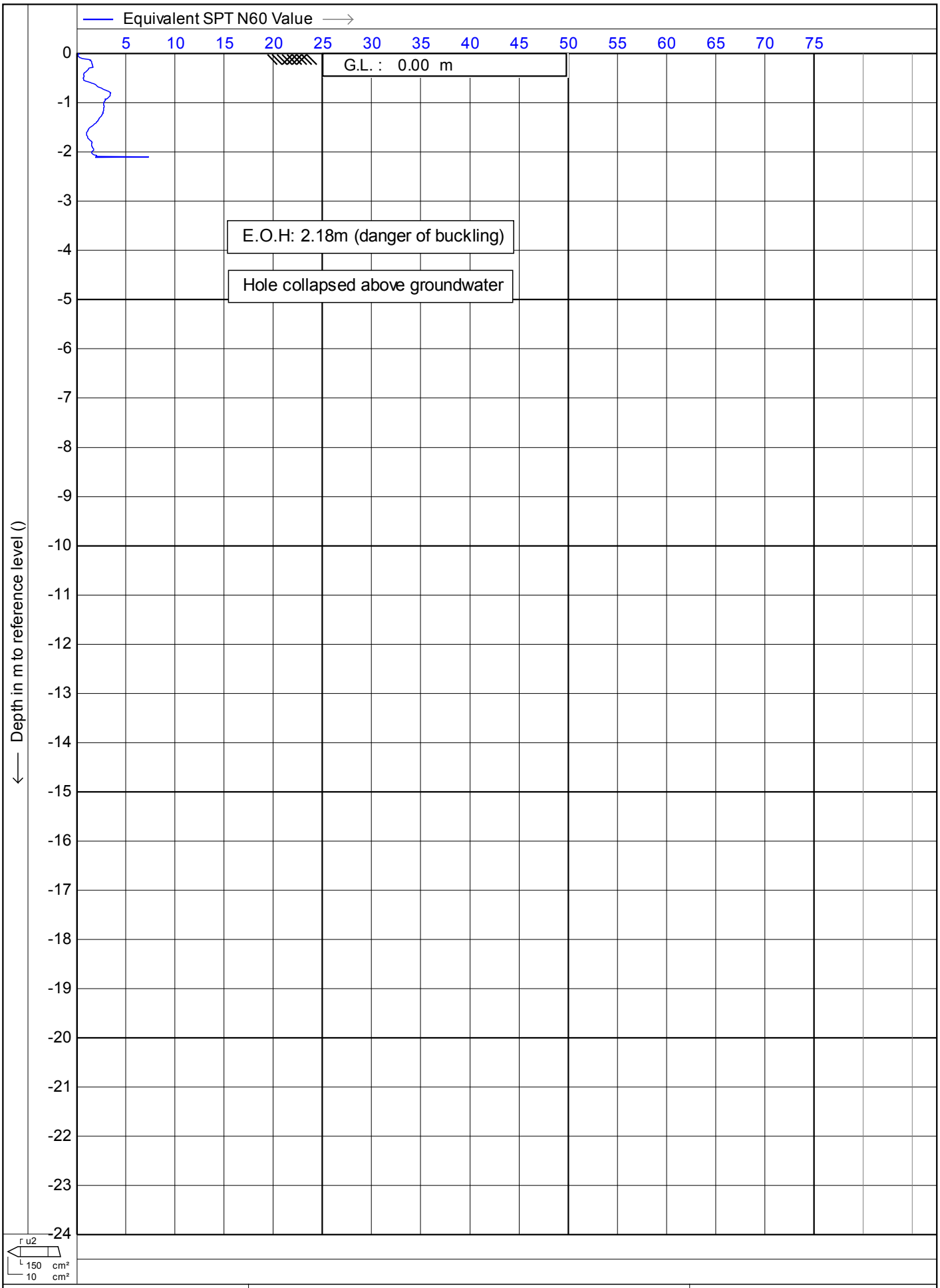
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Test acc NZ class

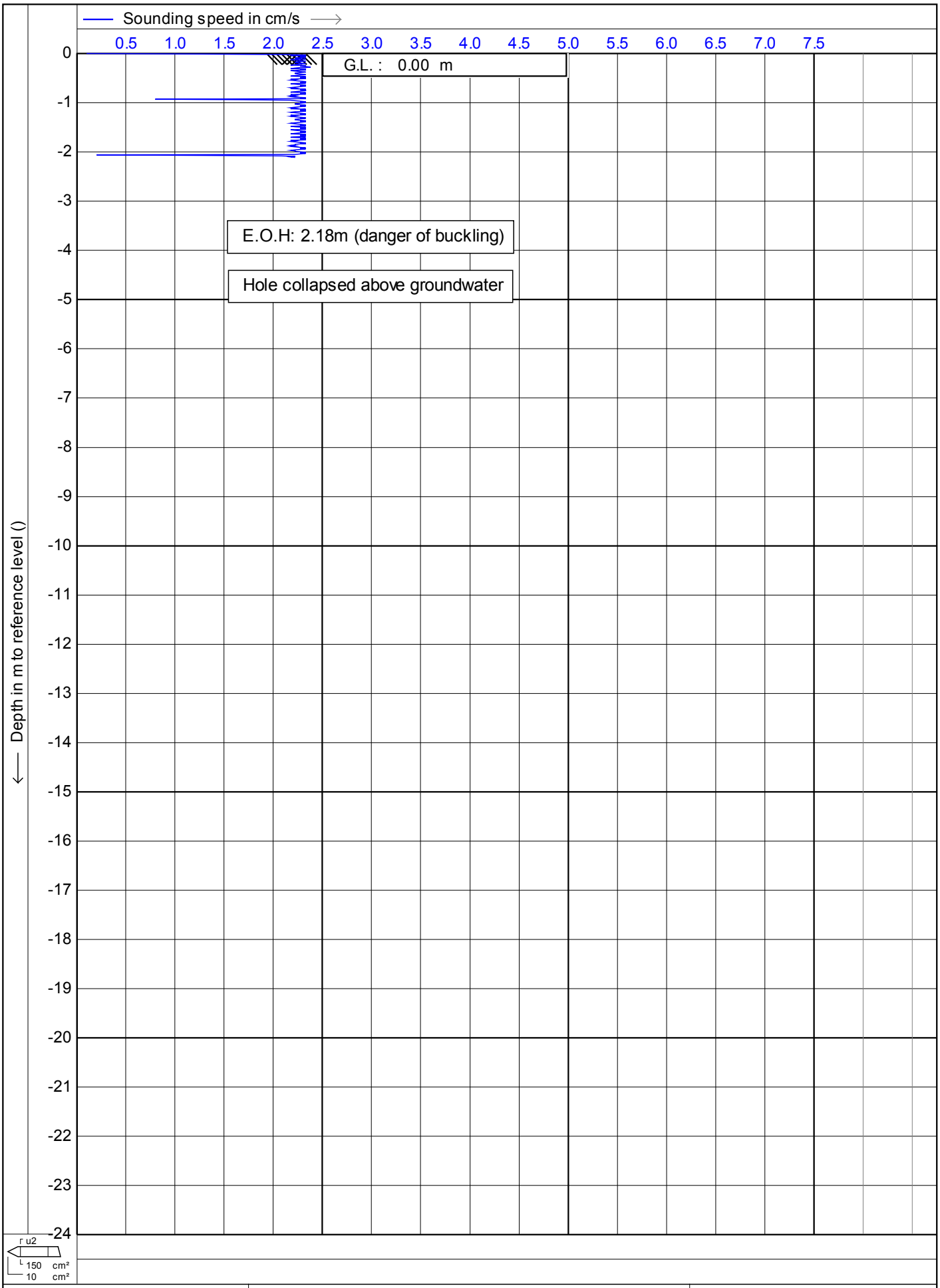
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91615, -35.20837 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_02**

1.45



DRILLFORCE
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Test acc NZ class

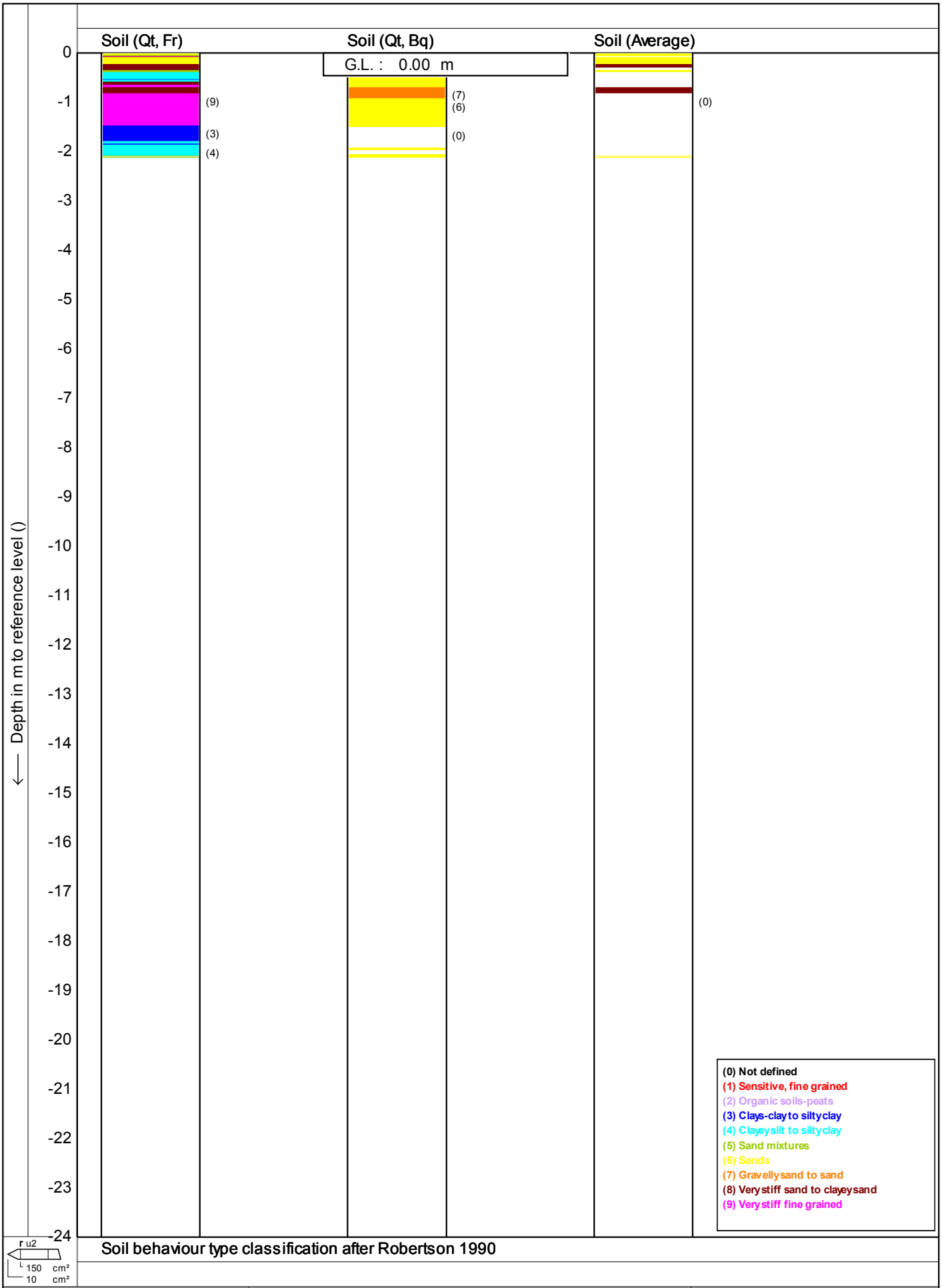
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91615, -35.20837 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_02**

1.45



Soil behaviour type classification after Robertson 1990

DRILLFORCE
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Test acc NZ class

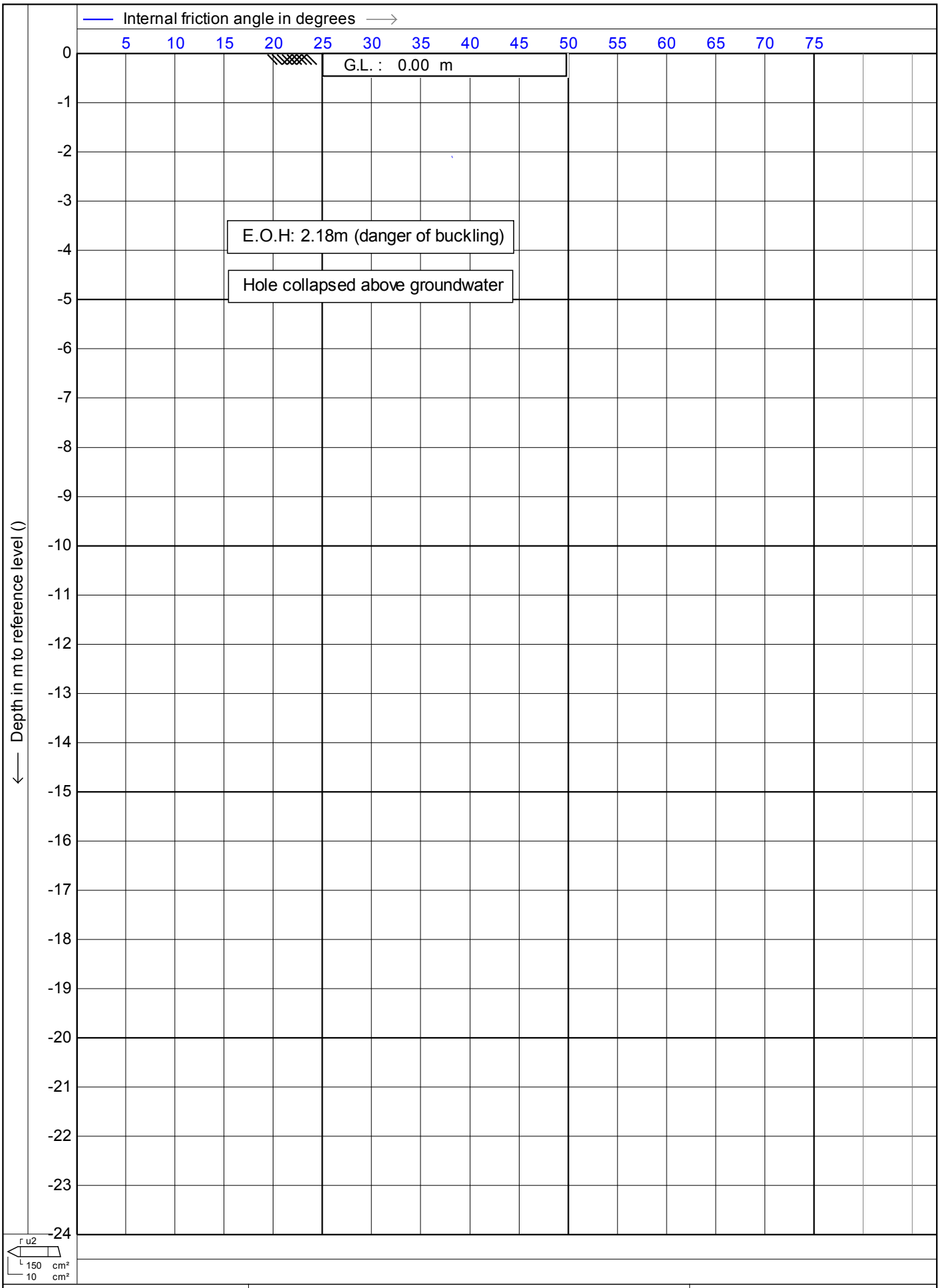
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91615, -35.20837 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_02** **14/15**

1.45



DRILLFORCE
THE DRILLING SPECIALISTS

Test acc NZ class

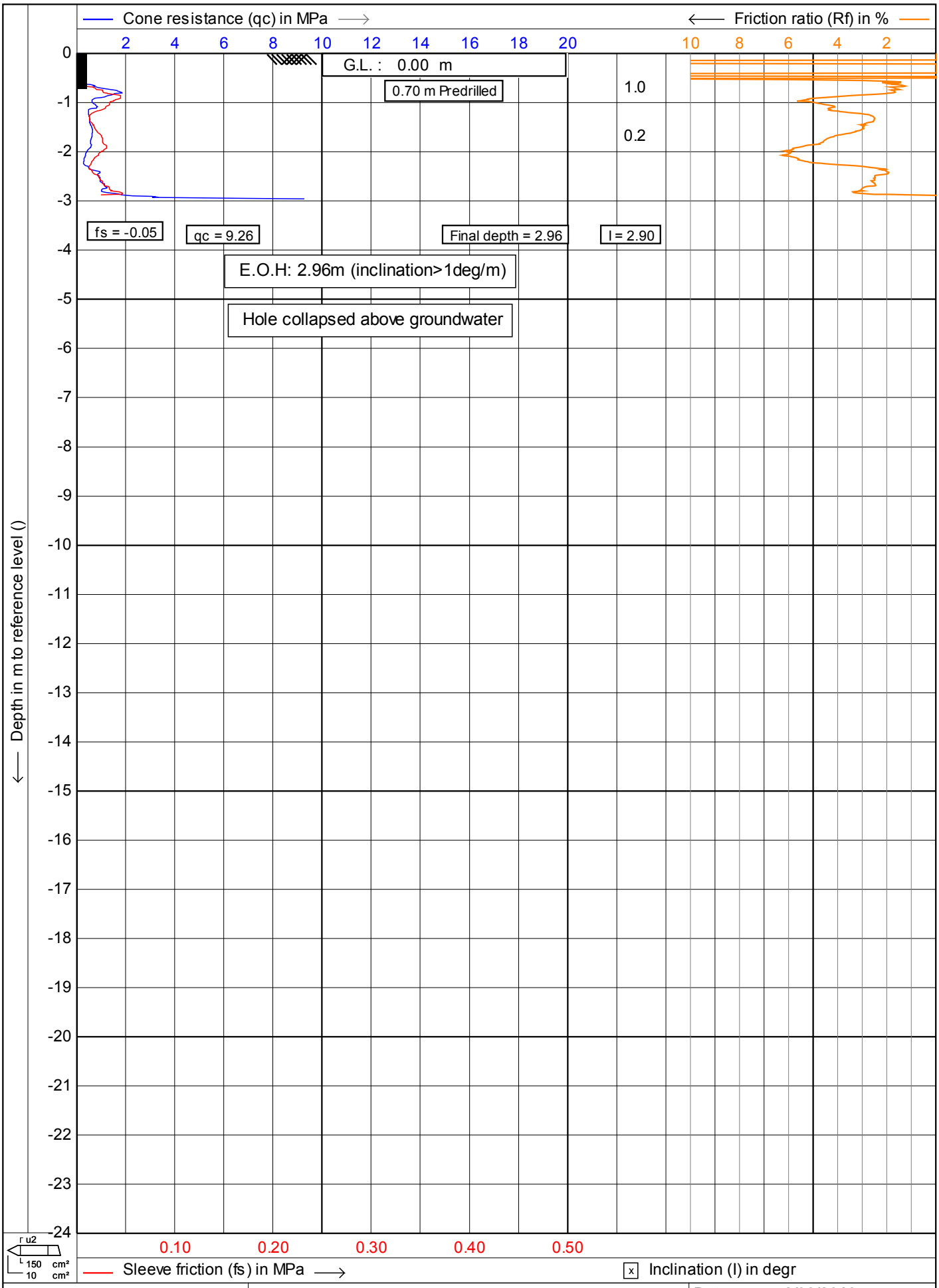
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91615, -35.20837 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_02** **15/15**

1.45



DRILLFORCE
THE DRILLING SPECIALISTS

Test acc NZ class

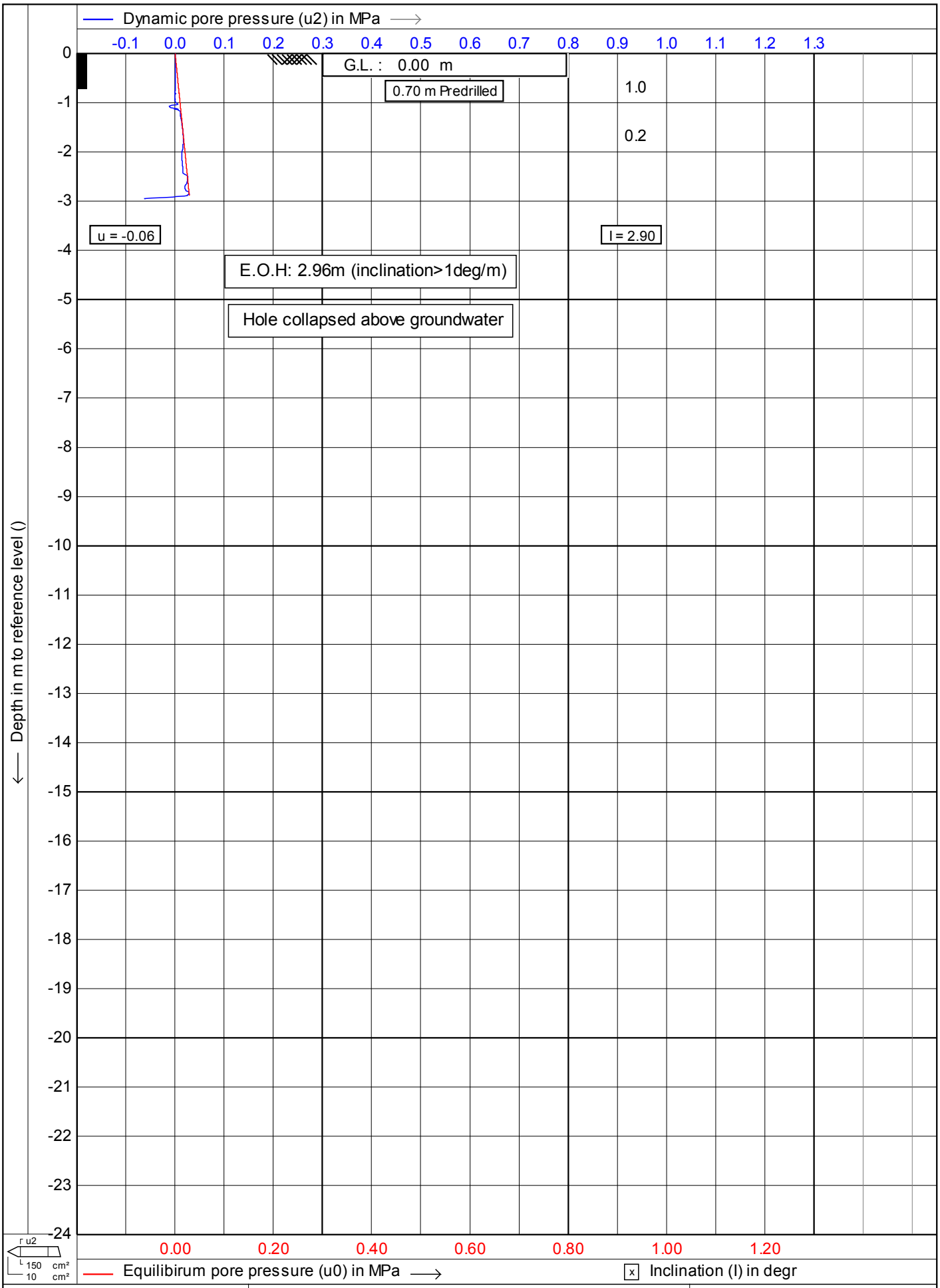
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** 1/15

1.45



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Test acc NZ class

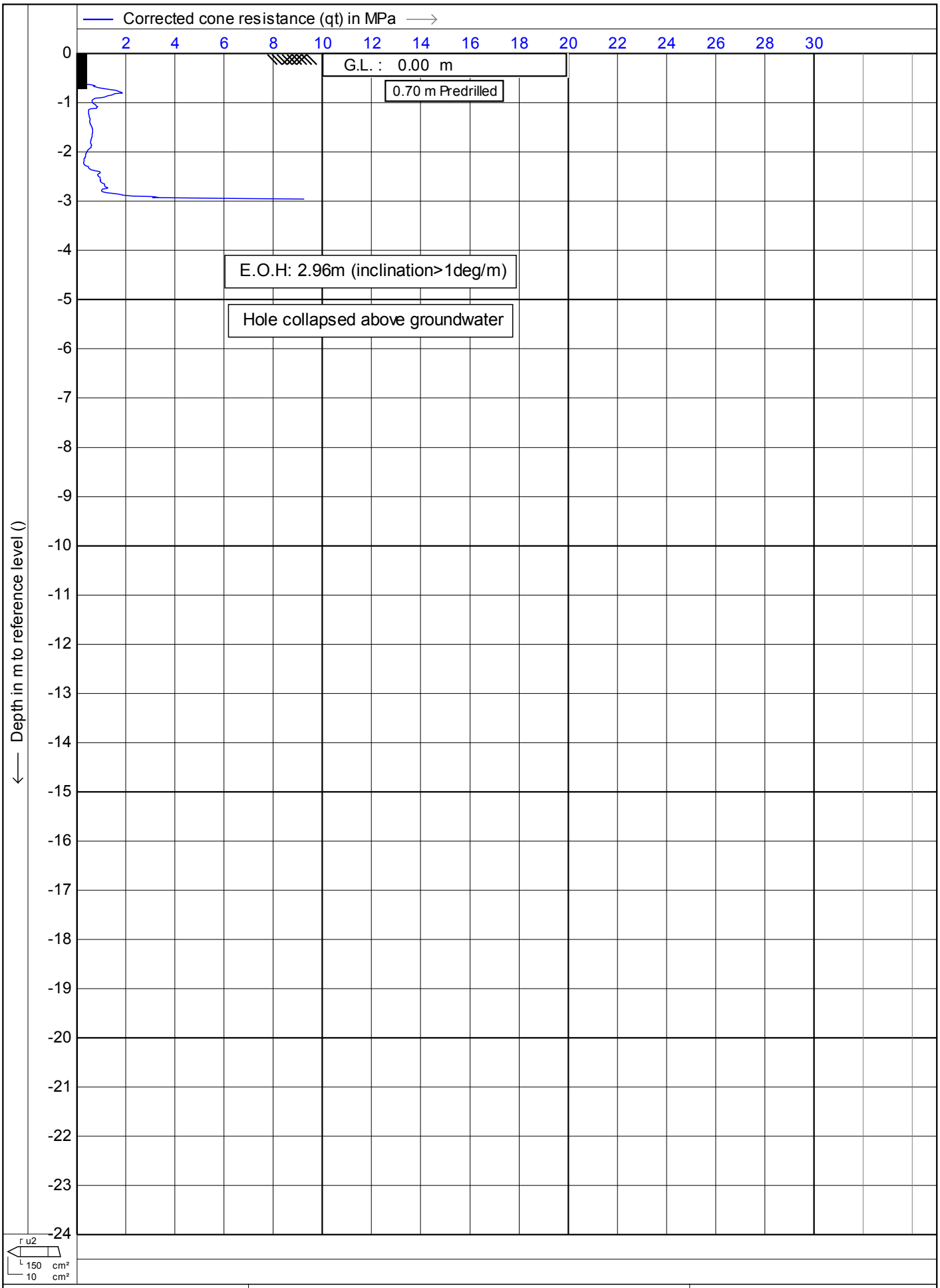
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** 2/15

1.45



DRILLFORCE
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Test acc NZ class

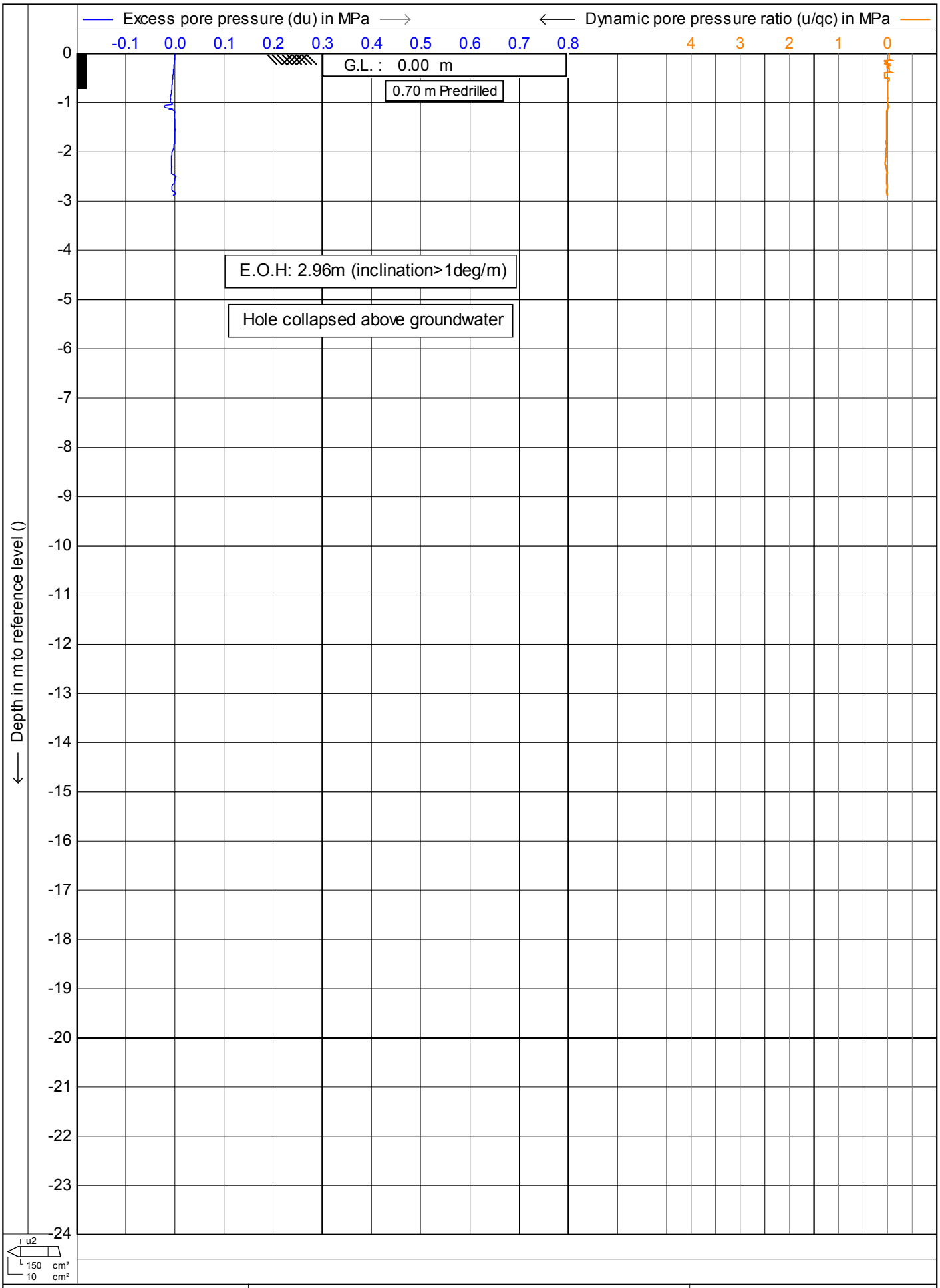
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** **3/15**

1.45



DRILLFORCE
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Test acc NZ class

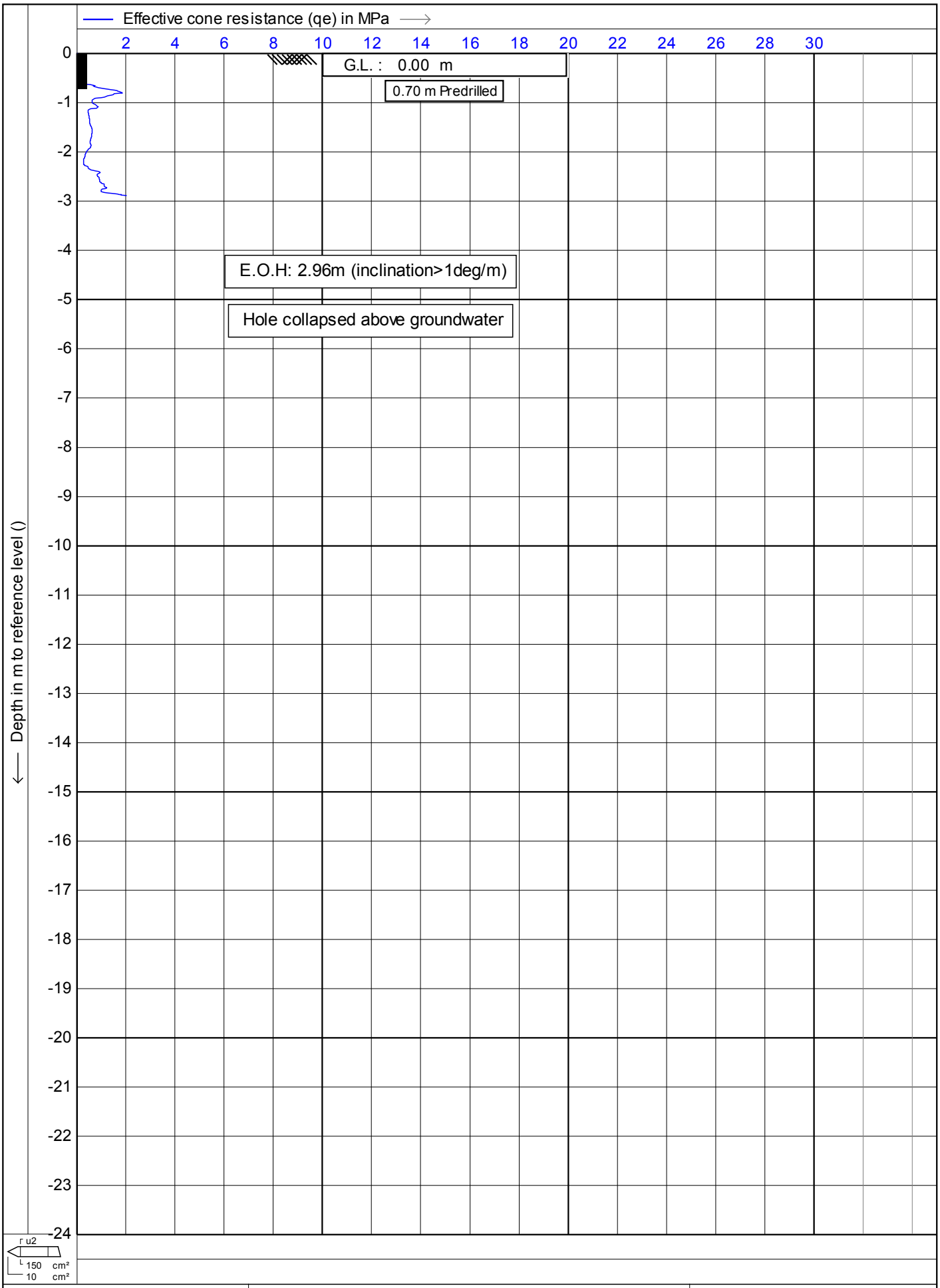
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** **4/15**

1.45



DRILLFORCE
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Test acc NZ class

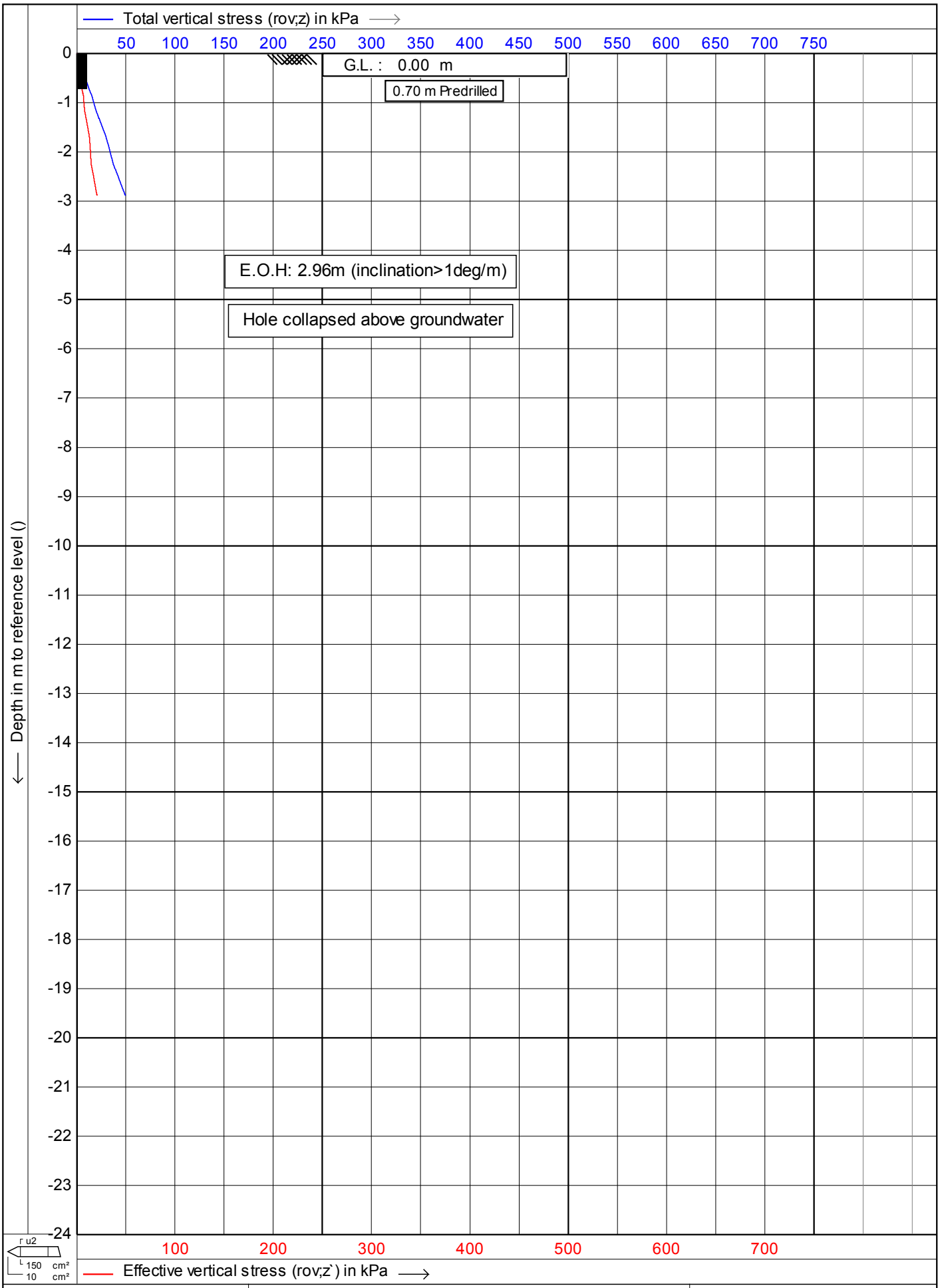
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** **5/15**

1.45



DRILLFORCE
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Test acc NZ class

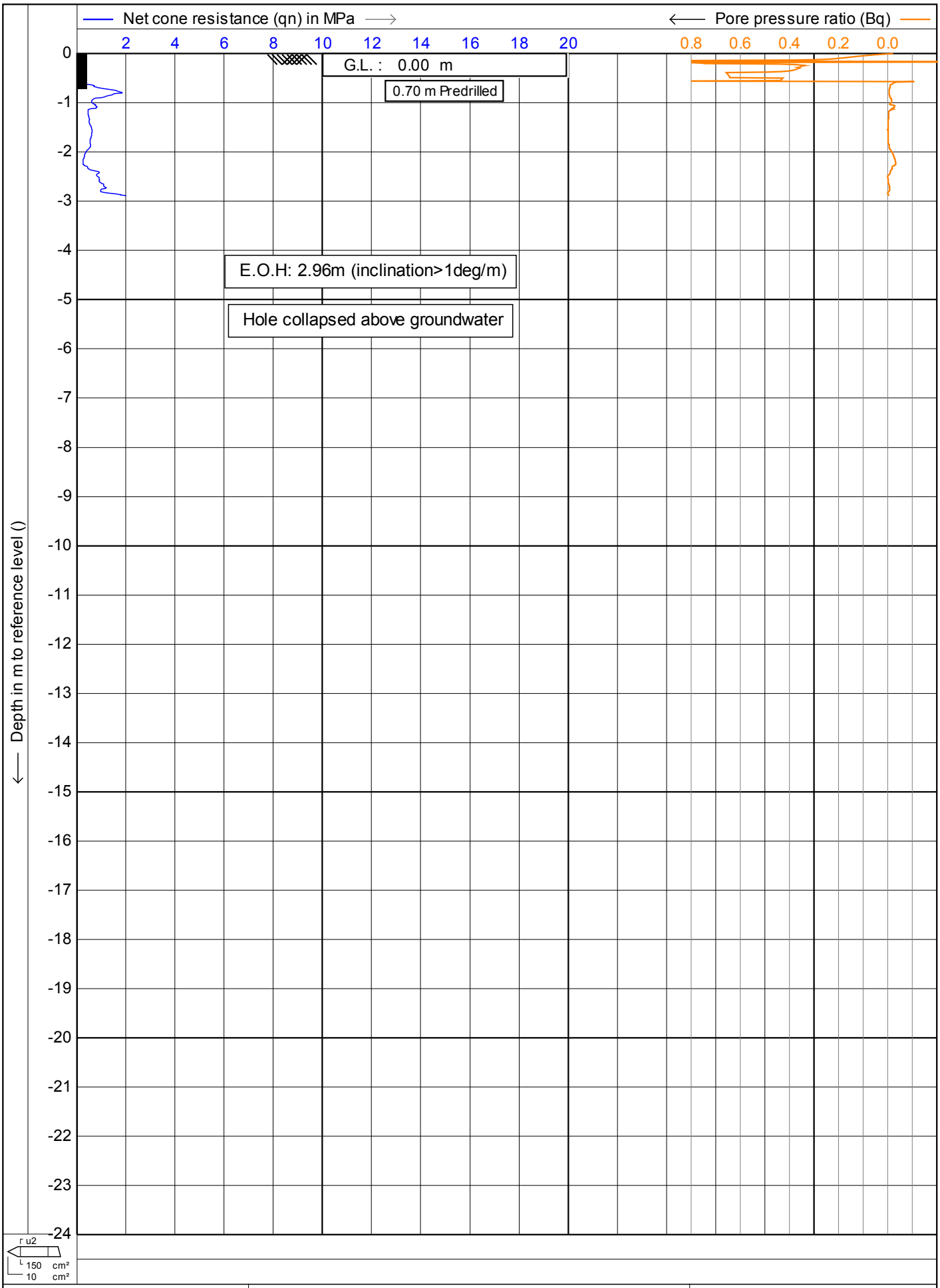
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** **6/15**

1.45



DRILLFORCE
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Test acc NZ class

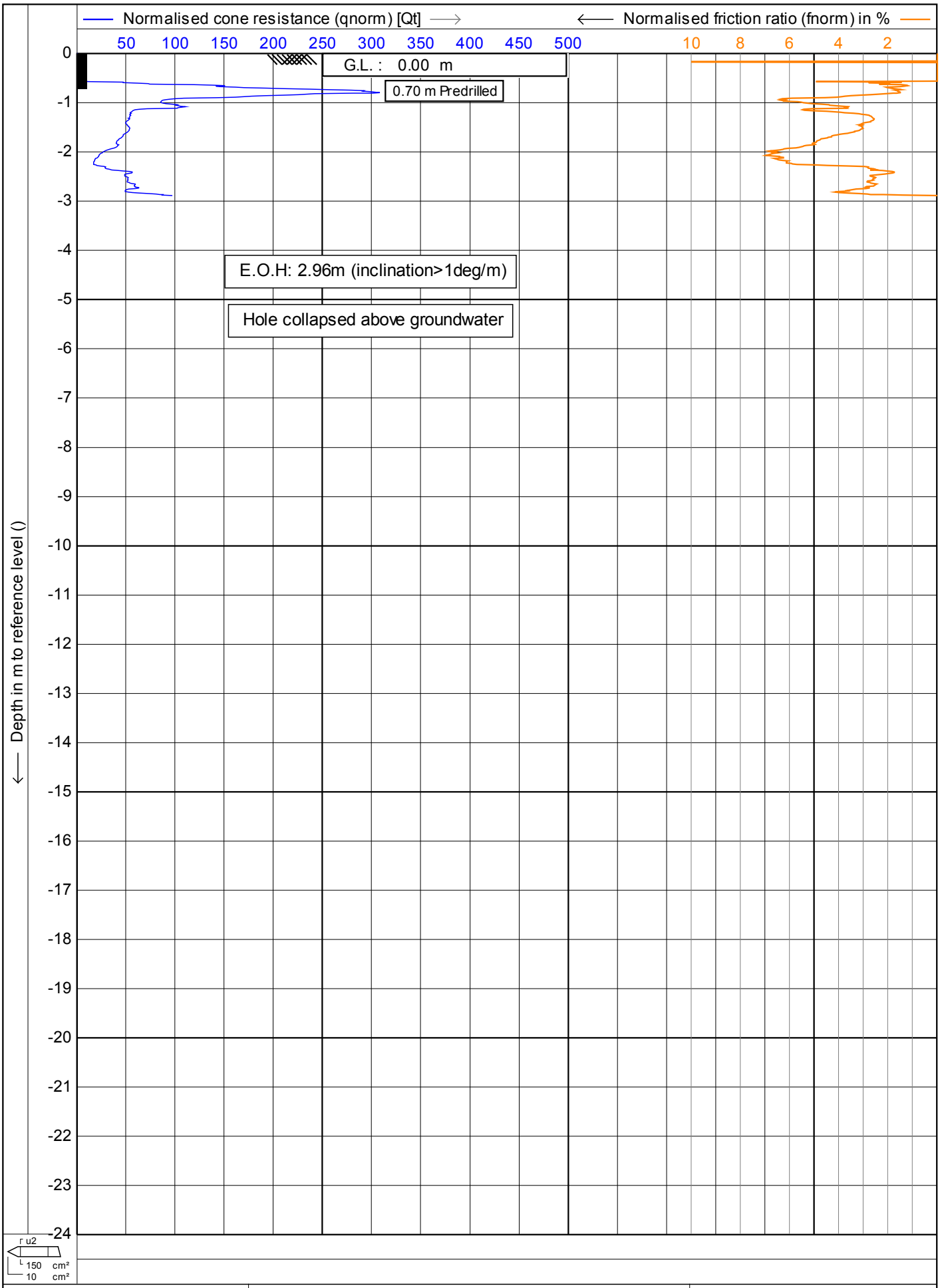
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** 7/15

1.45



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Test acc NZ class

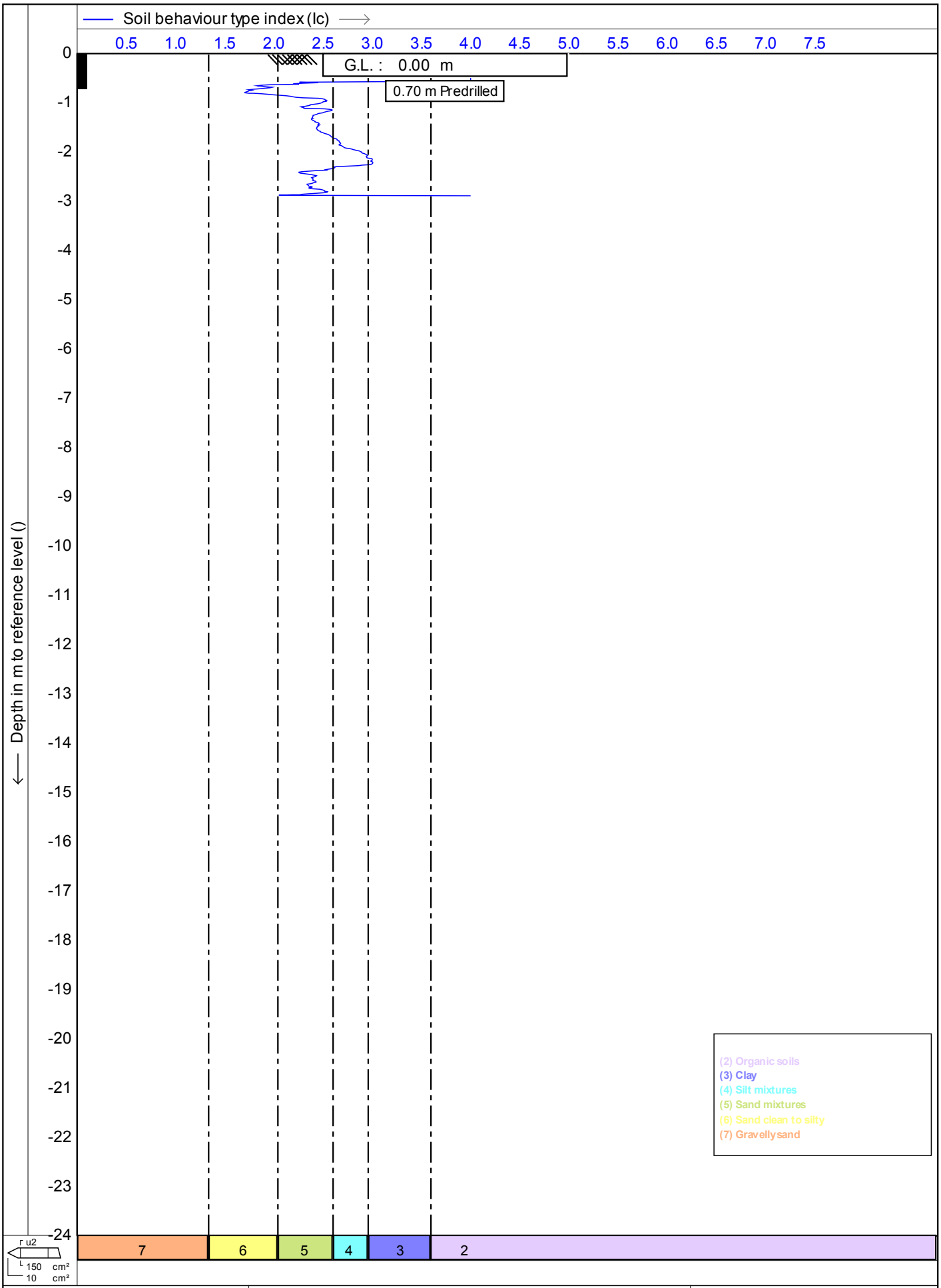
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** 8/15

1.45



DRILLFORCE
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Test acc NZ class

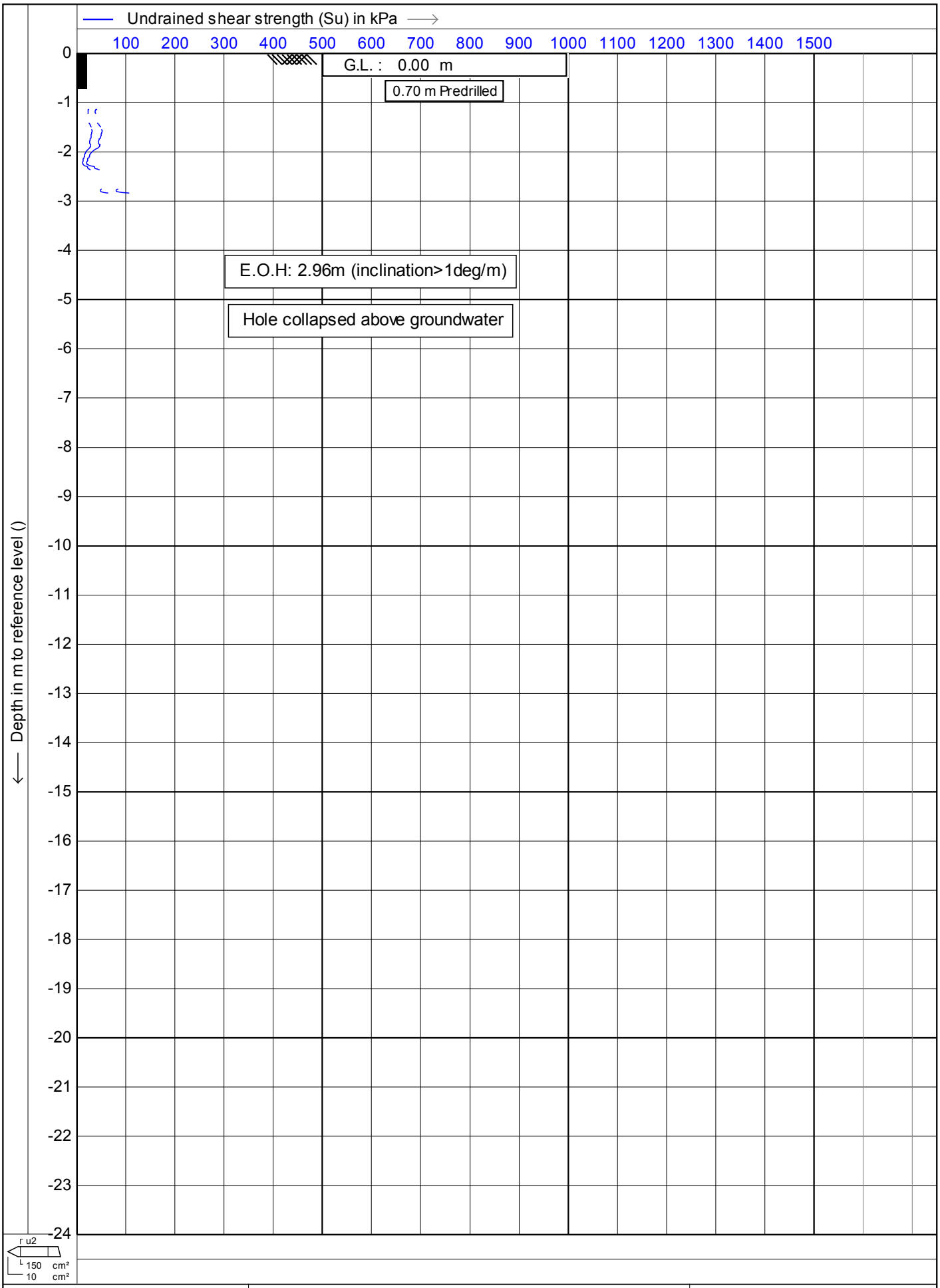
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** **9/15**

1.45



DRILLFORCE
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Test acc NZ class

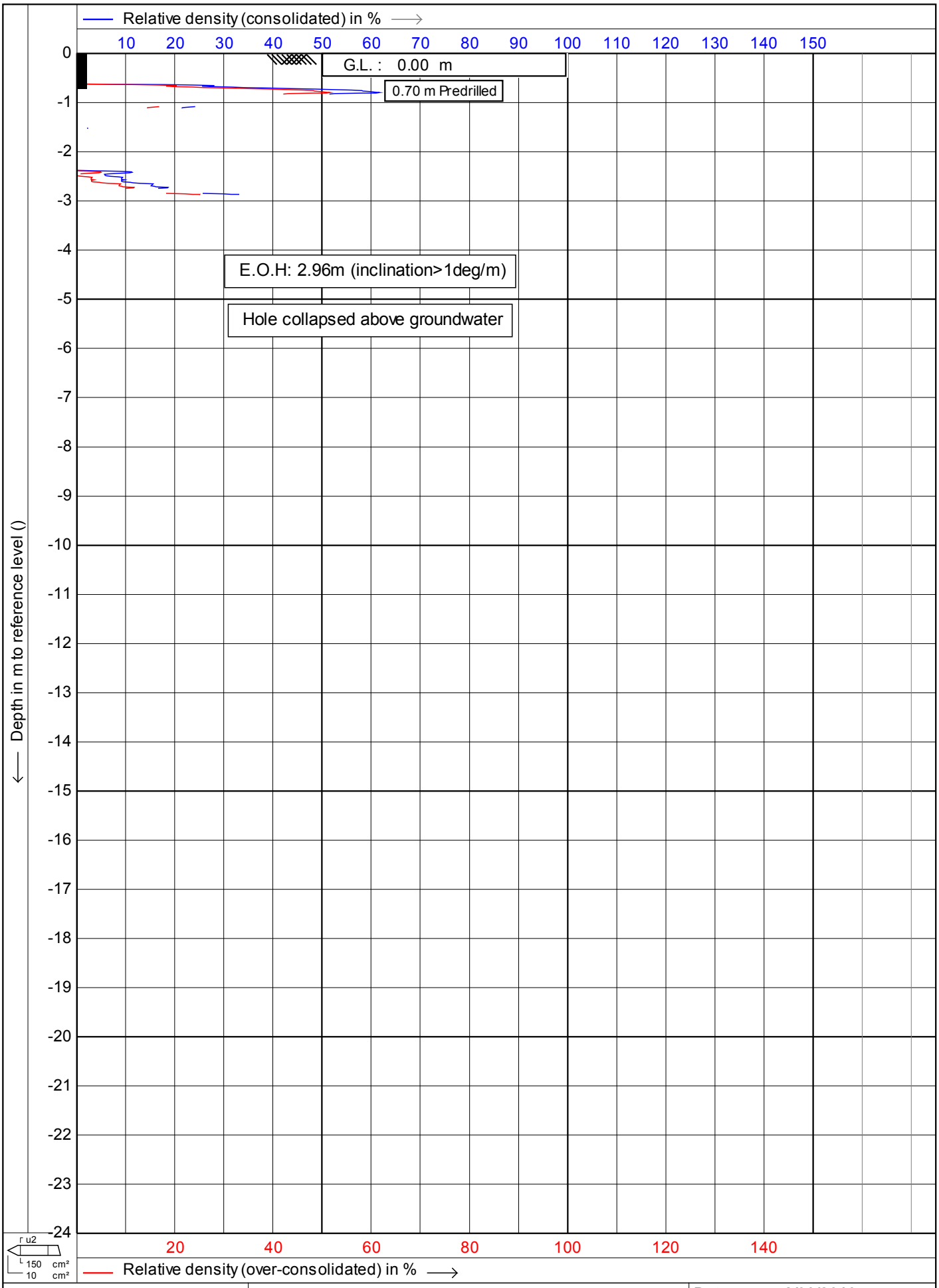
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** **10/15**

1.45



DRILLFORCE
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Test acc NZ class

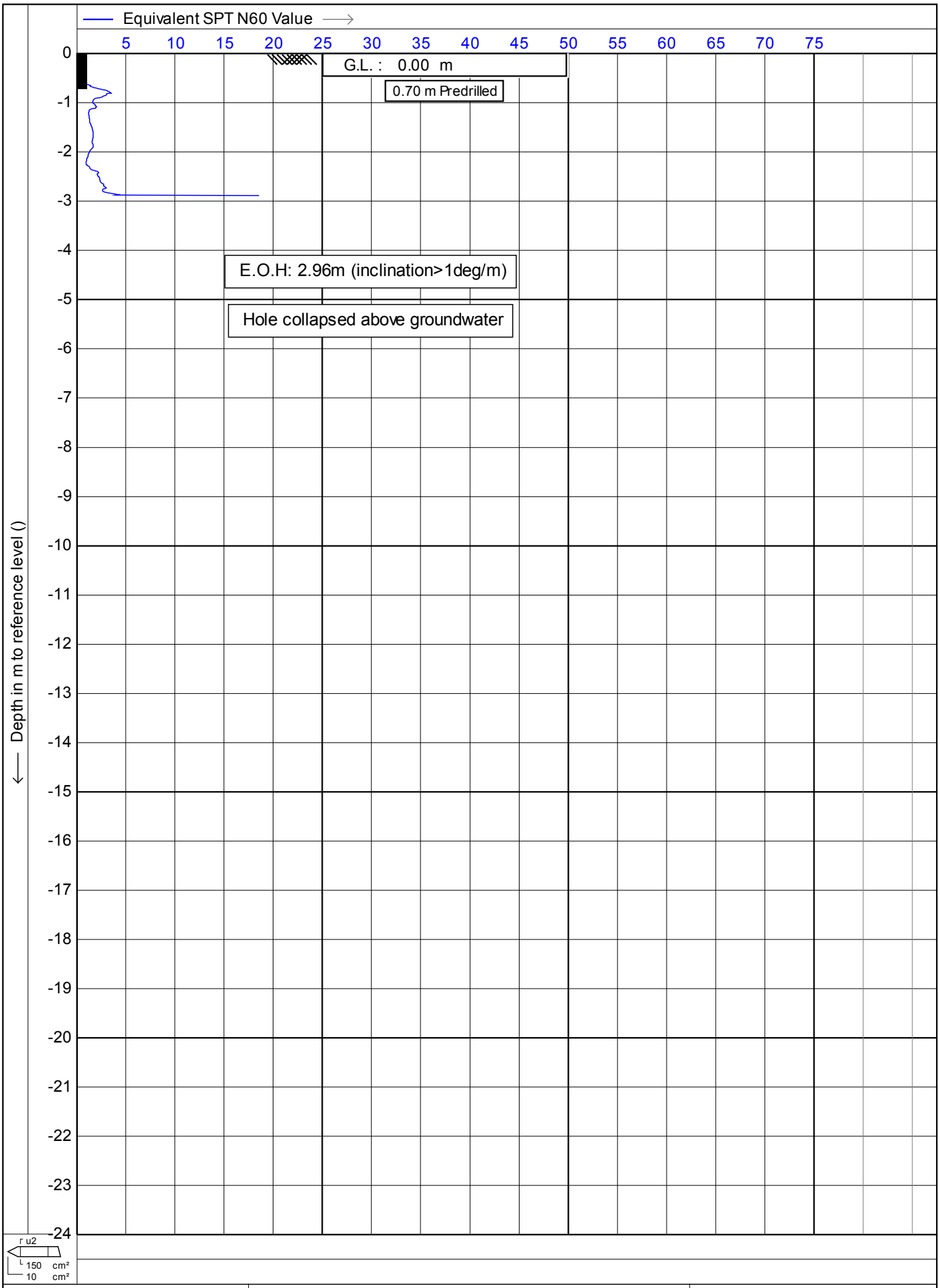
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** **11/15**

1.45



DRILLFORCE
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Test acc NZ class

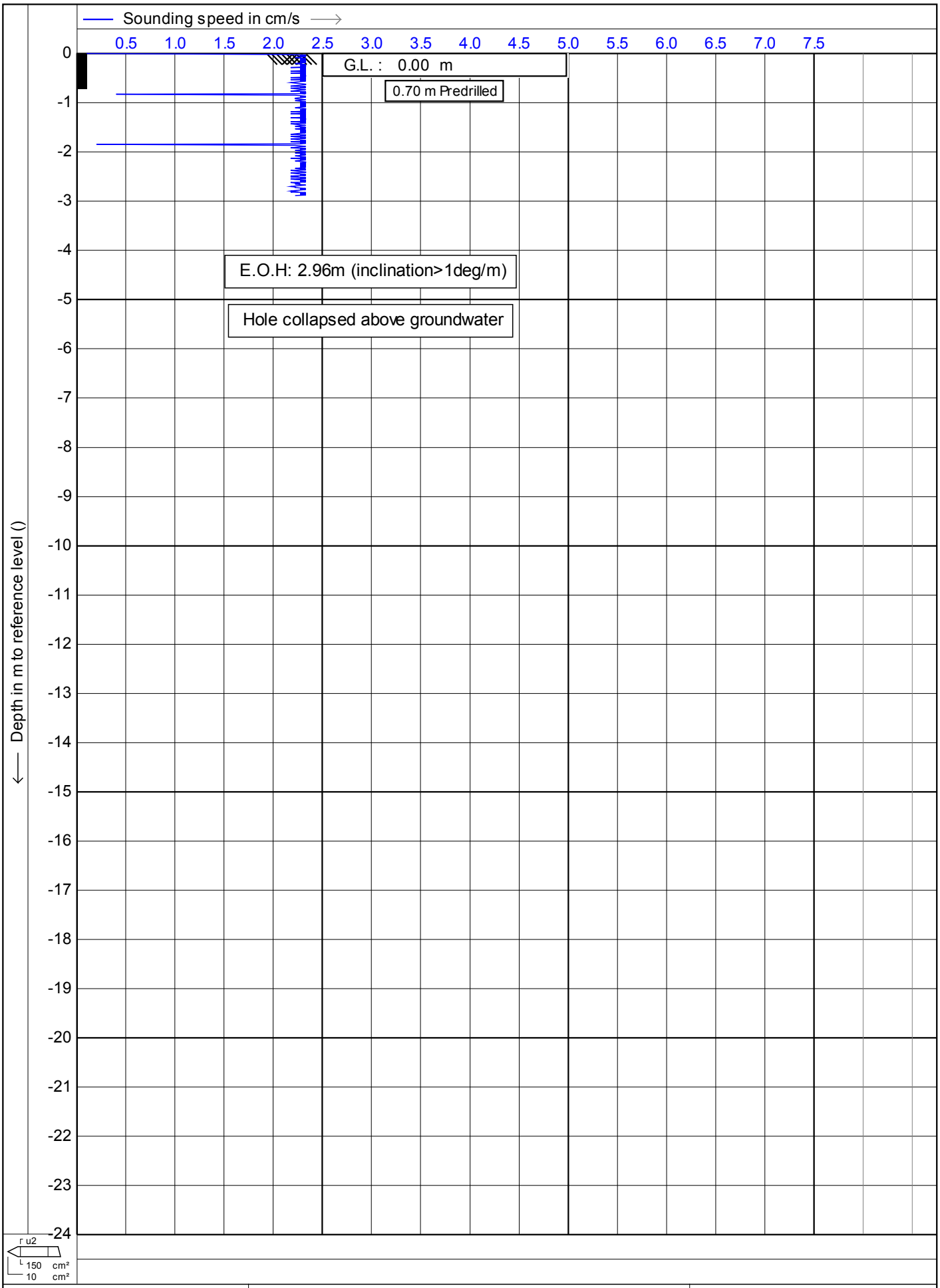
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** 12/15

1.45



DRILLFORCE
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Test acc NZ class

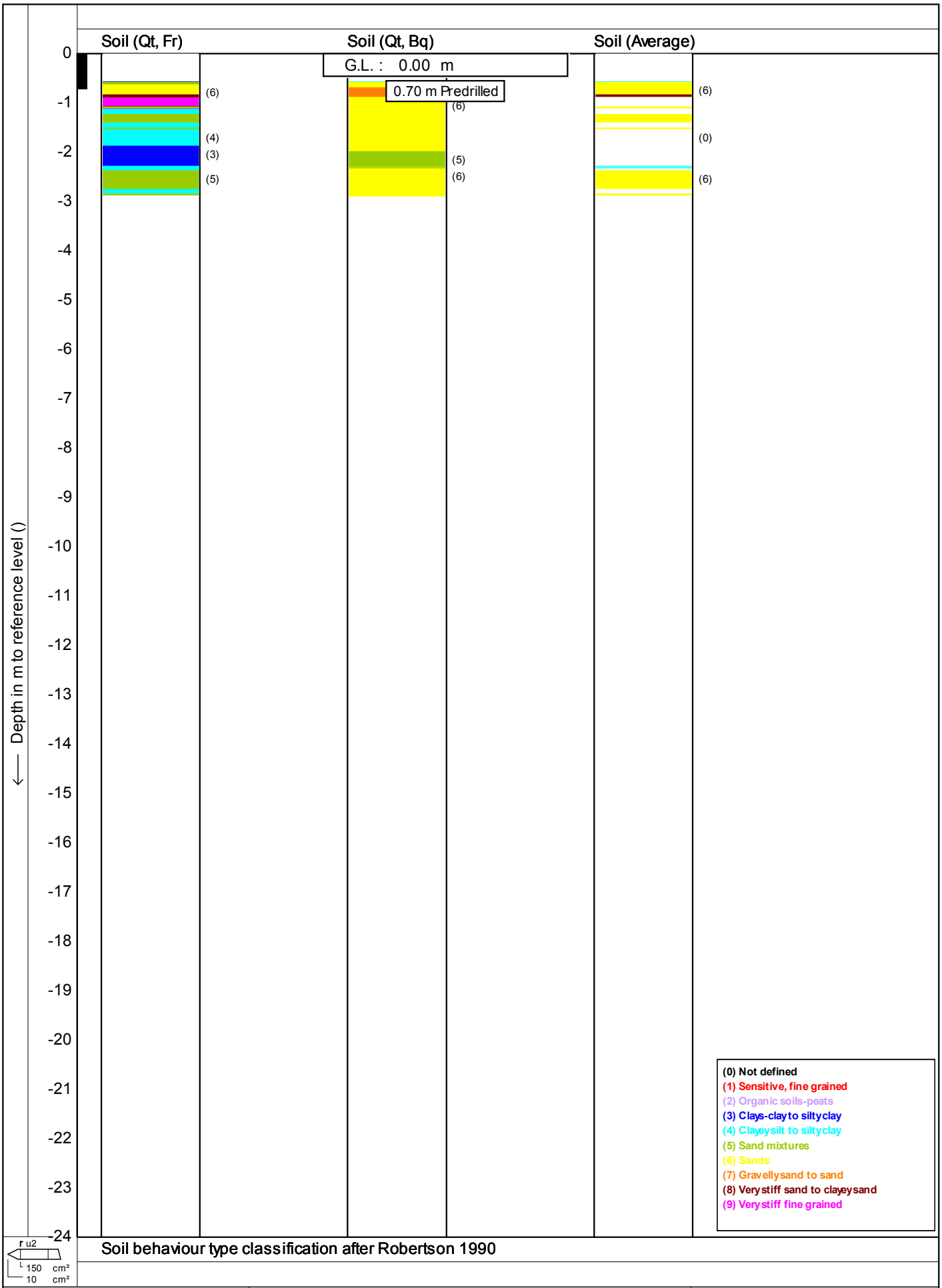
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03**

1.45



DRILLFORCE
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Test acc NZ class

Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

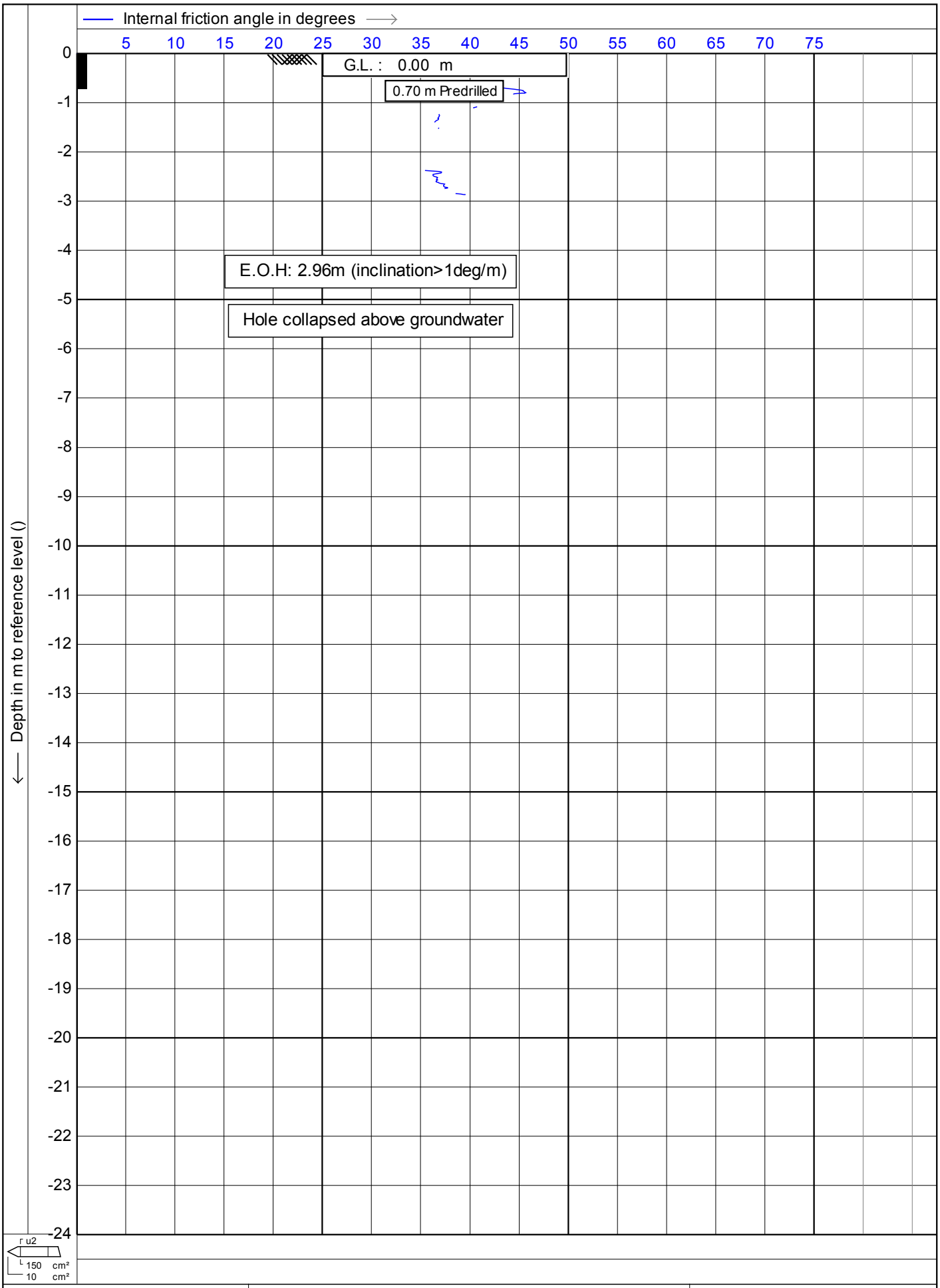
Date : **2/09/2019**

Cone no. : **S10CFIIP.S15297**

Project no. : **DF19GE167**

CPT no. : **CPT_03** **14/15**

1.45



DRILLFORCE
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Test acc NZ class

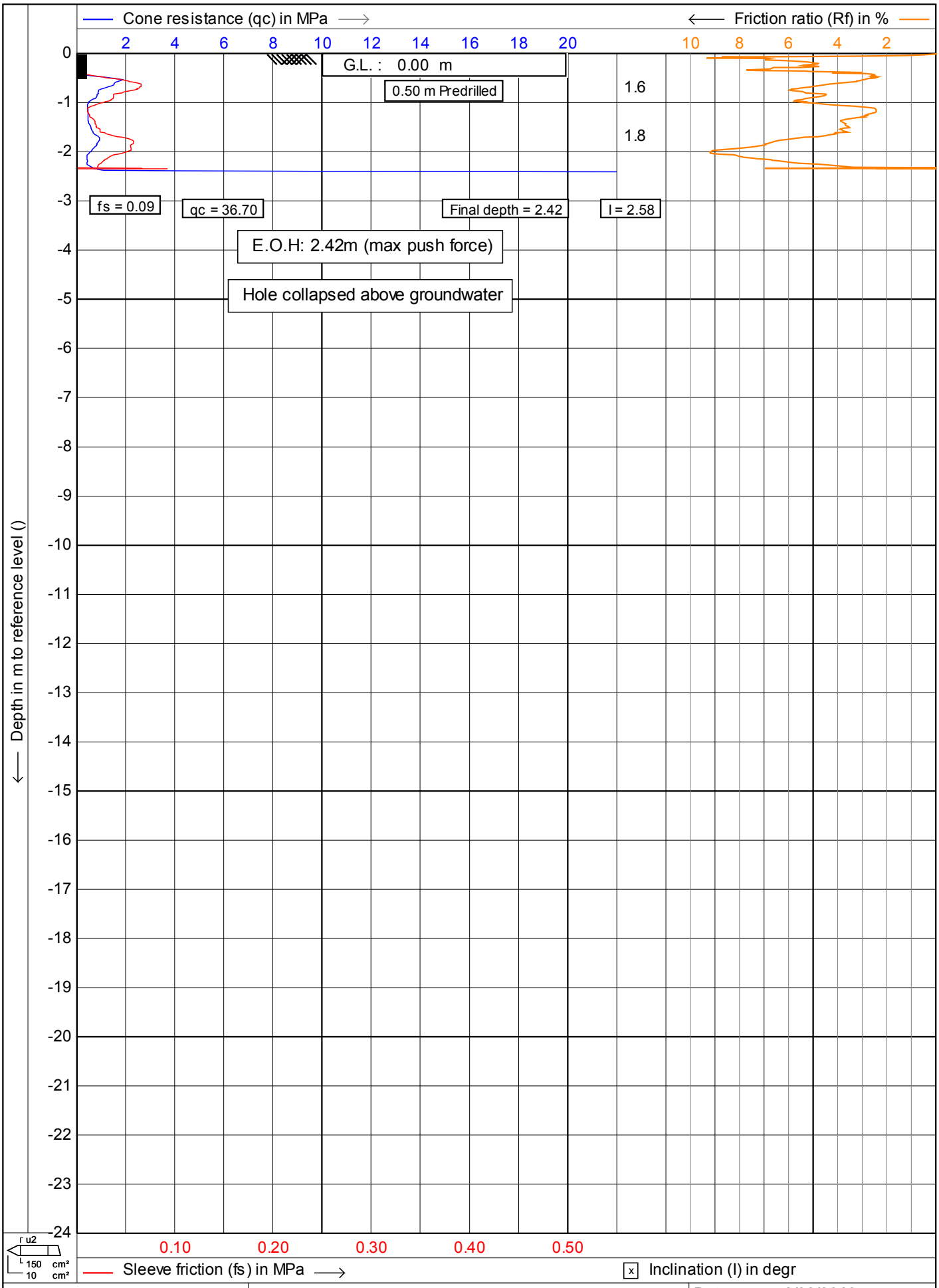
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** **15/15**

1.45



DRILLFORCE
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Test acc NZ class

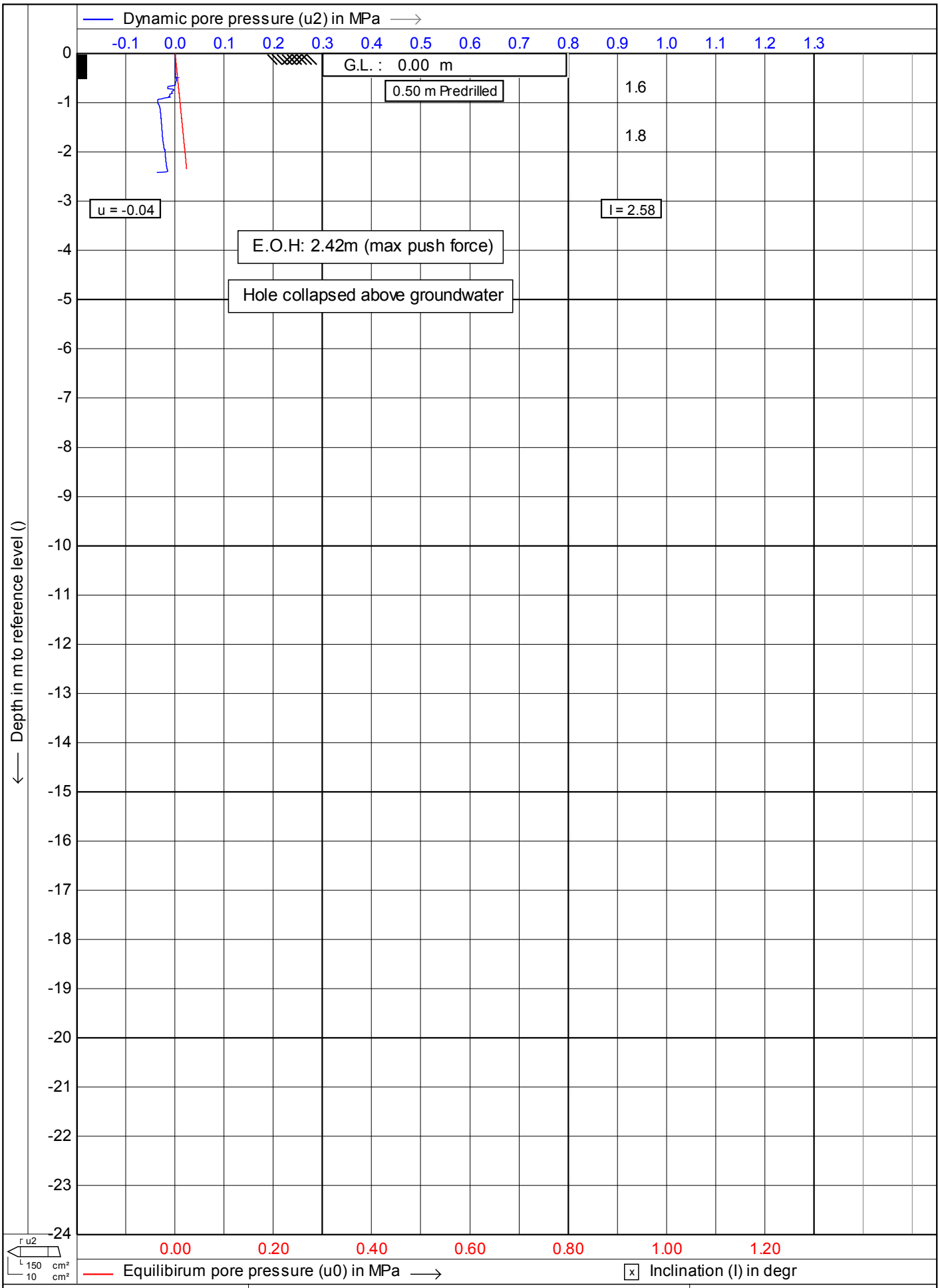
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** 1/15

1.45



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Test acc NZ class

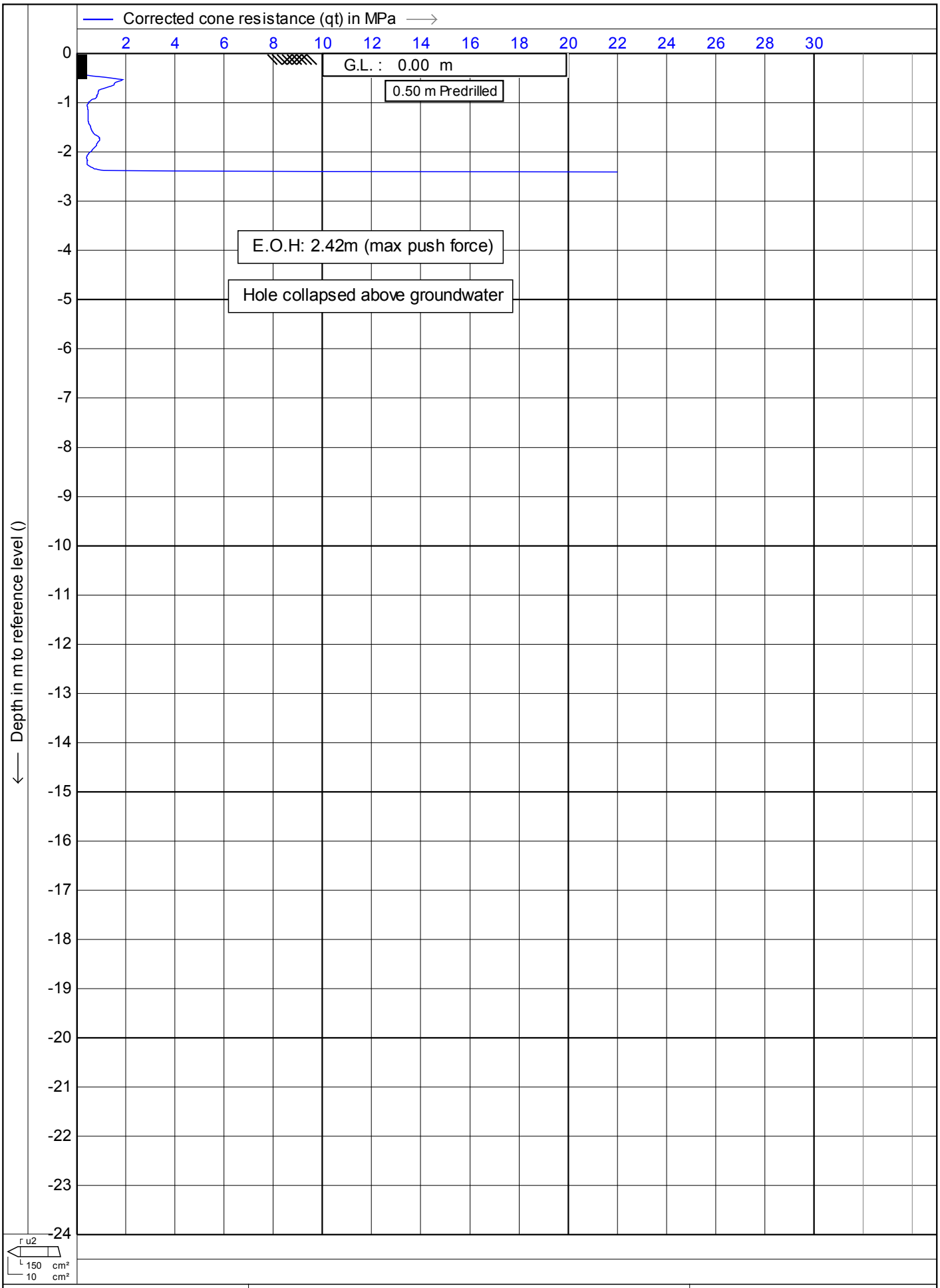
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **2/15**

1.45



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Test acc NZ class

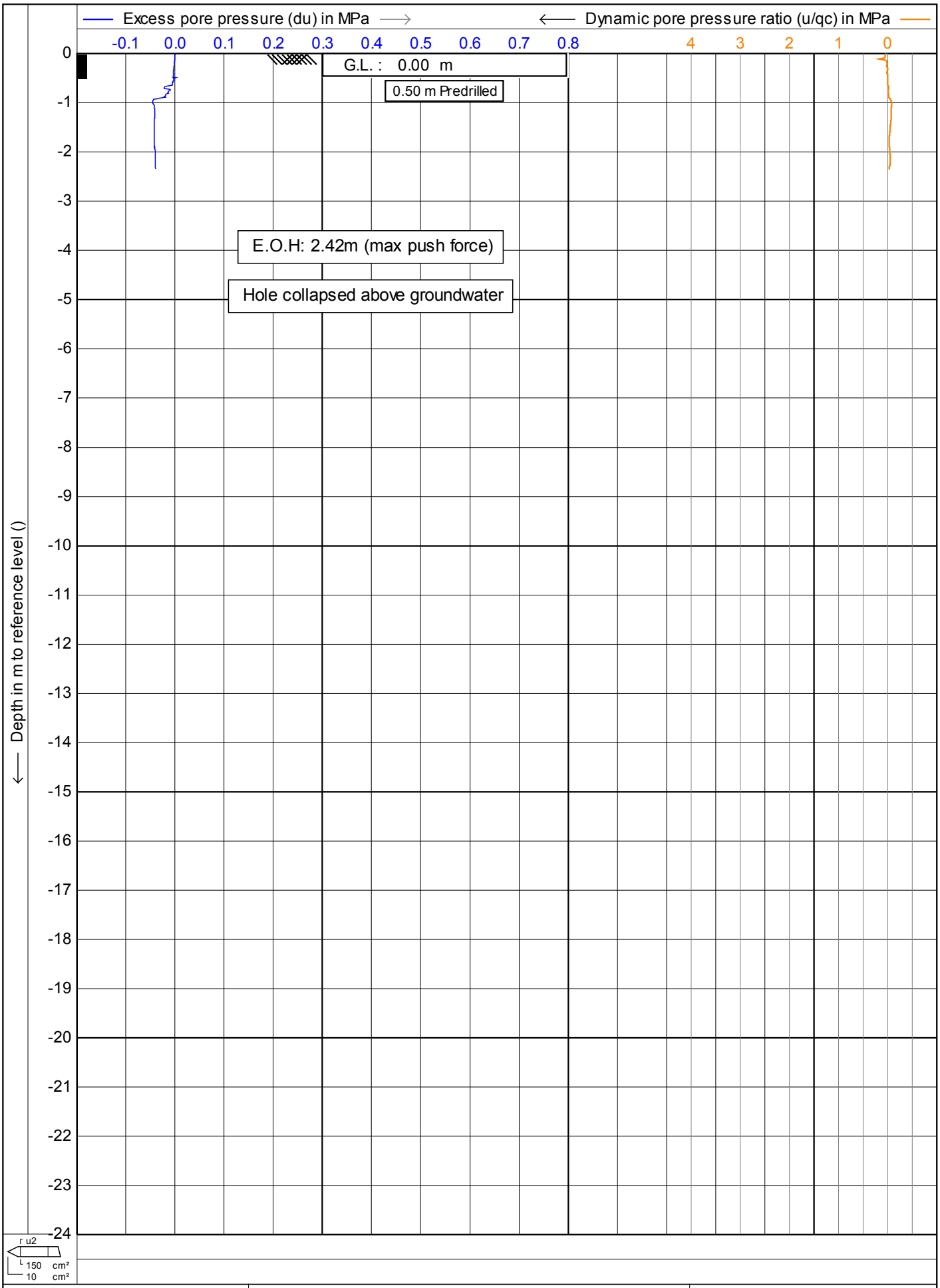
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **3/15**

1.45



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Test acc NZ class

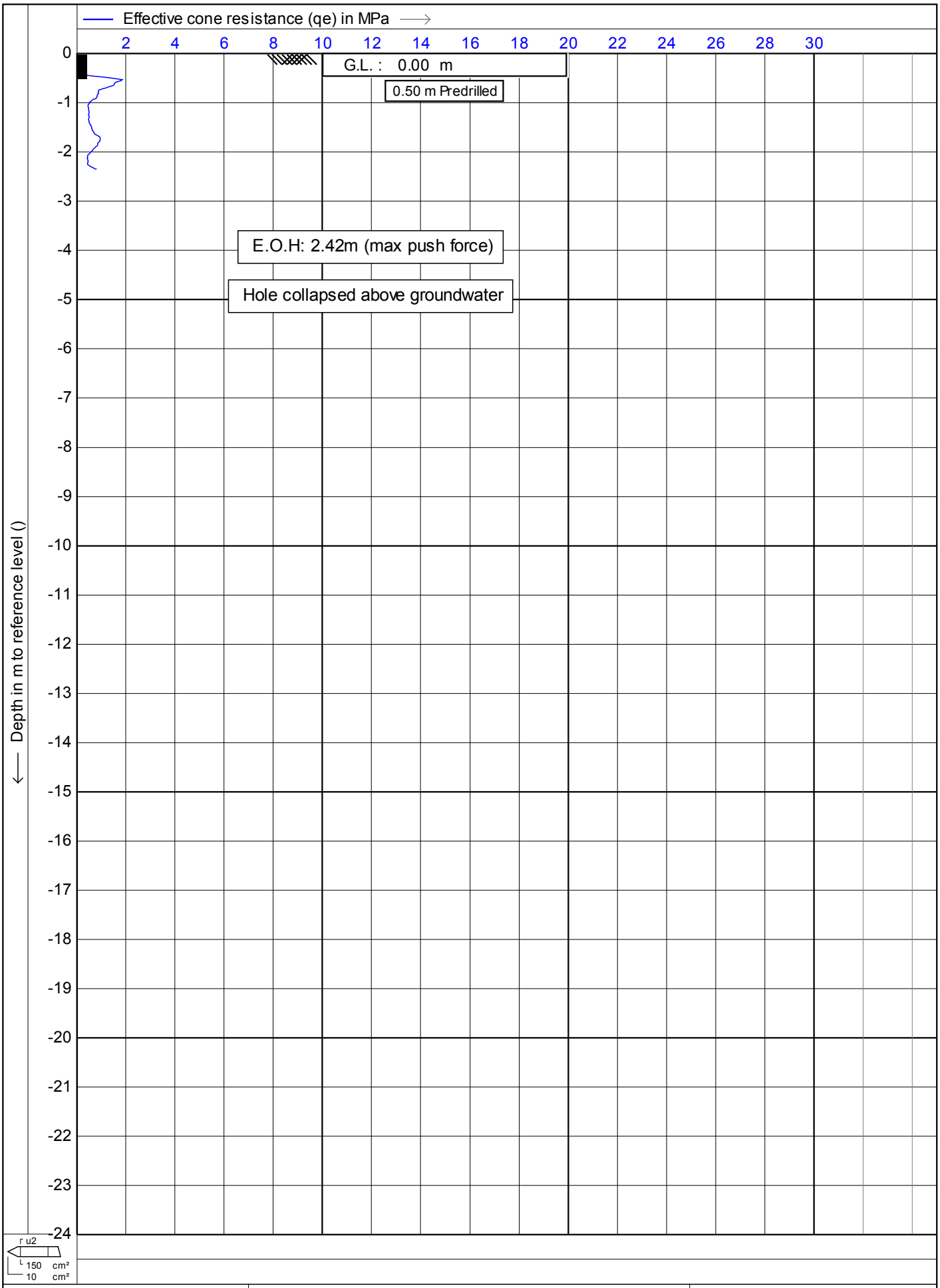
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **4/15**

1.45



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Test acc NZ class

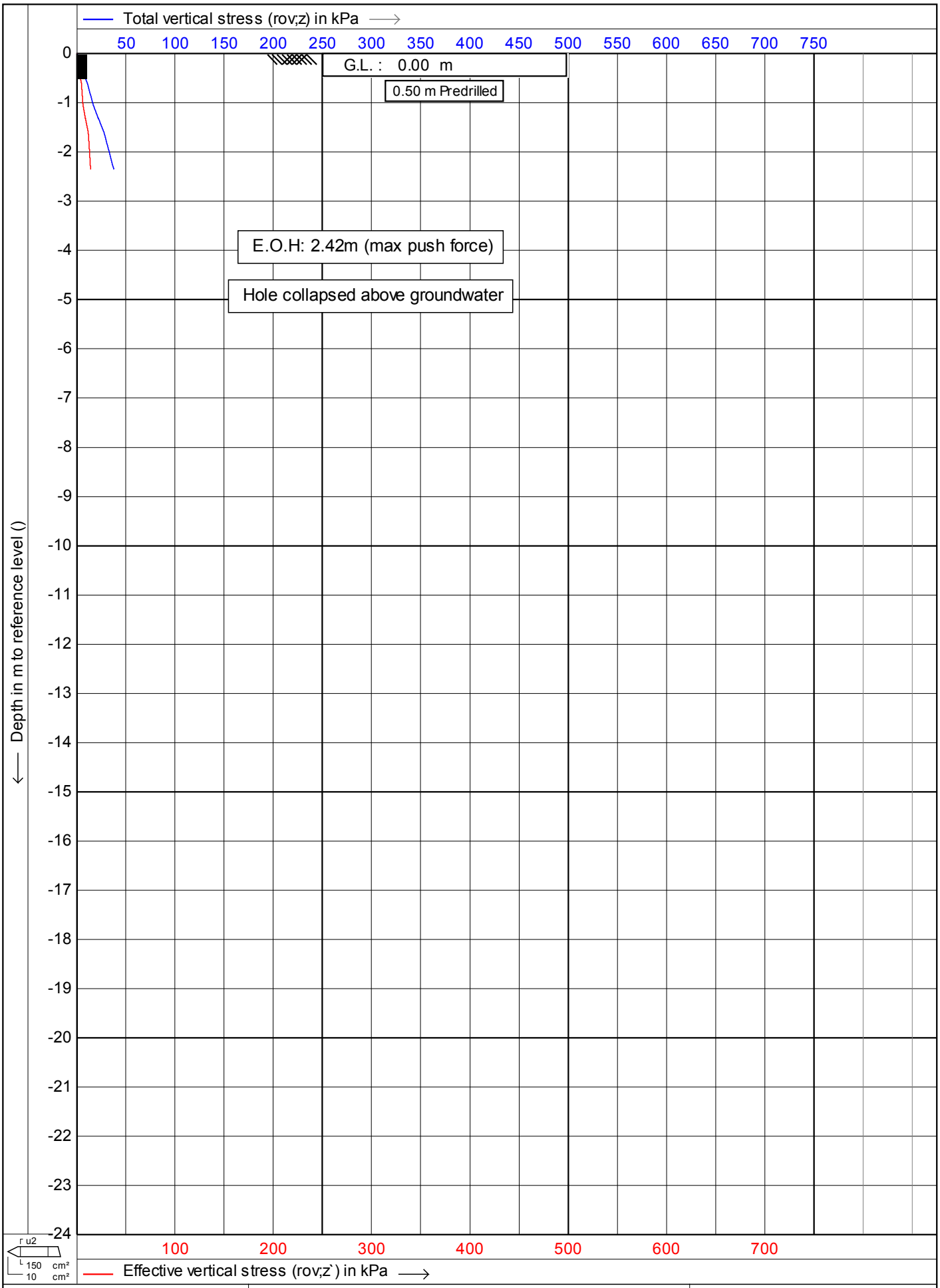
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **5/15**

1.45



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Test acc NZ class

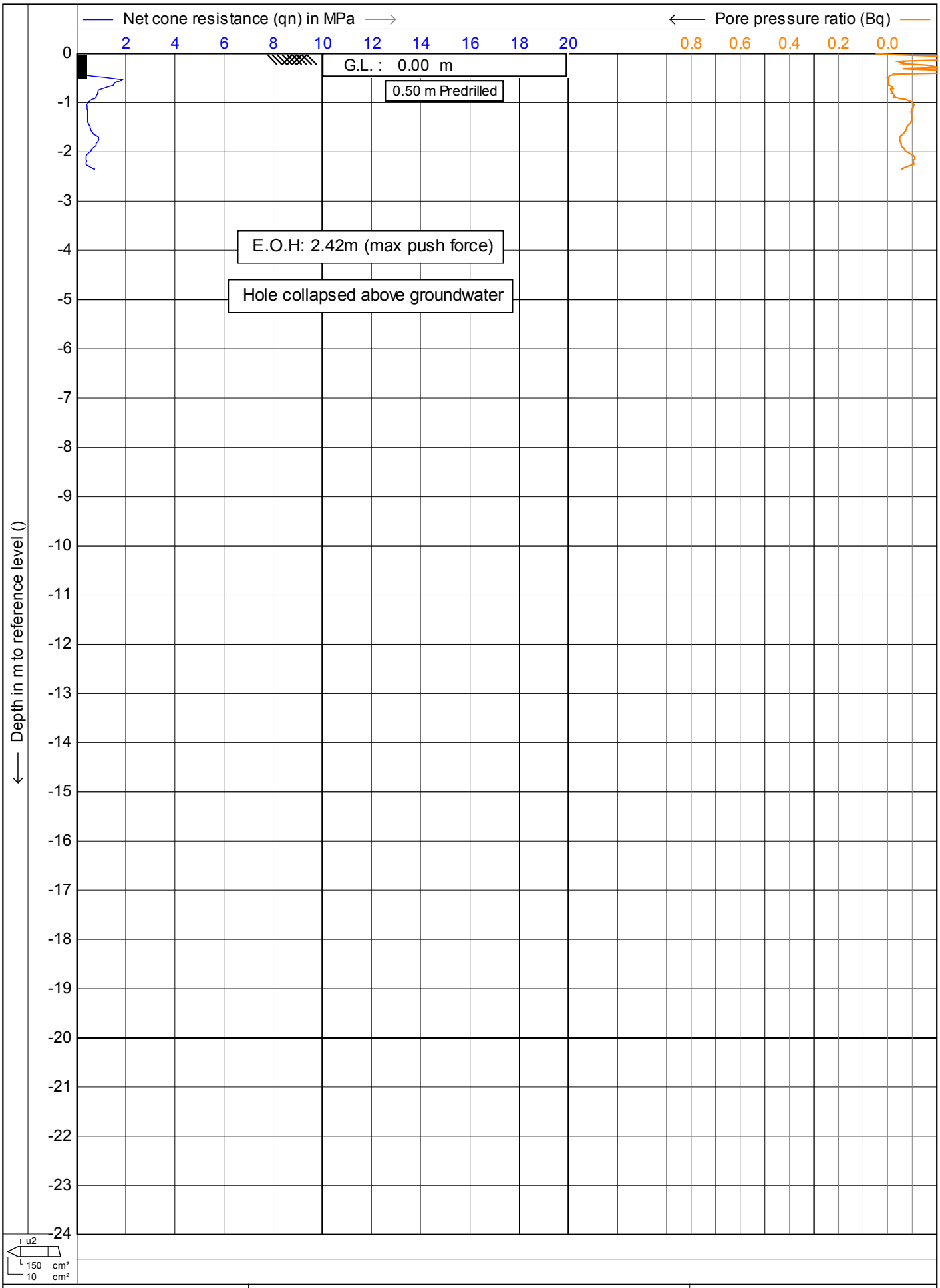
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **6/15**

1.45



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Test acc NZ class

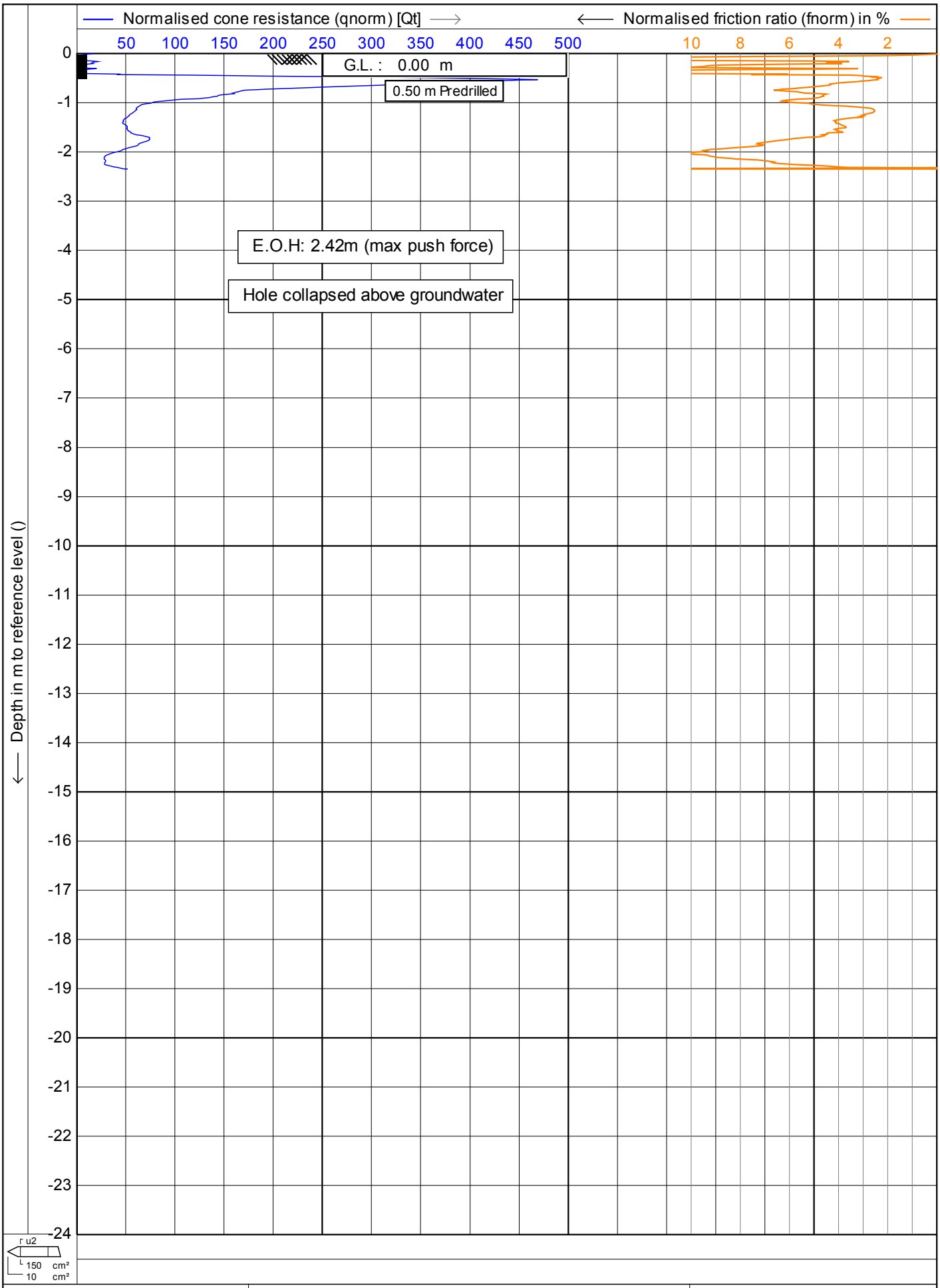
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **7/15**

1.45



DRILLFORCE
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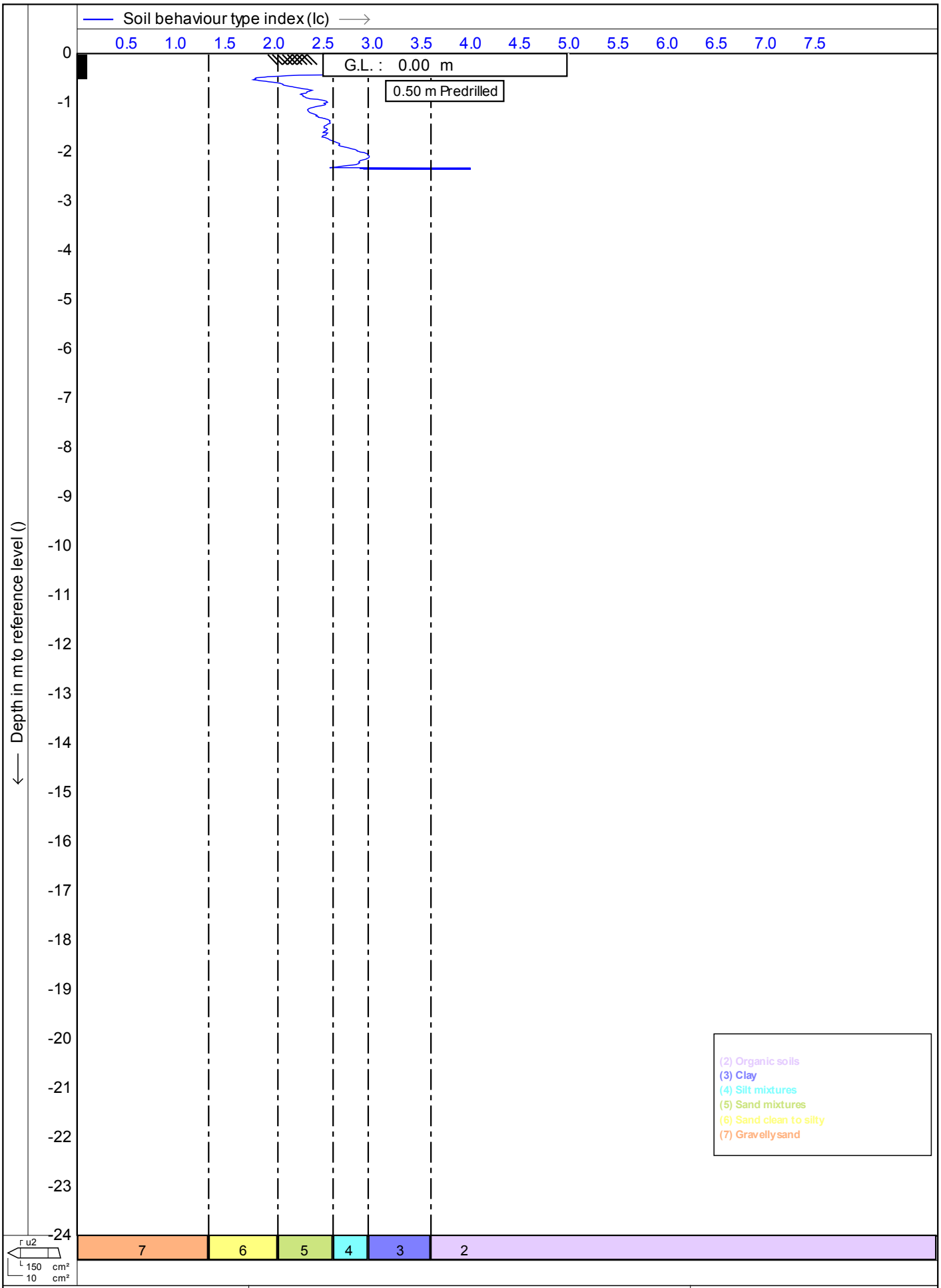
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **8/15**

1.45



DRILLFORCE
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Test acc NZ class

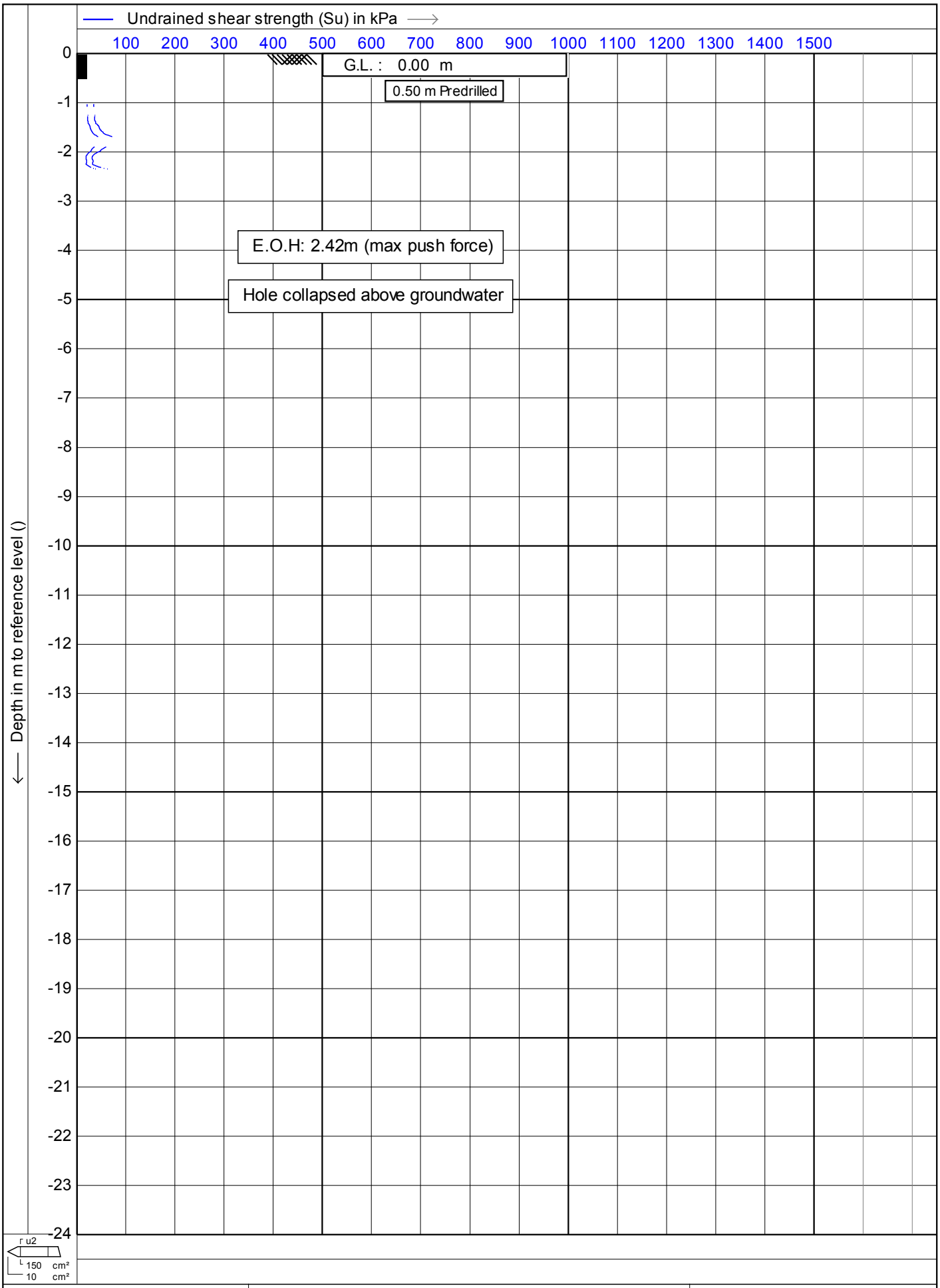
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **9/15**

1.45



DRILLFORCE
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Test acc NZ class

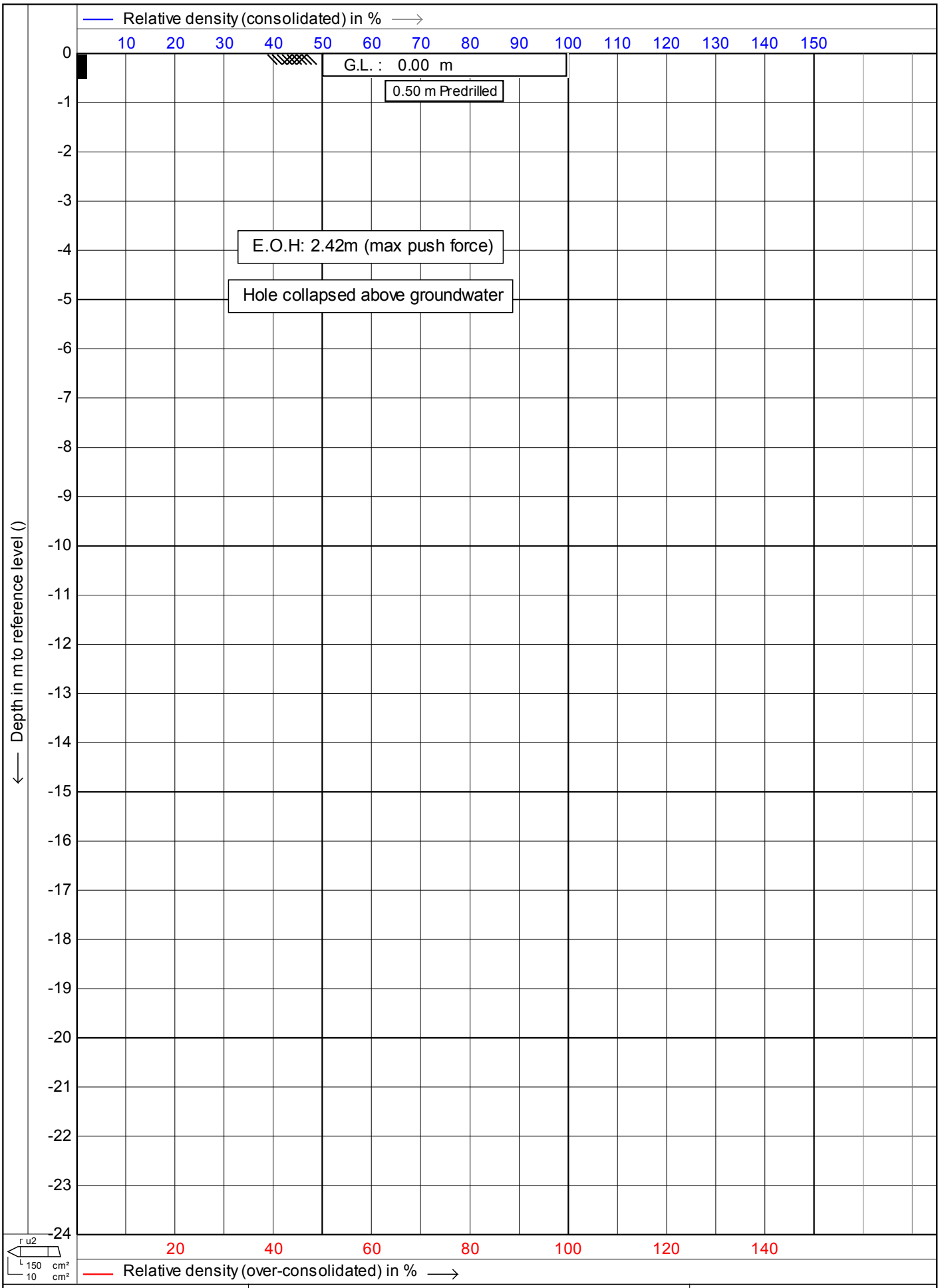
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **10/15**

1.45



DRILLFORCE
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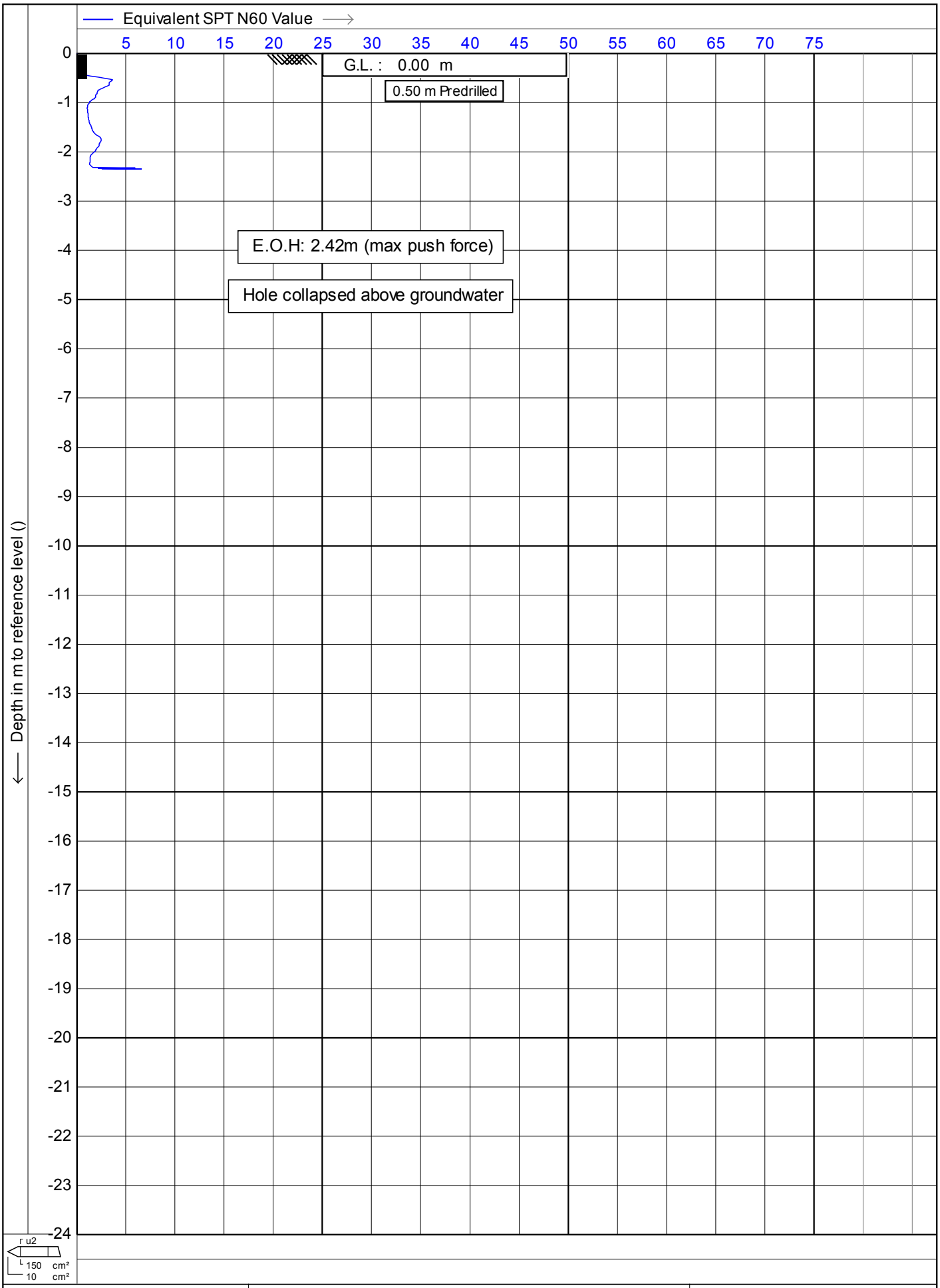
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

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Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **11/15**

1.45



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THE DRILLING SPECIALISTS

Test acc NZ class

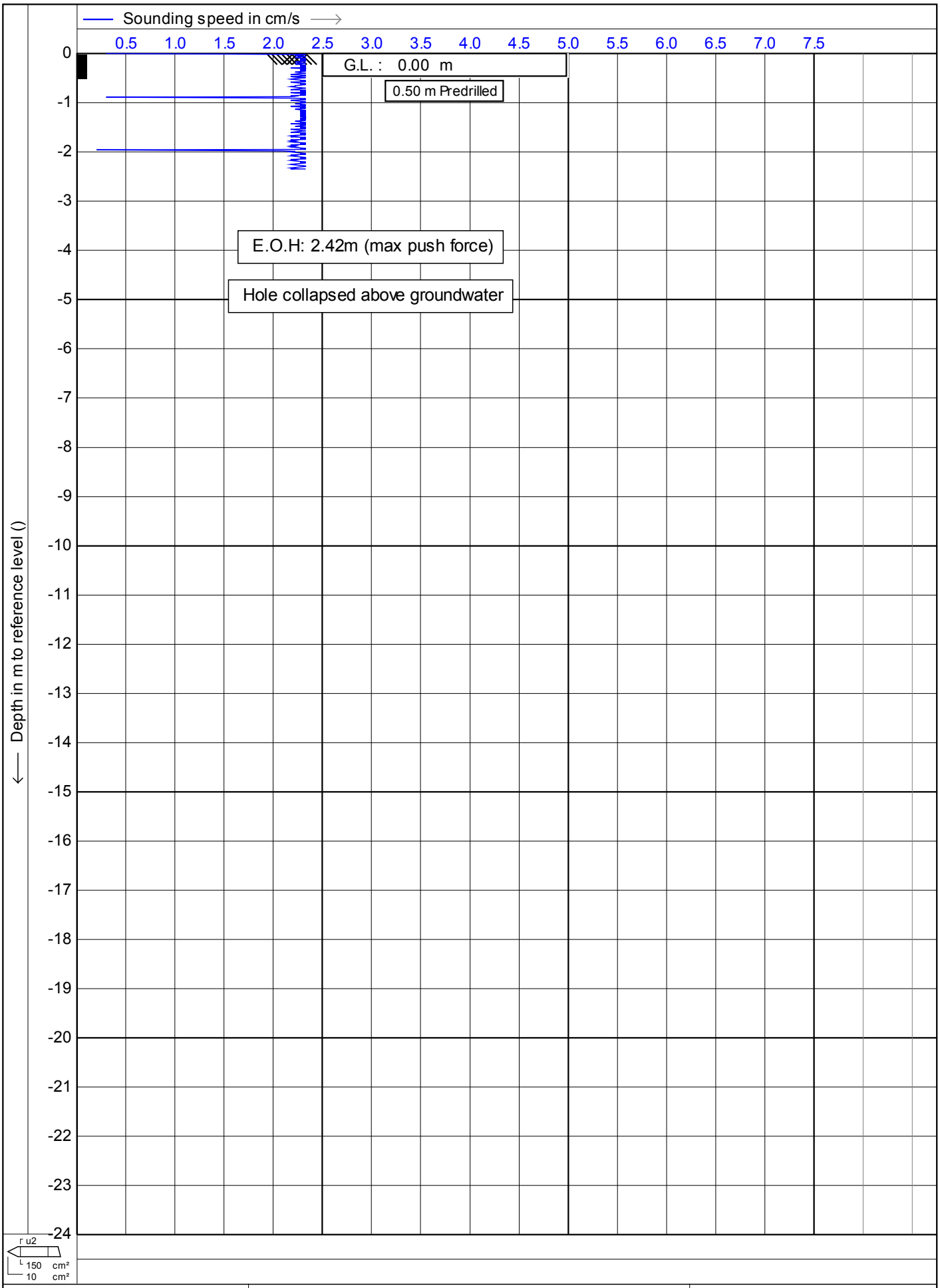
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** 12/15

1.45



DRILLFORCE
THE DRILLING SPECIALISTS

Test acc NZ class

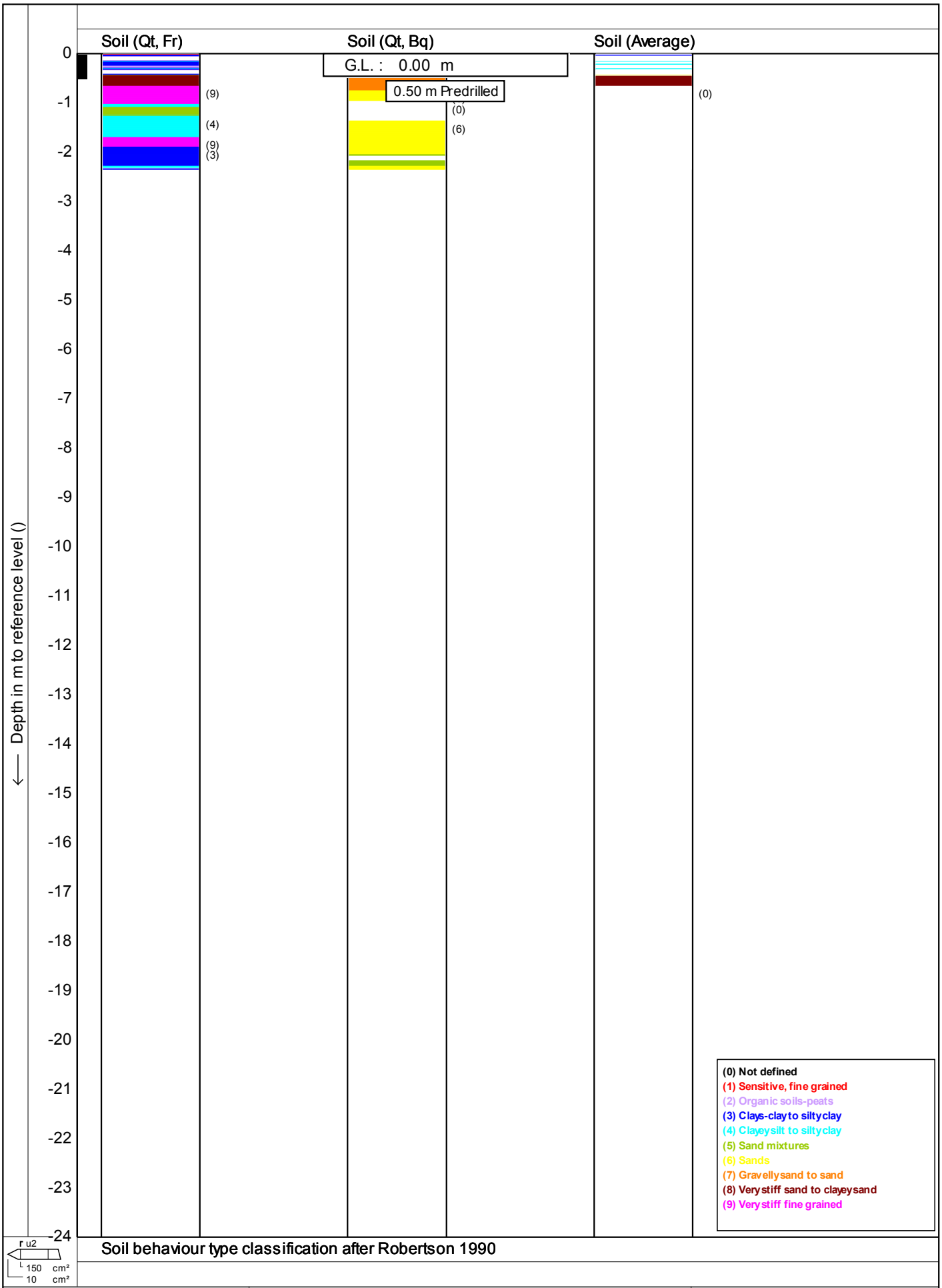
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **13/15**

1.45



DRILLFORCE
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Test acc NZ class

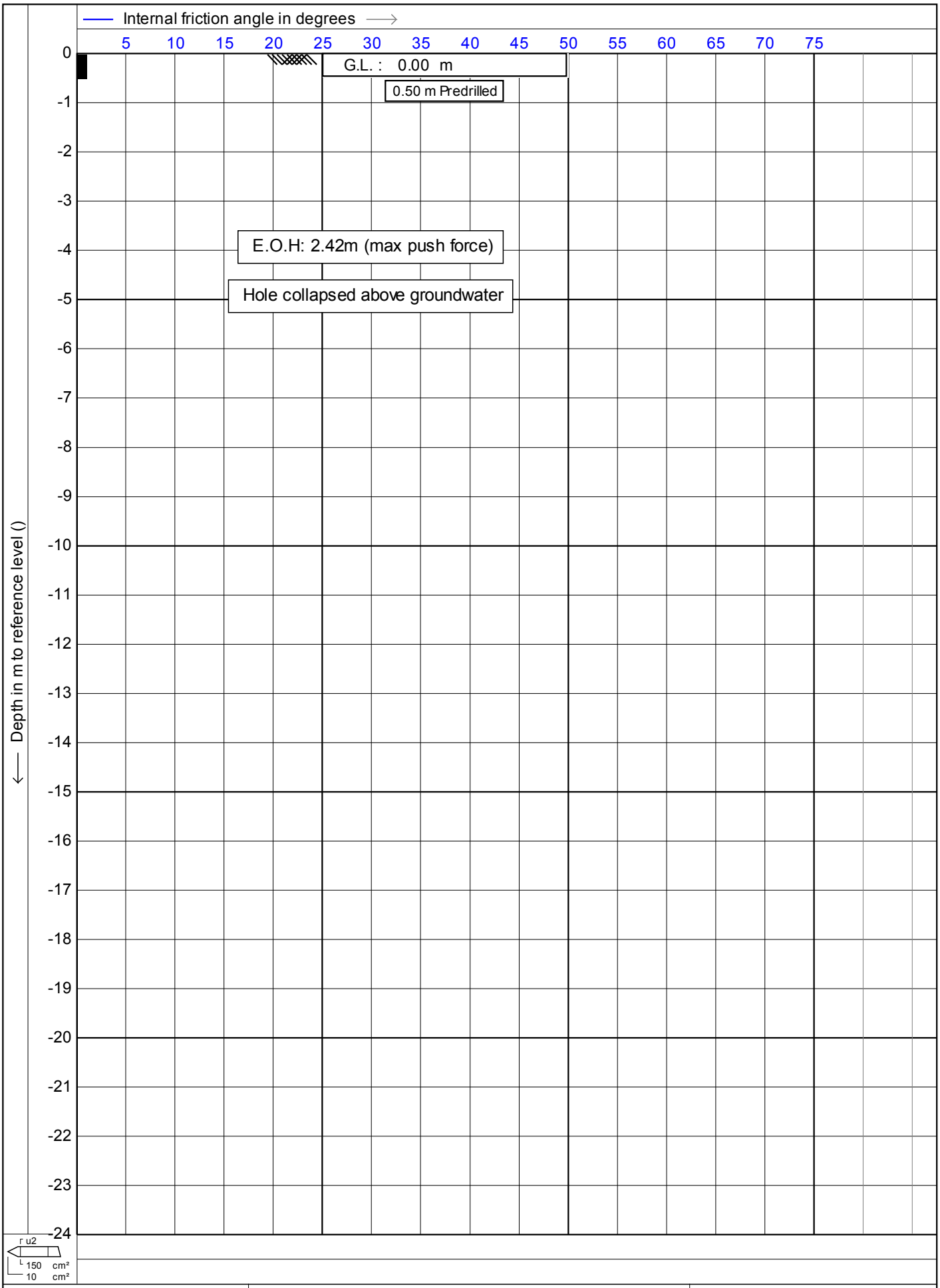
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **14/15**

1.45



DRILLFORCE
THE DRILLING SPECIALISTS

Test acc NZ class

Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **15/15**

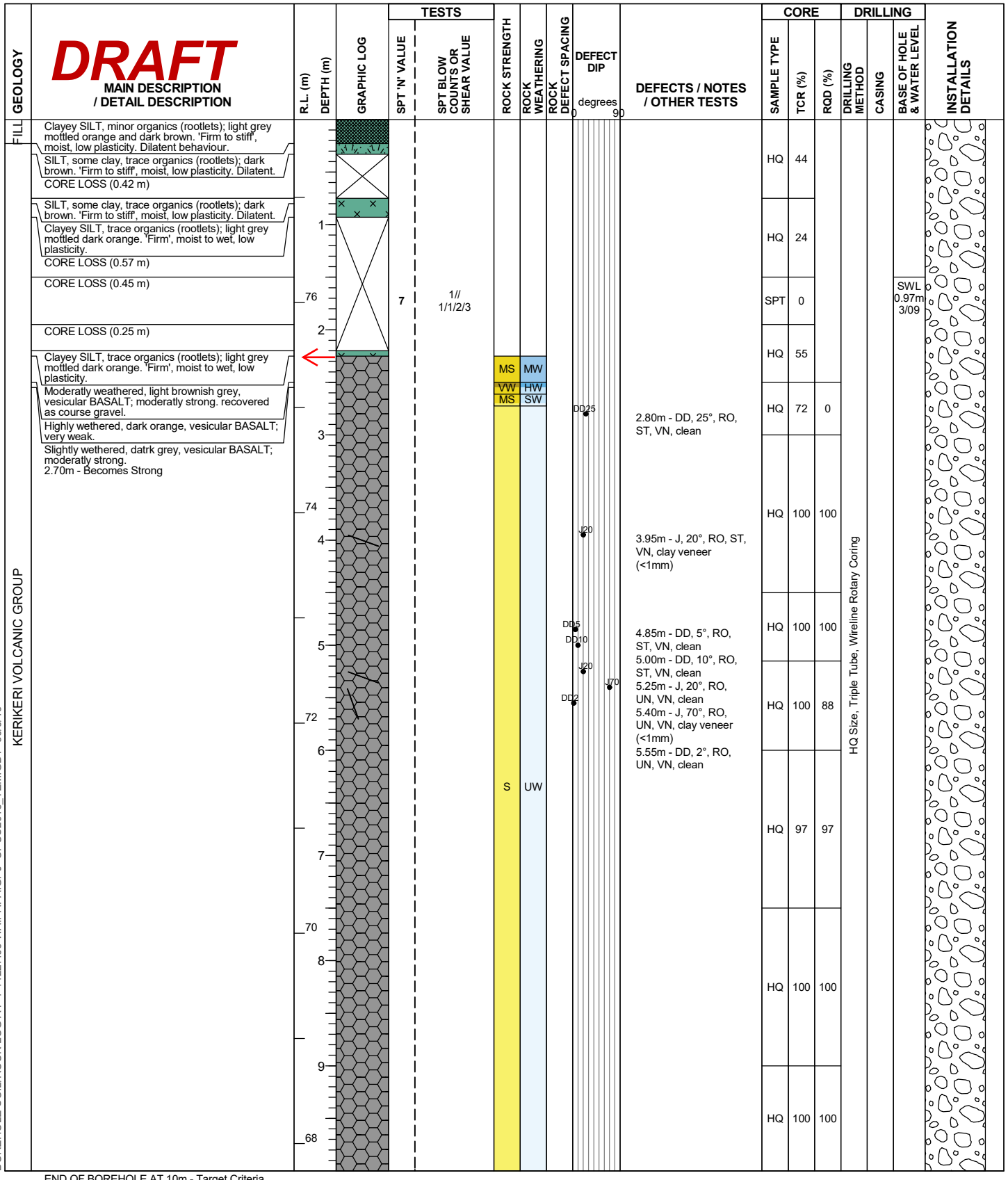
1.45

Borehole No. BH 19-01

Project:	Whiriwhiritoa Stream Crossing	*Coordinates:*	1683391 E 6103466 N
Client:	NZTA	*Ref. Grid:*	NZTM
Project No.:	1-11227.00	*R.L.:*	77.74 m
Location:	Waipapa Waipapa	*Datum:*	

Depth: 10 m

Inclination: Vertical



Notes: END OF BOREHOLE AT 10m - Target Criteria Achieved

Started:	2/09/2019	*Finished:*	3/09/2019
Drilling Co.:	Drill Force NZ Ltd	*Drilling Rig:*	Truck Mounted Rig
Logged by:	RVD	*Checked by:*	A. George

Logged in accordance with NZ Geotechnical Society Guidelines (2005). See attached key sheet for explanation of symbols.

Scale 1:50 @ A4

BOREHOLE SOIL/ROCK LOG A4 1-11227.00 WAIPAPA.GPJ OPUS2016_TEM.GDT 30/9/19

Borehole No. BH 19-01

Project:	Whiriwhiritoa Stream Crossing	*Coordinates:*	1683391 E 6103466 N		
Client:	NZTA	*Ref. Grid:*	NZTM	*Depth:*	10 m
Project No.:	1-11227.00	*R.L.:*	77.74 m	*Inclination:*	Vertical
Location:	Waipapa Waipapa	*Datum:*			

PHOTOGRAPHS





BOREHOLE SOIL/ROCK LOG A4 1-11227.00 WAIPAPA.GPJ OPUS2016_TEM.GDT 30/9/19

Notes:

Started:	2/09/2019	*Finished:*	3/09/2019
Drilling Co.:	Drill Force NZ Ltd	*Drilling Rig:*	Truck Mounted Rig
Logged by:	RVD	*Checked by:*	A. George

Logged in accordance with NZ Geotechnical Society Guidelines (2005). See attached key sheet for explanation of symbols.

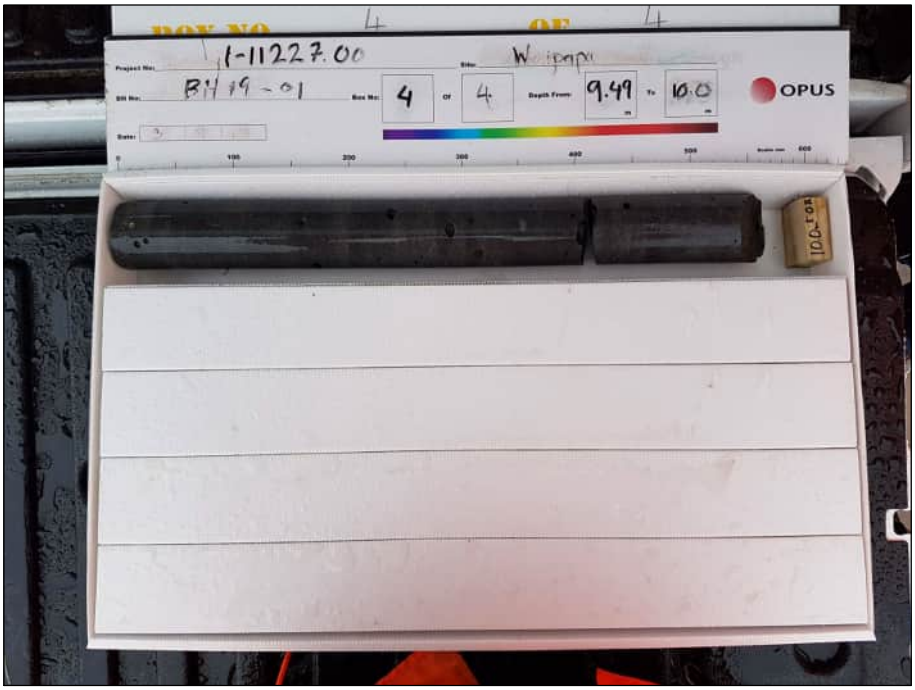
Scale 1:50 @ A4

Borehole No. BH 19-01

Project:	Whiriwhiritoa Stream Crossing	*Coordinates:*	1683391 E 6103466 N		
Client:	NZTA	*Ref. Grid:*	NZTM	*Depth:*	10 m
Project No.:	1-11227.00	*R.L.:*	77.74 m	*Inclination:*	Vertical
Location:	Waipapa Waipapa	*Datum:*			

PHOTOGRAPHS





BOREHOLE SOIL/ROCK LOG A4 1-11227.00 WAIPAPA.GPJ OPUS2016_TEM.GDT 30/9/19

Notes:

Started:	2/09/2019	*Finished:*	3/09/2019
Drilling Co.:	Drill Force NZ Ltd	*Drilling Rig:*	Truck Mounted Rig
Logged by:	RVD	*Checked by:*	A. George

Logged in accordance with NZ Geotechnical Society Guidelines (2005). See attached key sheet for explanation of symbols.

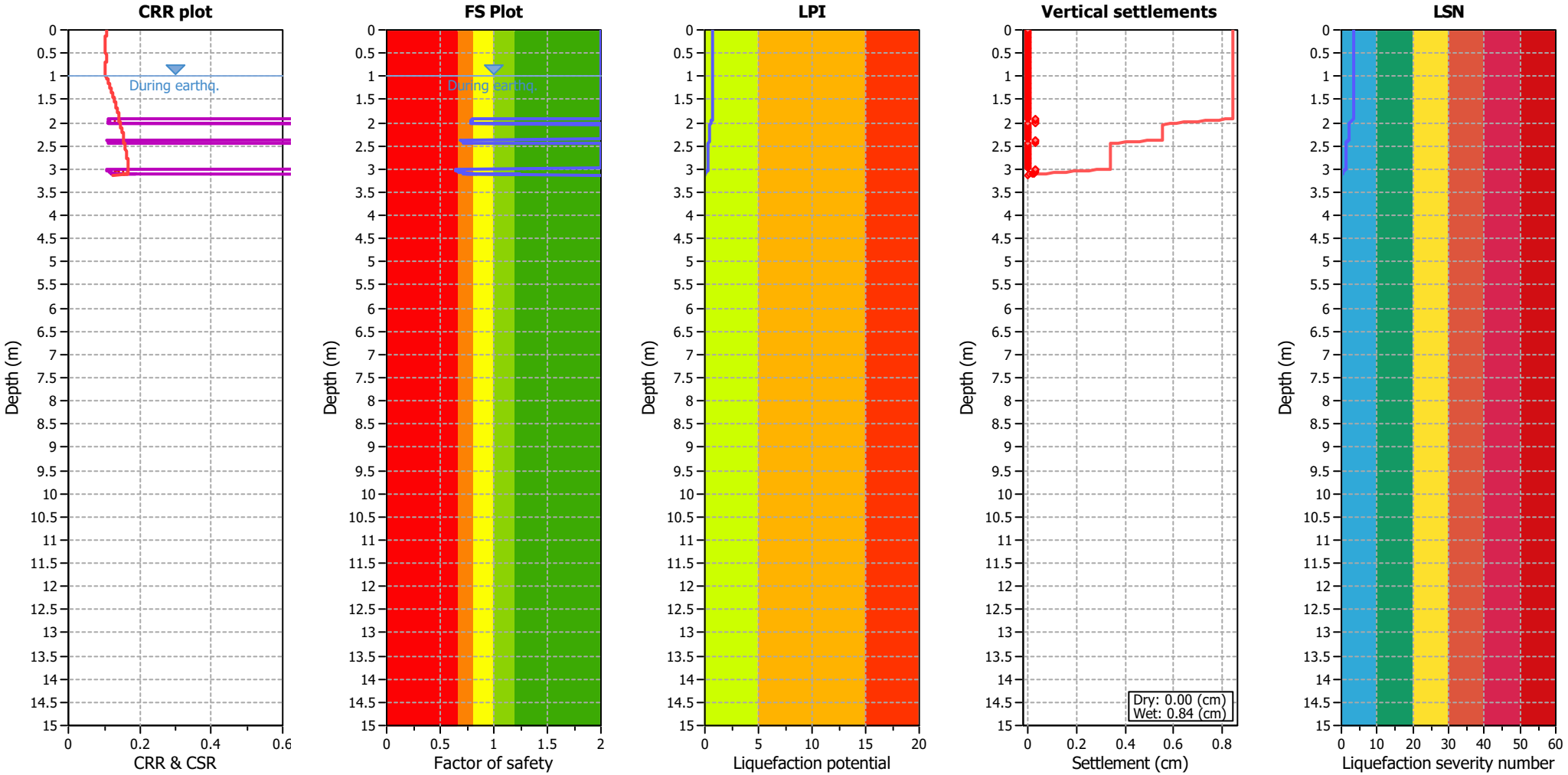
Scale 1:50 @ A4

Appendix C Cliq Outputs

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http://www.initia.co.nz

Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT01
Total depth: 3.13 m

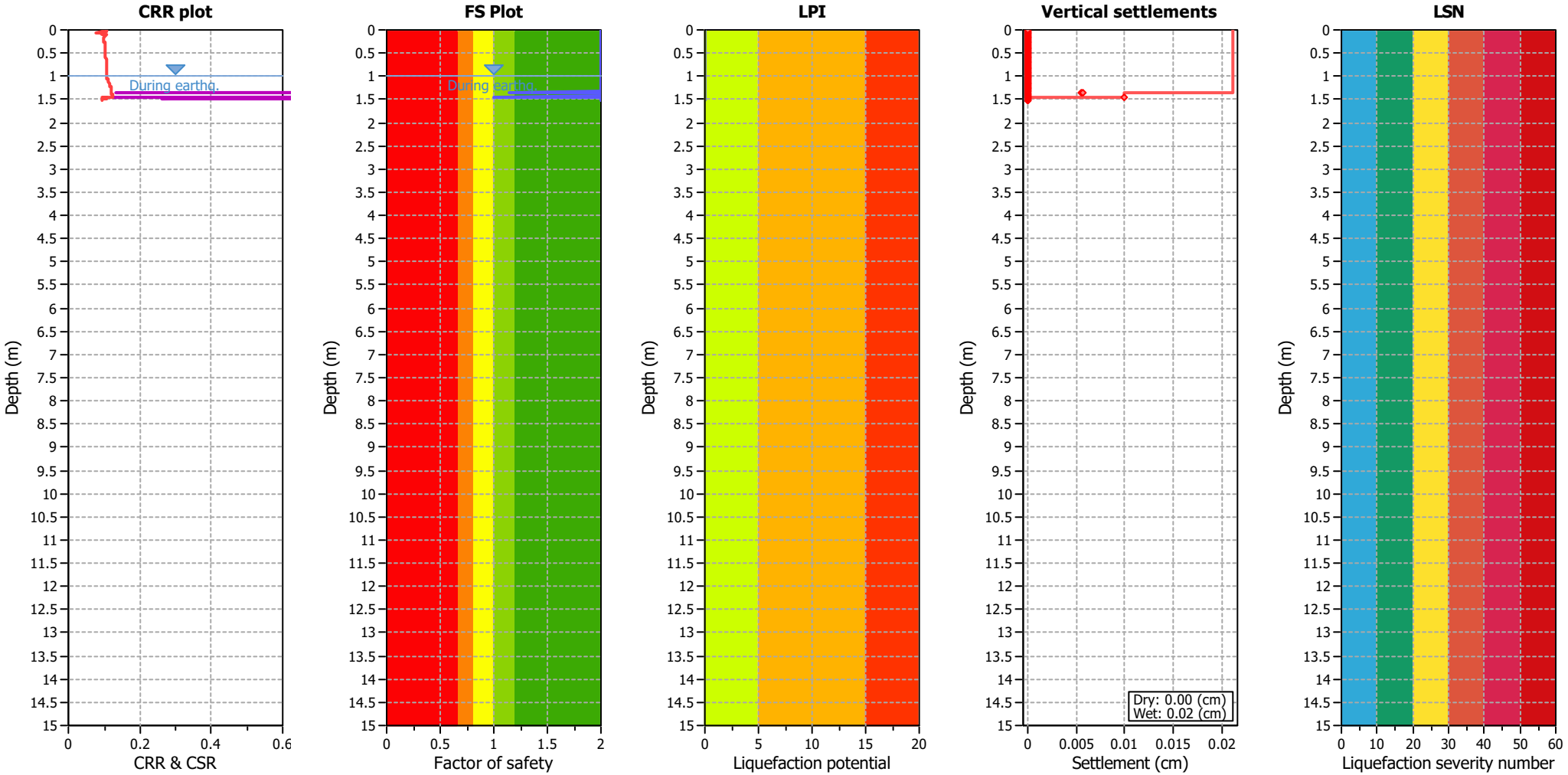


Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.40 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Geotechnical Specialists
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http://www.initia.co.nz

Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT02
Total depth: 1.53 m

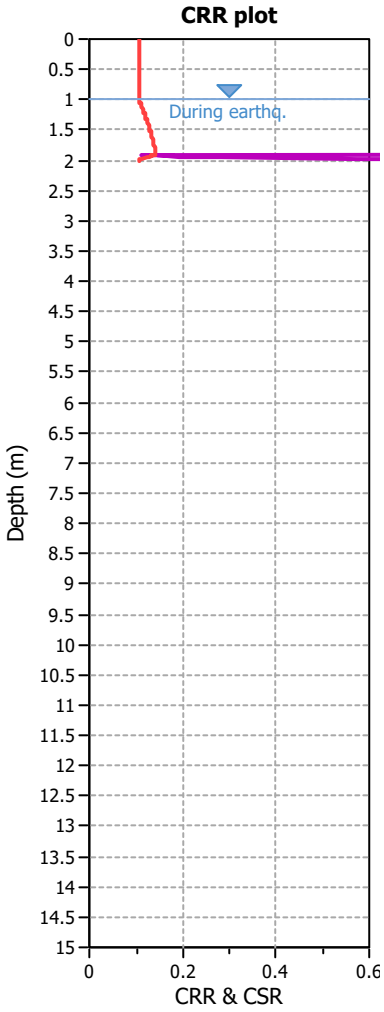


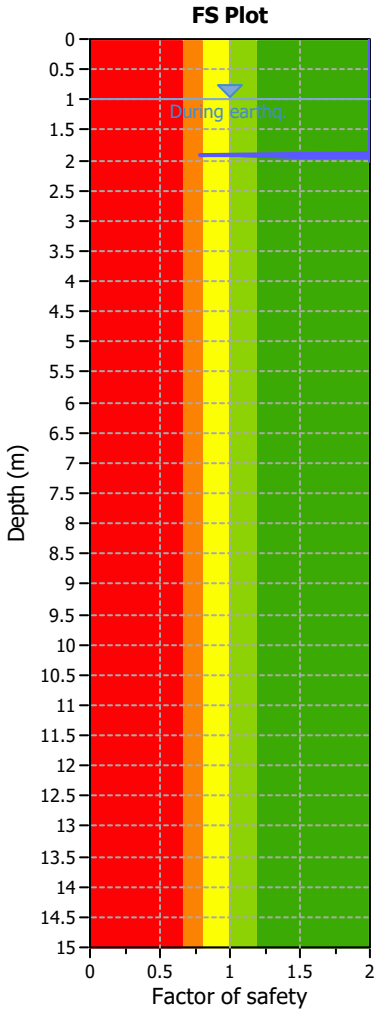
Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.00 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

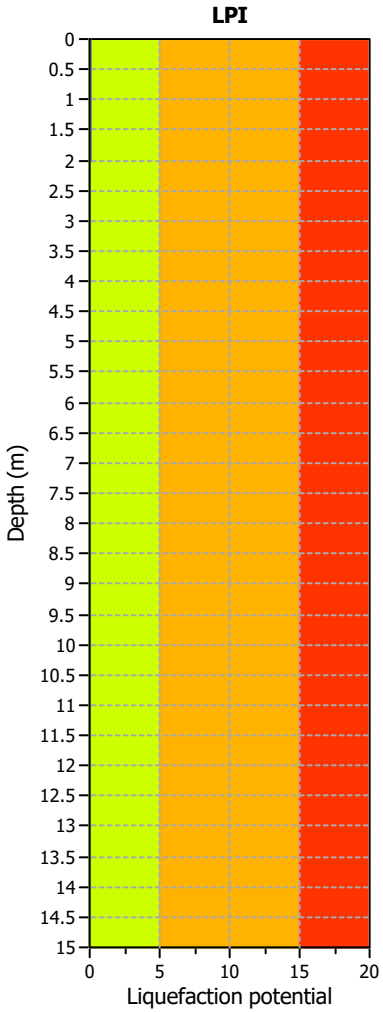
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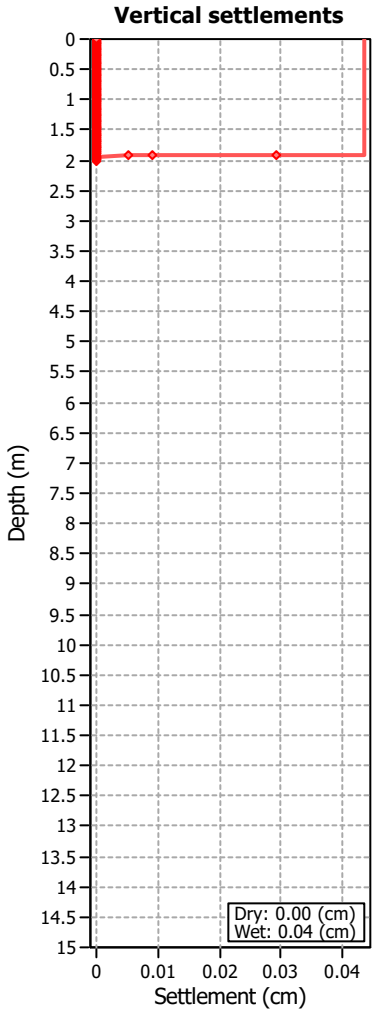
Project: **Waipapa Development**
Location: **P-003194**

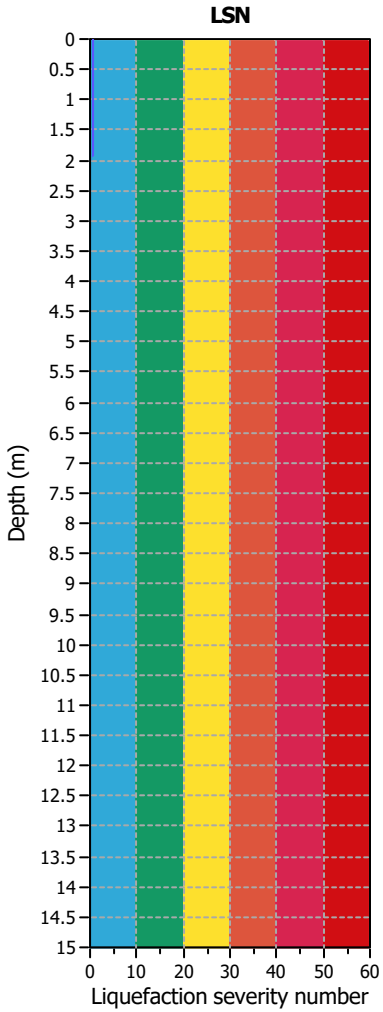
CPT: CPT03
Total depth: 2.00 m









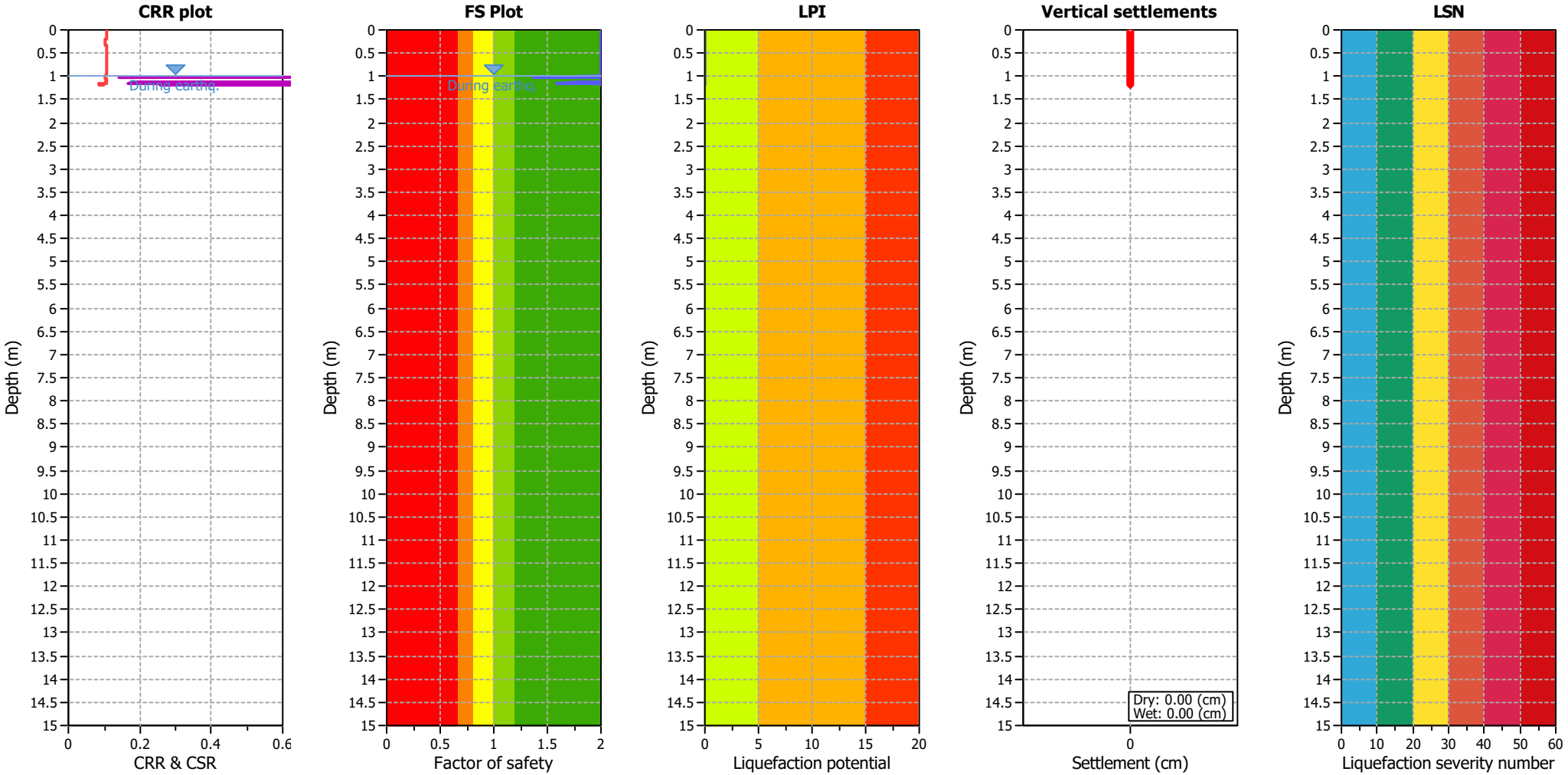


Analysis method:	B&I (2014)	G.W.T. (in-situ):	0.90 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT04
Total depth: 1.19 m

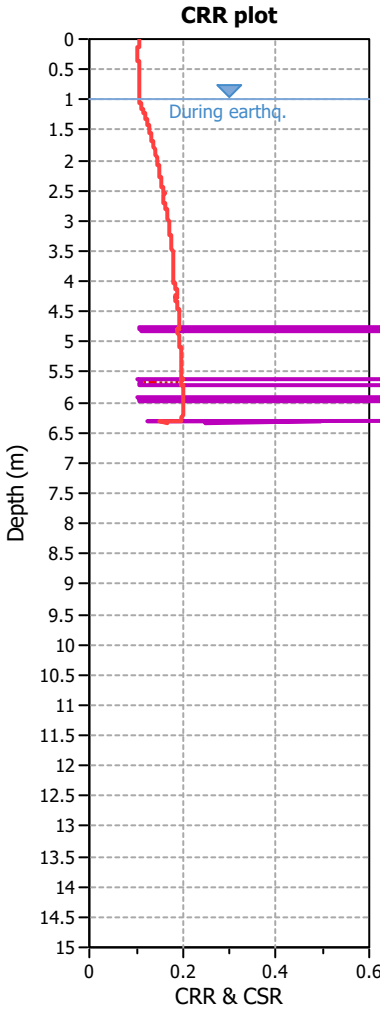


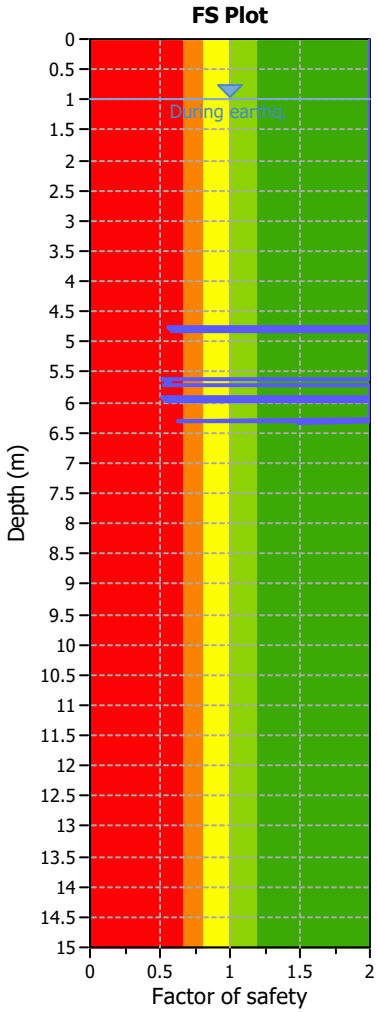
Analysis method:	B&I (2014)	G.W.T. (in-situ):	0.90 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

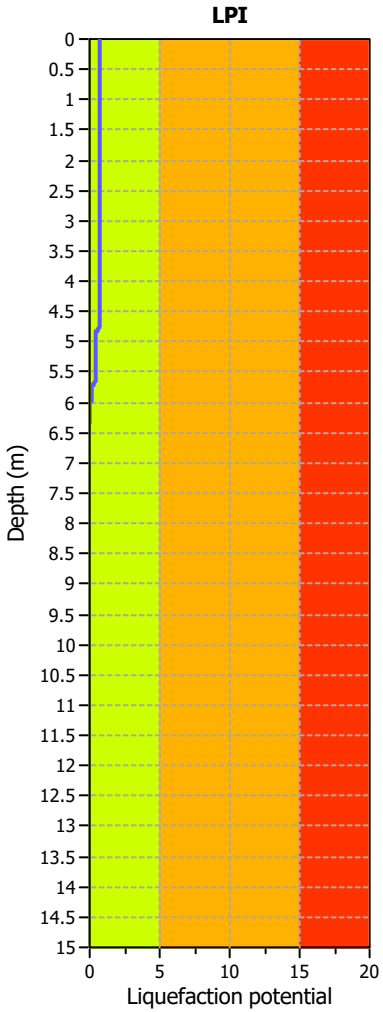
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http://www.initia.co.nz

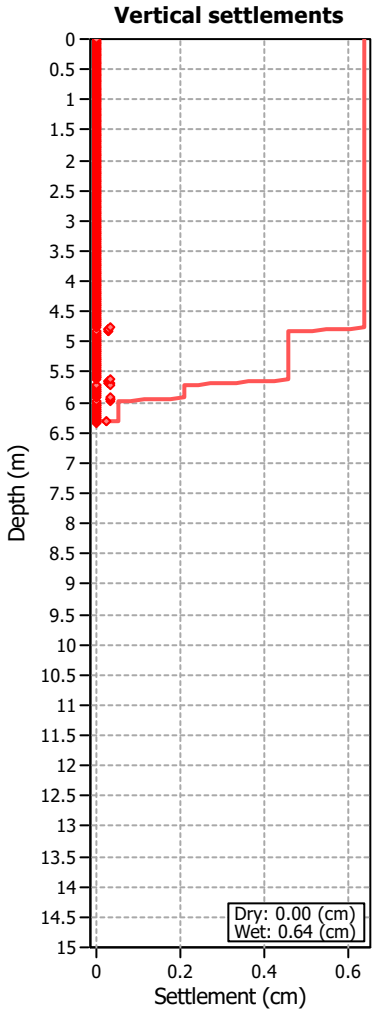
Project: **Waipapa Development**
Location: **P-003194**

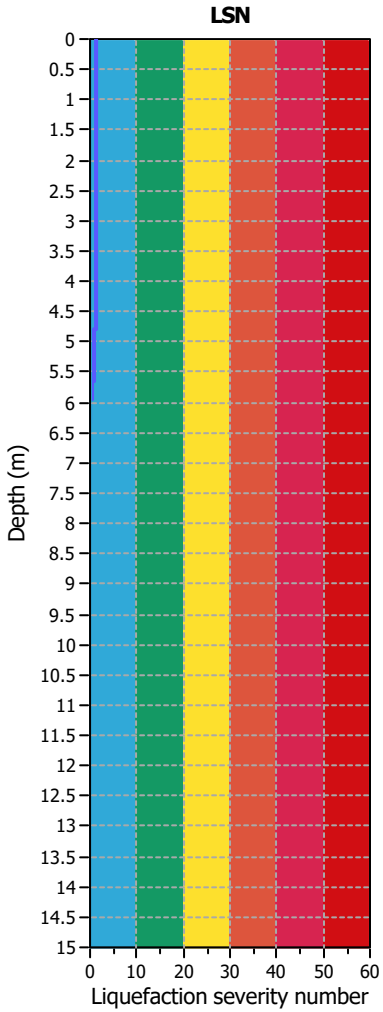
CPT: CPT05
Total depth: 6.33 m









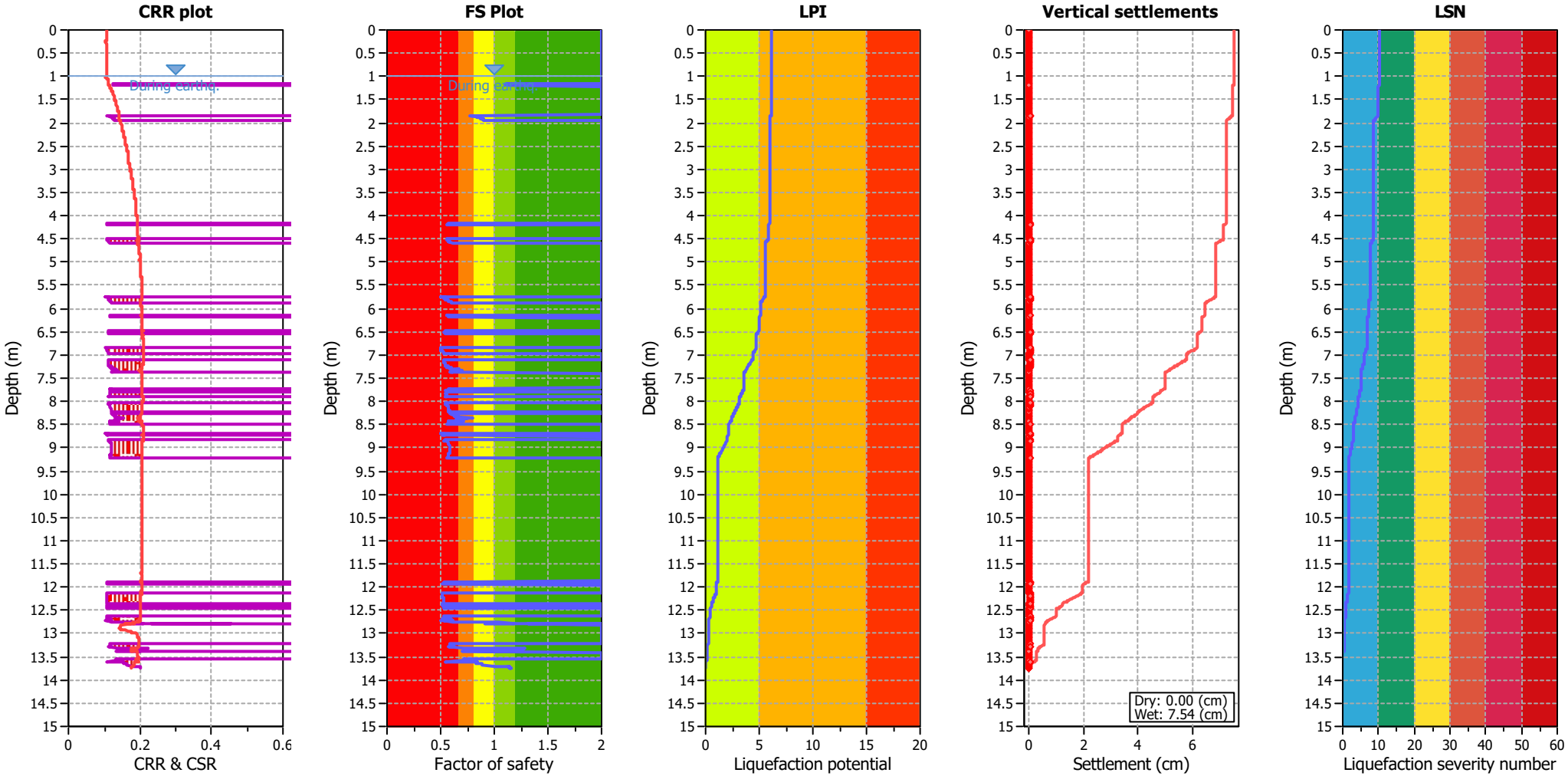


Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.10 m	Use fill:	No	Clay like behavior applied:	.
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Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT06
Total depth: 13.76 m

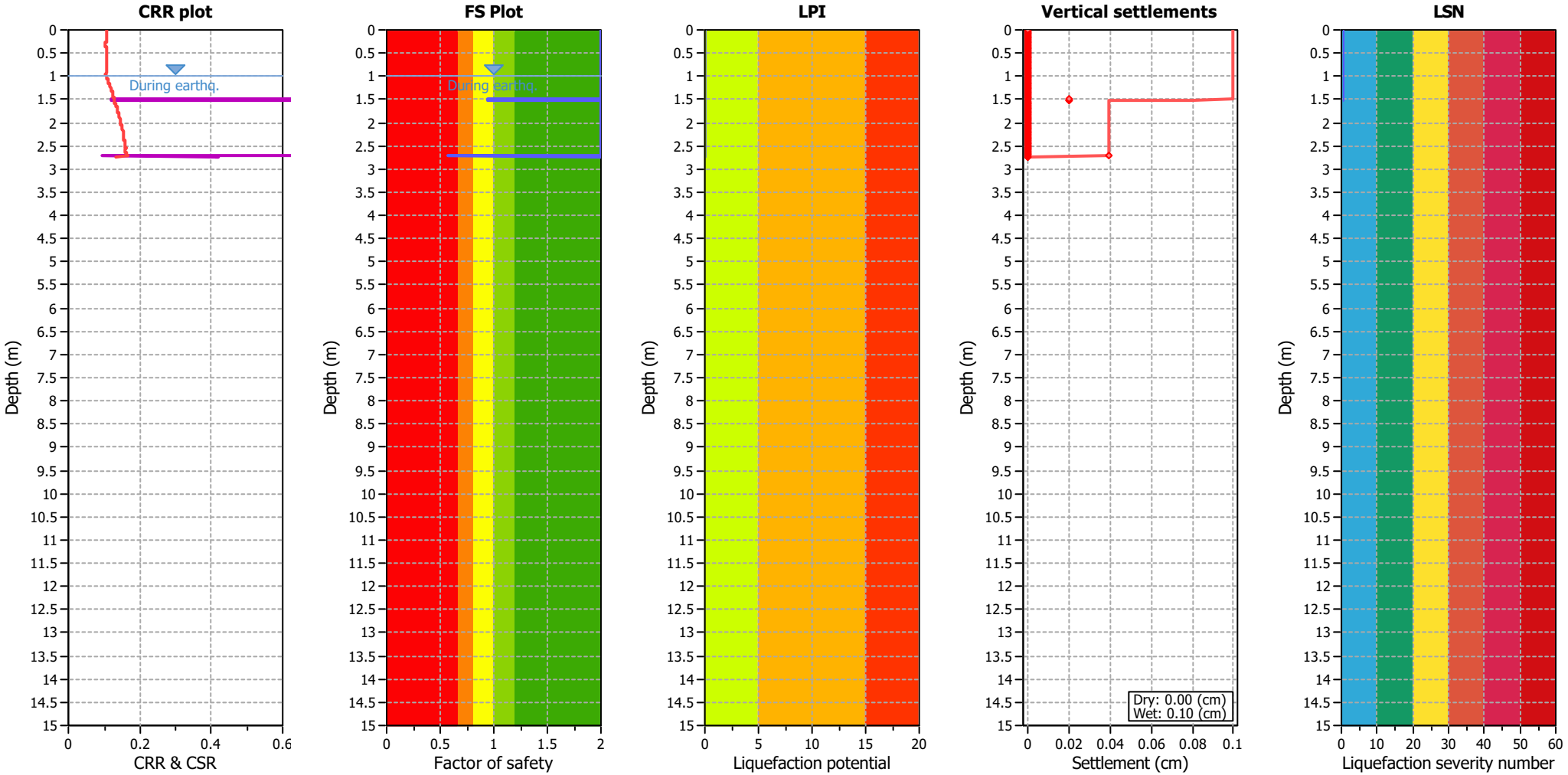


Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.00 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT07
Total depth: 2.74 m

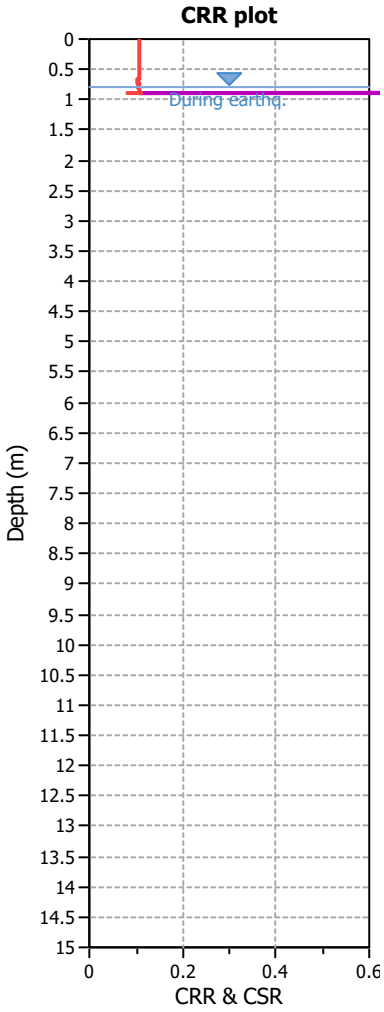


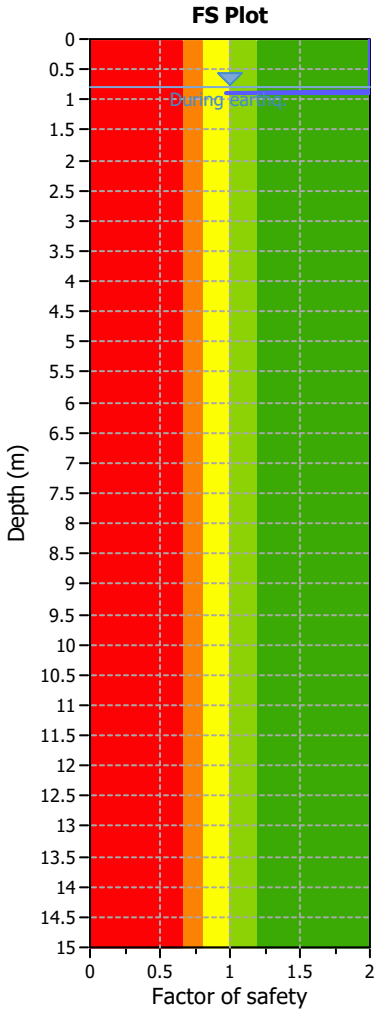
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Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

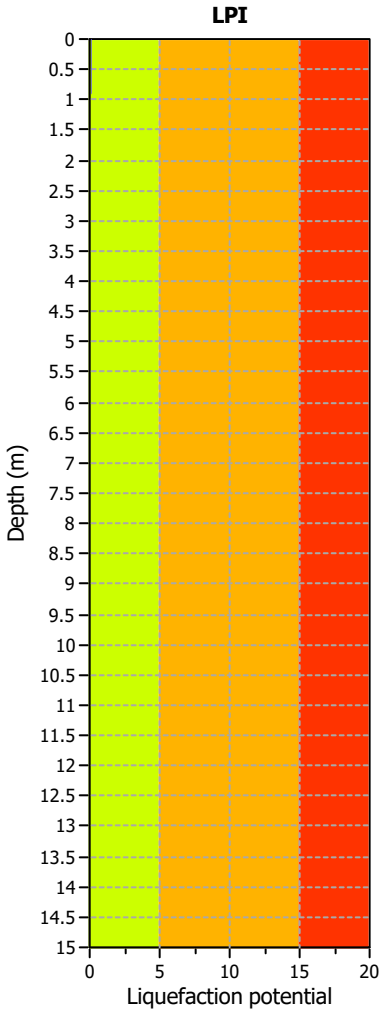
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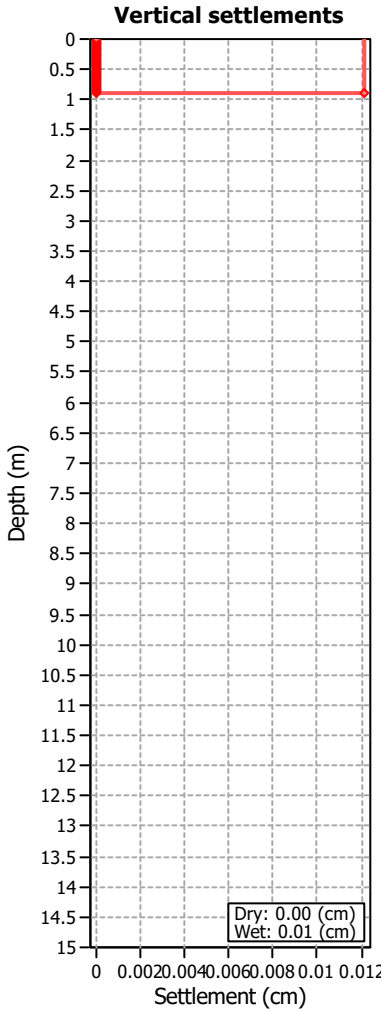
Project: **Waipapa Development**
Location: **P-003194**

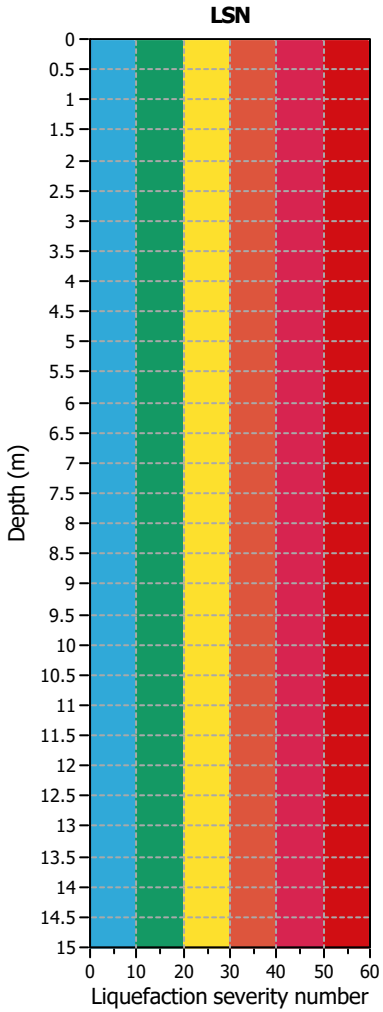
CPT: CPT08
Total depth: 0.89 m









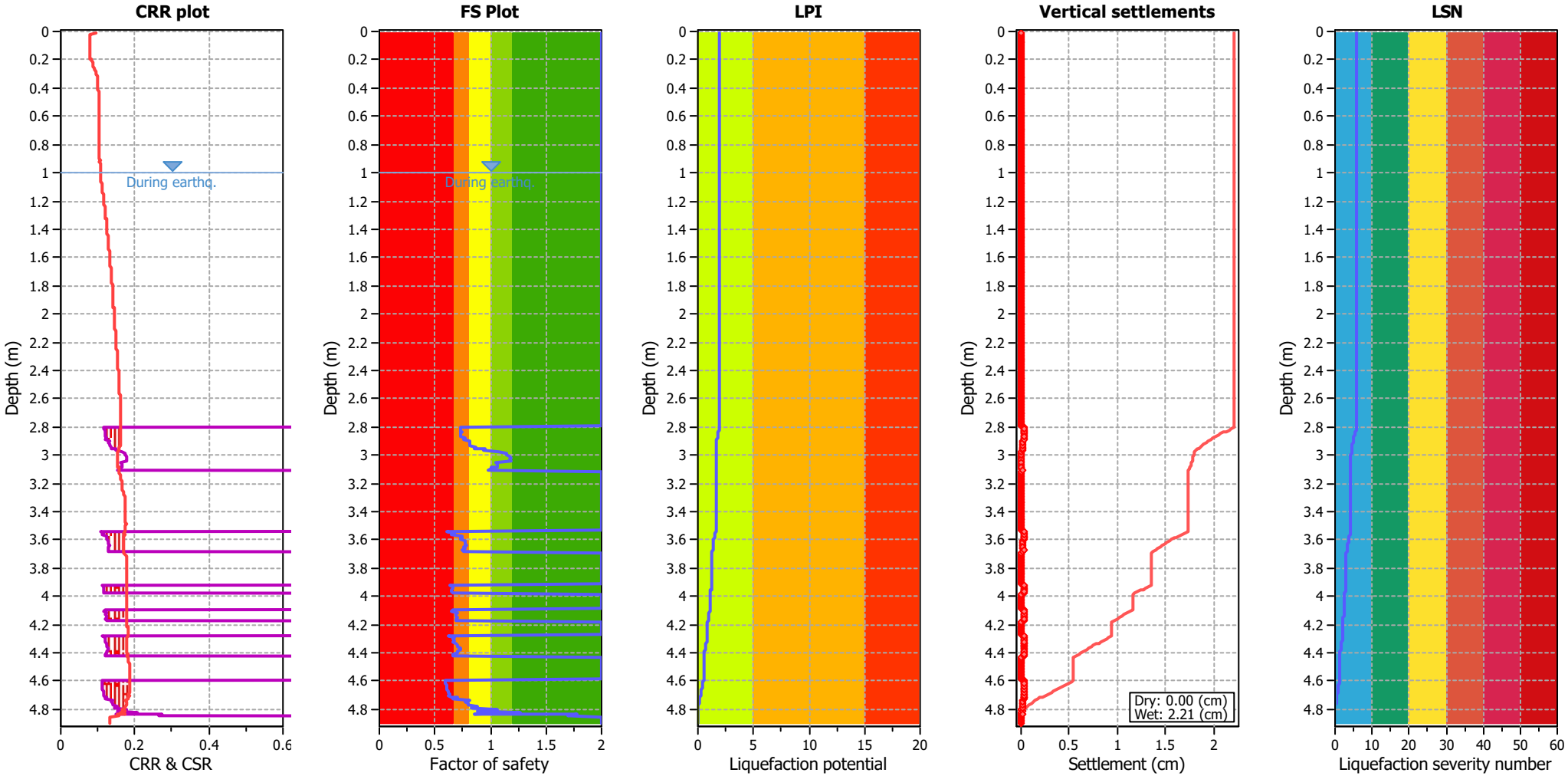


Analysis method:	B&I (2014)	G.W.T. (in-situ):	0.80 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	0.80 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT101
Total depth: 4.90 m

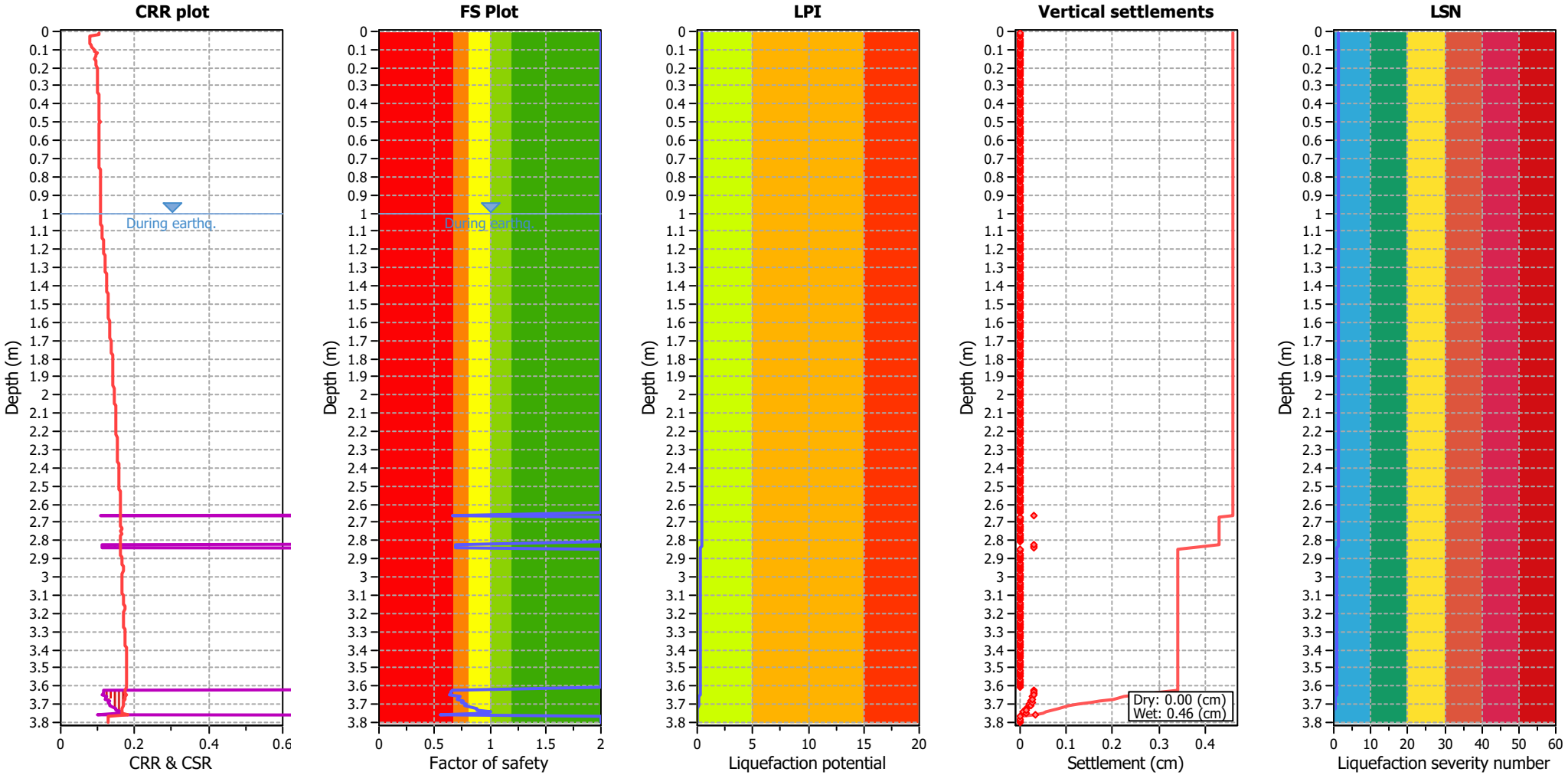


Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.10 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT102
Total depth: 3.80 m

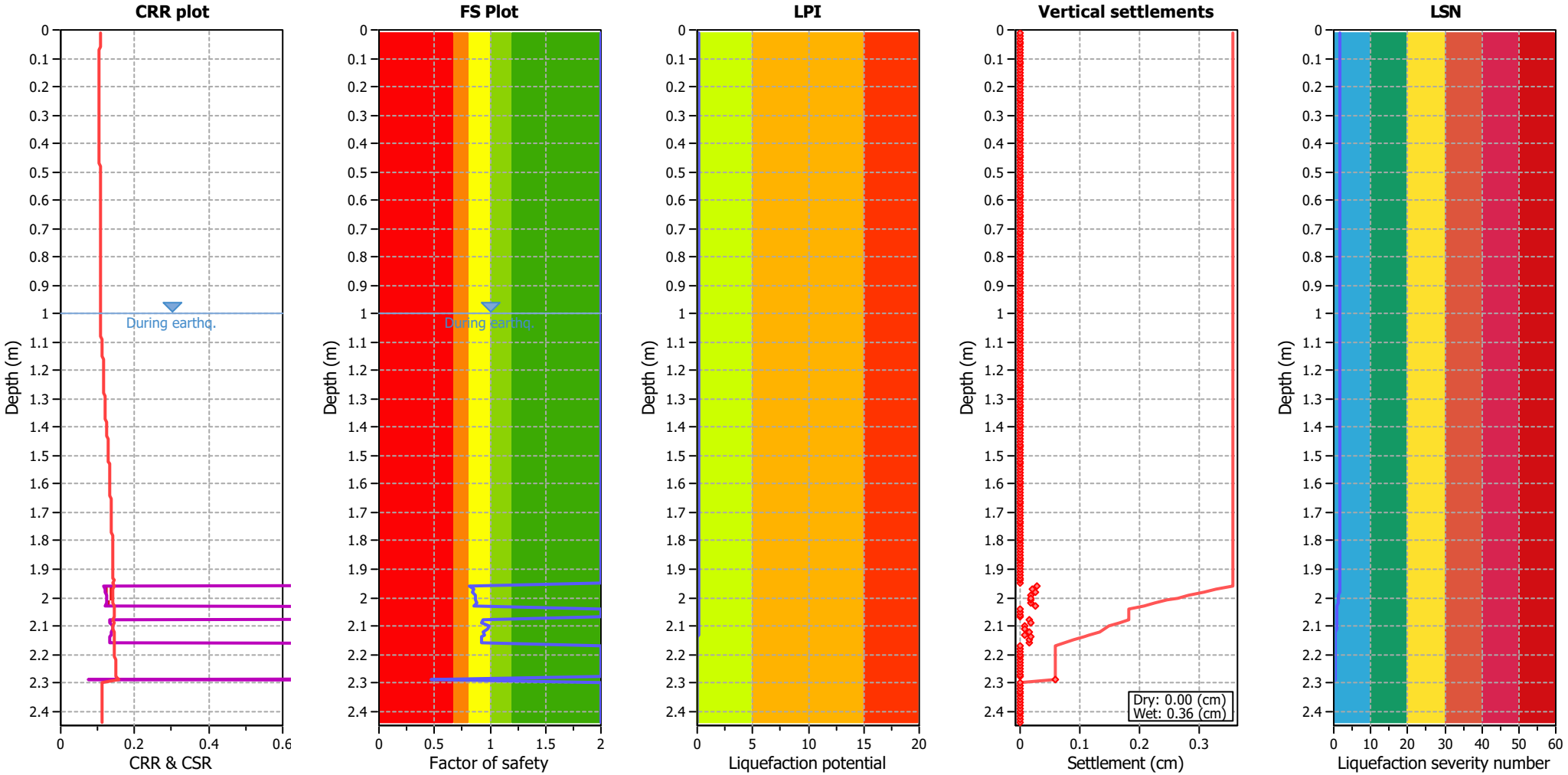


Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.50 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT103
Total depth: 2.44 m

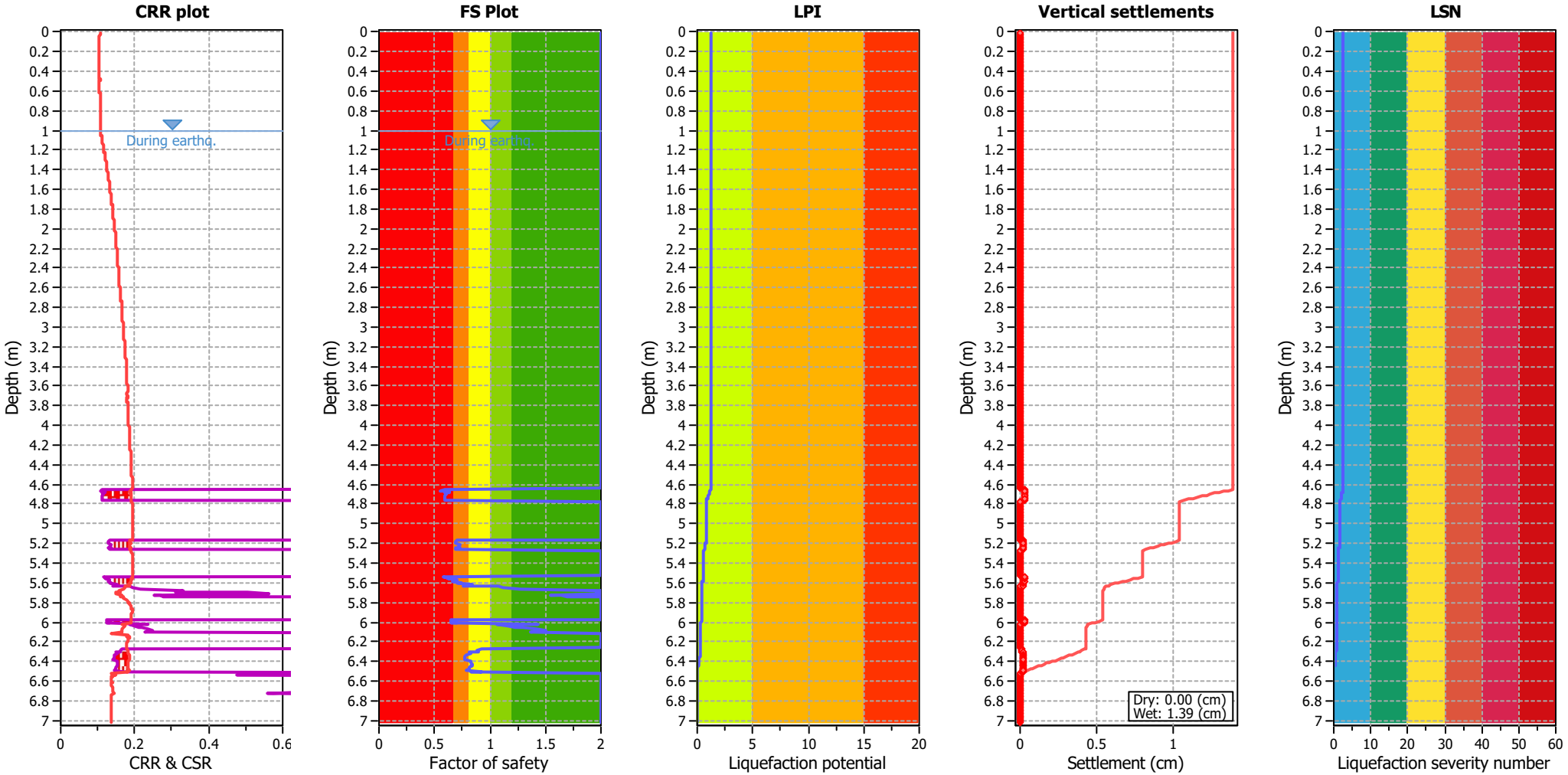


Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.20 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT104
Total depth: 7.02 m

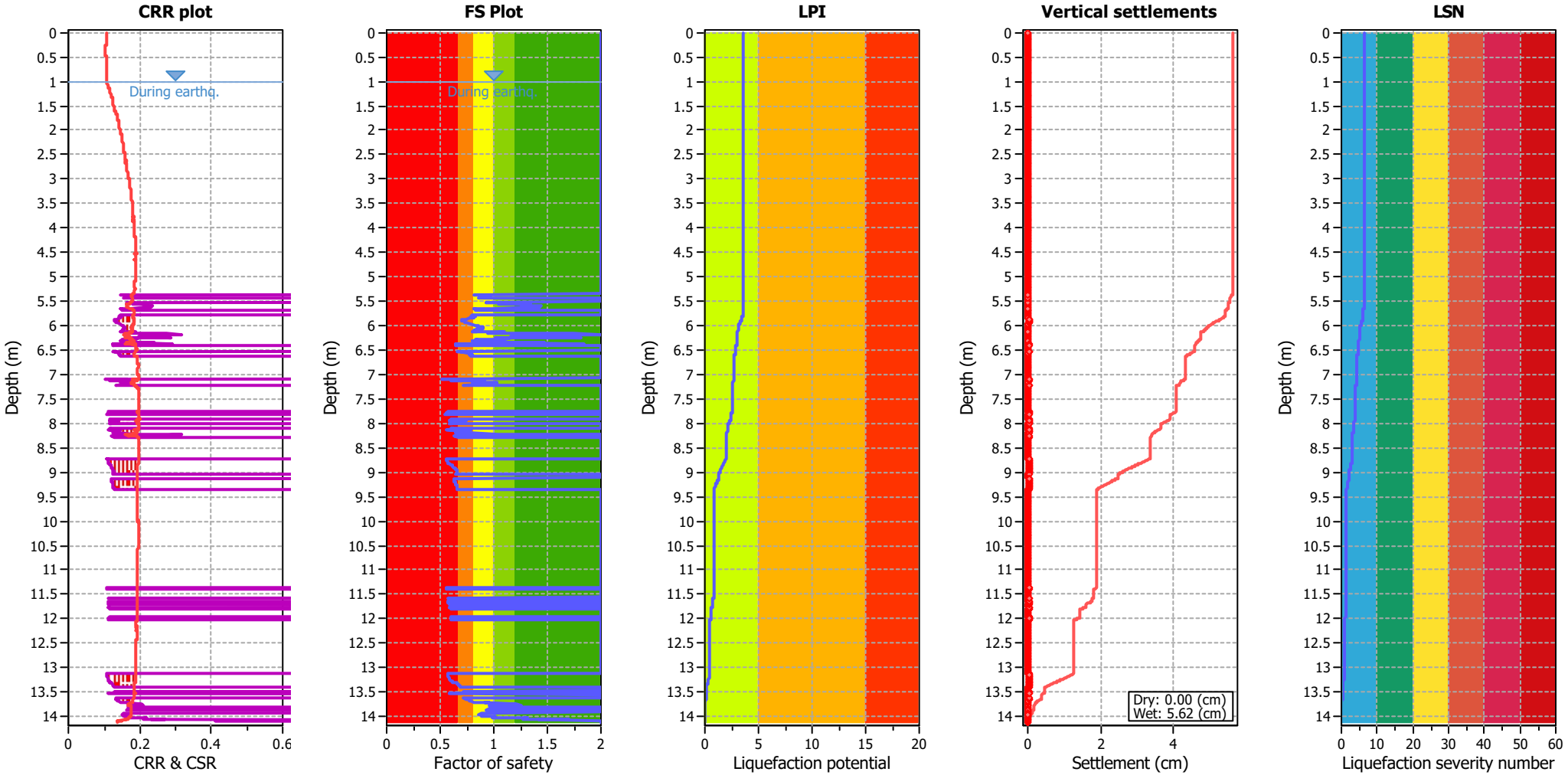


Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.05 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT105
Total depth: 14.12 m

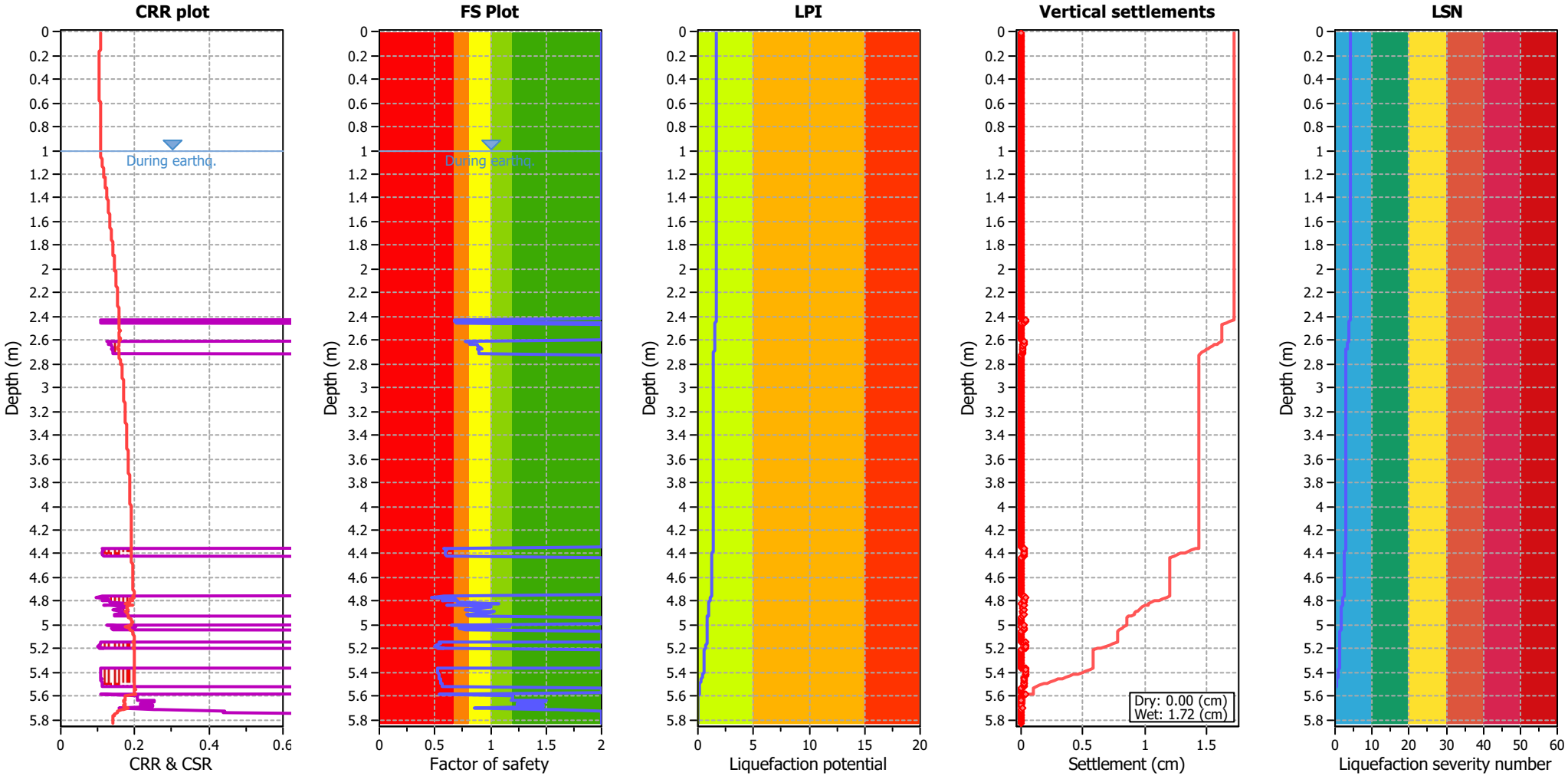


Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.10 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT106
Total depth: 5.83 m

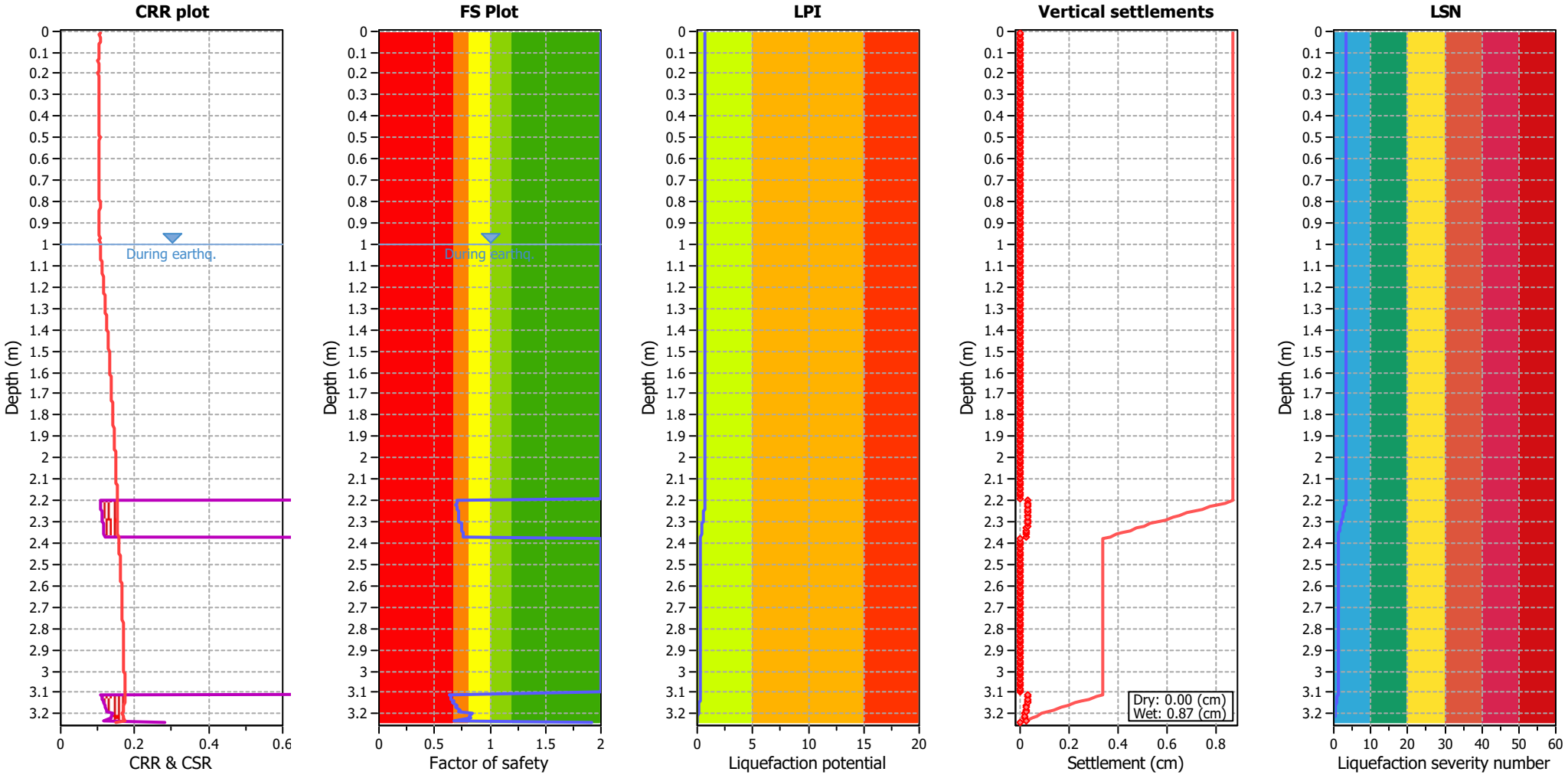


Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.00 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT107
Total depth: 3.24 m



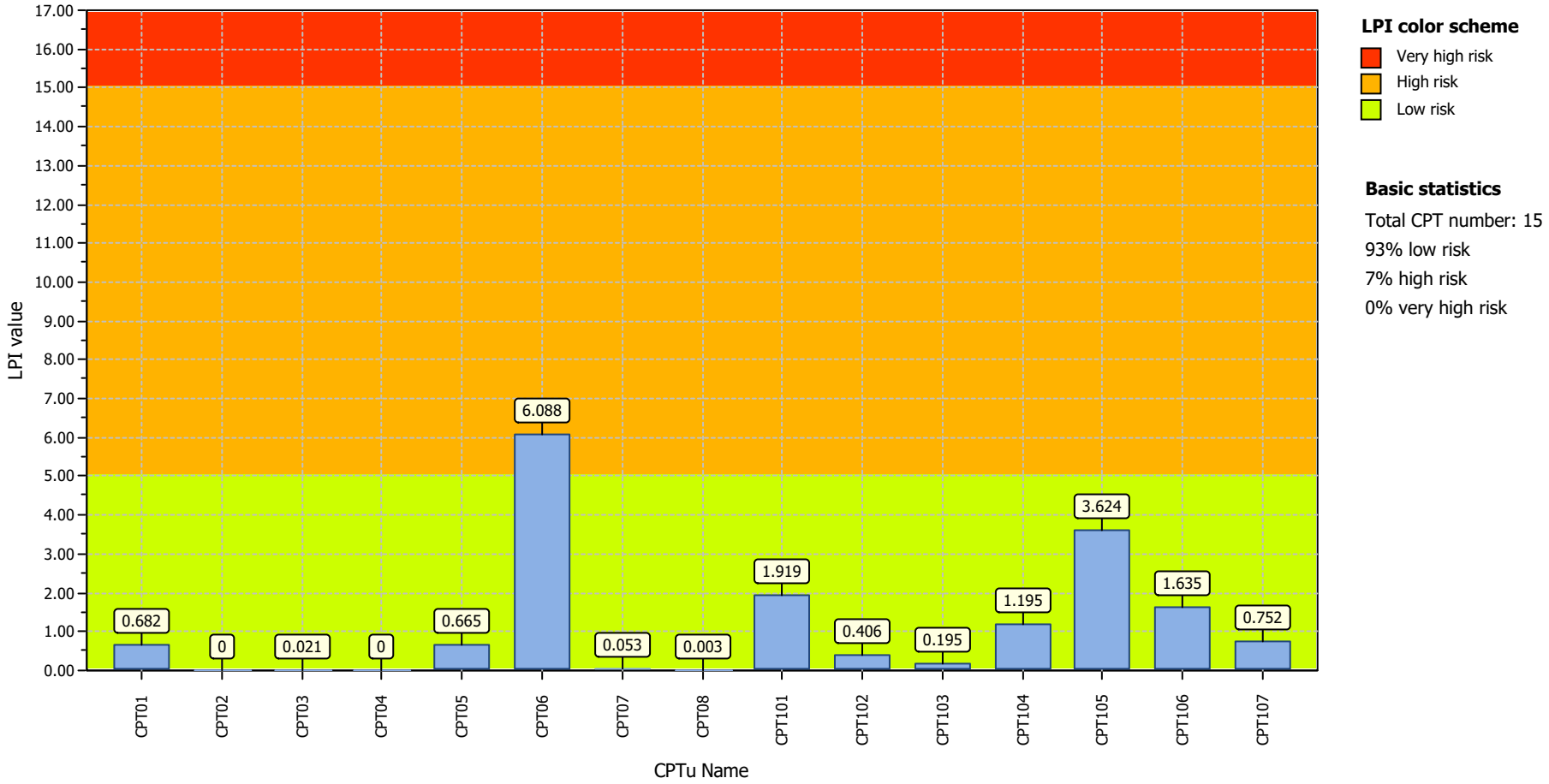
Analysis method:	B&I (2014)	G.W.T. (in-situ):	0.90 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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http://www.initia.co.nz

Project title : Waipapa Development

Location : P-003194

Overall Liquefaction Potential Index report



LPI color scheme

- Very high risk
- High risk
- Low risk

Basic statistics

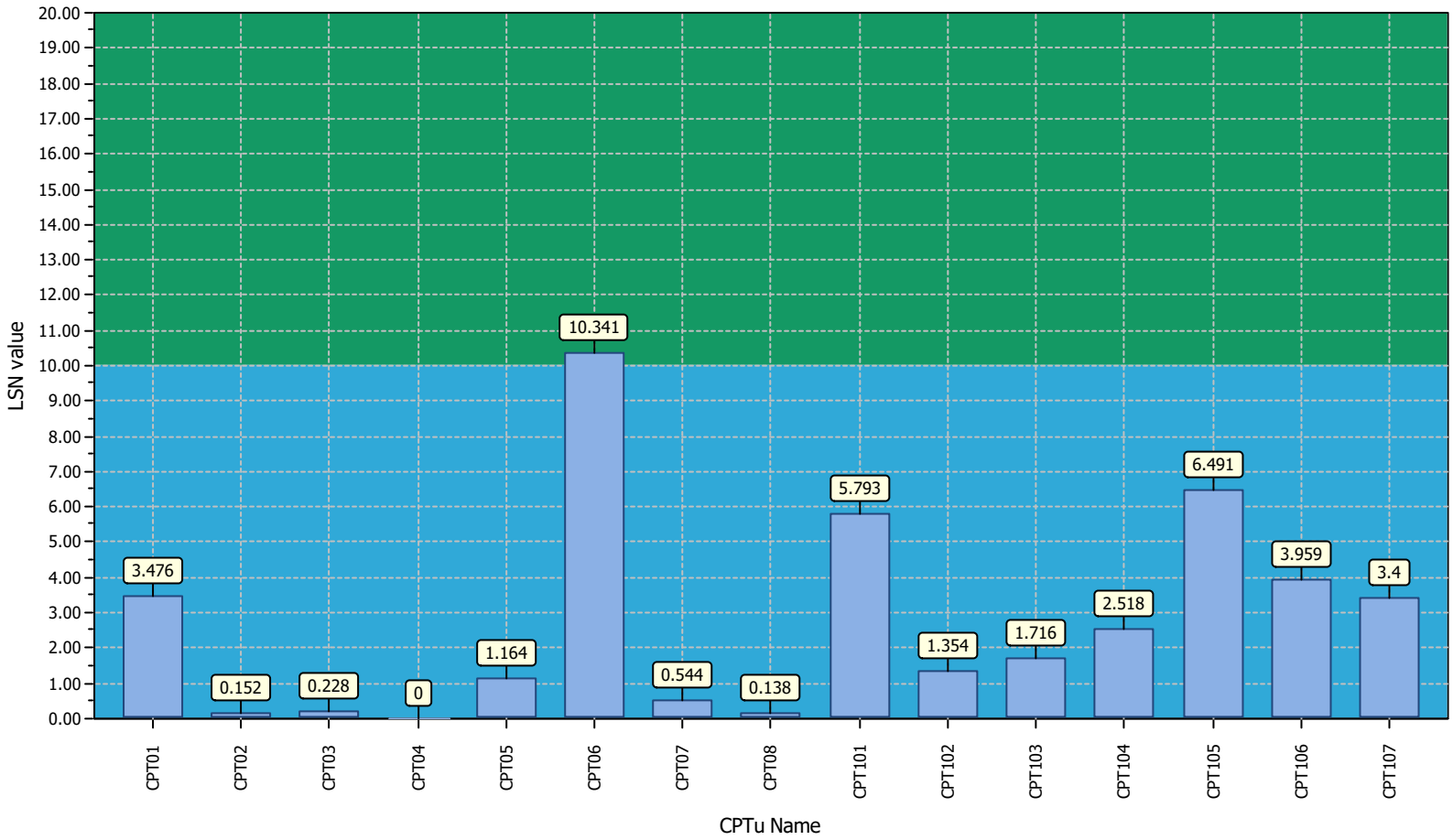
Total CPT number: 15
93% low risk
7% high risk
0% very high risk

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http://www.initia.co.nz

Project title : Waipapa Development

Location : P-003194

Overall Liquefaction Severity Number report



LSN color scheme

- Severe damage
- Major expression of liquefaction
- Moderate to severe exp. of liquefaction
- Moderate expression of liquefaction
- Minor expression of liquefaction
- Little to no expression of liquefaction

Basic statistics

Total CPT number: 15

93% little liquefaction

7% minor liquefaction

0% moderate liquefaction

0% moderate to major liquefaction

0% major liquefaction

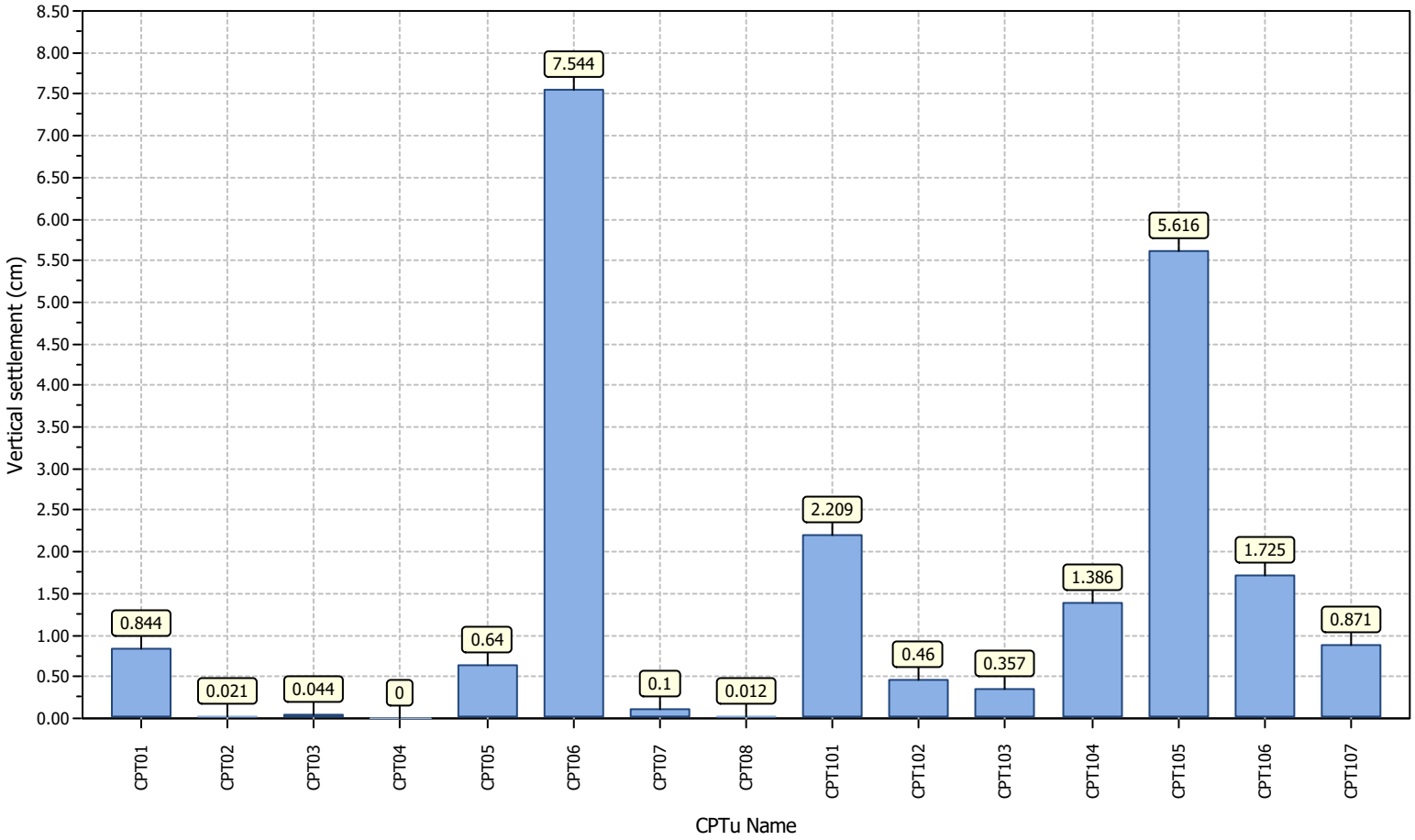
0% severe liquefaction

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Project title : Waipapa Development

Location : P-003194

Overall vertical settlements report



Appendix D Construction Monitoring Requirements

This table documents the required monitoring, observation and testing requirements during the earthworks and construction stages of the project. It is important that this table be updated/revised at the commencement of construction, once the design is complete.

Construction Stage	Summary Design Advice/Parameters	Hold Point	Monitoring Requirement and Acceptance Criteria
Earthworks	Topsoil, unsuitable, and low strength soils to be stripped and removed. Minimum subgrade strength prior to filling.	Pre-fill subgrade assessment	Visual approval by geotechnical engineer. Shear vane testing to confirm minimum Su of 60 kPa. Proof rolling to confirm no weaving/significant surface deflection.
	Fill compacted to achieve 'Engineered Fill' criteria as specified in Section 5.3.4 of this report.	During fill placement and compaction	Cohesive fill compacted to achieve: Min Su = 120 kPa Average Su = 140 kPa (5 consecutive tests). Max air voids: 10% Average air voids: 8%. Hardfill: Min CIV 25 Average CIV 28 (5 consecutive tests).[1]
Ground Improvement	Undercuts are required to remove uncontrolled fill, organic soils, and/or topsoil where identified beneath the hardfill in the storage yard area.	During earthworks	Visual approval by geotechnical engineer. Shear vane testing to confirm minimum Su of 60 kPa.
	Preloading to be applied across parts of Building 3 footprint (in its present locations) prior to foundation and slab construction. Approximately 1 m preload above design subgrade level, maintained for minimum 6 months to be confirmed by specific design.	During preloading period	Continuous settlement monitoring to verify that settlement rates have attenuated to acceptable levels. Settlement monitoring results to be reviewed and approved by Geotechnical Engineer before preload removal.
Foundations	Footings must bear on either natural Late Quaternary colluvial/alluvial soils (Buildings 1 and 2) or Engineered Fill soils following satisfactory preloading (Building 3). Minimum foundation embedment depth of 600 mm below finished ground level. Geotechnical Ultimate Bearing Capacity: 300 kPa.	Following excavation of footings, before placement of site concrete/ blinding and reinforcement	Visual appraisal and minimum undrained shear strength: Su > 60 kPa or Scala blow of 3 per 100 mm penetration (granular)

Construction Stage	Summary Design Advice/Parameters	Hold Point	Monitoring Requirement and Acceptance Criteria
Floor Slab or Pavement Subgrade. [2, 3, 4]	Subgrade CBR: 3% for floor slabs (post-preload for Building 3); and pavement areas (following stripping of uncontrolled fill/topsoil where applicable).	Prior to placement of subbase layers	Minimum undrained shear strength of subgrade: Su = 70 kPa (cohesive) or Scala blow of 3 per 100 mm penetration (granular)

Notes:

1. The Contractor should refer to the Earthworks Specification for a full summary of the required test type, method, frequencies, and acceptance criteria.
2. Geotechnical Engineer is responsible for the monitoring of materials to subgrade level only.
3. Refer to slab designer or structural engineer for compaction/other criteria for subbase layers.
4. Refer to pavement designer or civil engineer for compaction/other criteria of pavement (subbase/basecourse) layers.

Do not scale from drawings.
The Contractor must check and verify all dimensions on site prior to commencing any work.

All work to be in accordance with
The Building Act 2004,
The New Zealand Building Code, NZS 3604 and
Any additional Territorial Authority requirements.
Refer Specification for references to other
New Zealand / Australian Standards to be complied with as they apply to this project.

WIND ZONE: HIGH
EXPOSURE ZONE: C

Whiriwhiritoa Stream

77.0

B-Train turning curve

FGL: 77.89

MH5
LL 77.80
IL IN 76.45
IL OUT 76.40

Easement boundary
297.12 m²

SW OUTLET

77.0

MH6
LL 77.59
IL IN 76.18
IL OUT 76.13

A - 01

FGL: 77.89

FGL: 77.815

Entry / Exit

FGL: 77.89

Extg vehicle crossing

BUILDING 2
FL: 78.09
Lettable area
20m x 28m = 560m2
688.90 m²

77.0

FGL: 77.89

FGL: 77.99

Building 2 Platform RL 77.94

Diagonal hatching = fill area 689 m².
Volume: 579 m³
Maximum fill depth 1.14 metres

A - 02
546.59 m²

7 carparks

FGL: 77.89

Landscape 50% of 6m wide strip

CP9 Cess Pit.
LL 77.708

FGL: 77.99

FGL: 77.89

A - 03
402.13 m²

MARITIME LANE

MH1
LL 77.818
IL IN 76.18
IL OUT 76.13

CP1 Cess Pit
LL: 77.66
IL IN 76.25
IL OUT 76.2

FGL: 77.89

FGL: 77.99

FGL: 77.99

BUILDING 1
FL: 78.09
Lettable area
20m x 40m = 800m2
956.25 m²

Building 1 Platform RL 77.94

Diagonal hatching = fill area 956 m².
Volume: 517 m³
Maximum fill depth 0.76 metres

78.0

A - 04
377.19 m²

FGL: 77.89

FGL: 77.99

FGL: 77.89

MH2
LL 77.81
IL IN 76.38
IL OUT 76.33

A - 05
402.66 m²

CP5 Cess Pit.
LL 77.64

FGL: 77.766

Landscape 50% of 6m wide strip

77.0

KLINAC LANE

Sediment retention pond size & location TBC

CP2 Cess Pit.
LL 77.645

MH4
77.535
IL IN 76.63
IL OUT 76.58

Green space / future development area

A - 08
1,070.88 m²

FGL: 77.89

FGL: 77.71

MH3.
LL 77.79
IL IN 76.67
IL OUT 76.62

A - 06
544.60 m²

CP6 Cess Pit.
LL 77.64
IL OUT 76.71

Extg vehicle crossing

CP7 Cess Pit.
LL 77.60
IL OUT 76.765

77.0

Easement boundary

CP3 Cess Pit Manhole.
LL 77.150
IL IN 76.82
IL OUT 76.77

A - 09
637.21 m²

FGL: 77.85

A - 07
463.46 m²

CP4 Cess Pit.
LL 77.370
IL OUT 76.95

FGL: 77.29

FGL: 77.29

A - 10
167.48 m²

Silt fence

FGL: 77.29

BUILDING 3
FL: 77.49
Lettable area
20m x 28m = 560m2
685.85 m²

Building 3 Platform RL 77.34

Diagonal hatching = fill area.
Volume: 302 m3
Maximum fill depth 0.74 metres

NOTES:

Fill volume for buildings:	1,398m³
Fill volume for paving:	1,789m³
Total fill volume:	3,187m³
Total fill volume in 10 year flood zone:	912m³
Total fill volume in 100 year flood zone:	3,187m³

Protect the works in accordance with FNDC Engineering standards for temporary erosion and sediment control.
Install silt fences along boundaries where possible.
Install filter sock to crossings and paved edges

Only expose enough ground at any one time as required to complete the siteworks.
Excavated area to be stabilized with gravel immediately after exposure.

Install temporary filter cloth to any existing surface water drains. Maintain during construction, including regular cleaning.

Cut faces and batters to be covered immediately after exposure with polythene or mulch.

Fill areas to be compacted to engineers requirements and stabilised with GAP 65 or GAP 40 basecourse.

Monitor and review erosion & sediment control measures constantly throughout the period that earth remains uncovered.

EARTHWORKS PLAN

SCALE 1:200 @ A1

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
EARTHWORKS PLAN

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

Spooner architectural solutions
PO Box 10 KERIKERI 0245
e: paul@spoonersolutions.co.nz
p: (09) 407 3107 m: 027 289 1221
Spooner Architectural Services Ltd.

SCALE

SHEET No.
BC30

4
SO 438821

2
DP 110493

Whiriwhiritoa Stream

Average width of stream 2.5m

stream position

DP 95010

Ⓘ
SO 438821

Ⓓ
DP 514002

Ⓐ
SO 570424

EB

25m offset line

SECTION 3
SO 438821
1.2148ha

14
DP 337517

KLINAC LANE

KLINAC LANE

WBC Developers Limited
Title : 574944
Total Area : 1.2148ha
Zone : Industrial

0 5 10 15 20 25 50

Dir : Drawing001
Scale @ A3 : 1:100
Date : 30/06/2026

SURVEY OF STREAM WIDTH ADJACENT SECTION 3 SO 438821

REF : 8759

DONALDSONS
REGISTERED LAND SURVEYORS

Land / engineering Surveyors & development planners - 90 Kerikeri Road, Kerikeri, Northland, New Zealand - www.donaldsons.net.nz - em: info@donaldsons.net.nz - p:09 4079182

This section has rules that are subject to appeal.

Earthworks

Overview

Earthworks involve the alteration or disturbance of land, including by moving, removing, placing, blading, cutting, contouring, filling or excavation of earth. Earthworks are an integral part and necessary component of the use and development of rural and urban land for living, business and recreation purposes. In addition, earthworks are a key component of the development, operation, maintenance and upgrading of infrastructure.

However, earthworks can be significant and result in long term adverse effects. Earthworks have the potential to detrimentally alter and affect landforms, landscapes, natural features, historic and cultural heritage and the natural character of the coastal environment. Earthworks associated with subdivision and land use can result in adverse effects including increased land instability and accelerated erosion and alteration or loss of overland flow paths leading to increased risks from natural hazards and sedimentation entering waterbodies and the coastal marine area. Often the effects of earthworks are to such an extent that the identified amenity values and character of an area can be changed permanently and unidentified historic and cultural sites are destroyed or damaged.

Council has responsibilities under the RMA and the RPS to manage any effects from land use and subdivision, which includes the management of earthworks. The purpose of this chapter is to ensure that the adverse effects associated with earthworks are appropriately managed and minimised. The NRC also has responsibilities to manage earthworks for the purposes of soil conservation, and water quality and quantity for waterbodies and the coastal marine area.

Objectives	
EW-O1	Earthworks are enabled where they are required to facilitate the efficient subdivision, use and development of land, while managing adverse effects on amenity, public safety, surrounding land and infrastructure.
EW-O2	Earthworks are appropriately designed, located and managed to protect historical and cultural values, natural environmental values, preserve amenity and safeguard the life-supporting capacity of soils.
EW-O3	Earthworks are undertaken in a manner which does not compromise the stability of land, infrastructure and public safety.

Policies	
EW-P1	Enable earthworks necessary to provide for the district's social, economic and cultural wellbeing, and their health and safety where they provide for: a. urban land uses and development within urban areas; b. rural land uses and development including, farm tracks, land drainage, and other farming activities within rural areas; c. restoration, conservation and recreation activities; d. land drainage and flood control works; and e. installation, upgrade and maintenance of infrastructure.
EW-P2	Ensure earthworks are managed, when it has the potential to: a. create new or exacerbate existing natural hazards, including but not limited to flooding, instability, and coastal hazards; and b. result in adverse effects on amenity value, historic heritage, cultural values and indigenous biodiversity
EW-P3	Ensure earthworks are located and designed appropriately to manage the effects of the activity by: a. controlling maximum depth and height and maximum area or volume of earthworks; b. requiring appropriate setbacks to be maintained from adjoining property boundaries; c. managing the location and design of infrastructure; d. managing impacts on natural drainage patterns and overland flow paths; and e. controlling the movement of dust and sediment beyond the area of development to avoid: i. nuisance effects and/or amenity effects on surrounding; and ii. silt and sediment entering stormwater systems.
EW-P4	Require earthworks to be of a type, scale and form that is appropriate for the location having regards to the effects of the activity, and: a. existing site constraints, opportunities and specific engineering requirements; b. the impact on existing natural landforms, features, historic heritage and indigenous biodiversity; c. compatibility with the visual amenity and character values of the area;

	d. changes in the natural landform that will lead to instability, erosion and scarring; e. impacts on natural drainage patterns and overland flow paths; f. using materials for retaining structures that are compatible with the visual amenity and the characteristics and qualities of the surrounding area; g. minimising adverse visual effects associated with any exposed cut faces or retaining structures, including with the use of screening, landscaping and/or planting; and h. loss of flood storage within flood hazard areas.
EW-P5	Manage effects on historic heritage and cultural values that may be discovered when undertaking earthworks by: a. requiring a protocol for the accidental discovery of archaeology, kōiwi and artefacts of Māori origin; and b. undertaking appropriate actions in accordance with mātauranga and tikanga Māori when managing effects on cultural values.
EW-P6	Require that all earthworks are designed and undertaken in a manner that ensures: a. the stability and safety of surrounding land, buildings or structures; and b. the safe, effective and efficient operation of infrastructure.
EW-P7	Ensure all earthworks associated with land development are designed and assessed in a coordinated and integrated manner at the time of subdivision, by: a. controlling earthworks associated with subdivision, including for the purpose of site preparation, creating roads or access to/within the subdivision, and for the provision of infrastructure; and b. considering the appropriateness of earthworks in conjunction with site design and layout of future subdivision and/or development of land, particularly for future infill or greenfield subdivision.
EW-P8	Consider the following matters where relevant when assessing and managing the effects of earthworks: a. the location, scale and volume; b. depth and height of cut and fill; c. the nature of filling material and whether it is compacted; d. the extent of exposed surfaces or stockpiling of fill; e. erosion, dust and sediment controls; f. the risks of natural hazards, particularly flood events; g. stormwater controls; h. flood storage, overland flow paths and drainage patterns; i. the stability of land, buildings and infrastructure; j. visual amenity, natural character, natural features and landscape values, k. historic heritage values, and whether any assessment or advice from a suitably qualified and experienced heritage expert is required; l. any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6; m. the life-supporting capacity of soils; n. the extent of indigenous biodiversity clearance and its effect on biodiversity values; o. the location, operational and functional need and use of infrastructure; p. temporary or permanent nature of any adverse effect; and q. traffic and noise effects.

Rules

Notes:

1. **More stringent earthworks rules apply in the following other district-wide matters: Natural Character, Natural Features and Landscapes, Coastal Environment, Heritage Area Overlays, Historic Heritage, Notable Trees, and Sites and Areas of Significance to Māori. Those earthworks rules apply in addition to the earthworks rules and standards in this chapter. Refer to the *how the plan works* chapter to determine the activity status of a proposed activity where resource consent is required under multiple rules in this District Plan.**
2. **The Ecosystems and Indigenous biodiversity chapter manages land disturbance associate with indigenous vegetation clearance.**
3. **Earthworks associated with commercial forestry are regulated under the National Environmental Standards for Commercial Forestry 2017 (NES-CF). The rules in the Earthworks chapter do not apply to earthworks regulated by the NES-CF. However, if commercial forestry earthworks are located in the Coastal Environment or Natural Features and Landscapes overlays, the more stringent earthworks rules in those chapters prevail over the NES-CF.**
4. **The Northland Regional Plan includes rules relating to earthworks to manage effects on freshwater, the coastal marine area, natural hazards and soil. Consent may be required for earthworks under the Northland Regional Plan in addition to this District Plan.**
5. **Earthworks in the margins of wetlands are controlled by the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES-F). The rules in this Earthworks**

chapter do not apply to earthworks regulated by the NES-F.

6. **Where soil sampling and land disturbance is proposed on land where a hazardous activity or industry has been, is more likely than not to have been or is currently operating, then the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health Regulations 2011 also apply.**
7. **The earthworks rules in this Chapter do not apply to the removal or replacement of an underground fuel storage system which are regulated under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health Regulations 2011.**
8. **Where electric vehicle charging infrastructure is established in accordance with the NES-ETEVCIA, the provisions of that NES prevail over any inconsistent District Plan rule.**

EW-R1	**Earthworks**	
All zones	**Activity status: Permitted** **Where:** **PER-1** The earthworks complies with standards: EW-S1 Maximum earthworks thresholds; EW-S2 Maximum depth; EW-S3 Accidental discovery protocol; EW-S4 Site reinstatement; EW-S5 Erosion and sediment control; EW-S6 Setbacks; EW-S7 Land stability; EW-S8 Nature of filling material; and EW-S9 Flood and coastal hazards **EW-R1 does not apply to:** a. the placement of aggregate; b. earthworks to control unwanted organisms as a response to directions of a person authorised under the Biosecurity Act 1993.	**Activity status where compliance not achieved with PER-1:** **Restricted discretionary** **Matters of discretion are restricted to:** a. the location, scale and volume; b. depth and height of cut and fill; c. the nature of filling material and whether it is compacted; d. the extent of exposed surfaces or stockpiling of fill; e. erosion, dust and sediment controls; f. the risks of natural hazards, particularly flood events; g. stormwater controls; h. flood storage, overland flow paths and drainage patterns; i. the stability of land, buildings and infrastructure; j. natural character, landscape, natural features, historic heritage, spiritual and cultural values; k. the life-supporting capacity of soils; l. the location and use of infrastructure; m. temporary or permanent nature of any adverse effect; n. traffic and noise effects; o. time of year earthworks will be carried out and duration of the activity; and p. impact on visual and amenity values.
EW-R2	**Earthworks within the National Grid Yard and within 10m of Top Energy Transmission Lines (110kV and 66kV)**	
All zones	**Activity status: Permitted** **Where:** **PER-1** Earthworks must: 1. be no deeper than 300mm within 6 metres of the outer visible edge of a foundation of a 110kV transmission line, tower or pole; 2. be no deeper than 3 metres: a. between 6 metres and 12 metres from the outer visible edge of a foundation of a 110kV transmission line, tower or pole; or b. between 6 metres and 10 metres from the outer visible edge of foundation of a 66kV transmission line, tower or pole; 3. not compromise the stability of a transmission line, tower or pole; 4. not result in a reduction in the ground to conductor clearance distances as required by New Zealand Electrical Code of Practice for Electrical Safe	**Activity status where compliance not achieved with PER-1: Non-complying**

	Distances (NZECP34:2001); and 5. not permanently physically impede access to a 110kV transmission line or support structure. **PER-1 does not apply to:** a. land disturbance undertaken as part of agricultural, horticultural or domestic cultivation, or repair or resealing of a road, footpath, driveway or farm track. b. excavation of a vertical hole, not exceeding 500mm in diameter, that is more than 1.5 metres from outer visible edge of foundation of a transmission line, pole or stay wire. c. earthworks that otherwise comply with Clause 2.4.1 of NZECP34: 2001. **This rule does not apply to** the network utility operator.	
EW-R3	**Earthworks within 10m of Critical Electricity Lines (excluding Top Energy 110Kv and 66kV Transmission Lines)**	
All zones	**Activity status: Permitted** **Where:** **PER-1** Earthworks: 1. are not directly above underground cables; 2. do not result in a reduction of existing ground clearance distances from overhead lines below the minimums prescribed in the New Zealand Code of Practice 34:2001 (NZECP 34:2001); and 3. are in accordance with NZECP 34:2001. **PER-2** Earthworks that do not comply with PER-1 provided that: 1. prior to works notification is provided to Council and the proposed activity is being carried out in accordance with the Electricity Act 1992 and associated regulations (NZECP 34:2001, the Electricity (Hazards from Trees) Regulations 2003 (SR 2003/375), and the Electricity (Safety) Regulations 2010); or 2. the activity is being carried out by a network utility operator or territorial authority in accordance with NZECP 34:2001.	**Activity status when compliance not achieved with PER-1, or PER-2: Restricted discretionary** **Matters of discretion restricted to:** a. the safe and efficient operation and maintenance of the electricity supply network, including: i. the use, design and location of buildings or structures; ii. compliance with NZECP 34:2001; iii. effects on public health and safety; and iv. effects on access to Critical Electricity Lines, designated substations and associated infrastructure for maintenance purposes.
EW-R4	**Earthworks Affecting a mapped Land Drainage Area of Benefit**	
All zones	**Activity status: Restricted discretionary** **Where:** **RDIS-1** Earthworks are within a mapped Land Drainage Area of Benefit that may obstruct, divert or attenuate catchment flows or adversely affect the operation of a land drainage scheme. **Matters of discretion are restricted to:** a. Effects on the operation and maintenance of land drainage infrastructure. b. Effects on catchment flows and drainage capacity. c. Effects on flood risk and the conveyance function of the land drainage scheme. d. Effects on adjoining properties and the wider catchment.	**Activity status when compliance not achieved with RDIS-1: Not applicable**

	e. Measures to avoid, remedy or mitigate adverse effects. f. The adequacy of proposed measures to maintain drainage function. g. The extent to which the proposal supports the efficient and effective operation of the wider land drainage scheme.	

Standards

EW-S1 **Maximum earthworks thresholds**

All zones, except Moturoa Island zone, Orongo Bay zone

The following maximum volumes and area thresholds must not be exceeded for all earthworks undertaken on a site within a single calendar year:

Zone	Volume (m^3)	Area (m^2)
General Residential, Medium Density Residential, Mixed Use, Town Centre, Hospital, Horticulture Processing Facility, Carrington, Kororāreka Russell Township, Hospital, Māori Purpose – Urban zones, Waitangi Estate zone – Whakanga (Tourism) and Te Pitowhenua (Treaty Grounds) sub zone	200	2,500
Natural Open Space, Open Space, Sport and Active Recreation, Rural Residential, Settlement, Quail Ridge, Airport zones, and Waitangi Estate zone – Papa Rehia (Recreation) sub zone	300	2,500
Light Industrial, Heavy Industrial zones	500	2,500
Rural Lifestyle zone	1000	2,500
Rural Production, Mineral Extraction, Corrections, Kauri Cliffs, Ngawha Innovation and Enterprise Park, Māori Purpose – Rural zones, and Waitangi Estate zone - Ahuwhenua (General Activities) sub zone	5000	2,500

This standard does not apply to:

a. earthworks for septic tanks and associated drainage fields;
b. earthworks for the maintenance of existing walking tracks, farm tracks, driveways, roads and accessways;
c. earthworks for the operation, maintenance and repair of existing infrastructure; and
d. earthworks for the maintenance of drains.

Where the standard is not met, matters of discretion are restricted to: refer EW-R1

EW-S2 **Maximum depth**

All zones	The maximum depth of any cut or height of any fill shall not exceed: 1. 1.5m, i.e. maximum permitted cut and fill height may be 3m; or 2. 3m subject to it being retained by a engineered retaining wall, which has had a building consent issued. **This standard does not apply to:** a. to land disturbance; and b. earthworks for telecommunication pole foundations.	**Where the standard is not met, matters of discretion are restricted to: refer EW-R1**
EW-S3	**Accidental discovery protocol**	
All zones	On discovery of any suspected sensitive material, the person must take the following steps: 1. Cease all works within 20m of any part of the discovery immediately and secure the area, including: a. shutting down all earth disturbing machinery and stopping all earth moving activities; and b. establish a sufficient buffer area to ensure that all material remains undisturbed. 2. Within 24 hours of the discovery the owner of the site, tenant or the contractor must: a. inform the following parties of the discovery: i. The New Zealand Police if the discovery is of human remains or kōiwi; ii. The Council in all cases; iii. Heritage New Zealand Pouhere Taonga if the discovery is an archaeological site, Māori cultural artefact, human remains or kōiwi; and iv. Tangata Whenua if the discovery is an archaeological site, Māori cultural artefact, or kōiwi. 3. No works shall recommence until the discovery area is inspected by the relevant authority or agency, this shall include: a. If the discovery is human remains or kōiwi the New Zealand Police are required to investigate the human remains to determine whether they are those of a missing person or a crime scene. The remainder of this process will not apply until the New Zealand Police confirm that they have no further interest in the discovery; or b. If the discovery is of archaeological material, other than evidence of contaminants, a site inspection for the purpose of initial assessment and response will be arranged by the Council in consultation with Heritage New Zealand Pouhere Taonga and appropriate Tangata Whenua representatives. 4. Recommencement of work: a. Heritage New Zealand has confirmed that an archaeological authority has been approved for the work or that none is required; b. Any required notification under the Protected Objects Act 1975 has been made to the Ministry for Culture and Heritage; and c. Resource consent has been granted to any alteration or amendment to	**Where the standard is not met, matters of discretion are restricted to: refer EW-R1**

	the earthworks or land disturbance that may be necessary to avoid the sensitive materials that is not otherwise permitted under the plan or allowed by any existing resource consent.	
EW-S4	**Site reinstatement**	
All zones	As soon as practicable, but no later than six months from the commencement of works: 1. the earthworks area shall be established, filled and/or recontoured in a manner consistent with the surrounding land; and 2. replanted with vegetation which is the same as, or of similar species, to that which existed on the site prior to the earthworks taking place (if any), except that where the site was vegetation with any plant pest, the site may be replanted with indigenous vegetation from locally sourced genetic stocks or sealed, paved, metaled or built over.	**Where the standard is not met, matters of discretion are restricted to: refer EW-R1**
EW-S5	**Erosion and sediment control**	
All zones	Earthworks must for their duration be controlled in accordance with the Erosion and Sediment Control Guidelines for Land Disturbing Activities in the Auckland Region 2016 (Auckland Council Guideline Document GD2016/005) to minimise silt or sediment from entering any stormwater system, overland flow paths, or roads.	**Where the standard is not met, matters of discretion are restricted to: refer EW-R1**
EW-S6	**Setback**	
All zones	Earthworks must be setback from a site boundary by the following minimum distances: 1. supported by engineered retaining walls - 1.5m; or 2. not supported by engineered retaining walls - 3m **This standard does not apply to:** a. land disturbance; b. earthworks for the installation and upgrading of utility connections and infrastructure; and c. earthworks for for the formation of an approved driveway or crossing. **NOTE:** Setbacks from waterbodies is managed by the Natural Character chapter.	**Where the standard is not met, matters of discretion are restricted to: refer EW-R1**
EW-S7	**Land stability**	
All zones	Earthworks must not result in any instability of land at or beyond the boundary of the property where the earthworks occurs.	**Where the standard is not met, matters of discretion are restricted to: refer EW-R1**
EW-S8	**Nature of filling material**	
All zones	The fill material shall not: 1. contain putrescible, pollutant, inflammable or hazardous components; or 2. consist of material other than soil, rock, stone, aggregate, gravel, sand, silt, or demolition material; or 3. comprise more than 5% vegetation (by volume) of any load.	**Where the standard is not met, matters of discretion are restricted to: refer EW-R1**
EW-S9	**Flood and coastal hazards**	
All zones	Earthworks must not: 1. divert flood flow or coastal inundation onto other properties or otherwise result in any increase in flood hazard or coastal inundation beyond the	**Where the standard is not met, matters of discretion are restricted to: refer EW-R1**

	boundaries of the site; or 2. result in the loss of any flood storage volume within a flood hazard area, unless equivalent flood storage is provided.	

Tanea Webster

From: Magpie Design <designbymagpie@gmail.com>
Sent: Tuesday, 25 August 2026 5:12 am
To: Planning Support
Subject: Re: FNDC Resource Consent Application – Earthworks, 20 Klinac Lane, Waipapa

Follow Up Flag: Follow up
Flag Status: Flagged

CAUTION: This email originated from outside Far North District Council.
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Good Morning,

Thank you for your email.

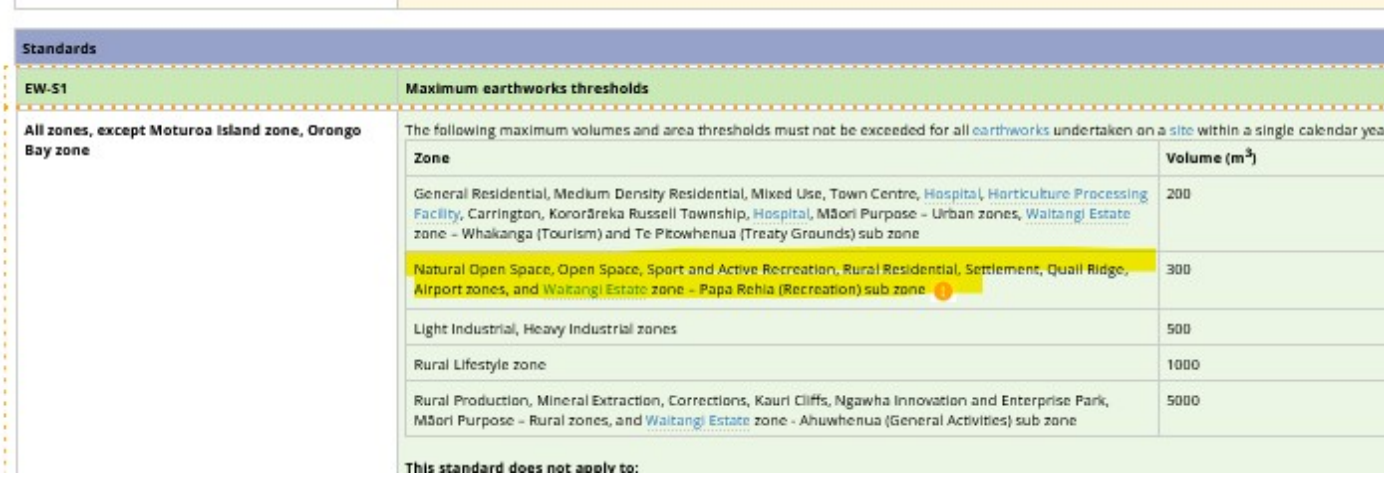
The application has been assessed under the Proposed District Plan – Appeals Version, which FNDC released on 20 August 2026 (https://www.fndc.govt.nz/Whats-New/Latest-news/news-items/2026/august/appeals-version-of-proposed-district-plan-now-available). The appeal period closed on 12 August 2026.

The Earthworks chapter provisions relied on in the application — EW-R1, the Light Industrial zone thresholds in EW-S1, standards EW-S2 to EW-S9, and policies EW-P1 to EW-P8 — are not subject to any appeal. Under s86F(1) of the RMA, these non-appealed provisions must be treated as operative from the close of the appeal period. The equivalent Operative District Plan earthworks provisions are therefore inoperative and do not apply to this application.

I have reviewed all 27 notices of appeal. Only two seek relief relating to the Earthworks chapter, and neither affects the provisions applicable to this application:

1. - Top Energy Limited appeals EW-S1 seeking additional exemptions for network utility, septic tank, and drainage earthworks. This relates to the exclusions list, not to the Light Industrial zone volume or area thresholds.
2. - Bentzen Farm Limited / Matauri Trustee Limited seek to change earthworks in Outstanding Natural Landscape overlays from non-complying to restricted discretionary. This relates to the Natural Open Space and landscape zones, not to Light Industrial.

I attach a screenshot of the EW-S1 table from the Appeals Version. The orange dashing and flag markers identify the provisions under appeal. The Light Industrial row (500 m^3 / 2,500 m^2) has no appeal markings and is operative.



Standards

EW-S1	Maximum earthworks thresholds
All zones, except Moturoa Island zone, Orongo Bay zone	The following maximum volumes and area thresholds must not be exceeded for all earthworks undertaken on a site within a single calendar yea

Zone	Volume (m^3)
General Residential, Medium Density Residential, Mixed Use, Town Centre, Hospital, Horticulture Processing Facility, Carrington, Kororāreka Russell Township, Hospital, Māori Purpose – Urban zones, Waitangi Estate zone – Whakanga (Tourism) and Te Pitowhenua (Treaty Grounds) sub zone	200
Natural Open Space, Open Space, Sport and Active Recreation, Rural Residential, Settlement, Quail Ridge, Airport zones, and Waitangi Estate zone – Papa Rehia (Recreation) sub zone	300
Light Industrial, Heavy Industrial zones	500
Rural Lifestyle zone	1000
Rural Production, Mineral Extraction, Corrections, Kauri Cliffs, Ngawha Innovation and Enterprise Park, Māori Purpose – Rural zones, and Waitangi Estate zone - Ahuwhenua (General Activities) sub zone	5000

This standard does not apply to:

The applicable rules and activity status are identified in the AEE at Sections 1.1 and 4.2. The earthworks are a restricted discretionary activity under Rule EW-R1, with the matters of discretion assessed at Section 6.5.

I trust this clarifies the position. Happy to discuss if anything further is needed or I have misinterpreted the PDP- Appeals Version.

Thank you,

Paul

Paul Wright CEng, MSc, GradDipTech, BBS, DAEM, MEIT
Director, Planner, Designer
Magpie Design
Kerikeri, New Zealand
027 3688564

On Mon, Aug 24, 2026 at 7:50 PM Planning Support <Planning.Support@fndc.govt.nz> wrote:

> Kia ora,
>
> As part of our administrative check of the application, we have been unable to identify the following information within the Assessment of Environmental Effects:
>
> - The Activity Status under the Operative District Plan (ODP);
> - Identification of the applicable ODP rules; and
> - Confirmation of the applicable Proposed District Plan – Decisions Version (PDP-DV) rules and activity status.
>
> could you please provide the above information for completeness of the application?
>
> Could you also please confirm where the applicable activity status and rules are identified within the AEE, if already provided.

Ngā mihi,

Tanea Webster

Planning Support
Resource Consents Administration
P 6494015200 | Planning.Support@fndc.govt.nz
Te Kaunihera o Te Hiku o te Ika | Far North District Council

Pokapū Kōrero 24-hāora | 24-hour Contact Centre 0800 920 029
fndc.govt.nz

From: Planning Support <Planning.Support@fndc.govt.nz>
Sent: Monday, 24 August 2026 9:03 am
To: designbymagpie@gmail.com
Subject: FW: FNDC Resource Consent Application – Earthworks, 20 Klinac Lane, Waipapa

Kia ora Paul,

Thank you for your request to lodge a resource consent application.

Your lodgement is currently being actioned. Once processing is complete, you will receive formal confirmation of lodgement, your resource consent reference number, and the instalment fee invoice.

If we require any further information in the meantime, we will be in touch.

Ngā mihi,

Kieran

Planning Support
Resource Consents Administration
P 6494015200 | Planning.Support@fndc.govt.nz
Te Kaunihera o Te Hiku o te Ika | Far North District Council

Pokapū Kōrero 24-hāora | 24-hour Contact Centre 0800 920 029
fndc.govt.nz

From: Magpie Design <designbymagpie@gmail.com>
Sent: Monday, 24 August 2026 7:37 am
To: Planning Support <Planning.Support@fndc.govt.nz>
Subject: FNDC Resource Consent Application – Earthworks, 20 Klinac Lane, Waipapa

CAUTION: This email originated from outside Far North District Council.
Do not click links or open attachments unless you recognise the sender and know the content is safe.

Good Morning,

Please find attached a resource consent application for earthworks at 20 Klinac Lane, Waipapa (Section 3 SO 438821), on behalf of WBC Developments Limited.

The application is for a restricted discretionary activity under Rule EW-R1 of the District Plan. The AEE, application form, and supporting documents are attached.

Could you please issue an invoice for the application fee so we can arrange payment.

Happy to discuss if anything further is needed.

Kind regards,

Paul

_____

Paul Wright CEng, MSc, GradDipTech, BBS, DAEM, MEIT

Director, Planner, Designer

Magpie Design

Kerikeri, New Zealand

027 3688564

Resource Consent Application

PLANNING REPORT & ASSESSMENT OF ENVIRONMENTAL EFFECTS

Proposed Transport, Natural Hazards, and Earthworks:

20 Klinac Lane, Waipapa

ISSUED BY

MAGPIE DESIGN

AUTHOR

Paul Wright
Director & Planner
designbymagpie@gmail.com
027 3688564

Report Overview

Report Type	Planning: Resource Consent - Transport, Natural Hazards, Earthworks
Report Prepared for	WBC Developers Limited
Consent Authority	Far North District Council
Report Prepared by	Paul Wright, Director & Planner, Magpie Design
Report Reference	MDRC-090926-V1.0
Issue	V1.0
Date	29 October 2026

EXECUTIVE SUMMARY

This application seeks resource consent from Far North District Council (FNDC) for three new detached single-storey retail buildings at 20 Klinac Lane, Waipapa, with a combined gross floor area (GFA) of 2,000 m², together with the associated parking, access and earthworks. It responds to the Form 4s issued on 9 September and 19 October 2026 for building consent EBC-2026-1042/0 and assesses every district plan matter in them, including the earthworks, in this report.

The site is zoned Light Industrial (Waipapa Control Area) under the Proposed District Plan, Appeals Version (PDP-AV), where the retail use is permitted. It lies within the NRC river flood hazard areas (RFHZ1, 10-year, and RFHZ3, 100-year plus climate change).

Resource consent is required under the following PDP-AV rules. Each is restricted discretionary:

- TRAN-R1 / TRAN-S1 (parking). Bicycle parking numbers, long-stay bicycle parking (inside each building), end-of-trip facilities, loading and parking dimensions comply. The consolidated short-stay bicycle parking is more than 30 m from the Building 1 and 2 entrances (TRAN-S1(7)).
- TRAN-R9 (trip generation). Each building exceeds the 450 m² large-format retail threshold. The Integrated Transport Assessment (ITA, Appendix D) assesses the trip generation and concludes the effects are less than minor.
- NH-R3, directing to NH-R7 (new buildings in a river flood hazard area). NH-R3 PER-1 is not met because each building exceeds 10 m² GFA. The NH-R7 standards RDIS-2 to RDIS-4 are met, and RDIS-1 is not engaged because retail is not a vulnerable activity.
- EW-R1 (earthworks). EW-S1 (volume and area), EW-S4 (reinstatement within six months), EW-S6 (boundary setback) and EW-S9 (flood hazard and flood storage) are not met.

The application also seeks, under section 127 RMA, to change Conditions 1, 2, 3, 5 and 6 of Decision C of wastewater consent 2170377-RMACOM, so it matches NRC consent AUT.042366.01.02 and the upgraded Ecogent treatment and disposal system. The daily volume limit in Condition 3 would rise from 2,500 to 4,400 litres. This resolves the wastewater item on the 19 October 2026 Form 4. The change is a discretionary activity under section 127(3), and its effects are less than minor (Section 9).

The activities are bundled, and the overall activity status is restricted discretionary under section 87A of the RMA. All adverse effects are assessed as less than minor, no person is adversely affected, and non-notified processing is requested.

ABBREVIATIONS

Abbreviation	Meaning
AEE	Assessment of Environmental Effects
AEP	Annual Exceedance Probability
CC	Climate Change
DP	Far North District Plan (Proposed District Plan, Appeals Version)
ECM	Equivalent Car Movements
ESCP	Erosion and Sediment Control Plan
EW	Earthworks chapter of the District Plan
FNDC	Far North District Council
FFL	Finished Floor Level
GFA	Gross Floor Area
ITA	Integrated Transport Assessment
LIZ	Light Industrial zone chapter of the District Plan
NATC	Natural Character chapter of the District Plan
NH	Natural Hazards chapter of the District Plan
NRC	Northland Regional Council
NZTA	NZ Transport Agency
NZVD2016	New Zealand Vertical Datum 2016
ODP	Operative District Plan
PDP-AV	Proposed District Plan, Appeals Version
PIM	Project Information Memorandum
RFHZ1	River Flood Hazard Zone 1 (10-year / 10% AEP extent)
RFHZ3	River Flood Hazard Zone 3 (100-year + CC / 1% AEP extent)
RMA	Resource Management Act 1991
SH10	State Highway 10
TP58	Auckland Regional Council Technical Publication 58, On-site Wastewater Systems
TRAN	Transport chapter of the District Plan

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1. INTRODUCTION

1.1. Purpose of Application

This application seeks resource consent from Far North District Council for three new detached single-storey retail buildings at 20 Klinac Lane, Waipapa, together with the associated parking, access and earthworks. It is made under the Far North District Plan (Proposed District Plan, Appeals Version) and responds to the Form 4s issued on 9 September and 19 October 2026 for building consent EBC-2026-1042/0 (Appendix B). It also includes an application under section 127 RMA to change conditions of wastewater consent 2170377-RMACOM (Section 9).

Each matter is assessed in the same order through the report. Section 1.2 lists the Form 4 matters, and Section 4 assesses them against the plan's standards to confirm the activity status. The effects are assessed in Section 5, the matters of discretion in Section 6 and the objectives and policies in Section 7. Section 10 sets out the proposed conditions, and Section 9 covers the section 127 application. Transport matters are assessed in the Integrated Transport Assessment (ITA, Appendix D), and this report refers to its findings rather than repeating them.

This assessment is provided in accordance with Section 88 and Schedule 4 of the Resource Management Act 1991 (RMA). Applicant details are set out in the Application Form.

1.2. Form 4 Matters and Where They Are Assessed

The Form 4s of 9 September and 19 October 2026 identify the following matters. The 19 October 2026 Form 4 no longer lists TRAN-R1 / TRAN-S1 or TRAN-R9, which remain assessed in this application. Note the Form 4 has been developed in collaboration with the FNDC to develop a complete set of planning aspects to be addressed by this resource consent application. One further standard not met (EW-S4 reinstatement) was identified in preparing this application and is included.

Form 4 matter	Form 4 reason	Assessed in this report	ITA	Outcome
TRAN-R1 PER-4 / TRAN-S1	Compliance with parts 1, 4, 7 and 8 not shown	4.1, 5.1, 6.1	7, 8, 10	Parts 1, 4 and 8 met. Part 7 not met. Restricted discretionary
TRAN-R9 PER-1	Large-format retail threshold 450 m² GFA; proposal is 2,000 m²	4.2, 5.1, 6.2	4, 9	Not met. Restricted discretionary
NH-R3 PER-1	Building GFA exceeds 10 m²	4.3, 5.2, 6.3	n/a	Not met; NH-R7 RDIS-2 to 4 met. Restricted discretionary
EW-R1	Breaches of EW-S1 and EW-S6; compliance with EW-S9 not shown	4.4, 5.3, 6.4	n/a	EW-S1, EW-S6 and EW-S9 not met. Restricted discretionary
EW-S4 reinstatement (not in Form 4)	Not identified	4.4, 5.3, 6.4	n/a	Not met (Building 3 preload). Restricted discretionary
Wastewater: 2170377-RMACOM Condition 3	Proposed discharge of 2,750 L/day exceeds the 2,500 L/day limit	9	n/a	Change to Conditions 1, 2, 3, 5 and 6 sought under s127. Discretionary

1.3. Matters Outside This Application

The Form 4 also lists one item that is not a district plan matter and is not part of this application:

Form 4 item	Position
2026 Regional Plan for Northland rule C.8.3 (earthworks in flood hazard areas)	A regional council matter. NRC earthworks application APP.047605.01.01 is being progressed separately with NRC.

The Operative District Plan rules cited on the 26 June and 28 August 2026 Form 4s (rule 12.7.6.1.2, setback from smaller lakes, rivers and wetlands, and rule 12.3.6.1.3, excavation and filling) are not cited on the 9 September or 19 October 2026 Form 4s. The stream setback item was removed after the Donaldson survey confirmed an average stream width of 2.5 m, giving a 10 m river margin, with all buildings, impermeable surfaces and earthworks outside it (Appendix I).

Other consents and approvals. The proposal also needs the following approvals, which are outside this application: land use consent from NRC under rule C.8.3 of the Regional Plan for Northland for earthworks in a flood hazard area (APP.047605.01.01, being processed by NRC); building consent EBC-2026-1042/0 from FNDC, which also covers the retaining wall; and certificate of acceptance COA-2027-4/0 for the upgraded wastewater system. The wastewater discharge is authorised by NRC consent AUT.042366.01.02. Stormwater is managed through the BC06 stormwater design to the existing site network and outlet, assessed under building consent EBC-2026-1042/0.

1.4. Statutory Framework and Appeals Status

The application is assessed under the PDP-AV, the plan cited in the 9 September and 19 October 2026 Form 4s. The site is zoned Light Industrial (Waipapa Control Area) under the PDP-AV and Industrial under the ODP. The earthworks provisions relied on are not subject to appeal and are treated as operative under section 86F. TRAN-R9 is subject to a limited appeal, so the ODP traffic intensity rule also applies, and it is met (Section 4.2). No other appeal affects the provisions relied on or the zoning of the site.

1.5. Background and Consenting History

A Project Information Memorandum application was lodged under EBC-2026-800/0 for three detached single-storey retail buildings on the site. The FNDC Form 4 of 8 April 2026 identified the need for NRC earthworks consent under rule C.8.3. The buildings are now the subject of building consent EBC-2026-1042/0, for which the Form 4s dated 26 June, 28 August, 9 September and 19 October 2026 were issued.

The Gumboots Flood Displacement Assessment (Appendix E) was prepared for the section 92 request on the NRC earthworks application. It is relied on in this application for the flood matters. The earthworks planning report prepared for NRC (Magpie Design, MDRC-110826-V1.0, 20 August 2026) is not relied on here, because the earthworks are assessed in full in this report.

1.6. Supporting Documents

The following documents accompany this application:

1. Appendix A: Record of Title 574944, with Consent Notice 6076987.2

2. Appendix B: FNDC Form 4s (19 October, 9 September, 28 August and 26 June 2026), FNDC letter of 8 October 2026 and FNDC email confirming the section 127 route
3. Appendix C: Architectural plans, Spooner Architectural Services Ltd, BC Drawings 13-10-26, including earthworks plan BC03A
4. Appendix D: Integrated Transport Assessment (Magpie Design, MDRC-ITA-090926-V1.0)
5. Appendix E: Gumboots Consulting Engineers Ltd, Flood Displacement Assessment, Revision A (22 September 2026)
6. Appendix F: NRC River Flood Level Report, Parcel ID 7315854
7. Appendix G: FNDC floor level correspondence (3 March 2026)
8. Appendix H: Initia Geotechnical Investigation Report, P-003194 Rev B (April 2026)
9. Appendix I: Donaldson Surveyors stream survey (30 June 2026)
10. Appendix J: Wastewater consents and design: FNDC 2170377-RMACOM (2017), NRC AUT.042366.01.01 (2021) and change AUT.042366.01.02 (2025) with Ecogent plans ECO1177-06 and ECO1177-07, FNDC 2240105-RMACOM (2023), and Ecogent TP58 site evaluation checklist ECO1177-11 Appendix E

2. THE SITE AND SURROUNDING ENVIRONMENT

2.1. Property Details

Property	Details
Site Address	20 Klinac Lane, Waipapa 0230
Legal Description	Section 3 Survey Office Plan 438821
Record of Title	574944 (Freehold)
Site Area	12,148 m² (1.2148 ha)
Owner	WBC Developers Limited
Property ID	3356415
ODP Zone	Industrial
PDP-AV Zone	Light Industrial, Waipapa Control Area
Overlays	NRC River Flood Hazard Zones RFHZ1 (10-year) and RFHZ3 (100-year + climate change)

Title interests (Record of Title 574944, search copy dated 24 August 2026): Consent Notice 6076987.2 (section 221 RMA, 13 July 2004); Land Covenant in Easement Instrument 6167615.1 (1 October 2004); Mortgage 9523920.3 to Bank of New Zealand and Variation 10296683.1; right to discharge treated sewage over part marked D on DP 514002 (Easement Instrument 11260659.9, 10 April 2019); right to convey electricity over part marked A on DP 584355 (Easement Instrument 12626241.1, 16 December 2022); and right (in gross) to drain water over part marked A on SO 570424 in favour of Far North District Council (Easement Instrument 12721288.1, 15 June 2023). The land covenant, mortgage and easements are private property matters and do not bear on this application.

Consent Notice 6076987.2 (RC 2030736, 2004, Appendix A) has been reviewed. Its conditions relate to development below the design flood lines, landscaping, wastewater, firefighting water supply, overland flow paths and building within covenant areas. The proposal is consistent with them. The flood and overland flow matters are assessed in this application, and the wastewater, firefighting and building siting matters are addressed through building consent EBC-2026-1042/0.

2.2. The Site

The site is generally flat and vacant, with a remnant gravel hardstand from a former storage yard. It has two existing vehicle crossings, one on Klinac Lane and one on Maritime Lane (Section 3.2).

The Whiriwhiritoa Stream runs along the northern boundary. Bob Donaldson, Registered Professional Surveyor, surveyed the stream on 30 June 2026 and confirmed an average width of 2.5 m. For a river under 3 m average width, the river margin is the land within 10 m of the river. All proposed buildings, impermeable surfaces and earthworks are outside the 10 m river margin (BC03 and BC03A).

2.3. The Surrounding Environment

The site is bounded by the Whiriwhiritoa Stream to the north, Maritime Lane to the west, Klinac Lane to the south and a vacant Northland Regional Council site to the east. The surrounding land in the Waipapa commercial precinct is commercial and light industrial. There are no residential properties adjoining or near the site.

2.4. Flood Hazard Context

The site is within two NRC river flood hazard zones, as confirmed in the NRC River Flood Level Report for Parcel 7315854 (Appendix F):

Flood Event	Maximum Water Level (NZVD2016)
10-year (RFHZ1)	77.84 m
50-year	77.88 m
100-year + climate change (RFHZ3)	77.98 m

Modelled flood levels generally fall from west to east across the site (Gumboots, Section 4.1). Finished floor levels have been set and approved through building consent EBC-2026-1042/0, at least 300 mm above the 1% AEP flood level, consistent with FNDC advice of 3 March 2026 (Appendix G).

3. THE PROPOSAL

3.1. Development Overview

The applicant proposes three new detached single-storey retail buildings:

Building	Gross Floor Area
Building 1	830 m²
Building 2	585 m²
Building 3	585 m²
Total	**2,000 m²**

The areas are the gross building areas on BC05. Each building is a single tenancy, as shown on BC05, so the per-tenancy and per-building requirements of the plan are the same. Any division of a building into further tenancies would need a fresh assessment.

The buildings are designed as large-format retail premises. In the Waipapa Control Area of the Light Industrial zone, commercial activity is permitted under LIZ-R13 and large-format retail activity is permitted under LIZ-R15.

The site layout is shown on BC03 and BC05 (Appendix C), and the parking, loading and access arrangements are described in the ITA (Section 2). A 6 m landscape strip, 50% planted, runs along both road frontages (BC03 and BC04), and the eastern part of the site is green space not developed under this application.

3.2. Access

Access is from the two existing Council-formed crossings on Maritime Lane and Klinac Lane (ITA Section 2.3). No new crossings or works to the existing crossings are proposed, so TRAN-R2 is not triggered (ITA Section 6.2) and no approval is needed under the Vehicle Crossings Bylaw.

3.3. Earthworks

Engineered fill is required beneath the three building platforms and the paved and hardstand areas, to raise ground levels as required by the building design and the geotechnical investigation. Existing ground levels range from about 76.7 m to 77.7 m across the development footprint. The fill quantities are from the earthworks plan (BC03A Rev B, Appendix C). All levels are in terms of NZVD2016.

Building platform fill

Building	Platform RL (m)	Fill area (m²)	Volume (m³)	Maximum fill depth (m)
Building 1	77.94	956	517	0.76
Building 2	77.94	689	579	1.14
Building 3	77.34	686	302	0.74
Total		**2,331**	**1,398**	**1.14**

Volume summary

Item	Volume (m^3)
Fill for building platforms	1,398
Fill for paving and hardstand	1,789
Total fill	3,187
Fill within the 10-year flood zone (RFHZ1)	912
Fill within the 100-year + CC flood zone (RFHZ3)	3,187
Topsoil strip (approximate)	739
Total earth moved or placed (approximate)	**3,926**

The 10-year flood zone is a subset of the 100-year zone, so those figures are not additive. The earthworks area is about 7,240 m^2: the building platforms (2,331 m^2) and the paving zones A-01 to A-10 (4,909 m^2) on BC03A. The topsoil strip is estimated from a strip area of 2,955 m^2 at an average depth of 0.25 m, where natural topsoil is present. Existing hardstand is not stripped, and engineered fill is placed directly on it after geotechnical inspection. The paving fill extends to the Maritime Lane, Klinac Lane and eastern boundaries, graded to tie in with the existing levels at the Maritime Lane and Klinac Lane boundaries, with no retaining walls there. Along the eastern boundary beside Building 3, the fill is held by a retaining wall of up to 0.7 m retained height (BC03 and BC03A), which is addressed through building consent EBC-2026-1042/0.

Building 3 preload. The geotechnical report (Initia, Sections 4.3 and 5.5.3) requires a preload 1 m above design subgrade level across the Building 3 footprint, held for at least six months with continuous settlement monitoring. Once the geotechnical engineer confirms settlement has attenuated, the preload is removed and reused on site as pavement subbase. The preload volume (560 m^3) is included in the paving fill figure and no preload material leaves the site.

Fill specification. All fill is to meet the Initia earthworks specification. Unsuitable material is removed before filling, the stripped subgrade is inspected and approved by the supervising geotechnical engineer, fill is placed in compacted layers from an approved source, and fill platform edges are formed at batters no steeper than 1V:3H and protected against erosion.

Programme. The earthworks will be carried out in a single construction period of about 12 months following the grant of consent, without staging.

Erosion and sediment control. An Erosion and Sediment Control Plan (ESCP), prepared in accordance with GD2016/005, will be submitted to FNDC for certification before works start.

4. ASSESSMENT AGAINST THE DISTRICT PLAN RULES

This section takes each Form 4 matter in turn, in the Form 4 order, and assesses it against the relevant standards. The resulting activity status is summarised in Section 4.7.

4.1. TRAN-R1 / TRAN-S1: Parking

TRAN-R1 permits parking where parking and loading spaces are on site and clear of footpaths, access, manoeuvring and outdoor living areas (PER-1), are permanently marked or delineated (PER-3), and comply with TRAN-S1 (PER-4). PER-2 (stacked residential parking) does not apply. All parking and loading is on site in dedicated bays clear of the accesses, service lane and footpaths, and Condition 3 requires the spaces to be marked or delineated, so PER-1 and PER-3 are met (ITA Section 7.1).

The 9 September 2026 Form 4 records for TRAN-R1 PER-4 and TRAN-S1: "Compliance with parts 1, 4, 7 & 8 has not been shown", requiring one long-stay bicycle park and one shower and changing area for each building and six short-stay bicycle parks. Each part of TRAN-S1 is assessed below (ITA Sections 7 and 8).

TRAN-S1 part	Requirement	Provision	Compliance
(1) Bicycle parking numbers (Form 4)	TRAN-Table 1: 1 short-stay per 350 m² GFA (6) and 1 long-stay per 15 staff, applied per tenancy (conservative) (3)	6 short-stay (BC03 and BC05) and 3 long-stay, one inside each building (BC03 and BC05)	Complies
(4) End-of-trip facilities (Form 4)	TRAN-Table 5: 1 shower and changing area, applied per tenancy (conservative)	1 per building (BC08 and BC11, BC13 and BC16, BC18 and BC21; BC29)	Complies
(7) Short-stay location (Form 4)	Visible or signposted, within 30 m of public entrances, secure stands	One consolidated location near the Klinac Lane entry, within 30 m of Building 3 but not of Buildings 1 and 2	Does not comply for Buildings 1 and 2 (ITA Section 8)
(8) Long-stay security (Form 4)	Undercover and secure from theft	One long-stay park inside each building (BC03 and BC05)	Complies. Also secured by Condition 2(b)

Parts (2), (3) and (5) also comply, and part (6) does not apply (ITA Section 7).

Status. TRAN-S1 part (7) is not met. The activity is restricted discretionary under TRAN-R1. The matters of discretion are assessed in Section 6.1.

4.2. TRAN-R9: Trip Generation

TRAN-R9 permits trip generation where the use or development is no greater than the thresholds in TRAN-Table 12. For large-format retail, the threshold is 450 m² GFA per tenancy. The 9 September 2026 Form 4 records: "Large-format retail PER-1 permitted threshold is 450m2 GFA (TRAN-Table 12); this application proposal is for 2,000m2 GFA."

Building	GFA	Threshold	Compliance
Building 1	830 m²	450 m²	Does not comply
Building 2	585 m²	450 m²	Does not comply
Building 3	585 m²	450 m²	Does not comply

TRAN-Table 12 also sets a threshold of 200 ECM per day or 40 ECM per hour for multiple on-site uses. The development generates about 920 ECM per day and 120 ECM in the peak hour, so it exceeds that threshold too (ITA Section 4.6). The ODP traffic intensity rule is also met. Rule 15.1.6A.2.1 and Table 15.1.6A.1 permit 200 daily one-way movements in the Industrial zone, and Appendix 3A applies 10 movements per 100 m² GFA to large-format retail, so the 2,000 m² GFA generates 200 movements, at the permitted limit.

Status. TRAN-R9 PER-1 is not met, and the activity is restricted discretionary under TRAN-R9. The ITA assesses the trip generation and responds to each matter of discretion (ITA Sections 4 to 6 and 9). The matters are summarised in Section 6.2.

4.3. NH-R3 / NH-R7: Buildings in River Flood Hazard Area

NH-R3 permits new buildings in river flood hazard areas where each of PER-1 to PER-3 is met. The Form 4 records the reason "Proposed buildings GFA exceeds 10m2."

NH-R3 condition	Requirement	Compliance
PER-1	Building GFA or footprint of 10 m² or less (or a small deck or boardwalk)	Does not comply. Each building exceeds 10 m²
PER-2	Building not located within, and does not alter or divert, an overland flow path	Complies. The buildings do not obstruct the stream corridor or the Klinac Lane and Maritime Lane drainage and overland flow corridors (Gumboots Sections 7.1 to 7.3)
PER-3	Telecommunications pole	Not applicable

Where NH-R3 is not met, it directs new buildings to NH-R7, which is restricted discretionary where RDIS-1 to RDIS-4 are met:

Standard	Requirement	Assessment
RDIS-1	Vulnerable activities not in a 1 in 10-year River Flood Hazard Area	Not engaged. Retail is not a vulnerable activity. The PDP-AV definition is a closed list: "residential activities, care facilities (including child care services), retirement villages, visitor accommodation, marae and medical facilities with overnight stay facilities".
RDIS-2(3)	Other buildings: FFL at least 300 mm above the 1% AEP flood level	Complies. Finished floor levels are approved under building consent EBC-2026-1042/0 at least 300 mm above the 1% AEP flood level.
RDIS-3	The building does not divert an overland flow path onto other properties	Complies. Gumboots Sections 7.1 to 7.5.
RDIS-4	NH-S1 information requirements	Complies. Gumboots assessment, read with the NRC River Flood Level Report (Appendix F) and the Initia geotechnical report (Appendix H).

Status. RDIS-2 to RDIS-4 are met and RDIS-1 is not engaged, so the activity is restricted discretionary under NH-R7. The matters of discretion are assessed in Section 6.3.

4.4. EW-R1: Earthworks

EW-R1 permits earthworks that comply with EW-S1 to EW-S9; otherwise the activity is restricted discretionary. The Form 4 records: "Plans show breaches of EW-S1 and EW-S6, and compliance has not been shown with EW-S9."

Standard	Requirement	Compliance
EW-S1 Maximum earthworks thresholds	Light Industrial: 500 m³ and 2,500 m² in a calendar year	Does not comply. About 3,926 m³ moved or placed over about 7,240 m² (Section 3.3).
EW-S2 Maximum depth	1.5 m cut or fill, or 3 m where retained by an engineered retaining wall with building consent	Complies. Maximum fill depth 1.14 m (Building 2).
EW-S3 Accidental discovery protocol	Protocol to be followed on discovery	Complies. EW-S3 applies and is repeated in Condition 9.
EW-S4 Site reinstatement	Reinstated as soon as practicable and no later than six months from commencement	Does not comply. See below.
EW-S5 Erosion and sediment control	In accordance with GD2016/005 for the duration of the works	Complies. ESCP to GD2016/005, certified before work starts (Condition 6(b)).
EW-S6 Setback	3 m from a site boundary (1.5 m where retained); driveways and crossings exempt	Does not comply. See below.
EW-S7 Land stability	No instability at or beyond the boundary	Complies. Works under geotechnical supervision.
EW-S8 Nature of filling material	No putrescible, pollutant, inflammable or hazardous components; only soil, rock, stone, aggregate, gravel, sand, silt or demolition material; no more than 5% vegetation by volume	Complies. Engineered fill to the geotechnical specification.
EW-S9 Flood and coastal hazards	(1) No diversion of flood flow onto other properties or other increase in flood hazard beyond the site; (2) no loss of flood storage in a flood hazard area unless equivalent storage is provided	Does not comply. (1) is not demonstrated on a quantified basis and (2) is not met. See below.

EW-S4 (not identified in the Form 4). The geotechnical report requires a 1 m preload over the Building 3 footprint, held for at least six months with settlement monitoring, before it is removed and reused as pavement subbase (Section 3.3). Reinstatement of the whole earthworks area within six months of commencement is therefore not achievable, and a period of 12 months is sought (Condition 6(c)).

EW-S6. The paving fill on BC03A (areas A-02 and A-04 to A-07, and A-10) extends to the Maritime Lane, Klinac Lane and eastern boundaries. EW-S6 sets a distance from the boundary, not a height: earthworks are to be set back 3 m, or 1.5 m where supported by an engineered retaining wall. On the Maritime Lane and Klinac Lane frontages the fill meets the existing ground at the boundary, so no wall is needed, but the fill is still within 3 m of those boundaries. On the eastern boundary the fill is held by a retaining wall of up to 0.7 m retained height beside Building 3. Building 3 is 1.0 m from that boundary (BC03), so the retained fill is within 1.5 m of it and EW-S6 is not met there either. Only the fill for the two crossings is

exempt. EW-S6 is not met. Setbacks from the stream are managed by the Natural Character chapter (EW-S6 Note), and all works are outside the 10 m river margin.

EW-S9. The fill displaces flood storage within the mapped flood hazard area and no equivalent storage is provided, so EW-S9(2) is not met. For EW-S9(1), the Gumboots assessment finds that the works do not obstruct the stream or its flood-control corridor, do not form a transverse barrier across the floodplain and do not obstruct the local drainage corridors, and it identifies no mechanism by which floodwater would be diverted onto another property (Sections 7.1 to 7.5). The assessment is qualitative, and the change in flood level or extent has not been quantified (Section 7.5). Compliance with EW-S9(1) is therefore not demonstrated, and the effects are assessed on their merits in Section 5.3.

Status. EW-S1, EW-S4, EW-S6 and EW-S9 are not met, and the activity is restricted discretionary under EW-R1. The effects are assessed in Section 5.3 and the matters of discretion in Section 6.4.

4.5. Light Industrial Zone Rules

The retail use is permitted in the Waipapa Control Area under LIZ-R13 (commercial activity) and LIZ-R15 (large-format retail). New buildings are permitted under LIZ-R1 where they accommodate a permitted activity (PER-1) and comply with LIZ-S1 to LIZ-S8 (PER-2). These were not identified in the Form 4 and are confirmed below.

Standard	Requirement	Compliance
LIZ-S1 Maximum height	16 m	Complies. Single-storey buildings approx. 7.8 m high (BC27, section A-A).
LIZ-S2 Height in relation to boundary	Applies where adjoining residential, Māori Purpose or open space zones	Not applicable. No adjoining site, including the stream margin to the north, is zoned residential, Māori Purpose or open space.
LIZ-S3 Setback	3 m from residential, Māori Purpose or open space zones	Not applicable, for the same reason.
LIZ-S4 Outdoor storage	Screening where adjoining a non-industrial zone	Not applicable. No outdoor storage is proposed apart from screened rubbish enclosures.
LIZ-S5 Landscaping on road boundaries	At least 50% of each road boundary not occupied by buildings or driveways landscaped in a strip at least 2 m wide, reaching 1 m within two years	Complies. A 6 m landscape strip, 50% planted, along both frontages (BC03 and BC04). Planting height secured by Condition 7.
LIZ-S6 Landscaping adjoining other zones	Applies where adjoining zones other than mixed use or industrial	Not applicable.
LIZ-S7 Coverage	At least 10% of the site planted or permeable; on-site disposal where no reticulated stormwater	Complies. Impermeable area 7,145 m² (BC04), leaving about 5,000 m² (41%) permeable. Stormwater is managed through the BC06 stormwater design to the existing site network and outlet.
LIZ-S8 Pedestrian frontages	Applies where identified on the planning maps	Not applicable. LIZ-S8 applies only to sites with a pedestrian frontage mapped on the planning maps, and none is mapped along the site's road boundaries. The public footpaths along Klinac Lane and Maritime Lane do not trigger it.

LIZ-R1 is met and the buildings are permitted under the zone rules.

4.6. Other District Plan Matters

Natural Character. NATC-R1 and NATC-R2 manage buildings and earthworks within the river margin. All buildings and earthworks are outside the 10 m river margin (Appendix I), so these rules are not engaged.

Vehicle crossings. TRAN-R2 is not triggered because both crossings are existing and no further works to them are proposed (Section 3.2 and ITA Section 6.2).

Contaminated soil (NES-CS). The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 (NES-CS) applies only where an activity on the Hazardous Activities and Industries List (HAIL) has been, or is being, carried out on the land. The historical aerial photographs in the Initia report show the site in pastoral use from at least 1953, with a gravel hardstand formed in the 2020s for container storage. No industrial or other HAIL activity is recorded, and the container storage did not involve hazardous substances. The site lies within the NRC Selected Land-use Register polygon SLU.042488. That polygon covers the wider Waipapa commercial precinct, and its listed HAIL categories (D1, F4 and F5) relate to other properties within it. It is classified "Verified HAIL: suitable for land use, natural state". The Initia investigation found no visual or olfactory signs of contamination. The NES-CS therefore does not apply, and no consent is required under it. The works also place clean imported engineered fill over the building and pavement footprint.

4.7. Overall Activity Status

Rule	Standards not met	Status
TRAN-R1 PER-4 / TRAN-S1	Part (7) short-stay location	Restricted discretionary
TRAN-R9 PER-1	TRAN-Table 12 large-format retail threshold	Restricted discretionary
NH-R3 PER-1, referring to NH-R7	NH-R3 PER-1 (GFA over 10 m^2); NH-R7 RDIS-2 to 4 met	Restricted discretionary
EW-R1	EW-S1, EW-S4, EW-S6 and EW-S9	Restricted discretionary

The activities are bundled, and the overall activity status is restricted discretionary under section 87A of the RMA.

The section 127 application to change conditions of wastewater consent 2170377-RMACOM (Section 9) is lodged with this application. Under section 127(3) it is a discretionary activity, limited to the change of conditions and the effects of the change.

5. ASSESSMENT OF ENVIRONMENTAL EFFECTS

This assessment follows section 88(2) and Schedule 4 of the RMA. Under section 104C, as Council only consider the matters over which discretion is restricted, so the assessment focuses on those.

5.1. Transport Effects

Transport effects are assessed in the ITA (Appendix D, Sections 4 to 8), which concludes they are less than minor. The network has capacity for the traffic generated, the existing crossings meet TRAN-S2, and parking, loading and bicycle facilities are provided on site.

5.2. Natural Hazard Effects

Floor levels. Finished floor levels are set and approved through building consent EBC-2026-1042/0, at least 300 mm above the 1% AEP flood level.

Overland flow and off-site effects. The buildings do not obstruct the Whiriwhiritoa Stream or its constructed flood-control corridor, do not form a continuous transverse barrier across the floodplain, and do not obstruct the Klinac Lane and Maritime Lane drainage and overland flow corridors (Gumboots Sections 4.2 and 7.1 to 7.5). No mechanism has been identified by which the development would divert floodwater onto a neighbouring property.

Safe access and egress. Vehicle access is from Klinac Lane and Maritime Lane. Flood levels fall from west to east, and the Klinac Lane crossing is at the south-eastern corner, where modelled levels are lowest (Gumboots Section 4.1). The buildings are daytime retail premises with no overnight occupation, and they can be closed when a flood warning is issued.

Building resilience and structural integrity are addressed through building consent EBC-2026-1042/0.

The natural hazard effects are less than minor. The floor levels provide the required freeboard, the activity is not vulnerable, overland flow paths are maintained, and safe access is available.

5.3. Earthworks Effects

Positive effects. The earthworks enable commercial development on a zoned site and raise building platforms and paved areas, which reduces flood risk to the buildings and their users.

Flood storage and conveyance (EW-S9). The fill displaces flood storage within the mapped flood hazard area, including 912 m^3 within RFHZ1. Gumboots treats the full 3,187 m^3 of fill as a conservative upper bound, because only fill below the design flood surface displaces floodwater (Section 6.1). The affected storage is spread across a floodplain that remains hydraulically connected, and the works do not obstruct the stream corridor, form a barrier across the floodplain, or obstruct the local drainage corridors (Sections 6.2 and 7.1 to 7.4). On that qualitative evidence, no mechanism has been identified for an increase in flood level or extent on another property. The change has not been quantified by modelling (Section 7.5). Effects on flood storage and conveyance are assessed as less than minor.

Boundary setback (EW-S6). The paving fill at the Maritime Lane and Klinac Lane frontages is shallow formation for the car park and service areas, graded to tie in with the existing levels at the boundary. Along the eastern boundary beside Building 3, the fill is held by a retaining wall of up to 0.7 m retained height, addressed through building consent EBC-2026-1042/0. Neither the adjoining road reserve nor the vacant site to the east is altered. Runoff from the paved areas is collected by the site stormwater system rather than shed onto adjoining land, and the works are under geotechnical supervision with sediment controls at the boundaries. Effects are less than minor.

Water quality and the stream. All works are outside the 10 m river margin, and no works are proposed in the stream or its banks. The main construction risk is sediment-laden runoff, managed by the ESCP. No dewatering is required. Effects are less than minor.

Construction effects. Noise, dust and fill import truck movements are temporary and limited to the works period, during standard construction hours, with dust suppression in dry conditions. The site will be enclosed by a 2 m high temporary security fence. Effects are less than minor in this commercial precinct.

Visual and amenity effects. Site levels rise by up to 1.14 m on a flat commercial site that will be built on and paved. Exposed earth during construction is temporary, and batters are stabilised. Effects are less than minor.

Land stability. All earthworks are supervised by the geotechnical engineer to the Initia specification, the eastern retaining wall is addressed through building consent EBC-2026-1042/0, and Building 3 settlement is addressed by the preload. There is no risk of instability at or beyond the boundary.

Cultural values and heritage. No wāhi tapu, sites of significance to tangata whenua or scheduled heritage items are identified on or next to the site. The EW-S3 accidental discovery protocol applies (Condition 9).

Reinstatement period (EW-S4). The longer period arises from the Building 3 preload. The preload is compacted engineered fill, and its surface and batters are stabilised under the ESCP for the hold period. Areas outside the preload are paved or built over as the works progress. The effect is temporary and confined to the site, and is less than minor.

Conclusion. The adverse effects of the earthworks are less than minor.

5.4. Effects Summary

Environmental Factor	Effect Level	Section
Transport effects	Less than minor	5.1
Natural hazard effects	Less than minor	5.2
Earthworks effects	Less than minor	5.3
Effects of the s127 change (wastewater)	Less than minor	9.4

6. MATTERS OF DISCRETION

Under s104C RMA, consideration is limited to the matters over which discretion is restricted. These are addressed below for each rule, in the Form 4 order.

6.1. TRAN-R1 and TRAN-S1

The ITA responds to the TRAN-S1 matters at Section 10.1 and the TRAN-R1 matters at Section 10.2, and its recommendations are carried into Conditions 1 to 4.

For TRAN-S1 matter (a), the ITA was prepared by Paul Wright, engineer and planner, and is not approved by a chartered professional engineer, so it should be assessed purely on its merits.

6.2. TRAN-R9

The ITA responds to each TRAN-R9 matter of discretion at Section 9, and its recommended conditions are adopted as Conditions 1 to 4.

6.3. NH-R7

a) **Effects of flood hazards on building integrity.** Floor levels and structural integrity are addressed through building consent EBC-2026-1042/0 under the Building Act 2004. This consent addresses the flood hazard only to the extent it is not managed by that process.

b) **Acceleration or worsening of flood effects.** The works do not obstruct the stream corridor, form a transverse barrier or obstruct the drainage network, and no mechanism has been identified for displaced floodwater to be directed onto an adjoining property (Gumboots Sections 7.1 to 7.4). Flood storage is addressed at Section 5.3.

c) **Overland flow paths, flood depths, velocity and frequency.** The established overland flow corridors along Klinac Lane and Maritime Lane are not obstructed (Gumboots Section 7.3). Gumboots has not quantified the change in flood level or extent, and its qualitative assessment identifies no mechanism for an off-site increase (Section 7.5).

d) **Ability to relocate or adapt.** The buildings are permanent commercial structures. The floor levels provide freeboard above the 1% AEP flood level.

e) **Risk to people and property.** Risk is managed through the floor levels, the maintained overland flow paths and the daytime, non-vulnerable nature of the activity.

f) **Nature of the activity and its vulnerability.** Retail is not a vulnerable activity (RDIS-1). Occupation is daytime only, and the premises need not operate during a flood.

g) **Safe access and egress.** Access is from the existing crossings, with the Klinac Lane crossing at the lowest-flood corner of the site. The premises can be closed when a flood warning is issued, so customers need not access the site during a flood.

h) **Functional or operational need.** There is no functional or operational need for the retail activity to be in the flood hazard area. The site is zoned for this use, the use is permitted under LIZ-R15, and the hazard is managed through the floor levels and the design of the site.

i) **Engineering solutions.** The primary mitigation is the floor level design. The development is outside the constructed Whiriwhiritoa Stream conveyance corridor, and the channel widening and levee along the stream have been built (Gumboots Section 4.2). No hard engineering is proposed.

j) **Building resilience.** Addressed through building consent EBC-2026-1042/0.

k) **Management during flood events.** The premises have predictable daytime operating hours and can be closed and evacuated in an orderly way on a flood warning, in line with Civil Defence advice.

6.4. EW-R1

Matter of discretion	Assessment
(a) Location, scale and volume	About 3,187 m^3 of fill and 739 m^3 of topsoil strip (about 3,926 m^3) over an area of 7,240 m^2, within the development footprint of a Light Industrial site. The volume is what is needed for the building platforms and pavements (Section 3.3).
(b) Depth and height of cut and fill	Maximum fill depth 1.14 m (Building 2), within EW-S2. Cut is limited to a topsoil strip of 0.2 to 0.3 m. The fill along the eastern boundary beside Building 3 is held by a retaining wall of up to 0.7 m retained height, addressed through building consent EBC-2026-1042/0.
(c) Nature of filling material and compaction	Engineered fill to the geotechnical specification, placed in compacted layers under supervision, meeting EW-S8.
(d) Exposed surfaces and stockpiling	Works are progressive, fill is placed and compacted directly, and there is no long-term stockpiling. The Building 3 preload is stabilised under the ESCP for its hold period.
(e) Erosion, dust and sediment controls	A certified ESCP prepared to GD2016/005 (Condition 6(b)), with dust suppression in dry conditions.
(f) Natural hazard risk, particularly flood events	No mechanism identified for diversion of flood flow or an off-site increase in flood hazard, on the qualitative Gumboots assessment (Sections 6 and 7). EW-S9(1) is not demonstrated on a quantified basis (Section 5.3).
(g) Stormwater controls	Permanent stormwater through the BC06 design. Construction stormwater through the ESCP.
(h) Flood storage, overland flow paths and drainage	Flood storage is displaced (EW-S9(2)), including 912 m^3 in RFHZ1, but is spread across a hydraulically connected floodplain, and the stream corridor, overland flow paths and drainage network are not obstructed (Gumboots Sections 6.2 and 7.1 to 7.4).
(i) Stability of land, buildings and infrastructure	Geotechnical supervision throughout, the eastern retaining wall addressed through building consent EBC-2026-1042/0, Building 3 settlement addressed by the preload, and no instability at or beyond the boundary.
(j) Natural character, landscape, heritage, spiritual and	No works within the 10 m river margin. No scheduled

Matter of discretion	Assessment
cultural values	heritage items or sites of significance affected. EW-S3 accidental discovery protocol applies.
(k) Life-supporting capacity of soils	Topsoil is stripped only where natural ground remains, for reuse in landscaped areas. The site is zoned and largely used for commercial purposes.
(l) Location and use of infrastructure	Existing site stormwater infrastructure (cesspits, manholes and the outlet) is incorporated into the design.
(m) Temporary or permanent nature of effects	Construction effects, including the longer reinstatement period, are temporary. The permanent effects (raised levels, boundary fill and displaced flood storage) are less than minor.
(n) Traffic and noise	Fill import movements and machinery noise are temporary, within standard construction hours, and consistent with the commercial precinct.
(o) Time of year and duration	One construction period of about 12 months. The Building 3 preload hold of at least six months is the reason reinstatement takes longer than six months (EW-S4).
(p) Visual and amenity values	Levels rise by up to 1.14 m on a flat commercial site that will be built on. The boundary fill is finished as landscaped strips and paving.

7. OBJECTIVES AND POLICIES

The objectives and policies below are considered insofar as they relate to the matters of discretion.

7.1. Transport

The transport objectives and policies (TRAN-O2 to TRAN-O4 and TRAN-P3 to TRAN-P7) are assessed in ITA Section 11, which finds the development consistent with them.

7.2. Natural Hazards

NH-O1 and NH-O2 seek that natural hazard risks are managed and that land use does not increase risk or mitigates it. NH-P2 and NH-P5 set out the matters for assessing risk, and NH-P3 asks for a precautionary approach. The application is supported by the NRC flood levels, the Gumboots assessment and the Initia geotechnical report. The buildings have freeboard above the 1% AEP flood level, the activity is not vulnerable, and no mechanism has been identified for risk to be transferred off site (NH-P2(b) and (j)). The flood storage effect has been assessed conservatively, using the full fill volume. There is no functional or operational need for the retail use to locate in the flood hazard area (NH-P2(l)), but the site is zoned for this use and the hazard is managed by design.

NH-P6 manages land use in river flood hazard areas by requiring:

- (b) at least 300 mm freeboard above the 1% AEP flood level for non-vulnerable buildings: met at each building (Section 4.3);
- (c) commercial buildings constructed to avoid material damage in a 1% AEP flood: met through the floor levels and building consent;
- (d) buildings within the 10-year flood area designed to avoid material damage in a 1% AEP flood: met through the floor levels and building consent;
- (f) earthworks that do not divert flood flow onto surrounding properties and do not reduce flood plain storage within the 10-year flood area: no diversion mechanism has been identified, but the 912 m^3 of fill within RFHZ1 reduces flood plain storage, so this limb is not met. The storage is spread across a hydraulically connected floodplain and the effect is less than minor (Section 5.3);
- (g) overland flow paths retained: met (Gumboots Section 7.3); and
- (h) safe vehicle access within the site: met.

The development is consistent with the natural hazards objectives and policies overall, except the flood storage limb of NH-P6(f), for the reasons above.

7.3. Earthworks

EW-O1 to EW-O3 enable earthworks needed for development while managing effects on amenity, safety, surrounding land, values and stability. The earthworks are needed for the development of a zoned site, are supervised for stability, and their effects are less than minor.

Policy	Assessment
EW-P1 Enable earthworks for social, economic and cultural wellbeing	The earthworks enable commercial development on a zoned site. **Consistent.**
EW-P2 Manage earthworks with potential to create or worsen natural hazards	Managed through geotechnical supervision, the ESCP and the stormwater design. No mechanism identified

Policy	Assessment
	for off-site flood effects. **Consistent.**
EW-P3 Locate and design earthworks to manage effects	Fill depth within EW-S2, drainage and overland flow paths maintained, sediment and dust controlled. The road frontage fill is shallow and unretained, and the eastern boundary fill is held by a retaining wall of up to 0.7 m. **Consistent.**
EW-P4 Earthworks appropriate for the location	Site constraints addressed by the geotechnical report, and no natural landforms, heritage or biodiversity affected. Flood storage is lost within flood hazard areas (EW-P4(h)), but the effect is less than minor (Section 5.3). **Consistent overall.**
EW-P5 Historic heritage and cultural values	EW-S3 accidental discovery protocol applies, and no known heritage or cultural sites. **Consistent.**
EW-P6 Stability and safety	Geotechnical supervision, and no instability at or beyond the boundary. **Consistent.**
EW-P7 Coordinated assessment for land development	Building platforms, paving, preload and site preparation are assessed together. **Consistent.**
EW-P8 Matters for assessing earthworks	Largely the EW-R1 matters (Section 6.4). Of the additional matters, no heritage expert advice is needed (k), no sites of significance to tangata whenua are identified under TW-P6 (l), no indigenous vegetation is cleared (n), and no infrastructure is proposed that needs a functional assessment (o). **Consistent.**

7.4. Light Industrial Zone

LIZ-O5 and LIZ-P3 provide for a limited range of commercial activities in the zone, including those which require larger sites and are not anticipated in the Mixed Use or Town Centre zones. The Waipapa Control Area specifically permits large-format retail (LIZ-R15), and the buildings meet the zone standards (Section 4.5). The development is consistent with these provisions.

7.5. National and Regional Policy Statements

National policy statements. The National Policy Statement for Freshwater Management 2020 is relevant because the site adjoins the Whiriwhiritoa Stream. All works are outside the 10 m river margin, sediment is managed through the certified ESCP, and stormwater is managed through the existing site network, so the health of the stream is maintained. The National Policy Statement on Urban Development 2020 supports business development on zoned land, and the proposal is consistent with it. The National Policy Statement for Highly Productive Land does not apply because the site is zoned Light Industrial, and the New Zealand Coastal Policy Statement does not apply because the site is not in the coastal environment.

National environmental standards. The NES-CS is addressed in Section 4.6. The National Environmental Standards for Freshwater do not apply, because no natural wetland has been identified within 100 m of the works and no works are proposed in the stream.

Regional Policy Statement. The Regional Policy Statement for Northland seeks that new use and development in flood hazard areas does not increase the risk to people and property (Objective 3.13 and Policies 7.1.1 and 7.1.2). The buildings have freeboard above the 1% AEP flood level, the activity is not vulnerable, and no mechanism has been identified for flood risk to be transferred off site (Sections 5.2 and 5.3). The loss of flood storage is assessed in Section 5.3 and its effect is less than minor. The proposal is consistent with these provisions. The Regional Plan for Northland is addressed through the NRC earthworks consent (APP.047605.01.01).

7.6. Part 2 of the RMA

The proposal is consistent with Part 2 of the RMA. It enables commercial development on zoned land while the adverse effects on the environment are less than minor, in line with the purpose in section 5. Significant risks from natural hazards (section 6(h)) are managed through the floor levels, the open flood and drainage corridors and the assessment of flood storage. No sites of significance to Māori are identified on or near the site (section 6(e)), and the accidental discovery protocol applies (Condition 9). The site layout and landscaping maintain amenity values and make efficient use of the land (section 7(b) and (c)). No Treaty of Waitangi matters under section 8 have been identified.

8. NOTIFICATION (s95A TO s95E)

8.1. Public Notification

The s95A steps are set out below, in order.

Step 1 (s95A(2) and (3)): Public notification is not mandatory. The applicant does not request it, the application does not involve the exchange of recreation reserve land, and s95C does not apply.

Step 2 (s95A(4) to (6)): No rule or national environmental standard precludes public notification.

Step 3 (s95A(7) and (8)): No rule or national environmental standard requires public notification, and the adverse effects on the environment are not more than minor (s95D). As assessed in Section 5, all effects are less than minor.

Step 4 (s95A(9)): No special circumstances apply.

Public notification is not required.

8.2. Limited Notification

The s95B steps are set out below, in order.

Step 1 (s95B(2) to (4)): No protected customary rights group or customary marine title group is affected, and the site is not within or adjacent to a statutory acknowledgement area.

Step 2 (s95B(5) and (6)): No rule or national environmental standard precludes limited notification.

Step 3 (s95B(7) and (8)): Under s95E, a person is affected if the adverse effects on them are minor or more than minor, disregarding any person who has given written approval. This is assessed below.

Step 4 (s95B(10)): No special circumstances apply.

The adjoining owners are Far North District Council (Klinac Lane and Maritime Lane road reserve and the drainage easement), Northland Regional Council (the vacant site to the east, and as owner of the Whiriwhiritoa Stream flood works) and the owners of the commercial sites across the roads.

Transport. Effects on the road network, including SH10, are less than minor (ITA Sections 6.3 to 6.5). The site has no access to SH10, and its traffic reaches the highway only through the local road network, so the NZ Transport Agency is not adversely affected.

Boundary earthworks (EW-S6). The fill at the road frontages is shallow and graded to tie in with existing levels. Along the eastern boundary beside Building 3, the fill is held by a retaining wall of up to 0.7 m retained height, addressed through building consent EBC-2026-1042/0. Runoff is collected on site, and there is no change to drainage or stability on the adjoining land. The FNDC drainage easement over area A on SO 570424 is maintained, and the existing site stormwater network and outlet are retained (BC06). Effects on the adjoining owners are less than minor.

Flood effects (EW-S9). The Gumboots Flood Displacement Assessment identifies no mechanism by which displaced floodwater would be directed toward a particular adjoining property, and the stream corridor and drainage corridors are not obstructed (Gumboots Section 7). The

change in flood level has not been quantified (Section 7.5), but on the available evidence no identifiable person is affected to a minor or more than minor degree.

Reinstatement period (EW-S4). The longer period is confined to the site and does not affect any person.

No person is adversely affected to a minor or more than minor degree, and no written approvals have been sought.

Consultation. FNDC has been consulted on the Form 4 matters and on the section 127 route (Appendix B). NRC has been engaged through the earthworks application APP.047605.01.01, including the Gumboots Flood Displacement Assessment (Appendix E). No other consultation has been undertaken. Tangata whenua have not been consulted, as no sites of significance to Māori are identified on or near the site and the effects are less than minor.

8.3. Notification Conclusion

The adverse effects are less than minor, no person is adversely affected, and the site and all surrounding properties are commercial or vacant. The applicant requests that the application be processed without public or limited notification.

Notification of the section 127 application is assessed in Section 9.6, with the same conclusion.

9. SECTION 127 APPLICATION: RESOURCE CONSENT 2170377-RMACOM

9.1. The Consent and the Form 4 Item

Resource consent 2170377-RMACOM was granted by FNDC on 30 May 2017 to Waipapa Centre Ltd, for land at 16 Klinac Lane that includes Section 3 SO 438821, now 20 Klinac Lane (Appendix J). Decision C, Land Use (Discharge to Land), was granted under the Regional Water and Soil Plan for Northland, under a transfer of powers from Northland Regional Council under section 33 of the RMA. It authorises the discharge from the on-site wastewater treatment and disposal system that serves the retail development on the site. Its duration is 15 years from the date of issue.

The Form 4 of 19 October 2026 records that the proposed discharge of 2,750 litres per day does not accord with Condition 3 of Decision C, which limits the discharge to 2,500 litres in any 24 consecutive hours. The Form 4 notes that this is separate to the NRC approvals AUT.042366.01.02 and AUT.042366.02.01. FNDC has confirmed by email that a section 127 application may be made as part of this resource consent application, and that if it is approved the item is removed from the Form 4 (Appendix B).

Decisions A (subdivision) and B (land use) of 2170377-RMACOM are not affected by this application.

9.2. Consent Holder and Activity Status

Decision C was granted as a land use consent and, under section 134 of the RMA, attaches to the land and may be enjoyed by its owners and occupiers for the time being. WBC Developers Limited, as owner of Section 3 SO 438821 (Record of Title 574944), is the consent holder and makes this application under section 127(1).

Under section 127(3), the application is treated as a discretionary activity, and the assessment is limited to the change of conditions and the effects of the change. The duration of the consent is not changed.

9.3. Changes Sought

The treatment and disposal system was upgraded in 2024 to a design by Ecogent Limited, which is the subject of certificate of acceptance application COA-2027-4/0. NRC has authorised the discharge at up to 4.4 m^3 per day under AUT.042366.01.01 (20 April 2021), and adopted the Ecogent plans by change AUT.042366.01.02 (4 March 2025). That consent is held by WBC Developers Limited and expires on 31 March 2036 (Appendix J).

Conditions 1, 2, 5 and 6 of Decision C tie the discharge to the 2016 Haigh Workman design, with dripline irrigation at 4.0 litres per square metre per day. Changing Condition 3 alone would leave the upgraded system out of step with those conditions. The applicant therefore seeks to change Conditions 1, 2, 3, 5 and 6 so that they match the Ecogent design and the NRC consent. The limit sought is 4,400 litres per day rather than the 2,750 litres per day recorded in the Form 4, so that Decision C matches the design capacity and the NRC limit and the matter does not arise again.

The conditions are proposed to read:

> **Condition 1.** The activity shall be carried out in accordance with the plans prepared by Ecogent Limited titled “Proposed Onsite Wastewater Layout” (drawing ECO1177-06, Revision A, dated 21/11/24) and “Proposed Conventional Bed Detail” (drawing ECO1177-07, Revision A, dated 21/11/24), attached to this consent with the Council’s “Approved Stamp” affixed to it.

Condition 2. The Consent Holder shall ensure that the on-site wastewater treatment and disposal system is constructed generally in accordance with the recommendations contained within the TP58 site evaluation for 12 and 20 Klinac Lane, Waipapa, prepared by Ecogent Limited (ECO1177-11, Appendix E).

Condition 3. The volume of wastewater discharged per day, being any 24 consecutive hours, shall not exceed 4,400 litres.

Condition 5. The treated wastewater shall not be applied to land at an areal loading rate greater than 10 litres per square metre per day.

Condition 6. The consent holder shall, as a minimum for the duration of this consent, ensure that all wastewater receives secondary treatment prior to being disposed of to the conventional soakage bed shown on the plans referred to in Condition 1.

Conditions 4 and 7 to 19 are unchanged.

9.4. Effects of the Change

Design flow. The Ecogent TP58 site evaluation (Appendix J) sets a design flow of 4,400 litres per day for 12 tenancies, nine existing and three future: 1,400 L/day for the existing retail units, 750 L/day for the lunch bar, 1,500 L/day for the café and 750 L/day for three future retail units. The three buildings in this application are the three future retail units in that design. The measured daily flow is 3,650 L/day. The measured flow exceeds the current Condition 3 limit, which is the reason for this application.

Treatment and disposal. Wastewater receives secondary treatment in an Eloy Oxyfix C-90 aerobic treatment plant and is pumped to a 440 m² conventional soakage bed at 10 L/m²/day (4,400 ÷ 10 = 440 m²), with a 132 m² reserve area (30%). The pump chamber has a high-level alarm and 5,000 litres of emergency storage. The treatment plant and disposal field are more than 15 m from surface water and more than 1.5 m from boundaries, and the disposal field is outside the 10-year flood hazard area. The 10 L/m²/day loading rate is the rate in the Ecogent design and in NRC Condition 5 for the soakage bed, which replaced the 2016 dripline design.

District land use. FNDC granted land use consent 2240105-RMACOM (Activity 1, 2023) for the enlarged disposal area, including its breach of the 30 m waterbody setback (Appendix J).

Regional authorisation. NRC has assessed this discharge under the Regional Plan for Northland and authorised it at up to 4.4 m³ per day, with conditions on the treatment system, loading rate, alarms, metering, records, stormwater diversion, the reserve area and maintenance. The changes sought bring Decision C into line with that consent, so the two authorisations no longer set different limits for the same discharge.

Retained conditions. The remaining conditions of Decision C continue to apply. These include the effluent quality limits (Condition 4), the flow meter and monthly records (Conditions 9 and 13), the alarm and 24-hour emergency storage (Condition 10), no ponding or runoff (Condition 11), stormwater diversion (Condition 12), maintenance (Condition 15), no vehicles on the disposal area (Condition 16) and the review clause for flooding and wastewater flows (Condition 18). The meter and records allow Council to verify compliance with the new limit.

Conclusion. The change does not increase the discharge beyond the design capacity of the system or the volume NRC has authorised. The effects of the change are less than minor.

9.5. Statutory Assessment

Applying section 104 through section 127(3), the change is consistent with the Northland Regional Policy Statement and the Regional Plan for Northland, under which NRC assessed and granted the same discharge (AUT.042366.01.01 and AUT.042366.01.02). The district plan matters for the disposal field were assessed and granted under 2240105-RMACOM. The change is consistent with Part 2 of the RMA. It provides for the use of the site while the discharge is treated, contained and monitored so as to avoid adverse effects on the Whiriwhiritoa Stream.

9.6. Notification

Section 127(4) requires Council to consider, in particular, every person who made a submission on the original application and may be affected by the change. The original application was processed without notification, and no affected persons were identified (2170377-RMACOM, Reasons for the Decision), so there are no submitters.

Following the s95A and s95B steps in Section 8, public notification is not mandatory or required, no special circumstances apply, and the effects of the change are less than minor. No person is adversely affected, because the discharge stays on site, within the limit NRC has authorised and under the retained conditions. The applicant requests the section 127 application be processed without notification.

10. PROPOSED CONDITIONS

The applicant offers the following conditions. The standard or matter each condition secures is noted in brackets.

Transport (TRAN-S1 and TRAN-R9; ITA Section 12)

1. The development shall be carried out in accordance with the approved architectural plans prepared by Spooner Architectural Services Ltd, including the car parking, three accessible car parking spaces, loading bays, truck park, internal service lane, bicycle parking and end-of-trip facilities shown on those plans. Accessible spaces shall comply with TRAN-Table 2 and TRAN-Table 6. (TRAN-S1(2), (3) and (5))
2. Before the activity commences in each building, the following shall be provided in accordance with TRAN-S1 and maintained thereafter:
    a. short-stay bicycle parking (six spaces across the site), consisting of stands securely attached to an immovable object, clearly visible or signposted, at the location shown on BC03 (Rev C); (TRAN-S1(1) and (7))
    b. one long-stay bicycle parking space per building, undercover and secure from theft, plus one additional space for each additional 15 staff where a building employs more than 15 staff; and (TRAN-S1(1) and (8))
    c. one shower and changing area with clothing storage per building for staff use. (TRAN-S1(4))
3. All parking, loading, manoeuvring and access areas shall be formed, sealed or concreted, drained and marked or delineated before the activity commences, and shall be maintained and kept available for those purposes. (TRAN-R1 PER-1 and PER-3)
4. Vehicle access shall be from the existing vehicle crossings on Klinac Lane and Maritime Lane, and the site shall be laid out so that vehicles, including the design vehicle, can enter and leave in a forward direction. (TRAN-R9 matter (c))

Natural hazards (NH-R7)

5. No building or associated works shall divert or obstruct any overland flow path so as to cause flooding on neighbouring properties. (RDIS-3)

Earthworks (EW-R1)

6. The earthworks shall be carried out:
    a. in accordance with earthworks plan BC03A (Rev B, Appendix C), under the supervision of a geotechnical engineer and in accordance with the Initia Geotechnical Investigation Report, P-003194 Rev B; (EW-S7)
    b. in accordance with an Erosion and Sediment Control Plan prepared to GD2016/005 and certified by Far North District Council before works start; and (EW-S5)
    c. with all exposed areas reinstated within 12 months of the commencement of earthworks. (EW-S4)

Landscaping (LIZ-S5 and TRAN-R1 matter (c))

7. The landscape strips along the Klinac Lane and Maritime Lane frontages shown on BC03 and BC04 shall be planted within the first planting season following completion of the works, with plants

that reach at least 1 m in height within two years of planting and shall be maintained. Planting within the sight lines of the two vehicle crossings shall be kept low enough to maintain the sight distances in TRAN-Table 9.

General

8. All works shall be carried out in accordance with the approved plans, except as modified by the conditions of this consent.
9. If any archaeological site, kōiwi, human remains or taonga is discovered during earthworks, the consent holder shall: (EW-S3)
    a. cease all works within 20 m of the discovery immediately and secure the area;
    b. within 24 hours, inform Far North District Council, Heritage New Zealand Pouhere Taonga and the relevant tangata whenua, and the New Zealand Police if human remains or kōiwi are found; and
    c. not recommence works in that area until the site has been inspected and any required authority or approval has been obtained.

11. CONCLUSION

11.1. Summary

The application is for three detached single-storey retail buildings at 20 Klinac Lane, Waipapa, with a combined GFA of 2,000 m² (830 m², 585 m² and 585 m²), together with the associated parking, access and earthworks, in the Waipapa Control Area of the Light Industrial zone. Each matter in the Form 4s of 9 September and 19 October 2026 has been assessed, together with the further standard (EW-S4) identified in preparing the application and the section 127 application for wastewater consent 2170377-RMACOM.

11.2. Overall Assessment

Resource consent is required under the following PDP-AV rules. The activities are bundled, and the overall activity status is restricted discretionary under section 87A of the RMA:

- TRAN-R1 / TRAN-S1 (short-stay bicycle parking location)
- TRAN-R9 (trip generation; each building exceeds 450 m² GFA)
- NH-R3, directing to NH-R7 (new buildings in a river flood hazard area)
- EW-R1 (EW-S1, EW-S4, EW-S6 and EW-S9)

The application under section 127 to change Conditions 1, 2, 3, 5 and 6 of Decision C of wastewater consent 2170377-RMACOM is lodged with this application and is a discretionary activity under section 127(3). The effects of the change are less than minor (Section 9).

All adverse effects are less than minor, and no person is adversely affected. The development is consistent with the relevant objectives and policies, apart from the flood storage limb of NH-P6(f), whose effect is less than minor. The proposed conditions secure the transport facilities, the landscaping and the management of the natural hazard and earthworks effects.

11.3. Final Statement

This application provides sufficient information for Far North District Council to make an informed decision. The applicant requests that it be processed on a non-notified basis and consent be granted.

APPENDICES

Appendix A: Record of Title 574944, with Consent Notice 6076987.2

Appendix B: FNDC Form 4s (19 October, 9 September, 28 August and 26 June 2026), FNDC letter of 8 October 2026 and FNDC email confirming the section 127 route

Appendix C: Architectural plans, BC Drawings 13-10-26 (including BC03A earthworks plan)

Appendix D: Integrated Transport Assessment (MDRC-ITA-090926-V1.0)

Appendix E: Gumboots Flood Displacement Assessment, Revision A

Appendix F: NRC River Flood Level Report, parcel 7315854

Appendix G: FNDC floor level correspondence, 3 March 2026

Appendix H: Initia Geotechnical Investigation Report, P-003194 Rev B

Appendix I: Donaldson stream survey, 30 June 2026

Appendix J: Wastewater consents and design: FNDC 2170377-RMACOM (2017), NRC AUT.042366.01.01 (2021) and change AUT.042366.01.02 (2025) with Ecogent plans ECO1177-06 and ECO1177-07, FNDC 2240105-RMACOM (2023), and Ecogent TP58 site evaluation checklist ECO1177-11 Appendix E

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017
FREEHOLD

Search Copy

R.W. Muir
Registrar-General
of Land

Identifier	**574944**
Land Registration District	**North Auckland**
Date Issued	13 January 2012

Prior References
154050

Estate	Fee Simple
Area	1.2148 hectares more or less
Legal Description	Section 3 Survey Office Plan 438821
Registered Owners	

WBC Developers Limited

Interests

6076987.2 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 13.7.2004 at 9:00 am

Land Covenant in Easement Instrument 6167615.1 - 1.10.2004 at 9:00 am

9523920.3 Mortgage to Bank of New Zealand - 17.10.2013 at 9:47 am

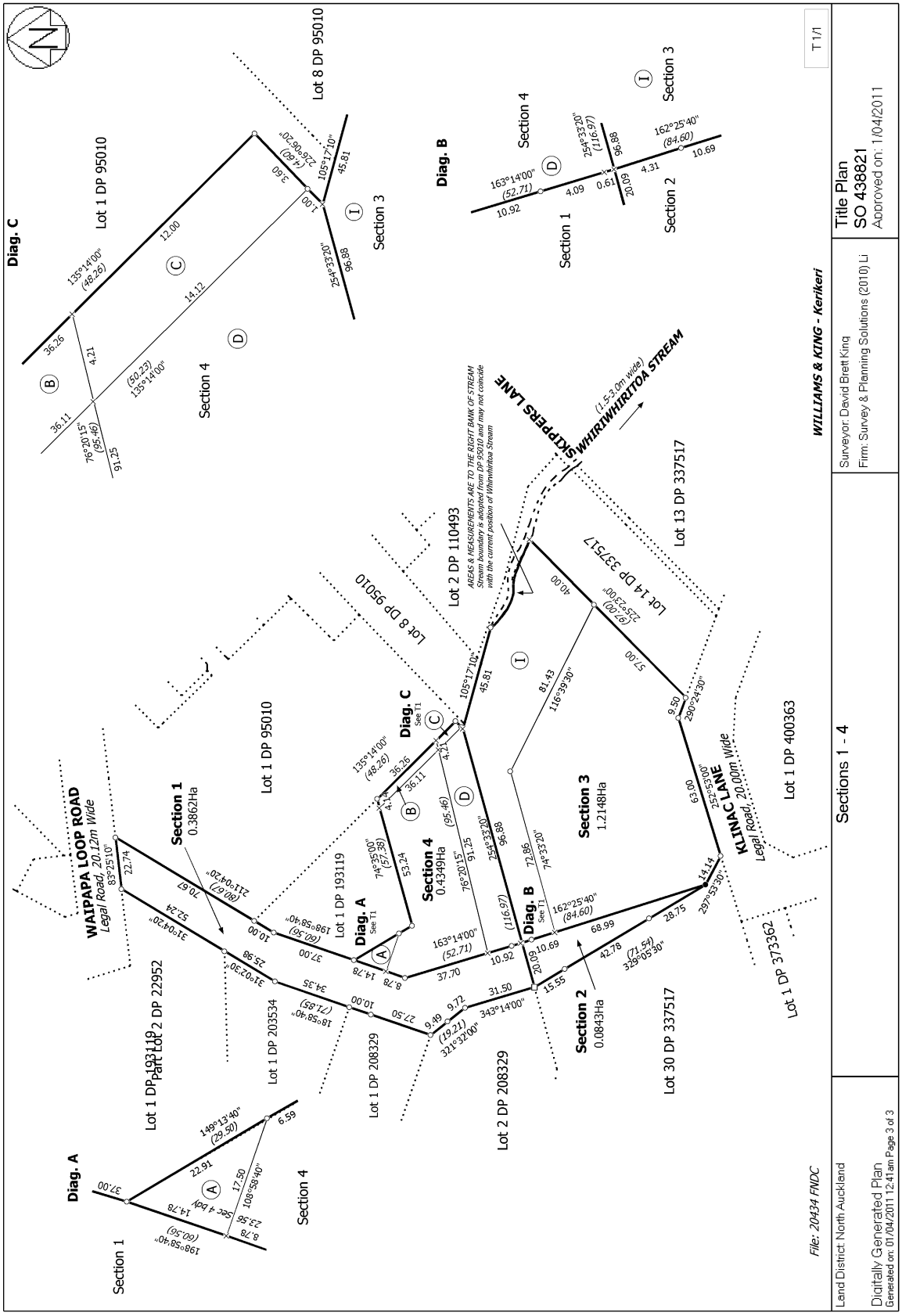
10296683.1 Variation of Mortgage 9523920.3 - 28.1.2016 at 10:58 am

Subject to a right to discharge treated sewage over part marked D on DP 514002 created by Easement Instrument 11260659.9 - 10.4.2019 at 12:57 pm

The easements created by Easement Instrument 11260659.9 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right to convey electricity over part marked A on DP 584355 created by Easement Instrument 12626241.1 - 16.12.2022 at 2:28 pm

Subject to a right (in gross) to drain water over part marked A on SO 570424 in favour of Far North District Council created by Easement Instrument 12721288.1 - 15.6.2023 at 12:58 pm


Diag. C
Lot 1 DP 95010
Lot 8 DP 95010
Section 3
Section 4
Diag. B
Section 1
Section 2
WHIRIWHIRITTOA STREAM
(1.5-3.0m wide)
SKIPPERS LANE
Lot 13 DP 337517
Lot 14 DP 337517
Lot 2 DP 110493
Lot 8 DP 95010
Lot 1 DP 95010
Lot 1 DP 193119
Lot 1 DP 203534
Lot 1 DP 208329
Lot 2 DP 208329
Lot 30 DP 337517
Lot 1 DP 400363
Lot 1 DP 373362
Lot 1 DP 193118
Part Lot 2 DP 22952
WAIPAPA LOOP ROAD
Legal Road, 20.12m Wide
KLINAC LANE
Legal Road, 20.00m Wide
Section 1
0.3862Ha
Section 4
0.4349Ha
Section 3
1.2148Ha
Section 2
0.0843Ha
Diag. A
Diag. C
Diag. B
AREAS & MEASUREMENTS ARE TO THE RIGHT BANK OF STREAM
Stream boundary is adopted from DP 95010 and may not coincide with the current position of Whiriwhiritoa Stream
WILLIAMS & KING - Kerikeri
T1/1
Sections 1 - 4
Title Plan
SO 438821
Approved on: 1/04/2011
Surveyor: David Brett King
Firm: Survey & Planning Solutions (2010) Li
Land District: North Auckland
Digitally Generated Plan
Generated on: 01/04/2011 12:41am Page 3 of 3
File: 20434 FNDC

FAR NORTH DISTRICT COUNCIL

THE RESOURCE MANAGEMENT ACT 1991

SECTION 221 : CONSENT NOTICE

CONO 6076987.2 Cons
Cpy - 01/01, Pgs - 002, 12/07/04, 17:14
DocID: 311506030

REGARDING RC 2030736
The subdivision of Pt Lot 1 DP 24011, Lot 4 DP 178287,
Lot 2 DP 178287 & Lot 3 DP 178287
North Auckland Registry.

PURSUANT to Section 221 for the purposes of Section 224 of the Resource Management Act 1991, this Consent Notice is issued by the FAR NORTH DISTRICT COUNCIL to the effect that conditions described in the schedule below are to be complied with on a continuing basis by the subdividing owner and the subsequent owners after the deposit of the survey plan, and is to be registered on the title of Lots 1 – 7, 11 – 29 DP 337517 and Lot 30 DP 337517

SCHEDULE

LOTS 12 –18 AND LOT 30 DP 337517

i. No development shall take place on the area shown on the survey plan as being below the design flood lines without the prior approval of Council and then only in accordance with the recommendations of a Registered Engineer in respect of stormwater drainage matters.

LOTS 1 – 6 – 7 & 11 DP 337517

ii. The landscaping required to be provided by Conditions 2 (A) and 3 (I) of the Resource Consent Decision shall be maintained and if necessary replaced, thereafter.

ALL LOTS EXCLUDING LOT 30 DP 337517

iii. Each lot will require a specifically designed wastewater treatment and disposal system. The systems are to be designed in accordance with the requirements of TP58 and the details submitted with any Building Consent application.

iv. That no fire fighting water supplies are available.

LOT 12 DP 337517

v. No building or other obstructions shall be erected or placed within the overland flow paths

LOT 30 DP 337517

vi. No building, as defined in Section 3 of the Building Act 1991 or any act in substitution thereof, shall be erected or placed within the areas A4, O & M shown on the survey plan as being subject to land covenants.

SIGNED: P.J. Killalea

by the FAR NORTH DISTRICT COUNCIL
under delegated authority:
RESOURCE CONSENTS MANAGER

DATED at **KAIKOHE** this 29th day of June 2004

RC2030736
SRM\CERT\3221
4wbc221-a

Te Kaunihera o Te Hiku o te Ika
Far North District Council

19 October 2026

WBC Developments Limited
C/- Pete Hendl
205 Kapiro Road
RD 1
Kerikeri 0294

Tēnā koe,

Building consent number: EBC-2026-1042/0
Property ID: 3356415
Address: 20 Klinac Lane, Waipapa 0230
Description: Three new detached single-storey retail buildings

Requirement for Resource Consent

PIM Assessment of your application has highlighted the need for Resource Consent that must be granted prior to any building works or earthworks commencing.

The site is zoned **Industrial** under the Operative District Plan, and **Light Industrial** under the Proposed District Plan – Appeals Version and Resource Consent is required for breach of the following:

Rule:	NH-R3 PER-1
Reason:	Proposed buildings GFA exceeds 10m2.

Rule:	EW-R1 Earthworks
Reason:	Plans show breaches of EW-S1and EW-S6, and compliance has not been shown with EW-S9.

The proposed onsite wastewater discharge volume does not appear to be in accordance with approved Resource Consent 2170377-RMACOM therefore a Resource Consent is required for breach of the following:

Resource Consent:	2170377-RMACOM approved 30/05/2017 Condition 3: The volume of wastewater discharged per day, being any 24 consecutive hours, shall not exceed 2,500 Litres.
Reason:	This application proposes wastewater discharge volume of 2,750 litres per day. (**NB:** This is separate to the Northland Regional Council AUT.042366.01.02 and AUT.042366.02.01 approval obtained.)

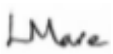
Rule:	2026 Regional Plan for Northland – C.8.3 Earthworks • Flood Hazard area is 100m3 of moved or placed earth in any 12-month period in a 1 in100 Year Flood Hazard. • High Risk Flood Hazard area is 50m3 of moved or placed earth in any 12-month period in a 1 in 10 Year River Flood occurrence.
Reason:	This application does not demonstrate that the proposed earthworks will comply this these permitted thresholds.

Please note there may be other rule breaches found during the Resource Consent process. It is your responsibility to ensure the Resource Consent approved plans match the Consented approved plans.

The application form can be downloaded from www.fndc.govt.nz and submitted to Council's (Planning Department) with the appropriate documentation and instalment fee.

If you have any queries, please contact the Duty Planner on Duty.Planner@fndc.govt.nz or 0800 920 029.

Nāku iti nei, nā



Lysigna Mare
PIM Officer
Delivery and Operations

Emailed to: paul@spoonersolutions.co.nz

FORM 4
Certificate attached to
PROJECT INFORMATION MEMORANDUM

Section 37, Building Act 2004

Building Consent Number: EBC-2026-1042/0

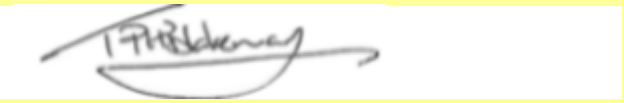
RESTRICTIONS ON COMMENCING BUILDING WORK UNDER RESOURCE MANAGEMENT ACT 1991

The building work referred to in the attached Project Information Memorandum is also required to have the following **Resource Consent**(s) under the Resource Management Act 1991:

- **Resource Consent – REQUIRED**
- **NRC Resource Consent - REQUIRED**

As the above Resource Consent(s) will affect the building work to which the Project Information Memorandum relates, until this has been granted no building work may proceed.

Failure to comply with the requirements of this notice may result in legal action being taken against you under the Resource Management Act 1991.

Signature:	
	Trent Blakeman
Position:	Manager - Building Services – Delivery and Operations
On behalf of:	Far North District Council (Building Consent Authority)
Date:	19 October 2026

Te Kaunihera o Te Hiku o te Ika
Far North District Council

9 September 2026

WBC Developments Limited
C/- Pete Hendl
205 Kapiro Road
RD 1
Kerikeri 0294

Tēnā koe,

Building consent number: EBC-2026-1042/0
Property ID: 3356415
Address: 20 Klinac Lane, Waipapa 0230
Description: Three new detached single-storey retail buildings

Requirement for Resource Consent

PIM Assessment of your application has highlighted the need for Resource Consent that must be granted prior to any building works or earthworks commencing.

The site is zoned **Industrial** under the Operative District Plan, and **Light Industrial** under the Proposed District Plan – Appeals Version and Resource Consent is required for breach of the following:

Rule:	TRAN-R1 Parking PER-4 TRAN-S1
Reason:	Compliance with parts 1, 4, 7 & 8 has not been shown. • This project shall require provision of 1 long-stay bicycle park for staff use for each proposed building. • This project shall require provision of 6 short-stay bicycle parks. • This project shall require provision of one shower and changing area with space for storage of clothing for staff use for each proposed building.

Rule:	TRAN-R9 Trip Generation PER-1
Reason:	Large-format retail PER-1 permitted threshold is 450m2 GFA (TRAN-Table 12); this application proposal is for 2,000m2 GFA.

Rule:	NH-R3 PER-1
Reason:	Proposed buildings GFA exceeds 10m2.

Rule:	EW-R1 Earthworks
Reason:	Plans show breaches of EW-S1and EW-S6, and compliance has not been shown with EW-S9.

The proposed onsite wastewater discharge volume does not appear to be in accordance with approved Resource Consent 2170377-RMACOM therefore a Resource Consent is required for breach of the following:

Resource Consent:	2170377-RMACOM approved 30/05/2017 Condition 3: The volume of wastewater discharged per day, being any 24 consecutive hours, shall not exceed 2,500 Litres.
Reason:	This application proposes wastewater discharge volume of 2,750 litres per day.

Rule:	2026 Regional Plan for Northland – C.8.3 Earthworks • Flood Hazard area is 100m3 of moved or placed earth in any 12-month period in a 1 in100 Year Flood Hazard. • High Risk Flood Hazard area is 50m3 of moved or placed earth in any 12-month period in a 1 in 10 Year River Flood occurrence.
Reason:	This application does not demonstrate that the proposed earthworks will comply this these permitted thresholds.

Please note there may be other rule breaches found during the Resource Consent process. It is your responsibility to ensure the Resource Consent approved plans match the Consented approved plans.

The application form can be downloaded from www.fndc.govt.nz and submitted to Council's (Planning Department) with the appropriate documentation and instalment fee.

If you have any queries, please contact the Duty Planner on Duty.Planner@fndc.govt.nz or 0800 920 029.

Nāku iti nei, nā

LMare

Lysigna Mare
PIM Officer
Delivery and Operations

Emailed to: paul@spoonersolutions.co.nz

FORM 4
Certificate attached to
PROJECT INFORMATION MEMORANDUM

Section 37, Building Act 2004

Building Consent Number: EBC-2026-1042/0

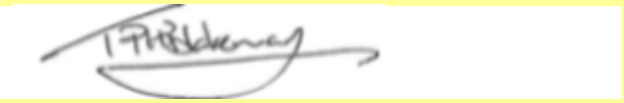
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- **Resource Consent – REQUIRED**
- **NRC Resource Consent - REQUIRED**

As the above Resource Consent(s) will affect the building work to which the Project Information Memorandum relates, until this has been granted no building work may proceed.

Failure to comply with the requirements of this notice may result in legal action being taken against you under the Resource Management Act 1991.

Signature: 

Trent Blakeman
Position: Manager - Building Services – Delivery and Operations
On behalf of: Far North District Council (Building Consent Authority)
Date: 9 September 2026

Te Kaunihera o Te Hiku o te Ika
Far North District Council

28 August 2026

WBC Developments Limited
C/- Pete Hendl
205 Kapiro Road
RD 1
Kerikeri 0294

Tēnā koe,

Building consent number: EBC-2026-1042/0
Property ID: 3356415
Address: 20 Klinac Lane, Waipapa 0230
Description: Three new detached single-storey retail buildings

Requirement for Resource Consent

PIM Assessment of your application has highlighted the need for Resource Consent that must be granted prior to any building works or earthworks commencing.

The site is zoned **Industrial** under the Operative District Plan and Resource Consent is required for breach of the following:

Rule:	12.7.6.1.2 SETBACK FROM SMALLER LAKES, RIVERS AND WETLANDS
Reason:	Plans show proposed impermeable surfaces within 20m of Whiriwhiritoa Stream along the northern boundary of this site.

Rule:	12.3.6.1.3 EXCAVATION AND/OR FILLING, EXCLUDING MINING AND QUARRYING, IN THE RESIDENTIAL, INDUSTRIAL, HORTICULTURAL PROCESSING, COASTAL RESIDENTIAL AND RUSSELL TOWNSHIP ZONES
Reason:	Proposed fill volumes in the Geotech Report by Initia Geotechnical Specialists exceed 200m3 in any 12-month period per site.

Rule:	2026 Regional Plan for Northland – C.8.3 Earthworks • Flood Hazard area is 100m3 of moved or placed earth in any 12-month period in a 1 in100 Year Flood Hazard. • High Risk Flood Hazard area is 50m3 of moved or placed earth in any 12-month period in a 1 in 10 Year River Flood occurrence.
Reason:	This application does not demonstrate proposed earthworks will comply this these thresholds.

The site is zoned **Light Industrial** under the Proposed District Plan – Appeals Version and Resource Consent is required for breach of the following:

Rule:	TRAN-R1 Parking PER-4 TRAN-S1
Reason:	Compliance with parts 1, 4 and 7 has not been shown.

Rule:	TRAN-R9 Trip Generation PER-1
Reason:	Large-format retail PER-1 permitted threshold is 450m2 GFA (TRAN-Table 12); this application proposal is for 2,000m2 GFA.

Rule:	NH-R3 PER-1
Reason:	Proposed buildings GFA exceeds 10m2.

Rule:	EW-R1 Earthworks
Reason:	Plans show breaches of EW-S1and EW-S6, and compliance has not been shown with EW-S9.

The proposed onsite wastewater discharge volume does not appear to be in accordance with approved Resource Consent 2170377-RMACOM, therefore a Resource Consent or a variation approval is required for breach of the following:

Resource Consent:	2170377-RMACOM approved 30/05/2017 Condition 3: The volume of wastewater discharged per day, being any 24 consecutive hours, shall not exceed 2,500 Litres.
Reason:	This application proposes wastewater discharge volume of 2,750 litres per day. (NB: this is separate to the NRC Resource Consent AUT.042366.01.02 and AUT.042366.02.01 approval.)

Please note there may be other rule breaches found during the Resource Consent process. It is your responsibility to ensure the Resource Consent approved plans match the Consented approved plans.

The application form can be downloaded from www.fndc.govt.nz and submitted to Council's (Planning Department) with the appropriate documentation and instalment fee.

If you have any queries, please contact the Duty Planner on Duty.Planner@fndc.govt.nz or 0800 920 029.

Nāku iti nei, nā

Lysigna Mare
PIM Officer
Delivery and Operations

Emailed to: paul@spoonersolutions.co.nz

FORM 4
Certificate attached to
PROJECT INFORMATION MEMORANDUM

Section 37, Building Act 2004

Building Consent Number: EBC-2026-1042/0

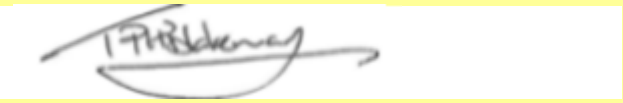
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- **NRC Resource Consent - REQUIRED**

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Signature: 

Trent Blakeman

Position: Manager - Building Services – Delivery and Operations

On behalf of: Far North District Council (Building Consent Authority)

Date: 28 August 2026

Te Kaunihera o Te Hiku o te Ika
Far North District Council

26 June 2026

WBC Developments Limited
C/- Pete Hendl
205 Kapiro Road
RD 1
Kerikeri 0294

Tēnā koe,

Building consent number: EBC-2026-1042/0
Property ID: 3356415
Address: 20 Klinac Lane, Waipapa 0230
Description: Three new detached single-storey retail buildings

Requirement for Resource Consent

PIM Assessment of your application has highlighted the need for Resource Consent that must be granted prior to any building works or earthworks commencing.

NB: As of 27th July 2022, some rules and standards in the Far North District Council Proposed District Plan took legal effect and compliance with these rules applies to your building consent. Please visit our website to see these rules
Far North Proposed District Plan (isoplan.co.nz)

The site is zoned **Industrial** under the Operative District Plan and Resource Consent is required for breach of the following:

Rule:	12.7.6.1.2 SETBACK FROM SMALLER LAKES, RIVERS AND WETLANDS
Reason:	Plans show proposed impermeable surfaces within 20m of Whiriwhiritoa Stream along the northern boundary of this site.

Rule:	12.3.6.1.3 EXCAVATION AND/OR FILLING, EXCLUDING MINING AND QUARRYING, IN THE RESIDENTIAL, INDUSTRIAL, HORTICULTURAL PROCESSING, COASTAL RESIDENTIAL AND RUSSELL TOWNSHIP ZONES
Reason:	Proposed fill volumes in the Geotech Report by Initia Geotechnical Specialists exceed 200m3 in any 12-month period per site.

Rule:	2026 Regional Plan for Northland – C.8.3 Earthworks • Flood Hazard area is 100m3 of moved or placed earth in any 12-month period in a 1 in100 Year Flood Hazard. • High Risk Flood Hazard area is 50m3 of moved or placed earth in any 12-month period in a 1 in 10 Year River Flood occurrence.
Reason:	This application does not demonstrate proposed earthworks will comply this these thresholds.

The proposed onsite wastewater discharge volume does not appear to be in accordance with approved Resource Consent 2170377-RMACOM therefore a Resource Consent is required for breach of the following:

Resource Consent:	2170377-RMACOM approved 30/05/2017 Condition 3: The volume of wastewater discharged per day, being any 24 consecutive hours, shall not exceed 2,500 Litres.
Reason:	This application proposes wastewater discharge volume of 2,750 litres per day.

Please note there may be other rule breaches found during the Resource Consent process. It is your responsibility to ensure the Resource Consent approved plans match the Consented approved plans.

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If you have any queries, please contact the Duty Planner on Duty.Planner@fndc.govt.nz or 0800 920 029.

Nāku iti nei, nā



Lysigna Mare
PIM Officer
Delivery and Operations

Emailed to: paul@spoonersolutions.co.nz

FORM 4
Certificate attached to
PROJECT INFORMATION MEMORANDUM

Section 37, Building Act 2004

Building Consent Number: EBC-2026-1042/0

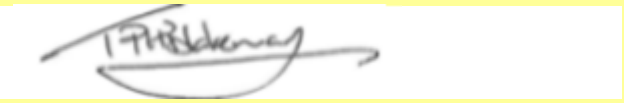
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Signature:	
	Trent Blakeman
Position:	Manager - Building Services – Delivery and Operations
On behalf of:	Far North District Council (Building Consent Authority)
Date:	26 June 2026

Te Kaunihera o Te Hiku o te Ika
Far North District Council

HE ARA TĀMATA
CREATING GREAT PLACES
Supporting our people

Private Bag 752, Kaikohe 0440, New Zealand
ask.us@fndc.govt.nz
0800 920 029
fndc.govt.nz

8 October 2026

WBC Developments Limited
C/- Pete Hendl
205 Kapiro Road
RD 1
Kerikeri 0294

Tēnā koe,

Building consent number:	COA-2027-4/0
Property ID:	3356415
Address:	20 Klinac Lane, Waipapa 0230
Description:	installation and subsequent upgrades to wastewater treatment and disposal system

I am writing in relation to COA-2027-4/0, which was originally issued with a Form 4 advising the requirement of a Resource Consent prior to work on your project commencing.

Further to discussion with our Resource Consents Planner, this letter is to advise that a Resource Consent for the noncompliance identified in the Form 4 is no longer required as the rule noted on that letter is considered inoperative for this activity.

Our records have been updated accordingly.

It is noted that the processing Building Compliance Officer for this application has requested an updated TP58 report to include the proposed buildings constructed on EBC 2026-1042. A PIM assessment of the report will be required and should any non-compliance aspects be identified, these will be advised by letter with a Form 4 – Section 37.

Nāku iti nei, nā

Lysigna Mare
PIM Officer
Delivery and Operations

Emailed to: paul@spoonersolutions.co.nz

Gmail **Magpie Design <designbymagpie@gmail.com>**

EBC-2026-1042/0, 20 Klinac Lane: wastewater item on Form 4 (19 Oct 26)

2 messages

Magpie Design <designbymagpie@gmail.com> Thu, Oct 22, 2026 at 7:35 AM
To: Duty Planner <Duty.Planner@fndc.govt.nz>

Good Morning,

The Form 4 of 19 October 2026 for EBC-2026-1042/0 (20 Klinac Lane, Waipapa) lists a breach of Condition 3 of 2170377-RMACOM, which limits the wastewater discharge to 2,500 L/day. The proposal is 2,750 L/day.

NRC has since granted AUT.042366.01.02 (March 2025) for the same discharge from the same site, at up to 4,400 L/day due to a system upgrade.

We propose to include an s127 application in the resource consent application we are about to lodge, changing Condition 3 to 4,400 L/day to match the NRC consent. Alternatively, as Decision C of 2170377-RMACOM is the discharge consent now superseded by the NRC consent, we could surrender that part under s138 if Council prefers.

Could you please confirm that an s127 application within the resource consent application is acceptable, and that it would clear this item on the Form 4?

Thanks,

Paul

Paul Wright CEng, MSc, GradDipTech, BBS, DAEM, MEIT
Director, Planner, Designer
Magpie Design
Kerikeri, New Zealand
027 3688564

Approved Form4 19 Oct 26.pdf
224K

Duty Planner <Duty.Planner@fndc.govt.nz> Fri, Oct 23, 2026 at 3:30 PM
To: Magpie Design <designbymagpie@gmail.com>

Kia ora Paul,

Yes. You may apply for a s127 as part of a resource consent application. If the s127 is approved, then this would remove the item from the form 4.

Ngā mihi,

Rachel - Duty Planner

Resource Consents

P 09 407 0444 | Duty.Planner@fndc.govt.nz

Te Kaunihera o Te Hiku o te Ika | Far North District Council

Pokapū Kōrero 24-hāora | 24-hour Contact Centre 0800 920 029

fndc.govt.nz

Please note - The views and opinions provided by the Duty Planner in this email are their preliminary view only and relate to the specific questions and information you have asked/provided. If the details of the proposal change in the future, please be aware that the advice provided might change, and we would encourage you to come back for a further discussion. We would also encourage you to seek your own Professional Planning/Engineering/Legal advice before making decisions on a future development.

From: Magpie Design <designbymagpie@gmail.com>
Sent: Thursday, 22 October 2026 7:35 am
To: Duty Planner <Duty.Planner@fndc.govt.nz>
Subject: EBC-2026-1042/0, 20 Klinac Lane: wastewater item on Form 4 (19 Oct 26)

CAUTION: This email originated from outside Far North District Council.
Do not click links or open attachments unless you recognise the sender and know the content is safe.

[Quoted text hidden]

20 KLINAC LANE
WAIPAPA
KERIKERI

PROPOSED NEW RETAIL BUILDINGS

ARCHITECTURAL DRAWING SCHEDULE

DWG NO.	REV.	TITLE
BC00	A	COVERPAGE
BC01	A	COMPLIANCE SCHEDULE
BC02	A	COMPLIANCE SCHEDULE
BC03	C	SITE PLAN
BC03A	B	EARTHWORKS PLAN
BC04	A	COVERAGE CALCULATIONS
BC05	C	CARPARKING PLAN
BC06	B	STORMWATER PLAN
BC07	C	OVERALL PLUMBING & DRAINAGE PLAN
BC08	C	FLOOR PLAN BUILDING ONE
BC09	A	ELEVATIONS BUILDING ONE
BC10	A	SECTIONS BUILDING ONE
BC11	C	ROOF PLAN PLUMBING PLAN BUILDING ONE
BC12	A	CEILING FRAMING PLAN BUILDING ONE
BC13	C	FLOOR PLAN BUILDING TWO
BC14	A	ELEVATIONS BUILDING TWO
BC15	A	SECTIONS BUILDING TWO
BC16	C	ROOF PLAN PLUMBING PLAN BUILDING TWO
BC17	A	CEILING FRAMING PLAN BUILDING TWO
BC18	C	FLOOR PLAN BUILDING THREE
BC19	A	ELEVATIONS BUILDING THREE
BC20	A	SECTIONS BUILDING THREE
BC21	C	ROOF PLAN PLUMBING PLAN BUILDING THREE
BC22	A	CEILING FRAMING PLAN BUILDING THREE
BC23	A	DETAILS
BC24	A	DETAILS
BC25	A	DETAILS
BC26	A	DETAILS
BC27	A	DETAILS
BC28	A	DETAILS
BC29	C	INTERIOR ELEVATIONS

Do not scale from drawings.
The Contractor must check and verify all dimensions on site prior to commencing any work.

All work to be in accordance with
The Building Act 2004,
The New Zealand Building Code, NZS 3604 and
Any additional Territorial Authority requirements.
Refer Specification for references to other
New Zealand / Australian Standards to be complied with as they apply to this project.

WIND ZONE: HIGH
EXPOSURE ZONE: C

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
COVERPAGE

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

Spooner
architectural solutions
PO Box 10 KERIKERI 0245
e: paul@spoonersolutions.co.nz
p: (09) 407 3107 m: 027 289 1221
© Spooner Architectural Services Ltd.

SCALE

SHEET No.
BC00

BUILDING CODE COMPLIANCE SUMMARY

AS APPLICABLE UNDER SECTION 17 OF THE BUILDING ACT.

Building Code Clause	Means of Compliance	Executive Summary
B1 STRUCTURE	B1/VM1	Concrete and steel structural elements. Timber frame elements complying with NZS 3604. All elements designed by RS engineers with PS1 Producer Statement. PS4 Producer statement required from HFC Group Engineers upon completion. Contact on 09 376 1070 prior to commencement of work on site for schedule of inspections required. NO INSPECTION = NO PRODUCER STATEMENT.
	B1/AS1	Timber frame walls (refer legend on BC03 for locations) to NZS 3604.
B2 DURABILITY	B2/AS1	This building is expected to have a life of not less than 50 years. Elements specified in this building comply with B2/AS1 Table 1. With regard to concrete structure, covers to reinforcing have been specified in accordance with NZS 3101, Part 1, Section 3. With regard to structural steel, surface protection has been specified in accordance with the "Guide to protection of structural steel against atmospheric corrosion by the use of protective coatings" AS/NZS 2312. We note that this is on a time to first maintenance basis.
C FIRE	C/AS4 & C/AS5	1. Each building is required to have a Type 4 automatic fire alarm system activated by smoke detectors and manual call points, installed throughout the building in accordance with NZS 4512:2021. Small areas may have heat detection substituted as allowed by NZS 4512, where smoke detection would be unsuitable. The fire alarm system does not require a connection to a Remote Receiving Centre. Emergency lighting in compliance with F6 must be installed where escape routes exceed 20m in length. Design and detailing of the emergency lighting system is to be by others. 2. To comply with D1/AS1. Install illuminated or photo-luminescent exit signs complying with F6 and F8. All exit door locking devices should be clearly visible, located where such a device would normally be expected, designed to be easily operated without a key or other security device, and allow the door to open in a normal manner. Doors on escape routes shall be hung to open in the direction of escape. However, this is not required if the number of occupants of spaces with egress using the door is no greater than 50. Doors on designated egress routes are to provide level access for the full swing of the doors. On level escape routes, a maximum threshold step of 20mm is allowed for weathering (as per D1/AS1). Inward swinging and sliding doors are not required to have a level landing, to the outside, where allowed by D1/AS1 4.3.1. Automatic doors are permitted on escape routes provided they are fitted with compliant fail-safe features. 3. Surface finishes are to meet the required maximum permitted Group Numbers in this report. Any foamed plastic building materials to be used in the building are to meet flame propagation requirements as set out in this report. Any suspended fabric, including building underlay, that is to remain exposed to view is to have a maximum Flammability Index as set out in the report. Any combustible flooring is required to have a minimum Critical Radiant Flux of 2.2kW/m². 4. The South Elevation external wall of Building 3 is to achieve a minimum FRR of (180)/180/180 one-way to meet the more onerous WB with storage requirements. To be designed and achieved with the proposed precast concrete wall. All other elevations for each building comply with external spread of fire requirements by distance separation without the requirement to add fire rating. There are no external cladding system requirements. 5. Structure integral in supporting fire rated external walls must be fire rated for structural adequacy to the same level as is required for the external wall. Building 3's South Elevation external wall is required to be designed by a structural engineer to meet post fire structural stability requirements of AS/NZS 1170 as amended by B1/VM1 6. Vehicular access complies. The fire alarm contractor is to consult with Fire & Emergency New Zealand with regards to the fire alarm control panel location. If hazardous substances are present in the building, warning signage in accordance with NZBC F8 shall be displayed. 7. All electrical installations in the building must be installed in accordance with NZBC Clause G9. Notes: It is recommended that fire extinguishers be installed to address specific risks (eg switchboard fires, cooking fires etc) in accordance with NZS4503:2005, although this is not a requirement of the Acceptable Solutions for building consent.

Building Code Clause	Means of Compliance	Executive Summary
D1 ACCESS ROUTES	D1/AS1	Paved surfaces on building approaches to have cross fall not less than 1:100 and not more than 1:50. Exterior paved surfaces to buildings to be concrete, with either broom or exposed crushed aggregate finish (confirm with owner & designer). Exterior door thresholds at entrance to showroom to have threshold step no greater than 20mm. Where polished concrete floor finish is specified on access routes, finish to be achieved with polyurethane impregnated with sand grit finish. The sand/grit, which is sprinkled over the complete surface of the final paint coating, should be a hard angular material such as silica sand or calcined bauxite. The particle size should not be less than 0.2 mm so that it is not submerged by the coating and not greater than about 2 – 3 mm so that it remains tightly bound to the surface. Do not over paint.
E1 SURFACE WATER	E1/AS1	Refer BC11, BC16, BC21 for internal gutter and downpipe calculations. Stormwater plumbing & drainage also noted on BC06.
E2 EXTERNAL MOISTURE	E2/AS1 E2/AS3	Profiled Metal Roofing and Membrane Roofing in accordance with E2/AS1 Cl. 8.4 & 8.5 Masonry construction to CCANZ-01.
E3 INTERNAL MOISTURE	E3/AS1	Wet area bathrooms. Refer drawings BC08, BC13, BC18. Gib Aqualine lined walls & ceilings generally enamel paint finished. Jacobsen Tarkett safety vinyl floor covering to kitchen, & bathrooms, or other vinyl flooring approved by owner whilst meeting slip resistance and fire safety CRF requirements.
F1 HAZARDOUS AGENTS ON SITE		NOT APPLICABLE
F2 HAZARDOUS BUILDING MATERIALS	F2.3.1 F2/AS1	Materials specified in this building do not present a hazard to human health. All glazing to NSZ4223:2016
F3 HAZARDOUS SUBSTANCES	F3/VM1	There are no substances in this building that present a hazard to human health.
F4 SAFETY FROM FALLING	F4/AS1	NOT APPLICABLE
F5 CONSTRUCTION & DEMOLITION HAZARDS	F5/AS1	Site to be fully fenced with 2.0m minimum height temporary fence for the period that hazards exist.
F6 LIGHTING FOR EMERGENCY	F6/AS1	Provide emergency lighting to part of the building in accordance with NZBC F6 to the areas defined by the Fire Report. Refer separate drawings for layout. Provide PS4 and as built upon completion of installation.
F7 WARNING SYSTEMS	F7/AS1	Provide Fire Alarm as noted under "C FIRE"
F8 SIGNS	F8/AS1	Provide emergency exit signage as specified in the Fire Report. Provide also signage to F8/AS1 to meet compliance with NZS4121 as shown on BC08, BC13, BC18.
G1 PERSONAL HYGIENE	G1/AS1	Number of sanitary fixtures calculated in accordance with Table 1: (staff facilities) To all buildings: One unisex toilet (accessible) provided for staff use only, able to accomodate up to 5 staff under Table 1. (Anticipated staff levels not greater than 5).
G2 LAUNDERING		NOT APPLICABLE
G3 FOOD PREP & PREVENTION OF CONTAMINATION	G3/AS1	NOT APPLICABLE

Do not scale from drawings.
The Contractor must check and verify all dimensions on site prior to commencing any work.

All work to be in accordance with
The Building Act 2004,
The New Zealand Building Code, NZS 3604 and
Any additional Territorial Authority requirements.
Refer Specification for references to other
New Zealand / Australian Standards to be complied with as they apply to this project.

WIND ZONE: HIGH
EXPOSURE ZONE: C

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
COMPLIANCE SCHEDULE

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

Spooner architectural solutions
PO Box 10 KERIKERI 0245
e: paul@spoonersolutions.co.nz
p: (09) 407 3107 m: 027 289 1221
© Spooner Architectural Services Ltd.

SCALE 1:100
SHEET No. BC01

BUILDING CODE COMPLIANCE SUMMARY

AS APPLICABLE UNDER SECTION 17 OF THE BUILDING ACT.

Building Code Clause	Means of Compliance	Executive Summary
G4 VENTILATION	G4/AS1	Compliance achieved as follows: Refer Ventilation Report and design drawings for compliance in accordance with NZS4303.1990.
G5 INTERIOR ENVIRONMENT	G5/AS1	G5 does not apply to commercial buildings, except G5.3.4. An accessbile counter is provided to meet compliance with the accessible solutions.
G6 AIRBORNE AND IMPACT SOUND	NOT APPLICABLE	Only applies to habitable spaces of household units.
G7 NATURAL LIGHT	NOT APPLICABLE	Only applies to housing.
G8 ARTIFICIAL LIGHT	G8/AS1	Artificial lighting to be provided to the entire building not less than 20 lux at floor level.
G9 ELECTRICITY	G9/AS1	Refer specification for various standard to which electrical installation is to comply. Along accessible routes, light switches to align with door handle heights.
G10 PIPED SERVICES	NOT APPLICABLE	No piped services defined by G10.2 in this building.
G11 GAS AS AN ENERGY SOURCE	NOT APPLICABLE	
G12 WATER SUPPLIES	G12/AS1	Water supply installation by registered plumber. Refer specification for various standards. Refer separate note on BC08, BC13, BC18 for water heater selections and installation notes. Refer Specification appendices for installation of valves and general installation of water storage heaters. Safe tray to all water heaters in accordance with AS 3500.4, as G12/AS1 lacking sufficient information. Refer detail on BC26 for safe tray installation.
G13 FOUL WATER	AS 3500.2 & G13/AS2	Wastewater plumbing & drainage by registered plumber and drain layer. Refer drawings BC11, BC16, BC21 & BC07 for pipework layout and further notes. System is single stack system also incorporating graded ground floor plumbing using drainage principles. Refer Specification for standards to be complied with.
G14 INDUSTRIAL LIQUID WASTE	NOT APPLICABLE	No industrial liquid waste to be produced in this building.
G15 SOLID WASTE	G15.2 G15.3.1	Space has been provided at the rear of the building for placement of rubbish storage bins, which are anticipated to be aligned with a collection service contract, with closed lidded and lockable bins supplied within that contract.
H1 ENERGY EFFICIENCY	H1/AS1 S.112	Compliance pathway is as follows: Buildings to comply with H1/VM2, modelling method of the New Zealand Building code for thermal efficiency: Refer H1 Compliance Report by Re-Shape for thermal insulation selections.

Do not scale from drawings.
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All work to be in accordance with
The Building Act 2004,
The New Zealand Building Code, NZS 3604 and
Any additional Territorial Authority requirements.
Refer Specification for references to other
New Zealand / Australian Standards to be complied with as they apply to this project.

WIND ZONE: HIGH
EXPOSURE ZONE: C

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING

COMPLIANCE
SCHEDULE

JOB

PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

Spooner
architectural solutions

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SCALE

SHEET No.
BC02

Do not scale from drawings.
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WIND ZONE: HIGH
EXPOSURE ZONE: C

N

LEGAL DESCRIPTION:
Identifier: 574944
Section 3
Survey Office Plan 438821
Area: 12,148sqm

Whiriwhiritoa Stream
10m setback
Average width of stream 2.5m
10m setback
10m setback
10m setback
2.12
2.64
2.03
5.11
.89
3.15
1.56
30
SW OUTLET
77.0
Easement boundary
Service lane
B-Train turning curve
20,000 SET BACK
21,188 SET BACK
gate
gate
FGL: 77.89
Outer wheel 13,000
Inner body 8,782
Outer body 13,711
Loading bay
Rubbish
Street light
Entry / Exit
Vehicle crossing
BUILDING 2
FL: 78.09
Lettable area
20m x 28m = 560m2
Long stay bicycle park
77.0
20,550
28,550
1,200
4 carparks
7 carparks
12 carparks
Truck park / loading space
Green space / future development area
7,500
Easement boundary
7 carparks
Loading bay
Long stay bicycle park
Silt fence
Rubbish
BUILDING 3
FL: 77.49
Lettable area
20m x 28m = 560m2
20,450
28,550
1,000
SWMH
SWMH
Landscape 50% of 6m wide strip
21,015
24 carparks
12,292
40,500
Long stay bicycle park
Loading bay
BUILDING 1
FL: 78.09
Lettable area
20m x 40m = 800m2
20,500
15,909
78.0
15,746
16,792
12 carparks
Entry / Exit
Extg vehicle crossing
7 carparks
15,944
Garden
6 short stay bicycle parks.
WM
Street light
77.0
CP
Landscape 50% of 6m wide strip
77.0
WM
Street light
Hydrant
CP
MARITIME LANE
KLINAC LANE

GENERAL NOTES:

- Entire site to be fenced with 2m high temporary security fence for the duration of the works with lockable gates at entrances.
- Landscaped areas to be fully planted in lawn or other plantings.
- No signage included in this application.
- Wastewater disposal to existing established treatment plant and disposal area per wastewater report.
- Stormwater from site in accordance with stormwater report.

C RFI 05-10-26
Add Bicycle Parks

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
SITE PLAN

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

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SCALE	SHEET No.
1:100	BC03

SITE PLAN
SCALE 1:200 @ A1

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WIND ZONE: HIGH
EXPOSURE ZONE: C

Whiriwhiritoa Stream

5.11
2.03
2.64
2.12
1.89
10m setback
1.65
1.11
10m setback
Average width of stream 2.5m
3.15
10m setback
1.55
2.15
10m setback
5.30
10m setback

77.0
77.0
77.0
78.0

SW OUTLET

297.12 m²

MH5
LL 77.80
IL IN 76.45
IL OUT 76.40

MH6
LL 77.59
IL IN 76.18
IL OUT 76.13

B-Train turning curve

FGL: 77.89
FGL: 77.815
FGL: 77.89
FGL: 77.89
FGL: 77.89
FGL: 77.99
FGL: 77.89
FGL: 77.89
FGL: 77.89
FGL: 77.99
FGL: 77.99
FGL: 77.89
FGL: 77.99
FGL: 77.89
FGL: 77.766
FGL: 77.85
FGL: 77.29
FGL: 77.29
FGL: 77.29

A - 01

Entry / Exit

Vehicle crossing

BUILDING 2
FL: 78.09
Lettable area
20m x 28m = 560m2
688.90 m²

Building 2 Platform RL 77.94

Diagonal hatching = fill area 689 m².
Volume: 579 m³
Maximum fill depth 1.14 metres

A - 02
546.59 m²

7 carparks

CP9 Cess Pit.
LL 77.708

A - 03
402.13 m²

MH1
LL 77.818
IL IN 76.18
IL OUT 76.13

CP1 Cess Pit
LL: 77.66
IL IN 76.25
IL OUT 76.2

BUILDING 1
FL: 78.09
Lettable area
20m x 40m = 800m2
956.25 m²

Building 1 Platform RL 77.94

Diagonal hatching = fill area 956 m².
Volume: 517 m³
Maximum fill depth 0.76 metres

A - 04
377.19 m²

MH2
LL 77.81
IL IN 76.38
IL OUT 76.33

A - 05
402.66 m²

CP5 Cess Pit.
LL 77.64

A - 06
544.60 m²

CP6 Cess Pit.
LL 77.64
IL OUT 76.71

CP7 Cess Pit.
LL 77.60
IL OUT 76.765

MH3.
LL 77.79
IL IN 76.67
IL OUT 76.62

A - 07
463.46 m²

MH4
77.535
IL IN 76.63
IL OUT 76.58

A - 08
1,070.88 m²

Sediment retention pond size & location TBC

Green space / future development area

CP2 Cess Pit.
LL 77.645

CP3 Cess Pit Manhole.
LL 77.150
IL IN 76.82
IL OUT 76.77

A - 09
637.21 m²

CP4 Cess Pit.
LL 77.370
IL OUT 76.95

A - 10
167.48 m²

Silt fence

BUILDING 3
FL: 77.49
Lettable area
20m x 28m = 560m2
685.85 m²

Building 3 Platform RL 77.34

Diagonal hatching = fill area.
Volume: 302 m3
Maximum fill depth 0.74 metres

NOTES:

Fill volume for buildings:	1,398m³
Fill volume for paving:	1,789m³
Total fill volume:	3,187m³
Total fill volume in 10 year flood zone:	912m³
Total fill volume in 100 year flood zone:	3,187m³

Protect the works in accordance with FNDC Engineering standards for temporary erosion and sediment control.
Install silt fences along boundaries where possible.
Install filter sock to crossings and paved edges

Only expose enough ground at any one time as required to complete the siteworks.
Excavated area to be stabilized with gravel immediately after exposure.

Install temporary filter cloth to any existing surface water drains. Maintain during construction, including regular cleaning.

Cut faces and batters to be covered immediately after exposure with polythene or mulch.

Fill areas to be compacted to engineers requirements and stabilised with GAP 65 or GAP 40 basecourse.

Monitor and review erosion & sediment control measures constantly throughout the period that earth remains uncovered.

B RFI **30-06-26**
New Sheet

A BUILDING CONSENT **09-06-26**

REVISIONS

DRAWING
EARTHWORKS PLAN

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
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SCALE

SHEET No.
BC03A

EARTHWORKS PLAN
SCALE 1:200 @ A1

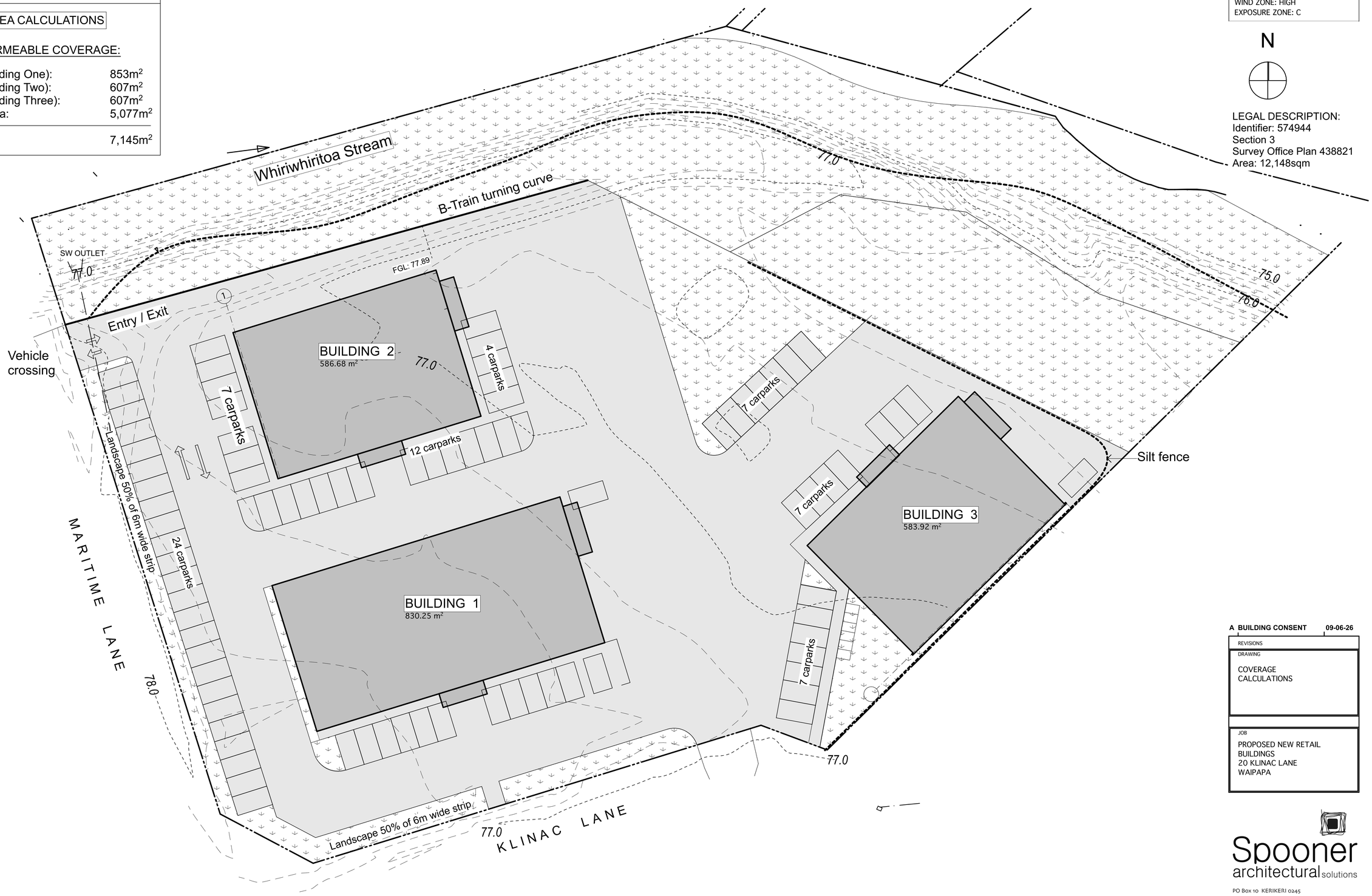
LEGAL DESCRIPTION

Section 3 Survey Office Plan 438821
Identifier 574944
Area 12,148 square metres more or less

IMPERMEABLE AREA CALCULATIONS

PROPOSED IMPERMEABLE COVERAGE:

Proposed Roof (Building One):	853m²
Proposed Roof (Building Two):	607m²
Proposed Roof (Building Three):	607m²
Proposed paved area:	5,077m²
Proposed Total:	7,145m²



COVERAGE CALCULATIONS
SCALE 1:250 @ A1

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The Building Act 2004,
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New Zealand / Australian Standards to be complied with as they apply to this project.

WIND ZONE: HIGH
EXPOSURE ZONE: C

N

LEGAL DESCRIPTION:
Identifier: 574944
Section 3
Survey Office Plan 438821
Area: 12,148sqm

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
COVERAGE CALCULATIONS

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

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SCALE	SHEET No.
NTS	BC04

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WIND ZONE: HIGH
EXPOSURE ZONE: C

N

LEGAL DESCRIPTION:
Identifier: 574944
Section 3
Survey Office Plan 438821
Area: 12,148sqm

Whiriwhiritoa Stream

Average width of stream 2.5m

77.0

B-Train turning curve

Outer wheel 13,000
Inner body 8,762
Outer body 13,711

SW OUTLET

77.0

FGL: 77.89

Entry / Exit

Vehicle crossing

Easement boundary

BUILDING 2

77.0

20,550

28,550

Long stay bicycle park

Rubbish

4 carparks

7 carparks

12 carparks

Truck park / loading space

Loading bay

BUILDING 3

20,450

28,550

Long stay bicycle park

Rubbish

7 carparks

Garden

6 short stay bicycle parks.

BUILDING 1

40,500

20,500

Long stay bicycle park

12 carparks

24 carparks

7 carparks

MARITIME LANE

78.0

77.0

KLINAC LANE

MAXIMUM TRAFFIC INTENSITY FACTOR = 200

LARGE FORMAT RETAIL = TIF 10 PER 100m2 GBA
2,000m2 maximum GBA to meet permitted activity.
Tenancy 1 = 830m2 GBA
Tenancy 2 = 585m2 GBA
Tenancy 3 = 585m2 GBA

CARPARKING REQUIREMENT - RETAIL:
1 carpark per 25 m2 GBA
Tenancy 1: 33.2
Tenancy 2: 23.4
Tenancy 3: 23.4
TOTAL 80 Carparks required.

CARPARKING PLAN

SCALE 1:200 @ A1

C RFI 05-10-26
Add Bicycle Parks

B RFI 30-06-26
Revise accessible carpark dimensions

A BUILDING CONSENT 09-06-26

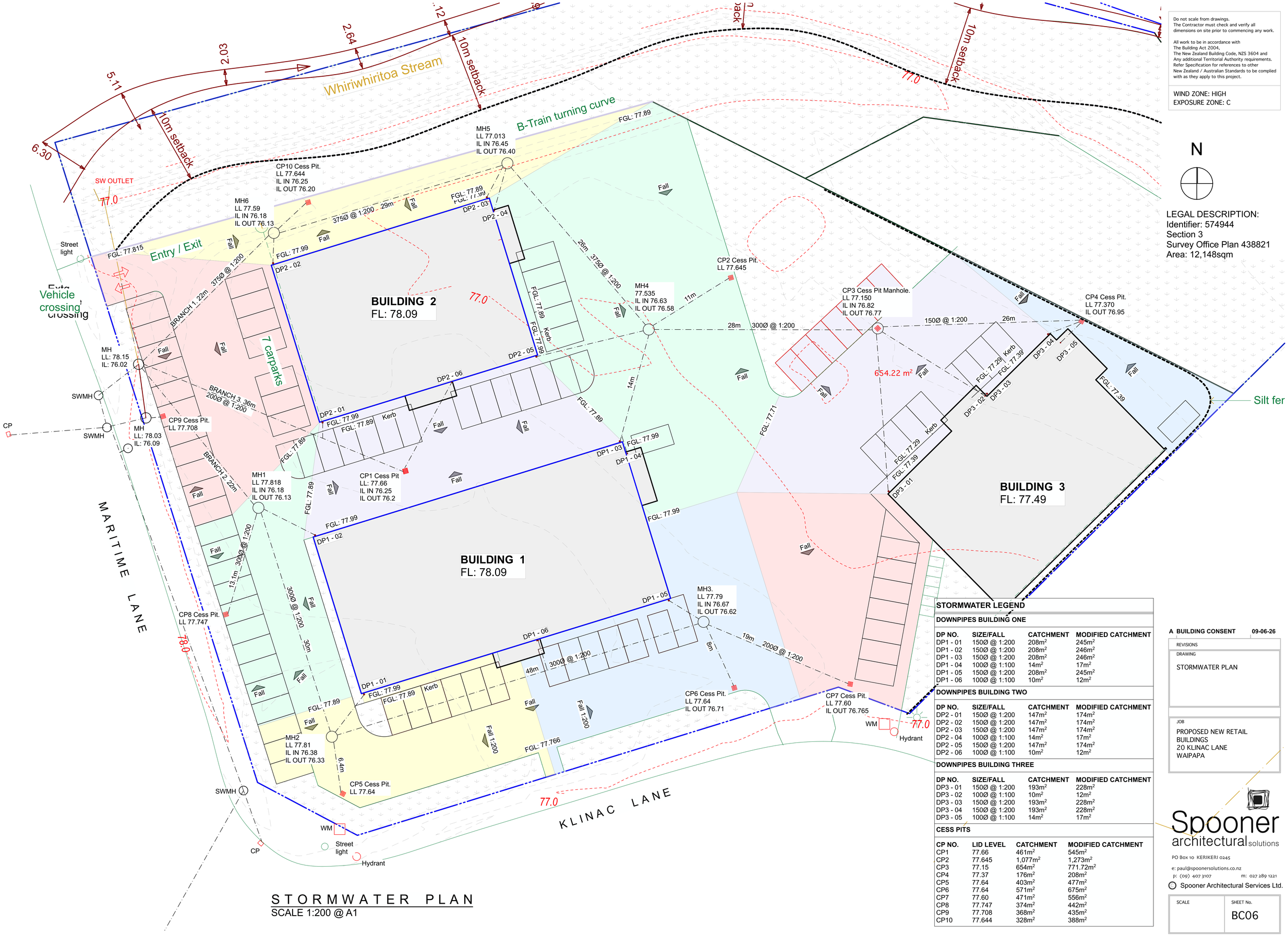
REVISIONS

DRAWING
CARPARKING PLAN

JOB
PROPOSED NEW RETAIL BUILDINGS
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SCALE 1:50
SHEET No. BC05



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WIND ZONE: HIGH
EXPOSURE ZONE: C

LEGAL DESCRIPTION:
Identifier: 574944
Section 3
Survey Office Plan 438821
Area: 12,148sqm

STORMWATER LEGEND

DOWNPIPES BUILDING ONE

DP NO.	SIZE/FALL	CATCHMENT	MODIFIED CATCHMENT
DP1 - 01	150Ø @ 1:200	208m²	245m²
DP1 - 02	150Ø @ 1:200	208m²	246m²
DP1 - 03	150Ø @ 1:200	208m²	246m²
DP1 - 04	100Ø @ 1:100	14m²	17m²
DP1 - 05	150Ø @ 1:200	208m²	245m²
DP1 - 06	100Ø @ 1:100	10m²	12m²

DOWNPIPES BUILDING TWO

DP NO.	SIZE/FALL	CATCHMENT	MODIFIED CATCHMENT
DP2 - 01	150Ø @ 1:200	147m²	174m²
DP2 - 02	150Ø @ 1:200	147m²	174m²
DP2 - 03	150Ø @ 1:200	147m²	174m²
DP2 - 04	100Ø @ 1:100	14m²	17m²
DP2 - 05	150Ø @ 1:200	147m²	174m²
DP2 - 06	100Ø @ 1:100	10m²	12m²

DOWNPIPES BUILDING THREE

DP NO.	SIZE/FALL	CATCHMENT	MODIFIED CATCHMENT
DP3 - 01	150Ø @ 1:200	193m²	228m²
DP3 - 02	100Ø @ 1:100	10m²	12m²
DP3 - 03	150Ø @ 1:200	193m²	228m²
DP3 - 04	150Ø @ 1:200	193m²	228m²
DP3 - 05	100Ø @ 1:100	14m²	17m²

CESS PITS

CP NO.	LID LEVEL	CATCHMENT	MODIFIED CATCHMENT
CP1	77.66	461m²	545m²
CP2	77.645	1,077m²	1,273m²
CP3	77.15	654m²	771.72m²
CP4	77.37	176m²	208m²
CP5	77.64	403m²	477m²
CP6	77.64	571m²	675m²
CP7	77.60	471m²	556m²
CP8	77.747	374m²	442m²
CP9	77.708	368m²	435m²
CP10	77.644	328m²	388m²

STORMWATER PLAN
SCALE 1:200 @ A1

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
STORMWATER PLAN

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

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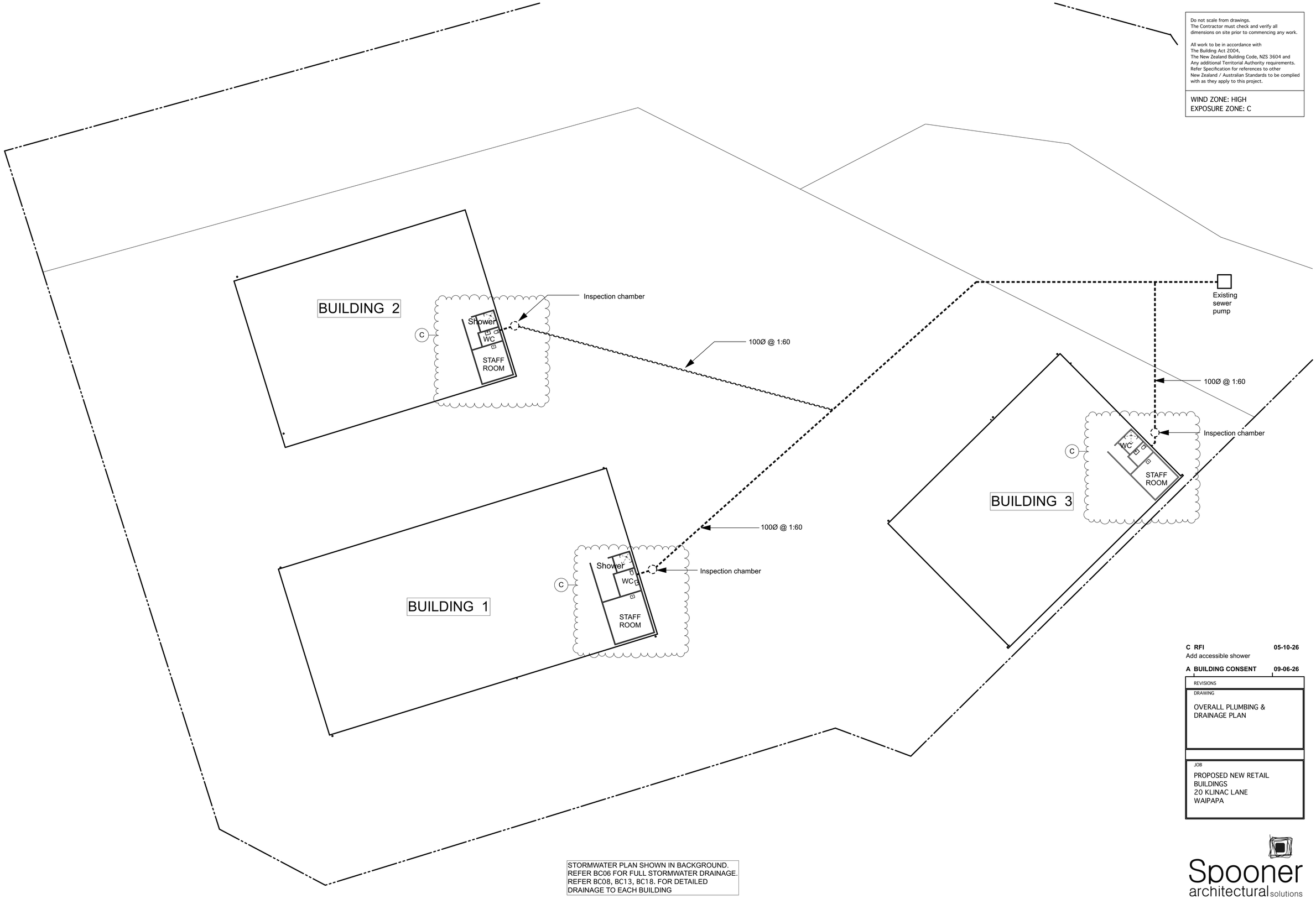
SCALE

SHEET No.
BC06

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WIND ZONE: HIGH
EXPOSURE ZONE: C



STORMWATER PLAN SHOWN IN BACKGROUND.
REFER BC06 FOR FULL STORMWATER DRAINAGE.
REFER BC08, BC13, BC18. FOR DETAILED
DRAINAGE TO EACH BUILDING

OVERALL PLUMBING & DRAINAGE PLAN

SCALE 1:200 @ A1

C RFI **05-10-26**
Add accessible shower

A BUILDING CONSENT **09-06-26**

REVISIONS

DRAWING

OVERALL PLUMBING & DRAINAGE PLAN

JOB

PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

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SCALE	SHEET No.
	BC07

LEGEND:

WALL FRAMING:

1,250mm high Precast concrete wall (125mm) to Engineer's Design

New Timber frame wall.

New interior walls to be as follows:
Walls up to 3.0m high - 90x45 SG8 studs @ 600 crs.
H1.2 treated. Nogs @ 800 crs.

Kingspan KSN1000FC Five Crown Wall Panels (125mm) from 1,200mm above floor level. Lap 50mm down face of Precast panel.

NOTES:

BATHROOMS / ACCESSIBLE WC'S:

Floors:
Jacobsens Tarkett safety Granite vinyl flooring (or similar approved), with coved upstand.
Confirm all floor finishes with owner prior to construction.
Submit selected floor finishes to designer for confirmation prior to installation.

Walls:
All walls lined with 10mm Gib Aqualine.
Level 4 enamel paint finished.

Ceilings:
13mm Gib Aqualine ceiling lining, enamel paint finished.

Vanities: To owner's selection.

WCs: To owner's selection.

Tapware:
To all sinks and to accessible bathroom wash basins, provide single lever taps, positioned 60mm clear of any adjacent obstruction.
Confirm tapware selections with owner for all other fixtures.

Water heating:

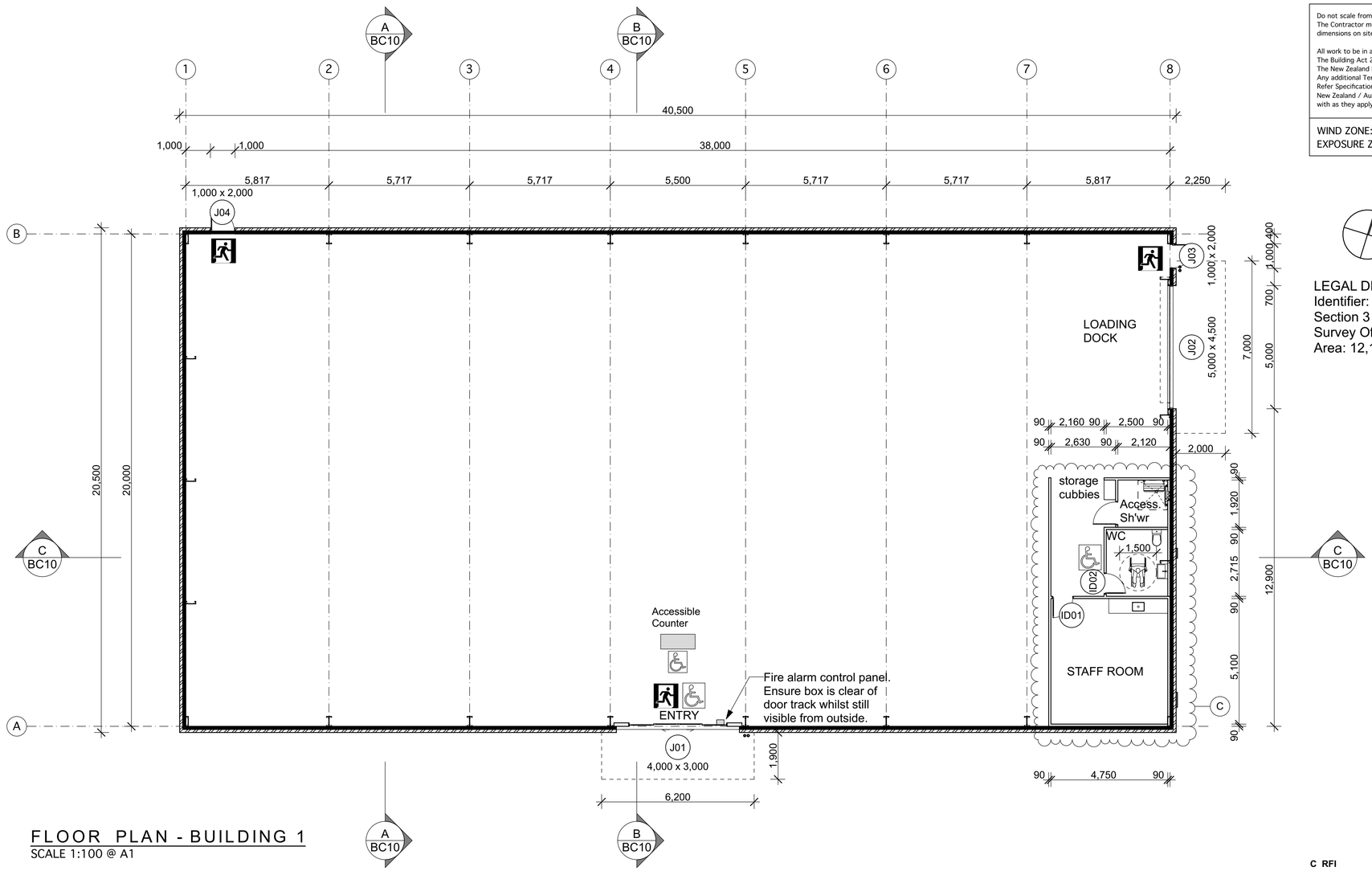
Rheem Mains Pressure Electric hot water cylinders
1 in each building above bathrooms. Install 19mm Ply over ceiling joists to support cylinders.
180L (model MPVE 31218015).
Install on safe tray with seismic restraint and tempering valve.

Ventilation:

Extract fans: Provide 125Ø Manrose extract fan to bathrooms.
Flow rate 25L/S

INSULATION:

EXTERNAL STAFF AND BATHROOM WALLS: Install Pink Batts R2.2 insulation between timber framing (90mm) pads.



FLOOR PLAN - BUILDING 1
SCALE 1:100 @ A1

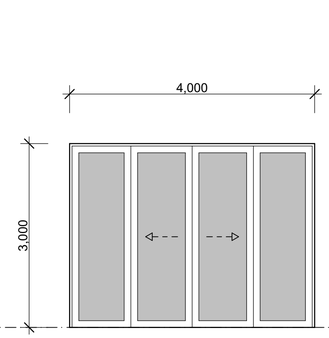
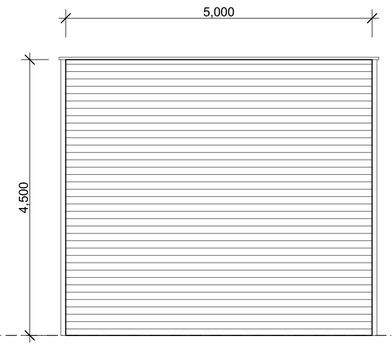
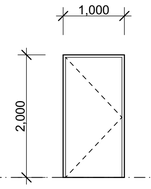
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Any additional Territorial Authority requirements.
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New Zealand / Australian Standards to be complied with as they apply to this project.

WIND ZONE: HIGH
EXPOSURE ZONE: C

N

LEGAL DESCRIPTION:
Identifier: CT 574944
Section 3
Survey Office Plan 438821
Area: 12,148sqm

NAME	J01	J02	J03, J04
ELEVATION			
LOCATION	Building 1	Building 1	Building 1
SPECIFICATION	Vantage Magnum 50 automated sliding door in 100mm shopfront frame. Install 150mm wide opaque adhesive strip manifestation @ 1.0m crs above floor. Confirm Hardware with owner. Powdercoat finish.	Metalbit Industrial roller door (or similar approved by owner) Automatic operation. Sliding bolt locking to owners requirements positioned on right side when viewed from outside @ 1,200 above FL to centre. Powdercoat finish.	Vantage Metro Aluminium frame, hinged door. Powdercoat finish.

EXTERIOR WINDOW & DOOR SCHEDULE
1:50 scale

EXTERIOR WINDOW & DOOR NOTES:

This Schedule to be read in conjunction with construction details provided. Details show indicative profiles.
Joiner to provide shop drawings to NZS 4211.
All glass to comply with 4223.3.

Confirm all dimensions and measurements on site prior to fabrication of joinery.

All Aluminium doors to be profiles as noted adjacent.
Powdercoat finish to selected colour.

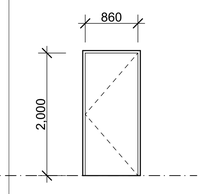
GLAZING:
All glazing to be single glazed units to IGUMA standards R0.46 minimum.

All glass thicknesses to suit pane size, location and wind loadings. Generally, all glazing in accordance with NZS 4223:2016.

HARDWARE:
Confirm all hardware with owners prior to ordering.
Position door handles 1,000mm above floor to centre to comply with NZS4121.

INSTALLATION:
Allow to install all doors.
Co-ordinate with other trades as required.
Installation to include all flashings and sealants necessary to provide a complete weather seal.

NOTE:
* Joiner to prepare full shop and installation drawings of all joinery for approval prior to fabrication.

NAME	ID01, ID02
ELEVATION	
LOCATION	Building 1 Staffroom & WC
SPECIFICATION	Interior solid core door, left hung. Paint finish.

INTERIOR DOOR SCHEDULE
1:50 scale

INTERIOR DOOR NOTES:

Generally door swing indicated from hinge side of door.

Left hung

Right hung

Confirm all dimensions and measurements on site prior to fabrication of joinery.

Ex 25mm rad. pine frames with planted stops. 40x10mm square edge architraves. Paint finish.

Confirm all hardware with owner prior to manufacture.

C RFI **05-10-26**
Add accessible shower

B RFI **30-06-26**
Extend wing will to staffroom / bathroom area
Show wheel chair turning circle
Add fire alarm control panel

A BUILDING CONSENT **09-06-26**

REVISIONS

DRAWING
FLOOR PLAN BUILDING ONE

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

Spooner architectural solutions
PO Box 10 KERIKERI 0245
e: paul@spoonersolutions.co.nz
p: (09) 407 3107 m: 027 289 1221

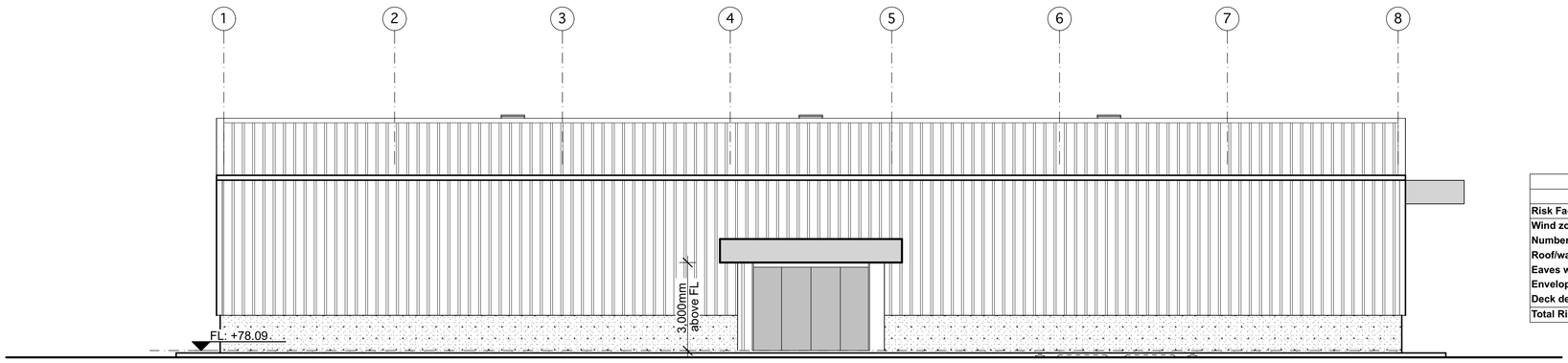
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SCALE 1:50
SHEET No. BC08

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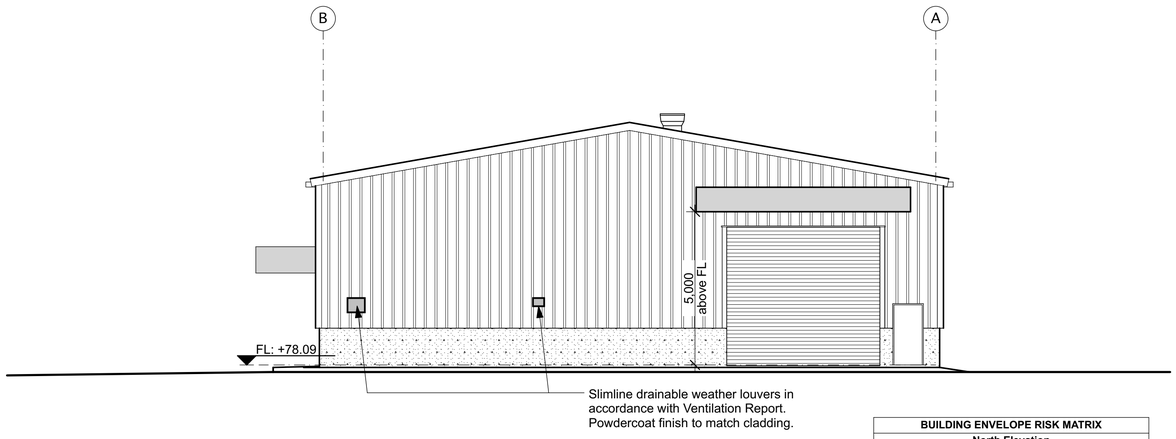
All work to be in accordance with
The Building Act 2004,
The New Zealand Building Code, NZS 3604 and
Any additional Territorial Authority requirements.
Refer Specification for references to other
New Zealand / Australian Standards to be complied with as they apply to this project.

WIND ZONE: HIGH
EXPOSURE ZONE: C



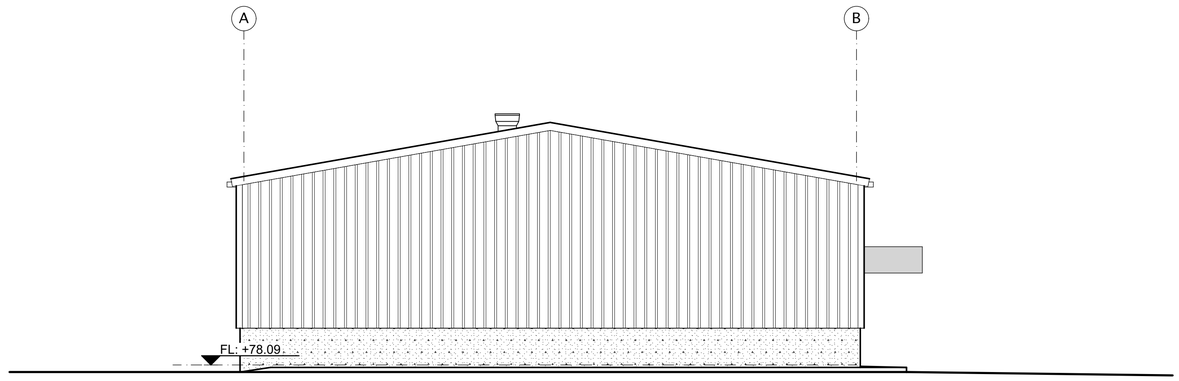
BUILDING ENVELOPE RISK MATRIX		
North Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Very high risk	5
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		**12**

SOUTH ELEVATION - BUILDING 1
SCALE 1:100 @ A1



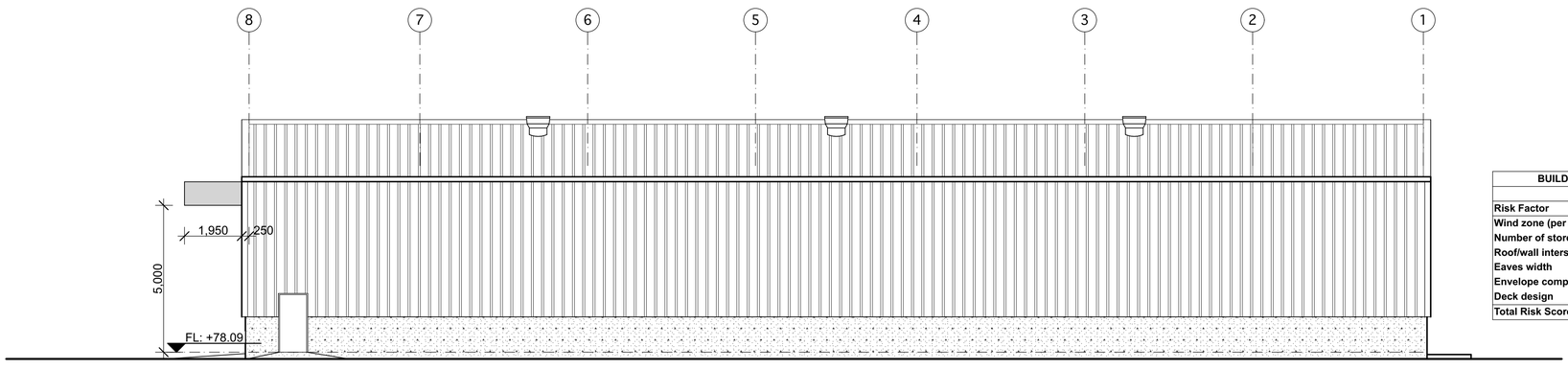
BUILDING ENVELOPE RISK MATRIX		
North Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Very high risk	5
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0

EAST ELEVATION - BUILDING 1
SCALE 1:100 @ A1



BUILDING ENVELOPE RISK MATRIX		
North Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Medium risk	1
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		**8**

WEST ELEVATION - BUILDING 1
SCALE 1:100 @ A1



BUILDING ENVELOPE RISK MATRIX		
North Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Medium risk	1
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		**8**

NORTH ELEVATION - BUILDING 1
SCALE 1:100 @ A1

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
ELEVATIONS BUILDING ONE

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

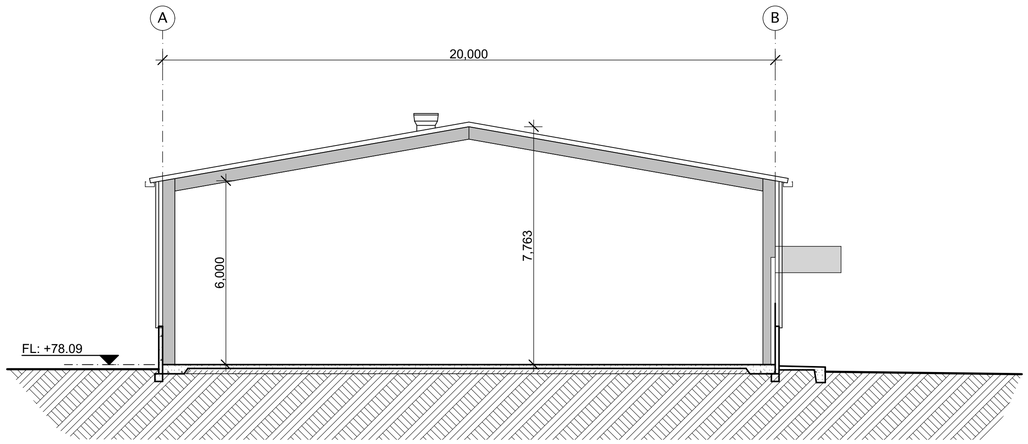
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SCALE	SHEET No.
	BC09

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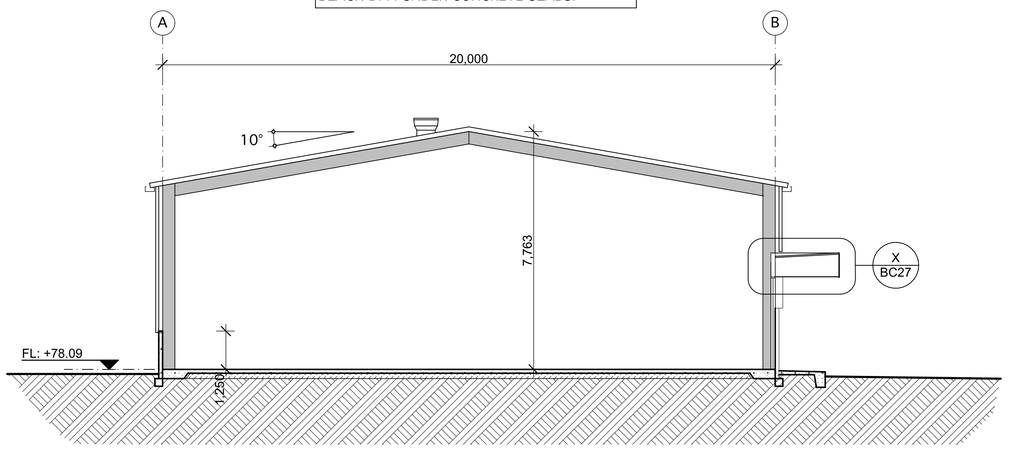
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WIND ZONE: HIGH
EXPOSURE ZONE: C



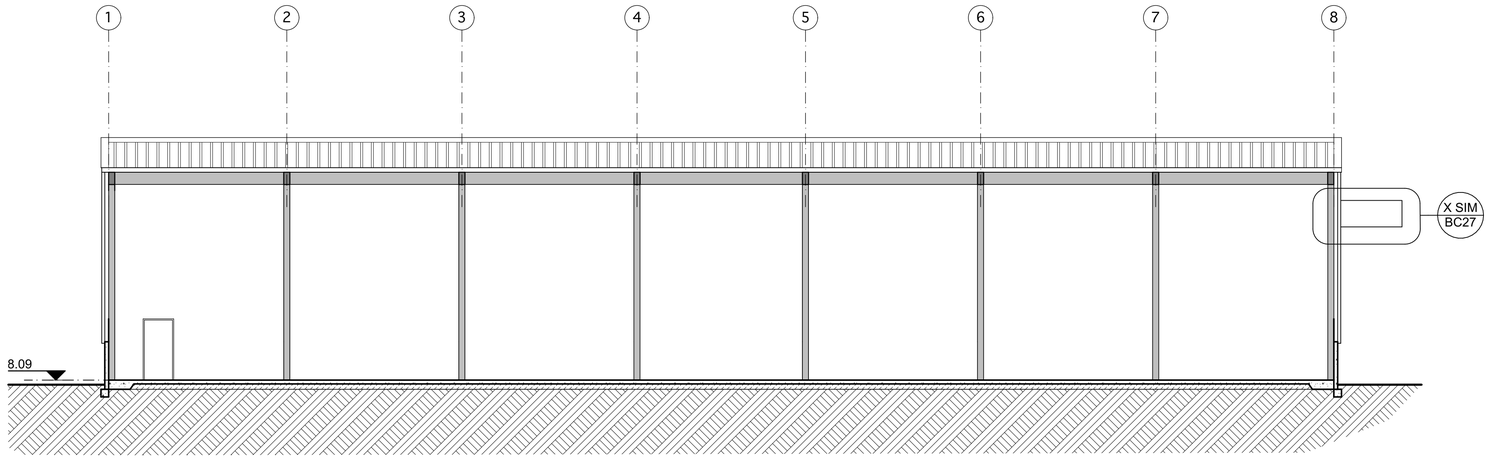
SECTION A-A - BUILDING 1
SCALE 1:100 @ A1

REFER STRUCTURAL DRAWINGS FOR FOUNDATIONS. INSTALL THERMAKRAFT SUPERCOURSE 500 DPC BETWEEN ANY CONCRETE & TIMBER. INSTALL THERMAKRAFT BLACK DPM UNDER CONCRETE SLABS.



SECTION B-B - BUILDING 1
SCALE 1:100 @ A1

REFER STRUCTURAL DRAWINGS BY STEELSPAN FOR ALL STEEL FRAMING MEMBERS & DETAILS.



SECTION C-C - BUILDING 1
SCALE 1:100 @ A1

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
SECTIONS BUILDING ONE

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
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SCALE	SHEET No.
1:50	BC10

STORMWATER PLUMBING & DRAINAGE NOTES:

All storm water plumbing and drainage work to be in accordance with NZBC E1/AS1.

All downpipes and drains to be PVC.
Downpipes sizes as noted. Catchment area noted on roof plan.
150Ø drains.

Assemble as a gravity drain system, discharging to extg connection.

SANITARY PLUMBING & DRAINAGE NOTES:

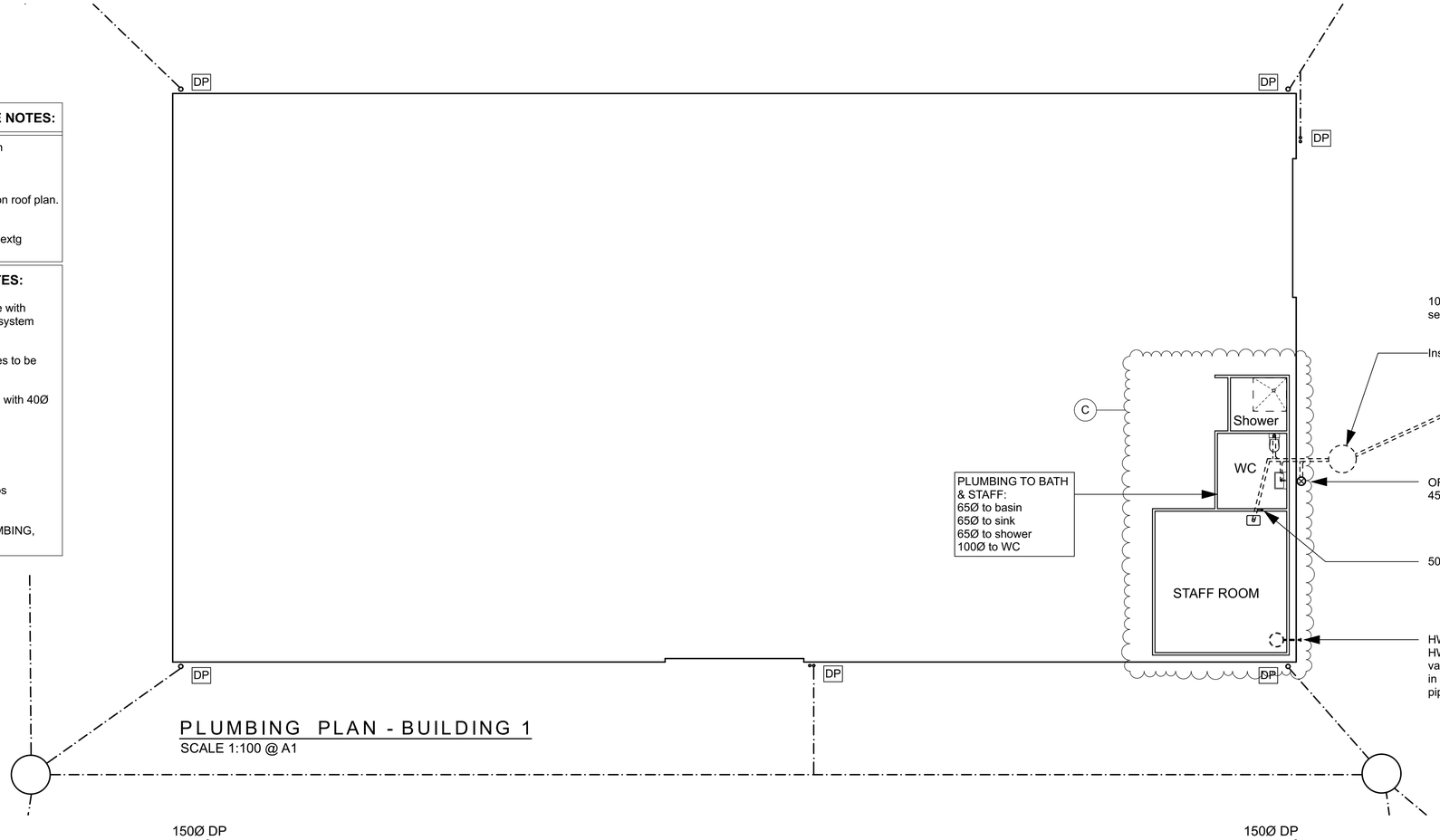
All plumbing and drainage work to be in accordance with NZS / AS 3500:2021. Check onsite and do not mix system types.

All waste pipes to be uPVC except for exposed pipes to be chrome plated copper.

All under slab waste pipes to be 65Ø or 100Ø PVC, with 40Ø reducer fitted above slab to inlet of sink & WHB's.

MINIMUM FALL FOR SANITARY WASTE PIPES:
40Ø 1 in 40
50Ø 1 in 40
65Ø 1 in 40
100Ø 1 in 60 - including 100Ø pipes under slabs
Minimum fall for 100Ø drains = 1 in 60 gradient.

REFER ALSO BC06 & BC07 FOR OVERALL PLUMBING, DRAINAGE & STORMWATER



PLUMBING PLAN - BUILDING 1
SCALE 1:100 @ A1

ROOF PLAN NOTES:

Roofing:
10° roof pitch. Kingspan KSN1000FC Five Crown roof panels 150mm. Rib profile, 0.55BMT AM150 G300S Maxam coated steel

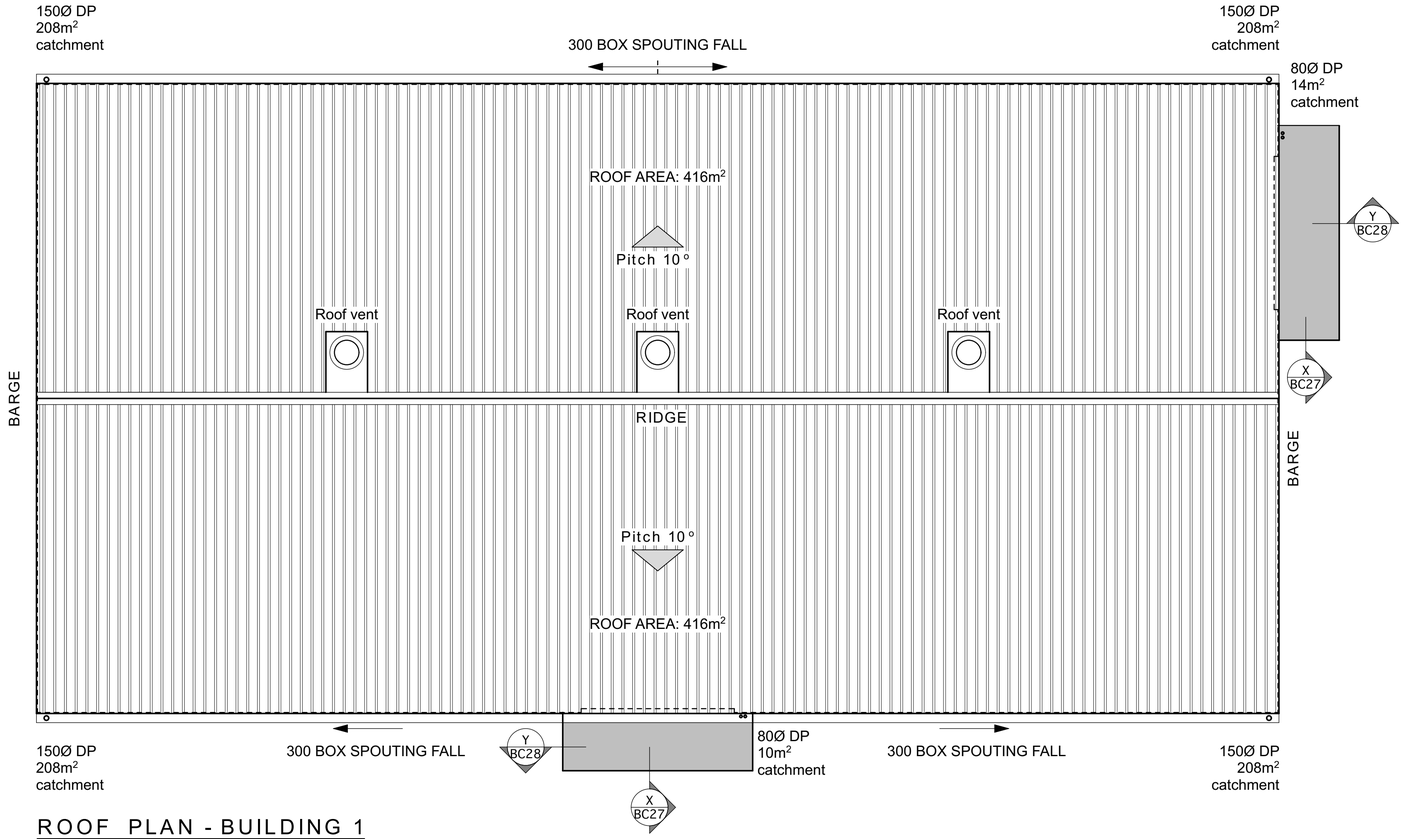
Flashings:
0.55BMT Colorsteel roof flashings (H wind zone).
Transverse flashing over roofing min. lap 200mm
Parallel flashing over roofing min. lap 2 crests.
Barge flashing overlap to barge fascia 90mm min.

Spouting / Downpipes:
Dimond Box 300 profile Colorsteel
Maxam spouting (fall @ 1:500 min).

Provides 33,550mm^2 effective cross sectional area with 15mm freeboard. 33,000mm^2 required for roof plane area of 416m^2. 150Ø PVC downpipes.

Internal Gutter / Downpipes:

300w Nuralite TPO membrane hidden gutter on 50mm PIR panel discharging to 2 x Allproof 80Ø bronze clamp ring drains. One drain with dome for roof drainage. One drain with 50mm raised ring & grate for overflow.
Single 80Ø PVC down pipe. to domed drain.
Overflow drain 80Ø PVC terminated immediately under soffit lining.



ROOF PLAN - BUILDING 1
SCALE 1:100 @ A1

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WIND ZONE: HIGH
EXPOSURE ZONE: C

N

LEGAL DESCRIPTION:
Identifier: CT 574944
Section 3
Survey Office Plan 438821
Area: 12,148sqm

C RFI **05-10-26**
Add accessible shower

B RFI **30-06-26**
Add HWC overflow drain

A BUILDING CONSENT **09-06-26**

REVISIONS

DRAWING
ROOF PLAN PLUMBING
PLAN BUILDING ONE

JOB
PROPOSED NEW RETAIL BUILDINGS
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SCALE
SHEET No. BC11

LEGEND:

Walls:

Non-load bearing timber frame wall below.
Refer BC08 for stud crs.

Load bearing wall below.
Refer BC08 for wall types / stud crs.

CJ1 240x45 SG8 ceiling joists @ 400 crs

L1 L1: 2/90x45 SG8

NOTES:

Lintels:

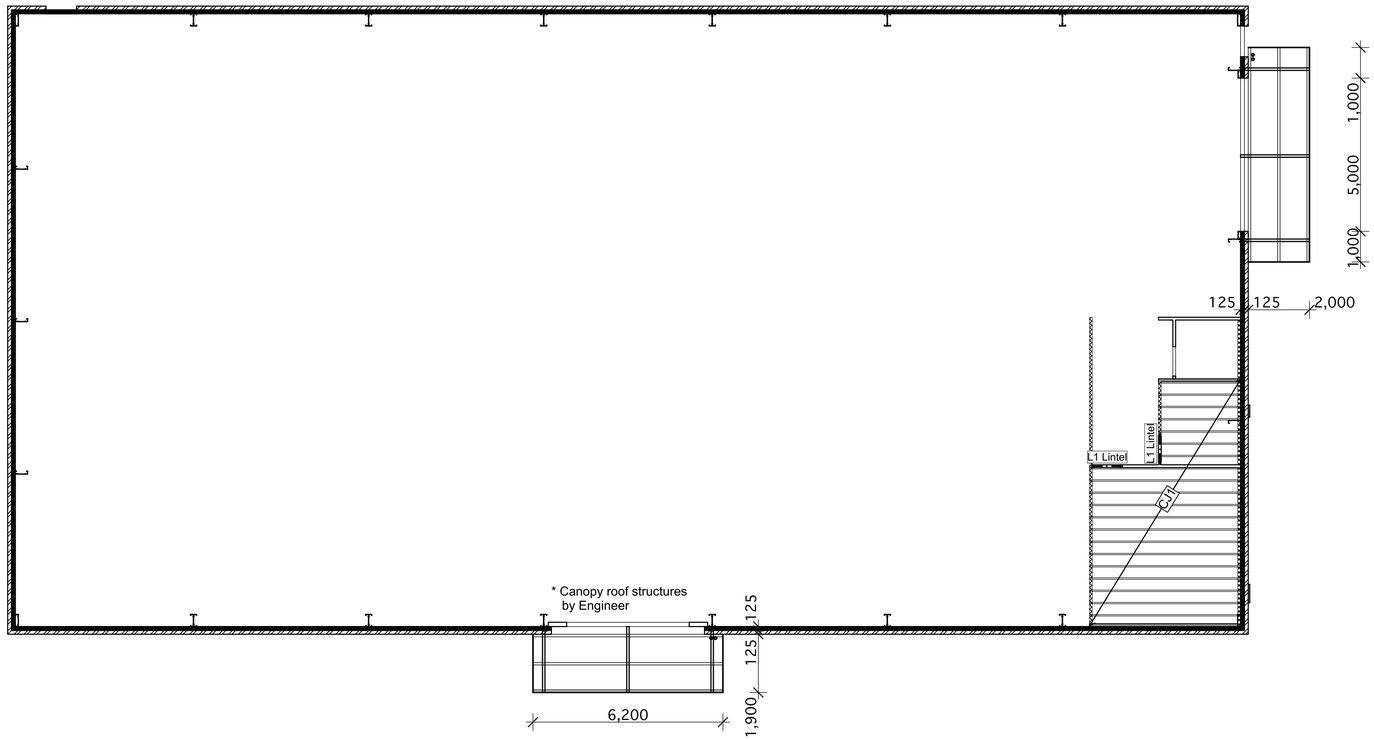
All lintels SG8 grade H1.2 pine unless noted otherwise.
Generally all lintels and beams concealed behind linings.

Where members are formed by doubling or tripling timber members, allow to glue and well nail all members together.

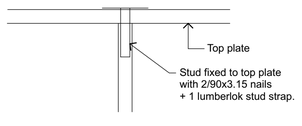
Generally all lintel fixings supporting roof framing to be Type G 7.5Kn.

Posts:

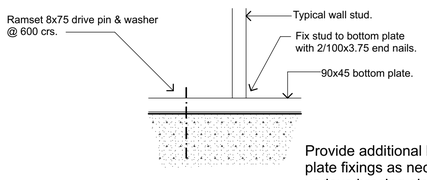
- 2/90x45 SG8 H1.2 studs supporting lintel.
  To lintels & trimmers: Locate one stud under.
  Refer details for fixings to resist uplift to all lintels.



CANOPY ROOF / CEILING FRAMING PLAN - BUILDING 1
SCALE 1:100 @ A1



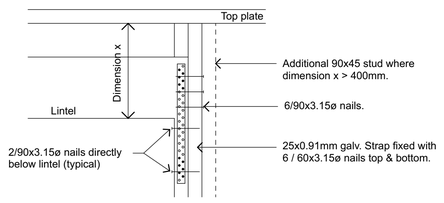
Top plate (supporting roof framing)



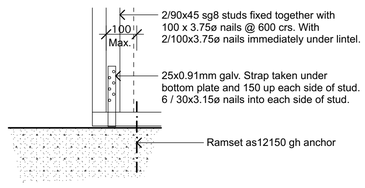
Provide additional bottom plate fixings as necessary for various bracing elements.

Concrete floor (internal wall)
1 : 10 scale

Typical top & bottom plate fixings
1 : 10 scale



Lintel (7.5kn)



Concrete floor

Type "g" fixings to resist uplift (7.5kn).
1 : 10 scale

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WIND ZONE: HIGH
EXPOSURE ZONE: C

N

LEGAL DESCRIPTION:
Identifier: CT 574944
Section 3
Survey Office Plan 438821
Area: 12,148sqm

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
CEILING FRAMING PLAN
BUILDING ONE

JOB
PROPOSED NEW RETAIL
BUILDINGS
20 KLINAC LANE
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SCALE

SHEET No.
BC12

LEGEND:

WALL FRAMING:

- 1,250mm high Precast concrete wall (150mm) to Engineer's Design
- New Timber frame wall.

  New interior walls to be as follows:
  Walls up to 3.0m high - 90x45 SG8 studs @ 600 crs.
  H1.2 treated. Nogs @ 800 crs.
- Kingspan KSN1000FC Five Crown Wall Panels (125mm) from 1,200mm above floor level. Lap 50mm down face of Precast panel.

NOTES:

BATHROOMS / ACCESSIBLE WC'S:

Floors:
Jacobsens Tarkett safety Granite vinyl flooring (or similar approved), with coved upstand.
Confirm all floor finishes with owner prior to construction.
Submit selected floor finishes to designer for confirmation prior to installation.

Walls:
All walls lined with 10mm Gib Aqualine.
Level 4 enamel paint finished.

Ceilings:
13mm Gib Aqualine ceiling lining, enamel paint finished.

Vanities: To owner's selection.

WCs: To owner's selection.

Tapware:
To all sinks and to accessible bathroom wash basins, provide single lever taps, positioned 60mm clear of any adjacent obstruction.
Confirm tapware selections with owner for all other fixtures.

Water heating:

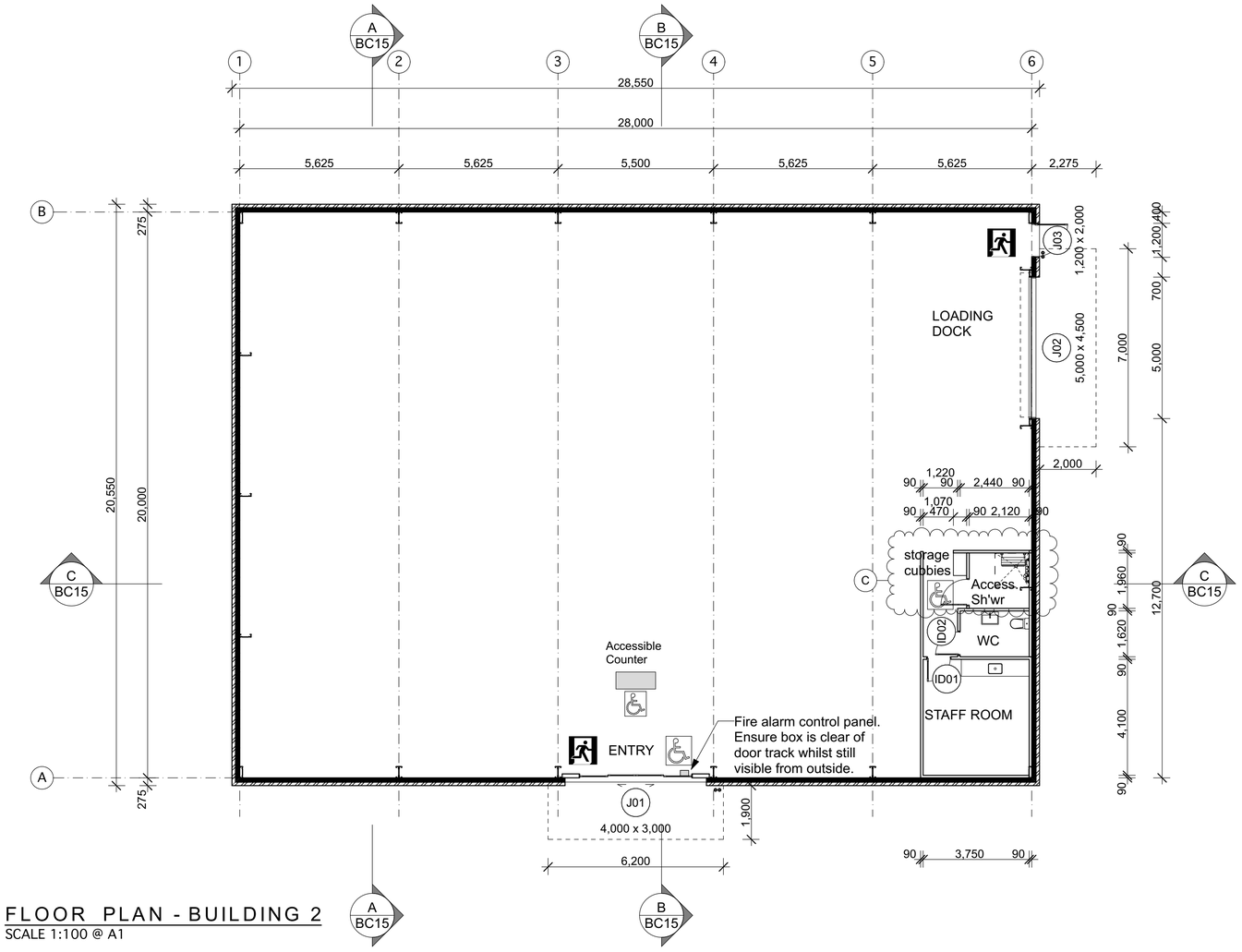
Rheem Mains Pressure Electric hot water cylinders
1 in each building above bathrooms. Install 19mm
Ply over ceiling joists to support cylinders.
180L (model MPVE 31218015).
Install on safe tray with seismic restraint and tempering valve.

Ventilation:

Extract fans: Provide 125Ø Manrose extract fan to bathrooms.
Flow rate 25L/S

INSULATION:

EXTERNAL STAFF AND BATHROOM WALLS: Install Pink Batts R2.2 insulation between timber framing (90mm) pads.



FLOOR PLAN - BUILDING 2

SCALE 1:100 @ A1

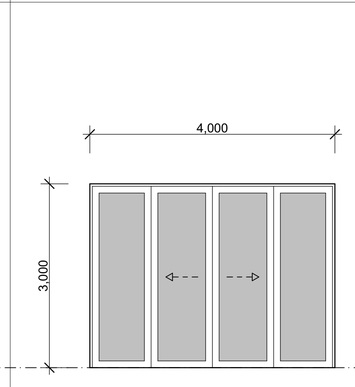
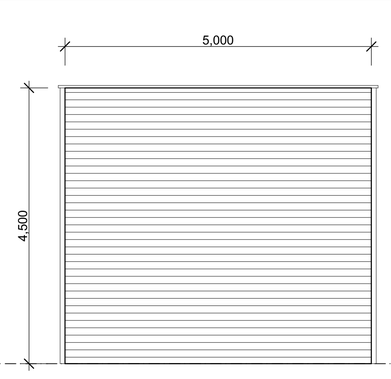
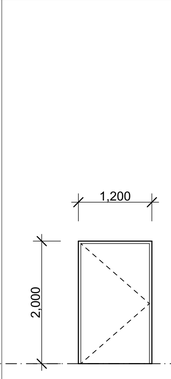
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WIND ZONE: HIGH
EXPOSURE ZONE: C

N

LEGAL DESCRIPTION:
Identifier: CT 574944
Section 3
Survey Office Plan 438821
Area: 12,148sqm

NAME	J01	J02	J03
ELEVATION			
LOCATION	Building 2	Building 2	Building 2
SPECIFICATION	Vantage Magnum 50 automated sliding door in 100mm shopfront frame. Install 150mm wide opaque adhesive strip manifestation @ 1.0m crs above floor. Confirm Hardware with owner. Powdercoat finish.	Metalbit Industrial roller door (or similar approved by owner) Automatic operation. Sliding bolt locking to owners requirements positioned on right side when viewed from outside @ 1,200 above FL to centre. Powdercoat finish.	Vantage Metro Aluminium frame, hinged door. Powdercoat finish.

EXTERIOR WINDOW & DOOR SCHEDULE

1:50 scale

EXTERIOR WINDOW & DOOR NOTES:

This Schedule to be read in conjunction with construction details provided. Details show indicative profiles.
Joiner to provide shop drawings to NZS 4211.
All glass to comply with 4223.3.

Confirm all dimensions and measurements on site prior to fabrication of joinery.

All Aluminium doors to be profiles as noted adjacent.
Powdercoat finish to selected colour.

GLAZING:
All glazing to be single glazed units to IGUMA standards R0.46 minimum.

All glass thicknesses to suit pane size, location and wind loadings. Generally, all glazing in accordance with NZS 4223:2016.

HARDWARE:
Confirm all hardware with owners prior to ordering.
Position door handles 1,000mm above floor to centre to comply with NZS4121.

INSTALLATION:
Allow to install all doors.
Co-ordinate with other trades as required.
Installation to include all flashings and sealants necessary to provide a complete weather seal.

NOTE:
* Joiner to prepare full shop and installation drawings of all joinery for approval prior to fabrication.

INTERIOR DOOR NOTES:

Generally door swing indicated from hinge side of door.

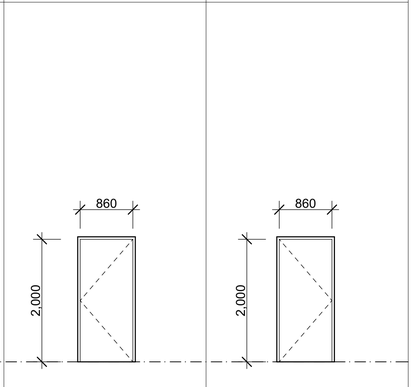
Left hung

Right hung

Confirm all dimensions and measurements on site prior to fabrication of joinery.

Ex 25mm rad. pine frames with planted stops.
40x10mm square edge architraves. Paint finish.

Confirm all hardware with owner prior to manufacture.

NAME	ID01	ID02
ELEVATION		
LOCATION	Building 1 Staffroom	Building 1 WC
SPECIFICATION	Interior solid core door, left hung. Paint finish.	Interior solid core door, right hung. Paint finish.

INTERIOR DOOR SCHEDULE

1:50 scale

C RFI 05-10-26
Add accessible shower

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
FLOOR PLAN BUILDING TWO

JOB
PROPOSED NEW RETAIL BUILDINGS
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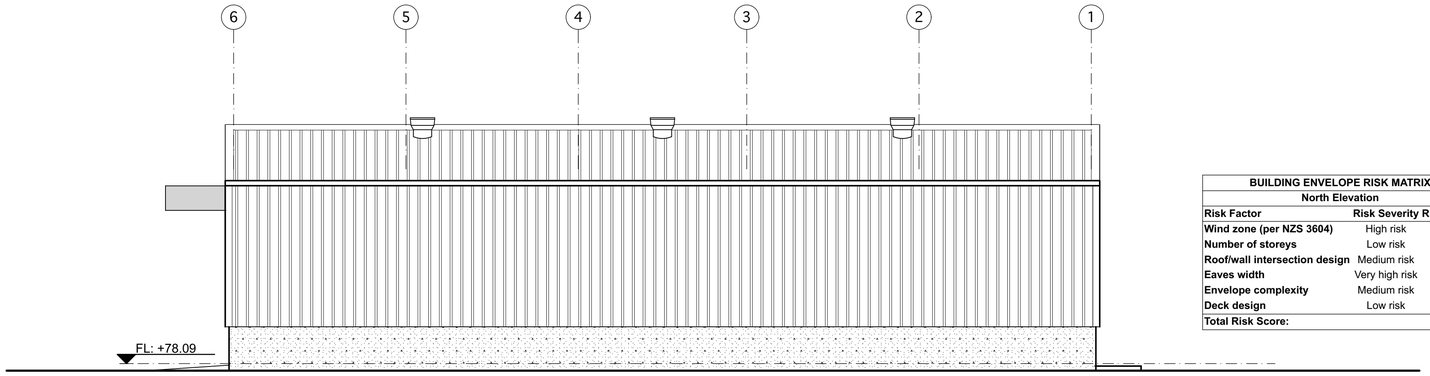
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SCALE	SHEET No.
1:50	BC13

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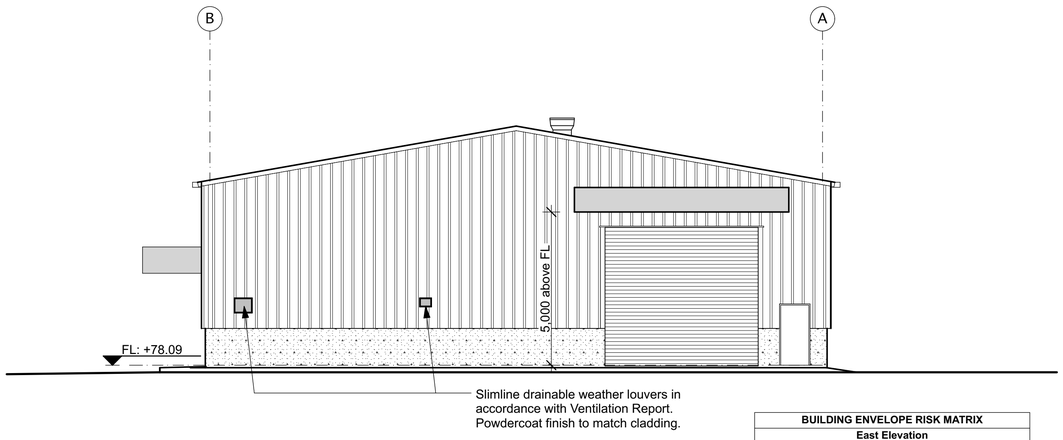
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WIND ZONE: HIGH
EXPOSURE ZONE: C



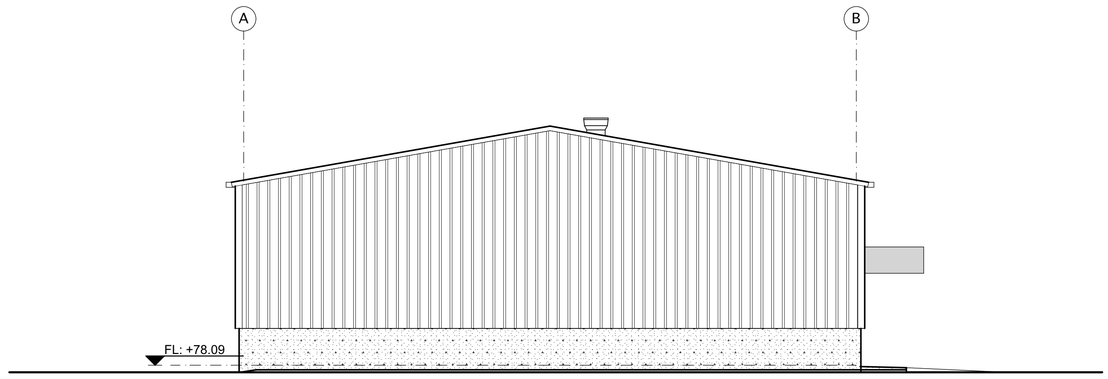
BUILDING ENVELOPE RISK MATRIX		
North Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Medium risk	1
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		**8**

NORTH ELEVATION - BUILDING 2
SCALE 1:100 @ A1



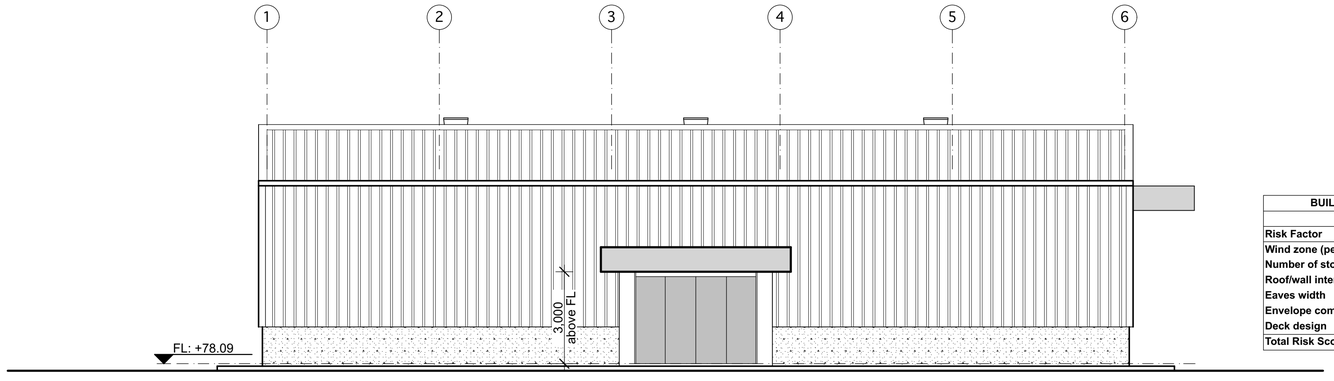
BUILDING ENVELOPE RISK MATRIX		
East Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Very high risk	5
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		**12**

EAST ELEVATION - BUILDING 2
SCALE 1:100 @ A1



BUILDING ENVELOPE RISK MATRIX		
West Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Medium risk	1
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		**8**

WEST ELEVATION - BUILDING 2
SCALE 1:100 @ A1



BUILDING ENVELOPE RISK MATRIX		
South Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Very high risk	5
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		**12**

SOUTH ELEVATION - BUILDING 2
SCALE 1:100 @ A1

A BUILDING CONSENT **09-06-26**

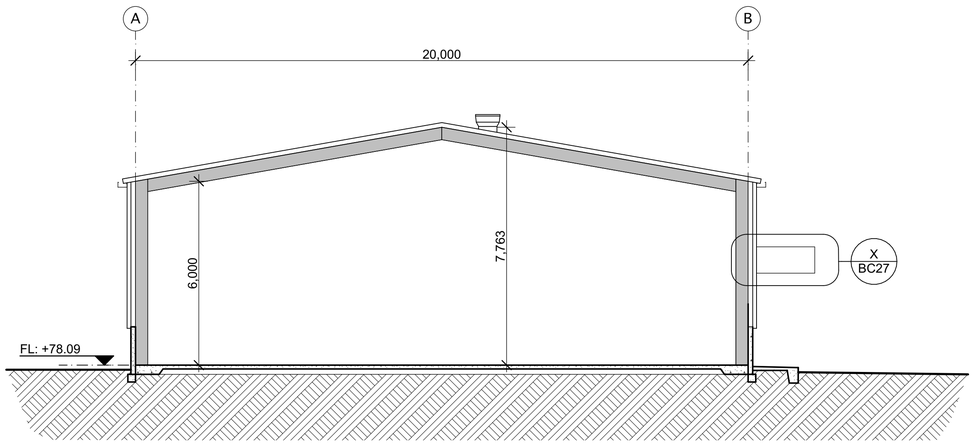
REVISIONS

DRAWING
ELEVATIONS BUILDING TWO

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

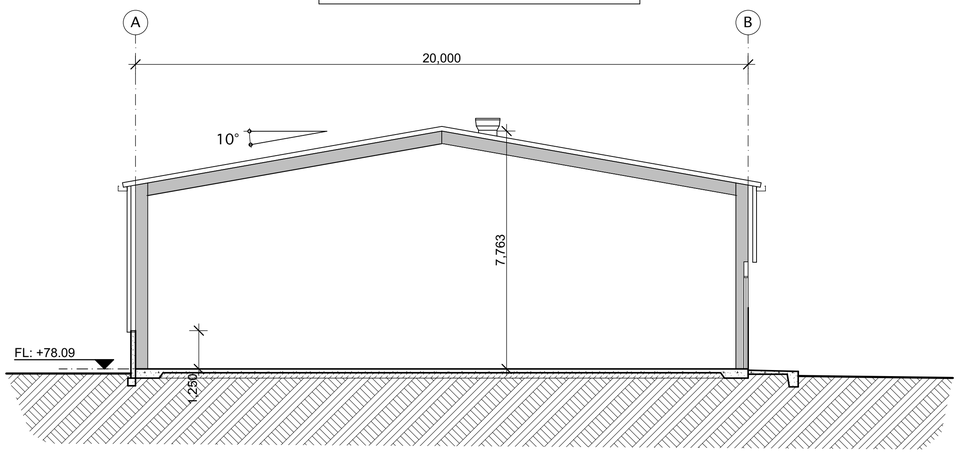
Spooner architectural solutions
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p: (09) 407 3107 m: 027 289 1221
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SCALE	SHEET No.
1:50	BC14



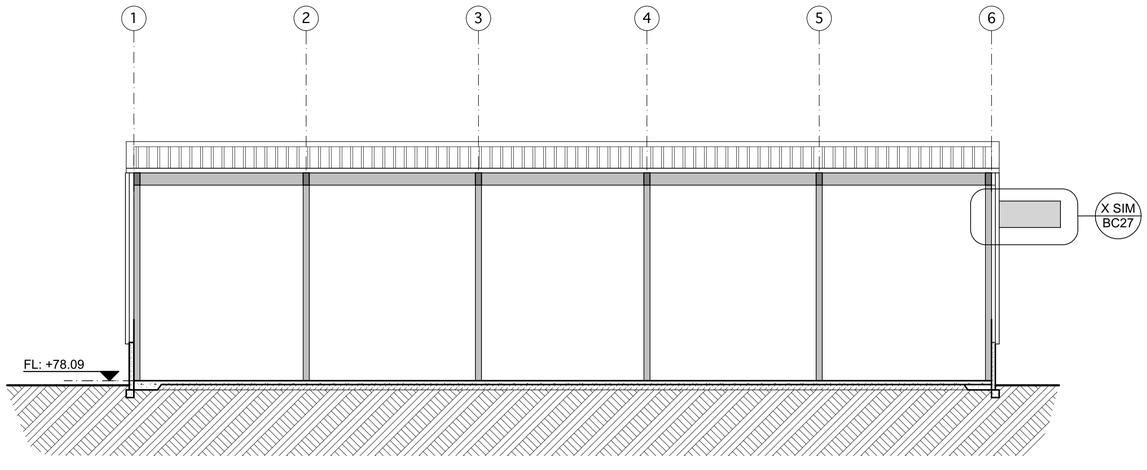
SECTION A-A - BUILDING 2
SCALE 1:100 @ A1

REFER STRUCTURAL DRAWINGS FOR FOUNDATIONS. INSTALL THERMAKRAFT SUPERCOURSE 500 DPC BETWEEN ANY CONCRETE & TIMBER. INSTALL THERMAKRAFT BLACK DPM UNDER CONCRETE SLABS.



SECTION B-B - BUILDING 2
SCALE 1:100 @ A1

REFER STRUCTURAL DRAWINGS BY STEELSPAN FOR ALL STEEL FRAMING MEMBERS & DETAILS.



SECTION C-C - BUILDING 2
SCALE 1:100 @ A1

Do not scale from drawings.
The Contractor must check and verify all dimensions on site prior to commencing any work.

All work to be in accordance with
The Building Act 2004,
The New Zealand Building Code, NZS 3604 and
Any additional Territorial Authority requirements.
Refer Specification for references to other
New Zealand / Australian Standards to be complied with as they apply to this project.

WIND ZONE: HIGH
EXPOSURE ZONE: C

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
SECTIONS BUILDING TWO

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

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SCALE	SHEET No.
1:50	BC15

STORMWATER PLUMBING & DRAINAGE NOTES:

All storm water plumbing and drainage work to be in accordance with NZBC E1/AS1.

All downpipes and drains to be PVC.
Downpipes sizes as noted. Catchment area noted on roof plan.
150Ø drains.

Assemble as a gravity drain system, discharging to extg connection.

SANITARY PLUMBING & DRAINAGE NOTES:

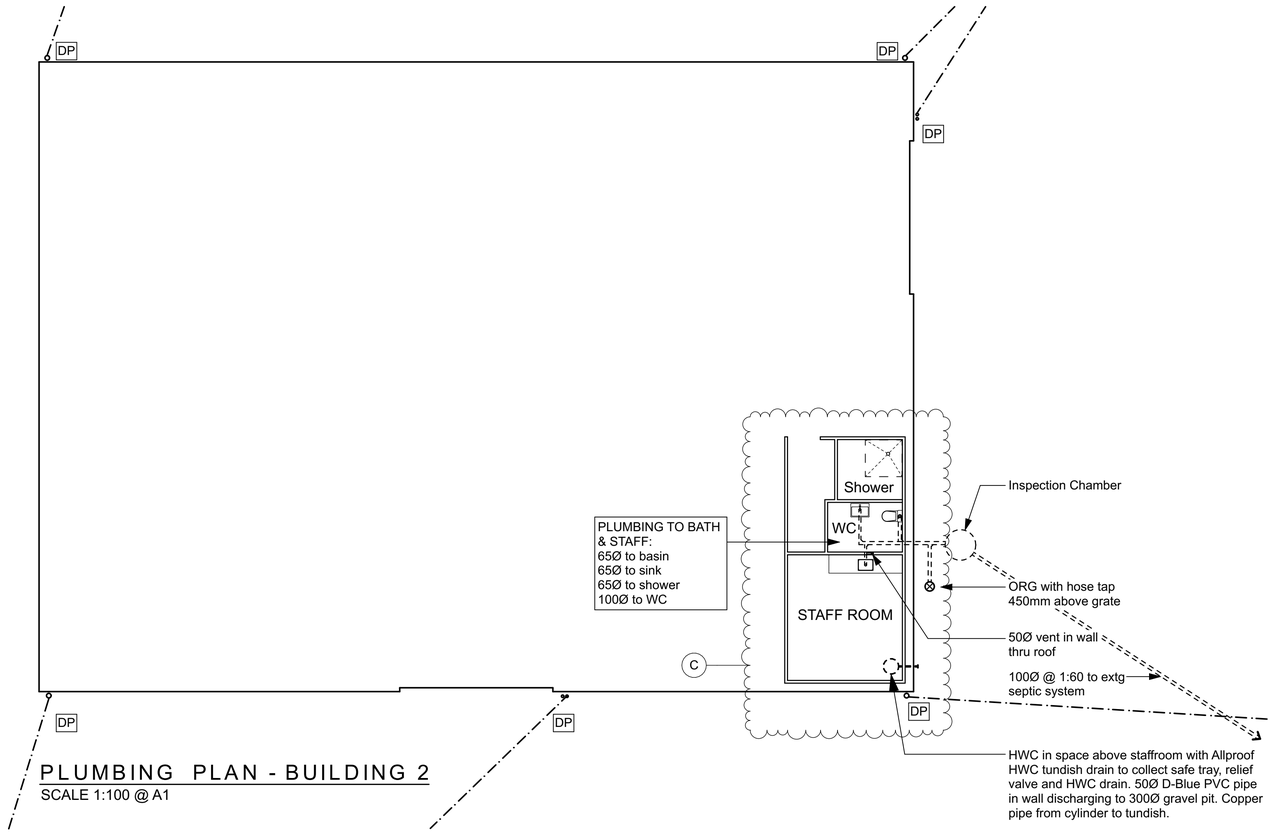
All plumbing and drainage work to be in accordance with NZS / AS 3500:2021. Check onsite and do not mix system types.

All waste pipes to be uPVC except for exposed pipes to be chrome plated copper.

All under slab waste pipes to be 65Ø or 100Ø PVC, with 40Ø reducer fitted above slab to inlet of sink & WHB's.

MINIMUM FALL FOR SANITARY WASTE PIPES:
40Ø 1 in 40
50Ø 1 in 40
65Ø 1 in 40
100Ø 1 in 60 - including 100Ø pipes under slabs
Minimum fall for 100Ø drains = 1 in 60 gradient.

REFER ALSO BC06 & BC07 FOR OVERALL PLUMBING, DRAINAGE & STORMWATER



PLUMBING PLAN - BUILDING 2
SCALE 1:100 @ A1

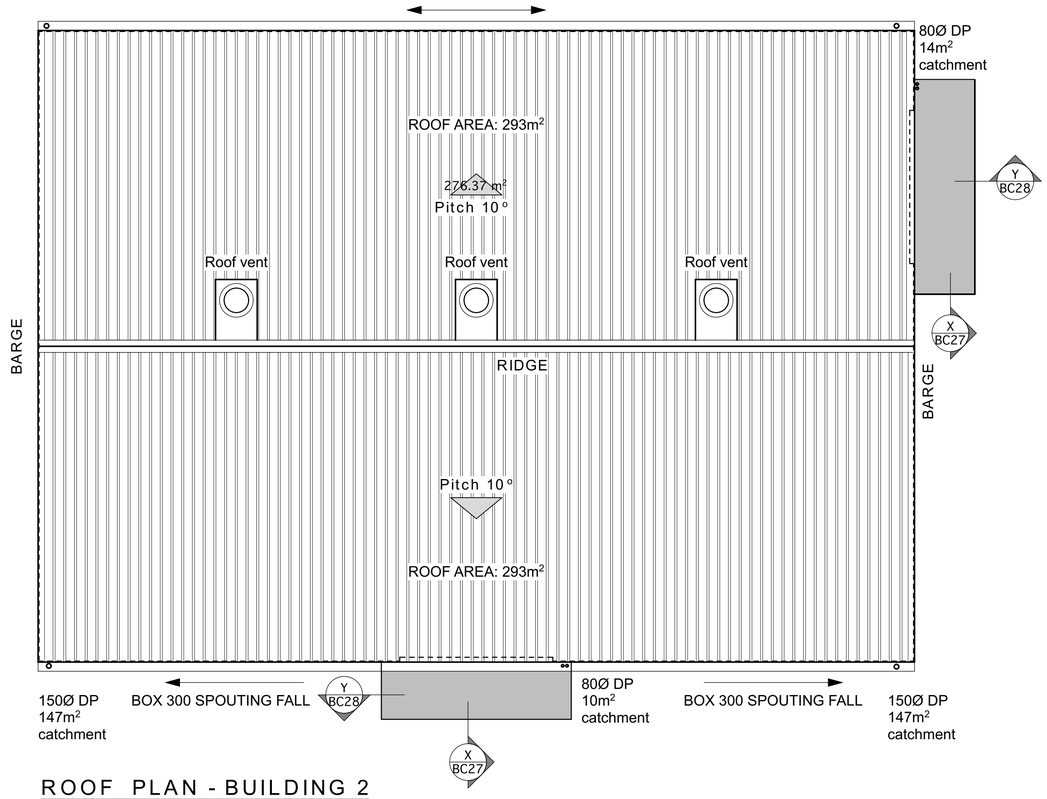
ROOF PLAN NOTES:

Roofing:
10° roof pitch. Kingspan KSN1000FC Five Crown roof panels 150mm. Rib profile, 0.55BMT AM150 G300S Maxam coated steel

Flashings:
0.55BMT Colorsteel roof flashings (H wind zone).
Transverse flashing over roofing min. lap 200mm
Parallel flashing over roofing min. lap 2 crests.
Barge flashing overlap to barge fascia 90mm min.

Spouting / Downpipes:
Dimond Box 300 profile Colorsteel
Maxam spouting (fall @ 1:500 min).
Provides 33,550mm² effective cross sectional area with 15mm freeboard. 25,000mm² required for roof plane area of 295m². 150Ø PVC downpipes.

Gutter / Downpipes:
300w Nuralite TPO membrane hidden gutter on 50mm PIR panel discharging to 2 x Allproof 80Ø bronze clamp ring drains. One drain with dome for roof drainage. One drain with 50mm raised ring & grate for overflow.
Single 80Ø PVC down pipe. to domed drain.
Overflow drain 80Ø PVC terminated immediately under soffit lining.



ROOF PLAN - BUILDING 2
SCALE 1:100 @ A1

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Any additional Territorial Authority requirements.
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New Zealand / Australian Standards to be complied with as they apply to this project.

WIND ZONE: HIGH
EXPOSURE ZONE: C

N

LEGAL DESCRIPTION:
Identifier: CT 574944
Section 3
Survey Office Plan 438821
Area: 12,148sqm

C RFI **05-10-26**
Add accessible shower

B RFI **30-06-26**
Add HWC overflow drain

A BUILDING CONSENT **09-06-26**

REVISIONS

DRAWING
ROOF PLAN PLUMBING
PLAN BUILDING TWO

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

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SCALE
SHEET No.
BC16

LEGEND:

Walls:

Non-load bearing timber frame wall below.
Refer BC13 for stud crs.

Load bearing wall below.
Refer BC13 for wall types / stud crs.

CJ1 240x45 SG8 ceiling joists @ 400 crs

L1 L1: 2/90x45 SG8

NOTES:

Lintels:

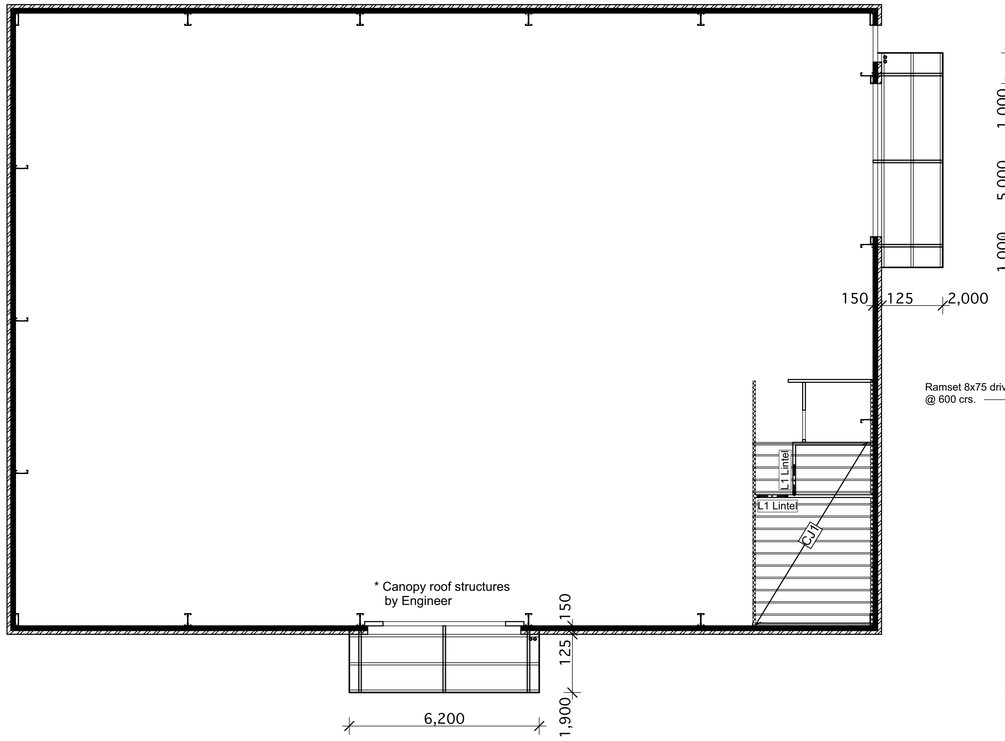
All lintels SG8 grade H1.2 pine unless noted otherwise.
Generally all lintels and beams concealed behind linings.

Where members are formed by doubling or tripling timber members, allow to glue and well nail all members together.

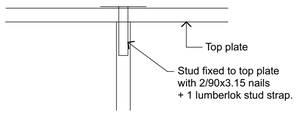
Generally all lintel fixings supporting roof framing to be Type G 7.5Kn.

Posts:

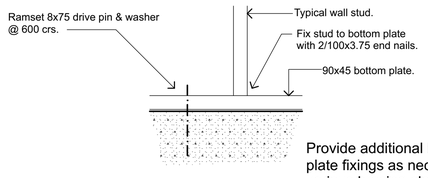
- 2/90x45 SG8 H1.2 studs supporting lintel.
  To lintels & trimmers: Locate one stud under.
  Refer details for fixings to resist uplift to all lintels.



CANOPY ROOF / CEILING FRAMING PLAN - BUILDING 2
SCALE 1:100 @ A1



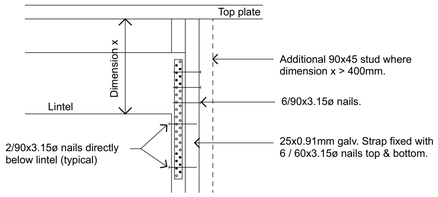
Top plate (supporting roof framing)



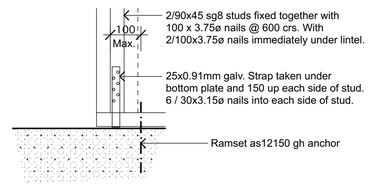
Provide additional bottom plate fixings as necessary for various bracing elements.

Concrete floor (internal wall)
1 : 10 scale

Typical top & bottom plate fixings
1 : 10 scale



Lintel (7.5kn)



Concrete floor

Type "g" fixings to resist uplift (7.5kn).
1 : 10 scale

Do not scale from drawings.
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All work to be in accordance with
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The New Zealand Building Code, NZS 3604 and
Any additional Territorial Authority requirements.
Refer Specification for references to other
New Zealand / Australian Standards to be complied with as they apply to this project.

WIND ZONE: HIGH
EXPOSURE ZONE: C

N

LEGAL DESCRIPTION:
Identifier: CT 574944
Section 3
Survey Office Plan 438821
Area: 12,148sqm

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
CEILING FRAMING PLAN
BUILDING TWO

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

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SCALE

SHEET No.
BC17

LEGEND:

WALL FRAMING:

1,250mm high, Precast concrete wall (150mm) to Engineer's Design. South Wall to be full height (175mm) Precast concrete. Refer Elevations. South Wall to be strapped and lined with 45x45mm timber strapping @ 600 crs with R1.0 insulation between framing. 10mm Gib wall lining over strapping. South wall to achieve minimum FRR of 180/180/180 one-way in accordance with the Fire Proofed Fire Safety Compliance Report.

New Timber frame wall.

New interior walls to be as follows:
Walls up to 3.0m high - 90x45 SG8 studs @ 600 crs.
H1.2 treated. Nogs @ 800 crs.

Kingspan KSN1000FC Five Crown Wall Panels (125mm) from 1,200mm above floor level. Lap 50mm down face of Precast panel.

NOTES:

BATHROOMS / ACCESSIBLE WC'S:

Floors:
Jacobsens Tarkett safety Granite vinyl flooring (or similar approved), with coved upstand.
Confirm all floor finishes with owner prior to construction.
Submit selected floor finishes to designer for confirmation prior to installation.

Walls:
All walls lined with 10mm Gib Aqualine.
Level 4 enamel paint finished.

Ceilings:
13mm Gib Aqualine ceiling lining, enamel paint finished.

Vanities: To owner's selection.

WCs: To owner's selection.

Tapware:
To all sinks and to accessible bathroom wash basins, provide single lever taps, positioned 60mm clear of any adjacent obstruction.
Confirm tapware selections with owner for all other fixtures.

Water heating:

Rheem Mains Pressure Electric hot water cylinders
1 in each building above bathrooms. Install 19mm Ply over ceiling joists to support cylinders.
180L (model MPVE 31218015).
Install on safe tray with seismic restraint and tempering valve.

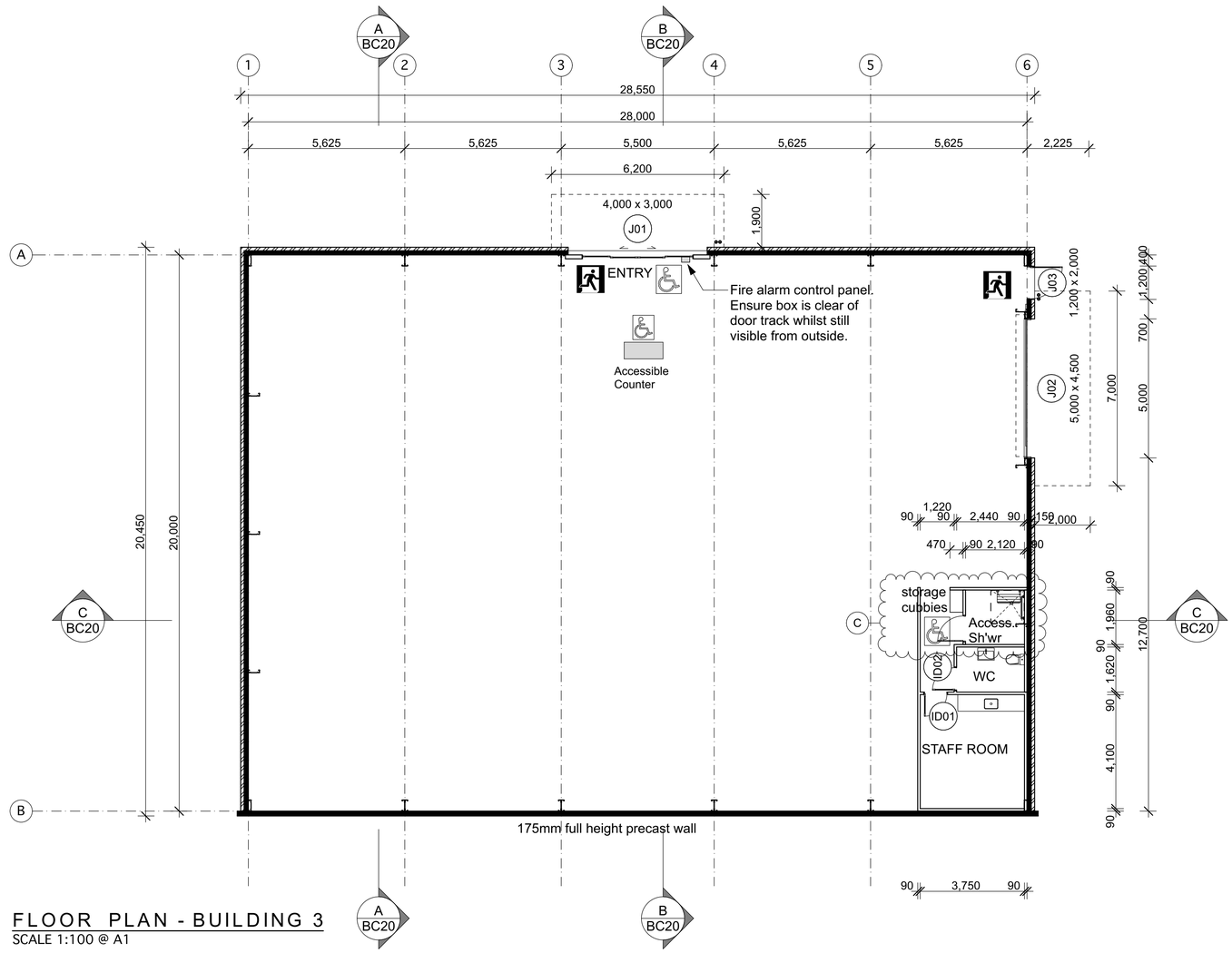
Ventilation:

Extract fans: Provide 125Ø Manrose extract fan to bathrooms.
Flow rate 25L/S

INSULATION:

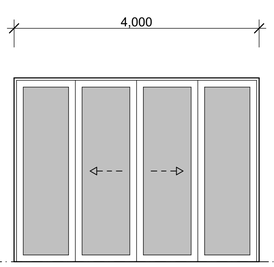
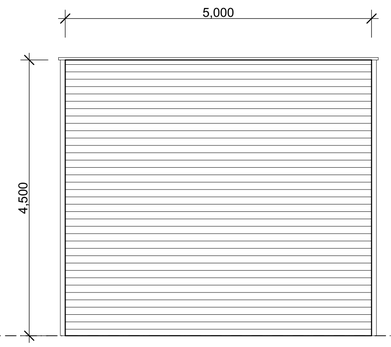
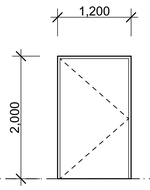
SOUTH WALL: Install Pink Batts R1.0 insulation between timber strapping (40mm) pads.

EXTERNAL STAFF AND BATHROOM WALLS: Install Pink Batts R2.2 insulation between timber framing (90mm) pads.



FLOOR PLAN - BUILDING 3

SCALE 1:100 @ A1

NAME	J01	J02	J03
ELEVATION			
LOCATION	Building 2	Building 2	Building 2
SPECIFICATION	Vantage Magnum 50 automated sliding door in 100mm shopfront frame. Install 150mm wide opaque adhesive strip manifestation @ 1.0m crs above floor. Confirm Hardware with owner. Powdercoat finish.	Metalbit Industrial roller door (or similar approved by owner) Automatic operation. Sliding bolt locking to owners requirements positioned on right side when viewed from outside @ 1,200 above FL to centre. Powdercoat finish.	Vantage Metro Aluminium frame, hinged door. Powdercoat finish.

EXTERIOR WINDOW & DOOR SCHEDULE

1:50 scale

EXTERIOR WINDOW & DOOR NOTES:

This Schedule to be read in conjunction with construction details provided. Details show indicative profiles.
Joiner to provide shop drawings to NZS 4211.
All glass to comply with 4223.3.

Confirm all dimensions and measurements on site prior to fabrication of joinery.

All Aluminium doors to be profiles as noted adjacent. Powdercoat finish to selected colour.

GLAZING:
All glazing to be single glazed units to IGUMA standards R0.46 minimum.

All glass thicknesses to suit pane size, location and wind loadings. Generally, all glazing in accordance with NZS 4223:2016.

HARDWARE:
Confirm all hardware with owners prior to ordering.
Position door handles 1,000mm above floor to centre to comply with NZS4121.

INSTALLATION:
Allow to install all doors.
Co-ordinate with other trades as required.
Installation to include all flashings and sealants necessary to provide a complete weather seal.

NOTE:
* Joiner to prepare full shop and installation drawings of all joinery for approval prior to fabrication.

INTERIOR DOOR NOTES:

Generally door swing indicated from hinge side of door.

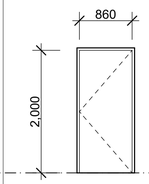
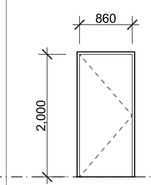
Left hung

Right hung

Confirm all dimensions and measurements on site prior to fabrication of joinery.

Ex 25mm rad. pine frames with planted stops.
40x10mm square edge architraves. Paint finish.

Confirm all hardware with owner prior to manufacture.

NAME	ID01	ID02
ELEVATION		
LOCATION	Building 1 Staffroom	Building 1 WC
SPECIFICATION	Interior solid core door, left hung. Paint finish.	Interior solid core door, right hung. Paint finish.

INTERIOR DOOR SCHEDULE

1:50 scale

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Refer Specification for references to other New Zealand / Australian Standards to be complied with as they apply to this project.

WIND ZONE: HIGH
EXPOSURE ZONE: C

LEGAL DESCRIPTION:
Identifier: CT 574944
Section 3
Survey Office Plan 438821
Area: 12,148sqm

C RFI **05-10-26**
Add accessible shower

A BUILDING CONSENT **09-06-26**

REVISIONS

DRAWING
FLOOR PLAN BUILDING THREE

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

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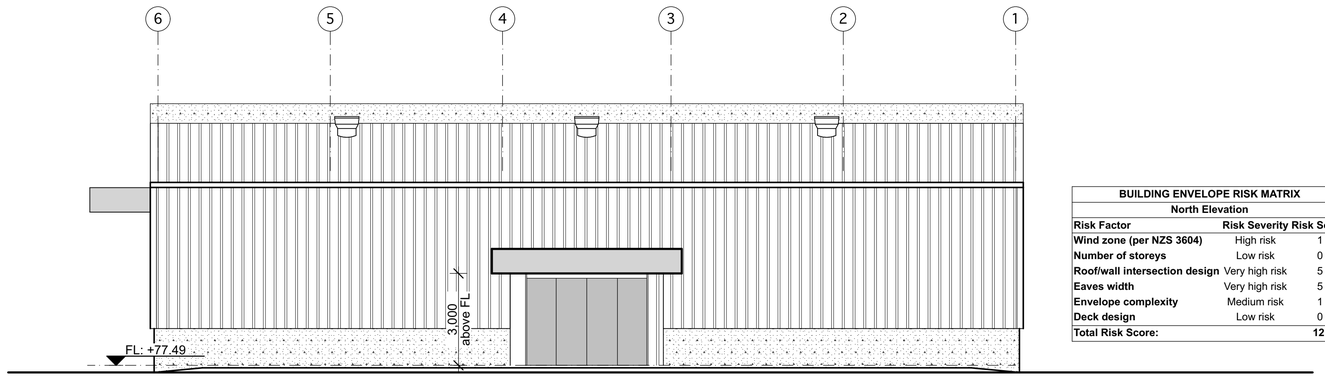
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SCALE	SHEET No.
1:100 1:50	BC18

Do not scale from drawings.
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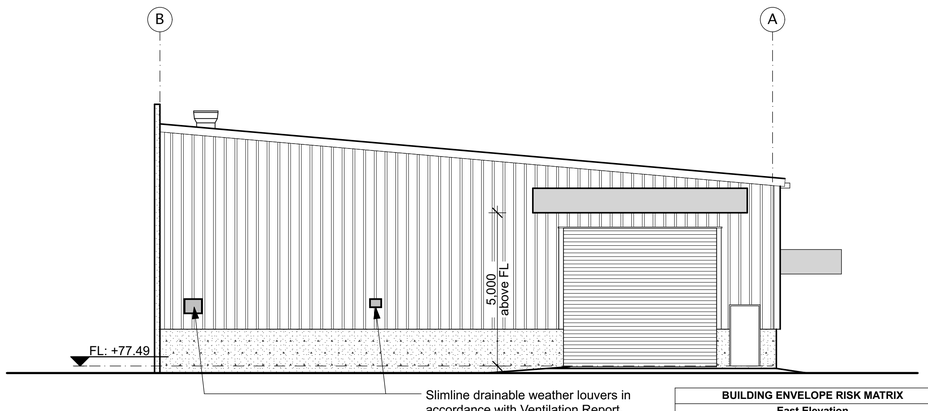
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WIND ZONE: HIGH
EXPOSURE ZONE: C



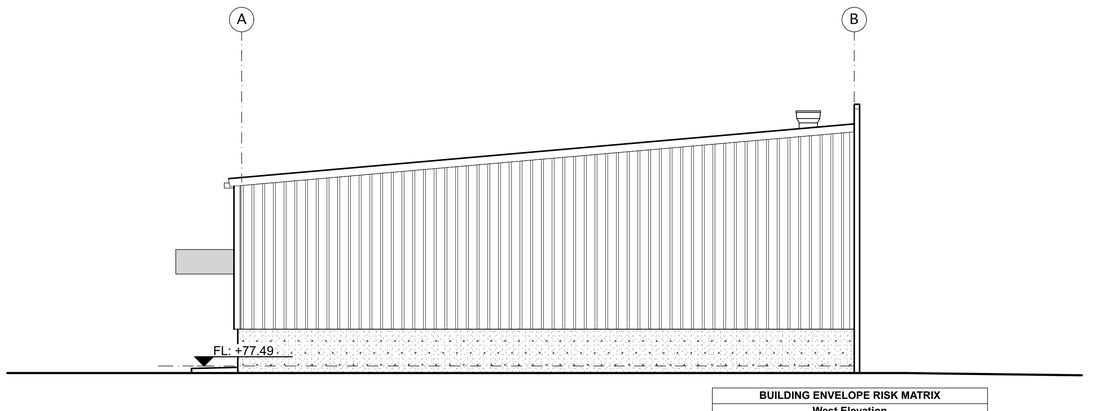
BUILDING ENVELOPE RISK MATRIX		
North Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Very high risk	5
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		**12**

NORTH ELEVATION - BUILDING 3
SCALE 1:100 @ A1



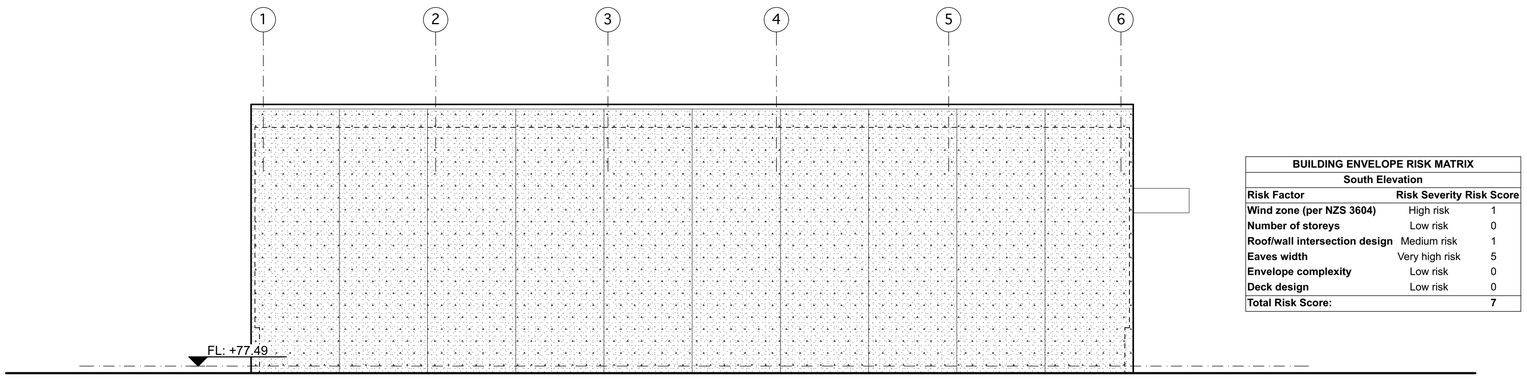
BUILDING ENVELOPE RISK MATRIX		
East Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Very high risk	5
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		**12**

EAST ELEVATION - BUILDING 3
SCALE 1:100 @ A1



BUILDING ENVELOPE RISK MATRIX		
West Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Medium risk	1
Eaves width	Very high risk	5
Envelope complexity	Medium risk	1
Deck design	Low risk	0
Total Risk Score:		**8**

WEST ELEVATION - BUILDING 3
SCALE 1:100 @ A1



BUILDING ENVELOPE RISK MATRIX		
South Elevation		
Risk Factor	**Risk Severity**	**Risk Score**
Wind zone (per NZS 3604)	High risk	1
Number of storeys	Low risk	0
Roof/wall intersection design	Medium risk	1
Eaves width	Very high risk	5
Envelope complexity	Low risk	0
Deck design	Low risk	0
Total Risk Score:		**7**

SOUTH ELEVATION - BUILDING 3
SCALE 1:100 @ A1

A BUILDING CONSENT **09-06-26**

REVISIONS

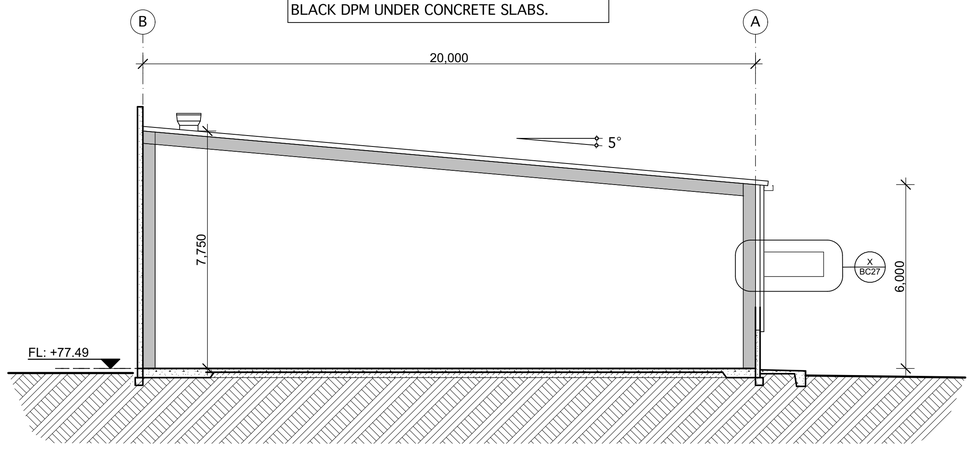
DRAWING
ELEVATIONS BUILDING THREE

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
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SCALE 1:50
SHEET No. BC19

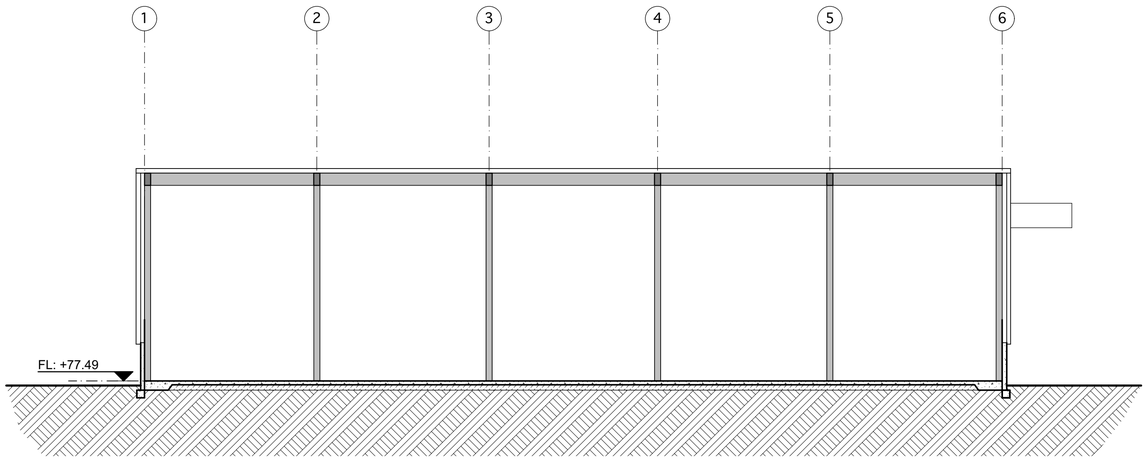
REFER STRUCTURAL DRAWINGS FOR FOUNDATIONS. INSTALL THERMAKRAFT SUPERCOURSE 500 DPC BETWEEN ANY CONCRETE & TIMBER. INSTALL THERMAKRAFT BLACK DPM UNDER CONCRETE SLABS.



SECTION A-A - BUILDING 3

SCALE 1:100 @ A1

REFER STRUCTURAL DRAWINGS BY STEELSPAN FOR ALL STEEL FRAMING MEMBERS & DETAILS.



SECTION C-C - BUILDING 3

SCALE 1:100 @ A1

Do not scale from drawings.
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Any additional Territorial Authority requirements.
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WIND ZONE: HIGH
EXPOSURE ZONE: C

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING

SECTIONS BUILDING THREE

JOB

PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

Spooner architectural solutions

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SCALE	SHEET No.
1:50 / 1:10	BC20

STORMWATER PLUMBING & DRAINAGE NOTES:

All storm water plumbing and drainage work to be in accordance with NZBC E1/AS1.

All downpipes and drains to be PVC.
Downpipes sizes as noted. Catchment area noted on roof plan.
150Ø drains.

Assemble as a gravity drain system, discharging to extg connection.

SANITARY PLUMBING & DRAINAGE NOTES:

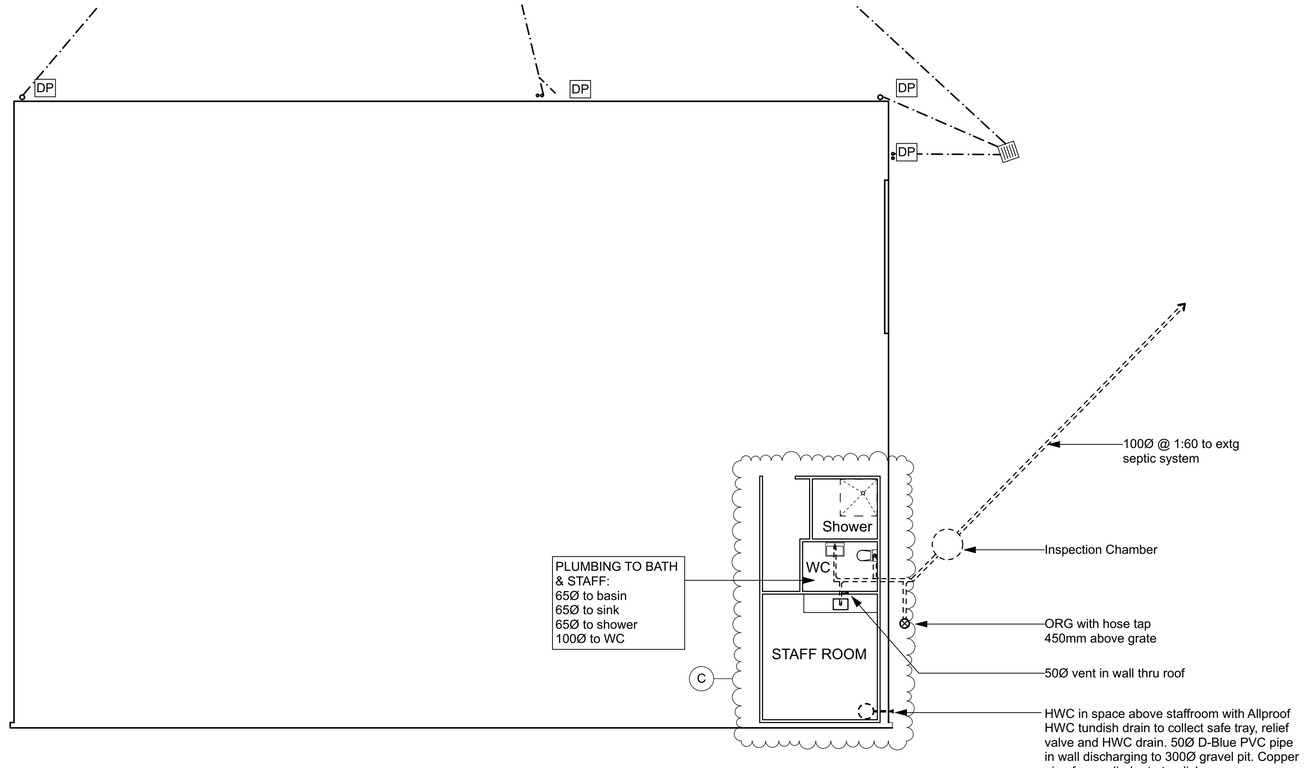
All plumbing and drainage work to be in accordance with NZS / AS 3500:2021. Check onsite and do not mix system types.

All waste pipes to be uPVC except for exposed pipes to be chrome plated copper.

All under slab waste pipes to be 65Ø or 100Ø PVC, with 40Ø reducer fitted above slab to inlet of sink & WHB's.

MINIMUM FALL FOR SANITARY WASTE PIPES:
40Ø 1 in 40
50Ø 1 in 40
65Ø 1 in 40
100Ø 1 in 60 - including 100Ø pipes under slabs
Minimum fall for 100Ø drains = 1 in 60 gradient.

REFER ALSO BC06 & BC07 FOR OVERALL PLUMBING, DRAINAGE & STORMWATER



PLUMBING PLAN - BUILDING 3
SCALE 1:100 @ A1

Do not scale from drawings.
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Any additional Territorial Authority requirements.
Refer Specification for references to other
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WIND ZONE: HIGH
EXPOSURE ZONE: C

LEGAL DESCRIPTION:
Identifier: CT 574944
Section 3
Survey Office Plan 438821
Area: 12,148sqm

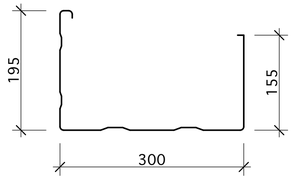
ROOF PLAN NOTES:

Roofing:
5° roof pitch. Kingspan KSN1000FC Five Crown roof panels 150mm. Rib profile, 0.55BMT AM150 G300S Maxam coated steel

Flashings:
0.55BMT Colorsteel roof flashings (H wind zone).
Transverse flashing over roofing min. lap 200mm
Parallel flashing over roofing min. lap 2 crests.
Barge flashing overlap to barge fascia 90mm min.

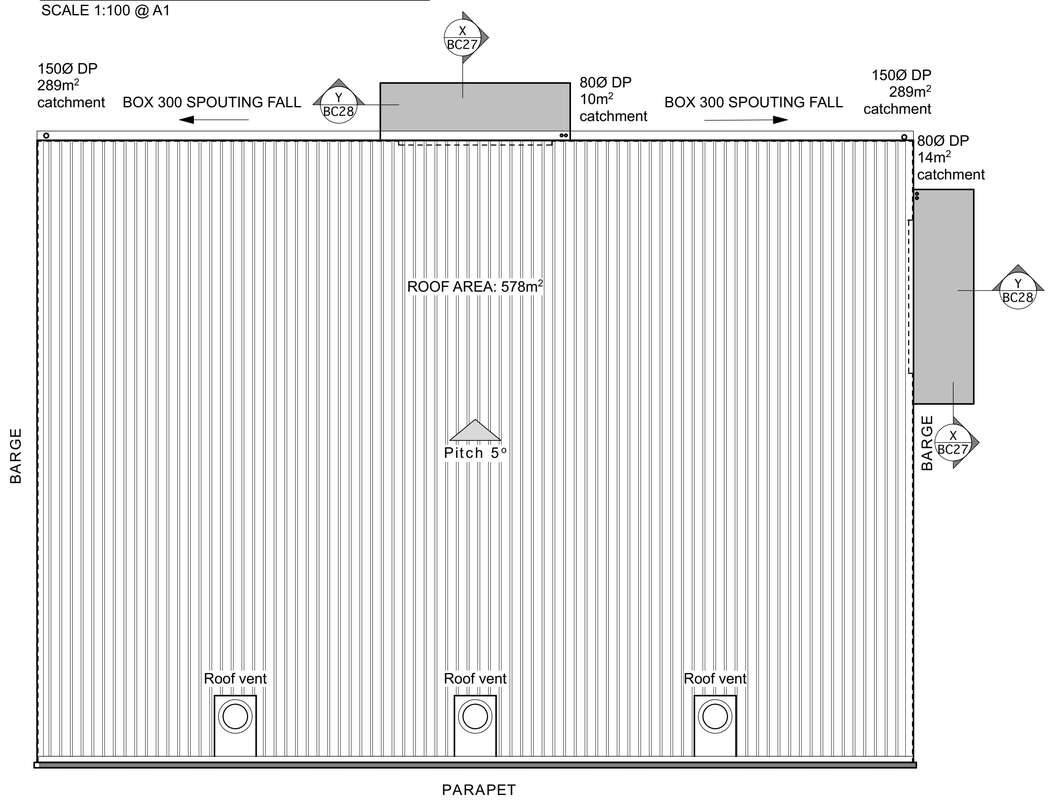
Spouting / Downpipes:
Custom built spouting, profile to match Box 300.
Spouting dimensions to detail below.
Colorsteel Maxam (fall @ 1:500 min).
Provides 42,200mm² effective cross sectional area with 15mm freeboard. 42,000mm² required for roof plane area of 578m². 150Ø PVC downpipes.

Gutter / Downpipes:
300w Nuralite TPO membrane hidden gutter on 50mm PIR panel discharging to 2 x Allproof 80Ø bronze clamp ring drains. One drain with dome for roof drainage. One drain with 50mm raised ring & grate for overflow.
Single 80Ø PVC down pipe. to domed drain.
Overflow drain 80Ø PVC terminated immediately under soffit lining.



NOTE: MUST ACHIEVE MIN. 42,000mm EFFECTIVE CROSS SECTIONAL AREA WITH 15mm FREEBOARD

CUSTOM SPOUTING DIMENSIONS
SCALE: 1:5 @ A1



ROOF PLAN - BUILDING 3
SCALE 1:100 @ A1

C RFI **05-10-26**
Add accessible shower

B RFI **30-06-26**
Add HWC overflow drain

A BUILDING CONSENT **09-06-26**

REVISIONS

DRAWING
ROOF PLAN PLUMBING
PLAN BUILDING THREE

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

Spooner architectural solutions
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SCALE	SHEET No.
	BC21

LEGEND:

Walls:

- Non-load bearing timber frame wall below. Refer BC18 for stud crs.
- Load bearing wall below. Refer BC18 for wall types / stud crs.
- CJ1 240x45 SG8 ceiling joists @ 400 crs
- L1 L1: 2/90x45 SG8

NOTES:

Lintels:

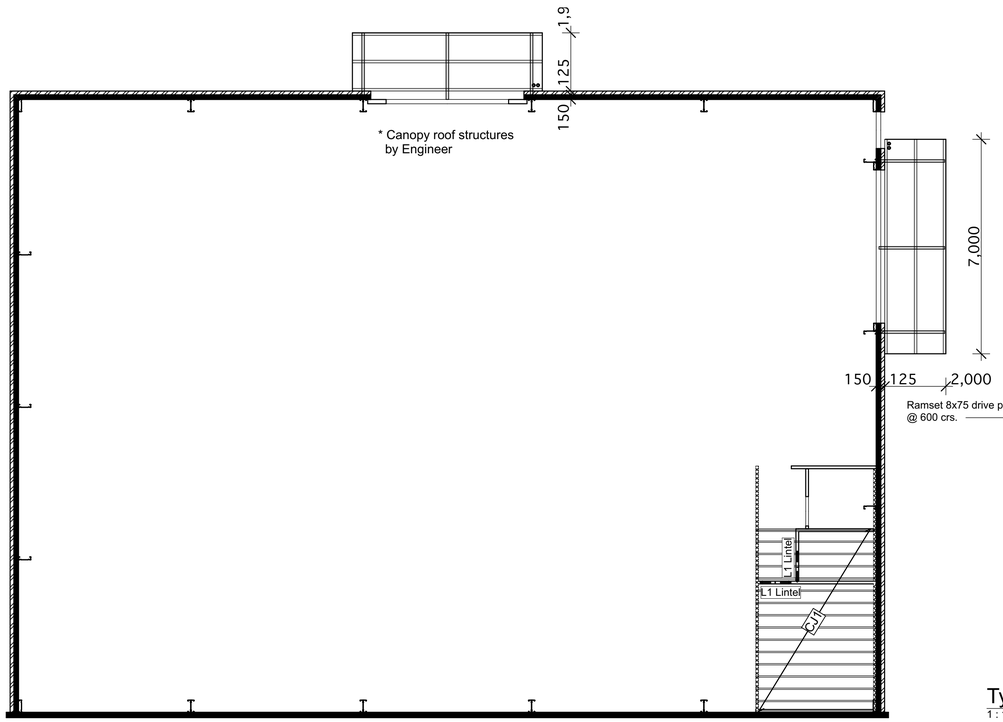
All lintels SG8 grade H1.2 pine unless noted otherwise.
Generally all lintels and beams concealed behind linings.

Where members are formed by doubling or tripling timber members, allow to glue and well nail all members together.

Generally all lintel fixings supporting roof framing to be Type G 7.5Kn.

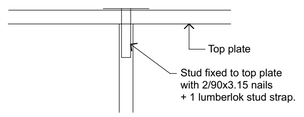
Posts:

- 2/90x45 SG8 H1.2 studs supporting lintel. To lintels & trimmers: Locate one stud under. Refer details for fixings to resist uplift to all lintels.

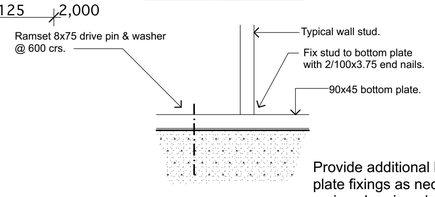


CANOPY ROOF / CEILING FRAMING PLAN - BUILDING 3

SCALE 1:100 @ A1



Top plate (supporting roof framing)

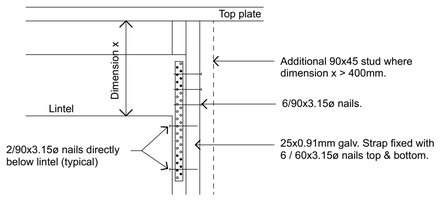


Provide additional bottom plate fixings as necessary for various bracing elements.

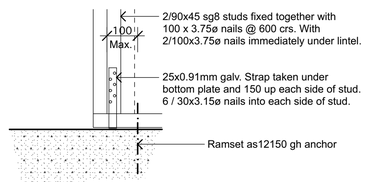
Concrete floor (internal wall)
1 : 10 scale

Typical top & bottom plate fixings

1 : 10 scale



Lintel (7.5kn)



Concrete floor

Type "g" fixings to resist uplift (7.5kn).

1 : 10 scale

Do not scale from drawings.
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All work to be in accordance with
The Building Act 2004,
The New Zealand Building Code, NZS 3604 and
Any additional Territorial Authority requirements.
Refer Specification for references to other New Zealand / Australian Standards to be complied with as they apply to this project.

WIND ZONE: HIGH
EXPOSURE ZONE: C

N

LEGAL DESCRIPTION:
Identifier: CT 574944
Section 3
Survey Office Plan 438821
Area: 12,148sqm

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING

CEILING FRAMING PLAN
BUILDING THREE

JOB

PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

Spooner architectural solutions

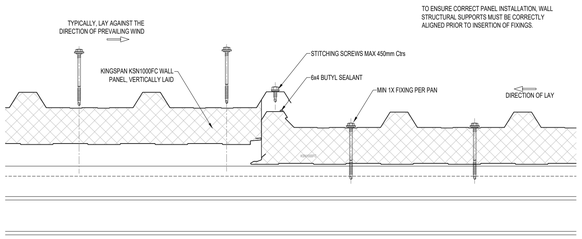
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SCALE	SHEET No.
	BC22

PANEL LAP DETAILS



SYSTEM: KSN1000FC FIVE CROWN VERTICAL WALL PANEL
DESCRIPTION: PANEL LAP DETAILS

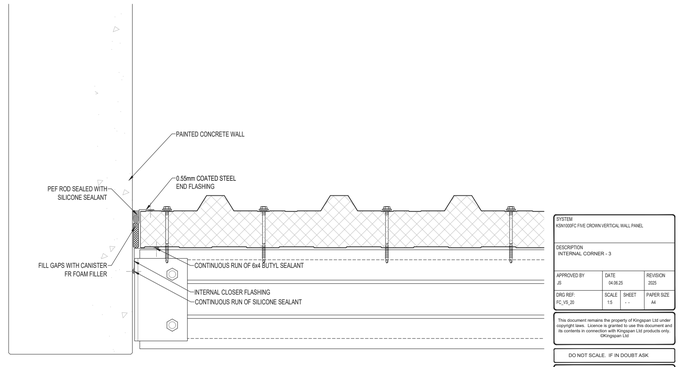
APPROVED BY	DATE	REVISION
JS	04.06.25	2025
DRG REF: FC_V5_03	SCALE: 1:5	SHEET: - -	PAPER SIZE: A4

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INTERNAL CORNER - 3



20

SYSTEM: KSN1000FC FIVE CROWN VERTICAL WALL PANEL
DESCRIPTION: INTERNAL CORNER - 3

APPROVED BY	DATE	REVISION
JS	04.06.25	2025
DRG REF: FC_V5_20	SCALE: 1:5	SHEET: - -	PAPER SIZE: A4

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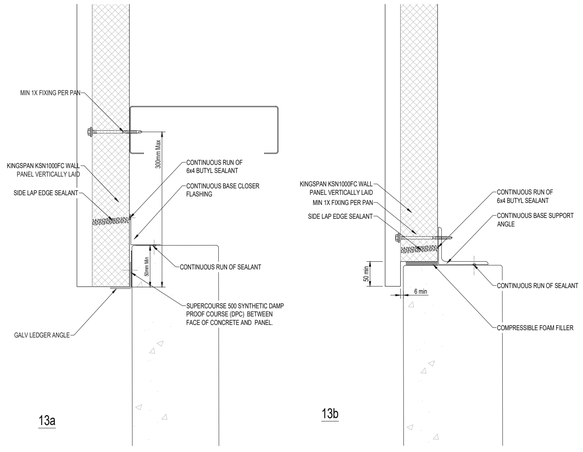
NOTE:
REFER ALSO TO STRUCTURAL ENGINEER'S DETAIL DRAWINGS.

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WIND ZONE: HIGH
EXPOSURE ZONE: C

NIB DETAIL 1



SYSTEM: KSN1000FC FIVE CROWN VERTICAL WALL PANEL
DESCRIPTION: NIB DETAIL 1

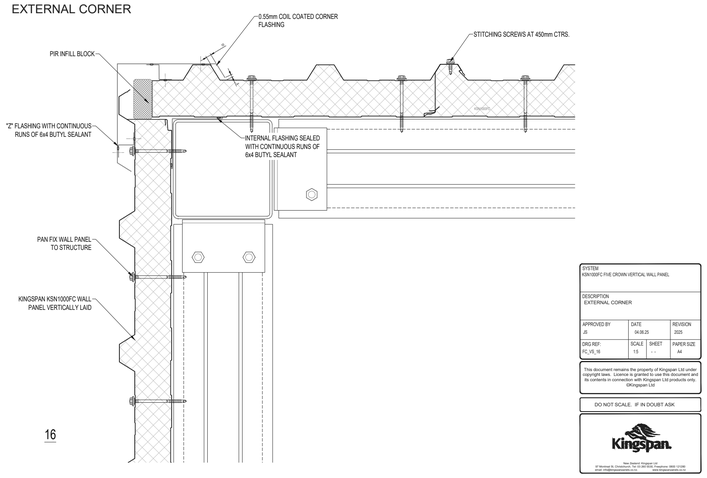
APPROVED BY	DATE	REVISION
JS	04.06.25	2025
DRG REF: FC_V5_13	SCALE: 1:5	SHEET: - -	PAPER SIZE: A4

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EXTERNAL CORNER



SYSTEM: KSN1000FC FIVE CROWN VERTICAL WALL PANEL
DESCRIPTION: EXTERNAL CORNER

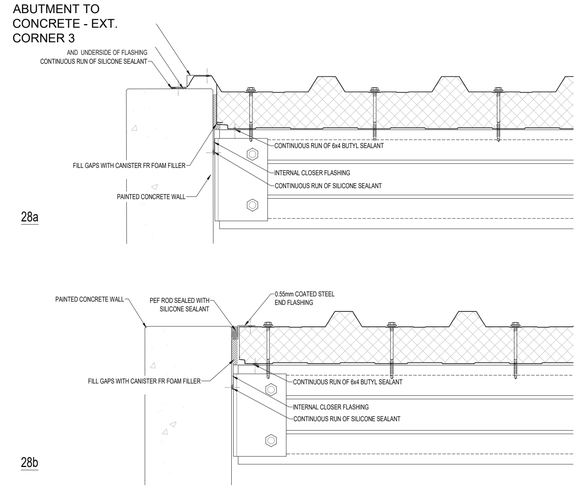
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DRG REF: FC_V5_16	SCALE: 1:5	SHEET: - -	PAPER SIZE: A4

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ABUTMENT TO CONCRETE - EXT. CORNER 3



SYSTEM: KSN1000FC FIVE CROWN VERTICAL WALL PANEL
DESCRIPTION: ABUTMENT TO CONCRETE - EXT. CORNER 3

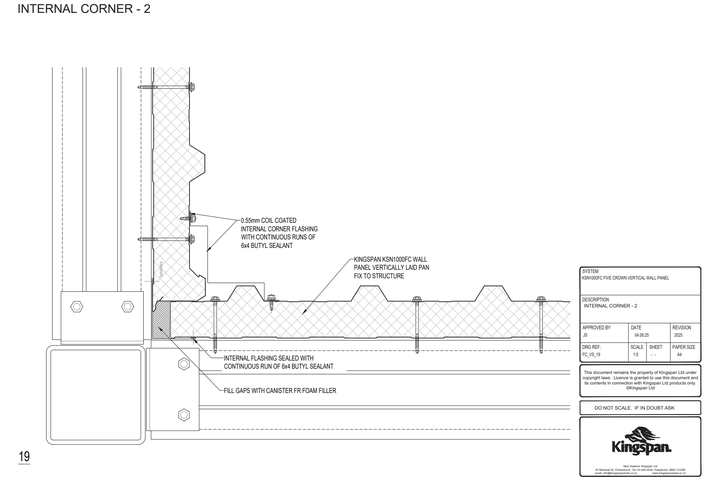
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INTERNAL CORNER - 2



SYSTEM: KSN1000FC FIVE CROWN VERTICAL WALL PANEL
DESCRIPTION: INTERNAL CORNER - 2

APPROVED BY	DATE	REVISION
JS	04.06.25	2025
DRG REF: FC_V5_19	SCALE: 1:2	SHEET: - -	PAPER SIZE: A4

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A BUILDING CONSENT 09-06-26

REVISIONS

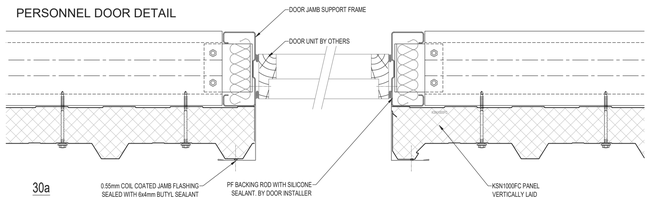
DRAWING
DETAILS

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

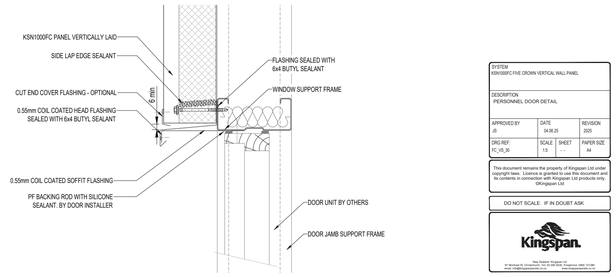
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SCALE	SHEET No.
1:2	BC23

PERSONNEL DOOR DETAIL



30a



30b

SYSTEM
KSN1000FC FIVE CROWN VERTICAL WALL PANEL

DESCRIPTION
PERSONNEL DOOR DETAIL

APPROVED BY	DATE	REVISION
JS	04.06.25	2025
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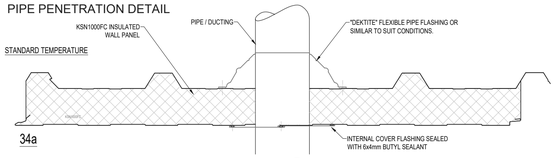
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email: info@kingspanpanels.co.nz www.kingspanpanels.co.nz

PIPE PENETRATION DETAIL

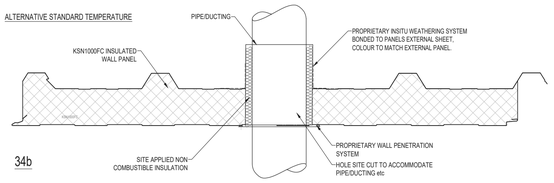
NOTE: MAXIMUM CIRCULAR HOLE SIZE TO BE 300mm. PENETRATIONS GREATER WILL REQUIRE ADDITIONAL SUPPORTING STEEL.

STANDARD TEMPERATURE



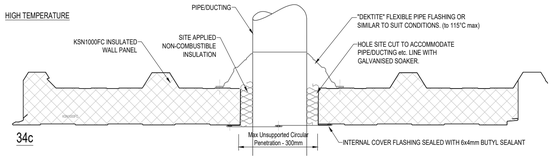
34a

ALTERNATIVE STANDARD TEMPERATURE



34b

HIGH TEMPERATURE



34c

SYSTEM
KSN1000FC FIVE CROWN VERTICAL WALL PANEL

DESCRIPTION
PIPE PENETRATION DETAIL

APPROVED BY	DATE	REVISION
JS	04.06.25	2025
DRG REF: FC_V6_34	SCALE: 1:5	SHEET: - - -
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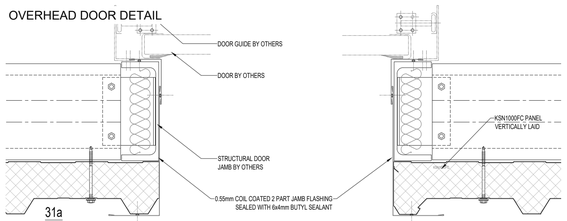
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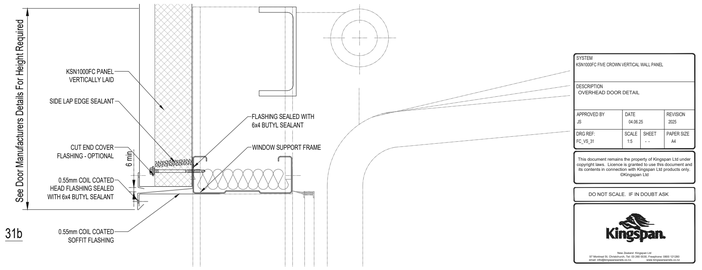
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WIND ZONE: HIGH
EXPOSURE ZONE: C

OVERHEAD DOOR DETAIL



31a



31b

SYSTEM
KSN1000FC FIVE CROWN VERTICAL WALL PANEL

DESCRIPTION
OVERHEAD DOOR DETAIL

APPROVED BY	DATE	REVISION
JS	04.06.25	2025
DRG REF: FC_V6_31	SCALE: 1:5	SHEET: - - -
		PAPER SIZE: A4

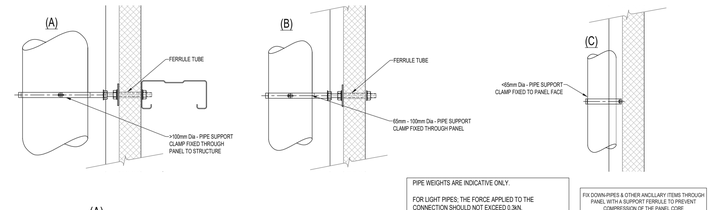
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DOWN-PIPE SUPPORT DETAIL

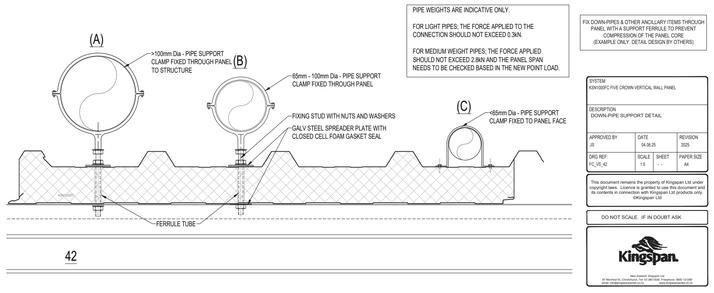


PIPE WEIGHTS ARE INDICATIVE ONLY.

FOR LIGHT PIPES: THE FORCE APPLIED TO THE CONNECTION SHOULD NOT EXCEED 0.3kN.

FOR MEDIUM WEIGHT PIPES: THE FORCE APPLIED SHOULD NOT EXCEED 2.8kN AND THE PANEL SPAN NEEDS TO BE CHECKED BASED IN THE NEW POINT LOAD.

FIX DOWN-PIPES & OTHER ANCILLARY ITEMS THROUGH PANEL WITH A SUPPORT FERRULE TO PREVENT COMPRESSION OF THE PANEL CORE (EXAMPLE ONLY. DETAIL DESIGN BY OTHERS)



SYSTEM
KSN1000FC FIVE CROWN VERTICAL WALL PANEL

DESCRIPTION
DOWN-PIPE SUPPORT DETAIL

APPROVED BY	DATE	REVISION
JS	04.06.25	2025
DRG REF: FC_V6_42	SCALE: 1:5	SHEET: - - -
		PAPER SIZE: A4

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A BUILDING CONSENT 09-06-26

REVISIONS

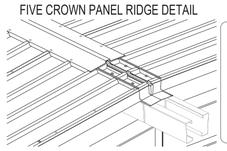
DRAWING
DETAILS

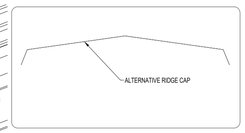
JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

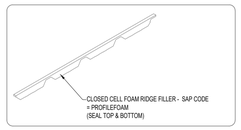
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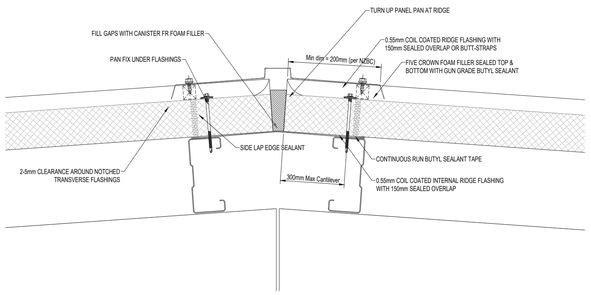
SCALE: NTS
SHEET No.: BC24

FIVE CROWN PANEL RIDGE DETAIL









EXTERNAL & INTERNAL FLASHING JOINS TO BE SEALED PER NZ METAL ROOFING MANUFACTURER'S CODE OF PRACTICE.

SYSTEM
KSN1000FC FIVE CROWN ROOF PANEL

DESCRIPTION
FIVE CROWN PANEL RIDGE DETAIL

APPROVED BY	DATE	REVISION
JS	04.06.25	2025
DRG REF: FC_RS_04	SCALE 1:5	PAPER SIZE A4

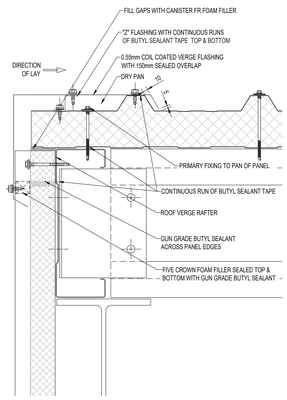
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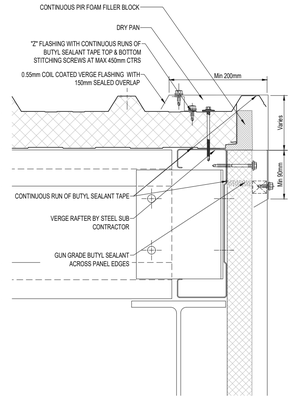
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email: info@kingspanbuilding.co.nz www.kingspanbuilding.co.nz

FIVE CROWN VERGE TO RW VERTICAL WALL





SYSTEM
KSN1000FC FIVE CROWN ROOF PANEL

DESCRIPTION
FIVE CROWN VERGE TO RW
VERTICAL WALL

APPROVED BY	DATE	REVISION
JS	04.06.25	2025
DRG REF: FC_RS_19	SCALE 1:5	PAPER SIZE A4

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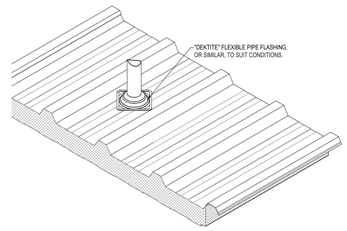
NOTE:
REFER ALSO TO STRUCTURAL ENGINEER'S DETAIL DRAWINGS.

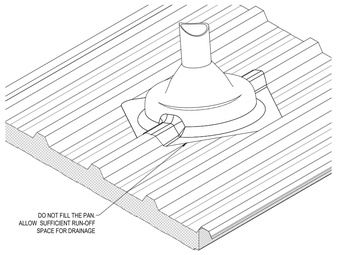
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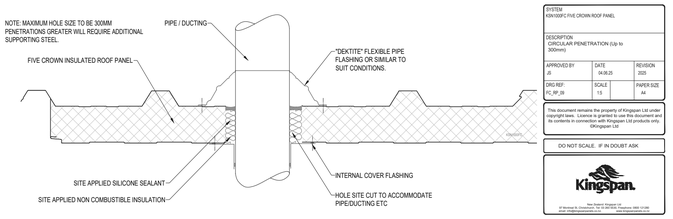
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Any additional Territorial Authority requirements.
Refer Specification for references to other New Zealand / Australian Standards to be complied with as they apply to this project.

WIND ZONE: HIGH
EXPOSURE ZONE: C

CIRCULAR PENETRATION (Up to 300mm)







SYSTEM
KSN1000FC FIVE CROWN ROOF PANEL

DESCRIPTION
CIRCULAR PENETRATION (Up to 300mm)

APPROVED BY	DATE	REVISION
JS	04.06.25	2025
DRG REF: FC_RP_08	SCALE 1:5	PAPER SIZE A4

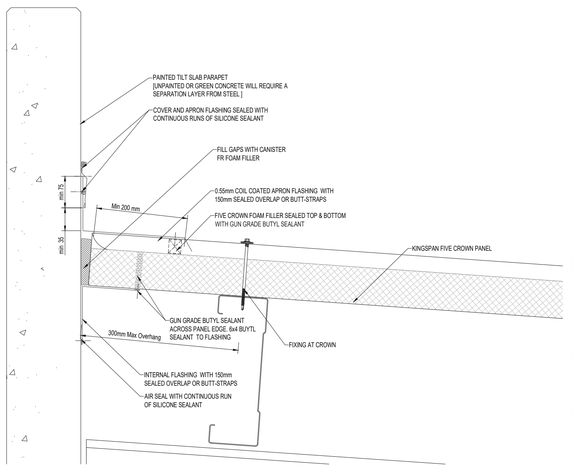
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FIVE CROWN SKILLION ROOF TO CONCRETE PARAPET



SYSTEM
KSN1000FC FIVE CROWN ROOF PANEL

DESCRIPTION
FIVE CROWN SKILLION ROOF TO
CONCRETE PARAPET

APPROVED BY	DATE	REVISION
JS	04.06.25	2025
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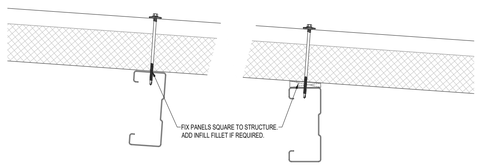
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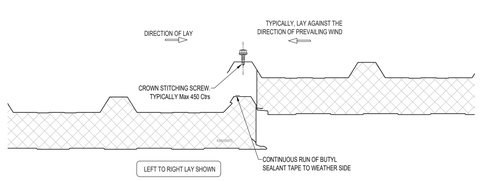
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FIVE CROWN ROOF PANEL PURLIN DETAILS (LIGHT STEEL STRUCTURE)

KINGSPAN DOES NOT RECOMMEND BACK LAYING OF PANELS.
CHECK CONSTRUCTION PROGRAMME BEFORE ORDERING PANEL LAY DIRECTION

NOTE:
COLD ROLLED STEEL STRUCTURE SHOWN
TIMBER OR HOT ROLLED STEEL MAY BE SUBSTITUTED





NOTE: TO ENSURE CORRECT PANEL INSTALLATION, ROOF PURLINS MUST BE CORRECTLY ALIGNED PRIOR TO INSTALLATION OF PANELS. END LAP PURLINS NEED TO BE TRUE & STRAIGHT

SYSTEM
KSN1000FC FIVE CROWN ROOF PANEL

DESCRIPTION
FIVE CROWN ROOF PANEL PURLIN
DETAILS (LIGHT STEEL STRUCTURE)

APPROVED BY	DATE	REVISION
JS	04.06.25	2025
DRG REF: FC_RS_38	SCALE 1:5	PAPER SIZE A4

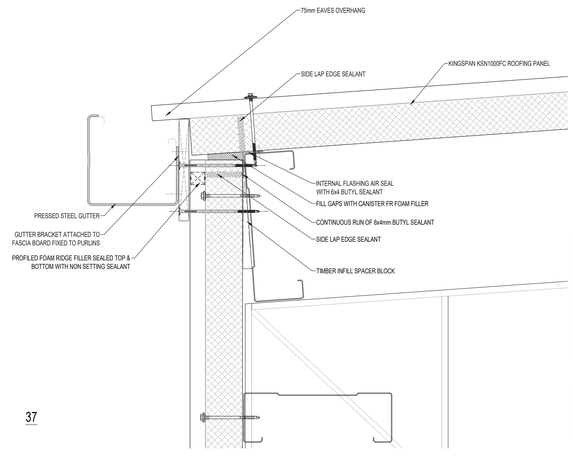
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EAVES GUTTER DETAIL



SYSTEM
KSN1000FC FIVE CROWN VERTICAL WALL PANEL

DESCRIPTION
EAVES GUTTER DETAIL

APPROVED BY	DATE	SHEET	REVISION
JS	04.06.25	- -	2025
DRG REF: FC_RS_37	SCALE 1:5		PAPER SIZE A4

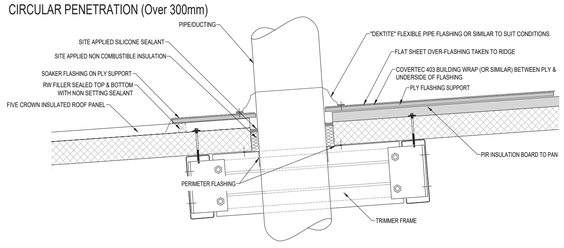
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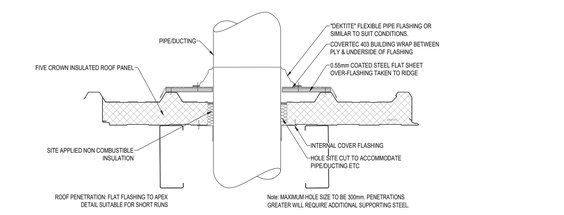
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CIRCULAR PENETRATION (Over 300mm)





SYSTEM
KSN1000FC FIVE CROWN ROOF PANEL

DESCRIPTION
CIRCULAR PENETRATION (Over
300mm)

APPROVED BY	DATE	REVISION
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A BUILDING CONSENT **09-06-26**

REVISIONS

DRAWING
DETAILS

JOB
PROPOSED NEW RETAIL
BUILDINGS
20 KLINAC LANE
WAIPAPA

Spooner architectural solutions
PO Box 10 KERIKERI 0245
e: paul@spoonersolutions.co.nz
p: (09) 407 3107 m: 027 289 1221
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SCALE 1:2
SHEET No. BC25

Figure 14: **Seismic Restraint of Storage Water Heaters 90 – 360 litres**
Paragraph 6.11.4

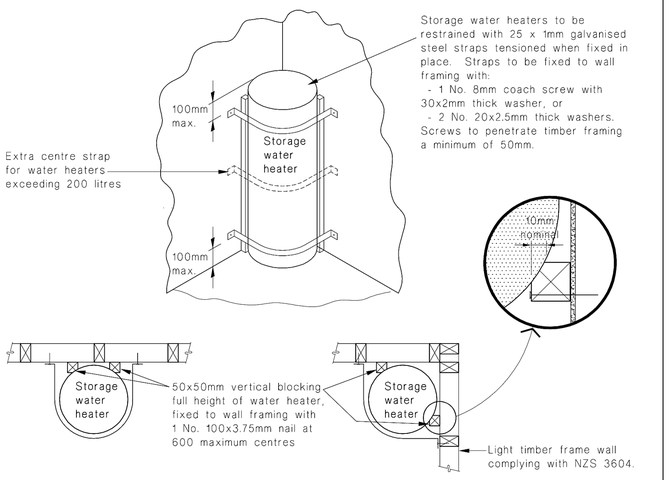


Figure 8: **Mains Pressure Storage Water Heater System (unvented)**
Paragraphs 6.1.2 and 6.2.1 b)

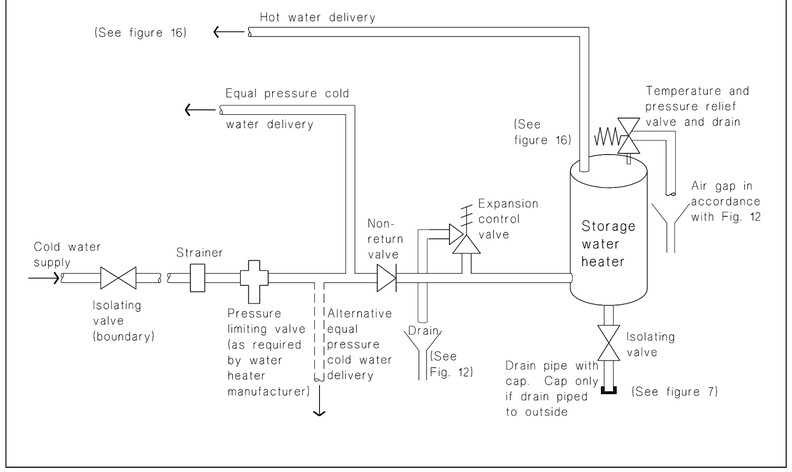


Figure 65: **Levels and garage openings**
Paragraphs 9.1.3, 9.1.3.4, 9.2.5, Table 18

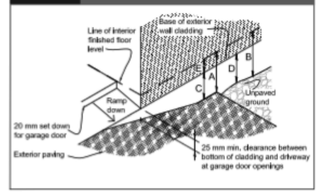


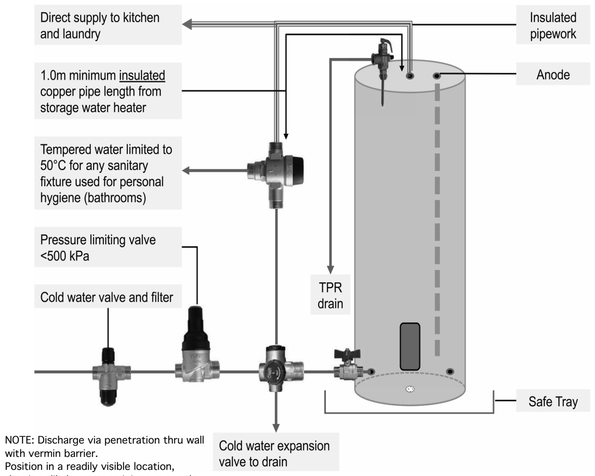
Table 18: **Minimum clearances**
Paragraphs 9.1.3, 9.1.3.1, 9.1.3.2, 9.1.3.3, 9.1.3.4, 9.1.3.5 and 9.2.7

Minimum clearances (mm)	Masonry veneer		Other claddings				
	A	B	A	B	C	D	E
Concrete slab	100	150	150	225	100	175	50
Timber floor Refer Note 1)					100	175	50[2]

NOTE: 1) Refer to NZS 3604 for requirements.
2) Cladding to extend minimum 50 mm below bearer or lowest part of timber floor framing.

Hwc seismic restraint
N.T.S.

MAINS PRESSURE INSTALLATION



NOTE: Discharge via penetration thru wall with vermin barrier.
Position in a readily visible location, that is unlikely to cause injury to people or damage to property.

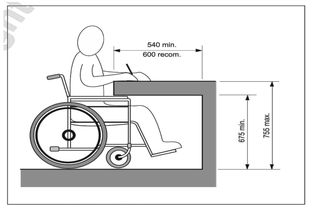
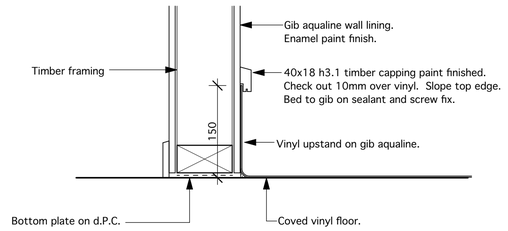


Figure 36 – Public counters and desks

Reception counter
Accessible counter to be at least 900mm long and may be retractable Provide one to each building. Confirm location onsite with owner.

Hwv valve layout
N.T.S.



Coved vinyl upstand detail
1:5 scale



Sealing plumbing fittings in watersplash areas
Scale 1:5

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WIND ZONE: HIGH
EXPOSURE ZONE: C

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
DETAILS

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

Spooner architectural solutions
PO Box 10 KERIKERI 0245
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SCALE 1:2
SHEET No. BC26

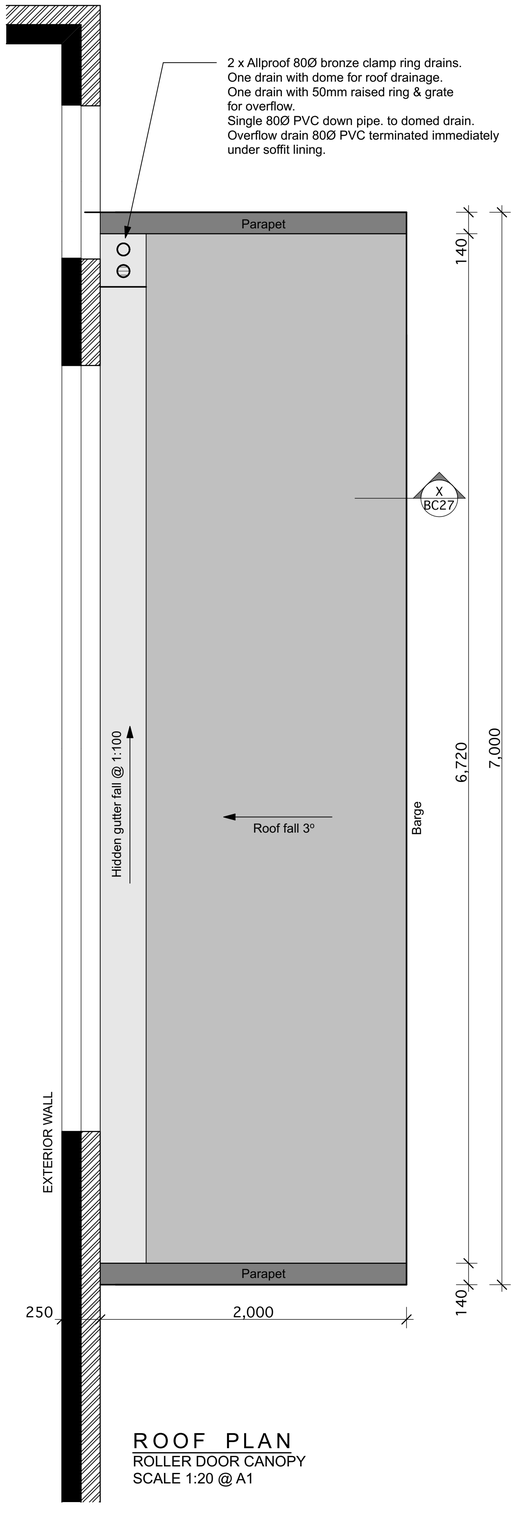
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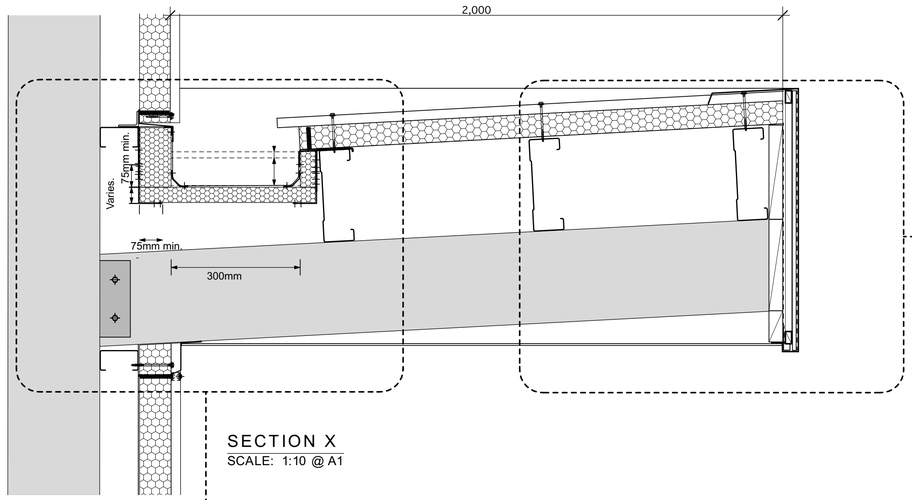
WIND ZONE: HIGH
EXPOSURE ZONE: C

HIDDEN GUTTER SIZES:

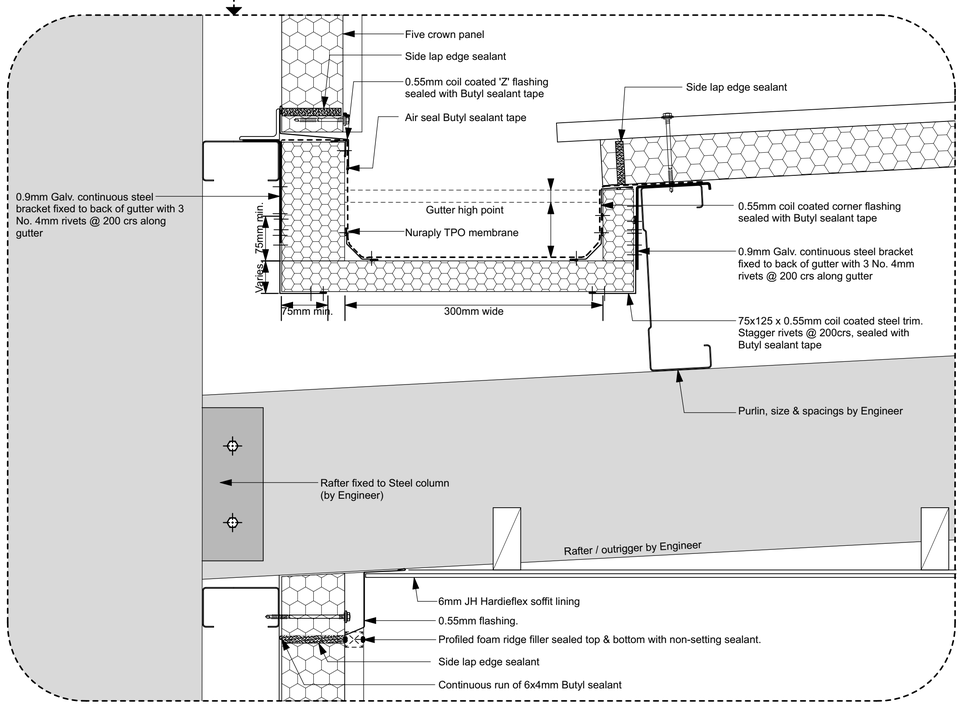
To roller door canopy:
Hidden gutter 300w x 20mm min depth to 70mm. 1:100 fall to outlets, compliance as follows:
E1/AS1 Fig. 16 requries a CSA of 4,000mm2 for 14m2 roof area.
CSA provided = 21,000m2 so gutter has ample redundancy, overflow protection provided in accordance with E2/AS1, clause 8.5.6(d).



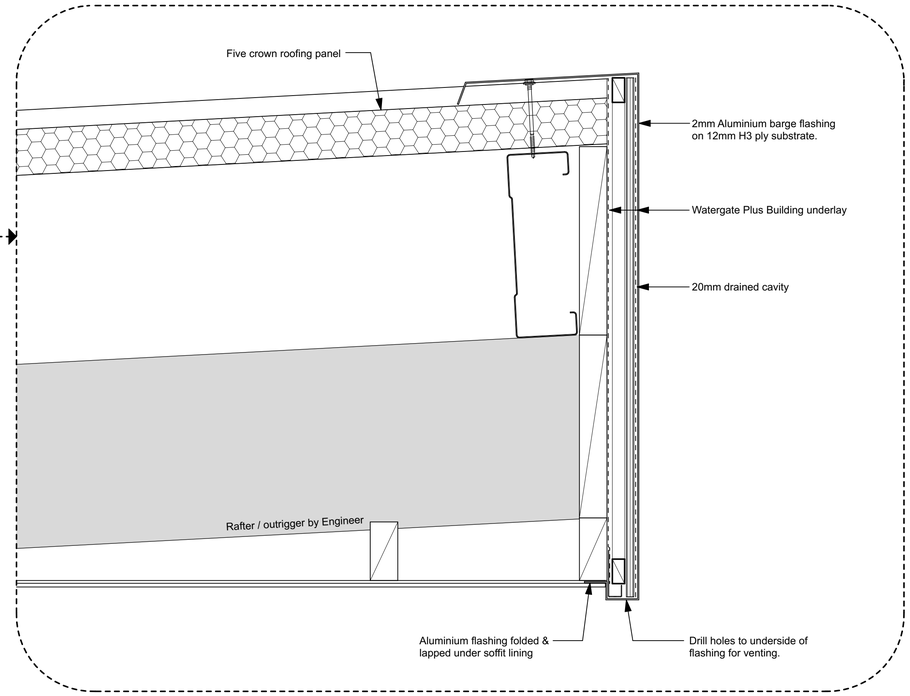
ROOF PLAN
ROLLER DOOR CANOPY
SCALE 1:20 @ A1



SECTION X
SCALE: 1:10 @ A1



ENLARGEMENT
SCALE: 1:5 @ A1



ENLARGEMENT
SCALE: 1:5 @ A1

A BUILDING CONSENT 09-06-26

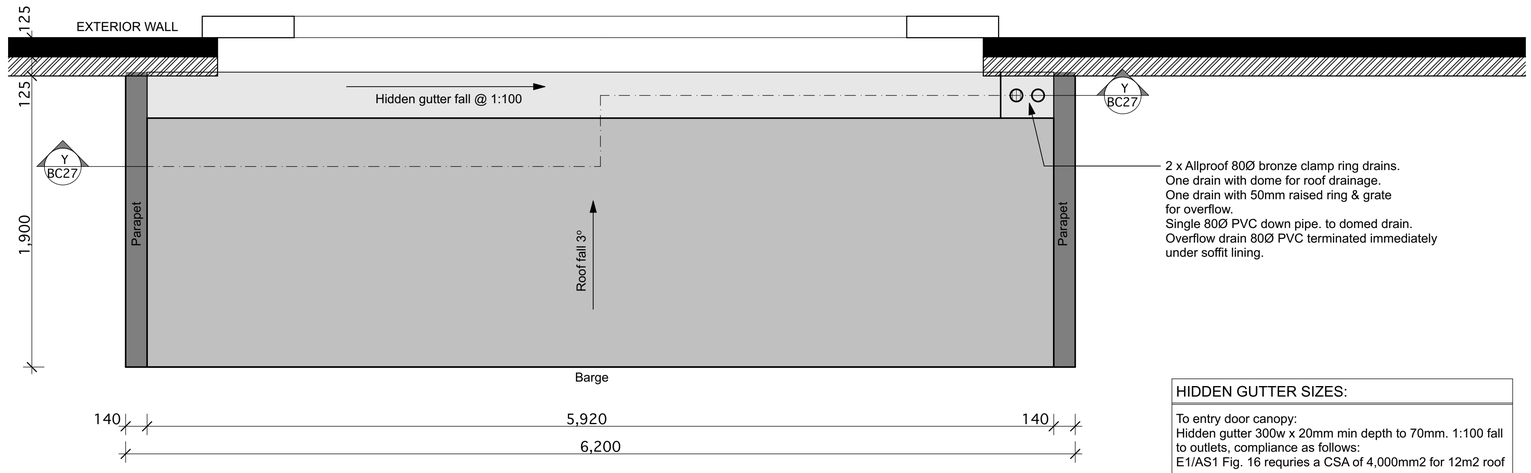
REVISIONS

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DETAILS

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20 KLINAC LANE
WAIPAPA

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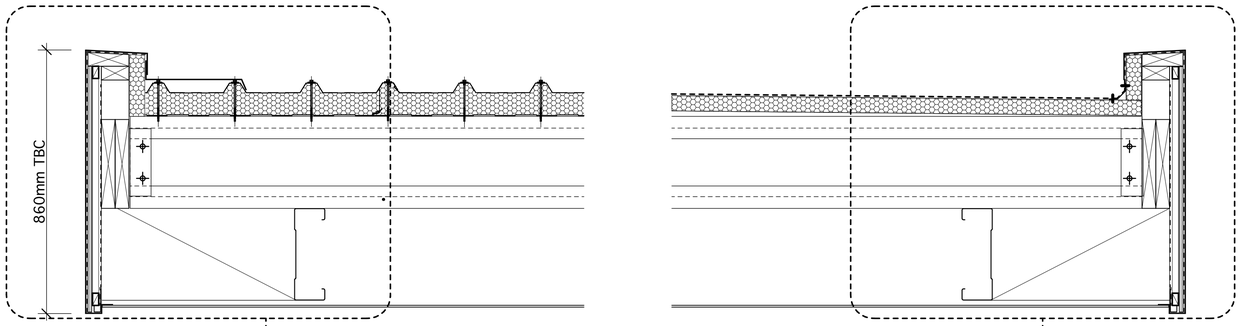
SCALE	SHEET No.
1:5	BC27



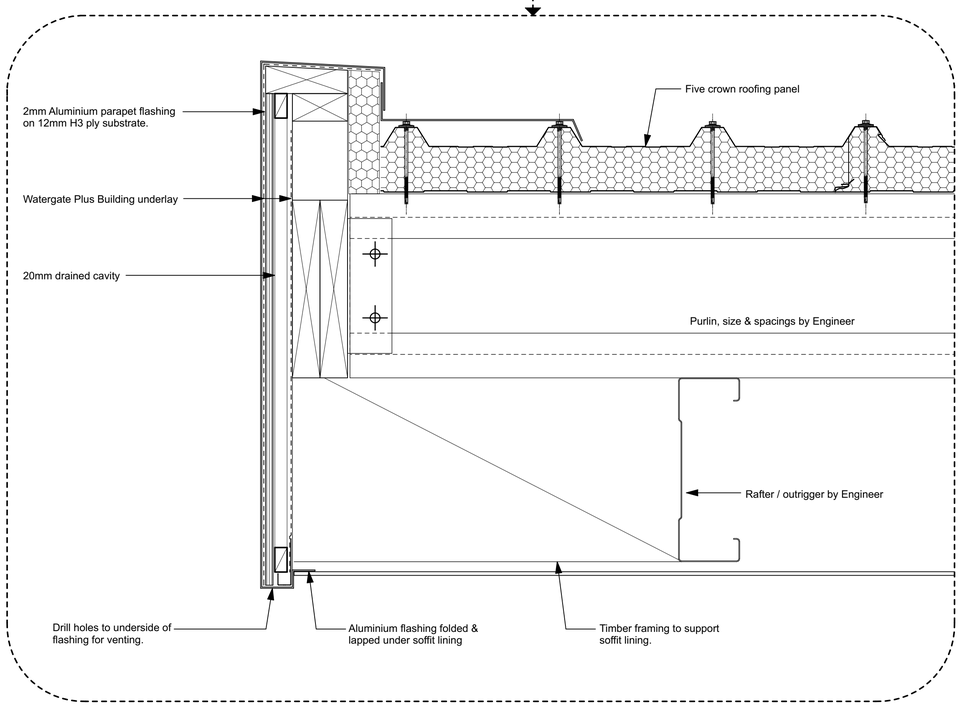
ROOF PLAN
ENTRY DOOR CANOPY
SCALE 1:20 @ A1

HIDDEN GUTTER SIZES:

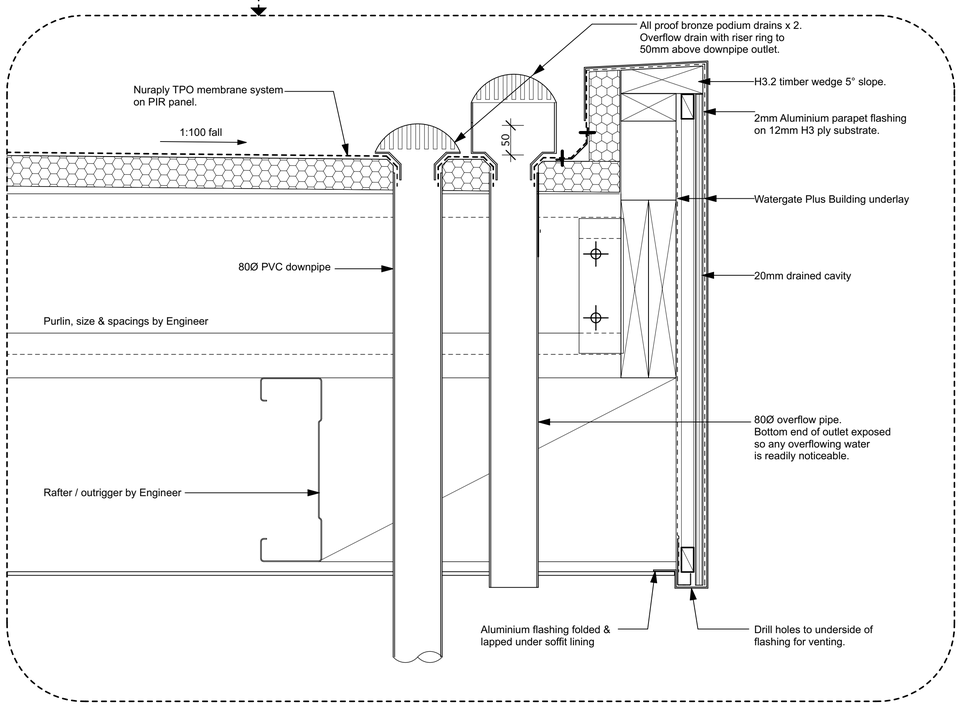
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SECTION Y
SCALE: 1:10 @ A1



ENLARGEMENT
SCALE: 1:5 @ A1



ENLARGEMENT
SCALE: 1:5 @ A1

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WIND ZONE: HIGH
EXPOSURE ZONE: C

A BUILDING CONSENT **09-06-26**

REVISIONS

DRAWING
DETAILS

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20 KLINAC LANE
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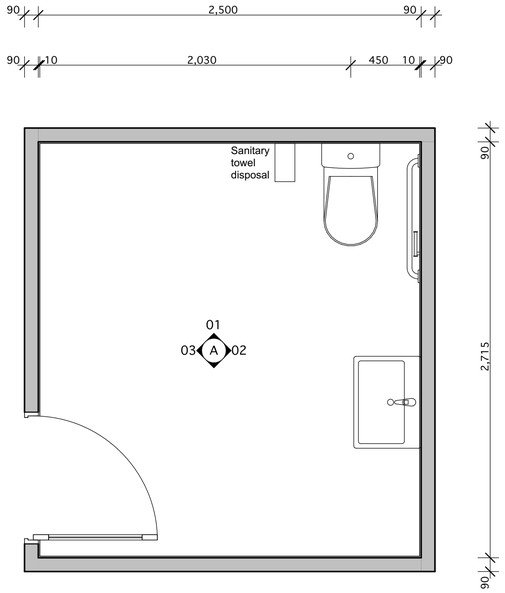
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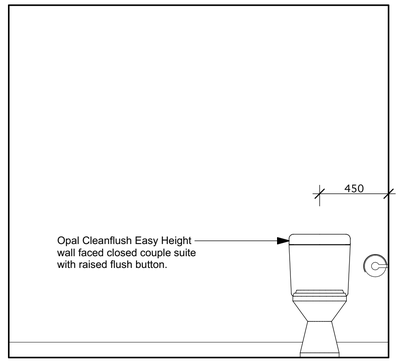
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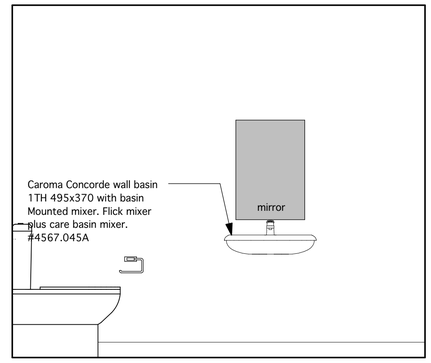
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EXPOSURE ZONE: C



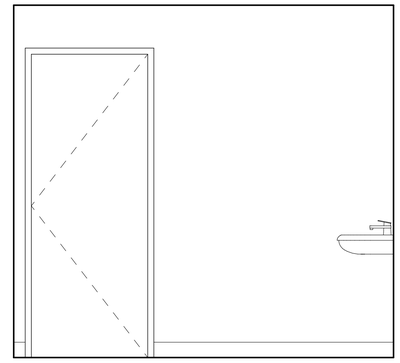
ACCESSIBLE WC - BUILDING ONE
1:20 @ A1 SIZE



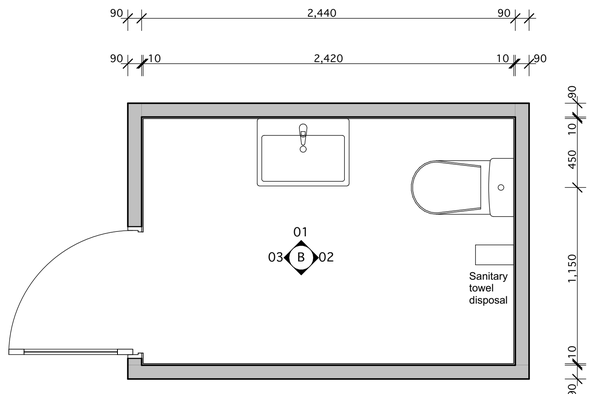
ELEVATION A-01
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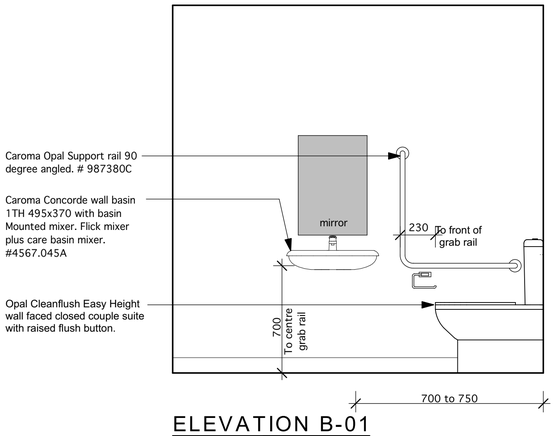
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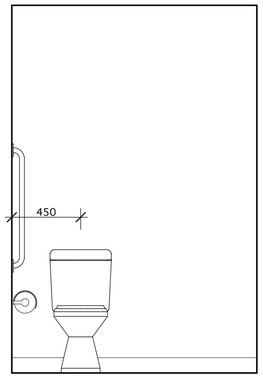
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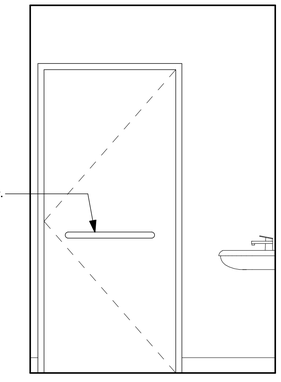
ACCESSIBLE WC - BUILDING TWO & THREE
1:20 @ A1 SIZE



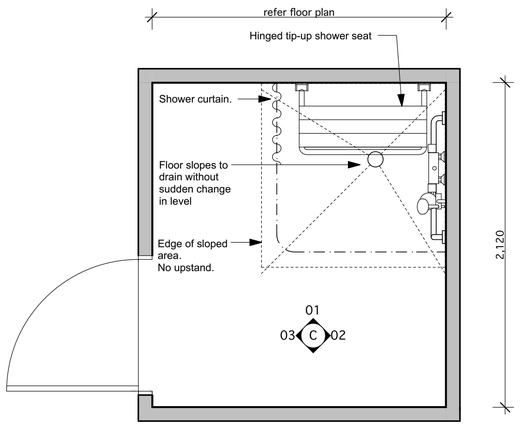
ELEVATION B-01
1:20 @ A1 SIZE



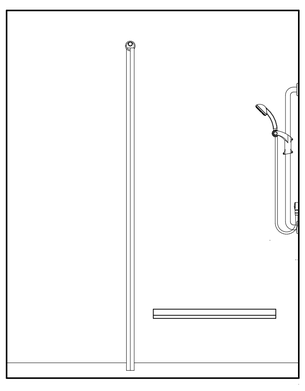
ELEVATION B-02
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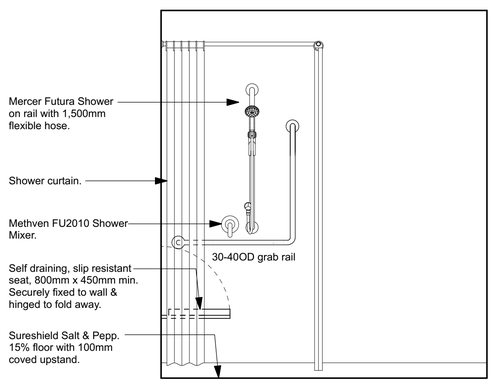
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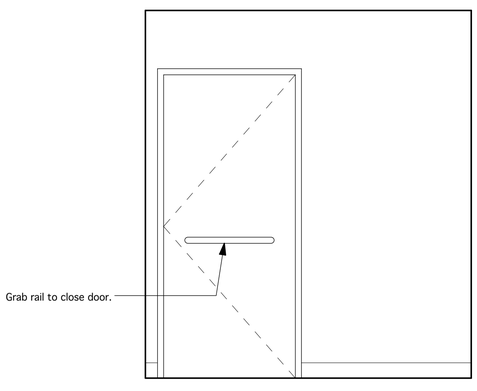
ACCESSIBLE SHOWER - ALL BUILDINGS
1:20 @ A1 SIZE



ELEVATION C-01
1:20 @ A1 SIZE



ELEVATION C-02
1:20 @ A1 SIZE



ELEVATION C-04
1:20 @ A1 SIZE

C RFI 05-10-26
Add accessible shower

A BUILDING CONSENT 09-06-26

REVISIONS

DRAWING
INTERIOR ELEVATIONS

JOB
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA

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SCALE

SHEET No.
BC29

Integrated Transport Assessment

NETWORK EFFECTS ASSESSMENT

Proposed Large-Format Retail Development:

20 Klinac Lane, Waipapa

ISSUED BY

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Report Overview

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EXECUTIVE SUMMARY

This Integrated Transport Assessment (ITA) supports a resource consent application to Far North District Council for three single-storey large-format retail buildings at 20 Klinac Lane, Waipapa, with a combined gross floor area of 2,000 m2. Transport consent is required because the development exceeds the 450 m2 large-format retail threshold for trip generation (TRAN-R9), and for parking and end-of-trip provision (TRAN-R1 and TRAN-S1) (FNDC Form 4, 9 September 2026).

The transport effects are less than minor, for four reasons.

1. **The road network was built for this type of development.** Klinac Lane, Maritime Lane and the SH10 / Waipapa Road roundabout were constructed or upgraded under the SH10 Waipapa Corridor Improvements (2020-2021) to serve the growth of the Waipapa commercial precinct. Access is from the site's two existing vehicle crossings. No new crossing or state highway access is created.
2. **The traffic generated is modest, and about half is already on the network.** Treating every trip as new and every delivery as a B-Train, the development generates about 920 ECM per day and 120 ECM in the peak hour, split roughly equally between the SH10 / Waipapa Road roundabout and the SH10 / Kahikatearoa Lane intersection. Both have ample capacity for it. About half of these trips will be customers already visiting Waipapa, the Far North's main large-format retail centre, so the traffic genuinely added is about 475 ECM per day and 65 ECM in the peak hour.
3. **Safety is not compromised.** The roundabout recorded five serious-injury crashes in the fifteen years before it was built and none in the five years since. The site frontage has a negligible crash history. The SH10 / Kahikatearoa Lane intersection has a weaker record, including a serious crash in 2023, but the development adds only about one vehicle every four minutes in each direction in the peak hour and does not change its layout or speed environment.
4. **On-site provision is appropriate.** Accessible parking, loading, the number of bicycle parks, long-stay bicycle parking (inside each building) and end-of-trip facilities meet TRAN-S1, and car parking matches the theoretical demand. There is one departure. The six short-stay bicycle parks are consolidated at one location, more than 30 m from the Building 1 and 2 entrances, which concentrates cycle traffic at the site edge and keeps it away from vehicles on site (Section 8). The effects are less than minor. Parking spaces and aisles meet TRAN-Figure 1 (Section 7.1).

Consent can be granted on transport grounds, subject to the conditions at Section 12.

ABBREVIATIONS

CAS	Crash Analysis System (NZ Transport Agency)
ECM	Equivalent Car Movements (TRAN-R9 notes)
EOT	End of Trip (facilities)
FNDC	Far North District Council
GBA	Gross Building Area
GFA	Gross Floor Area
ITA	Integrated Transport Assessment
ITE	Institute of Transportation Engineers
LOS	Level of Service
RR453	NZTA Research Report 453 (Trips and parking related to land use)
SH10	State Highway 10
vpd	Vehicles per day (two-way)
vph	Vehicles per hour (two-way)

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1. INTRODUCTION

1.1. Purpose and Scope

This ITA supports an application to Far North District Council (FNDC) for land use consent for a large-format retail development at 20 Klinac Lane, Waipapa. It is an appendix to the resource consent application and planning report.

It assesses the effects of the development on the transport network and responds to the transport matters in the FNDC Form 4 of 9 September 2026: trip generation, distribution of traffic onto the road network, and the effects on the safety and efficiency of that network, including the State Highway 10 (SH10) / Waipapa Road roundabout and the SH10 / Kahikatearoa Lane intersection.

The on-site elements (car parking, accessible parking, loading, bicycle parking, end-of-trip facilities, and vehicle manoeuvring and tracking) are shown on the architectural plans by Spooner Architectural Services Ltd. This ITA tests that provision against TRAN-S1 (Sections 7 and 8). It does not reproduce any plans.

1.2. Author

This ITA was prepared by Paul Wright, Director and Planner at Magpie Design, an engineer and resource management planner with experience in land development, engineering, traffic assessment and resource consents across the Far North.

TRAN-R9 and TRAN-P6 provide for an ITA by a suitably qualified and experienced transport professional. This is a proportionate assessment for a modest generator on recently built network infrastructure, using existing crossings. It applies established New Zealand trip generation practice. Intersection modelling and corridor design are not warranted at this scale.

1.3. Matters Addressed

This ITA addresses:

- TRAN-R9 (PER-1), trip generation. The development exceeds the 450 m2 GFA threshold for large-format retail in TRAN-Table 12, and the 200 ECM per day and 40 ECM per hour thresholds for multiple on-site uses (about 920 and 120 ECM). Restricted discretionary; matters of discretion at Section 9.
- TRAN-R1 (PER-4) and TRAN-S1, parking and end-of-trip standards. On-site provision is tested against TRAN-S1 at Sections 7 and 8; matters of discretion at Section 10.

1.4. Information Relied Upon

- FNDC Form 4 (09 Sep 26) and PIM certificate, building consent EBC-2026-1042/0;
- FNDC Form 4 (08 Apr 26), EBC-2026-800/0, assessed under the Operative District Plan;
- Architectural plans, Spooner Architectural Services Ltd, BC Drawings 13-10-26 including BC03 and BC05 Rev C (site layout, parking and facilities);
- Far North District Plan (Proposed District Plan, Appeals Version), Transport chapter (TRAN) and definitions;
- NZTA SH10 Waipapa Corridor Improvements project information (2020-2021), and the Supporting Waipapa Growth business case (2017);

- Te Pātukurea, Kerikeri-Waipapa spatial plan (FNDC, adopted June 2025);
- NZTA state highway traffic monitoring data and the Crash Analysis System (CAS);
- NZTA Research Report 453, Trips and parking related to land use (2011), for trip generation rates;
- Institute of Transportation Engineers, Trip Generation (8th Edition, 2008), for indicative pass-by proportions;
- Austroads, Guide to Traffic Management Part 3, for roundabout approach capacity;
- Abley, FNDC Proposed District Plan - Submission review - Transport Chapter (Revision C, 24 March 2025), technical note prepared for the Council's section 42A report on the Transport topic; Table 2.2 sets out the calculation of the TRAN-Table 12 trip generation thresholds.

2. THE SITE AND PROPOSAL

2.1. The Site

The site is 20 Klinac Lane, Waipapa, in the Waipapa commercial precinct: Section 3 SO 438821, Record of Title 574944 (freehold, 12,148 m2 (1.2148 ha), issued 13 January 2012, North Auckland), owned by WBC Developers Limited. It is zoned Light Industrial under the Proposed District Plan (Appeals Version) and lies within the Waipapa Control Area, where large-format retail is permitted under LIZ-R15 and commercial activity under LIZ-R13.

It is bounded by the Whiriwhiritoa Stream to the north, Maritime Lane to the west, Klinac Lane to the south and a vacant Northland Regional Council site to the east. Surrounding land is commercial and light industrial, with no residential neighbours.

2.2. The Proposal

Three detached single-storey large-format retail buildings are proposed:

Building	Gross Floor Area	Indicative use
Building 1	830 m2	Large-format retail
Building 2	585 m2	Large-format retail
Building 3	585 m2	Large-format retail
Total	**2,000 m2**	

These are the gross building areas on the carparking plan (BC05), used here as gross floor area. Large-format retail is any retail tenancy over 450 m2 GFA, and each tenancy exceeds that. The lettable areas on BC03 are slightly smaller, but the District Plan thresholds use gross floor area.

2.3. Access Arrangement

Access is from two existing vehicle crossings, one on each frontage (BC03). The Maritime Lane crossing at the north-western corner, an existing formed crossing with a Council-installed threshold, is a combined entry and exit connecting to the internal service lane along the northern boundary. The Klinac Lane crossing at the south-eastern corner is the second entry and exit. Heavy vehicles enter from Maritime Lane, travel along the service lane into the truck park and leave forward through the car park aisle to the Klinac Lane crossing. No new crossings are created.



Photo 1: Maritime Lane, looking north along the site frontage towards the Whiriwhiritoa Stream bridge (site visit, 18 October 2026).



Photo 2: Klinac Lane, looking along the site frontage towards the Klinac Lane crossing (site visit, 18 October 2026). All site photos are in Appendix B.

The design vehicle is a B-Train, the largest vehicle likely to service the site. BC03 and BC05 show its turning curve from the service lane into the truck park, and Condition 4 (Section 12) requires it to enter and leave in a forward direction.

3. THE EXISTING TRANSPORT ENVIRONMENT

3.1. Road Network and Hierarchy

The Waipapa commercial and industrial area lies west of SH10, the main route between Kerikeri to the south and Kaeo to the north. The precinct is served by local roads, including the site's frontage roads, Klinac Lane and Maritime Lane.

On the Proposed District Plan Transport Network Hierarchy maps, Klinac Lane is a Secondary Collector and Maritime Lane a Low Volume road; these classes set the crossing standards in TRAN-S2 and TRAN-Tables 7 to 9. Together the two roads form a link route through the precinct between the southern and northern parts of Waipapa.

3.2. The SH10 Waipapa Corridor Improvements

The network serving the site was upgraded in 2020 and 2021 under the NZTA SH10 Waipapa Corridor Improvements, to support growth of the commercial area and address congestion and safety at the SH10 intersections. The works included:

- A new single-lane roundabout at the SH10 / Waipapa Road intersection, completed in December 2020, replacing the previous priority-controlled intersection;
- Extension of Maritime Lane to connect with Klinac Lane, providing an alternative link route between the southern and northern sections of the township and distributing commercial traffic within the precinct;
- A new bridge over the Whiriwhiritoa Stream on Maritime Lane;
- Improved pathways and crossing points for pedestrians and cyclists through the corridor;
- Undergrounding of power and installation of fibre.

The network immediately serving the site is therefore new or recently upgraded, and designed for the commercial development of the precinct. The Maritime Lane / Klinac Lane link exists to carry precinct traffic, and the roundabout provides capacity and safety for that traffic entering and leaving SH10.

3.3. Speed Environment and Traffic Volumes

The speed limit is 50 km/h on the frontage roads and on the local roads that join SH10, including Maritime Lane, Klinac Lane and Kahikatearoa Lane. SH10 is posted at 70 km/h through the precinct, including at the SH10 / Waipapa Road roundabout and the SH10 / Kahikatearoa Lane intersection (site visit, 18 October 2026). The low-speed local roads support the site accesses (Section 6.1) and reduce the severity of any conflict.

The frontage roads carry low volumes of local commercial traffic. Traffic on the wider network has grown at 2 to 4.5% a year on SH10 and over 5% a year on Waipapa Road (Supporting Waipapa Growth business case, 2017), which is why the corridor was upgraded. This assessment rests on network capacity (Section 6.3), not a comparison with existing flows, so precise counts do not affect the outcome.

3.4. Pedestrians, Cyclists and Public Transport

The corridor improvements upgraded pedestrian and cycle paths and crossings through the precinct, so the site is reachable on foot and by bicycle. Public transport is limited, as expected in a rural town. Most

customers and staff will arrive by car, with some walking, cycling and linked trips from neighbouring businesses.

3.5. Crash History

Crash history was reviewed using the public CAS dataset for the SH10 / Waipapa Road and Waipapa Loop Road roundabout, the Maritime Lane and Klinac Lane frontage, and the SH10 / Kahikatearoa Lane intersection (Section 6.4). Records span 2006 to 2025, giving a before-and-after comparison for the roundabout that replaced the priority intersection in December 2020.

The SH10 / Waipapa Road roundabout

Period	Total crashes	Serious	Minor	Non-injury
Before roundabout (2006-2020, 15 yrs)	50	5	6	39
After roundabout (2021-2025, 5 yrs)	7	0	3	4

The former priority intersection recorded five serious-injury crashes in the fifteen years to 2020, including a 2019 crash in which two people were seriously injured and four received minor injuries. Since the roundabout opened there have been no serious or fatal crashes; the seven recorded were three minor-injury and four non-injury crashes. The roundabout has removed the serious crash pattern.

That record was achieved under the 70 km/h limit that still applies on SH10 (Section 3.3), so it is a direct indicator of current safety.

The Maritime Lane / Klinac Lane frontage

The frontage has a negligible crash history. In 2021 to 2025 there were three minor-injury crashes nearby (two at Waipapa Loop Road / Maritime Lane in 2023, one at SH10 / Maritime Lane in 2024) and no serious or fatal crashes. Klinac Lane records no injury crashes over the whole period.

The current network, a modern roundabout and low-speed local roads, has a good safety record. The development adds no state highway intersection, alters no road geometry, uses existing crossings and adds modest traffic to 50 km/h local roads before it reaches SH10. The Kahikatearoa Lane intersection is assessed at Section 6.4.

4. TRIP GENERATION

4.1. Methodology

Trip generation is estimated from published New Zealand large-format retail rates applied to gross floor area, then expressed in equivalent car movements (ECM) under the TRAN-R9 notes. The daily and peak hour rates are those in NZ Transport Agency Research Report 453 (RR453), which the Council used to set the TRAN-Table 12 thresholds (Section 4.2).

No separate weekend assessment is made. Saturday retail traffic is usually higher than on a weekday evening, but background traffic is lower, so the weekday peak hour remains the critical case.

4.2. Adopted Rate

The rates are those the Council used to set TRAN-Table 12. Its transport advice on the Proposed District Plan (Abley, FNDC Proposed District Plan - Submission review - Transport Chapter, Revision C, 24 March 2025, for the section 42A Transport report) converts RR453 rates into floor area thresholds at 200 vehicle trips per day and 40 per peak hour (Table 2.2), generally adopting the daily threshold to align with the Operative District Plan. For large-format retail it applies 44.8 vehicle movements per day and 5.6 per peak hour per 100 m2 GFA, giving 446 m2 (daily) and 714 m2 (peak hour). The Proposed District Plan adopts 450 m2 GFA.

Using the Council's own rates, which are New Zealand survey-based, keeps the assessment consistent with the basis of the rule.

Period	Adopted rate (per 100 m2 GFA)	Source
Daily (two-way)	44.8 vpd	RR453, as used by FNDC to set the threshold (Abley 2025, Table 2.2)
Peak hour (two-way)	5.6 vph	RR453, as used by FNDC to set the threshold (Abley 2025, Table 2.2)

4.3. Trip Generation Estimate

Applied to 2,000 m2 GFA (20.0 units of 100 m2), gross trip generation is:

Period	Calculation	Gross trips (two-way)
Daily	20.0 x 44.8	~896 vpd
Peak hour	20.0 x 5.6	~112 vph

That is about 896 vehicle movements per day and 112 (two-way) in the peak hour. The peak directional split for retail is typically 50/50 to 60/40; the precise split does not affect the conclusion.

4.4. Heavy Vehicles and Equivalent Car Movements

Under the TRAN-R9 notes, a car trip is 1 ECM, a truck trip 3 ECM and a truck and trailer trip 5 ECM. There is no separate category for larger combinations, so a B-Train (a truck towing two trailers) is counted at 5 ECM.

Conservatively, every delivery is assumed to be a B-Train, the design vehicle: one per tenancy per day, giving three deliveries (six movements) across the site, with one delivery (two movements) in the peak

hour. In practice most deliveries to tenancies like these are by rigid truck from regional distribution centres, so this overstates heavy vehicles.

Period	Light vehicles	B-Train movements	Total ECM (two-way)
Daily	890 x 1 = 890	6 x 5 = 30	~920 ECM
Peak hour	110 x 1 = 110	2 x 5 = 10	~120 ECM

In ECM, the development generates about 920 per day and 120 in the peak hour. Both exceed the 200 per day and 40 per hour baseline behind TRAN-Table 12, consistent with exceeding the 450 m2 threshold.

4.5. Linked and Diverted Trips

Not all large-format retail traffic is new. Some is pass-by traffic already on SH10, and some is linked or diverted trips by customers already visiting the precinct.

Waipapa is the Far North's main large-format retail centre. Anchored by Mitre 10 and The Warehouse, it includes furniture and appliance retailers, a butchery, rural suppliers, a dive shop and a medical centre, and draws customers from across the Bay of Islands. Te Pātukurea, the Council's spatial plan (adopted June 2025), identifies it as the area's commercial and industrial hub. Customers typically visit several businesses in one trip, trips they would make regardless of this development.

ITE Trip Generation (8th Edition, 2008) gives pass-by rates of about 30% for this type of retail, counting only vehicles passing on the adjacent road, not customers already travelling to the centre. Allowing for both, and without confirmed tenants or New Zealand survey data, 50% of light vehicle trips are treated as linked or diverted, with deliveries wholly new. The traffic genuinely added is about 475 ECM per day and 65 ECM in the peak hour (Appendix A, Table A4). The gross figures (920 and 120 ECM) are kept throughout as a conservative test, and the network accommodates them.

4.6. Comparison to the TRAN-R9 Threshold

TRAN-R9 (PER-1) permits trip generation up to the TRAN-Table 12 threshold, 450 m2 GFA for large-format retail. Each tenancy (830, 585 and 585 m2) exceeds it. TRAN-Table 12 also sets 200 ECM per day or 40 ECM per hour for multiple on-site uses and unlisted activities. These are two separate limits, so exceeding either one breaches PER-1. Read that way, the development (about 920 ECM per day and 120 ECM in the peak hour) exceeds both. On either reading, the activity is restricted discretionary (matters at Section 9).

Exceeding the threshold triggers assessment; it is not an adverse effect. The threshold is low enough that almost any commercial-scale large-format retail needs consent. The assessment is to determine whether the trips have more than minor effects on the network. Sections 5 and 6 show they don’t.

TRAN-R9 is subject to a Foodstuffs North Island Limited appeal limited to the supermarket threshold; the large-format retail threshold is unaffected. The rule has legal effect (s86B RMA) but is not yet operative, so the Operative District Plan traffic intensity rule also continues to apply. That rule (2,000 m2 gross building area permitted for large-format retail) is met. TRAN-R9 is not met, and consent is sought under it.

The 80 car parks on BC05 (1 per 25 m2) match the theoretical parking demand in TRAN-Table 3 (Section 7).

5. TRIP DISTRIBUTION AND ASSIGNMENT

Traffic will follow the retail catchment: mainly south (Kerikeri and the Bay of Islands), with less to the north. A 60% south, 40% north split on SH10 is assumed.

The site reaches SH10 by two routes: north via Maritime Lane to the roundabout, and south via Klinac Lane and Kahikatearoa Lane to the SH10 / Kahikatearoa Lane intersection, a give-way T intersection about 630 m south of the roundabout. The Maritime Lane / Klinac Lane link was built to provide this alternative and balance traffic. Site traffic is assumed to split about equally between the routes.

The SH10 direction does not fix the route. Because the Maritime Lane / Klinac Lane link connects both intersections, southbound traffic can use the roundabout and northbound traffic can use Kahikatearoa Lane, so an even route split is a reasonable working assumption. The outcome does not depend on it. If 60% of gross peak traffic used one intersection, that intersection would carry about 72 ECM two-way, still a small fraction of its capacity (Section 6.3).

6. EFFECTS ON THE TRANSPORT NETWORK

6.1. Site Access

Both crossings (Section 2.3) give way to the frontage road. With low volumes and a 50 km/h environment, both will operate with negligible delay and ample gaps throughout the day, including the peaks.

TRAN-S2(5) and TRAN-Table 9 require sight distances at 50 km/h of 70 m on a Secondary Collector (Klinac Lane) and 60 m on a Low Volume road (Maritime Lane). Both roads are flat and straight near the site. Distances scaled from aerial imagery (Appendix B) are:

- Klinac Lane: approximately 110 m and 81 m, both exceeding the 70 m minimum. The longer sightline also exceeds the Austroads safe intersection sight distance for 50 km/h (about 95 m).
- Maritime Lane: approximately 75 m to the north, across the Whiriwhiritoa Stream bridge, and 74 m to the south, to the Klinac Lane intersection, both exceeding the 60 m minimum.

Both crossings comply. Planting in the frontage landscape strips close to the crossings will be kept low so these sightlines stay clear.

6.2. Vehicle crossings and TRAN-R2

TRAN-R2 applies to new or altered crossings. Both crossings are existing and were formed by Council to serve this commercially zoned site, where the proposed retail activity is permitted. The development uses them for that purpose without widening, relocating or redesigning them, so they are not new or altered and TRAN-R2 is not triggered. For completeness, they are assessed against TRAN-R2 and TRAN-S2 below.

Standard	Requirement	Assessment	Complies
TRAN-R2 PER-3	The vehicle crossing is not off a road classified arterial	Klinac Lane is a Secondary Collector and Maritime Lane is a Low Volume road; neither is an arterial	Yes
TRAN-S2(1) / Table 7	Maximum number of crossings per frontage	One crossing on each frontage. TRAN-Table 7 permits at least one crossing per frontage for every frontage length and road classification	Yes
TRAN-S2(2)	New vehicle crossings no closer than 8 m to a dedicated pedestrian crossing facility	There is no pedestrian crossing facility within 8 m of either crossing.	Yes
TRAN-S2(3)	Where a site fronts more than one road, crossings onto the lower-classified road	Both crossings are existing Council-formed crossings used for their intended purpose without change	Yes
TRAN-S2(4) / Table 8	Minimum distance from an intersection at 50 km/h	The Klinac Lane crossing is approximately 81 m from the Maritime Lane intersection (20 m required); the Maritime Lane crossing is	Yes

Standard	Requirement	Assessment	Complies
		approximately 74 m from the Klinac Lane intersection (25 m required)	
TRAN-S2(5) / Table 9	Minimum sight distance	As set out above: 81 m and 110 m at Klinac Lane (70 m required); 75 m and 74 m at Maritime Lane (60 m required)	Yes
TRAN-R2 PER-6 / Table 11	Sealed or concreted (Light Industrial zone)	The crossings are sealed	Yes

No consent is required for the crossings.

6.3. SH10 Intersections

About half of site traffic uses each SH10 intersection (Section 5).

SH10 / Waipapa Road roundabout. This single-lane roundabout (December 2020) was designed for precinct growth. Adopting a conservative entry capacity of 1,200 vehicles per hour per approach (Austroads Guide to Traffic Management Part 3), even if all departing site traffic used one approach, the gross addition is about 60 ECM per hour one-way (half of the 120 ECM two-way peak), or 5% of capacity. Allowing for existing customers and the route split, the roundabout carries about 33 ECM two-way (65 x 0.5), of which about 16 ECM per hour enters on the busiest approach, just over 1% of capacity. No upgrade is required.

SH10 / Kahikatearoa Lane intersection. Kahikatearoa Lane gives way to SH10. Gross site traffic is about 60 ECM two-way in the peak hour (half of 120), one vehicle every two minutes each way. Allowing for existing customers, the genuine addition is about 33 ECM two-way (half of 65), one vehicle every four minutes each way, mostly left in and right out to and from the south. These volumes are low for a priority intersection, and no change is required.

6.4. Safety

The development creates no state highway intersection and alters no road geometry or speed environment. Its traffic joins a network recently built to current standards for this precinct.

SH10 / Waipapa Road roundabout. Five serious-injury crashes in the fifteen years to 2020, none in the five years since it opened (Section 3.5). Site traffic does not reintroduce the risk it removed.

SH10 / Kahikatearoa Lane intersection. This intersection was not upgraded. CAS records 23 crashes within 100 m from 2006 to 2025, including one fatal and two serious-injury crashes, the latest serious crash in 2023 (Appendix C, Table C3). The SH10 limit at the intersection is 70 km/h, the same limit that applied through the crash record period (Section 3.3). It is an established access already used by precinct customers, and the development adds about one vehicle every four minutes each way in the peak hour without changing its layout or speed environment.

Effects on network safety are less than minor.

6.5. Efficiency and Capacity

The frontage roads are local commercial roads with spare capacity, recently built or upgraded to carry precinct traffic. The development's modest trips are well within the capacity of those roads and both SH10 intersections. Effects on network efficiency and capacity are less than minor.

7. PARKING, LOADING AND SITE LAYOUT

7.1. Parking

The Proposed District Plan sets no minimum car parking. TRAN-S1 instead requires accessible parking (based on a theoretical demand), loading, end-of-trip facilities and bicycle parking, with compliant dimensions. The layout (BC03 and BC05) was designed by Paul Spooner, Registered Architect, as part of the building consent drawings to meet TRAN-S1. It is tested below against each vehicle-related limb.

TRAN-R1 also requires parking and loading spaces to be on site and not over footpaths, access, manoeuvring or outdoor living areas (PER-1), and to be permanently marked or delineated (PER-3). All parking and loading is on site in dedicated bays clear of the accesses, service lane and footpaths (BC03 and BC05), and Condition 3 requires the spaces to be marked or delineated. PER-1 and PER-3 are met.

Parking dimensions are set by TRAN-Table 6 and TRAN-Figure 1. For 90-degree parking for casual users (retail customers) with 2.6 m wide spaces, Figure 1 requires a space depth of 4.9 m and a manoeuvring aisle of 7.1 m (6.6 m in front of the 3.5 m accessible spaces). BC05 shows 2.6 m x 4.9 m spaces, so the space dimensions comply. The narrowest aisle, between Buildings 1 and 2, is 7.39 m: BC03 dimensions 12.292 m from the back of the Building 2 parking row to Building 1, less the 4.9 m spaces. All aisles therefore meet the 7.1 m requirement.

TRAN-S1 limb	Requirement	Provision	Complies
Theoretical parking demand (Table 3), basis for S1(2)	Large-format retail: 1 per 25 m2 GFA; 2,000 m2 = 80 spaces	80 car parks shown on BC05	Demand met on site
S1(2) Accessible parking (Tables 2 and 3)	Theoretical demand of 80: 2 spaces for the first 50, plus 1 for the next 50 = 3	3 accessible spaces shown on BC03	Yes
S1(3) Loading (Table 4)	2 loading spaces for each activity of 500 to 5,000 m2 GFA	3 dedicated loading bays plus a shared truck park / loading space = 4	Complies (Section 7.2)
S1(5) Parking and manoeuvring dimensions (Table 6)	Figure 1, 90 degrees, casual users, 2.6 m spaces: depth 4.9 m; aisle 7.1 m (6.6 m at the 3.5 m accessible spaces)	2.6 m x 4.9 m spaces on BC05; narrowest aisle 7.39 m (BC03: 12.292 m less 4.9 m)	Complies
Manoeuvring and tracking	Forward entry and exit for the design vehicle	B-Train turning curve from the service lane into the truck park shown on BC03 and BC05; forward entry and exit secured by Condition 4	By plan / condition

Although not required under the PDP-AV, the 80 spaces match the TRAN-Table 3 theoretical demand, so parking demand is met on site and not displaced onto the road (relevant to TRAN-R9 matter (b)).

7.2. Loading

TRAN-Table 4 requires two loading spaces for each commercial activity of 500 to 5,000 m2 GFA. The development is one commercial activity, large-format retail, with a combined GFA of 2,000 m2, so two loading spaces are required. Four are provided: a loading bay at each building and a shared truck park in the central service yard, reached from the service lane and sized for a B-Train, so TRAN-S1(3) is met.

The provision also suits the expected deliveries:

- Each tenancy expects about one delivery a day (Section 4.4). Four spaces handle three deliveries a day with no waiting.
- The shared truck park is sized for a B-Train, which enters from Maritime Lane via the service lane and leaves forward to Klinac Lane. No delivery needs to park on or reverse from the road.
- Deliveries to tenancies like these are scheduled and can avoid the busiest trading periods.
- No loading occurs on the road.

8. ALTERNATIVE MODES AND END-OF-TRIP FACILITIES

The Form 4 records that compliance with TRAN-S1 parts 1, 4, 7 and 8 had not been shown, and requires one long-stay bicycle park per building for staff, six short-stay bicycle parks, and one shower and changing area with clothing storage per building.

TRAN-S1 limb	Requirement	Provision	Complies
S1(1) Short-stay bicycle parks (Table 1)	Large-format retail: 1 per 350 m2 GFA. 2,000 m2 = 5.7, which rounds to 6 under the TRAN-R1 rounding note. Applied to each tenancy and rounded the same way (830 m2 = 2, 585 m2 = 2, 585 m2 = 2) the result is also 6, consistent with the Form 4	6 short-stay bicycle parks	Yes
S1(1) Long-stay bicycle parks (Table 1)	1 per 15 employees	3 (one per tenancy, as stated in the Form 4), one inside each building (BC03 and BC05)	Yes, for up to 15 staff per tenancy
S1(4) End-of-trip facilities (Table 5)	1 shower and changing area with clothing storage for each activity of 500 to 2,500 m2 GFA	1 per tenancy (3 total)	Yes
S1(7) Short-stay bicycle park location and design	Clearly visible or signposted; within 30 m of public entrances; stands securely fixed to a wall or the ground	6 short-stay bicycle parks in one consolidated location beside the garden near the Klinac Lane entry (BC03, BC05 Rev C)	No, for Buildings 1 and 2 (more than 30 m); assessed below
S1(8) Long-stay bicycle park security	Undercover and secure from theft	One long-stay bicycle park for each building (BC03 and BC05), undercover and secure; also secured by Condition 2(b)	Yes

Tenants are not yet confirmed. One long-stay park per tenancy meets TRAN-Table 1 for up to 15 staff, typical for large-format retail of this size, and a condition requires one more for each additional 15 staff.

Consolidated bicycle parking (TRAN-S1(7)). The six short-stay spaces are consolidated in one rack beside the garden between the Klinac Lane entry and Building 3 (BC03 and BC05). The three long-stay spaces for staff are inside the buildings, one in each. The rack is more than 30 m from the entrances of Buildings 1 and 2, so TRAN-S1(7) is not met for those buildings. Consolidation is the better outcome for this development, for three reasons.

It meets the intent of the standard. Every required space is provided. TRAN-S1(7) exists to provide end-of-journey facilities and encourage cycling, and the rack does both. Customers park once and walk the short distance to the store they are visiting.

It consolidates cycle traffic in one area. All customer cycle trips end at a single point at the site edge, rather than being spread across three destinations within the site.

It is safer. Cyclists do not ride around the buildings or through the car park and service areas, where cars and delivery trucks move in and out. Keeping cycle movements at one point near the Klinac Lane entry separates them from vehicle traffic on site and reduces the risk of conflict.

The effects of the departure are less than minor.

End-of-trip facilities are shown on BC08 and BC11 (Building 1), BC13 and BC16 (Building 2) and BC18 and BC21 (Building 3), with the plumbing and drainage plan on BC07 and the shower detail on BC29.

The site connects to the upgraded pedestrian and cycle network, so staff and customers can walk or cycle from the surrounding precinct. Together with the end-of-trip facilities, this supports a modest reduction in vehicle trips, consistent with the purpose of TRAN-S1.

9. RESPONSE TO THE TRAN-R9 MATTERS OF DISCRETION

Discretion under TRAN-R9 is restricted to the matters below.

Matter of discretion	Response
(a) Recommendations in an ITA approved by a suitably qualified and experienced transport professional	This ITA, a proportionate assessment by Paul Wright, engineer and planner (Section 1.2), concludes that transport effects are less than minor and recommends conditions for the on-site facilities.
(b) Safety and efficiency of the transport network, including future connections and parking demand on the road corridor	The development adds modest traffic to a recently upgraded network, alters no road geometry and does not reintroduce the historic crash pattern (Section 6). The 80 car parks meet TRAN-Table 3 demand, so none is displaced onto the road (Section 7). The site is served by existing roads and neither requires nor precludes any future connection. Effects are less than minor.
(c) The extent to which vehicle access, parking and manoeuvring areas are provided	Provided on site (Section 7). Vehicles enter and exit forwards and service vehicles manoeuvre on site, secured by Condition 4.
(d) The nature of the activity and compatibility with the function and purpose of the underlying zone	Large-format retail is permitted in the Light Industrial zone within the Waipapa Control Area (LIZ-R15), so the activity and its trips are anticipated here. Consent is needed for the transport effects of the trips, not the activity.
(e) The extent to which the design and layout maximise opportunities for alternative transport modes	The site connects to the upgraded pedestrian and cycle network and provides short-stay bicycle parking near the Klinac Lane entry, long-stay parking inside each building and end-of-trip facilities (Section 8).
(f) Whether utilising alternative transport modes can reduce trip generation and mitigate impacts on the network	End-of-trip facilities and cycle connections support a modest mode shift for staff, and the precinct location supports linked and pass-by trips, reducing net new traffic (Section 4.5).

10. RESPONSE TO THE TRAN-R1 AND TRAN-S1 MATTERS OF DISCRETION

TRAN-R1 permits parking where all parking and loading spaces comply with TRAN-S1 (PER-4). Where PER-4 is not met, the activity is restricted discretionary, with discretion restricted to: (a) the matters of discretion of any infringed standard; (b) the streetscape and amenity of the surrounding area; (c) screening, planting, landscaping and stormwater mitigation; and (d) topographical or other site constraints making compliance with the standard impractical.

Matter (a) brings in the TRAN-S1 matters (Section 10.1). Matters (b) to (d) are at Section 10.2.

10.1. TRAN-S1 Matters of Discretion

Matter of discretion	Response
(a) Any recommendations in a transport assessment approved by a chartered professional engineer	This ITA has not been approved by a Chartered Professional Engineer (CPEng); it was prepared by an engineer and planner (Section 1.2). The TRAN-S1 layout was designed by Paul Spooner, Registered Architect. The TRAN-S1 matters arise for the bicycle parking location (Section 8); (b) to (e) are addressed below.
(b) Effects on the safety and efficiency of the transport network (vehicles, pedestrians, cyclists, emergency access)	Network effects are less than minor (Section 6). Pedestrian and cycle access is via the upgraded network, and service vehicle access is on site (Section 7). Emergency responder access is controlled by the Building Code (TRAN-R2 note). Consolidating bicycle parking beside the garden between the Klinac Lane entry and Building 3 keeps cyclists out of the car park and service areas and reduces cycle and vehicle conflict on site (Section 8).
(c) The scale, management and operation of the activity as it relates to demand for parking and end-of-trip facilities	The 80 car parks meet TRAN-Table 3 demand, loading is on site and end-of-trip facilities meet TRAN-Table 5, so demand is not displaced to the road. All nine required bicycle parks are provided: six short-stay at one location and three long-stay inside the buildings (Sections 7 and 8).
(d) Water sensitive design techniques to minimise stormwater run-off	Managed through the building consent stormwater design (BC06); outside the transport scope of this ITA.
(e) The ability for persons with a disability or limited mobility to park, enter, exit and manoeuvre safely	Three accessible spaces are provided to TRAN-Table 2 (BC03), close to the building entrances and dimensioned for safe use.

10.2. TRAN-R1 Matters of Discretion

Matter of discretion	Response
(a) The matters of discretion of any infringed standard	TRAN-S1, for the bicycle parking location (Section 8). Addressed at Section 10.1.
(b) The streetscape and amenity of the surrounding area	All parking and loading is on site. Landscaped strips along both frontages (50% of a 6 m strip, BC03) screen the parking from the street, in a precinct where large car parks are normal. Effects are less than minor.
(c) Screening, planting, landscaping and stormwater mitigation	Landscaping along both frontages, with the eastern part of the site a green space / future development area (BC03). Stormwater is managed through the building consent design (BC06), outside the scope of this ITA.
(d) Topographical or other site constraints making compliance impractical	No topographical or site constraint applies. The bicycle parking departure is justified on its effects (Sections 8 and 10.1).

11. POLICY ASSESSMENT

The relevant Transport policies are TRAN-P3 to TRAN-P7.

11.1. TRAN-P6 - High Traffic Generating Activities

TRAN-P6 is to only allow high traffic generating activities exceeding the thresholds in TRAN-Table 12 where these activities support the safe, efficient and effective use of transport infrastructure, as demonstrated through an ITA. The development makes efficient use of infrastructure recently built for the precinct (Section 3.2). It takes access from local roads, not the state highway, adds modest net traffic to two intersections with ample spare capacity (Section 6.3), and joins a network with a good and improving safety record (Section 3.5). It is consistent with TRAN-P6.

11.2. TRAN-P7 - Matters for Assessing Effects on the Transport Network

TRAN-P7 lists the matters to consider when assessing effects on the transport network and adjacent land:

TRAN-P7 matter	Assessment
(a) Type and level of traffic anticipated	About 920 ECM per day and 120 in the peak hour, including one B-Train delivery per tenancy per day (Section 4); about 475 and 65 ECM genuinely added (Section 4.5).
(b) Location of the activity, its relationship to existing roads and their classification, and adjacent properties	Access from Klinac Lane (Secondary Collector) and Maritime Lane (Low Volume). Heavy vehicles enter from Maritime Lane and leave via Klinac Lane (Sections 2.3 and 6.2). The site adjoins commercial and light industrial land and a vacant NRC site, within an established large-format retail cluster.
(c) Water sensitive design methods, including green spaces	Landscaped frontages and a green space / future development area on the eastern part of the site (BC03). Stormwater is a building consent matter, outside the scope of this ITA.
(d) Safety requirements and improvements	Both crossings meet TRAN-Table 9 sight distances and TRAN-Table 8 separation (Sections 6.1 and 6.2). No improvements are required: the roundabout was built in 2020 to current standards, and the development adds little turning traffic at Kahikatearoa Lane (Section 6.4).
(e) Management of stormwater	Addressed through the site stormwater design for the building consent; outside the scope of this ITA.
(f) Any natural hazards	The site and parts of the road network are in mapped river flood hazard areas. Retail is not a vulnerable activity and the premises can close on a flood warning, so customers need not access the site in a flood. Safe access and egress are addressed in the resource consent application (NH-R7).
(g) Cumulative effects arising from lawfully established activities in the surrounding environment	See Section 11.3.
(h) Current and future connectivity, including pathways, parking and open space networks	Connects to the upgraded footpaths, cycle facilities and the Maritime Lane / Klinac Lane link (Sections 3.2 and 3.4). Parking demand is met on site (Section 7). No future road connection is affected.

TRAN-P7 matter	Assessment
(i) Any traffic assessment prepared by a suitably qualified and experienced transport professional	This ITA (Section 1.2).
(j) Impacts on any State Highway or Limited Access Road	No access to SH10. Traffic reaches SH10 via local roads and two public road intersections with ample capacity (Section 6.3). Note 3 requires NZTA approval for land use changes relying on existing accesses to the state highway. The site has no access to SH10, and public road intersections are not property accesses to it, so NZTA approval under the Government Roading Powers Act 1989 is not required.
(k) Historical, spiritual or cultural associations held by tangata whenua (TW-P6)	No sites or areas of significance to tangata whenua are mapped on or next to the site. Effects on tangata whenua values are addressed in the resource consent application.

11.3. Cumulative Effects

The precinct is established and largely developed, with large-format retail of similar or larger scale (including Mitre 10 Kerikeri and The Warehouse Waipapa on Klinac Lane) and vehicle sales, hire, trade and light industrial uses. The most recent significant development nearby is the Bidfood distribution facility on Kahikatearoa Lane, a low trip generator per unit of floor area.

The corridor improvements (2020 to 2021) were built for this precinct and its growth, and the network's performance since already reflects the cumulative traffic of these activities, with no serious or fatal crashes at the roundabout (Section 3.5). The development adds about 120 ECM in the peak hour on the conservative figures, or about 65 ECM allowing for existing customers (Section 4.5), split between the two SH10 intersections. Cumulative effects are less than minor.

11.4. TRAN-P3, TRAN-P4 and TRAN-P5

TRAN-P3 seeks a safe, efficient and well connected network by managing matters including the location of buildings and obstructions affecting sightlines, access design, site access, traffic volumes, the needs of all road users and cumulative effects. These are addressed in Sections 4 to 8 and 11.3; crossing sightlines comply and frontage planting near the crossings will be kept low (Section 6.1). Consistent.

TRAN-P4 manages the design and location of parking, the supply of bicycle parking and loading, and water sensitive design for parking areas. Parking matches theoretical demand, with three accessible spaces, loading suited to the delivery pattern, consolidated short-stay bicycle parking and long-stay bicycle parking inside each building (Sections 7 and 8). Stormwater from the parking areas is managed through the building consent design (BC06). Consistent.

TRAN-P5 encourages land uses that support an integrated and diverse network, including through bicycle parking, end-of-trip facilities and the allocation of spaces for motorcycles, car share, ride share and electric vehicle charging. Bicycle parking and end-of-trip facilities are provided (Section 8). No dedicated motorcycle, car share, ride share or EV charging spaces are proposed; none is required by the District Plan for this activity. Consistent.

12. RECOMMENDED CONDITIONS

The following conditions are recommended, to be read with those proposed in the resource consent application.

1. The development shall be carried out in accordance with the approved architectural plans prepared by Spooner Architectural Services Ltd, including the car parking, three accessible car parking spaces, loading bays, truck park, internal service lane, bicycle parking and end-of-trip facilities shown on those plans. Accessible spaces shall comply with TRAN-Table 2 and TRAN-Table 6.
2. Before the activity commences in each tenancy, the following shall be provided in accordance with TRAN-S1 and maintained thereafter:
    (a) short-stay bicycle parking (six spaces across the site), consisting of stands securely attached to an immovable object, clearly visible or signposted, at the location shown on BC03;
    (b) one long-stay bicycle parking space per tenancy, undercover and secure from theft, plus one additional space for each additional 15 staff where a tenancy employs more than 15 staff; and
    (c) one shower and changing area with clothing storage per tenancy for staff use.
3. All parking, loading, manoeuvring and access areas shall be formed, sealed or concreted, drained and marked or delineated before the activity commences, and shall be maintained and kept available for those purposes.
4. Vehicle access shall be from the existing vehicle crossings on Klinac Lane and Maritime Lane, and the site shall be laid out so that vehicles, including the design vehicle, can enter and leave in a forward direction.

13. CONCLUSION

The development generates modest traffic, split between the SH10 / Waipapa Road roundabout and the SH10 / Kahikatearoa Lane intersection. Even with every trip treated as new, it is well within the capacity of both intersections and of the Klinac Lane / Maritime Lane link, purpose-built in 2020 to 2021 for precinct growth. About half will be existing customers, so the genuine addition is about 65 ECM in the peak hour. No state highway intersection is created, no road geometry changes, the roundabout's historic crash pattern is not reintroduced, and only a small amount of turning traffic is added at Kahikatearoa Lane.

Accessible parking, loading, the number of bicycle parks and end-of-trip facilities meet TRAN-S1 and are secured by conditions, and car parking matches the theoretical demand. There is one departure: short-stay bicycle parking consolidated at one location more than 30 m from the Building 1 and 2 entrances, which concentrates cycle traffic at the site edge and keeps it away from vehicles on site. The effects are less than minor (Section 8). Parking spaces and aisles meet TRAN-Figure 1 (Section 7.1).

The transport effects are less than minor and the matters of discretion under TRAN-R9, TRAN-R1 and TRAN-S1 are satisfied. Consent can be granted on transport grounds, subject to the conditions at Section 12.

APPENDICES

Appendix A - Trip Generation Rates and Calculation

RR453 large-format retail rates as used by FNDC to set the threshold (Abley 2025, Table 2.2, p.18); the calculation is set out at Sections 4.2 to 4.5

Appendix B - Sight Distance Measurements

Klinac Lane and Maritime Lane accesses, scaled from aerial imagery (figures below)

Appendix C - CAS Crash Data Summary

NZTA Crash Analysis System (public dataset), 2006-2025, roundabout, frontage and SH10 / Kahikatearoa Lane intersection; summarised at Sections 3.5 and 6.4

Appendix D - Architectural Site Plan and Layout (BC03)

Spooner Architectural Services Ltd - shows access, parking, loading, the B-Train turning curve, accessible parking, and bicycle parking (BC03 and BC05 Rev C); end-of-trip facilities are shown on the building plans

Appendix A - Trip Generation Rates and Calculation

The rates are those the Council used to set TRAN-Table 12, from NZTA Research Report 453 (Trips and parking related to land use, 2011), as set out in Table 2.2 of Abley, FNDC Proposed District Plan - Submission review - Transport Chapter, Revision C, 24 March 2025 (Appendix 3 to the section 42A Transport report). The large-format retail entry is reproduced below.

Table A1: Large-format retail threshold derivation (Abley 2025, Table 2.2)

Activity	Vehicles per day (RR453)	Vehicles per peak hour (RR453)	Daily threshold (200 vpd)	Hourly threshold (40 vph)	Threshold adopted in the PDP
Large-format retail	44.8 vpd / 100 m2	5.6 vph / 100 m2	446 m2 GFA	714 m2 GFA	450 m2 GFA

Source: Abley (2025), Table 2.2, p.18, reproduced in full at Figure A1. The same rates apply to trade suppliers.

Table 2.2 Calculation of trip generation thresholds for different activities

Activity	Vehicles per day based on RR453	Vehicles per peak hour based on RR453	Daily threshold based on 200 vpd	Hourly threshold based on 40 vph	Threshold adopted in the PDP
Healthcare activity and hospitals	90	9	222m² GFA	444m² GFA	450m² GFA
Commercial activity	129 vpd/100m²	17.9 vph/100m²	155m² GBA	223m² GBA	200m² GBA
Drive-thru and service stations	122	20.4	164m² GFA	196m² GFA	200m² GFA
Trade supplier	44.8 vpd/100m²	5.6 vph/100m²	446m² GFA	714m² GFA	450m² GFA
Large-format retail	44.8	5.6	446m² GFA	714m² GFA	450m² GFA
Supermarket	129 vpd/100m²	17.9 vph/100m²	155m² GFA	223m² GFA	200m² GFA
Restaurants/bars /cafes	92	15.6	217m² GFA	256m² GFA	200m² GFA
Office	26.1 vpd/100m²	2.5 vph/100m²	766m² GFA	1600m² GFA	800m² GFA
Commercial service	129	17.9	155m² GFA	223m² GFA	200m² GFA
Industrial activity	5 vpd/100m²	1 vph/100m²	4000m² GFA	4000m² GFA	**200m² GBA (PDP has 200m² GFA which is an error, I recommend 4,000m² GBA is adopted)**
Kohanga reo/childcare centre	4.1/child	1.4/child	49 children	29 children	30 children
Primary and secondary schools	1.6/student	0.7/student	125 students	57 students	60 students
Tertiary education facility	1.4/student[30]	0.2/student[18]	143 students	200 students	150 students
Residential activity	10.7/dwellings	1.3/dwellings	19 dwellings	31 dwellings	20 units

Figure A1: *Table 2.2 of Abley (2025), p.18, showing the derivation of the TRAN-Table 12 trip generation thresholds from NZTA Research Report 453 rates. Large-format retail is the fifth row.*

Table A2: Gross trip generation by building

Building	GFA (m2)	Daily (44.8 / 100 m2)	Peak hour (5.6 / 100 m2)
Building 1	830	372 vpd	46 vph
Building 2	585	262 vpd	33 vph
Building 3	585	262 vpd	33 vph
Total	**2,000**	**896 vpd**	**112 vph**

Table A3: Equivalent car movements

Period	Light vehicles (1 ECM)	B-Train movements (5 ECM)	Total ECM (two-way)
Daily	890	6 x 5 = 30	920
Peak hour	110	2 x 5 = 10	120

Light vehicles are the gross trips less the B-Train movements, which are counted separately at 5 ECM each. Refer to Section 4.4.

Table A4: Traffic genuinely added to the network (50% linked and diverted trips)

Period	Light vehicles (gross)	Linked and diverted (50%)	Light vehicles (net)	B-Train ECM (all new)	Net ECM added
Daily	890	445	445	30	475
Peak hour	110	55	55	10	65

The 50% allowance is explained at Section 4.5. Deliveries are treated as wholly new to the network.

Appendix B - Sight Distance Measurements

Available sight distance at the two existing vehicle crossings, scaled from aerial imagery. The TRAN-Table 9 minimums at 50 km/h are 70 m for a Secondary Collector (Klinac Lane) and 60 m for a Low Volume road (Maritime Lane). All four sightlines comply.



Figure B1: *Klinac Lane access: available sight distance approximately 110 m (exceeds the 70 m TRAN-Table 9 minimum for a Secondary Collector at 50 km/h).*



Figure B2: *Klinac Lane access: available sight distance approximately 81 m (exceeds the 70 m TRAN-Table 9 minimum for a Secondary Collector at 50 km/h).*



Figure B3: *Maritime Lane access, looking north: available sight distance approximately 75 m (exceeds the 60 m TRAN-Table 9 minimum for a Low Volume road at 50 km/h).*



Figure B4: *Maritime Lane access, looking south: available sight distance approximately 74 m (exceeds the 60 m TRAN-Table 9 minimum for a Low Volume road at 50 km/h).*



Figure B5: Maritime Lane, looking north along the site frontage towards the Whiriwhiritoa Stream bridge (site visit, 18 October 2026).



Figure B6: Maritime Lane, looking south along the site frontage (site visit, 18 October 2026).



Figure B7: Klinac Lane, looking along the site frontage towards the Klinac Lane crossing (site visit, 18 October 2026).



Figure B8: The site viewed from across Klinac Lane (site visit, 18 October 2026).

Appendix C - CAS Crash Data Summary

Records are from the CAS open dataset, 2006 to 2025. Roundabout records are those coded to the SH10 / Waipapa Road and SH10 / Waipapa Loop Road intersections, excluding one 2011 non-injury record located about 1.4 km north on SH10. No fatal crashes are recorded at the roundabout or frontage. Kahikatearoa Lane records are those coded to that intersection and within 100 m of it.

Table C1: SH10 / Waipapa Road intersection (priority-controlled to December 2020, roundabout since), crashes by year

Year	Serious	Minor	Non-injury	Total
2006	3	0	3	6
2007	1	0	7	8
2008	0	0	3	3
2009	0	1	2	3
2010	0	0	3	3
2011	0	2	2	4
2012	0	0	3	3
2013	0	0	2	2
2014	0	0	4	4
2015	0	0	1	1
2016	0	0	3	3
2017	0	0	2	2
2018	0	3	2	5
2019	1	0	1	2
2020	0	0	1	1
2021	0	0	1	1
2022	0	2	0	2
2023	0	0	0	0
2024	0	0	1	1
2025	0	1	2	3
Before roundabout (2006-2020)	**5**	**6**	**39**	**50**
After roundabout (2021-2025)	**0**	**3**	**4**	**7**

The roundabout replaced the priority-controlled intersection in December 2020. The SH10 speed limit at the roundabout and at Kahikatearoa Lane is 70 km/h (site visit, 18 October 2026).

Table C2: Maritime Lane and Klinac Lane frontage, all recorded crashes 2006-2025

Year	Location (as coded by CAS)	Severity
2007	Kahikatearoa Lane / Klinac Lane	Non-injury
2009	Klinac Lane / SH10	Non-injury
2020	Skippers Lane / Maritime Lane	Non-injury
2023	Waipapa Loop Road / Maritime Lane	Minor injury

Year	Location (as coded by CAS)	Severity
2023	Waipapa Loop Road / Maritime Lane	Minor injury
2024	SH10 / Maritime Lane	Minor injury

Klinac Lane records no injury crashes over the period. The three minor-injury crashes in 2021-2025 are those referred to in Section 3.5.

Table C3: SH10 / Kahikatearoa Lane intersection, crashes by period

Period	Fatal	Serious	Minor	Non-injury	Total
2006-2020	1	1	7	10	19
2021-2025	0	1	0	3	4
Total 2006-2025	**1**	**2**	**7**	**13**	**23**

The intersection is priority-controlled (give way) and was not altered by the corridor improvements. The serious crash in 2021-2025 occurred in 2023.

Appendix D - Architectural Site Plan and Layout

The architectural plans (Spooner Architectural Services Ltd, BC Drawings 13-10-26), including the site plan (BC03), carparking plan (BC05) and building plans showing the end-of-trip facilities, are provided as Appendix C of the resource consent application. They are not reproduced here.

GUMBOOTS
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FLOOD DISPLACEMENT ASSESSMENT

20 Klinac Lane, Waipapa

1. Project Details

Table 1 - Project Details

PROJECT DETAILS	
Project Site Legal Description	Section 3 SO 438821
Client Details	Peter Hendl
Project details	3 x Single Storey Commercial Buildings
Revision Number	A
Engineering Company Details	Gumboots Consulting Engineers Ltd
Prepared on behalf of Gumboots Consulting Engineers by:	Kelly Wright AF Member of EngNZ
Reviewed/Approved on behalf of Gumboots Consulting Engineers by:	Akira Kepu - Geo-Civil Engineer; Chartered Member of EngNZ (CMEngNZ), TIPENZ, Board Member of EngNZ Northland Branch. Member of NZGS, ISSMGE, SIG EGP & The Sustainability Society.
Date:	22nd September 2026
Job Number	1389

This report has been prepared for Peter Hendl in accordance with the brief given to us. The findings and opinions presented in this report are based on the information identified in Section 3, together with engineering assessment of the proposed earthworks and the available flood information.

As appropriate, this appraisal shall be read in its entirety to understand the context of the recommendations given.

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2. Introduction

Gumboots Consulting Engineers Ltd has been engaged to assess the potential flood-displacement effects associated with the proposed development and earthworks at 20 Klinac Lane, Waipapa.

This assessment has been prepared in response to Northland Regional Council's request for further information under section 92(1) of the Resource Management Act for resource consent APP.047605.01.01.

NRC has requested:

> *"An assessment prepared by a suitably qualified and experienced person (e.g. engineer or flood modeller) of the effects of infilling the floodplain within the development area on flood risk onto other properties. The assessment of effects should include an assessment of whether the proposed works are likely to increase the flood level and/or flood extent on any other property as a result of the displacement of floodwaters and details of those if applicable."*

The purpose of this assessment is therefore to determine, from the flood information presently available, whether filling associated with the proposed development is likely to displace floodwater in a manner that increases flood level or flood extent on another property.

The desktop study assessment specifically considers:

- the existing flood mechanism affecting the site;
- the existing flood-control and stormwater infrastructure within the surrounding commercial area;
- the location and configuration of the proposed earthworks relative to established flood-conveyance pathways;
- the potential flood-storage volume affected by the proposed filling; and
- whether there is a credible hydraulic mechanism by which the proposed filling would cause a localised increase in flood level or flood extent on another property.

This is a targeted flood-displacement assessment. It does not comprise a new hydraulic model of the Kerikeri River–Whiriwhiritoa Stream system.

3. Information Reviewed

This assessment has been based on the following information:

- Gumboots Consulting Engineers, *3 Waters Assessment – 20 Klinac Lane, Waipapa*, Ref. 1389, Rev B, dated 20 May 2026;
- Haigh Workman, *Whiriwhiritoa Stream & Kerikeri River Flood Reduction – Stormwater Design Report*, prepared for NRC, July 2020;

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- NRC 10-year, 50-year and 100-year + climate change river-flood mapping supplied September 2026 and understood to be derived from NRC's 2025 Kerikeri catchment model;
- Spooner Architectural Solutions development and earthworks drawings, including Drawing BC30;
- Donaldson's Registered Surveyors, Ref. 8343 subdivision/wastewater disposal plan showing existing site levels, flood information, stopbank and drainage features;
- FNDC online infrastructure mapping showing stormwater and flood-management assets within Klinac Lane, Maritime Lane and the surrounding commercial area; and
- NRC's section 92 request and subsequent clarification regarding the flood mechanism affecting the site.

The proposed development comprises three single-storey retail buildings with associated parking, vehicle access and site development. The property has an area of approximately 1.2148 ha and adjoins the Whiriwhiritoa Stream corridor along its northern boundary.

4. Existing Flood Environment

4.1 Flood Mechanism

The property is located within the wider Kerikeri River-Whiriwhiritoa Stream floodplain and is affected by mapped river flooding during larger flood events.

NRC has advised that its 2025 Kerikeri catchment model incorporates the flood-reduction works previously undertaken along the Whiriwhiritoa Stream. NRC has further advised that the principal mechanism affecting the site during the larger design event is overflow from the Kerikeri River entering the Whiriwhiritoa Stream system.

Accordingly, the NRC 2025 model outputs supplied for the site have been adopted as the current representation of the flood hazard.

The supplied mapping indicates a continuous modelled flood surface across the property rather than an isolated area of ponded floodwater. The modelled flood level generally decreases from west to east across the site.

The previous 3 Waters Assessment adopted the available NRC flood information when establishing minimum finished floor levels, with proposed finished floor levels of RL 78.09 m for Buildings 1 and 2 and RL 77.49 m for Building 3.

4.2 Whiriwhiritoa Stream Flood-Reduction Works

The existing flood environment has been substantially modified by flood-reduction works undertaken along the Whiriwhiritoa Stream.

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The July 2020 Haigh Workman assessment identified existing stream capacities as low as approximately 9.4 m³/s. The recommended works comprised channel widening and construction of a levee adjoining Section 3 SO 438821, increasing the design conveyance capacity to approximately 43 m³/s, corresponding with the capacity of the downstream State Highway 10 culvert.

The Haigh Workman assessment identified the 100-year flow generated by the Whiriwhiritoa catchment itself as approximately 5.7 m³/s. The substantially greater 43 m³/s design conveyance therefore reflects the wider flood-management function of the Whiriwhiritoa corridor, including its role in conveying floodwater entering the system from the Kerikeri River.

These flood-reduction works have subsequently been constructed.

The proposed development is located outside the constructed Whiriwhiritoa Stream conveyance corridor and does not require filling or obstruction of the stream channel or constructed flood-control corridor.

4.3 Klinac Lane and Maritime Lane Drainage Network

The subject property also forms part of an established commercial area containing an extensive local stormwater drainage network.

FNDC infrastructure mapping, reproduced in Appendix E, identifies an established network of stormwater and surface-water infrastructure along Klinac Lane, Maritime Lane and the surrounding road corridors, including stormwater pipes, culverts, catchpit connections, drainage channels and mapped overland-flow paths.

These assets provide established pathways for the collection and conveyance of local surface runoff through the commercial area.

It is important to distinguish the function of this local stormwater network from the larger-event river-flood mechanism. The road drainage network primarily manages local stormwater runoff, while the Whiriwhiritoa Stream and associated flood-control works provide the principal large-event flood-conveyance pathway.

Together, these features define the existing flood-management environment surrounding the subject property, comprising:

- the Kerikeri River–Whiriwhiritoa Stream floodplain;
- the widened Whiriwhiritoa Stream;
- the constructed flood-control levee;
- the surrounding inundatable floodplain; and
- the established stormwater and overland-flow network serving the surrounding commercial area.

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5. Proposed Earthworks

The proposed earthworks are shown on Spooner Architectural Solutions Drawing BC30 and comprise filling associated with the three proposed building platforms, parking areas and associated site formation.

Drawing BC30 identifies approximately:

- 1,398 m³ of fill associated with the building platforms;
- 1,788 m³ associated with paving and site formation; and
- 3,187 m³ total fill within the mapped 100-year flood zone.

The earthworks are distributed across the development and remain outside the Whiriwhiritoa Stream and constructed flood-control corridor.

Accordingly, the principal potential hydraulic effect requiring assessment is the loss of floodplain storage within the development footprint.

6. Floodwater Displacement

6.1 Potential Displacement Volume

The volume of proposed fill is not equivalent to the volume of floodwater displaced. Only fill occupying space that would otherwise contain floodwater during the design event contributes to flood-storage displacement.

The 100-year + climate change flood-depth mapping for the site [supplied by NRC] indicates that flood depths across the proposed development footprint are predominantly shallow to moderate, generally within the lower mapped depth bands. Accordingly, the full 3,187 m³ of proposed fill within the mapped flood zone does not represent an equivalent volume of displaced floodwater. Only fill occupying the existing floodwater column below the modelled flood surface contributes to flood-storage displacement.

The 3,187 m³ figure therefore remains a conservative absolute upper bound. Actual displacement is lower and depends on the spatial relationship between the existing ground surface, proposed fill depth and NRC modelled flood depth.

6.2 Nature of the Affected Floodplain Storage

NRC mapping shows the development footprint forming part of a broader flood surface extending through the subject property and surrounding floodplain, rather than a discrete depression or enclosed flood-storage basin.

The affected storage is therefore hydraulically connected to the wider floodplain. Loss of storage within this setting does not, by itself, demonstrate that an equivalent volume of water will be transferred onto a

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particular adjoining property. The potential off-site effect depends on whether the proposed development obstructs or redirects established flood-conveyance pathways, as assessed below.

7. Assessment of Effects on Other Properties

NRC's request specifically asks whether displacement associated with the proposed filling is likely to increase flood level or flood extent on another property.

The relevant hydraulic mechanisms have therefore been considered individually.

7.1 Obstruction of the Primary Flood-Conveyance Pathway

The proposed earthworks do not obstruct the Whiriwhiritoa Stream or the constructed flood-control conveyance corridor adjoining the northern boundary.

The principal large-event conveyance pathway therefore remains available following development.

There is consequently no identified mechanism by which the proposed earthworks would create a damming or backing-up effect within the Whiriwhiritoa Stream itself.

7.2 Creation of a New Transverse Flood Barrier

The proposed development comprises three building platforms and associated parking/site formation rather than a continuous flood-control bund or embankment across the wider floodplain.

The works therefore do not create a new continuous transverse barrier that would intercept an established flood-flow corridor and force floodwater laterally toward a neighbouring property.

7.3 Interaction with the Existing Drainage Network

The proposed works do not obstruct the established stormwater drainage and overland-flow corridors identified along Klinac Lane, Maritime Lane and adjoining roads.

These systems have not been assumed to provide compensatory flood storage or capacity for river floodwater. Their relevance is limited to demonstrating that the development occurs within an established and hydraulically connected drainage environment.

7.4 Redistribution of Displaced Floodwater

The affected storage forms part of the wider Kerikeri River–Whiriwhiritoa Stream floodplain. NRC mapping indicates hydraulic continuity across the development area and surrounding floodplain, while the primary Whiriwhiritoa flood-conveyance corridor remains unobstructed.

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No specific hydraulic mechanism has been identified from the available information by which the proposed earthworks would preferentially concentrate or direct displaced floodwater toward a particular adjoining property. Any displaced floodwater would be expected to redistribute within the surrounding hydraulically connected floodplain and flood-conveyance system, rather than being preferentially directed toward a particular adjoining property.

This differs from filling an isolated storage depression or constructing a transverse embankment across an established flood-flow path, where a localised backing-up or redirection effect could occur.

7.5 Potential Change in Flood Level or Extent

The supplied NRC information does not provide the numerical hydraulic-model outputs required to calculate a specific change in flood level or flood extent at individual adjoining properties. Such quantification would require comparative hydraulic-model simulations representing the existing and proposed-development conditions.

The available information does, however, allow the likely hydraulic mechanism and potential for a localised off-site effect to be assessed. Having regard to the connected nature of the floodplain, the configuration of the proposed earthworks and the retention of the established flood-conveyance pathways, no specific mechanism has been identified by which the proposed earthworks would cause a localised increase in flood level or flood extent on another property through the diversion or concentration of displaced floodwater.

8. Conclusion

The proposed development at 20 Klinac Lane is located partly within NRC's mapped 100-year + climate change floodplain. The site forms part of the wider Kerikeri River–Whiriwhiritoa Stream flood system and an established flood-management environment comprising the modified Whiriwhiritoa Stream corridor and the local stormwater and overland-flow network serving the surrounding commercial area.

Drawing BC30 identifies approximately 3,187 m³ of proposed fill within the mapped 100-year flood zone. This has conservatively been adopted as the maximum potential displacement volume, although actual displacement is expected to be lower because only fill situated below the design flood surface can displace floodwater.

The proposed works do not obstruct the Whiriwhiritoa Stream or constructed flood-control corridor, form a continuous barrier across the floodplain, or occupy an identified enclosed flood-storage basin. **Based on the available information, no specific mechanism has been identified by which the proposed earthworks would cause a localised increase in flood level or flood extent on another property through the diversion or concentration of displaced floodwater.**

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Limited Liability

This document has been prepared exclusively for Peter Hendl in accordance with the brief given to us, the agreed scope and in general accordance with current standards, codes and best practice at the time of this writing. Therefore, he shall be deemed the exclusive owner on full and final payment of the invoice.

Information, assumptions, and recommendations contained within this report can only be used for the purposes for which it was intended. Gumboots Consulting Engineers accepts no liability or responsibility whatsoever for;

1. any use or reliance on the report by any party other than the owner or parties working for or on behalf of the owner, such as local authorities, and for purposes beyond those for which it was intended.
2. errors or omissions arising from inaccurate or incomplete information provided by the Client or external sources.

We should be contacted immediately if the conditions are found to differ from those described in this document. Accordingly, further investigations/observations shall then be undertaken as appropriate.

This report should be read and reproduced in its entirety including the limitations to understand the context of the opinions and recommendations given**.**

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Appendix A NRC s92 Request

Northland REGIONAL COUNCIL
Te Kaunihera ā rohe o Te Taitokerau

Please Quote File: 47605
CSAN:ASLU

2 September 2026

WBC Developers Limited
C/ – Delta Property Design TA Magpie Design
designbymagpie@gmail.com

Dear Sir

S92(1) REQUEST FOR FURTHER INFORMATION

RESOURCE CONSENT APPLICATION APP.047605.01.01 – WBC DEVELOPERS LIMITED – EARTHWORKS FOR SITE DEVELOPMENT AT 20 KLINAC LAND, WAIPAPA

An initial assessment of your application has been made and the following further information is requested:

(1) An assessment prepared by a suitably qualified and experienced person (e.g. engineer or flood modeller) of the effects of infilling the floodplain within the development area on flood risk onto other properties. The assessment of effects should include an assessment of whether the proposed works are likely to increase the flood level and/or flood extent on any other property as a result of the displacement of floodwaters and details of those if applicable. This information is requested so the council can determine whether an additional consent is required under Rule C.3.1.9 of the Regional Plan for Northland (RPN) for the diversion of flood waters onto any other property.

You are required to respond to the council within 15 working days from the date of this letter, being **Wednesday 23 September 2026** in one of following three ways:

- Provide the further information; or
- Advise the council in writing that you agree to provide the further information; or

  You should choose this option if you are unable to provide all the further information by the date specified above. Please contact me as soon as possible to discuss an appropriate alternative date.
- Advise the council in writing that you refuse to provide the further information.

  If you refuse to provide the further information, the council is required to publicly notify your application.

0800 002 004 www.nrc.govt.nz info@nrc.govt.nz

Private Bag 9021, Te Mai, Whangarei 0143

Northland REGIONAL COUNCIL

The processing of your application will be placed on hold from the date of this letter to the date of receipt of the further information or, if you refuse to provide the further information, the date the advice of refusal is received by the council.

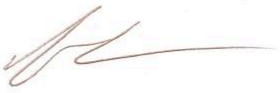
Once the council has received the further information, it will then make a decision on whether your application requires notification or whether it will be processed on a non-notified basis. If the council determines that your application is to be processed on a notified basis, an additional minimum initial fee will be required before the council proceeds any further with your application.

Please note that the council has the ability to decline your application on the grounds that it has insufficient information to determine the application.

The requirements outlined above are binding on you being the applicant, as well as on the council. Your opportunity to clarify or question the reasonableness of this further information request occurs within the next 15 working days, not at some later date.

Please contact me should you have any questions.

Yours faithfully



Courtney Sanson
Consents Officer - Generalist
courtneys@nrc.govt.nz

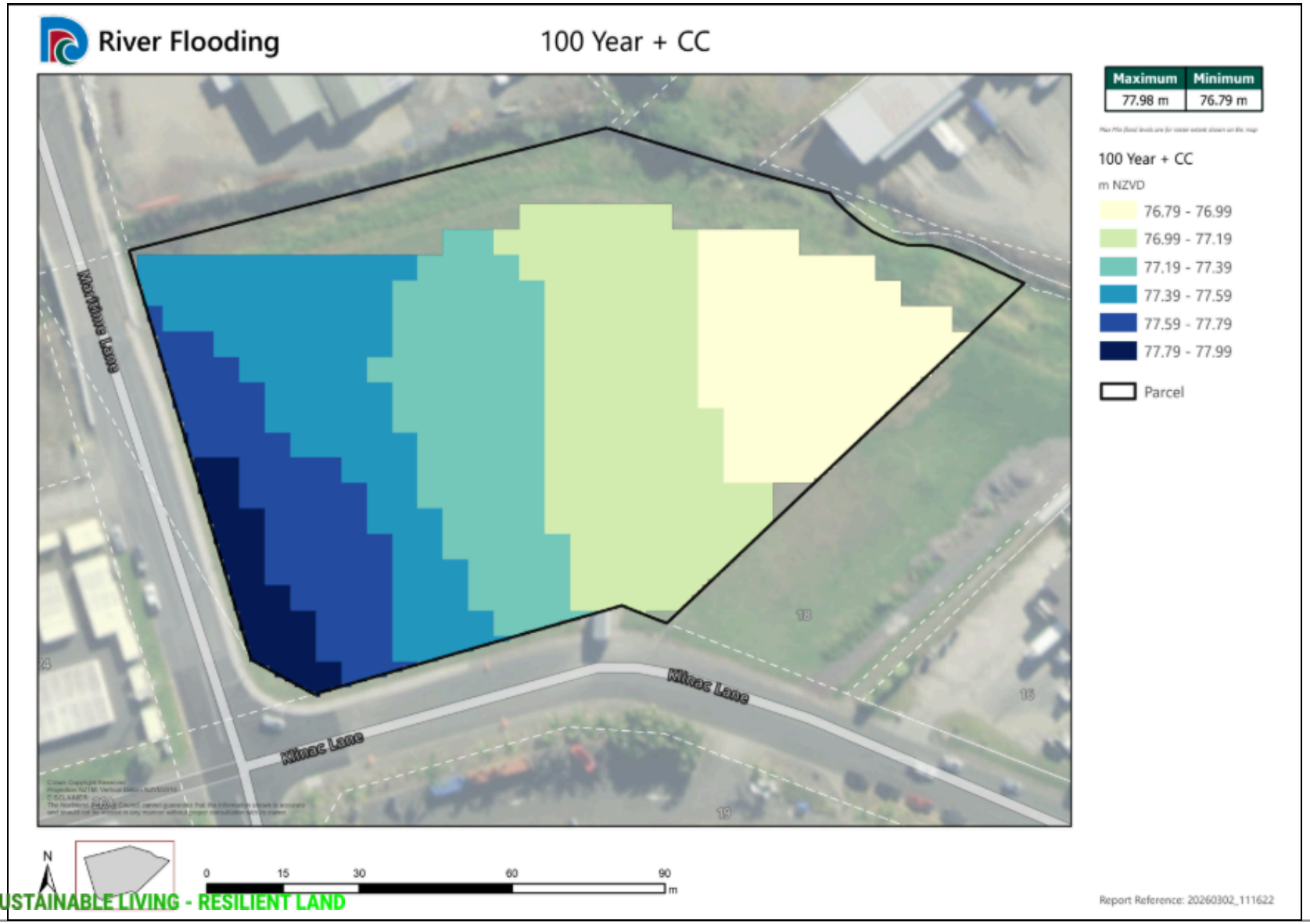
S92 OCTOBER 2019 (REVISION 7) A310502

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Appendix B NRC 100-year + CC Flood Mapping

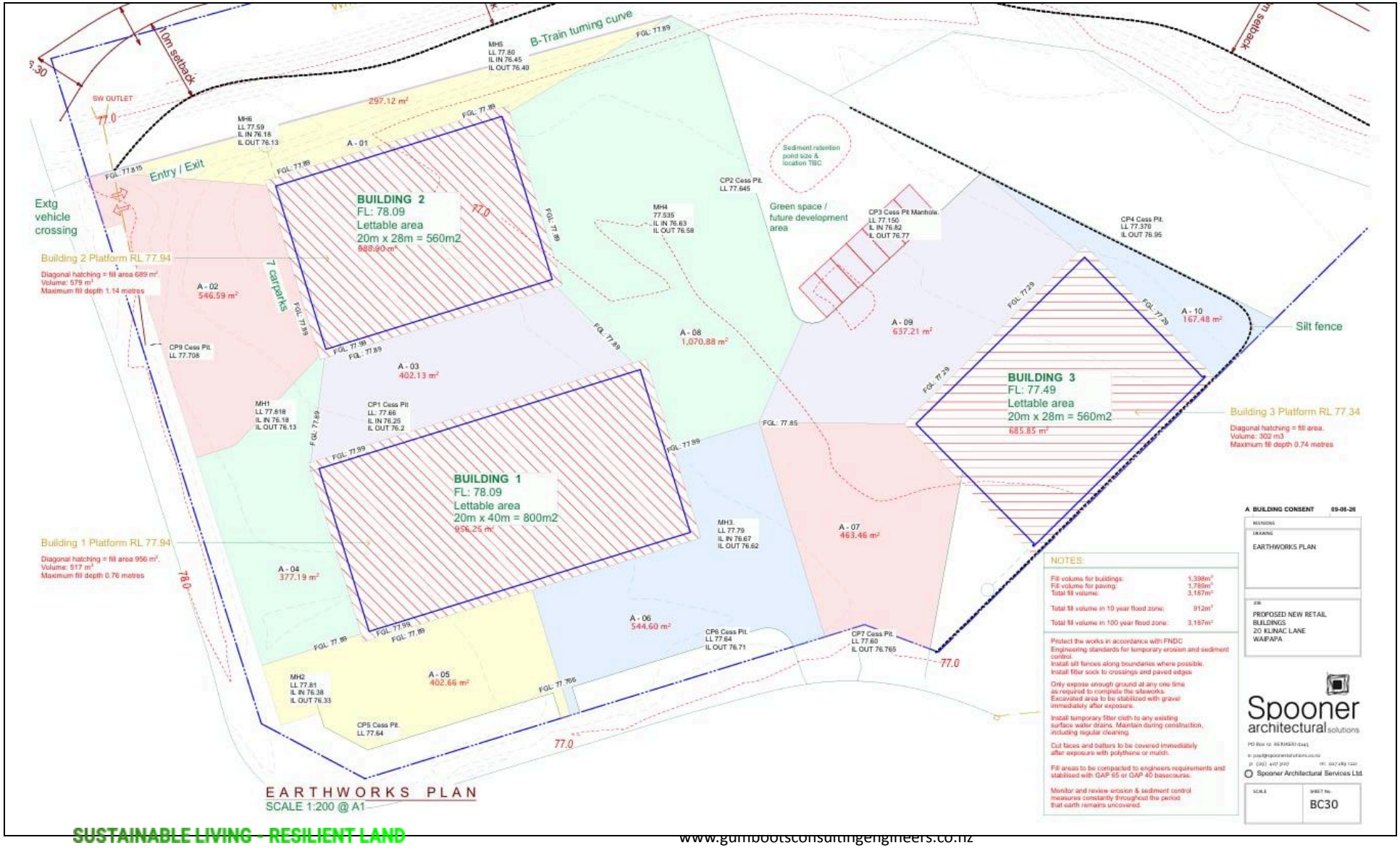
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Appendix C Spooner Architectural BC30 Earthworks Plan


B-Train turning curve
10m setback
SW OUTLET
77.0
MH6
LL 77.59
IL IN 76.18
IL OUT 76.13
MH5
LL 77.80
IL IN 76.45
IL OUT 76.40
297.12 m²
A - 01
Entry / Exit
Extg vehicle crossing
Sediment retention pond size & location TBC
CP2 Cess Pit
LL 77.645
Green space / future development area
CP3 Cess Pit Manhole
LL 77.150
IL IN 76.82
IL OUT 76.77
CP4 Cess Pit
LL 77.370
IL OUT 76.95
BUILDING 2
FL: 78.09
Lettable area
20m x 28m = 560m2
688.90 m²
Building 2 Platform RL 77.94
Diagonal hatching = fill area 689 m².
Volume: 579 m³
Maximum fill depth 1.14 metres
A - 02
546.59 m²
7 carparks
CP9 Cess Pit
LL 77.708
MH4
77.535
IL IN 76.63
IL OUT 76.58
A - 03
402.13 m²
A - 08
1,070.88 m²
A - 09
637.21 m²
A - 10
167.48 m²
Silt fence
BUILDING 3
FL: 77.49
Lettable area
20m x 28m = 560m2
685.85 m²
Building 3 Platform RL 77.34
Diagonal hatching = fill area.
Volume: 302 m3
Maximum fill depth 0.74 metres
MH1
LL 77.618
IL IN 76.18
IL OUT 76.13
CP1 Cess Pit
LL: 77.66
IL IN 76.25
IL OUT 76.2
BUILDING 1
FL: 78.09
Lettable area
20m x 40m = 800m2
956.25 m²
Building 1 Platform RL 77.94
Diagonal hatching = fill area 956 m².
Volume: 517 m³
Maximum fill depth 0.76 metres
MH3.
LL 77.79
IL IN 76.67
IL OUT 76.62
A - 07
463.46 m²
A - 04
377.19 m²
A - 06
544.60 m²
CP6 Cess Pit
LL 77.64
IL OUT 76.71
CP7 Cess Pit
LL 77.60
IL OUT 76.765
MH2
LL 77.81
IL IN 76.38
IL OUT 76.33
A - 05
402.66 m²
CP5 Cess Pit
LL 77.64
78.0
77.0
EARTHWORKS PLAN
SCALE 1:200 @ A1
A BUILDING CONSENT 09-06-20
EARTHWORKS PLAN
PROPOSED NEW RETAIL BUILDINGS
20 KLINAC LANE
WAIPAPA
NOTES:
Fill volume for buildings: 1,398m³
Fill volume for paving: 1,789m³
Total fill volume: 3,187m³
Total fill volume in 10 year flood zone: 912m³
Total fill volume in 100 year flood zone: 3,187m³
Protect the works in accordance with FNDC Engineering standards for temporary erosion and sediment control.
Install silt fences along boundaries where possible.
Install filter sock to crossings and paved edges
Only expose enough ground at any one time as required to complete the siteworks. Excavated area to be stabilized with gravel immediately after exposure.
Install temporary filter cloth to any existing surface water drains. Maintain during construction, including regular cleaning.
Cut faces and batters to be covered immediately after exposure with polythene or mulch.
Fill areas to be compacted to engineers requirements and stabilised with GAP 65 or GAP 40 basecourse.
Monitor and review erosion & sediment control measures constantly throughout the period that earth remains uncovered.
Spooner architectural solutions
Spooner Architectural Services Ltd
BC30

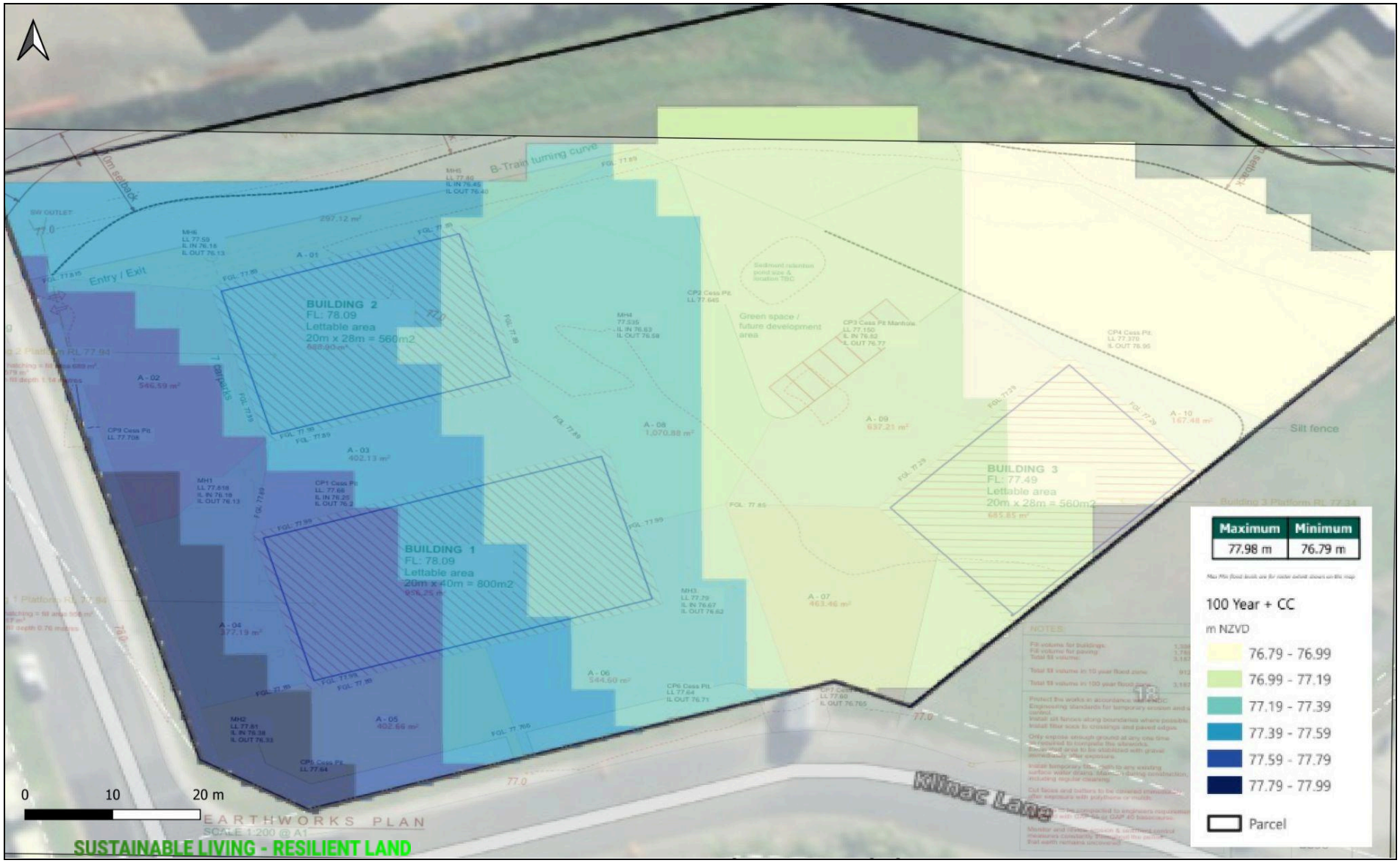
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Appendix D BC30 / NRC Flood Overlay

Indicative overlay of proposed BC30 earthworks and NRC 100-year + climate change modelled flood levels. Overlay prepared for assessment purposes; alignment is based on common site features and is not a survey-registered GIS analysis.

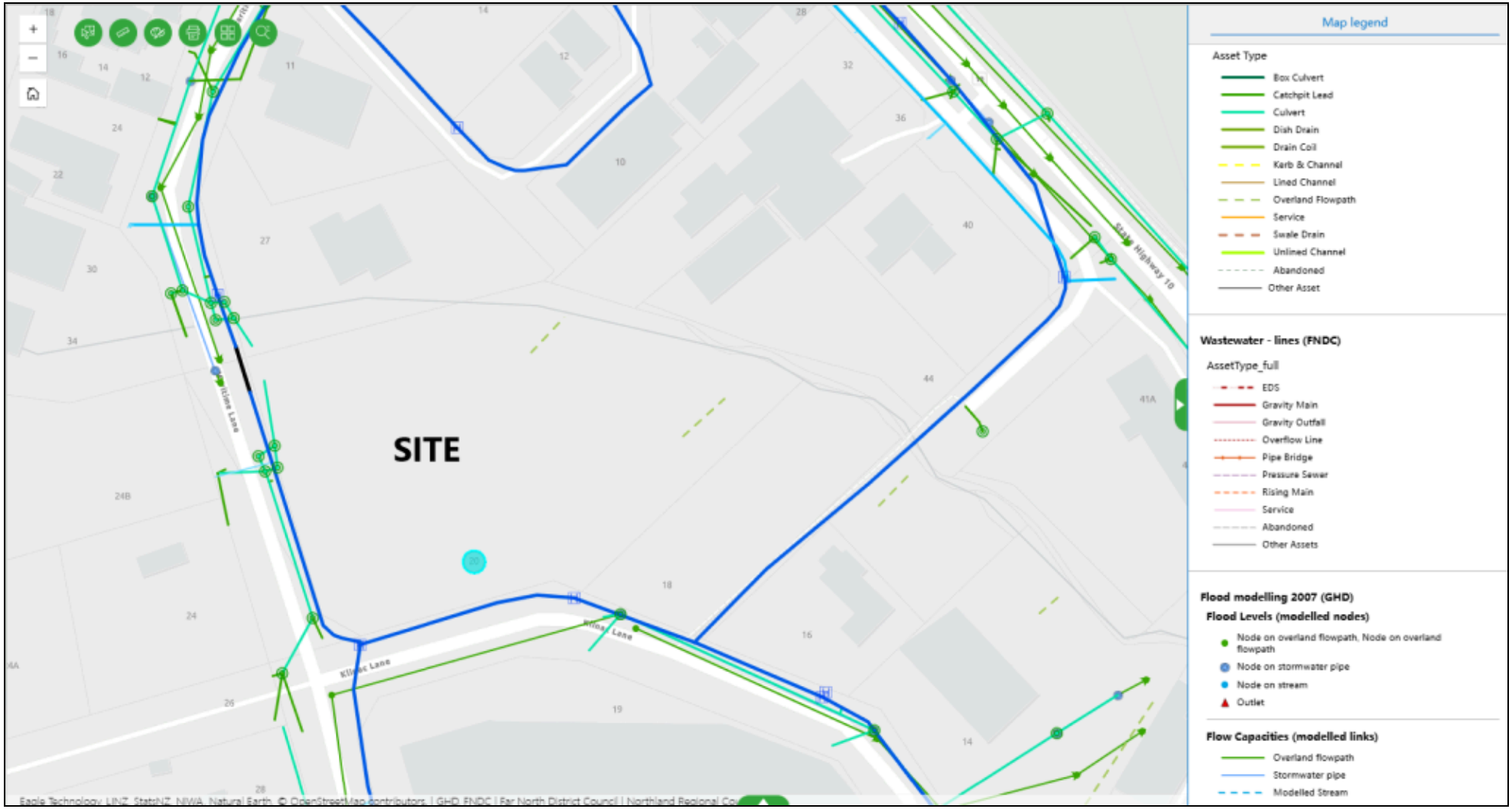
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Appendix E FNDC Stormwater and Flood-Management Infrastructure Mapping


SITE
Kiwis Lane
State Highway 10
Map legend
Asset Type
Box Culvert
Catchpit Lead
Culvert
Dish Drain
Drain Coil
Kerb & Channel
Lined Channel
Overland Flowpath
Service
Swale Drain
Unlined Channel
Abandoned
Other Asset
Wastewater - lines (FNDC)
AssetType_full
EDS
Gravity Main
Gravity Outfall
Overflow Line
Pipe Bridge
Pressure Sewer
Rising Main
Service
Abandoned
Other Assets
Flood modelling 2007 (GHD)
Flood Levels (modelled nodes)
Node on overland flowpath, Node on overland flowpath
Node on stormwater pipe
Node on stream
Outlet
Flow Capacities (modelled links)
Overland flowpath
Stormwater pipe
Modelled Stream

Flood Level Report

Northland REGIONAL COUNCIL
Te Kaunihera ā rohe o Te Taitokerau

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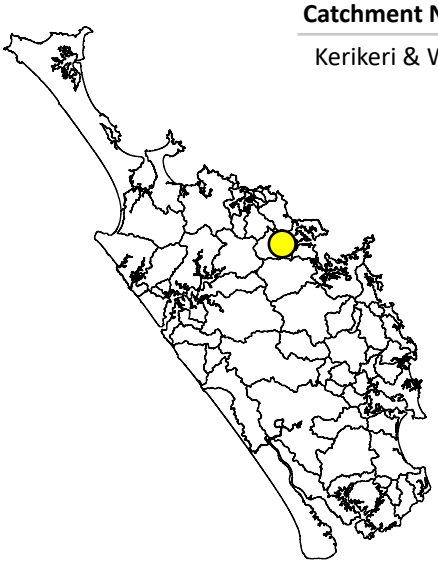
Title: 574944

Appellation: Section 3 SO 438821

Survey Area: 12,148 m²

Catchment Name(s)

Kerikeri & Waipapa



Date Exported: 2/03/2026

Report Reference: 20260302_110359

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Useful Flood Information Definitions

Annual Exceedance Probability (AEP) - The probability of a flood event of a given size occurring in any one year, usually expressed as a percentage annual chance.

1% AEP - A flood of this size or larger has a 1 in 100 chance or a 1% probability of occurring in any year.
2% AEP - A flood of this size or larger has a 1 in 50 chance or a 2% probability of occurring in any year.
5% AEP - A flood of this size or larger has a 1 in 20 chance or a 5% probability of occurring in any year.
10% AEP - A flood of this size or larger has a 1 in 10 chance or a 10% probability of occurring in any year.

NZVD2016 - New Zealand Vertical Datum - The reference level used in our flood models to define ground level.
Flood Levels - Flood levels are used from our modelled flood level rasters. The flood levels are calculated above NZVD 2016 Datum.
Climate Change (CC) - NZCPS (2010) requires that the identification of coastal hazards includes consideration of sea level rise over at least a 100-year planning period. Climate change impacts, such as increased rain intensity, have been included in the flood scenarios. You can read more about the Climate Change forecasts included in each flood model in the technical reports on the NRC website.
Mean high water spring (MHWS) - describes the highest level that spring tides reach, on average.

Coastal Flood Hazard Zones (CFHZ)

Coastal flood hazard zones are derived using a range of data including tide gauge analysis, wind and wave data and models, and use empirical calculations to estimate extreme water levels around the coastline. The calculations include projected sea level rise scenarios based on the latest Ministry for the Environment guidance.

CFHZ 0 Coastal Flood Hazard Zone 0 - area currently susceptible to coastal inundation (flooding by the sea) in a 1-in-100 year storm event
CFHZ 1 Coastal Flood Hazard Zone 1 - an area susceptible to coastal inundation (flooding by the sea) in a 1-in-50 year storm event, taking into account a projected sea-level rise of 0.6m over the next 50 years
CFHZ 2 Coastal Flood Hazard Zone 2 - an area susceptible to coastal inundation (flooding by the sea) in a 1-in-100 year storm event, taking into account a projected sea-level rise of 1.2m over the next 100 years
CFHZ 3 Coastal Flood Hazard Zone 3 - an area susceptible to coastal inundation (flooding by the sea) in a 1-in-100 year storm event, taking into account a projected sea-level rise of 1.5m over the next 100 years (rapid sea level rise scenario)

REGIONWIDE and PRIORITY - RIVER FLOOD HAZARD ZONES (RFHZ)

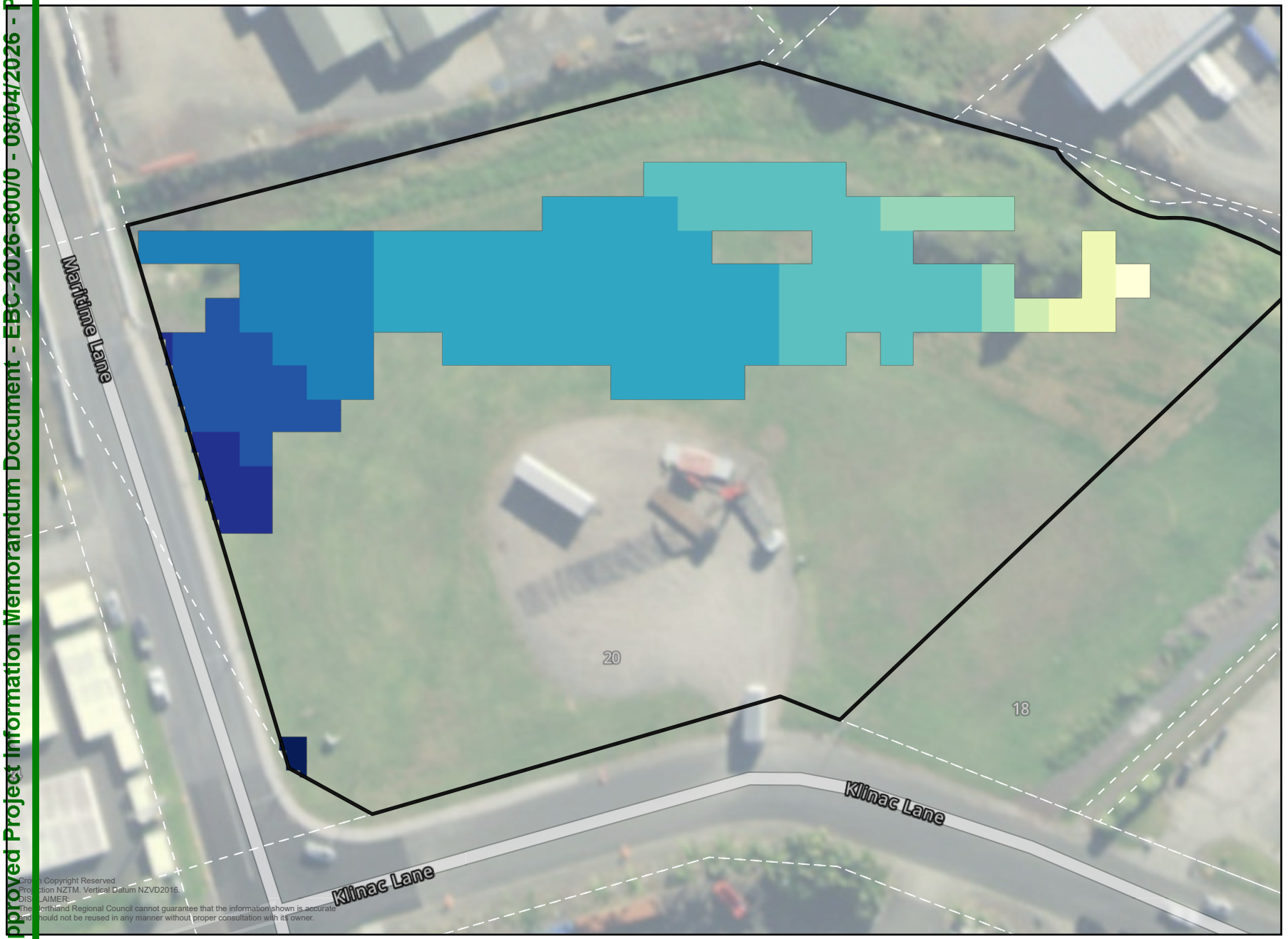
River flood hazard zones are created to raise awareness of where flood hazard areas are identified, inform decision-making and to support the minimisation of the impacts of flooding in our region. The river flood hazard zones have been created using an assessment of best current available information, engaging national and international experts in the field, using national standards and guidelines and has been peer reviewed. This will provide a good indication of the areas at potential risk of flooding from a regional perspective. However, flood mapping is a complex process which involves some approximation of the natural features and processes associated with flooding.

River Flood Hazard Zone 1 – 10% AEP flood extent: an area with a 10% chance of flooding annually
River Flood Hazard Zone 2 – 2% AEP flood extent: an area with a 2% chance of flooding annually
River Flood Hazard Zone 3 – 1% AEP flood extent: an area with a 1% chance of flooding annually with the inclusion of potential Climate Change (CC) impact

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River Flooding

10 Year



Maximum	Minimum
77.84 m	75.52 m

Max Min flood levels are for the raster extent shown on the map

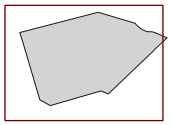
10 Year

m NZVD

- 75.52 - 75.75
- 75.75 - 75.98
- 75.98 - 76.21
- 76.21 - 76.44
- 76.45 - 76.68
- 76.68 - 76.91
- 76.91 - 77.14
- 77.14 - 77.37
- 77.37 - 77.61
- 77.61 - 77.84

Parcel

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Projection NZTM. Vertical Datum NZVD2016.
DISCLAIMER:
The Northland Regional Council cannot guarantee that the information shown is accurate and should not be reused in any manner without proper consultation with its owner.



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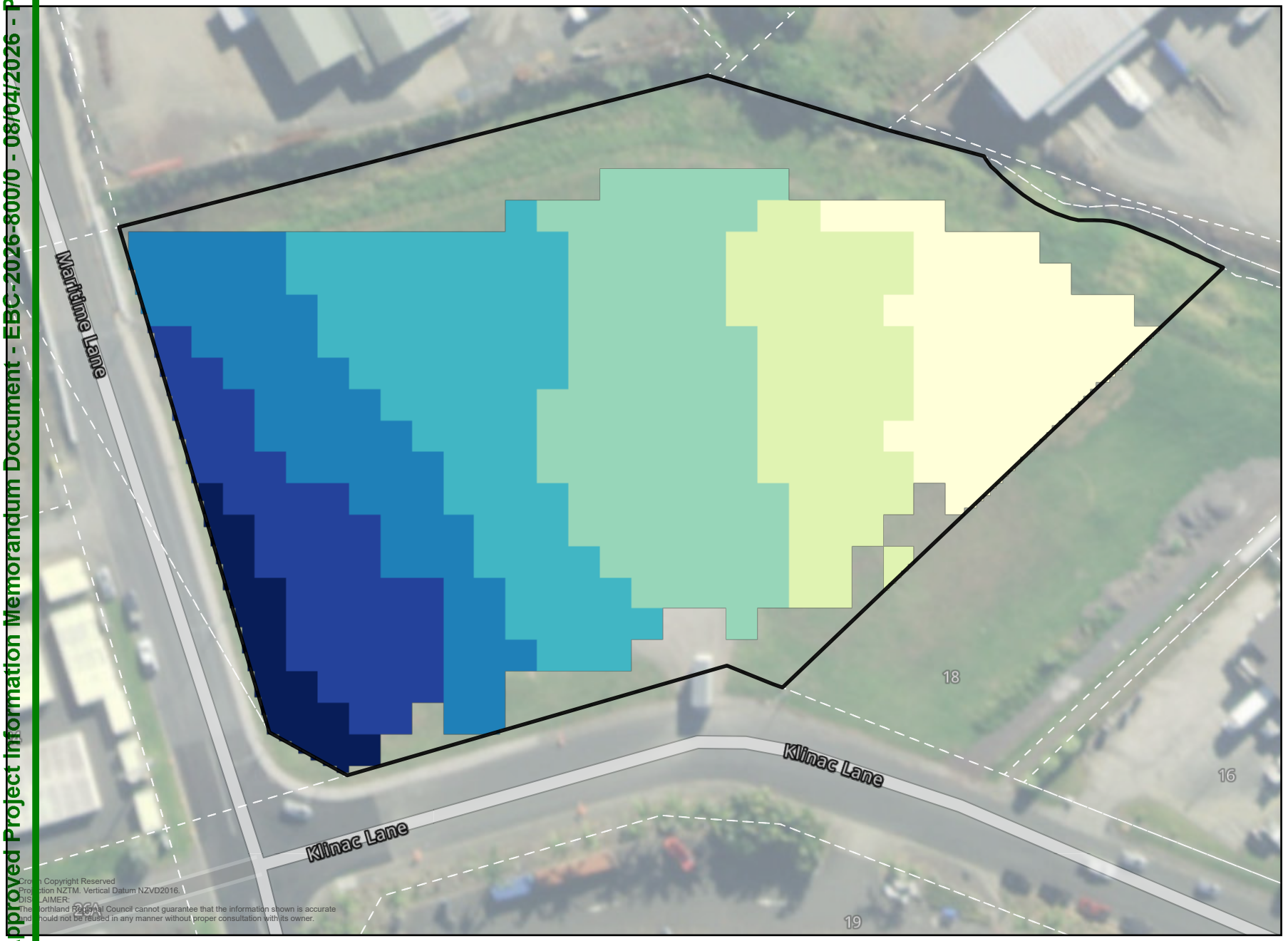
0 12.5 25 50 75 m

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River Flooding

50 Year



Maximum	Minimum
77.88 m	76.54 m

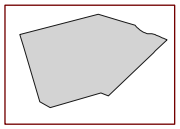
Max Min flood levels are for raster extent shown on the map

50 Year

m NZVD

- 76.54 - 76.74
- 76.74 - 76.94
- 76.94 - 77.14
- 77.14 - 77.34
- 77.34 - 77.54
- 77.54 - 77.74
- 77.74 - 77.94

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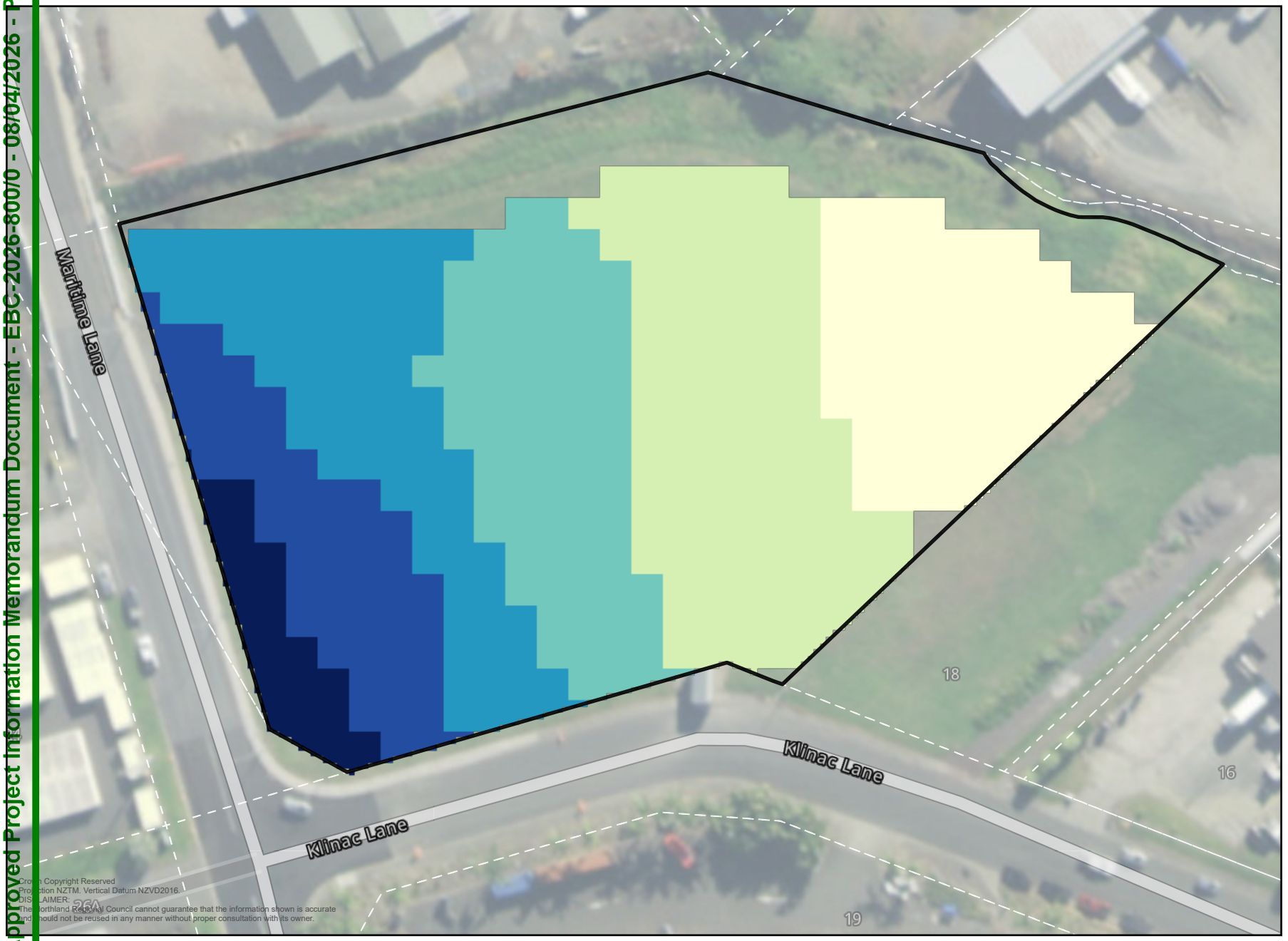
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Report Reference:

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River Flooding

100 Year + CC



Maximum	Minimum
77.98 m	76.79 m

Max Min flood levels are for raster extent shown on the map

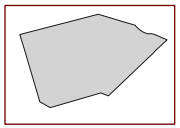
100 Year + CC

m NZVD

- 76.79 - 76.99
- 76.99 - 77.19
- 77.19 - 77.39
- 77.39 - 77.59
- 77.59 - 77.79
- 77.79 - 77.99

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Report Reference: 20260302_111622

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Disclaimers

Our modelling disclaimers are linked below:
https://www.nrc.govt.nz/media/ko2dkgxn/coastal-hazard-maps-disclaimer-june-2017.pdf
https://www.nrc.govt.nz/media/cqnnw12y/flood-map-disclaimer-2021.pdf

Our regionwide modelling reports are linked below:
https://www.nrc.govt.nz/environment/river-flooding-and-coastal-hazards/river-flooding/river-flood-hazard-maps/regionwide-river-catchments-analysis-technical-reports

ARE YOU FLOOD READY?



01

Know your risk

Check what potential flood risks and other hazards that may impact your property.

The Natural Hazards Portal is a great place to start. It's a 'one-stop-shop' of information related to natural hazards within our region: www.nrc.govt.nz/environment/natural-hazards-portal

The Environmental Data Hub provides river level and flow data, as well as warning levels, rainfall data, water quality, and more: www.nrc.govt.nz/environment/environmental-data/environmental-data-hub

02

Have a plan

Make sure you have an evacuation plan, emergency kit and important phone numbers ready. Check out: https://getready.govt.nz/en/prepared/ for tips on how to get ready.

03

Stay up to date

In a civil defence emergency situation, follow the updates on the Northland CDEM Group's Facebook page: www.facebook.com/civildefencenorthland

Or follow updates from the embedded feed on the regional council website: www.nrc.govt.nz/civildefence

04

In an emergency

Remember, if life is threatened dial 111 to contact emergency services.

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Subject: RE: River Flood hazard, 20 Klinac Lane Waipapa
Date: Tuesday, 3 March 2026 at 2:56:54 PM New Zealand Daylight Time
From: Duty Building Officers
To: Paul Spooner
Attachments: image008.png, image009.png, image010.png, image011.png, image012.png, image013.png, image020.png

Hi Paul.

The minimum floor level is set by the FNDC Engineering Standards.

Habitable buildings floor heights set 500mm above 1% AEP flood level (100 year flood level)

Commercial buildings floor heights set 300mm above 1% AEP flood event

Regards,

Rachel

Duty Building Officers

dutybuildingofficers@fndc.govt.nz
Te Kaunihera o Te Hiku o te Ika | Far North District Council

Pokapū Kōrero 24-hāora | 24-hour Contact Centre 0800 920 029
fndc.govt.nz

From: Paul Spooner <Paul@spoonersolutions.co.nz>
Sent: Monday, 2 March 2026 3:53 pm
To: Planning Support <Planning.Support@fndc.govt.nz>; Building Support <Building.Group@fndc.govt.nz>
Subject: River Flood hazard, 20 Klinac Lane Waipapa

CAUTION: This email originated from outside Far North District Council.
Do not click links or open attachments unless you recognise the sender and know the content is safe.

Hi there
The NRC have provided modelling for the above site, declaring the river floor levels for 10, 50 and 100 year events.
Can you please advise what the minimum floor height is required to be above a flood level?
The proposed use of future buildings on the site is retail.
NRC have advised that the minimum floor level is something that FNDC sets.

Regards

Paul.

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Spooner architectural solutions

https://spoonersolutions.co.nz/ I p. 027 289 1221 PO Box 10 Kerikeri 0245

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Subject: REQ 630584 Spooner Architecture River flood hazard levels 20 Klinac Lane Waipapa
Date: Monday, 2 March 2026 at 3:06:30 PM New Zealand Daylight Time
From: Anna Talbot
To: Paul Spooner
Attachments: Outlook-hd4tqves.png, Outlook-lv0u0i5a.png, Outlook-bc3rdc1q.png, Outlook-pwkn2kyg.png, Outlook-3eje1lfh.png, Outlook-2viu1d5o.png, FLR_7315854.pdf

Kia ora Paul,

Attached is a flood level report for 20 Klinac Lane, Waipapa which displays the priority river flood levels in 0.2m intervals. It will give the maximum and minimum river flood level found for each event (10yr, 50yr and 100yr CC) within the property's boundary.

As for the minimum floor levels, these are set by the district council.

Our modelling disclaimers are linked below:
Coastal Flood Hazard Disclaimer
River Flood Map Disclaimer

Please let me know if you have any questions.

Ngā mihi,

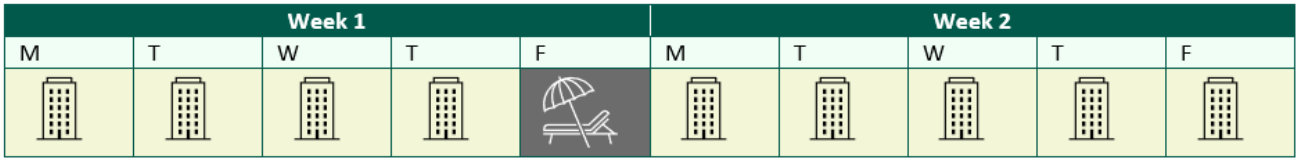
Anna Talbot
Natural Hazards Analyst
Northland Regional Council » Te Kaunihera a rohe o Te Taitokerau

Mobile: 027 251 3731

Northland REGIONAL COUNCIL
Te Kaunihera ā rohe o Te Taitokerau

P 0800 002 004 » **W** www.nrc.govt.nz

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INITIA

GEOTECHNICAL SPECIALISTS

WAIPAPA CENTRE LIMITED

PROPOSED NEW RETAIL BUILDINGS: 20 KLINAC LANE, WAIPAPA

GEOTECHNICAL INTERPRETATIVE REPORT

INITIA REF P-003194 REV B

APRIL 2026

Your Report Summary

This summary outlines the principal geotechnical issues, design considerations and advice for the proposed retail buildings at 20 Klinac Lane, Waipapa, and is intended for our client, Waipapa Centre Limited. It is important that all designers and constructors refer to relevant sections in the main body of the report for further detail.

Geotechnical Consideration	Summary Advice/Recommendations
Ground Conditions & Geology	The site is underlain by topsoil and/or existing fill over soft to very stiff Late Quaternary alluvial and colluvial silts and clays. Basalt of the Kerikeri Volcanic Group underlies these soils at depths ranging from less than 1 m to over 14 m bgl. Soil depths are greatest at southern site of Building 3. The basalt flow appears to be discontinuous in this area, and the site has been infilled with a thick deposit of low strength alluvium.
Groundwater	Groundwater was measured at 0.8–2.2 m bgl. Levels are likely influenced by the adjacent Whiriwhiritoa Stream.
Site seismicity & liquefaction susceptibility	A site Subsoil Class C is recommended for seismic design of the buildings. This is based on an assumption that there is at least 3 m of soil present beneath each building (including beneath the basalt rock, where this is present at near surface levels). Liquefaction risk is negligible and no specific liquefaction design is required.
Earthworks	With reference to proposed development plans, between 0.3 and 1.0 m of fill is required to form building platforms. All topsoil, uncontrolled fill, and soft or organic materials must be stripped and removed. The prefill subgrade should be inspected and approved by the geotechnical engineer prior to filling. Fill related settlement of up to 100 mm may occur where 1 m of fill is placed in the area of the site where the basalt rock is absent, at Building 3 (refer Figure 3194-G01). The fill induced settlement is likely to occur over a period of up to 12 months.
Settlements	Settlements from the combined fill and building surcharges – in the area where the upper basalt is absent (refer Figure 3194-G01) - are expected to exceed the tolerances for buildings of this nature. Therefore, ground improvement (preloading) will be required for Building 3. Settlements for Buildings 1 and 2 are estimated within acceptable limits (10–30 mm) and no mitigation is expected to be required.
Foundations	Shallow foundations are expected to be suitable for all three buildings. However preloading will be required prior to construction for Building 3.
Subgrade conditions – Floor slab and pavements	A subgrade CBR of 3% can be assumed for design of floor slabs bearing on grade and pavements. Subgrades must be protected from trafficking and poor weather during construction.

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1. Introduction

1.1 General

This report has been prepared to provide geotechnical advice and recommendations for design and consenting of the proposed retail building development at 20 Klinac Lane, Waipapa. This report is intended to support all design and consenting (Resource and Building Consent) stages for the project.

1.2 Proposed Development

Based on the current architectural drawings[1], the proposed development comprises the construction of three new single storey retail buildings with associated carpark/canopy and paved driveway. Building 1, in the southwestern corner of the site is proposed with Floor Level (FL) at RL 78.09 m and a building area of 800 m^2 (20 m x 40 m). Building 2 and Building 3 are located at northwestern and eastern parts of the site, respectively, with a proposed FL at RL 78.09 m and RL 77.49 m. Both Building 2 and Building 3 have a proposed building area of 560 m^2 (20 m x 28 m).

Car parking and access roads are proposed between the building locations and around site perimeter.

A plan of the proposed development is presented in Figure 1-1 below.

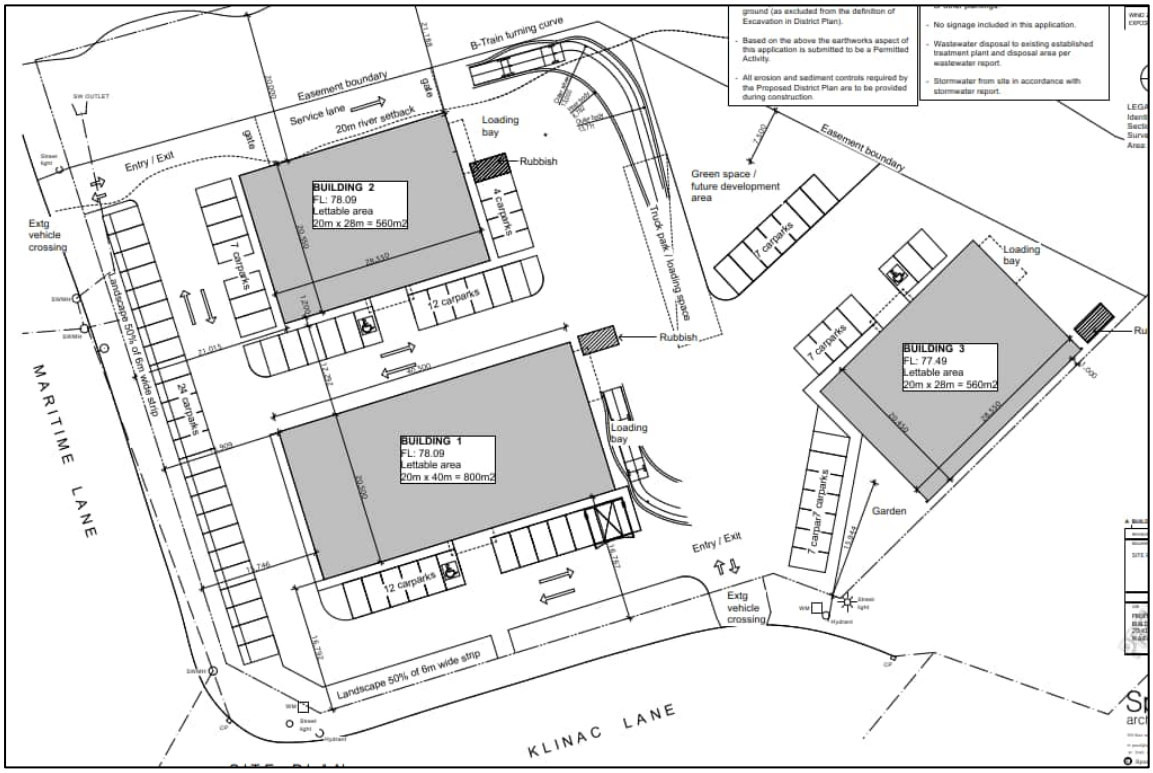


Figure 1-1: Site plan of proposed retail buildings

Based on the proposed floor levels and available local council GIS data, fill is likely required to be required to lift site levels to design subgrade level. Fill depths are expected to range from approximately 0.3 m to 1.0 m.

The buildings are proposed to comprise portal frame structures supported on strip footings (edge thickening) and floor slabs on grade.

[1] Proposed New Retail Buildings, 20 Klinac Lane, Waipapa. Spooner Architectural Solutions. Dated 10/04/2026.

2. Site Overview

2.1 Site Description

The project site is located at 20 Klinac Lane, Waipapa with a total site area of approximately 1.22 hectares. The property is located in a commercial/industrial properties area, and bounded by Maritime Lane and Klinac Lane to the west and south, respectively. The Whiriwhiritoa Stream runs along the northern site boundary. A vacant property is present to the southeast. Figure 2-1 presents the site boundary, pertinent features, and council Lidar contours.

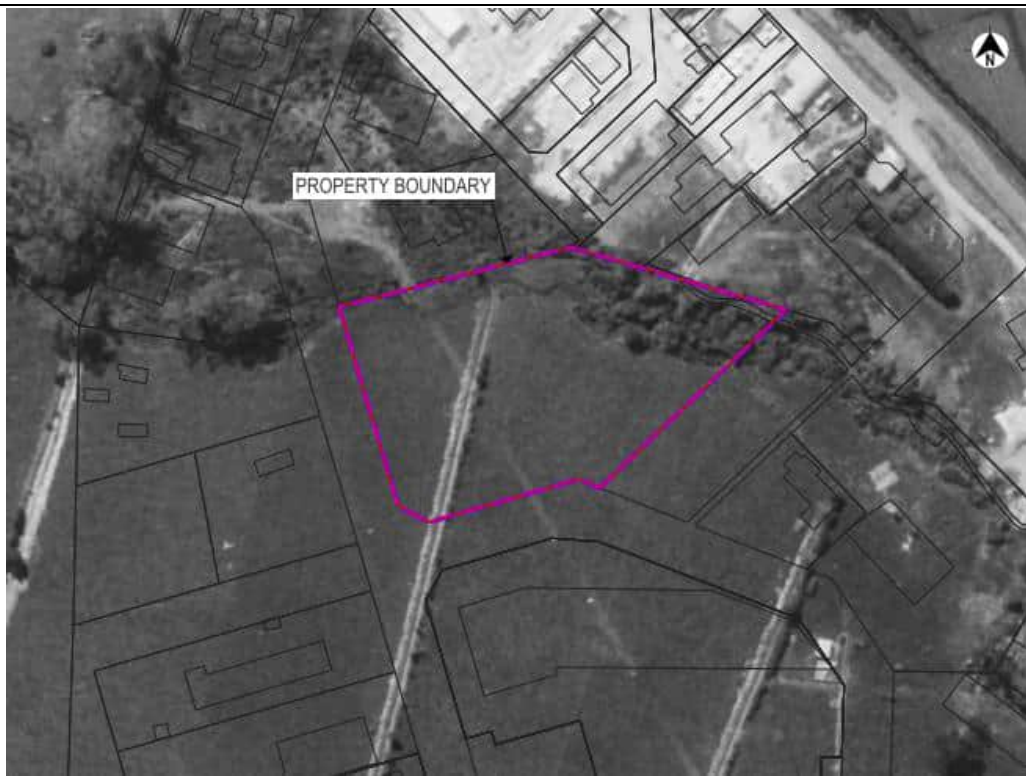
Topography at the site is very gently sloping downwards northeast, from approximately RL 78 m at southwestern corner, to approximately RL 76 m at the northern boundary. The stream has an invert level of approximately RL75 to 73.5 m adjacent to the northern boundary, grading down to the east.

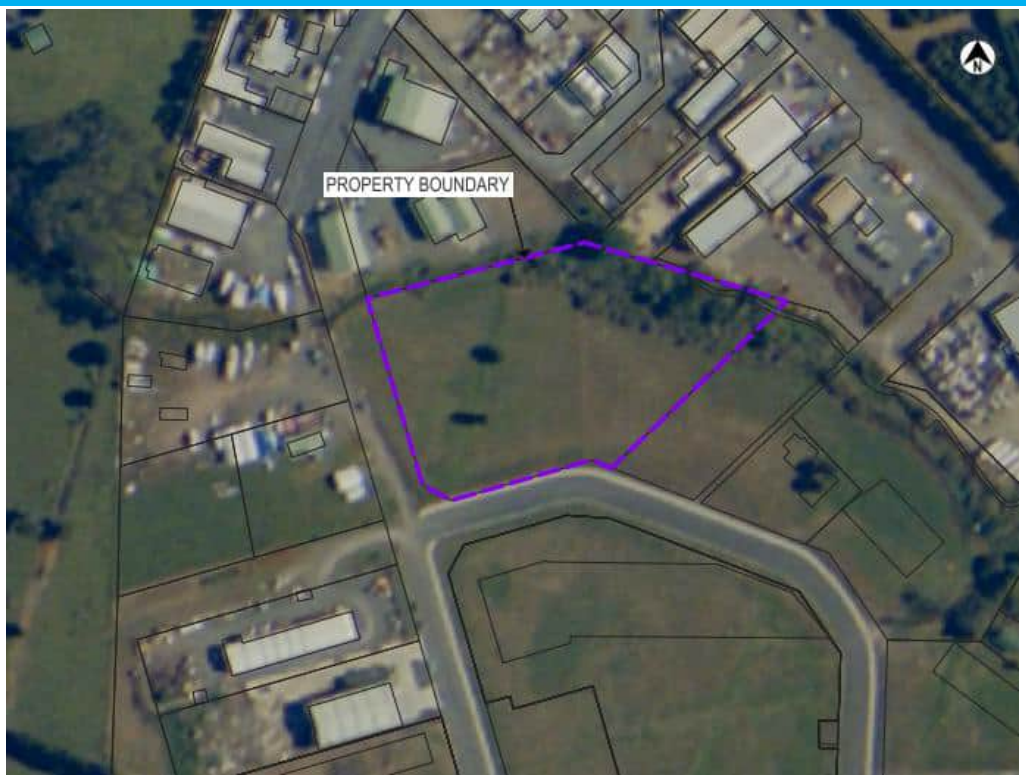


Figure 2-1: Site Location and Pertinent Features

2.2 Historic Imagery Review

Based on a review of historic aerial photographs sourced from Retrolens and Basemap records from 1953 up to now, the site remained undeveloped until sometime in 2020s. Prior to this period, the land was utilised for agricultural purposes. The middle southern site was repurposed for use as a shipping container yard around 2020s. Refer below for a summary of relevant historical aerial photographs.

Date & Description	Historical Aerial Photography
1953	 The sites has not been developed and appears to be mainly in use for agricultural purposes.
1981-1982	 A farm track is present. Northern neighbouring sites have been developed with buildings.

Date & Description	Historical Aerial Photography
2005	 Klinac Lane is formed and surrounding land is significantly more developed.
2020s	 A gravel hard standing area has been formed in the centre of the site. Land to the east and south is now developed.

2.3 Published Geology

Based on a review of the published geological map of the area[2] (see Figure 2-2) the site is inferred to be underlain by Kerikeri Volcanic Group basalt. The material typically comprises basalt lava, volcanic plugs and minor tuff. Early Pleistocene to Middle Pleistocene estuary, river and swamp deposits is mapped approximately 450 m south of the site.

The site-specific investigations generally encountered clayey SILT alluvium overlying basalt rock.

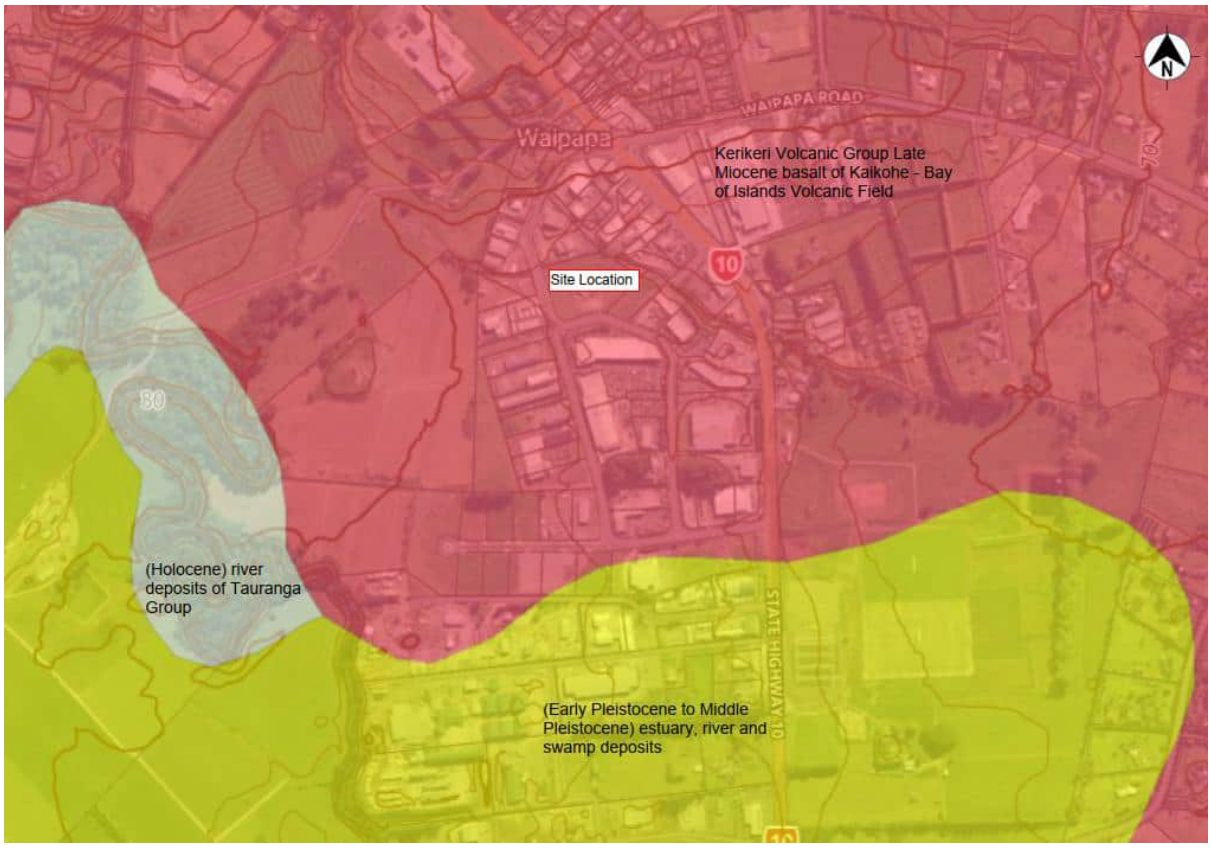


Figure 2-2: Published Geological Map of the area

[2] GNS Science: New Zealand Geology Web Map – https://data.gns.cri.nz/geology/

3. Geotechnical Investigations

3.1 NZTA Historical Investigations

New Zealand Transport Agency (NZTA) conducted site investigations for the Whiriwhiritoa Stream crossing located at northwestern corner of the project site[3]. These site investigations were carried out by WSP Ltd on the 2nd and 3rd of September 2019. The site investigation included:

- 4 No. Cone Penetration Tests (referred to as CPT1 to CPT4) to refusal at 2.2 m to 3.0 m bgl.
- 1 No. Machine Borehole (referred to as BH19-01) undertaken to 10 m bgl.

The results of the investigation confirmed the presence of alluvial deposits. The recorded composition and density are variable with depth. Basalt of the Kerikeri Volcanic Field was encountered at depth ranging from 2.3m to 3.0 m bgl.

Groundwater level was recorded at 1.0 m bgl in the machine borehole.

3.2 Initia Historical Investigations

Initia undertook site investigations for a previously proposed development on the site between November 2022 and June 2023, which included:

- 5 No. hand auger undertaken up to 4 m below ground level (referred to as HA01 to HA05)
- 8 No. Cone Penetration Tests (referred to as CPT01 to CPT08) to refusal at 1.2 m to 6.3 m bgl or target depth of 15 m bgl.
- 6 No. Scala Penetrometer tests up to 0.3 m in the storage yard area (referred to as SC1)

3.3 Initia Supplementary Investigations

Initia undertook a supplementary site investigations at the south eastern site of Building 1 and south western site of Building 3 in April 2026, which included 7 No. Cone Penetration Tests (referred to as CPT101 to CPT107) to refusal at 2.5 m to 14.1 m bgl. The purpose of the supplementary investigations was to further evaluate the area of the site where the upper layer of basalt rock is discontinuous.

All investigations were supervised by a qualified Initia geotechnical engineer / engineering geologist. All recovered soils were logged in accordance with the New Zealand Geotechnical Society (NZGS) guidelines.

Investigation locations are presented on Figure 3194-G01 in Appendix A and the investigation logs are presented in Appendix B. The investigations are summarised in Table 3-1 below.

[3] Whiriwhiritoa Stream Crossing Geotechnical Factual Report, Ref: GS 2019, WSP Opus Ltd, dated 6th September 2019.

Table 3-1: Summary of Historical Investigations.

Investigation ID	Source & Date	Investigation Type	Co-ordinates (NZTM)[1]		Ground Surface Elevation[2] (m RL)	Termination Depth (m BGL)
			Easting (mE)	Northing (mN)		
CPT1	WSP 09/2019	Cone Penetration Test	1683393	6103467	77.7	2.4
CPT2		Cone Penetration Test	1683389	6103464	77.7	2.2
CPT3		Cone Penetration Test	1683385	6103481	78.3	3.0
CPT4		Cone Penetration Test	1683391	6103486	78.2	2.4
BH19-01		Machine Auger Borehole	1683391	6103466	77.7	10.0
CPT01	Initia 11/2022 - 06/2023	Cone Penetration Test	1683428	6103395	77.9	3.1
CPT02		Cone Penetration Test	1683416	6103442	77.5	1.5
CPT03		Cone Penetration Test	1683472	6103464	76.8	2.0
CPT04		Cone Penetration Test	1683520	6103445	76.7	1.2
CPT05		Cone Penetration Test	1683503	6103411	77.1	6.3
CPT06		Cone Penetration Test	1683496	6103439	76.9	13.8
CPT07		Cone Penetration Test	1683441	6103427	77.5	2.7
CPT08		Cone Penetration Test	1683438	6103459	77.1	0.9
HA01		Hand Auger Borehole	1683426	6103397	77.8	3.5
HA02		Hand Auger Borehole	1683420	6103437	77.5	1.0
HA03		Hand Auger Borehole	1683471	6103463	76.8	3.8
HA04		Hand Auger Borehole	1683520	6103446	76.7	1.5
HA05		Hand Auger Borehole	1683505	6103410	77.1	4.0
SC1		Scala Penetrometer Test	-	-	-	-
CPT101	Initia 04/2026	Cone Penetration Test	1683468	6103417	77.3	4.9
CPT102		Cone Penetration Test	1683464	6103441	77.1	3.8
CPT103		Cone Penetration Test	1683507	6103445	76.8	2.5
CPT104		Cone Penetration Test	1683511	6103416	77.1	7.0
CPT105		Cone Penetration Test	1683519	6103428	76.9	14.1
CPT106		Cone Penetration Test	1683499	6103433	77.0	5.8
CPT107		Cone Penetration Test	1683451	6103416	77.5	3.3

Note 1: Co-ordinate system – NZTM 2016. NZTA test location coordinates extracted from WSP Opus factual report, Initia test between November 2022 and June 2023 location coordinates determined using a GPS unit with an estimated horizontal accuracy of +/- 500 mm, Initia test in April 2026 location coordinates determined from proposed locations

Note 2: Datum – NZVD 2016. Ground surface elevations of NZTA test locations extracted from WSP Opus factual report, ground surface elevations of Initia tests location determined from existing contours based on recorded/inferred coordinates.

4. Subsurface Conditions

4.1 General

The geotechnical model presented in this report is based on available information obtained from both historical and current geotechnical investigations at point locations by Initia and WSP. The nature and continuity of the subsoil conditions away from the investigation locations are inferred and it must be appreciated that the actual soil conditions may vary from the assumed model.

4.2 Stratigraphy

The results of the historical geotechnical investigations indicate that the site is underlain by the following geological units, in order of increasing age (youngest to oldest):

- **Topsoil** and/or **Existing Fill**; overlying
- **Late Quaternary alluvial and colluvial soils;** overlying
- **Kerikeri Volcanic Group Basalt.**

Geological cross sections are presented on Figure 3194-G10 in Appendix A.

As presented on Figure 3194-G01, there is an area of deeper alluvial soils present in the eastern area of the site, extending beneath Building 3. This is inferred to be an area between two discontinuous surface basalt flows. A deeper basalt rock layer is inferred below the upper layer at a depth of approximately 14m below ground level. The extent of this historical feature is inferred on Figures 3194-G01 and G10 in Appendix A, based on currently available investigation data.

A detailed description of the geological units is presented in Section 4.3 below with a summary of the site stratigraphy, geological units and in situ test results presented in Table 4-1 to Table 4-3.

4.3 Soil Units

4.3.1 Topsoil and Existing Fill

A surface layer of topsoil, generally 0.2 m to 0.3 m in thickness, was encountered across the site. The topsoil generally consists of dark brown SILT with minor clay.

At the southern site where storage yard was present, hardfill materials are present, extending to at least 0.4 m bgl. These materials likely comprise compacted gravels.

4.3.2 Late Quaternary Alluvium and Colluvium

Below the topsoil and / or fill, the site is underlain by the Late Quaternary alluvial and colluvial soils. These soils are variable with depth and strength and comprise interbedded layers of clay/silt, sandy silt and silty sand materials. The alluvial and colluvial deposits have been sub-divided into sub-units based on composition and density as follows:

- **Unit 1A:** This sub-unit predominantly comprises interbedded stiff to hard silt and clay. Undrained shear strengths range from 49 kPa to UTP (Unable to Penetrate) and cone tip resistance, q_c varies from 0.5 MPa to greater than 7 MPa.

- **Unit 1B:** This unit is inferred to comprise soft to firm silt and clay with thin lense loose silty sand. This unit has a typical CPT cone tip resistance q_c of 0.2-0.8 MPa.

The alluvium and colluvium soils are thick in the south eastern quadrant of the site but appear to be shallow elsewhere (1-2 m thick, overlying basalt).

4.3.3 Kerikeri Volcanic Group Basalt

Basalt rock of unknown thickness, quality, and strength underlies the alluvial and colluvial soils across the site. Its presence has been inferred from refusal conditions encountered in both hand augers and cone penetration tests (CPTs); however, the rock was not directly appraised on site by core sampling but was visually appraised in the NZTA machine borehole BH19-01 (north western corner of the site) at 2.3 m depth. Basalt boulders and outcrops were also observed in the stream bank and bed during our site visit.

Given the locations of the proposed buildings, and the spatial variability of the overlying alluvial and colluvial soils and depth to basalt, the site stratigraphy and in situ test results are summarised for each below.

Table 4-1: Summary of site stratigraphy and in situ testing at proposed Building No 1 (Southwest).

Geological Unit	Soil/Rock Type	Depth to Top of Unit (m, bgl)	Elevation to top of unit (m RL)	Typical layer Thickness (m) [mean]	In Situ Strength Parameters Range [Typical value]	
					Su (kPa)	CPT q_c (MPa)[1]
Topsoil/Existing Fill	*SILT with minor clay and / or GRAVELs*	0.0	76.8-77.9	0.2-0.4 [0.3]	-	1.0-30 [5.0]
Late Quaternary Alluvium and Colluvium	***Unit 1A:** Stiff to very stiff clayey SILT, SILT and silty CLAY*	0.2-2.7	74.6-77.7	0.8-3.0 [1.6]	63-230 [70]	0.4-3.0 [1.0]
	***Unit 1B**: Soft to firm CLAY and silty CLAY, with thin lenses loose silty SAND*	0.8-2.5	75.0-76.5	0.6-2.4 [1.4]	-	0.1-1.0 [0.4]
Kerikeri Volcanic Group	*Highly to slightly Weathered Basalt*	0.9-4.8	72.5-76.6	Unproven	-	>25

Table 4-2: Summary of site stratigraphy and in situ testing at proposed Building No 2 (Northwest).

Geological Unit	Soil/Rock Type	Depth to Top of Unit (m, bgl)	Elevation to top of unit (m RL)	Typical layer Thickness (m) [mean]	In Situ Strength Parameters Range [Typical value]	
					Su (kPa)	CPT q_c (MPa)[1]
Topsoil/Existing Fill	*SILT with minor clay and / or GRAVELs*	0.0	76.8-77.7	0.2-0.4 [0.3]	-	

Geological Unit	Soil/Rock Type	Depth to Top of Unit (m, bgl)	Elevation to top of unit (m RL)	Typical layer Thickness (m) [mean]	In Situ Strength Parameters Range [Typical value]	
					Su (kPa)	CPT q_c (MPa)[1]
Late Quaternary Alluvium and Colluvium	***Unit 1A:*** *Stiff to very stiff clayey SILT, SILT and silty CLAY*	0.2-0.3	76.6-77.5	0.6-1.3 [0.9]	94-165 [100]	0.4-3.0 [1.0]
	Unit 1B*: Soft to firm CLAY and silty CLAY, with thin lenses loose silty SAND*	0.6-1.3	75.8-76.7	0.9-2.4 [1.4]	-	0.2-0.6 [0.4]
Kerikeri Volcanic Group	*Highly to slightly Weathered Basalt*	0.8-3.4	73.4-76.6	Unproven	-	>25

Table 4-3: Summary of site stratigraphy and in situ testing at proposed Building No. 3 (Southeast).

Geological Unit	Soil/Rock Type	Depth to Top of Unit (m, bgl)	Elevation to top of unit (m RL)	Typical layer Thickness (m) [mean]	In Situ Strength Parameters Range [Typical value]	
					Su (kPa)	CPT q_c (MPa)[1]
Topsoil/Existing Fill	*SILT with minor clay and / or GRAVELs*	0.0	76.7-77.1	0.2-0.4 [0.3]	-	
Late Quaternary Alluvium and Colluvium	***Unit 1A:*** *Stiff to very stiff clayey SILT, SILT and silty CLAY*	0.2-4.0	72.9-76.9	0.7-10.2 [3.1]	49-230 [70]	0.4-15.0 [1.0]
	Unit 1B*: Soft to firm CLAY and silty CLAY, with thin lenses loose silty SAND*	0.9-3.0	74.0-76.2	1.0-4.6 [2.3]	-	0.1-1.2 [0.4]
Kerikeri Volcanic Group	*Highly to slightly Weathered Basalt*	1.0-14.0	62.9-75.7	Unproven	-	>25

4.4 Groundwater

Groundwater was encountered at 0.8 m bgl to 2.2 m bgl (RL 74.6 m to RL 76.7 m) during the site investigations. The groundwater measurements are summarised in Table 4-4 below.

Given the site is situated above and adjacent to the Whiriwhiritoa Stream which runs along the northern site boundary, the groundwater levels are likely to be governed by water levels in the stream. Measured water levels are therefore likely to be perched.

Table 4-4: Groundwater level measurements

Borehole ID	Depth to Groundwater (m bgl)	Elevation of Groundwater (m RL)
CPT1	-	-
CPT2	-	-
CPT3	-	-
CPT4	-	-
BH19-01	1.0	76.7
CPT01	1.4	76.5
CPT02	1.0	76.5
CPT03	0.9	75.9
CPT04	0.9	75.8
CPT05	1.1	76.0
CPT06	1.0	75.9
CPT07	1.0	76.5
CPT08	0.8	76.3
HA01	1.4	76.4
HA02	-	-
HA03	0.9	75.9
HA04	0.9	75.8
HA05	1.1	76.0
CPT101	1.1	76.2
CPT102	1.5	75.6
CPT103	2.2	74.6
CPT104	1.1	76.0
CPT105	1.1	75.8
CPT106	1.0	76.0
CPT107	0.9	76.6

5. Geotechnical Considerations

5.1 General

The following geotechnical considerations are pertinent to the design and construction of the proposed development:

- Site seismicity/site subsoil class;
- Liquefaction susceptibility and consequential effects;
- Settlement due to fill and building loads;
- Foundation type and design parameters; and
- Subgrade strengths for floor slabs and pavements.

These geotechnical considerations are addressed in the following subsections.

5.2 Seismic Considerations

5.2.1 Subsoil Class

The site is underlain by varying depths of soft to very stiff Late Quaternary alluvial and colluvial deposits comprising silts and clays, which were proven to extend to depths of approximately 1.0 m to 14.0 m bgl during the investigations. Below these deposits, highly to slightly weathered basalt of the Kerikeri Volcanic Group is inferred to be present to unknown depths.

Based on the geotechnical investigations within and adjacent to each proposed building footprint, the site should be considered as site Subsoil Class C (Shallow Soil Site) in terms of NZS 1170.5:2004.

5.2.2 Geotechnical Seismic Design Parameters

Design peak ground accelerations for purposes of structural design have been assessed in accordance with the recommendations presented in MBIE Module 1 – Earthquake geotechnical engineering practice (November 2021) for Importance Level 2 (IL2) structures. A summary of the design PGAs is presented in Table 5-1 below.

Table 5-1: Summary of design peak ground acceleration (PGA)

Design Case	Return period Event	Design Life	Peak ground acceleration, PGA (g)	Effective Earthquake Magnitude (M_{eff})
SLS	25 years	50 years	0.03	5.8
ULS	500 years	50 years	0.19	6.5

5.3 Earthworks

5.3.1 General

From review of the preliminary architectural drawings provided and available site contours, it is understood that fill earthworks will be required to lift the site to the desired floor levels (FL) and site levels. Bulk fill depths are expected to range between 0.3 and 1.0 m above existing ground levels. Specific fill levels beneath the proposed building footprints are presented in Table 5-2 below.

Table 5-2: FL, EGL and required bulk fill depth for the proposed development.

Building No.	FL (m RL)	EGL (m RL) (1)	Proposed Fill Depths (m) (2)
Building 1	78.09	77.1 – 77.7	0.3 – 0.8
Building 2	78.09	76.9 – 77.5	0.4 – 1.0
Building 3	77.49	76.7 – 77.0	0.3 – 0.6

Notes:

(1) The levels are assumed in terms of the New Zealand Vertical Datum (NZVD) 2016.
(2) Assuming a slab thickness of 150 mm.

Prior to any bulk fill placement, the subgrade should be inspected by a geotechnical engineer, with a combination of proof rolling and shear vane testing to confirm ground conditions.

Should any localised soft spots/organics be identified, there will require undercutting and backfill with engineered fill.

5.3.2 Subgrade Preparation

It is not known whether the area of the site currently occupied by hardstanding was stripped of topsoil prior to placing the hardfill. Prior to placing any new fill in this area, it is recommended that a grid of shallow test pits be completed to assess the nature of the near surface soils. If topsoil and uncontrolled fill is identified beneath the hardfill, then the hardfill will need to stripped/removed to enable remnant topsoil and uncontrolled fill to be stripped and removed/remediated. All debris and vegetation should also be removed from the building site.

It is important that the stripped subgrade be inspected and approved by the supervising Geotechnical Engineer prior to placing any fill.

5.3.3 Subgrade Protection

The subgrade should not be exposed for any prolonged period and should be covered with a minimum of 100mm of granular fill such as GAP 65 or basecourse, as soon as possible following approval. The subgrade should also be graded, or temporary drainage should be installed to prevent ponding of stormwater.

If subgrade degradation occurs by either excessive drying resulting of desiccation shrinkage or excessive subgrade softening after a period of wet weather resulting in weakened soils, then it will be necessary to remediate the subgrade by either reworking or undercutting and replacing with compacted hardfill.

5.3.4 Fill Specification

It is anticipated that fill will need to be imported to site to lift site levels. The bulk fill earthwork can be completed using imported either cohesive fill or hardfill.

All fills should be placed in layers of a maximum of 200 mm compacted thickness and placed to an engineered specification. If dry, hardfill should be placed with some wetting to aid compaction and ensure the above criteria are met.

The following compaction criteria are recommended:

Hardfill Compaction Specification:

Clegg Hammer:	Minimum CIV:	25
	Average CIV:	28 (5 consecutive tests)

and

Maximum Dry Density – NDM: Minimum Dry Density 95%

Imported Cohesive Fill:

Undrained shear strength: Minimum Su: 120 kPa

Average Su: 140 kPa (5 consecutive tests)

and

Air voids: Maximum value 10%

Average value 8%

Testing should be undertaken on these materials at intervals agreed by the geotechnical engineer.

A batter not steeper than 1V:3H shall be maintained at the edge of the proposed fills. The batter shall be compacted to engineered standards and the surface be appropriately grassed or otherwise protected to prevent erosion.

It is recommended that the proposed fill source be approved by the geotechnical engineer prior to importing to site.

5.4 Liquefaction Potential

5.4.1 General

Liquefaction occurs when soil loses shear resistance under cyclic seismic loading (cyclic shear strains). For liquefaction to develop, the following conditions must be present:

- Material with the potential to densify under cyclic loading (typically loose sand and non-plastic silts).
- Saturated ground (soils located below the groundwater level).
- Sufficient cyclic shear loading (usually due to a seismic event).

5.4.2 Liquefaction Potential

A liquefaction triggering analysis for SLS and ULS design seismic events has been undertaken on the site-specific CPT data. The analysis was undertaken using the CLiq software package utilising the Boulanger and Idriss (2014) assessment method. The default Soil Behaviour Type Index cut-off I_c = 2.6 was adopted. A groundwater level of 1 m below the existing ground level was assumed for the analysis based on the measured groundwater level during investigations. The liquefaction analysis outputs are presented in Appendix C.

Due to the spatial variability of the site soils and varying basalt rock depths, CPTs within or nearby each building platform were adopted for the liquefaction analysis for each proposed building site. The CPTs adopted for the liquefaction analysis for each building are list in Table 5-2 below.

Table 5-3: CPTs adopted for liquefaction and settlement analysis for each building.

Building No.	CPTs
Building 1 (Southwest)	CPT01, CPT02, CPT07, CPT101, CPT102, CPT107
Building 2 (Northwest)	CPT02, CPT03, CPT07, CPT08, CPT102
Building 3 (Southeast)	CPT04-CPT06, CPT103-106

Effects of Proposed Earthworks

Based on the preliminary architectural plans and existing contours, fill of varying depth (0.3 m to 1.0 m) is required to form the platforms for the proposed buildings. The fill earthworks will be beneficial in reducing the liquefaction effects by increasing the crust thickness. This is further discussed below.

Liquefaction effects

To assess liquefaction consequences on the site we have referenced the following index parameters in accordance with MBIE Earthquake Geotechnical Engineering Practice Module 3 (2021):

- Liquefaction Potential Index (LPI) derived by Iwasaki et al. (1978);
- Liquefaction Severity Number (LSN) derived by Van Ballegooy et al (2013); and
- Liquefaction induced; one dimensional vertical reconsolidation settlement (index settlement) has been estimated using the methodology developed by Zhang et al. (2002)

Calculated liquefaction indices are presented in Table 5-4. These values have been compared with performance criteria outlined in Table 5.1 of the MBIE Earthquake geotechnical engineering practice Module 3.

Table 5-4: Summary of Liquefaction Analysis Index Parameters at Building 3

Design Case Scenario	LSN [Typical]	LPI [Typical]	Index Settlement [Typical] (mm)	Performance Level (MIBE Guidelines Module 3)
25-year (SLS)	<1	<1	<10	L0 (Insignificant)
500-year (ULS)(1)	1 – 6 [2]	<2	<25	L0 (Insignificant)
500-year (ULS)(2)	4 – 6 [5]	6 – 10 [8]	60 – 80 [70]	L1 (Mild) to L2 (Moderate)

Notes:

(1) The analyses are based on all CPTs except CPT06 and CPT105.
(2) The analyses are based on CPT06 and CPT105 only.

The analysis indicates negligible risk of liquefaction occurring under a SLS seismic event for all CPTs. Under ULS loading, the analysis indicates negligible risk of liquefaction for all CPTs except CPT06 and CPT105. Based on performance criteria, analysis of CPT06 and CPT105 indicates mild to moderate liquefaction effects under ULS loading. In addition, the liquefiable soils in CPT06 and CPT105 are at a depth of at least 6.0 m bgl. The consequential effects of any liquefaction to the proposed buildings are therefore likely to insignificant, due to the presence of a thick non-liquefiable crust.

Specific design for liquefaction effects is not required for the proposed buildings

5.4.3 Lateral Spread Risk

Lateral spreading is generally defined as horizontal displacement of blocks of material towards an open slope face (e.g., stream banks) as a result of the underlying soils losing strength during a liquefaction event. The presence of a continuous liquefiable layer of sufficient thickness is required for significant spreading to occur.

While the Whiriwhiritoa Stream, which runs along the northern boundary, presents a potential free face for lateral spreading, site investigations confirmed the presence of basalt rock outcropping at the stream bed and banks. The depth of the overlying alluvial and colluvial soils decreases toward the stream, resulting in a minimal thickness of soil in this area. Since there is no continuous liquefiable stratum extending to the free face, the risk of lateral spreading is considered unlikely.

5.5 Long Term Static Settlement Assessment

5.5.1 General

The site is underlain by moderately to highly compressible materials present at relatively shallow depths across most of the site (0.9 m to 2.2 m below current ground level). These materials are considered susceptible to long term static settlements under new surcharges. The main sources of potential ground settlements are as follows:

- Placement of fill to achieve the design levels;
- Self-weight of the floor slab.
- Floor slab live loads.

The primary and secondary settlements analyses were undertaken based on the historical investigations, using the software CPeT-IT, based on Boussinesq load distribution.

5.5.2 Load & Design Assumptions

The proposed building finished floor levels, existing ground levels and inferred bulk fill depths are presented on Table 5-2.

Table 5-5 below summarises the proposed building platform dimensions and floor loads assumed for settlement analyses.

Table 5-5: Settlement analysis assumptions – building floor slabs.

Building No.	Dimensions (1)	Dead Load (2)	Live Load (2)
Building 1	40 m (L) x 20 m (W)	4 kPa	5 kPa
Building 2	28 m (L) x 20 m (W)	4 kPa	5 kPa
Building 3	28 m (L) x 20 m (W)	4 kPa	5 kPa

Notes:

(1) Dimensions are based on the provided plans by Spooner Architectural Solutions, dated 20th March 2026.

(2) The dead load is based on assumption of 150 mm thick concrete slab and a unit weight for concrete of 25 kN/m^3, with a slab live load of 5 kPa assumed for retail buildings.

5.5.3 Settlement Assessment

As noted in Sections 4.3 and 5.4.2, the CPT profiles were adopted for settlement analysis for each building.

Consolidation settlement and secondary (creep) settlement was assessed over a period of 50 years (600 months) i.e., the design life of the proposed buildings. The estimated settlement results are presented below.

Table 5-6: Static settlement results for each building

Building No.	Estimated Total Settlement
Building 1 (Southwest)	10mm to 30mm
Building 2 (Northwest)	10mm to 20mm
Building 3 (Southeast)	10mm to 120mm (CPT05, CPT06)

For proposed Building 3, the largest total settlement is estimated to be in the order of 80mm to 120 mm (CPT05 and CPT06), which is likely beyond the acceptable limits for buildings of this type. Furthermore, differential settlements may be as steep as 1 in 100 to 1 in 200 given variability in ground conditions.

As Buildings 1 and 2 are sited over basalt rock, with a nominal capping layer of alluvium/colluvium, estimated total settlements for these building are within the acceptable limits. Therefore, these buildings do not require specific ground improvement to mitigate settlement risk.

To mitigate the long-term static settlement for Building 3, it is recommended that a preload be formed across the entire building footprint, following completion of bulk earthworks (i.e. once fill has been placed to design levels). Based on the currently available investigations data, a preload of 1 m height (above the design subgrade level) would need to be placed over the platform and maintained for a minimum hold period of 6 months prior to slab construction. Continuous settlement monitoring will be required during this period to verify that settlement rates have attenuated to acceptable limits.

Detailed design and detailing of the preload is required prior to commencement of these works.

5.6 Foundations

5.6.1 General

As discussed in Section 5.5, the estimated long-term static settlement for Buildings 1 and 2 are expected to be within the normal tolerances of buildings of this type, though this should be confirmed by the structural engineer.

Estimated settlements for proposed Building 3 exceed generally acceptable limits for buildings and therefore this building is to be preloaded.

On the basis of the above, shallow foundations with a floor slab bearing on grade is suitable for all Buildings (Buildings 1 and 2 without ground improvement, and Building 3 following ground improvement).

5.6.2 Shallow Foundations

The design bearing capacity values for shallow pad/strip foundations and raft foundations are presented in Table 5-7 below.

These values are based on the following assumptions:

i. For Building 3, foundations bearing on engineered cohesive fill or granular fill (following preloading).
ii. For Buildings 1 and 2, foundation bearing on natural Late Quaternary colluvial and alluvial soils, with typical undrained shear strengths of greater than 60 kPa.
iii. Any topsoil, soft, or unsuitable fill, organics, or other weak surficial materials identified at founding level is to be undercut and replaced with compacted hardfill or site concrete.
iv. Strip/pad foundations are embedded a minimum of 600 mm below finished ground level.
v. Raft foundations may be designed for a Class M in accordance with AS2870 if in cohesive material.

Table 5-7: Design Bearing Capacity for Shallow Footings

Geotechnical Ultimate Bearing Capacity (unfactored)	Design Bearing Pressure for ULS Design (Including a strength reduction factor of 0.5)	Allowable Bearing Pressure for SLS design Loads
300 kPa	150 kPa	100 kPa

During construction, foundation subgrade excavations should be observed and tested by a suitably qualified geotechnical engineer to confirm strengths are consistent with those assumed in the design.

5.7 Floor Slabs and Pavements

The subgrade for floor slabs at Building 3 is expected to consist of new engineered fill over consolidated alluvial soils (following preloading). The subgrade for the floor slab at Buildings 1 and 2 is expected to generally consist of new engineered fill. A subgrade CBR of 3% can be assumed for the design of the building slab.

For the majority of the proposed pavement area, the subgrade is expected to generally consist of natural colluvial and alluvial silt and clay, with typical undrained shear strengths of greater than 60kPa. A subgrade CBR of 3% can be assumed for the design of pavements. This assumes that all unsuitable material has been stripped and removed as part of site preparation.

It is noted that settlements of approximately 80 mm may occur following fill placement of up to 1 m in the area of deep alluvial/colluvial soils as indicated in the Figure 3194-G01. Pavements in this area should be designed/detailed for differential settlements, i.e. with a flexible pavement, allowance for settlement bowls in surface drainage design etc. Geogrid should also be considered in bulk fill placed to lift site levels in this area.

For pavement design within the storage yard area, as outlined in Section 5.3.2, if topsoil and uncontrolled fill is identified beneath the hardfill, then the hardfill will need to stripped/removed to enable remnant topsoil and uncontrolled fill to be stripped and removed/remediated.

It is important that the subgrade be protected from trafficking and disturbance during construction, particularly during the winter months and periods of poor weather. We therefore recommend that the subgrade be protected with a wearing layer of hardfill as soon as it has been exposed and approved.

Drainage should also be maintained to ensure water does not pond at the basecourse/subgrade interface during construction.

5.8 Further Work

5.8.1 Design and Pre-Construction

The completed structural drawing set should be provided to Initia for review, prior to submission for building consent. This is to confirm the advice and recommendations outlined in this report have been appropriately interpreted and detailed for consent and construction.

The preload for Building 3 is subject to detailed geotechnical analysis and detailing.

5.8.2 Construction Monitoring

During earthworks construction, geotechnical observation and testing should be undertaken to confirm that the ground conditions are consistent with those outlined in this report and upon which recommendations and advice are based. Geotechnical observation and monitoring are also likely to be required so that a Producer Statement – Construction Review (PS4) can be prepared to support the application for a code of compliance at completion of construction.

Construction monitoring and testing requirements are presented in Appendix D for the various stages of earthworks and construction. The detail in this table is provisional and should be confirmed and revised prior to construction when design has been completed.

6. Conclusions

The following conclusions and recommendations are made for the proposed retail building development at 20 Klinac Lane, Waipapa:

Site and Ground Conditions

1. The site is underlain by topsoil and/or existing fill (0.2–0.3 m thick), overlying Late Quaternary alluvial and colluvial soils comprising stiff to very stiff clayey silt and silt (Unit 1A) and soft to firm clay and silty clay with thin lenses of loose silty sand (Unit 1B). Highly to slightly weathered basalt of the Kerikeri Volcanic Group underlies these deposits at depths ranging from approximately 1.0 m to 14.0 m bgl, with significant spatial variability across the site.
2. The depth to basalt is greatest in the vicinity of CPT105 and CPT06, at the southern site of Building 3, where the upper basalt flow encountered elsewhere on site is discontinuous.
3. Groundwater was measured at 0.8 m to 2.2 m bgl (RL 74.6 m to RL 76.7 m) during the investigations. Groundwater levels are likely governed by the adjacent Whiriwhiritoa Stream and should be expected to fluctuate seasonally in response to rainfall and stream levels.

Seismic and Liquefaction

4. The site should be taken as Site Subsoil Class C (Shallow Soil Site) in accordance with NZS 1170.5:2004. Design seismic parameters are presented in Table 5-1.
5. Liquefaction risk is negligible. No specific liquefaction design is required for any of the three buildings.
6. Lateral spreading is considered unlikely, given the absence of a continuous liquefiable stratum extending to the stream bank.

Settlement

7. Total settlements from bulk filling and building loads are expected to be between 20 and 30 mm except at the eastern end of the site (refer Figure 3194-G01), including beneath Building 3, where there is up to 14 m of alluvial/colluvial soils.
8. Long-term static settlements of 80 mm to 120 mm are estimated at test locations CPT105 and CPT06 at Building 3. This magnitude of settlement is expected to exceed allowable tolerances for Building 3.
9. It is recommended that the Building 3 platform be improved (e.g. by preloading) prior to construction of the Building 3.

Ground Improvement — Building 3

8. Based on the available investigation data, a preload of approximately 1 m above design subgrade level is likely to be required, with a minimum hold period of 6 months. Continuous settlement monitoring would be required throughout the preloading period to verify that settlement rates have attenuated to acceptable levels before construction proceeds.
9. The preload is subject to detailed analysis and detailing.

Foundations

10. Shallow strip/pad or raft foundations are considered suitable for all three buildings, provided platform for Building 3 is ground improved.
11. A geotechnical ultimate bearing capacity of 300 kPa (150 kPa for ULS design) is recommended for all buildings.

Floor Slabs and Pavements

12. A subgrade CBR of 3% may be assumed for design of floor slabs and for general pavement areas across the site.
13. If fill is placed to form pavement levels to the north and west of Building 3, settlement is expected to occur. Flexible pavements are recommended, and allowance should be made in drainage design for settlement bowls.

7. Applicability

This report has been prepared for our client, Waipapa Centre Limited, with respect to the brief provided to us. The advice and recommendations presented in this report should not be applied to any other project or used in any other context without prior written approval from Initia Limited.

Report prepared by:



Hao Zhang
Geotechnical Engineer

Report reviewed by:



Nick Speight
Senior Geotechnical Engineer

Document Control Record

Report Title		Proposed New Retail Buildings: Geotechnical Interpretative Report		20 Klinac Lane, Waipapa	
Initia Project Reference		P-003194			
Client		Waipapa Centre Limited			
Revision	Date	Revision Detail	Author	Reviewer	Approved By
A	10-04-2026	First Issue	H. Zhang	N. Speight	N. Speight
B	27-04-2026	Update with supplementary investigations	H. Zhang	N. Speight	N. Speight
Current Revision		B			

Appendix A Figures

LEGEND

INITIA INVESTIGATIONS (APR 2026)

- CONE PENETRATION TEST — CPT101

INITIA INVESTIGATIONS (NOV 2022)

- HAND AUGER — HA01
- CONE PENETRATION TEST — CPT01

HISTORICAL INVESTIGATIONS

- CONE PENETRATION TEST (OPUS - SEP 2019) — CPT1
- MACHINE BOREHOLE (OPUS - SEP 2019) — BH19-01
- SITE BOUNDARY
- 0.5 EXISTING GROUND CONTOUR (0.5m INTERVAL)
- PROPOSED BUILDING EXTENT
- INFERRED AREA WHERE UPPER BASALT LAYER IS ABSENT

INFERRED AREA WHERE UPPER BASALT LAYER IS ABSENT

NOTES
1. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
2. COORDINATE DATUM: MT EDEN 2000
3. LEVEL DATUM: NEW ZEALAND VERTICAL DATUM 2016 (NZVD2016)
4. AERIAL IMAGE, PROPERTY BOUNDARY AND LIDAR CONTOUR TAKEN FROM LINZ DATA.
5. PROPOSED LAYOUT REFERENCED "BC03 SITE PLAN[20].pdf" DATED 2026.04.10

SCALE A3 1:750

0 10 20 30 40m

INFORMATION ONLY

Rev	Revision Description	Designed	Drawn	Checked
B	REVISED ISSUE (20/04/2026)	NS	JG	NS
A	FIRST ISSUE (10/04/2026)	HZ	GG	NS

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APPROVED:

DATE:

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WAIPAPA CENTRE LIMITED

20 KLINAC LANE, WAIPAPA

GEOTECHNICAL INVESTIGATION LOCATION PLAN

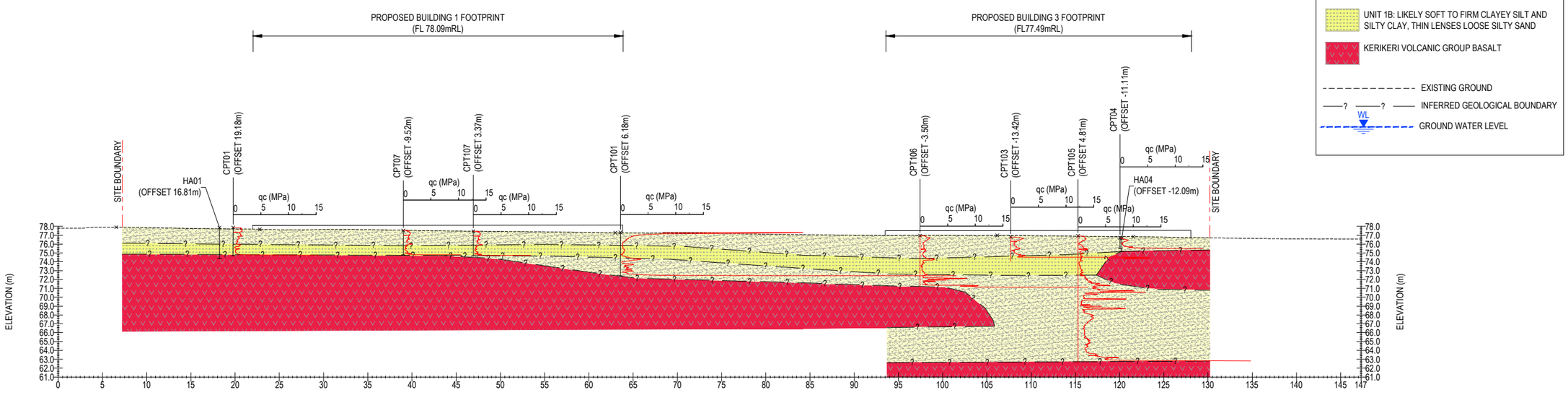
Initia Project ref: P003194

Figure Number 3194-G01

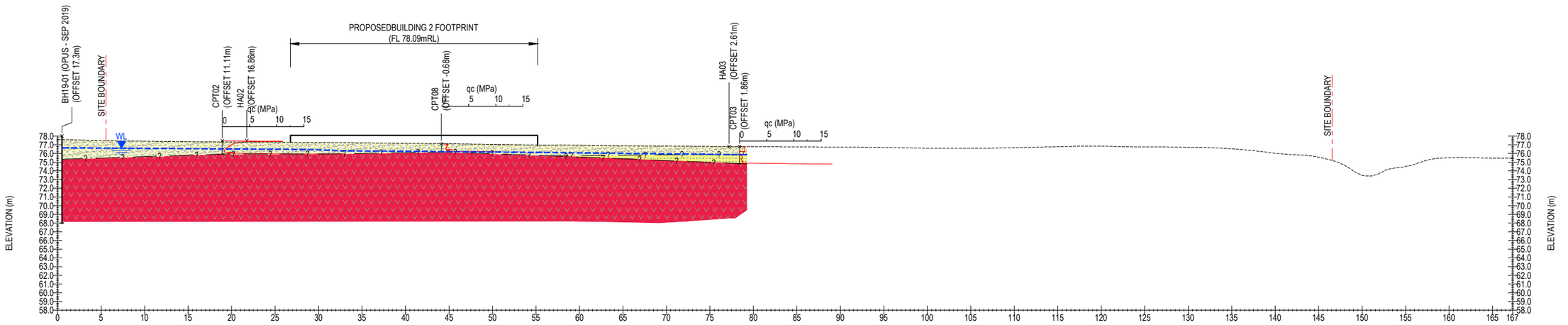
Revision B

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SCALE 1:500 (A3)



2 / G01 SECTION
SCALE 1:500 (A3)

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INFORMATION ONLY

Rev	Revision Description	Designed	Drawn	Checked
B	REVISED ISSUE (20/04/2026)	HZ	GG	NS
A	FIRST ISSUE (10/04/2026)	HZ	GG	NS

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WAIPAPA CENTRE LIMITED

20 KLINAC LANE, WAIPAPA

GEOTECHNICAL INVESTIGATION
GEOLOGICAL SECTION 1 AND 2

Initia Project ref: P003194
Figure Number 3194-G10
Revision B

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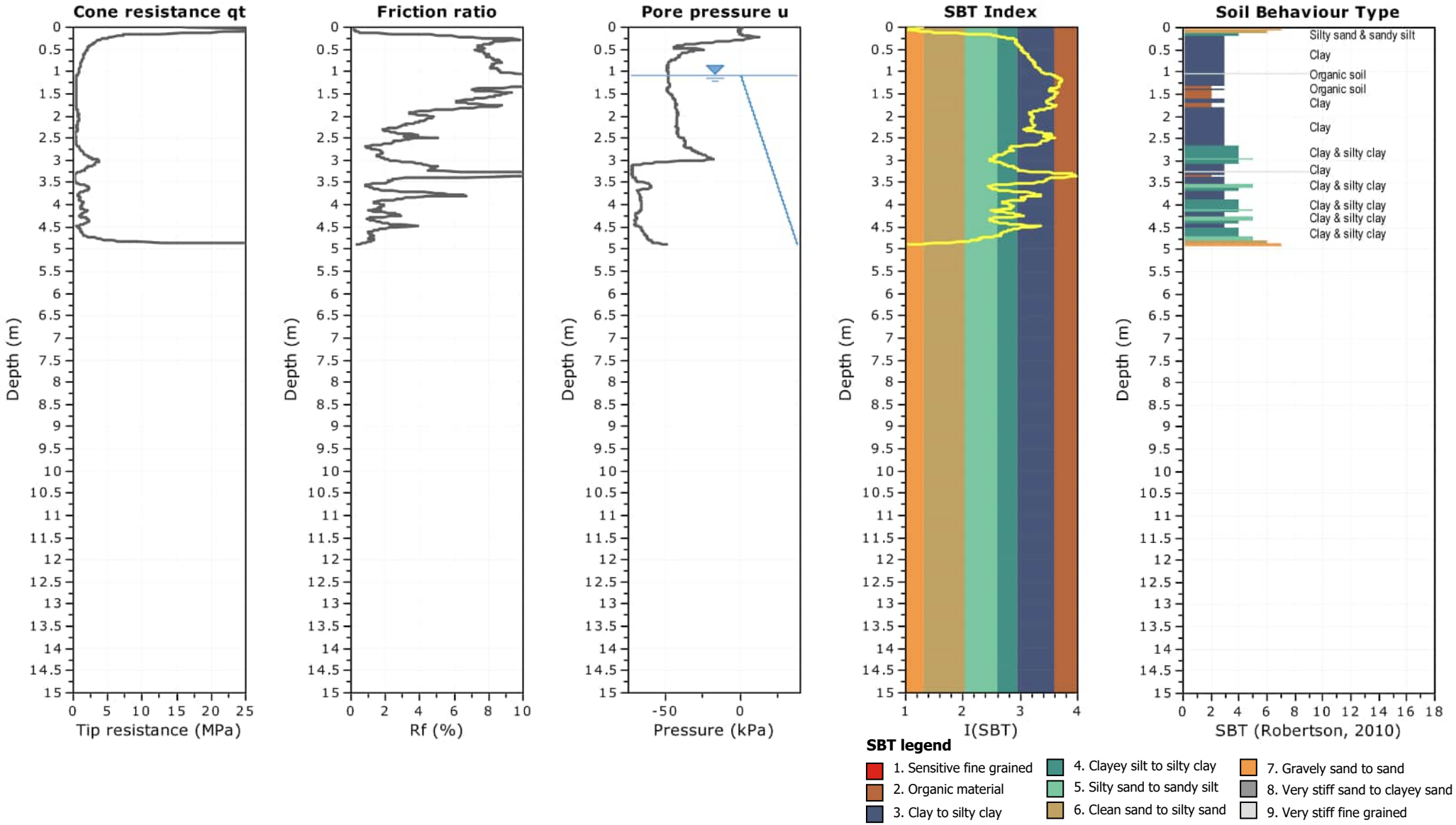
Appendix B Borehole and CPT Logs

Initia Site Investigation CPT Logs (04/2026)

Initia Limited
Geotechnical Specialists
Unit 6, Level 1, 114 St Georges Bay Road, Parnell, Auckland 1052
http://www.initia.co.nz

CPT: CPT101
Total depth: 4.90 m, Date: 19/04/2026
Surface Elevation: 0.00 m, Est. GWL: 1.10 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

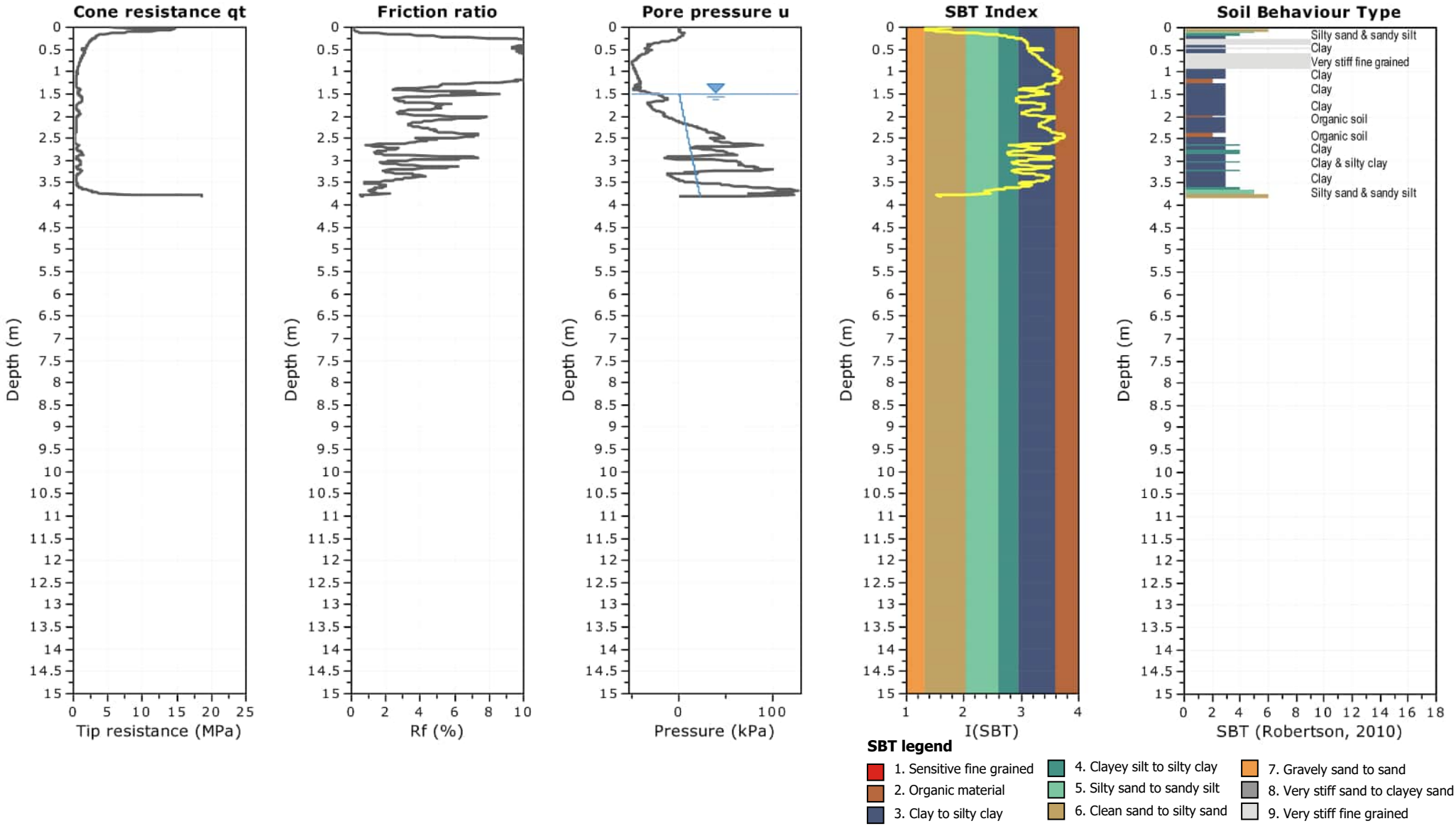
Project: **Waipapa Development**
Location: **P-003194**



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http://www.initia.co.nz

CPT: CPT102
Total depth: 3.80 m, Date: 19/04/2026
Surface Elevation: 0.00 m, Est. GWL: 1.50 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

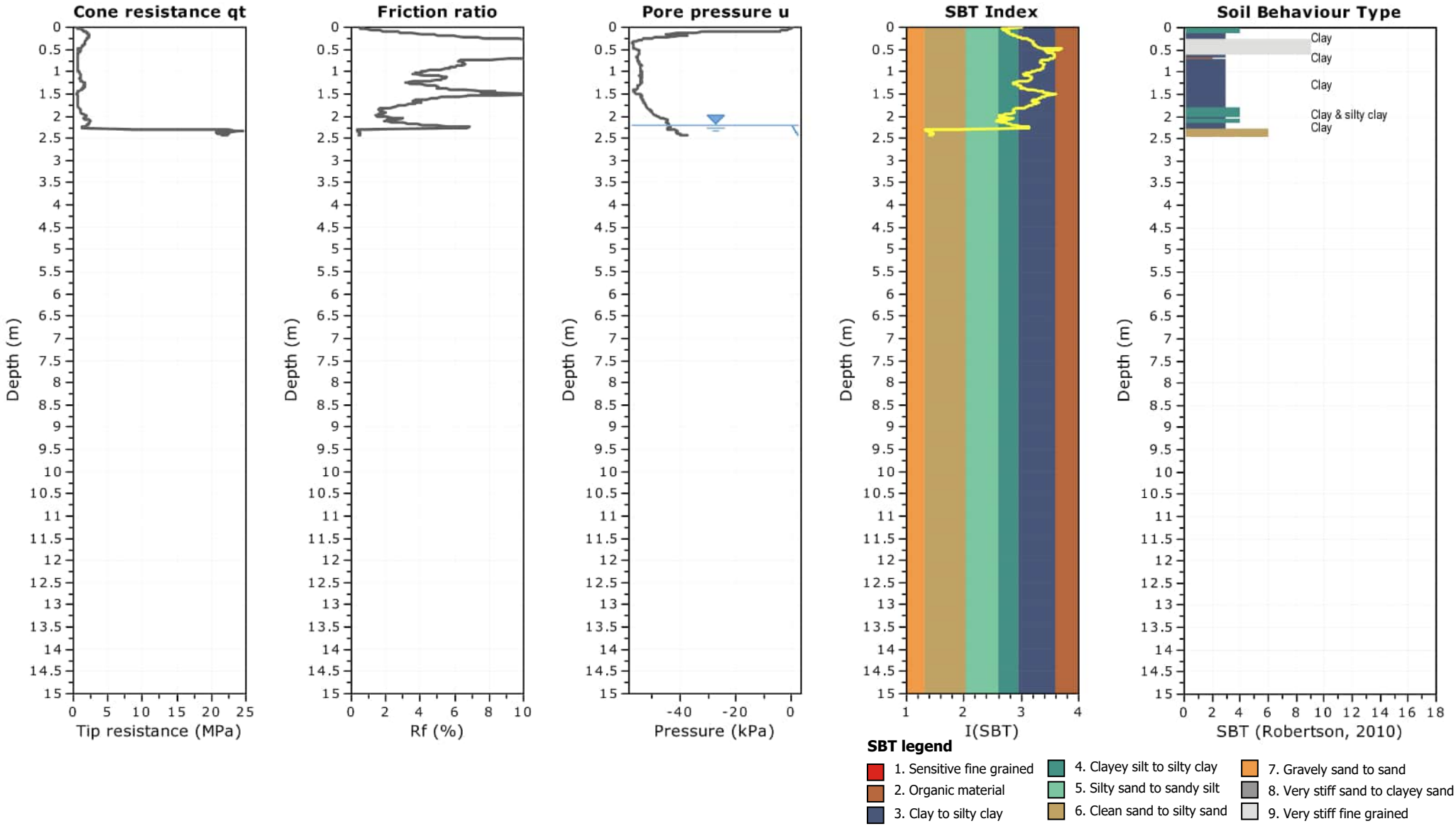
Project: **Waipapa Development**
Location: **P-003194**



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http://www.initia.co.nz

CPT: CPT103
Total depth: 2.44 m, Date: 19/04/2026
Surface Elevation: 0.00 m, Est. GWL: 2.20 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

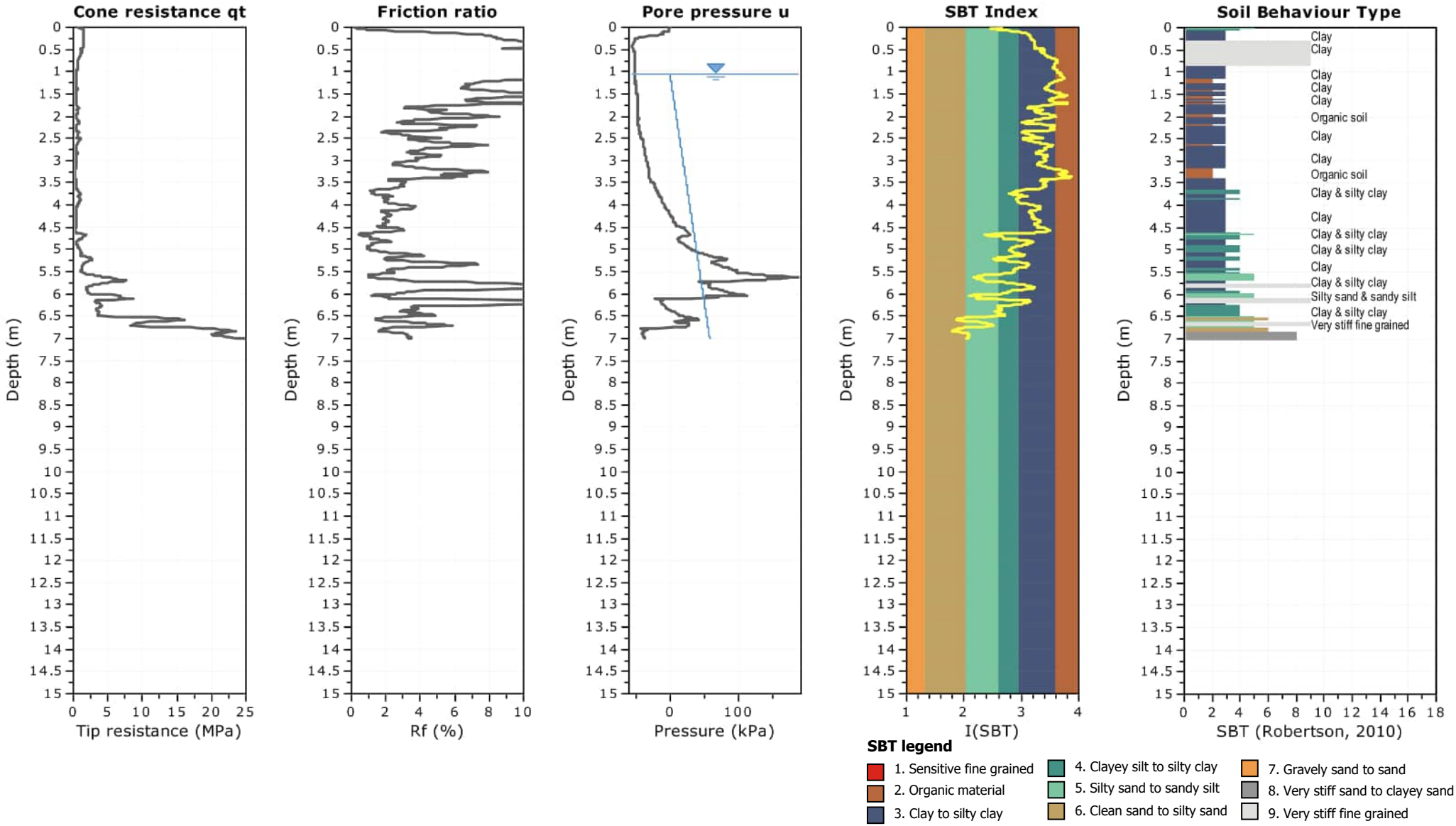
Project: **Waipapa Development**
Location: **P-003194**



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CPT: CPT104
Total depth: 7.02 m, Date: 19/04/2026
Surface Elevation: 0.00 m, Est. GWL: 1.05 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

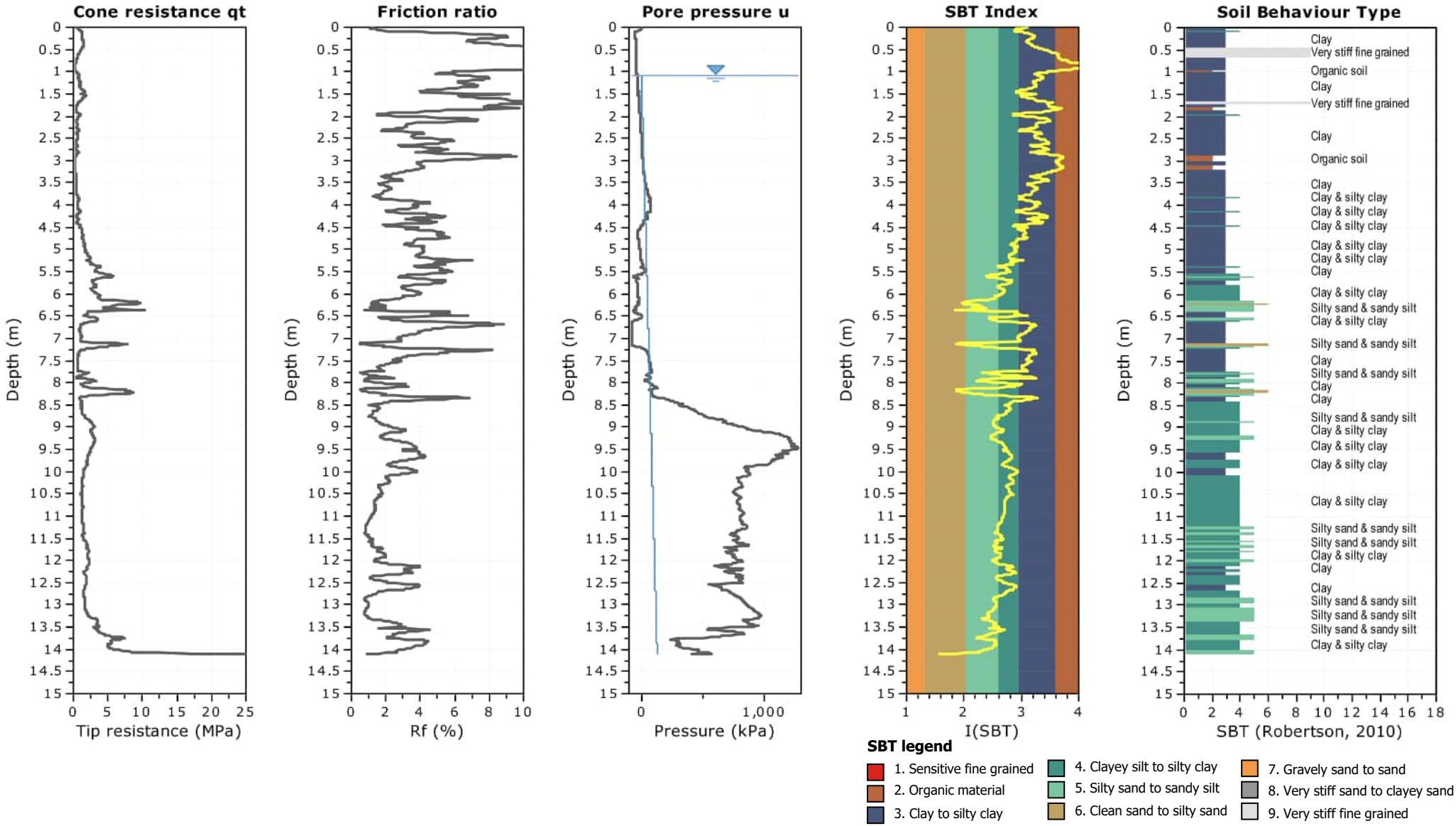
Project: **Waipapa Development**
Location: **P-003194**



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CPT: CPT105
Total depth: 14.12 m, Date: 19/04/2026
Surface Elevation: 0.00 m, Est. GWL: 1.10 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

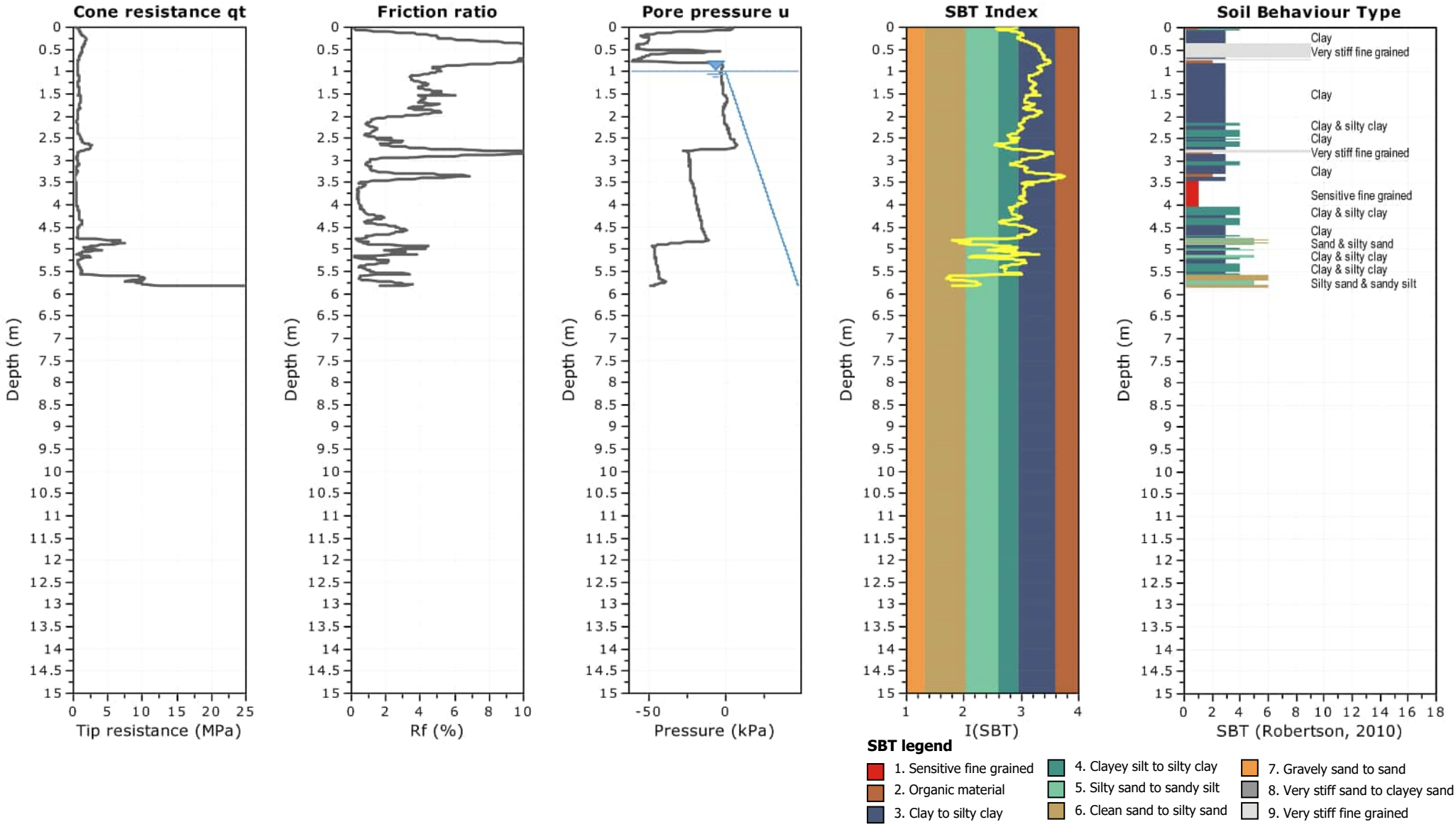
Project: **Waipapa Development**
Location: **P-003194**



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CPT: CPT106
Total depth: 5.83 m, Date: 19/04/2026
Surface Elevation: 0.00 m, Est. GWL: 1.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

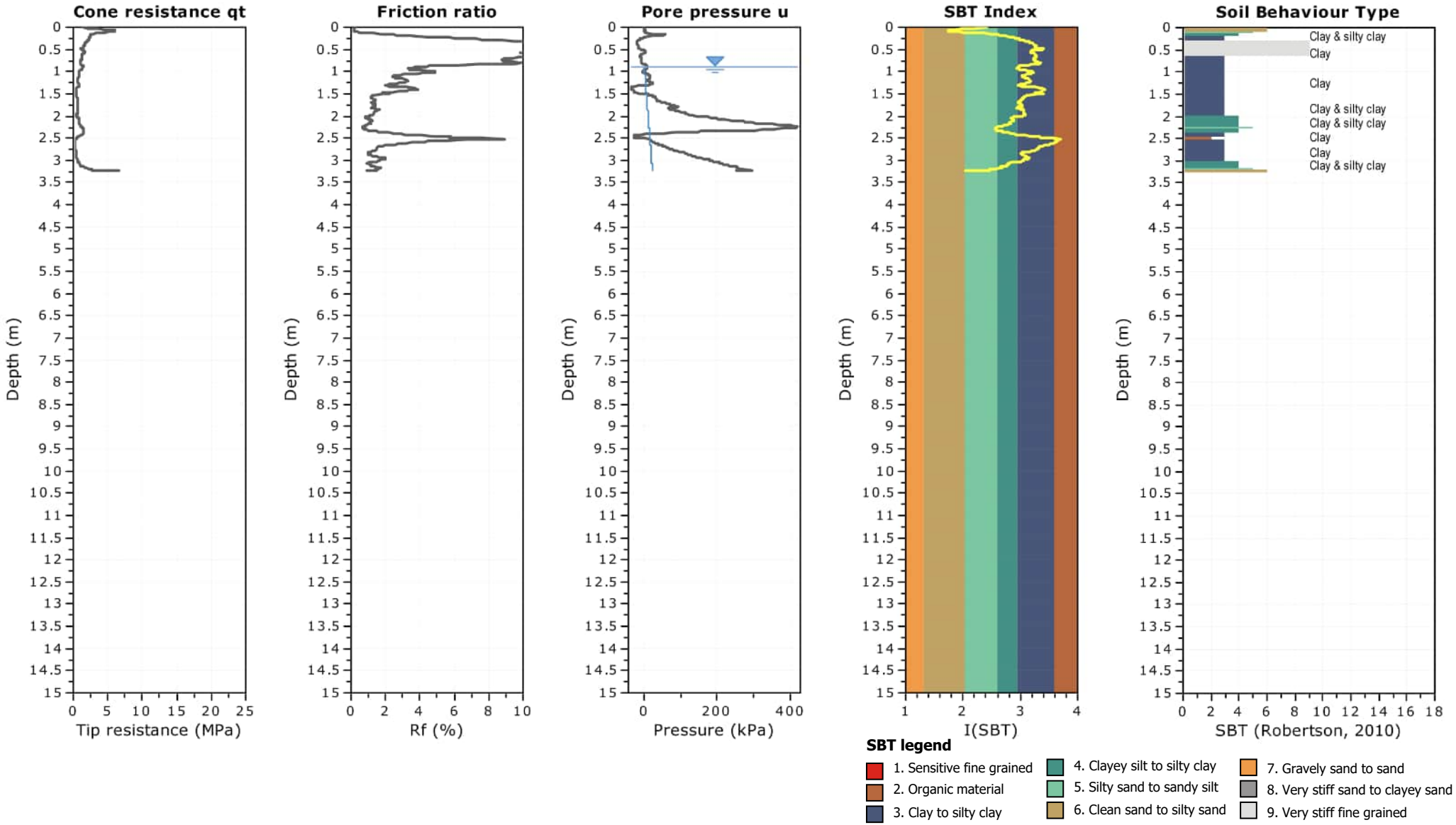
Project: **Waipapa Development**
Location: **P-003194**



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CPT: CPT107
Total depth: 3.24 m, Date: 19/04/2026
Surface Elevation: 0.00 m, Est. GWL: 0.90 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **Waipapa Development**
Location: **P-003194**

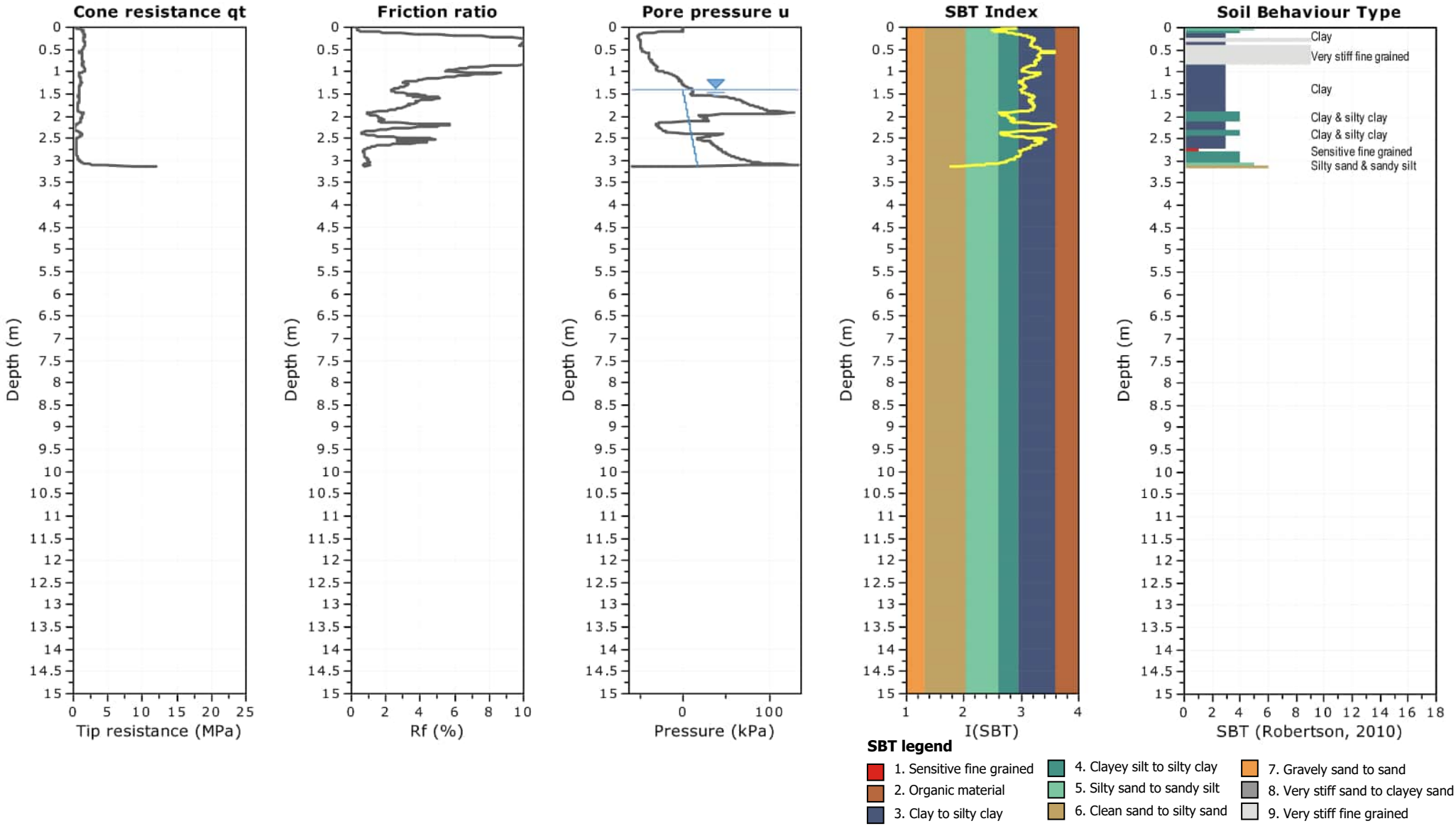


Initia Site Investigation Borehole and CPT Logs (11/2022 - 06/2023)

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Unit 6, Level 1, 114 St Georges Bay Road, Parnell, Auckland 1052
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Project: **Waipapa Development**
Location: **P-003194**

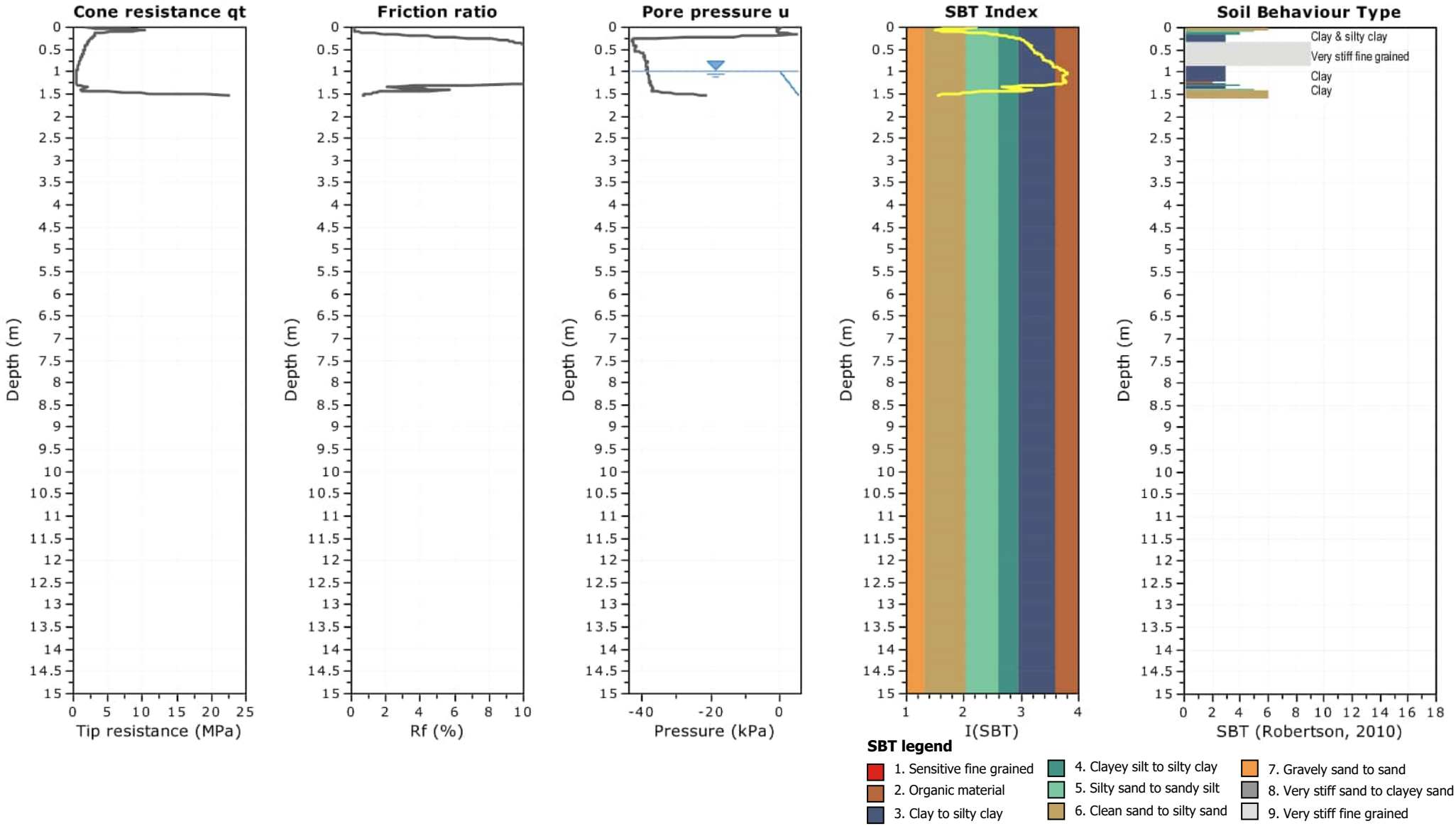
CPT: CPT01
Total depth: 3.13 m, Date: 15/11/2022
Surface Elevation: 0.00 m, Est. GWL: 1.40 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:



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Project: **Waipapa Development**
Location: **P-003194**

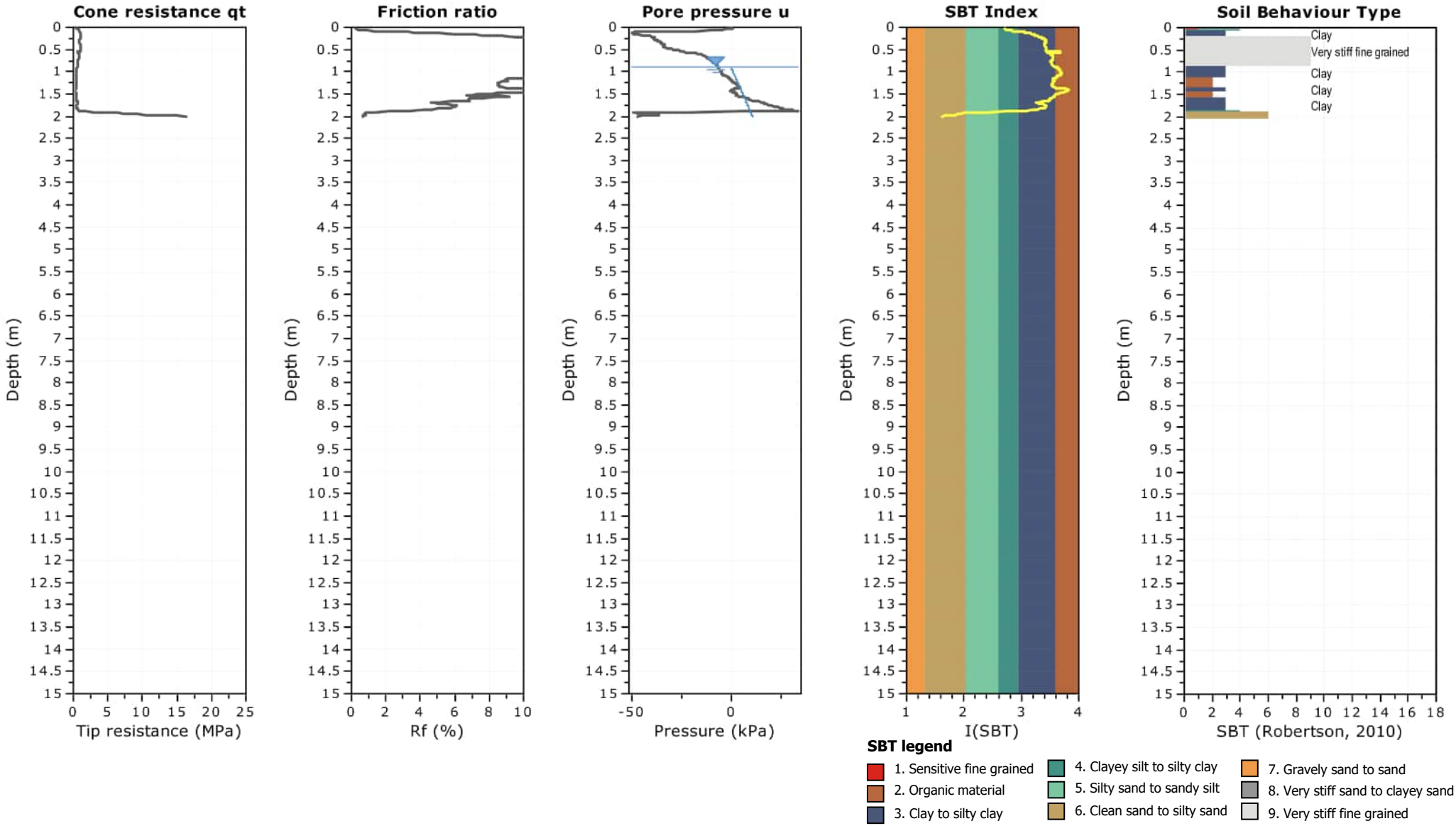
CPT: CPT02
Total depth: 1.53 m, Date: 15/11/2022
Surface Elevation: 0.00 m, Est. GWL: 1.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:



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CPT: CPT03
Total depth: 2.00 m, Date: 15/11/2022
Surface Elevation: 0.00 m, Est. GWL: 0.90 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

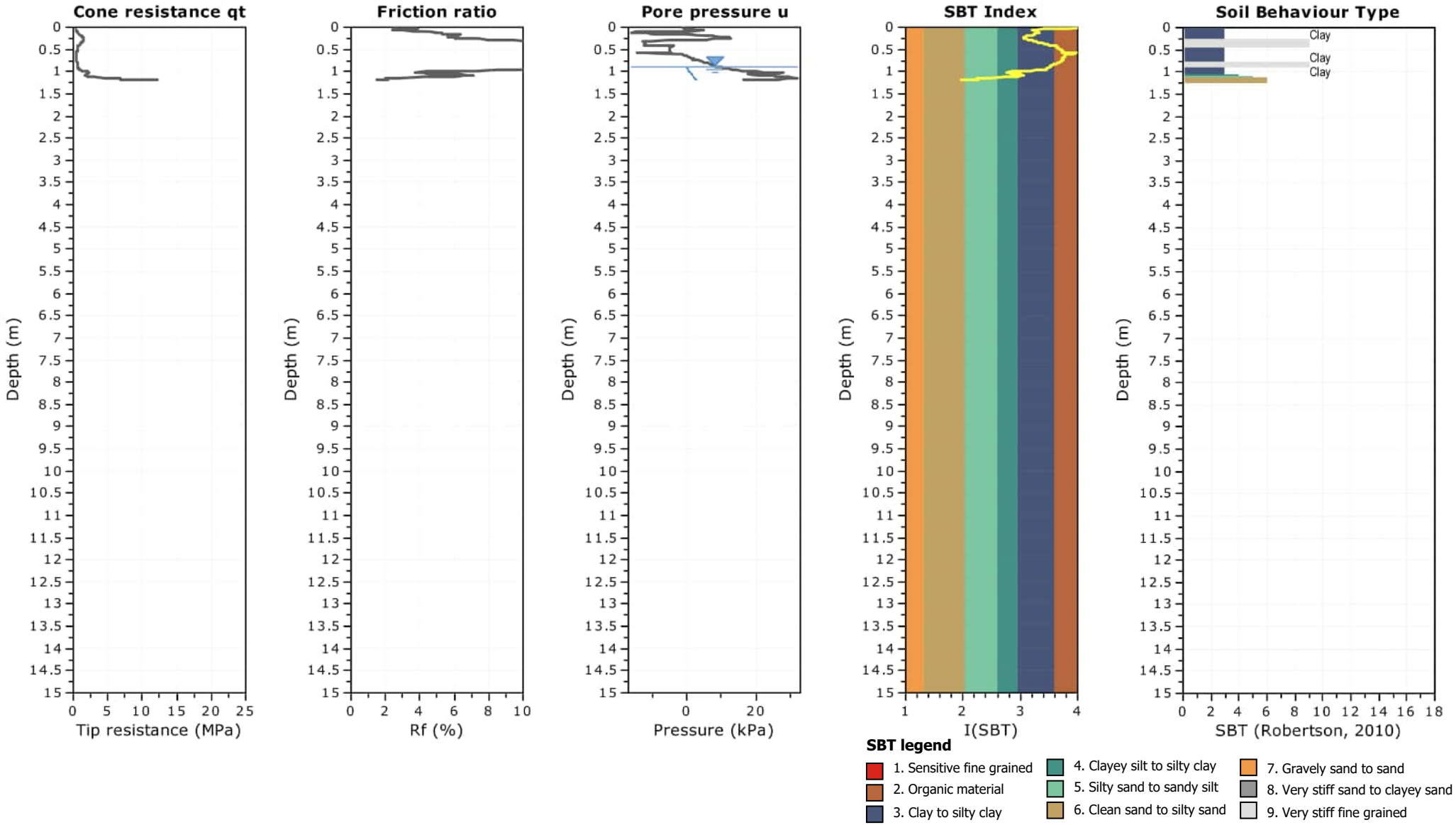
Project: **Waipapa Development**
Location: **P-003194**



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http://www.initia.co.nz

CPT: CPT04
Total depth: 1.19 m, Date: 15/11/2022
Surface Elevation: 0.00 m, Est. GWL: 0.90 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

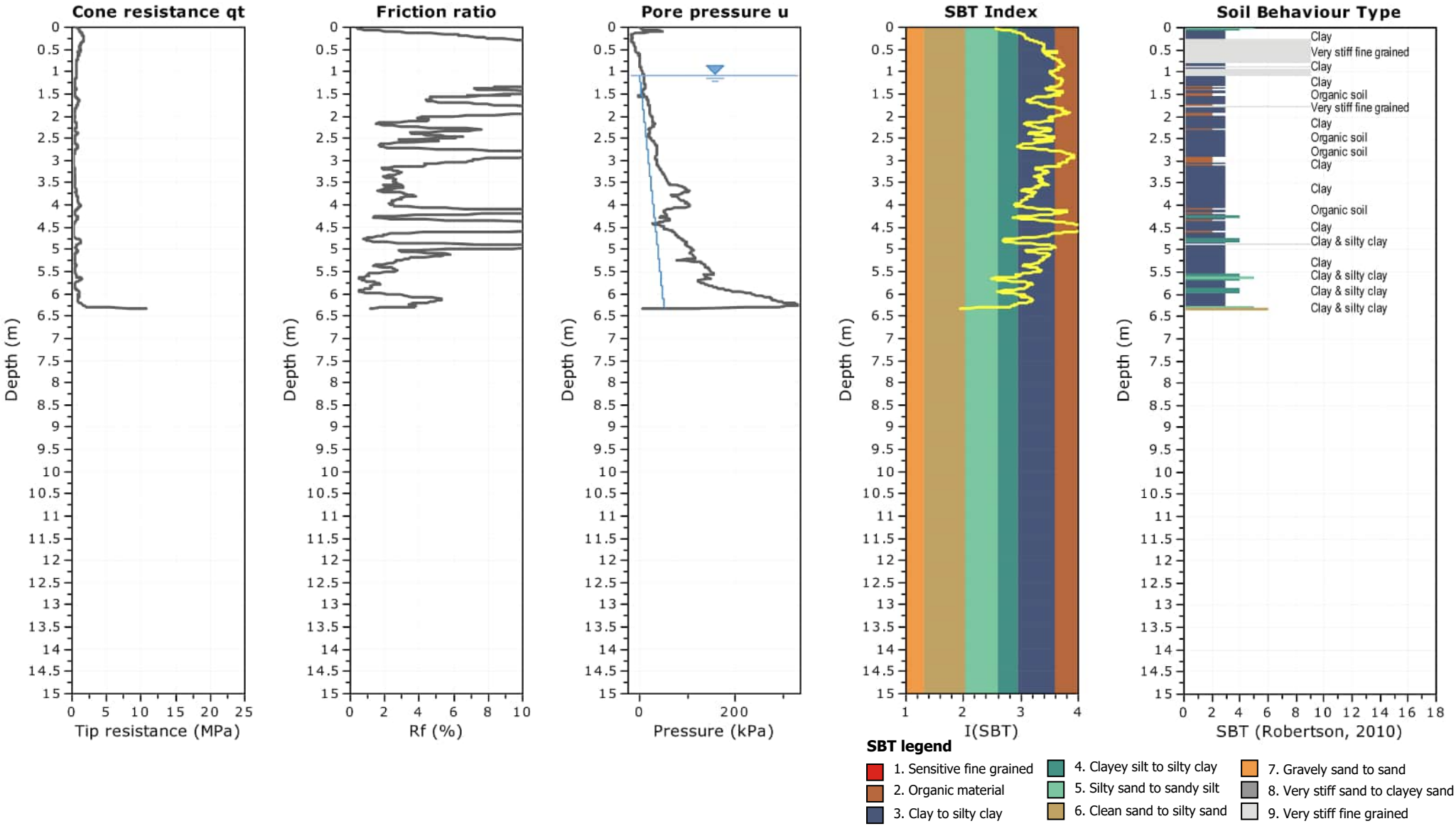
Project: **Waipapa Development**
Location: **P-003194**



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Project: **Waipapa Development**
Location: **P-003194**

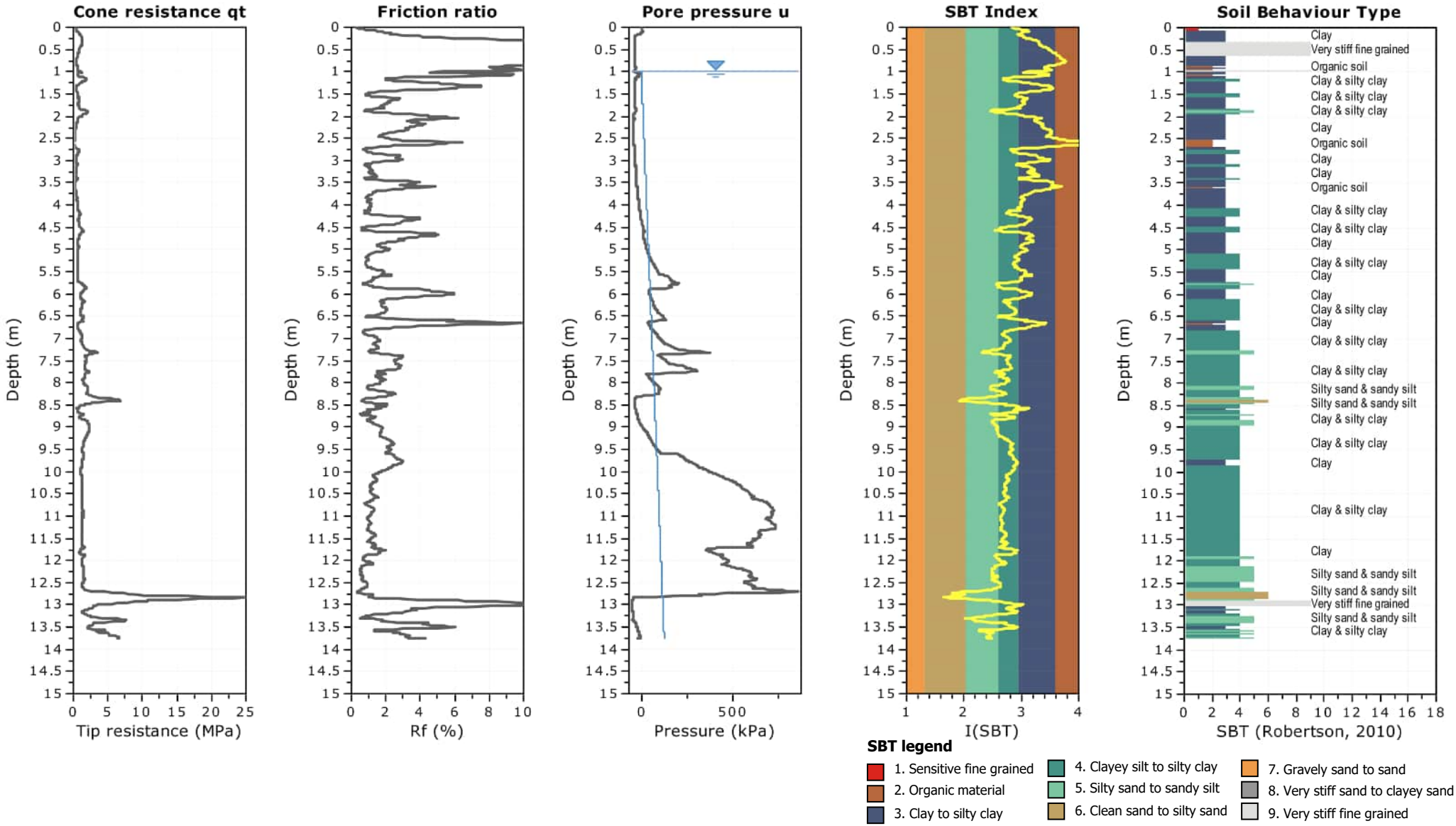
CPT: CPT05
Total depth: 6.33 m, Date: 15/11/2022
Surface Elevation: 0.00 m, Est. GWL: 1.10 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:



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CPT: CPT06
Total depth: 13.76 m, Date: 15/11/2022
Surface Elevation: 0.00 m, Est. GWL: 1.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

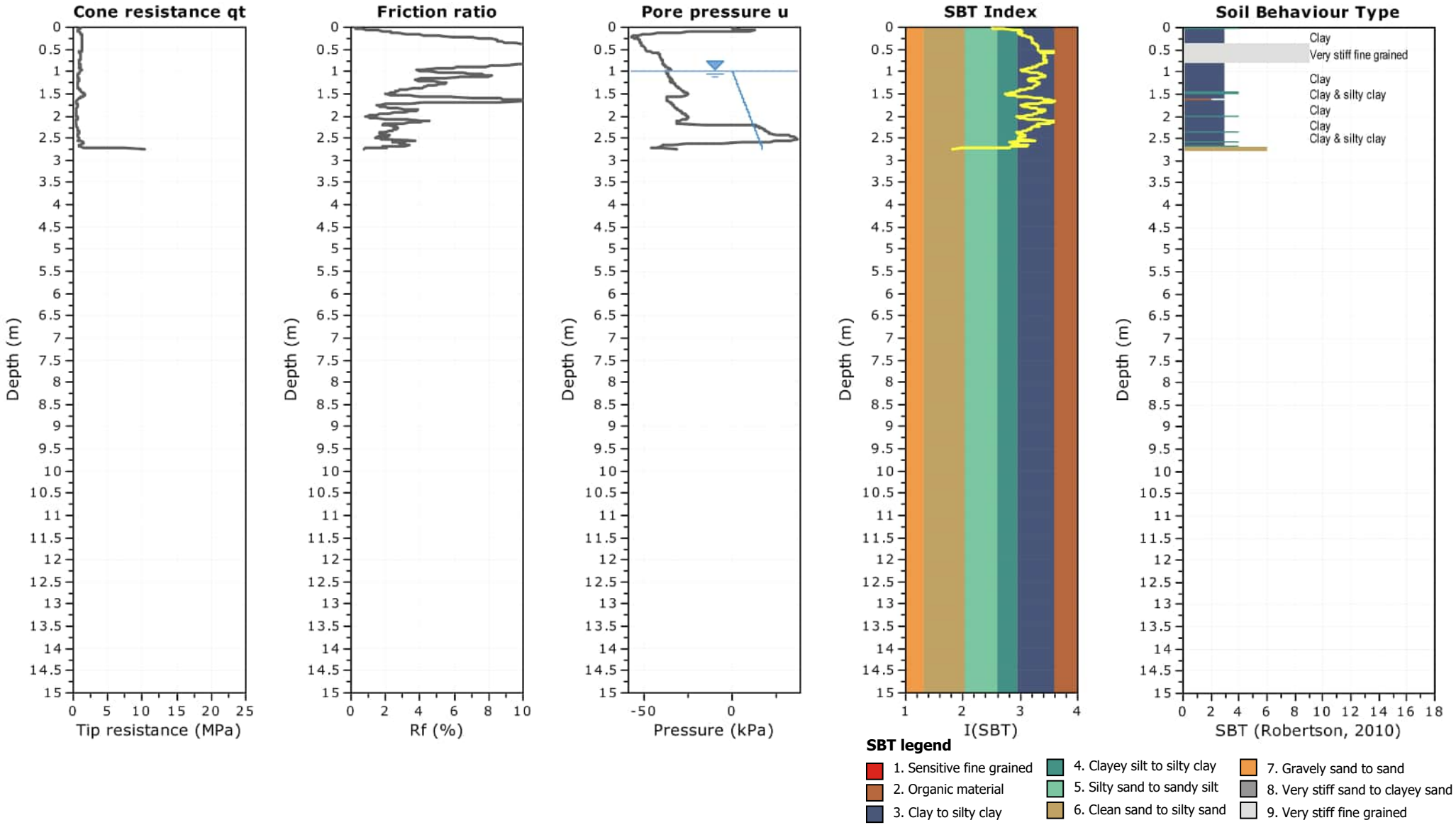
Project: **Waipapa Development**
Location: **P-003194**



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http://www.initia.co.nz

Project: **Waipapa Development**
Location: **P-003194**

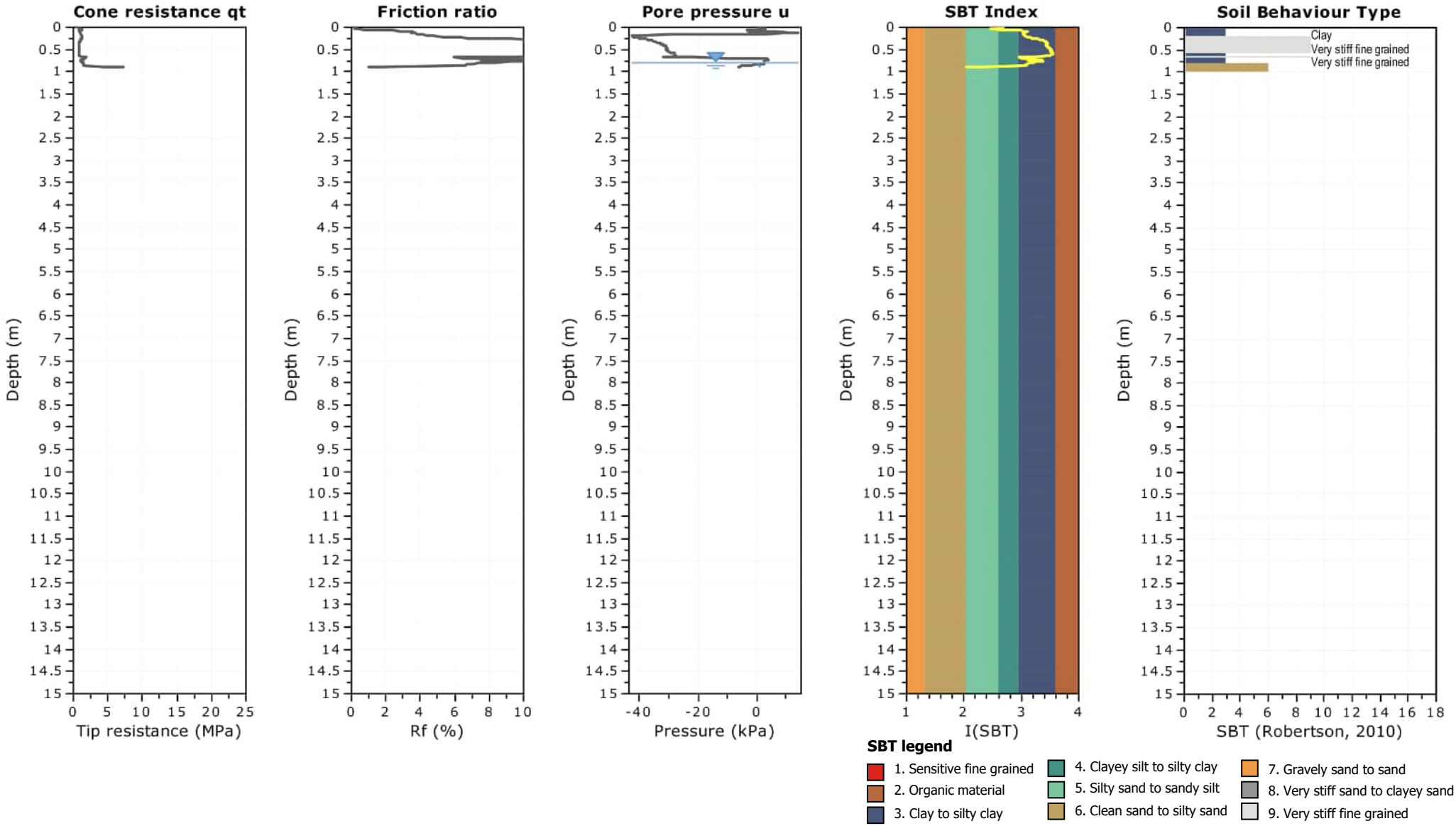
CPT: CPT07
Total depth: 2.74 m, Date: 15/11/2022
Surface Elevation: 0.00 m, Est. GWL: 1.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:



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CPT: CPT08
Total depth: 0.89 m, Date: 31/03/2026
Surface Elevation: 0.00 m, Est. GWL: 0.80 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **Waipapa Development**
Location: **P-003194**



HAND AUGER LOG

HOLE NO.: HA01

CLIENT: Peter Swan Consulting Engineers **SITE LOCATION:** 20 Klinac Lane, Waipapa
PROJECT: Waipapa Bidfood

Project Ref.: P-003194

CO-ORDINATES: 1683426.00mE, 6103397.00mN **ELEVATION:** 85m
Co-ordinate system: NZTM **Datum:** NZVD2016
Location method: GPSH **Level method:** GPSH

START DATE: 03/11/2022
END DATE: 03/11/2022
LOGGED BY: FPT
CHECKED BY: APK

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)
Topsoil	SILT, with minor clay; dark brown. Very stiff; low plasticity; moist; trace fresh rootlets.		0.0
Late Quaternary alluvium and colluvium	Clayey SILT; brownish grey, streaked brown. Very stiff; high plasticity; moist.		0.4
	SILT, with some clay; grey. Stiff; low plasticity; moist.		1.0
	1.2m: Grades to minor silt clasts. 1.3m: Grades to light grey, speckled white. 1.4m: Becomes saturated.		1.2
	2.00m - 2.80m: No Recovery		2.0
	Silty SAND, with minor clay; bluish grey. loose; low plasticity; saturated; sand, fine to medium.		2.8
	2.90m - 3.40m: No Recovery		3.4
	EOH: 3.50m		3.5

LEGEND

SCALA PENETROMETER (Blows / 0mm)

VANE SHEAR STRENGTH (kPa) Vane: 3591

Values
132
49
198
46
63
10
64
20
76
20
86
13

WATER: 03/11/2022



REMARKS

Ground water measured at the completion of the borehole.

Hand auger terminated on practical refusal at 3.50m.

WATER
- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE
- [x] Hand Auger
- [ ] Test Pit

Ver 2. Generated with CORE-GS by Geroc - Hand Auger_Initia - 15/11/2022 4:36:06 PM

HAND AUGER LOG

HOLE NO.: HA02

CLIENT: Peter Swan Consulting Engineers
PROJECT: Waipapa Bidfood
SITE LOCATION: 20 Klinac Lane, Waipapa

Project Ref.: P-003194

CO-ORDINATES: 1683420.00mE, 6103437.00mN
Co-ordinate system: NZTM
Location method: GPSH

ELEVATION: 86m
Datum: NZVD2016
Level method: GPSH

START DATE: 03/11/2022
END DATE: 03/11/2022
LOGGED BY: FPT
CHECKED BY: APK

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 50mm)	VANE SHEAR STRENGTH (kPa) Vane: 3591	Values	WATER
Top soil	SILT, with minor clay; dark brown. Very stiff; low plasticity; moist; Trace fresh rootlets.		0.0	TS TS	2 4 6 8 10 12 14 16 18	50 100 150 200	165	Groundwater Not Encountered
Late Quaternary alluvium and colluvium	Clayey SILT; grey. Very stiff; high plasticity; moist.		0.2				82	
			0.4				128	
			0.6				69	
	0.9m: Grades to hard.		0.8				UTP	
	EOH: 1.00m		1.0		20		-	
			1.2					
			1.4					
			1.6					
			1.8					
			2.0					
			2.2					
			2.4					
			2.6					
			2.8					
			3.0					
			3.2					
			3.4					
			3.6					
			3.8					
			4.0					
			4.2					
			4.4					
			4.6					
			4.8					



REMARKS

Ground Water Not Encountered

Hand auger terminated on practical refusal at 0.95m.

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

Ver 2. Generated with CORE-GS by Geroc - Hand Auger_Initia - 15/11/2022 4:36:08 PM

HAND AUGER LOG

HOLE NO.: HA03

CLIENT: Peter Swan Consulting Engineers
PROJECT: Waipapa Bidfood
SITE LOCATION: 20 Klinac Lane, Waipapa

Project Ref.: P-003194

CO-ORDINATES: 1683471.00mE, 6103463.00mN
Co-ordinate system: NZTM
Location method: GPSH

ELEVATION: 85m
Datum: NZVD2016
Level method: GPSH

START DATE: 03/11/2022
END DATE: 03/11/2022
LOGGED BY: FPT
CHECKED BY: APK

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)
Topsoil	SILT, with minor clay; dark brown. Very stiff; low plasticity; moist; Trace fresh rootlets..		0.0
Late Quaternary alluvium and colluvium	Clayey SILT; grey. Very stiff; high plasticity; moist.		0.2
	0.6m: Grades to stiff.		0.6
	SILT, with minor clay; light grey. Stiff; low plasticity; saturated.		0.8
	1.2m: Grades to firm.		1.2
	1.5m: Grades to stiff.		1.4
	1.60m - 2.60m: No Recovery		1.6
	Silty SAND, with minor clay; bluish grey. loose; low plasticity; saturated; sand, fine to medium.		2.6
	3.00m- 3.35m: No Recovery		3.0
	EOH: 3.80m		3.4

LEGEND

SCALA PENETROMETER (Blows / 50mm)

VANE SHEAR STRENGTH (kPa) Vane: 3591

Values
128
69
99
33
94
30
36
20
79
33

WATER: 03/11/2022



REMARKS

Ground water measured at the completion of the borehole.

Scala from 2.70m.

Hand auger terminated on practical refusal at 3.35m

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

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HAND AUGER LOG

HOLE NO.: HA04

CLIENT: Peter Swan Consulting Engineers **SITE LOCATION:** 20 Klinac Lane, Waipapa
PROJECT: Waipapa Bidfood

Project Ref.: P-003194

CO-ORDINATES: 1683520.00mE, 6103446.00mN **ELEVATION:** 85m
Co-ordinate system: NZTM **Datum:** NZVD2016
Location method: GPSH **Level method:** GPSH

START DATE: 04/11/2022
END DATE: 04/11/2022
LOGGED BY: FPT
CHECKED BY: APK

INITIA
GEOTECHNICAL SPECIALISTS

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 50mm)	VANE SHEAR STRENGTH (kPa) Vane: 3591	Values	WATER
Top soil	SILT, with minor clay; dark brown. Very stiff; low plasticity; moist; Trace fresh rootlets..		0.0	TS				
Late Quaternary alluvium and colluvium	Clayey SILT; grey, streaked light grey brown. Very stiff; high plasticity; moist.		0.2				148	
			0.4				66	
	0.6m: Grades to stiff.		0.6				63	
			0.8				-	
			1.0				49	
			1.2				-	
			1.4				63	
							16	
	SILT, with minor clay, with trace sand; reddish brown. Hard; low plasticity; saturated; sand, fine.						UTP	
	EOH: 1.50m		1.6				-	
			1.8					
			2.0					
			2.2					
			2.4					
			2.6					
			2.8					
			3.0					
			3.2					
			3.4					
			3.6					
			3.8					
			4.0					
			4.2					
			4.4					
			4.6					
			4.8					

04/11/2022



REMARKS

Ground water measured at the completion of the borehole.

Hand auger terminated on practical refusal at 1.45m.

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

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HAND AUGER LOG

HOLE NO.: HA05

CLIENT: Peter Swan Consulting Engineers
PROJECT: Waipapa Bidfood
SITE LOCATION: 20 Klinac Lane, Waipapa

Project Ref.: P-003194

CO-ORDINATES: 1683505.00mE, 6103410.00mN
Co-ordinate system: NZTM
Location method: GPSH

ELEVATION: 85m
Datum: NZVD2016
Level method: GPSH

START DATE: 04/11/2022
END DATE: 04/11/2022
LOGGED BY: FPT
CHECKED BY: APK

UNIT	MATERIAL DESCRIPTION (See Classification & Symbology sheet for details)	SAMPLES	DEPTH (m)	LEGEND	SCALA PENETROMETER (Blows / 0mm)	VANE SHEAR STRENGTH (kPa) Vane: 3591	Values	WATER
Topsoil	SILT, with minor clay; dark brown. Very stiff; low plasticity; moist.		0.0	TS				
Late Quaternary alluvium and colluvium	Clayey SILT; brownish grey, with occasional orange brown streaks. Very stiff; high plasticity; moist.		0.2				168	
	0.6m - 0.8m: Grades to brownish grey, streaked orange brown, minor fine to coarse sand.		0.4				82	
	0.9m: Grades to stiff.		0.6				181	
	1.1m: Grades to grey.		0.8				63	
	1.2m: Grades to very stiff.		1.0				69	
	1.5m: Grades to hard.		1.2				13	
	1.70m - 4.00m: No Recovery		1.4				178	
			1.6				21	
			1.8	N/R			230+	
			2.0	N/R			-	
			2.2	N/R				
			2.4	N/R				
			2.6	N/R				
			2.8	N/R				
			3.0	N/R				
			3.2	N/R				
			3.4	N/R				
			3.6	N/R				
			3.8	N/R				
	EOH: 4.00m		4.0	N/R				
			4.2					
			4.4					
			4.6					
			4.8					

04/11/2022



REMARKS

Ground water measured at the completion of the borehole.

Hand auger terminated at target depth of 4.00m

WATER

- Standing Water Level
- Out flow
- In flow

INVESTIGATION TYPE

- [x] Hand Auger
- [ ] Test Pit

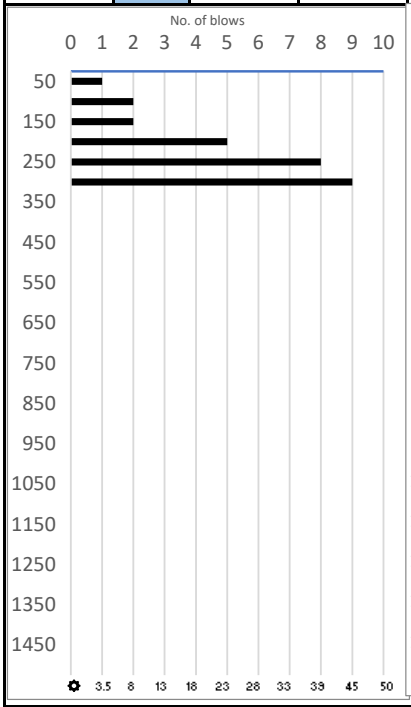
Ver 2. Generated with CORE-GS by Geroc - Hand Auger_Initia - 15/11/2022 4:36:14 PM

Scala Report - Up to 1.5m Bgl Tests

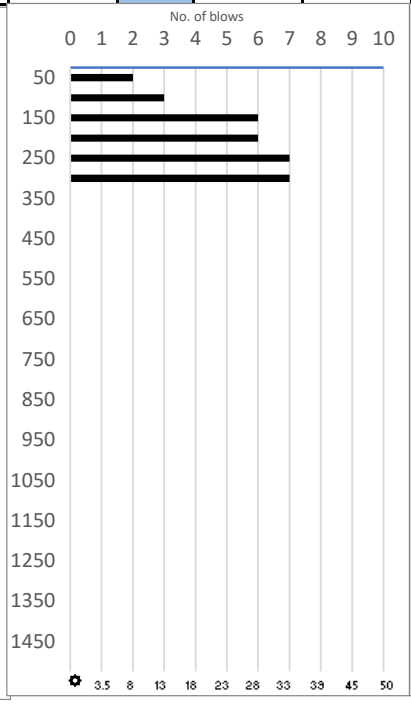
Form #	Scala501

Site	Bidfood	Date	13/06/2023
Project Ref	P-001500	Equipment ID	SC1
Staff Member	Thomas Overy		

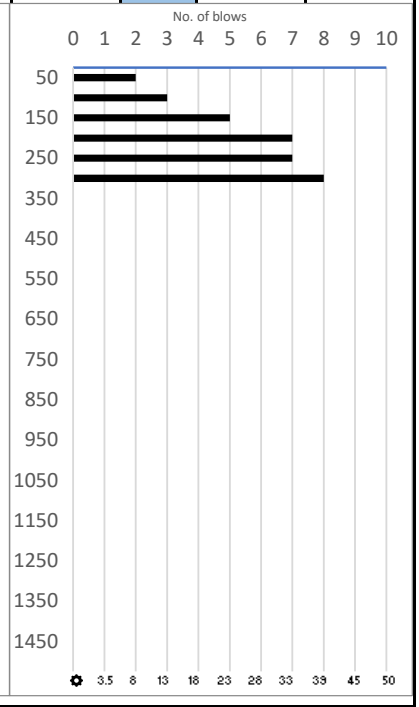
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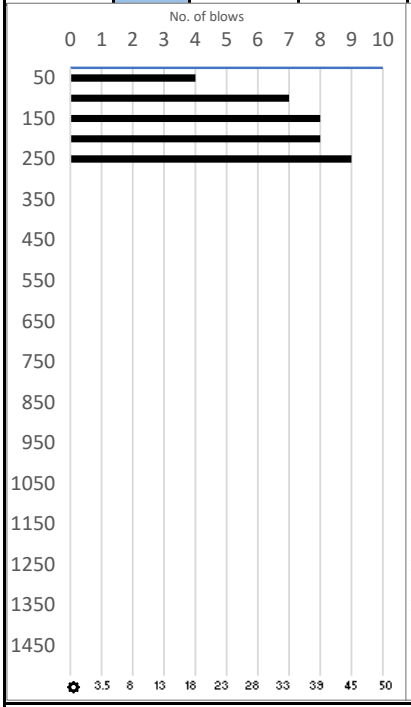
Test Reference	2	Start Depth Bgl	0.00



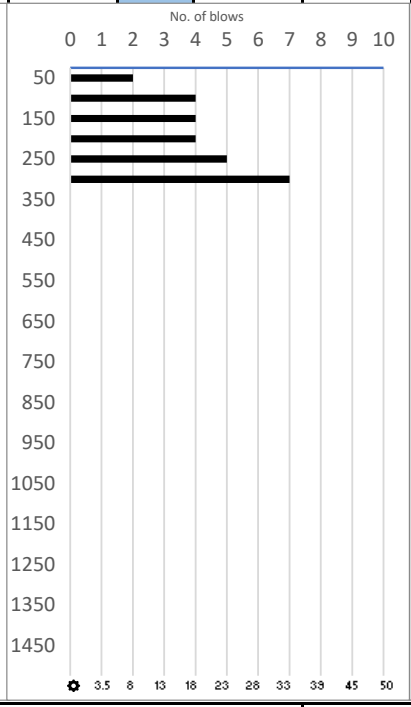
Test Reference	3	Start Depth Bgl	0.00



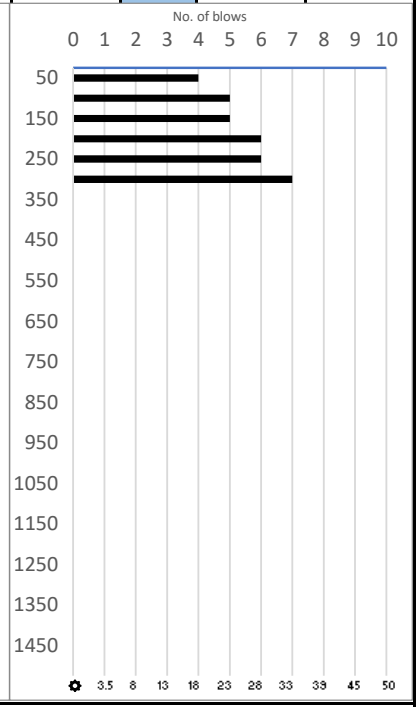
Test Location / number	4	Start Depth Bgl	0.00



Test Location / number	5	Start Depth Bgl	0.00



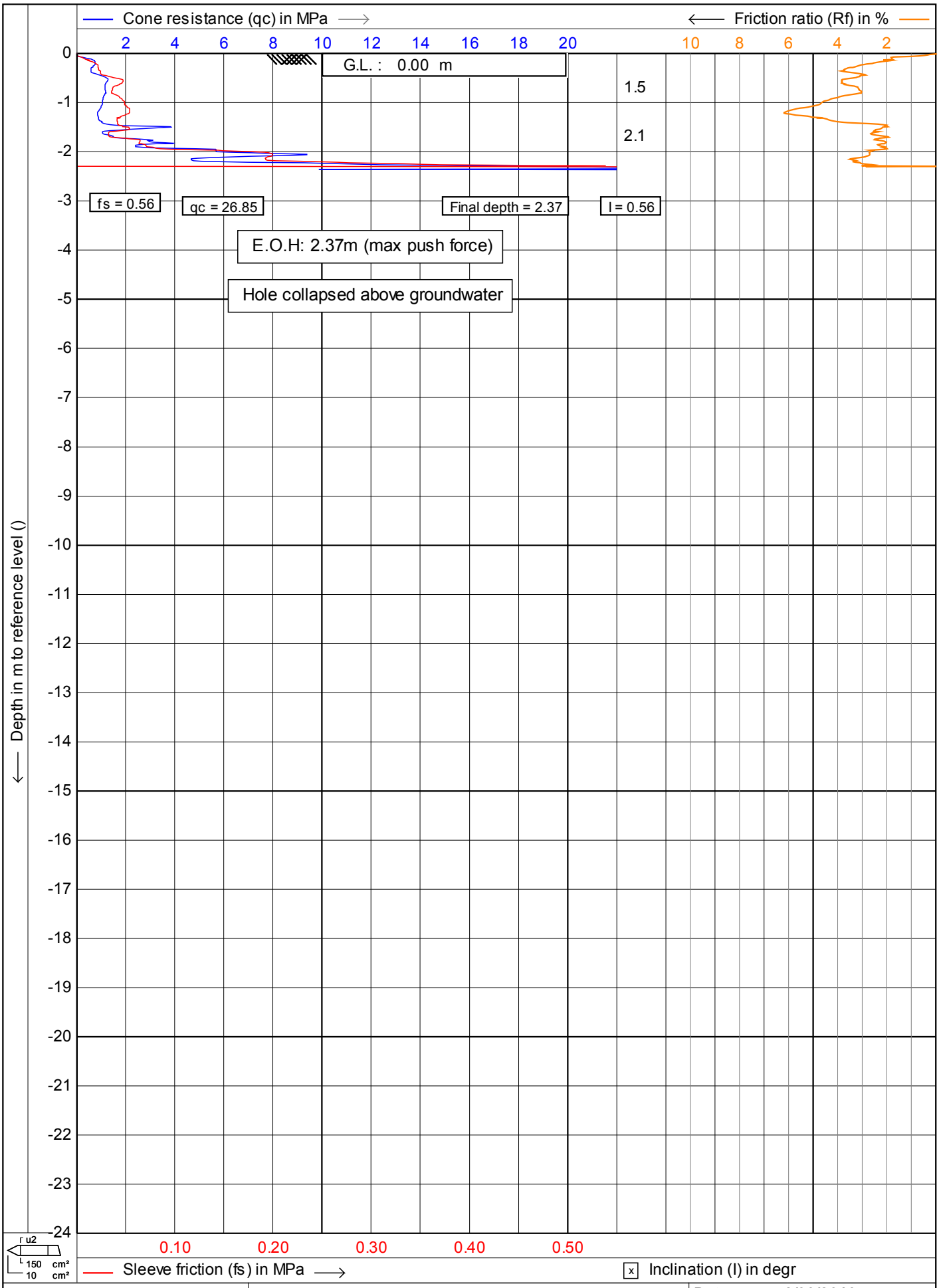
Test Location / number	6	Start Depth Bgl	0.00



The estimated CBR Values on the corresponding graph are based on Figure 5.3, Correlation of Dynamic Cone Penetration and CBR taken form AUSTROADS 2004- Pavement Design - A Guide to the Structural Design of Road Pavements.

Tested By	T.O	Checked By	0

NZTA Site Investigation Borehole and CPT Logs



DRILLFORCE
THE DRILLING SPECIALISTS

Test acc NZ class

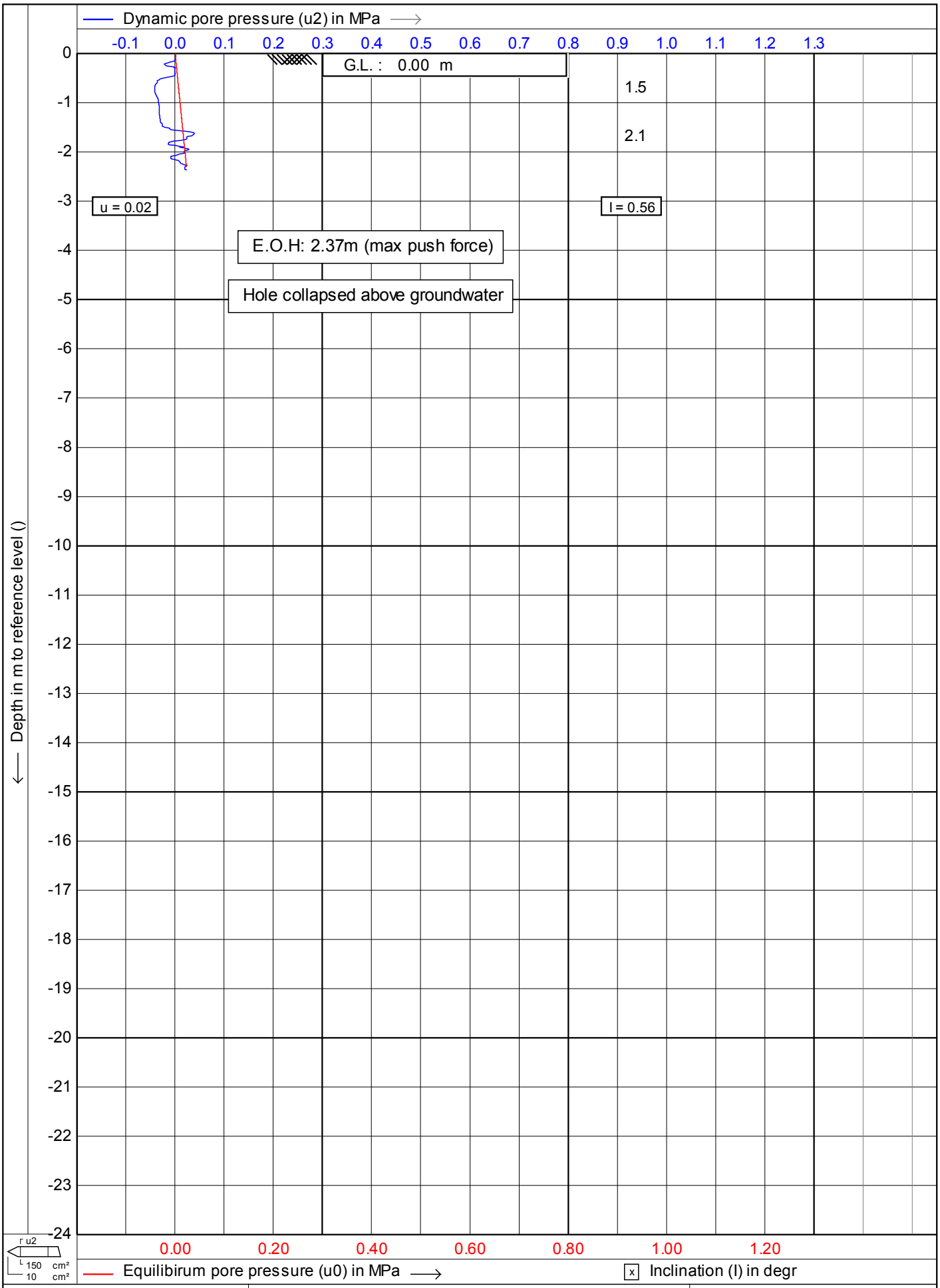
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** 1/15

1.45



DRILLFORCE
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Test acc NZ class

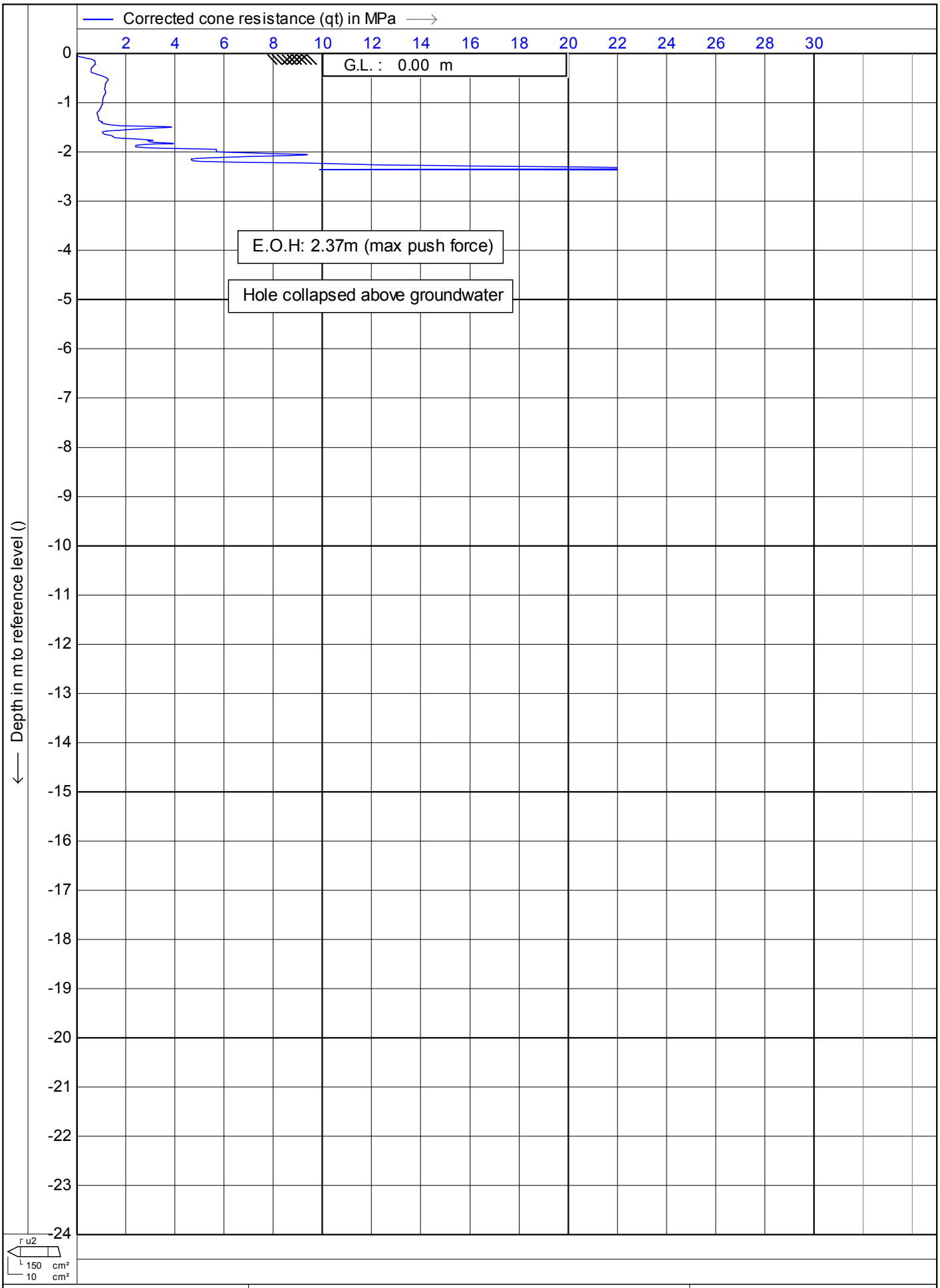
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01**

1.45



DRILLFORCE
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Test acc NZ class

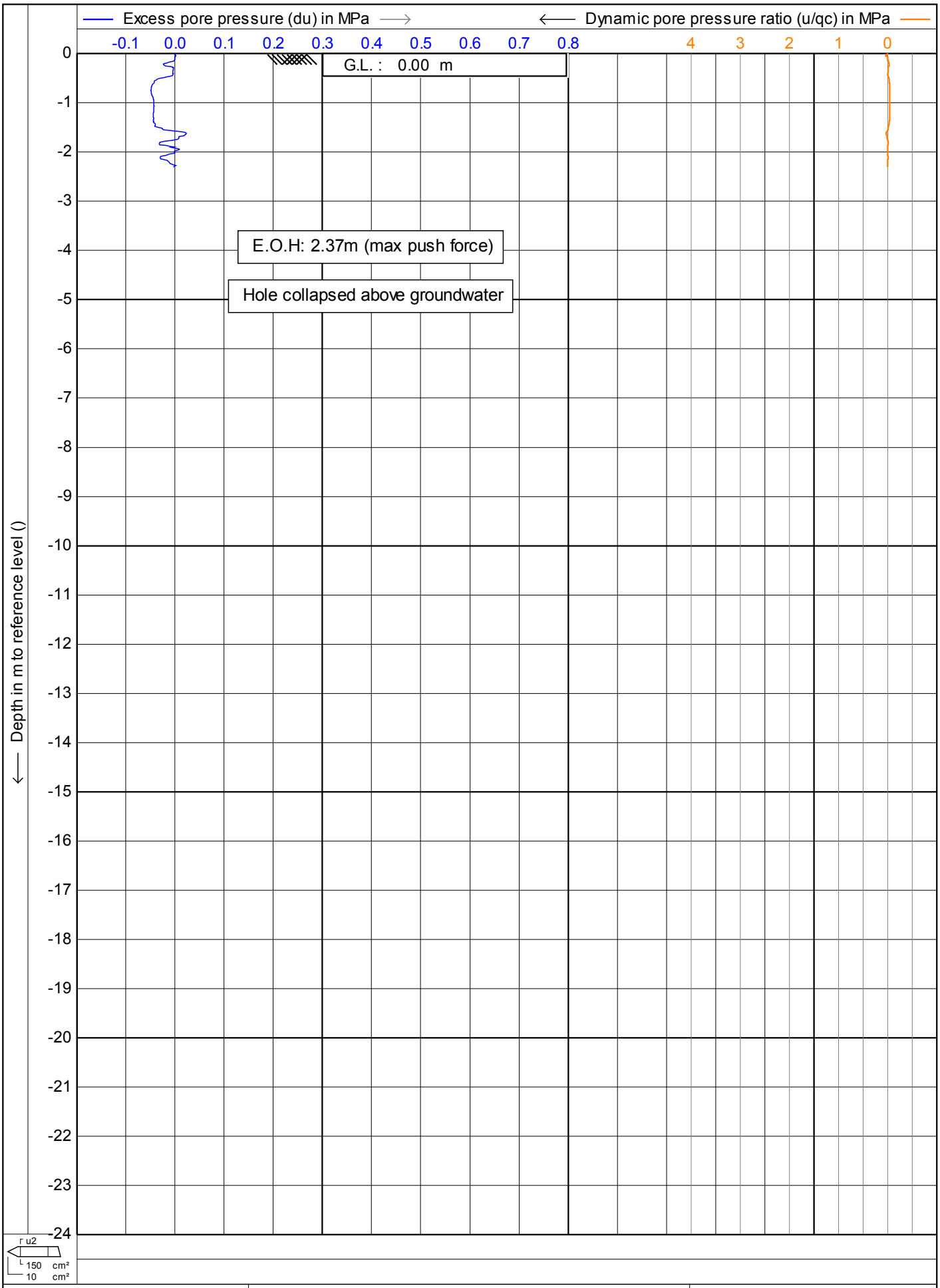
Project : **20 Klinac Lane**

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Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** **3/15**

1.45



DRILLFORCE
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Test acc NZ class

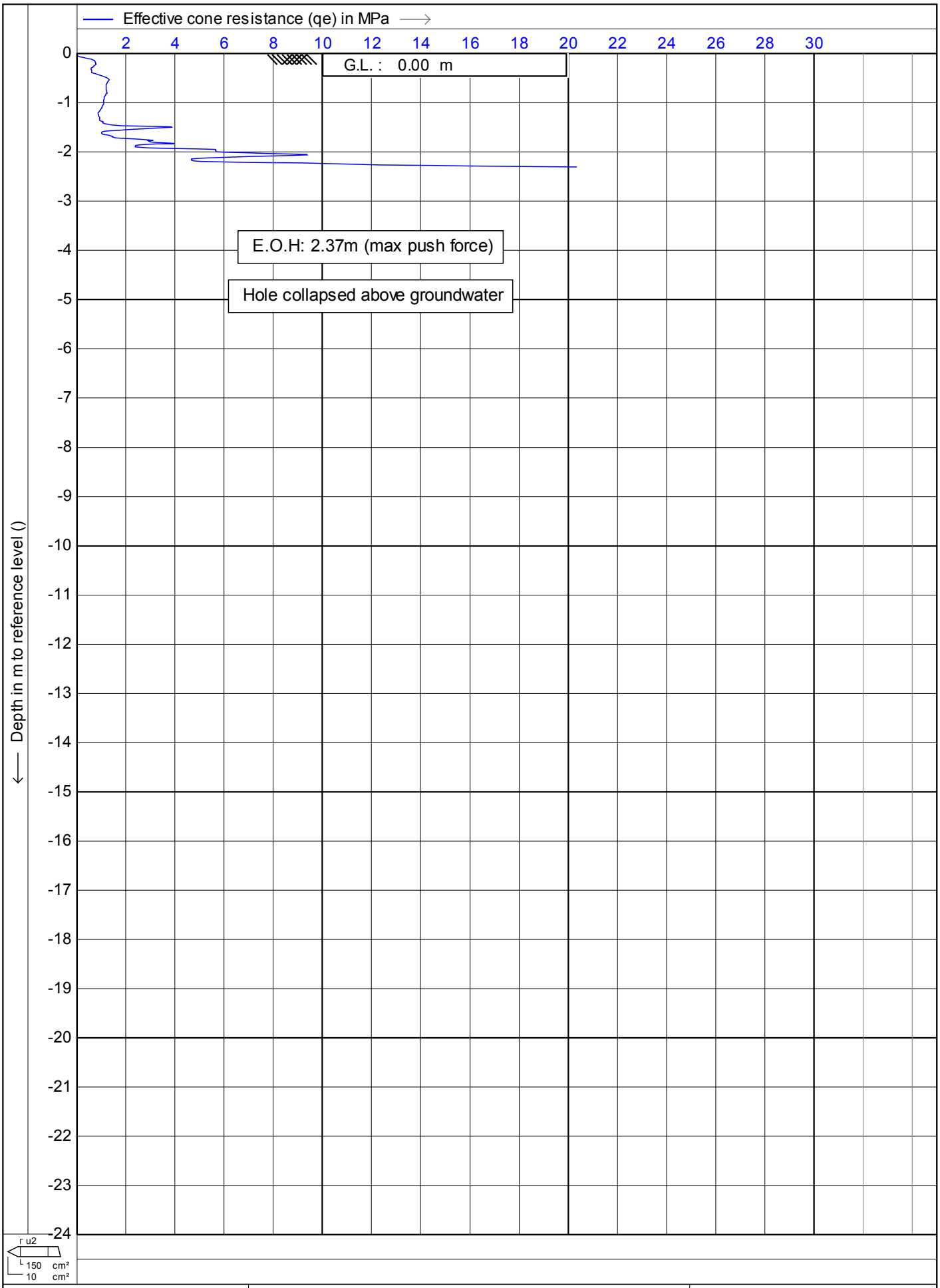
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** **4/15**

1.45



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Test acc NZ class

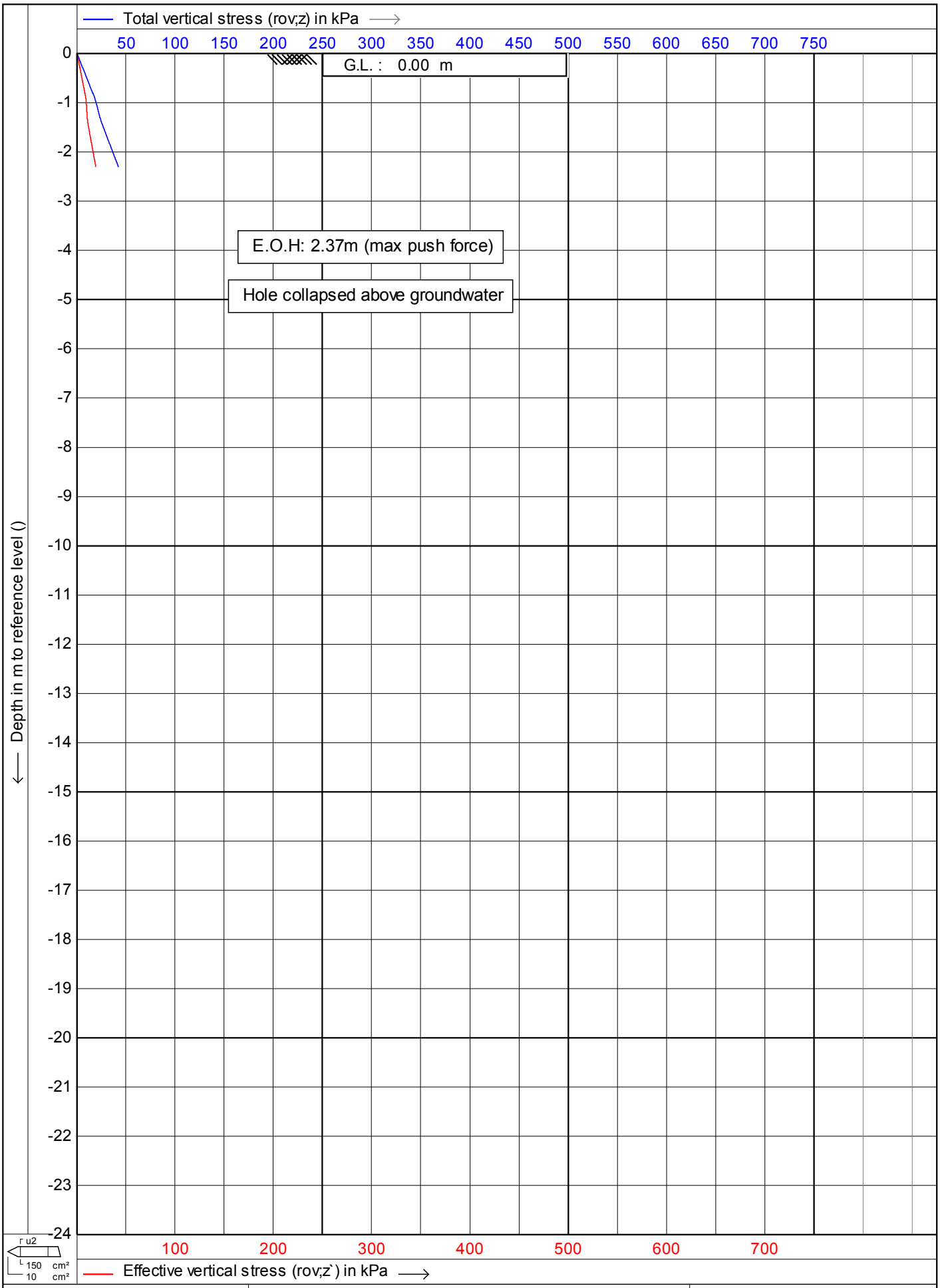
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** **5/15**

1.45



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Test acc NZ class

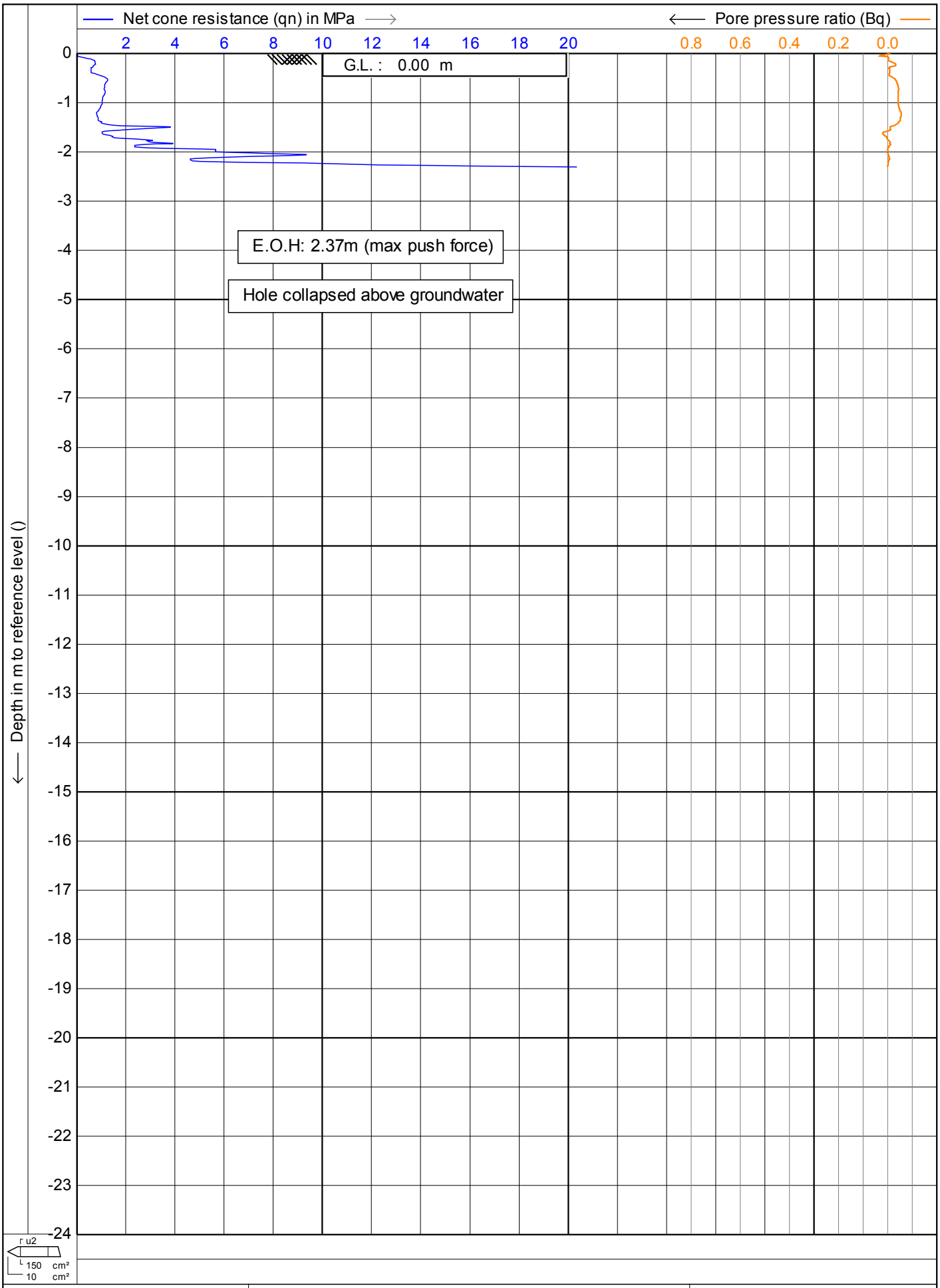
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** **6/15**

1.45



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Test acc NZ class

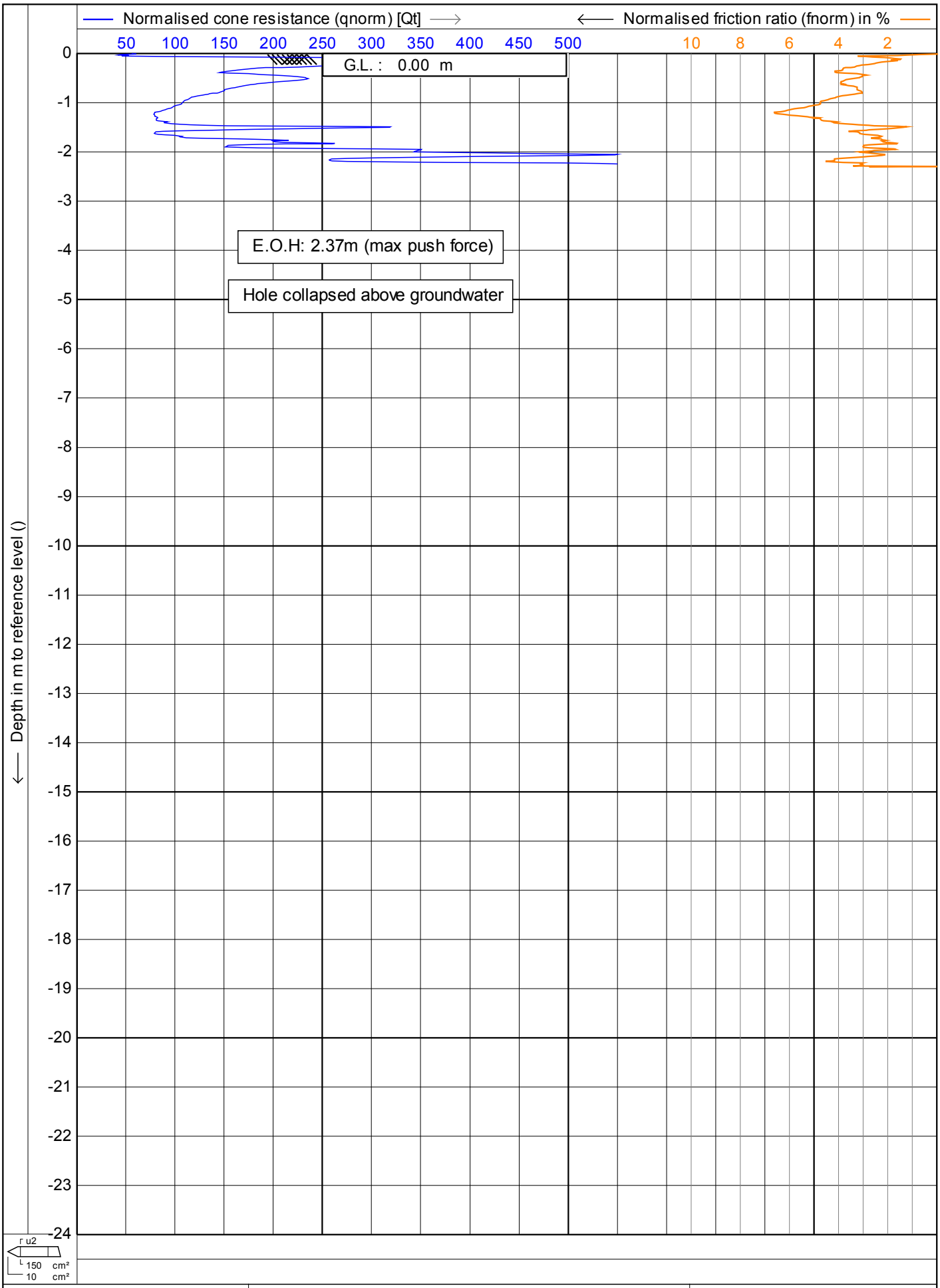
Project : **20 Klinac Lane**

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Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** 7/15

1.45



DRILLFORCE
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Test acc NZ class

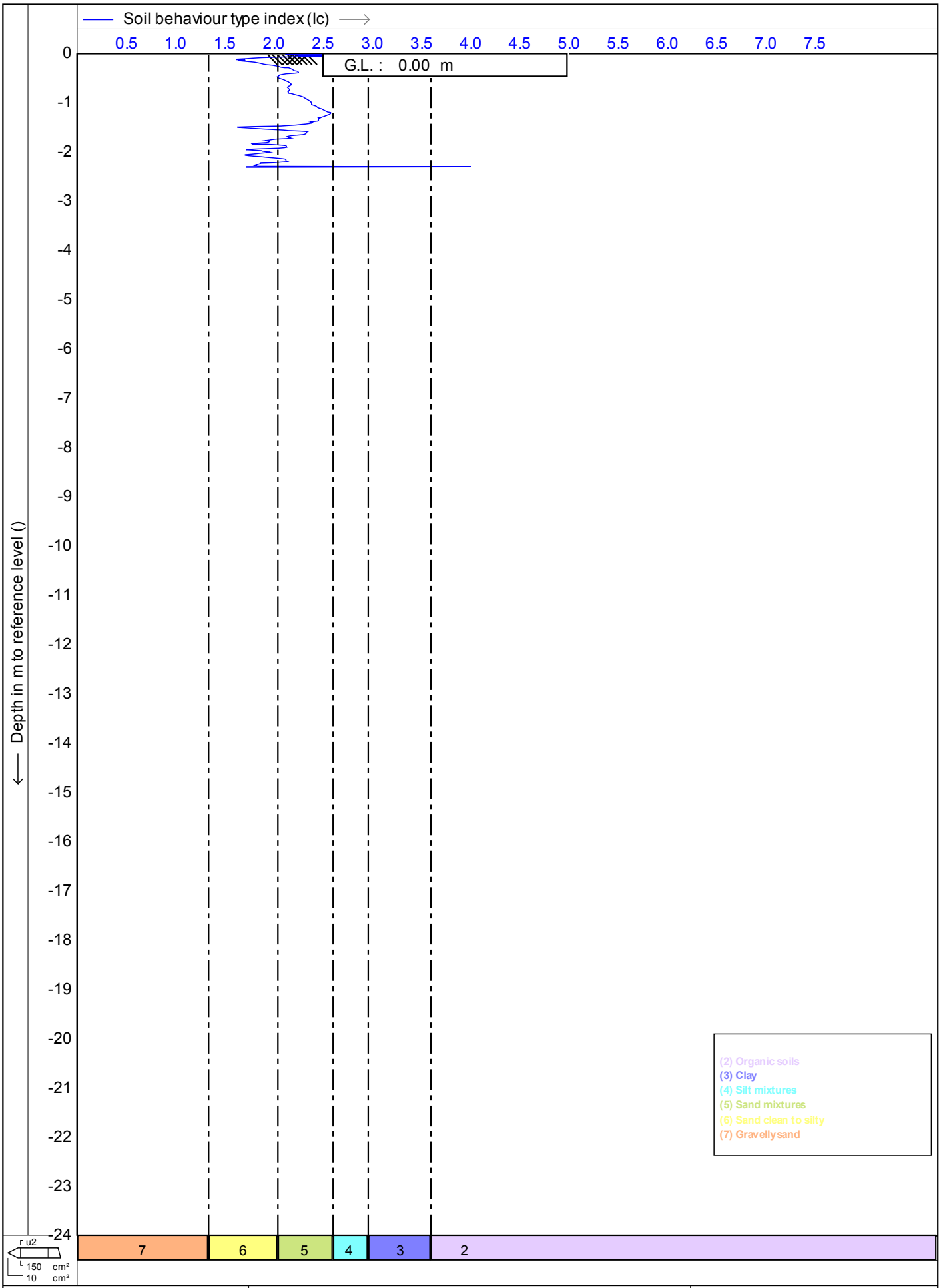
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

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Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** 8/15

1.45



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Test acc NZ class

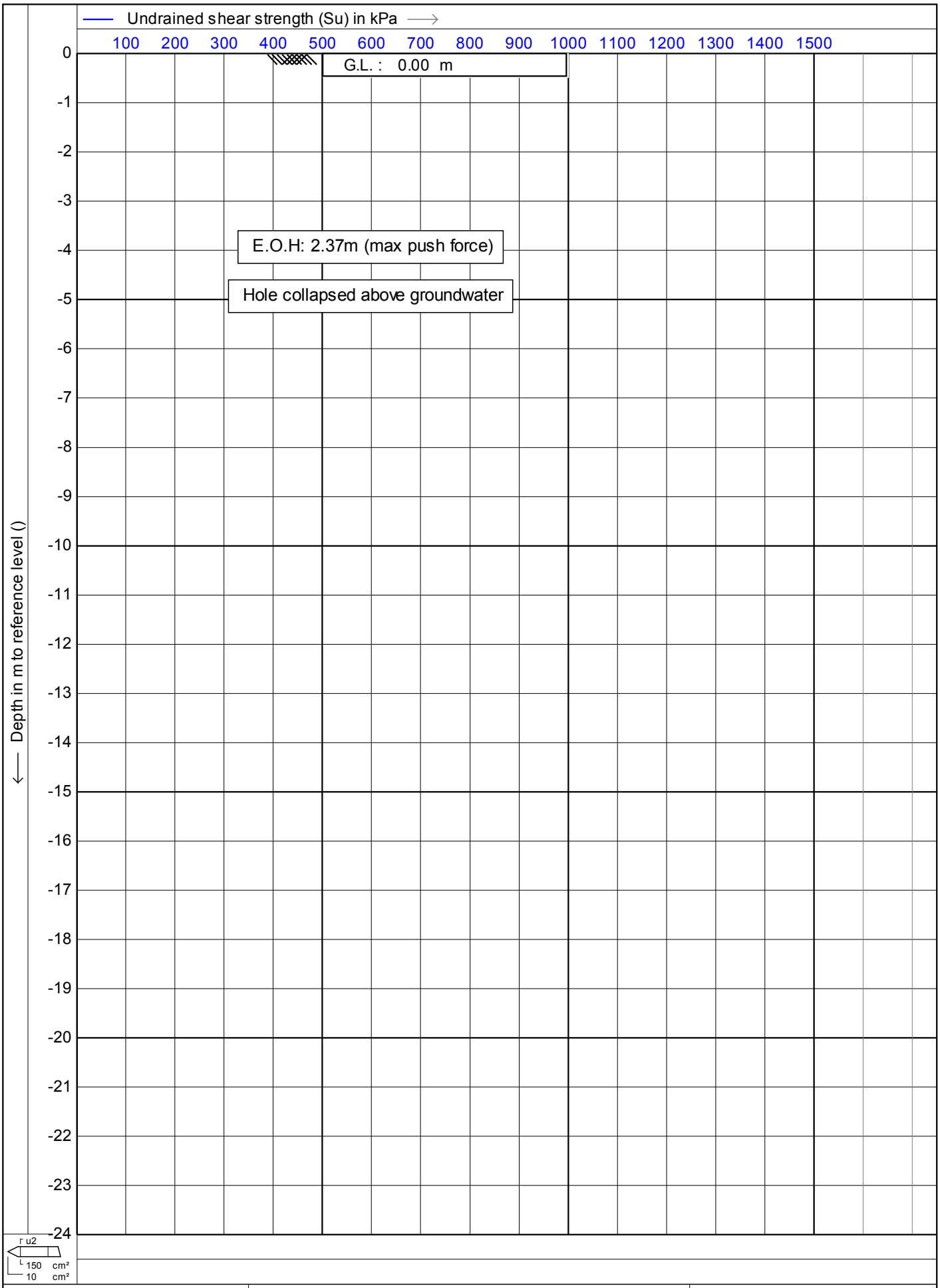
Project : **20 Klinac Lane**

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Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** **9/15**

1.45



DRILLFORCE
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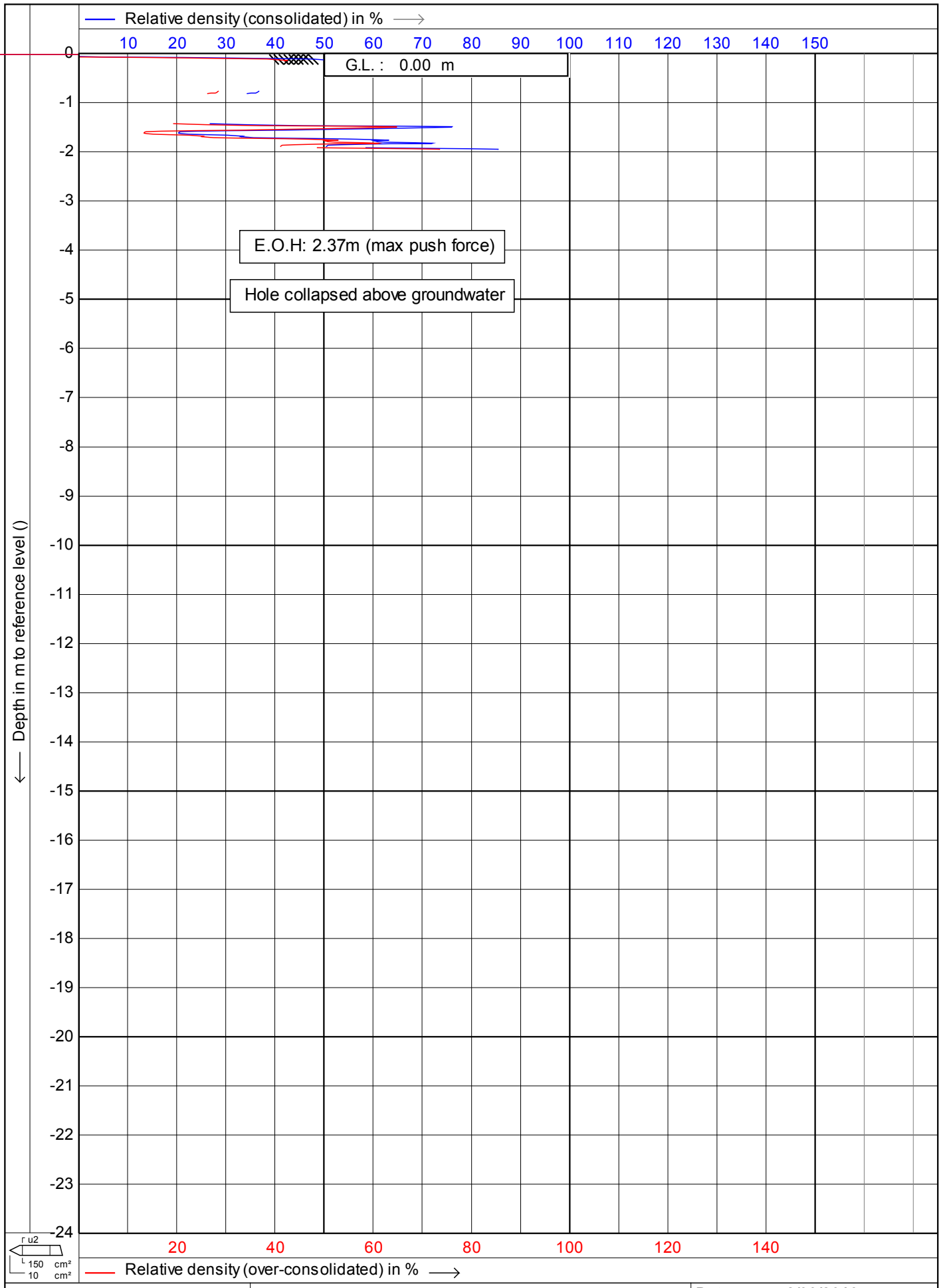
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.9162, -35.20834 Garmin EXTREX 10**

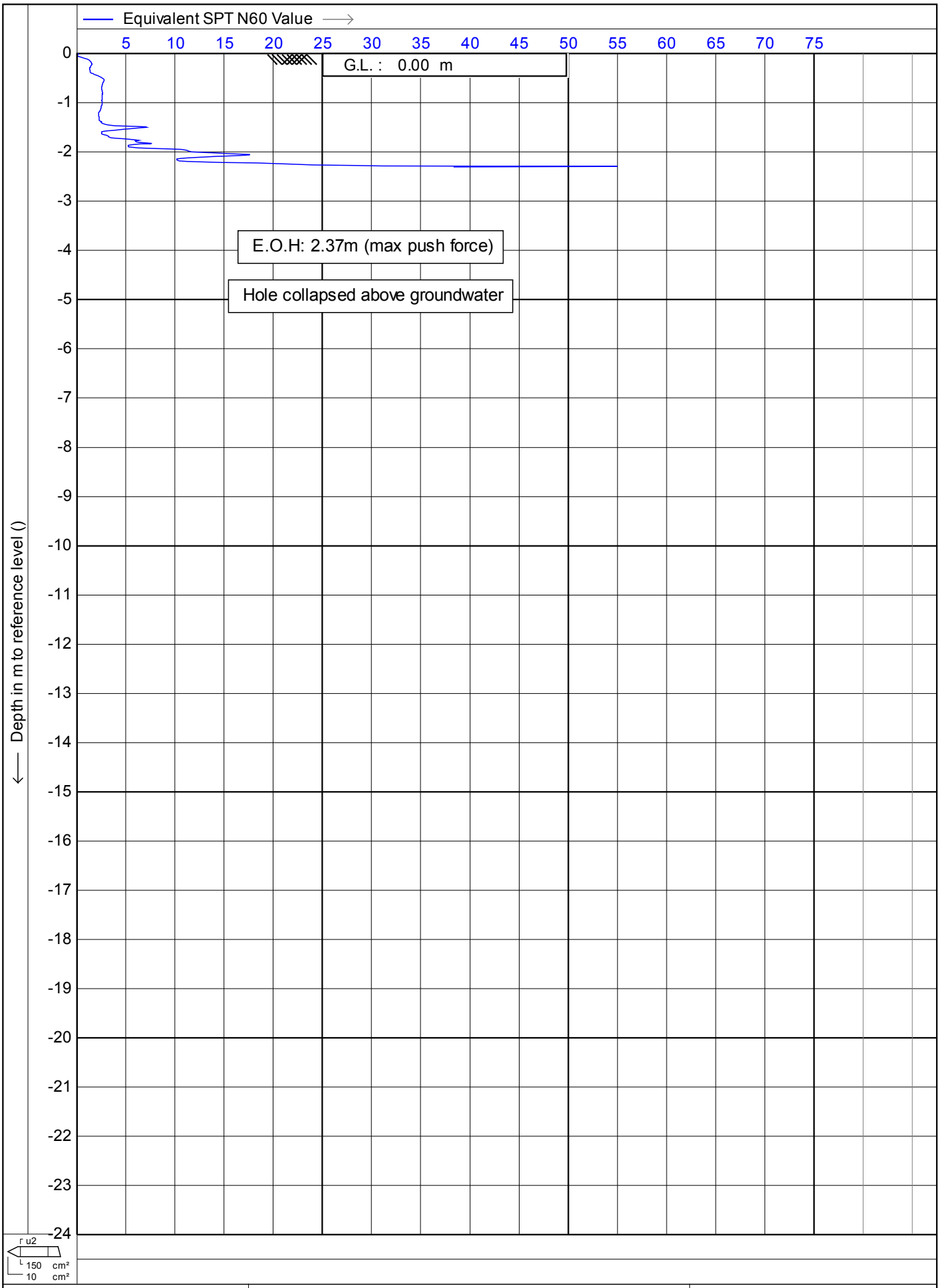
Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** **10/15**

1.45



DRILLFORCE THE DRILLING SPECIALISTS	Test acc NZ class	Date : **2/09/2019**
	Project : **20 Klinac Lane**	Cone no. : **S10CFIIP.S15297**
	Location: **20 Klinac Lane, Waipapa**	Project no. : **DF19GE167**
	Position: **173.9162, -35.20834 Garmin EXTREX 10**	CPT no. : **CPT_01** 11/15

1.45



DRILLFORCE
THE DRILLING SPECIALISTS

Test acc NZ class

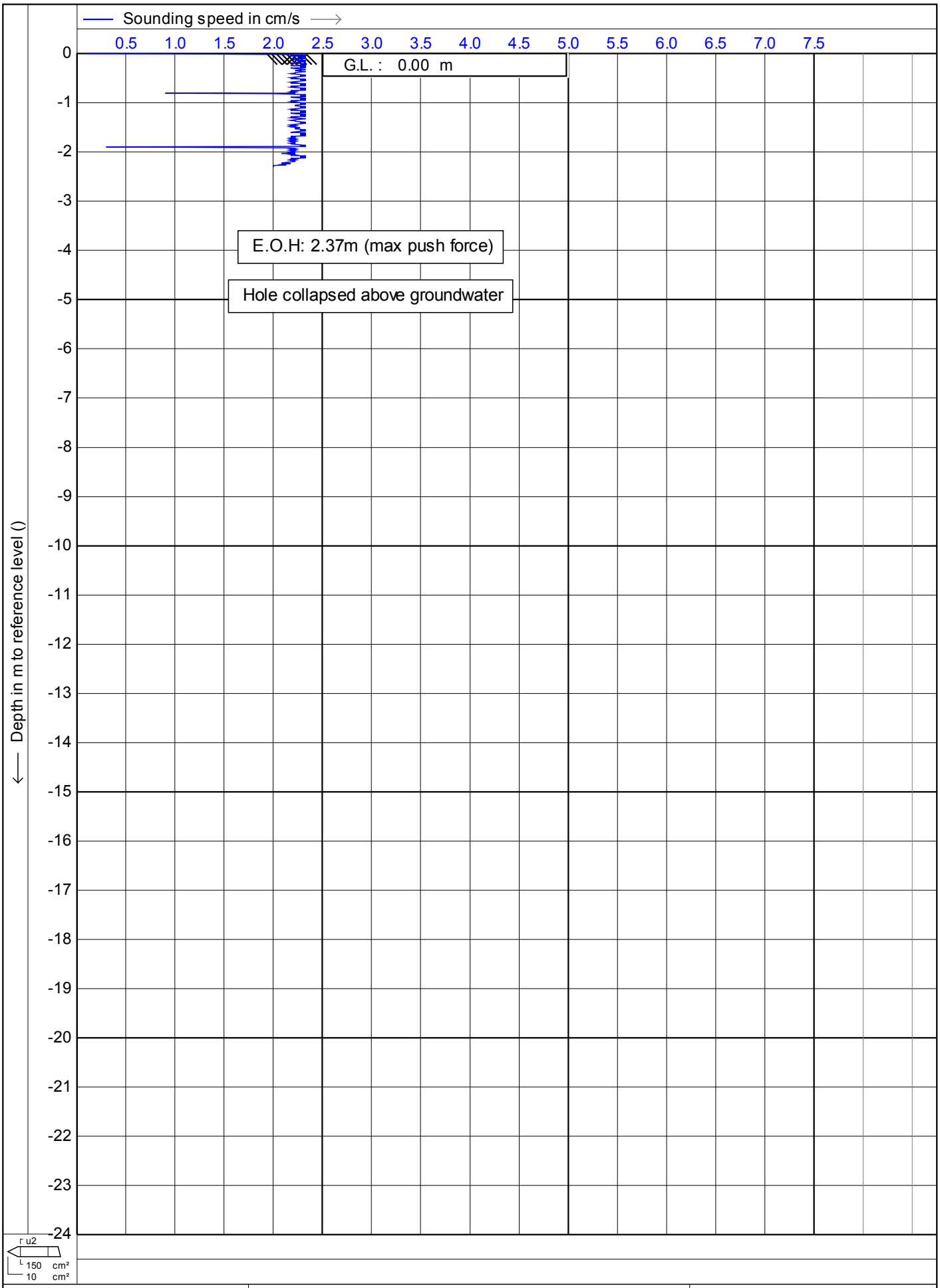
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01**

1.45



DRILLFORCE
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Test acc NZ class

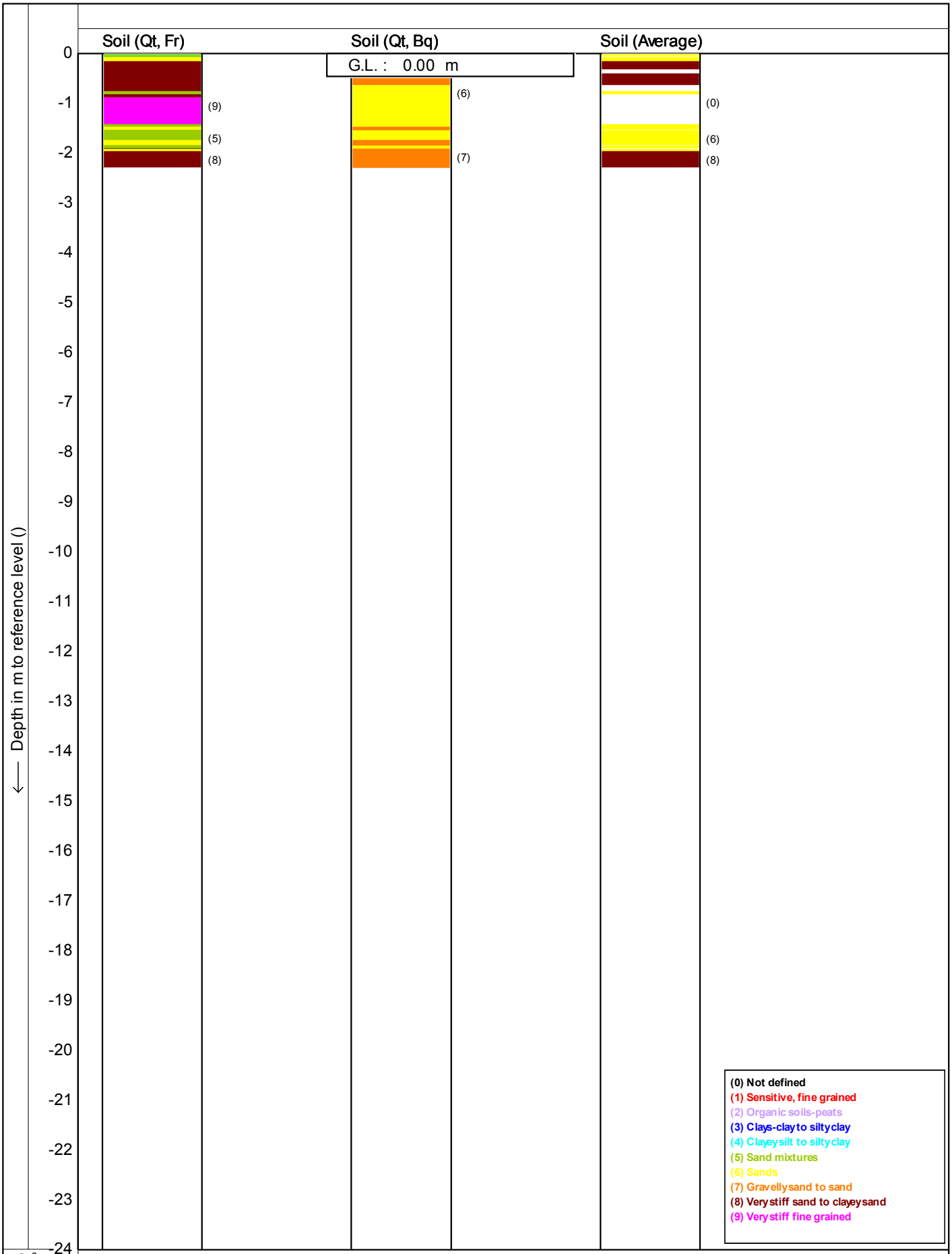
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01**

1.45



Soil behaviour type classification after Robertson 1990

r u2
150 cm²
10 cm²

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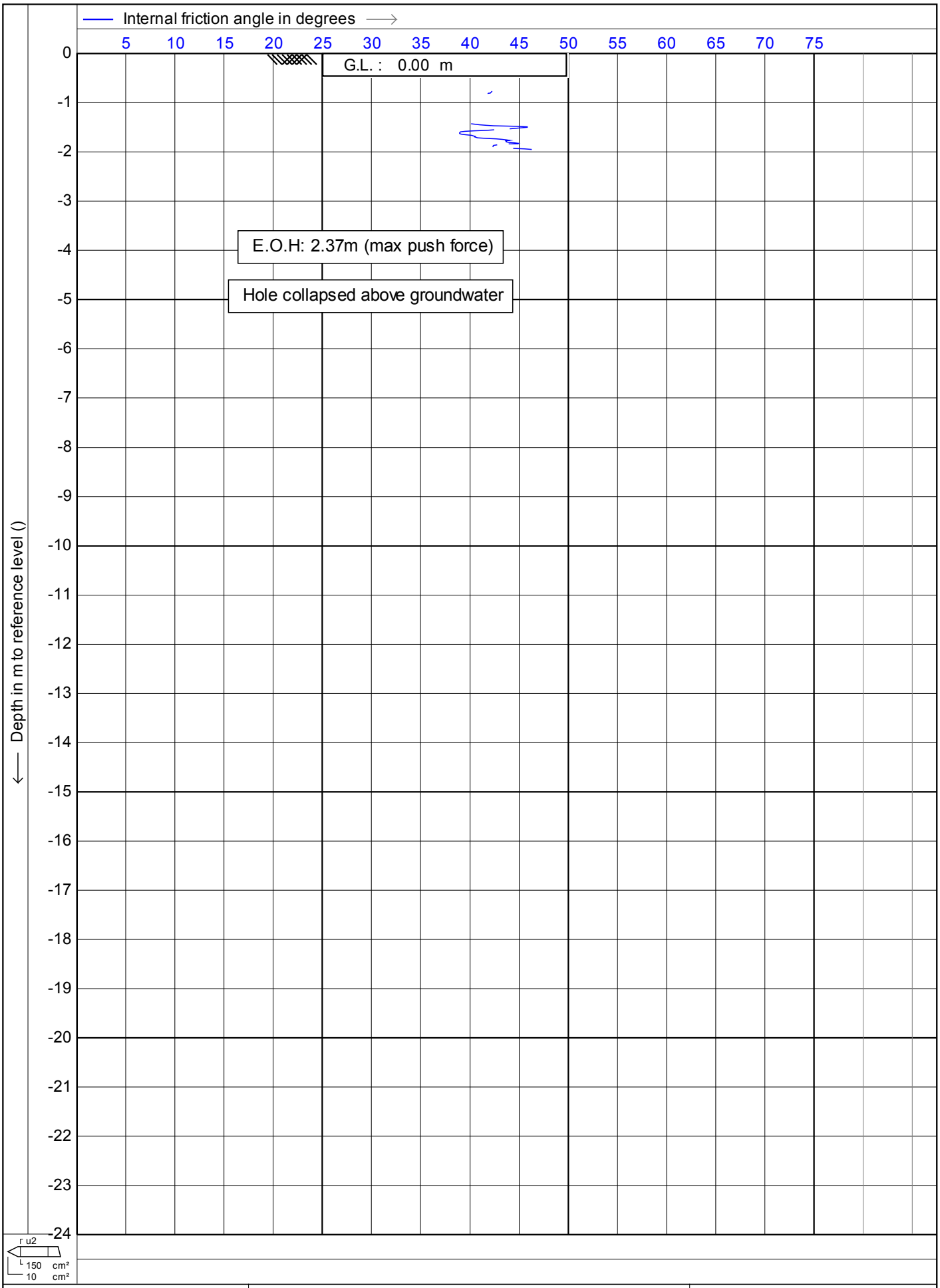
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** **14/15**

1.45



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Test acc NZ class

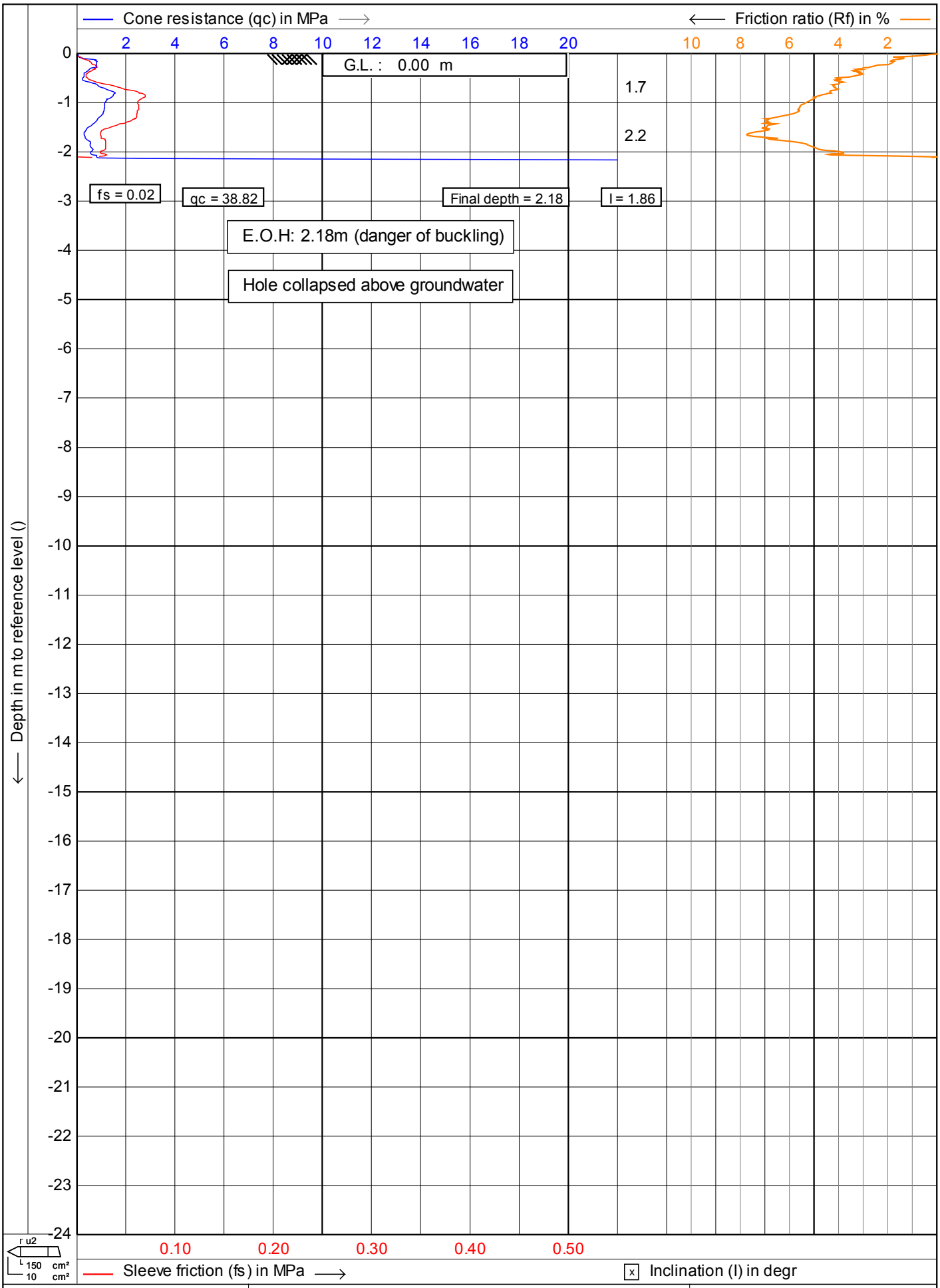
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.9162, -35.20834 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_01** **15/15**

1.45



DRILLFORCE
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Test acc NZ class

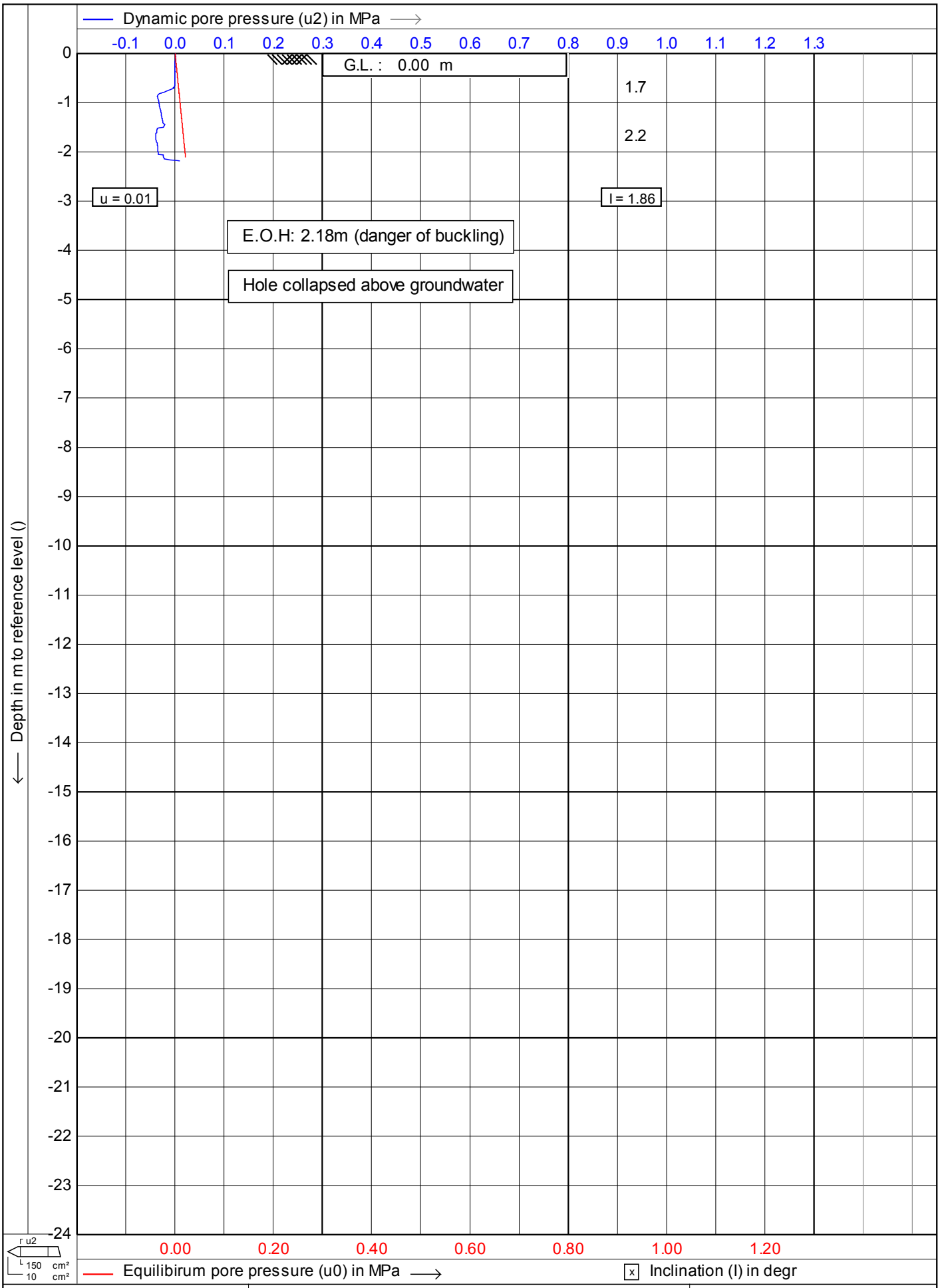
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91615, -35.20837 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_02** 1/15

1.45



DRILLFORCE
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Test acc NZ class

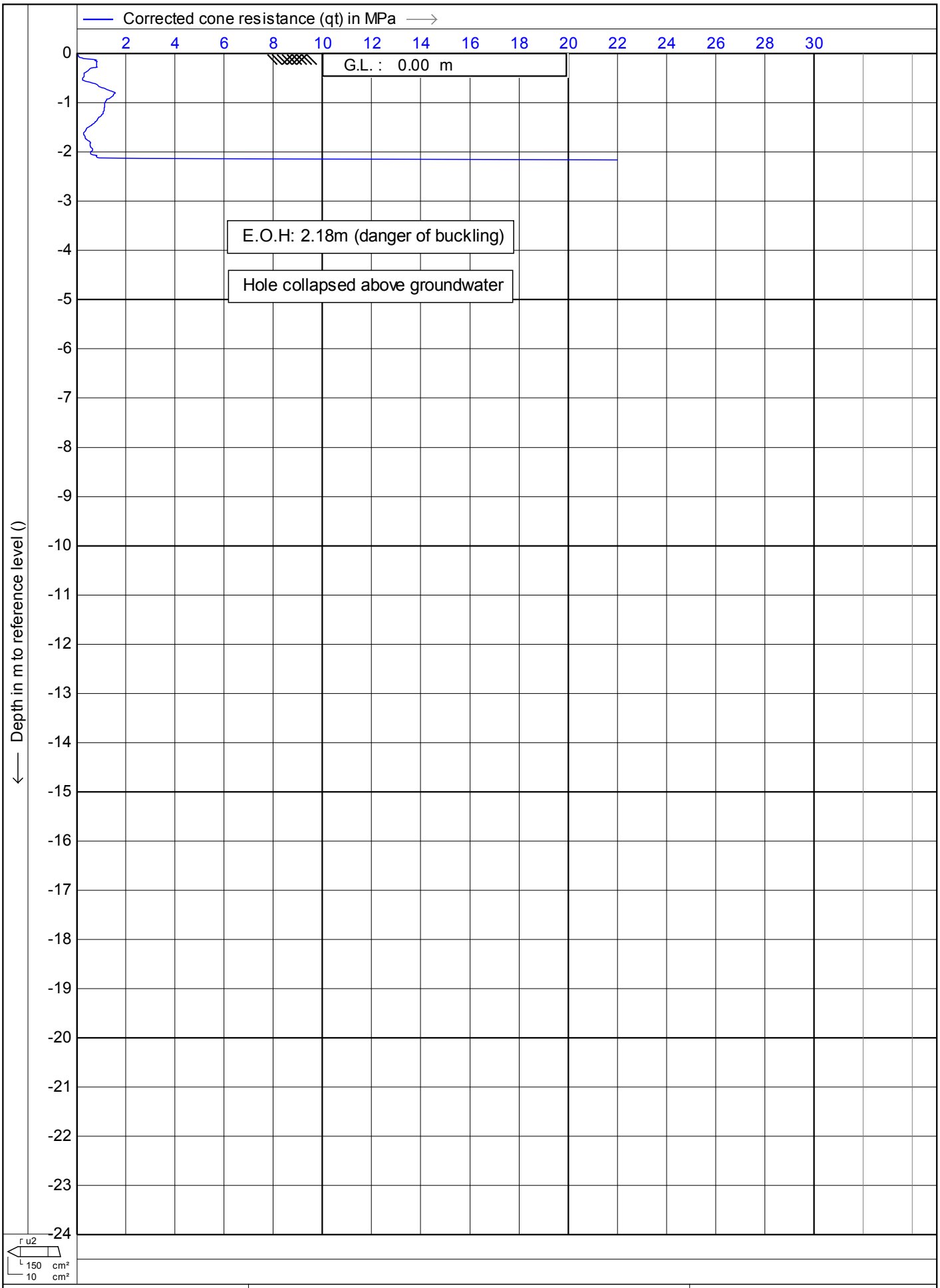
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91615, -35.20837 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_02**

1.45



DRILLFORCE
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Test acc NZ class

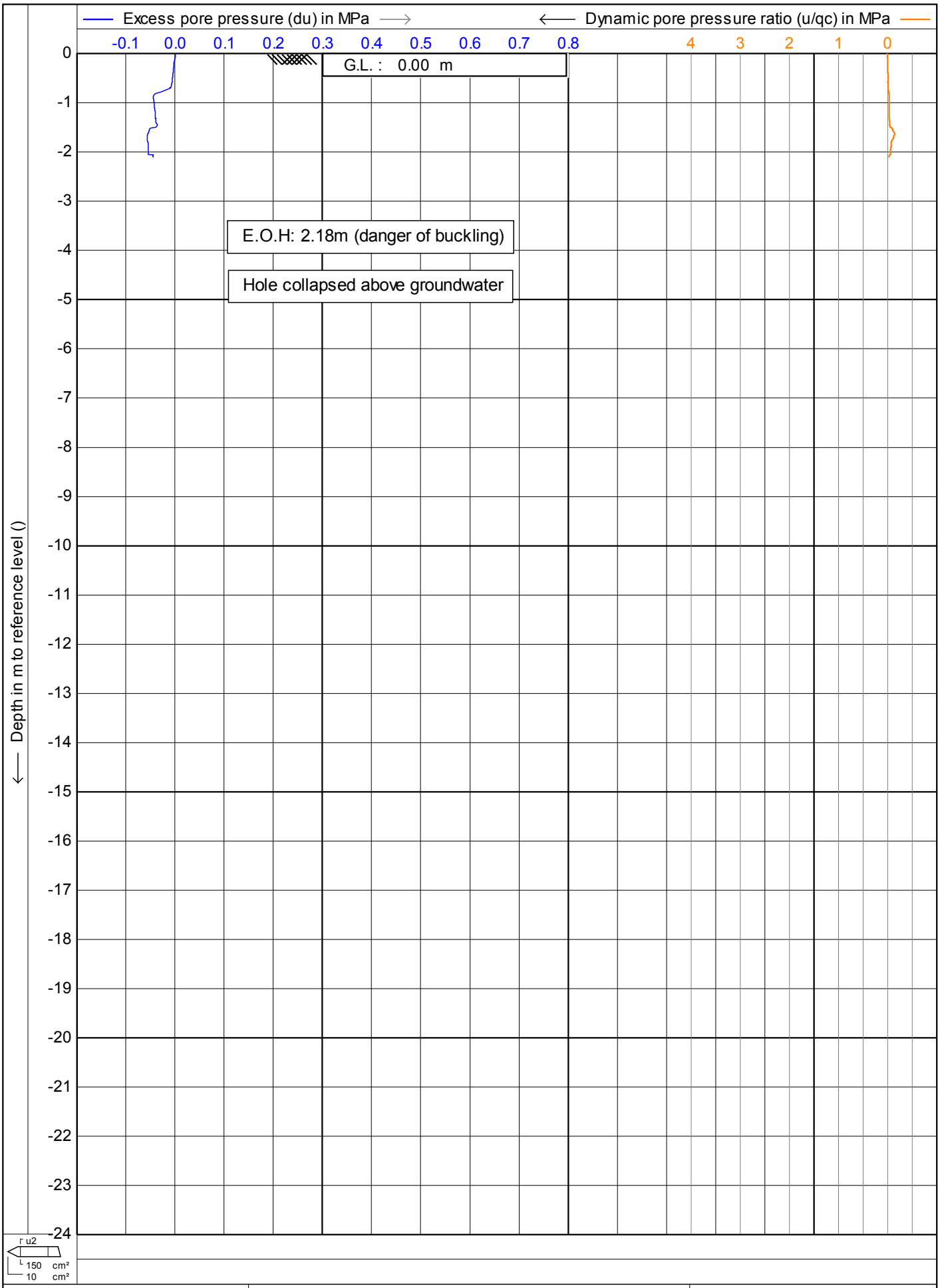
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91615, -35.20837 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_02** **3/15**

1.45



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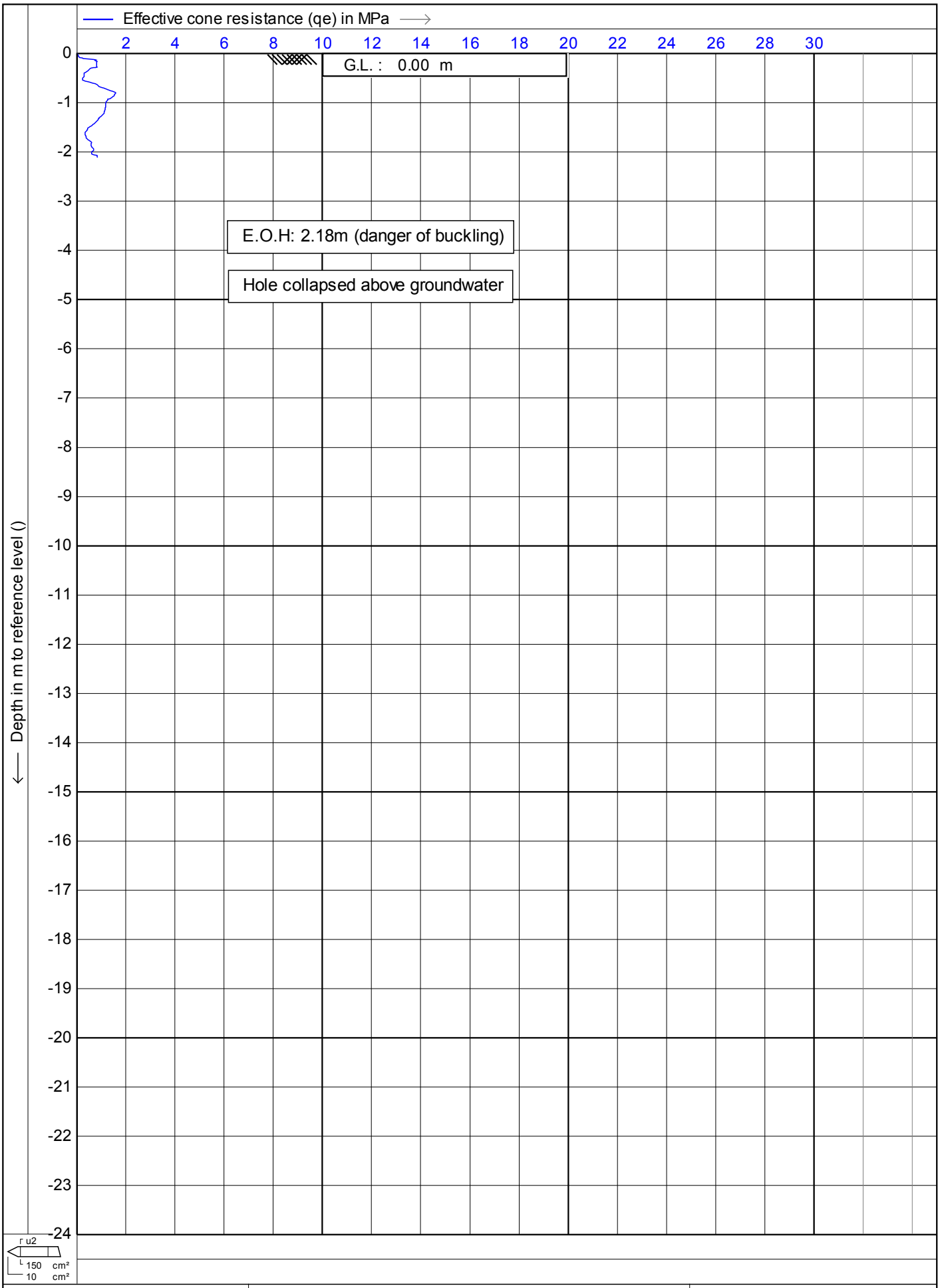
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91615, -35.20837 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_02** **4/15**

1.45



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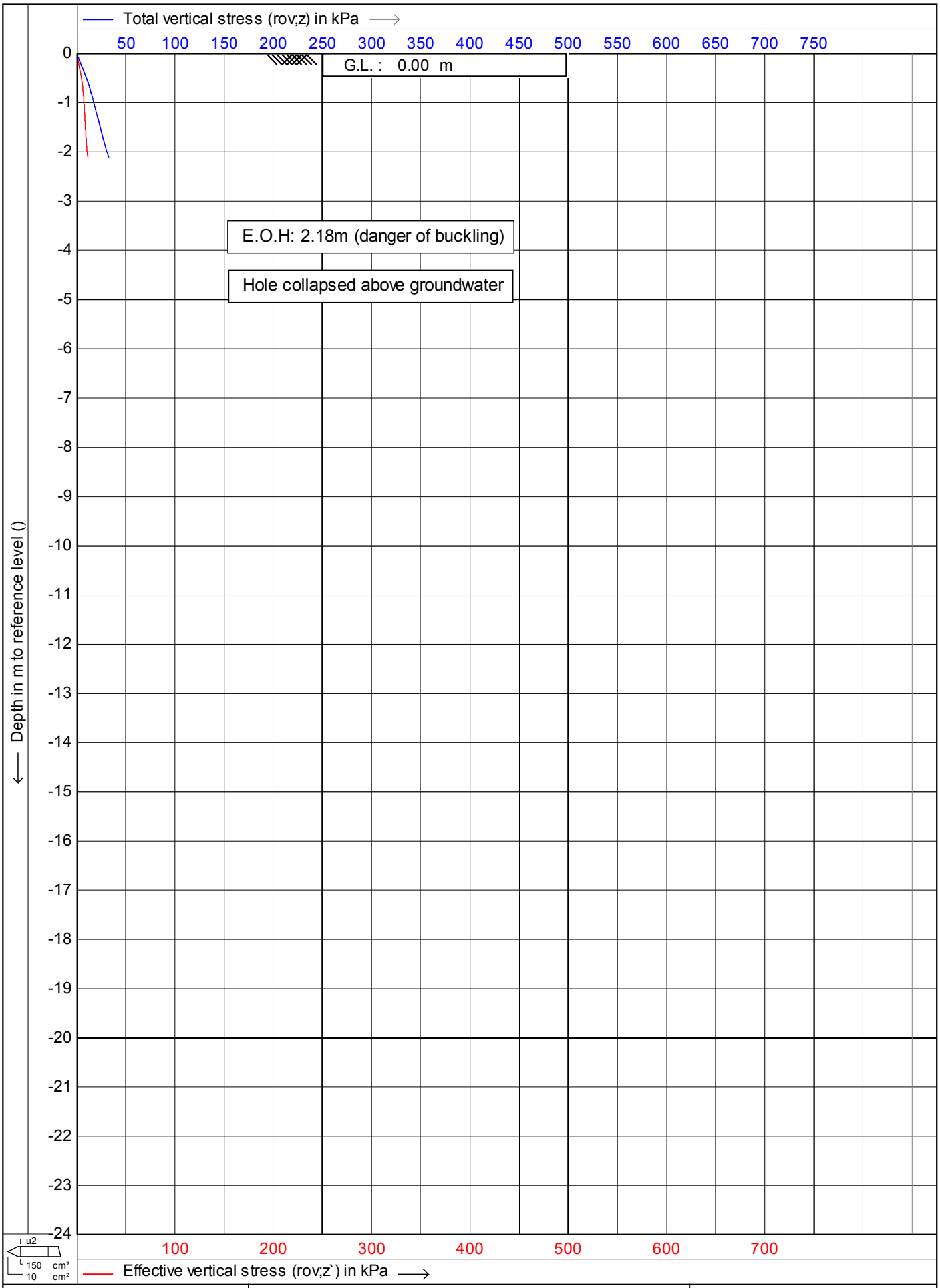
Project : **20 Klinac Lane**

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Position: **173.91615, -35.20837 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_02** **5/15**

1.45



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Test acc NZ class

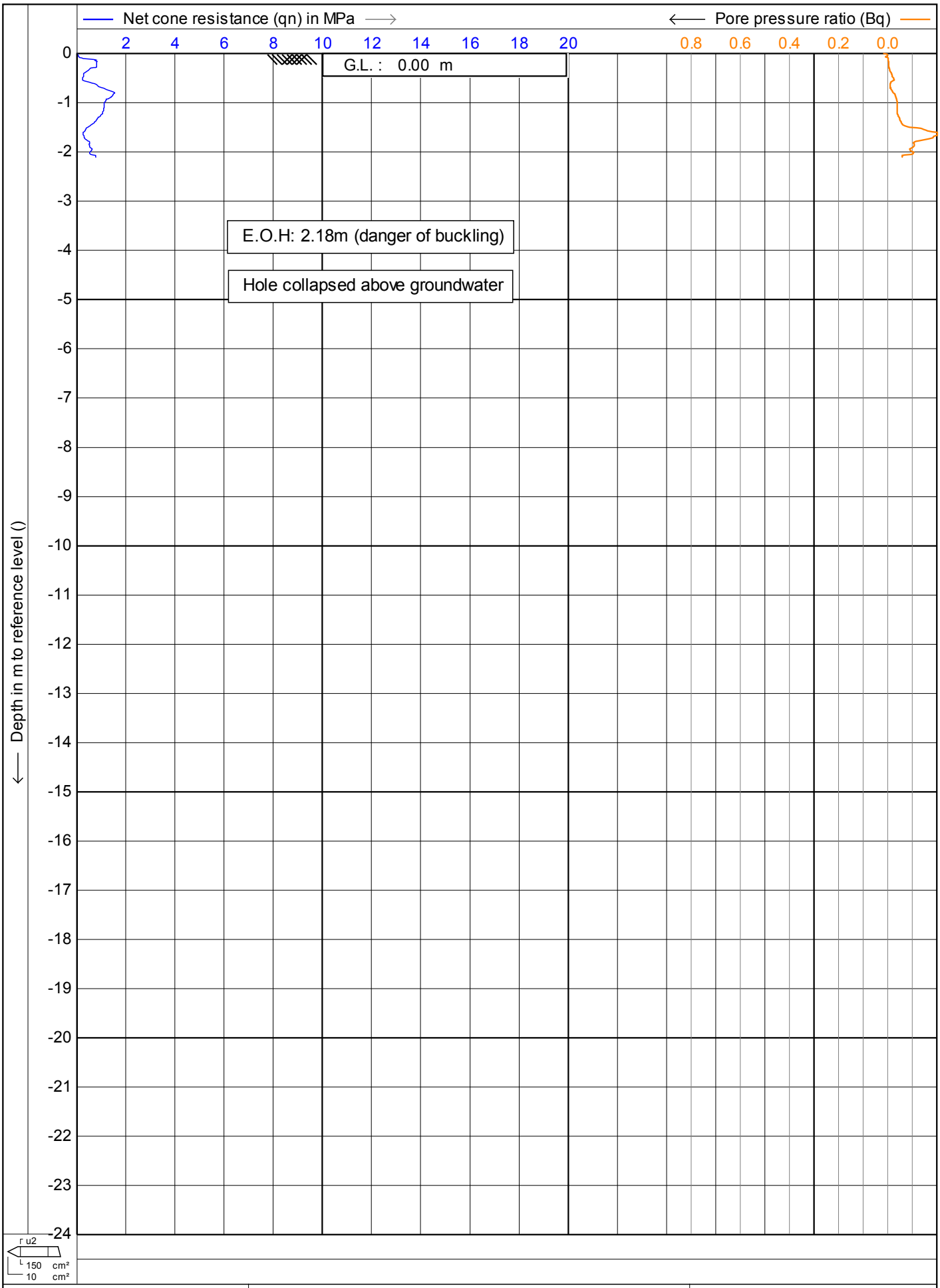
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

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Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_02** **6/15**

1.45



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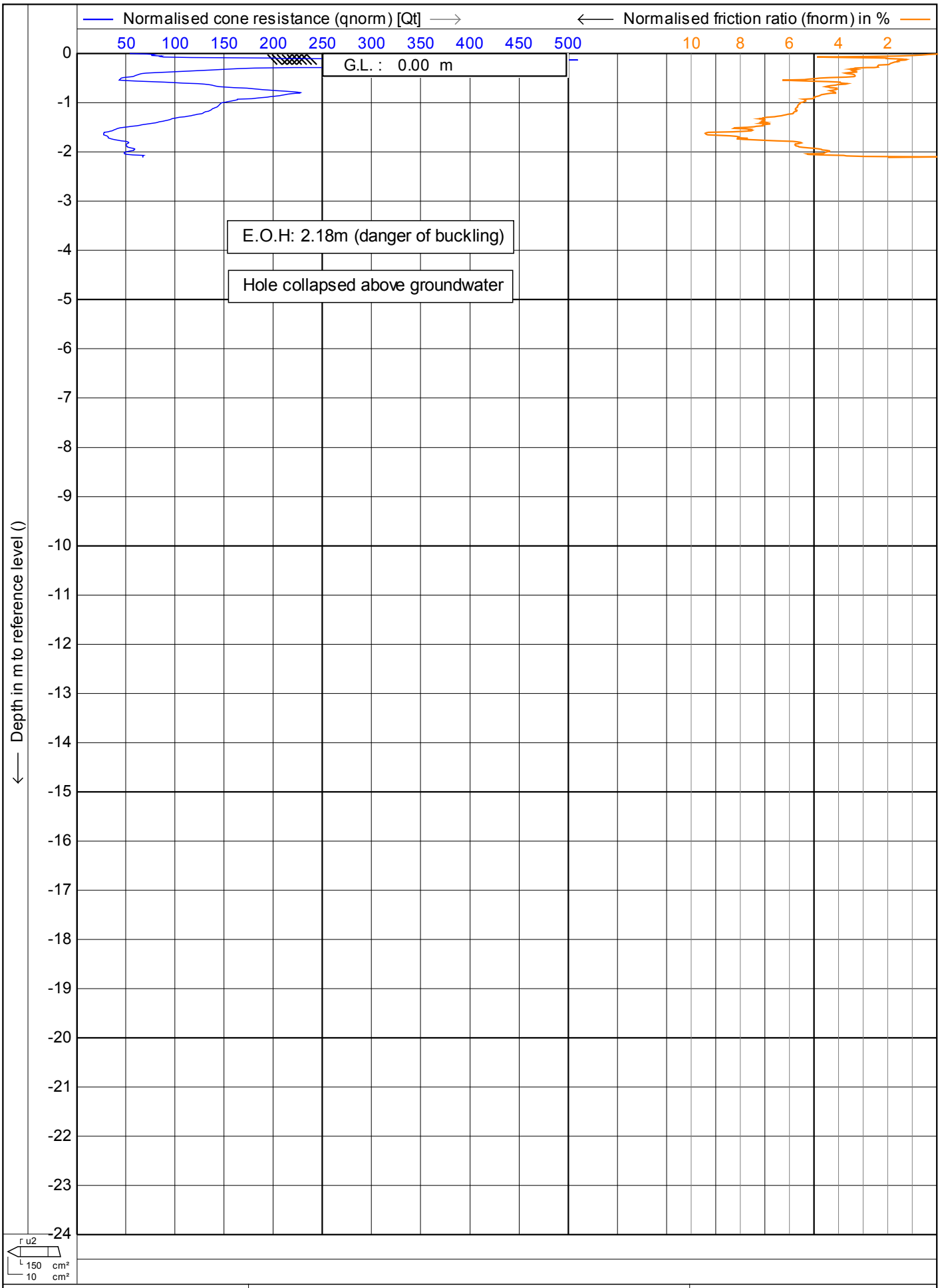
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1.45



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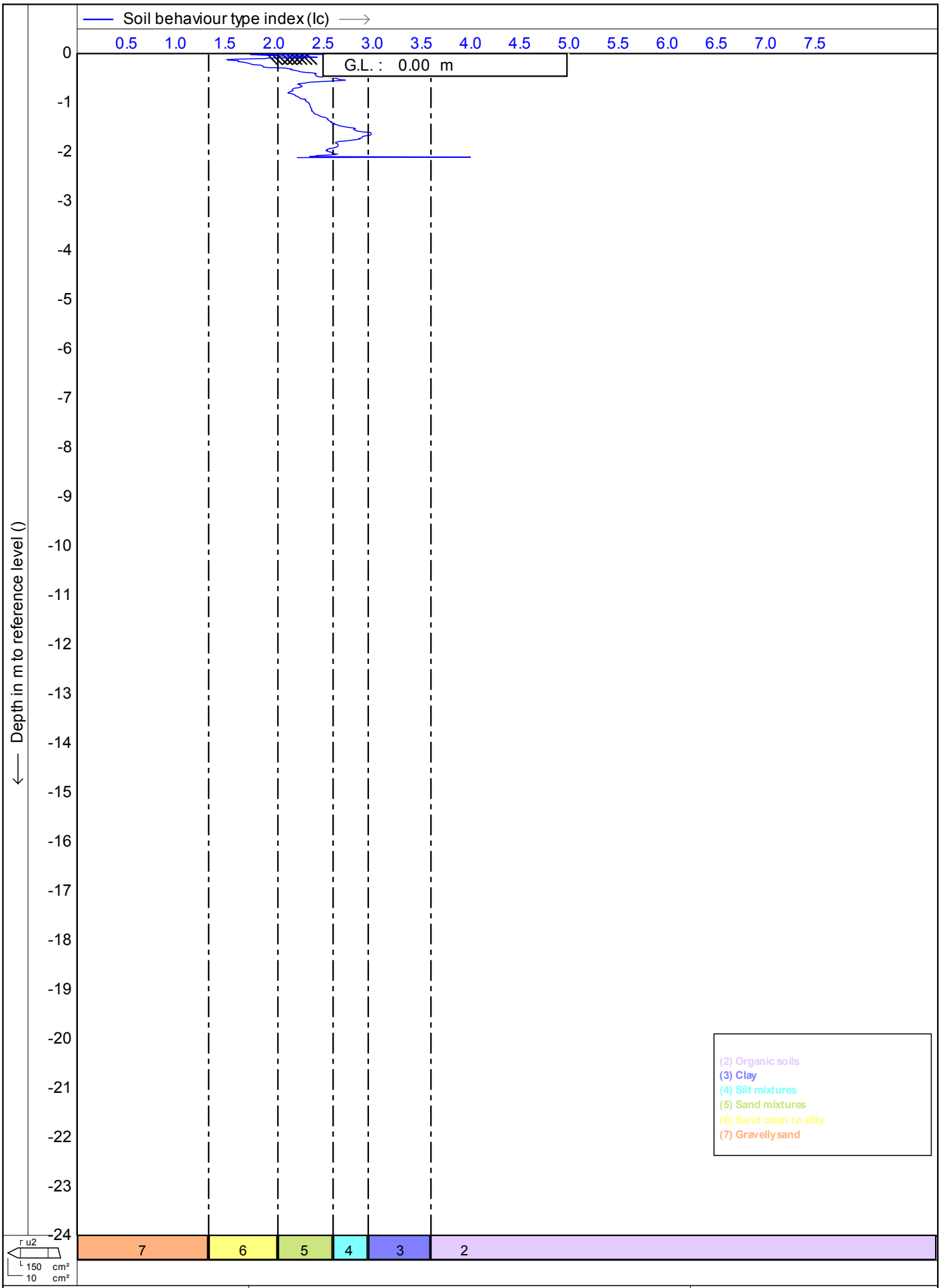
Project : **20 Klinac Lane**

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Date	: **2/09/2019**
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Project no.	: **DF19GE167**
CPT no.	: **CPT_02** 8/15

1.45



DRILLFORCE
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Test acc NZ class

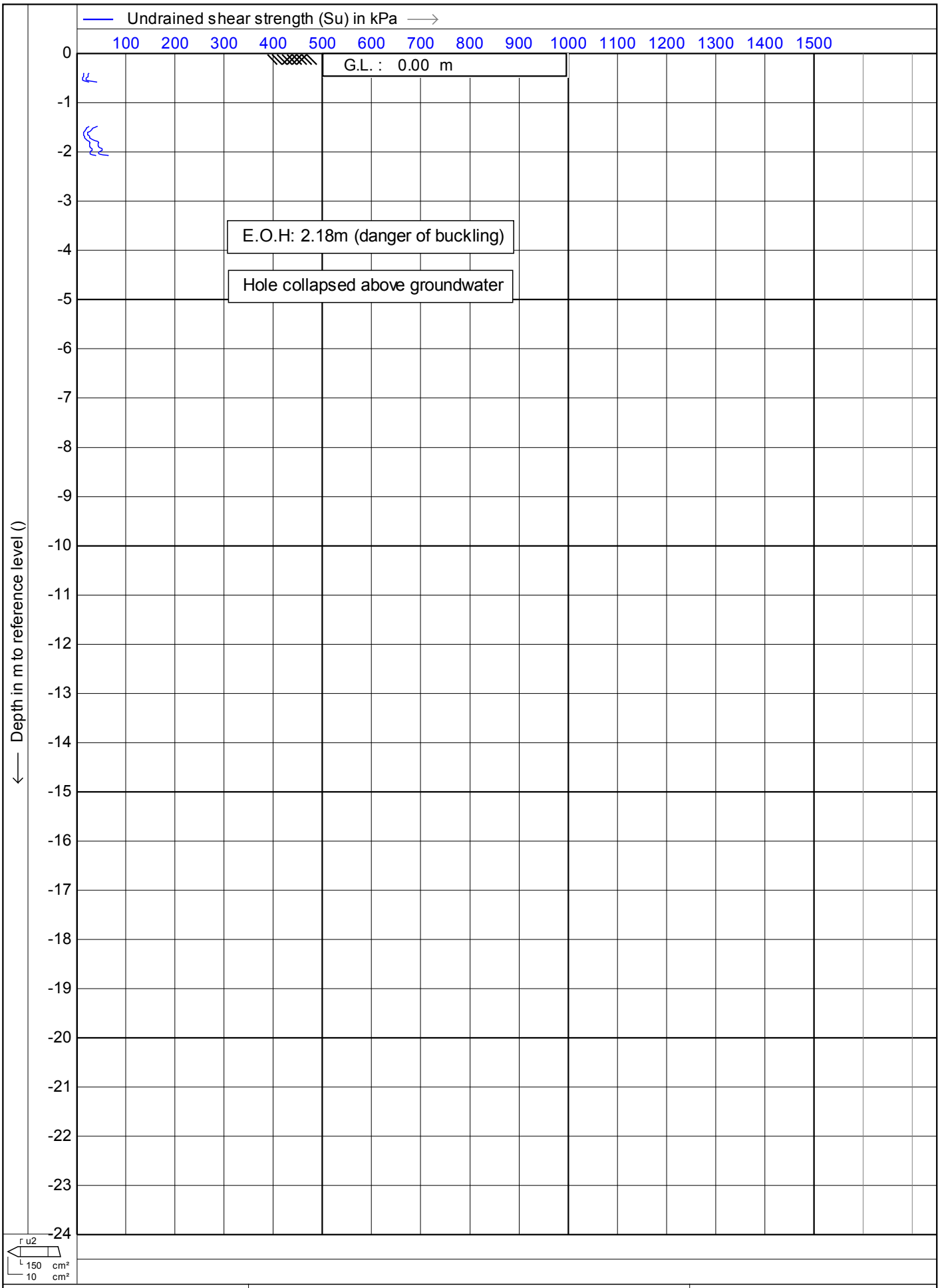
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1.45



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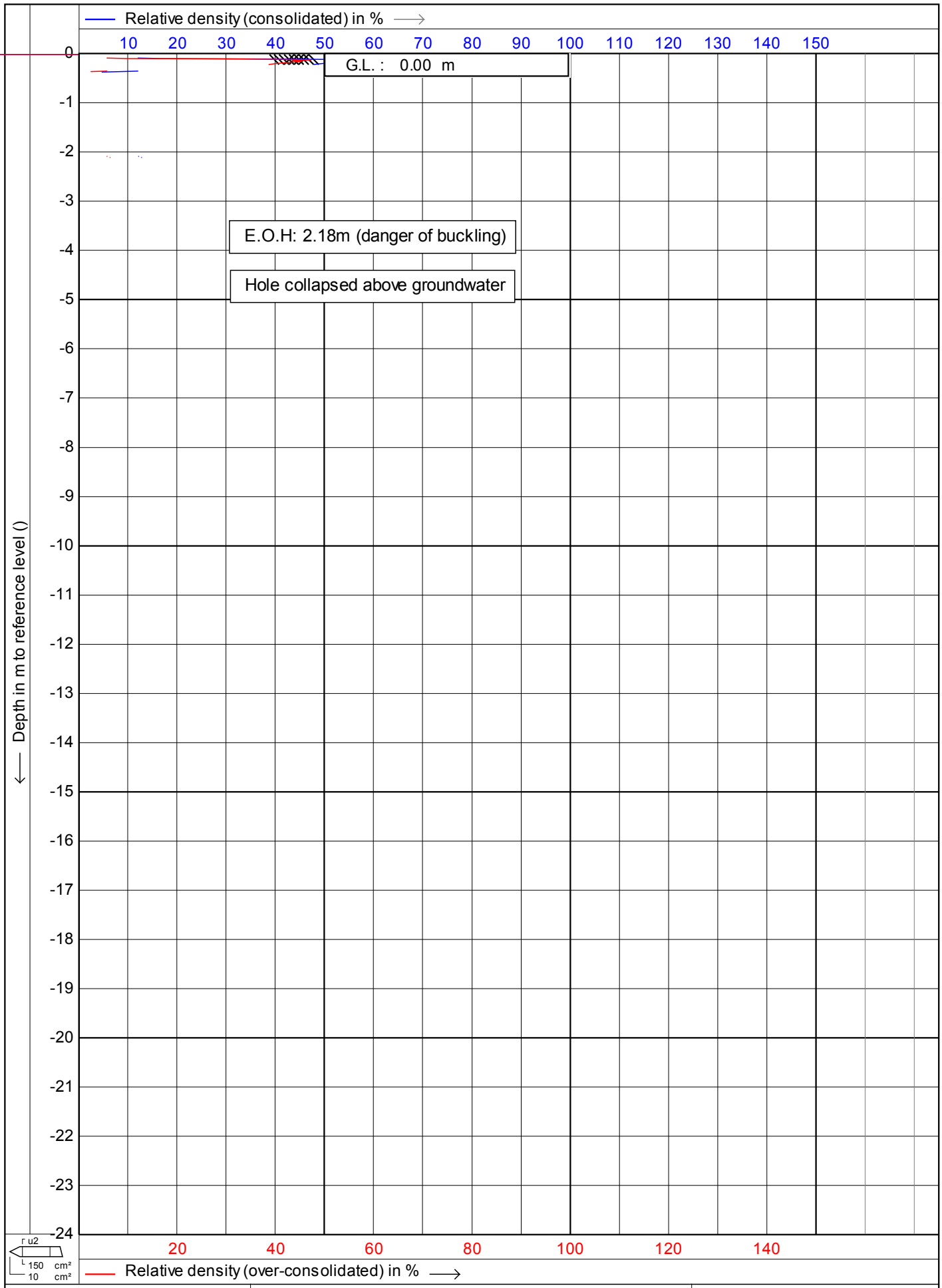
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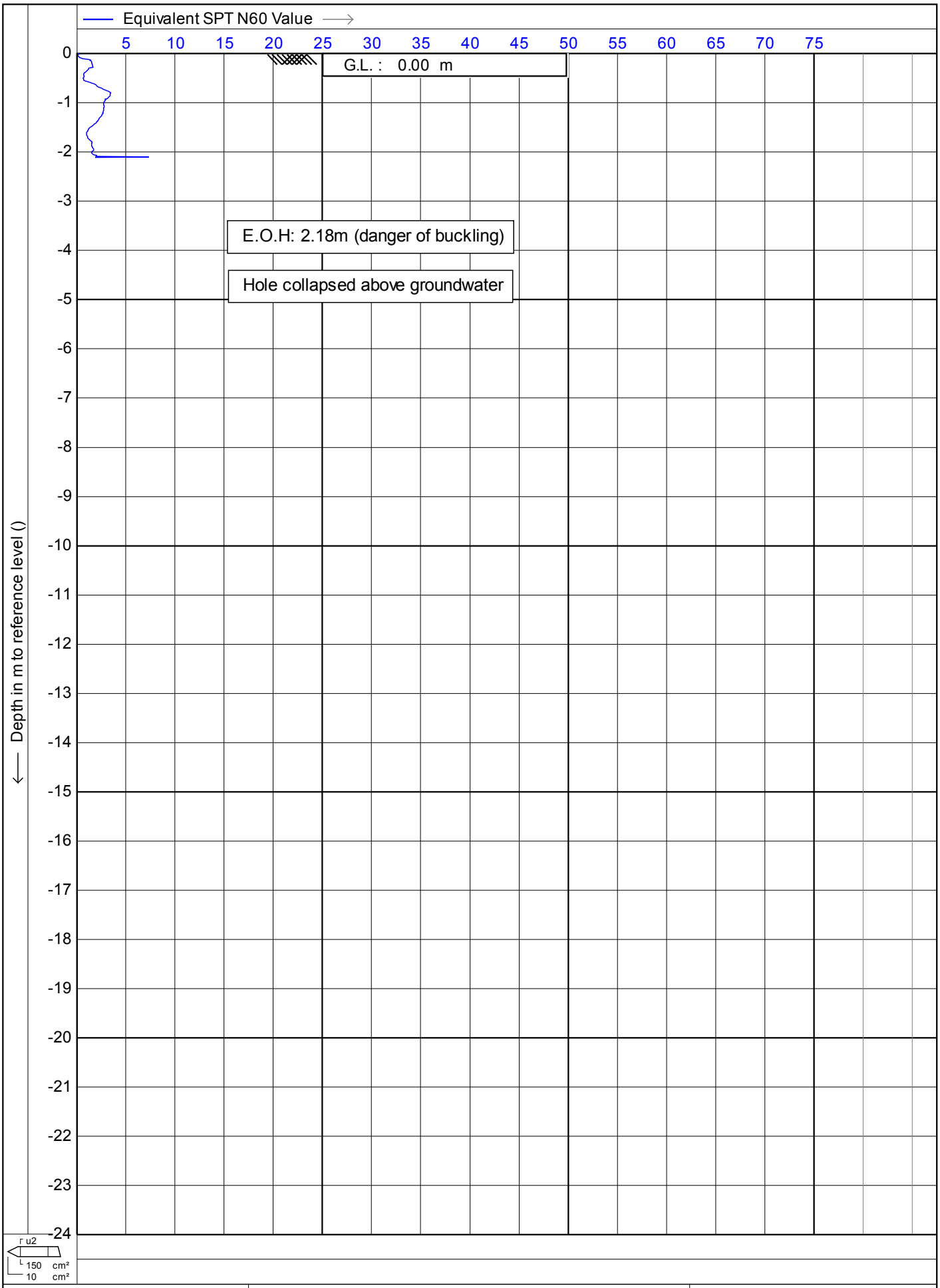
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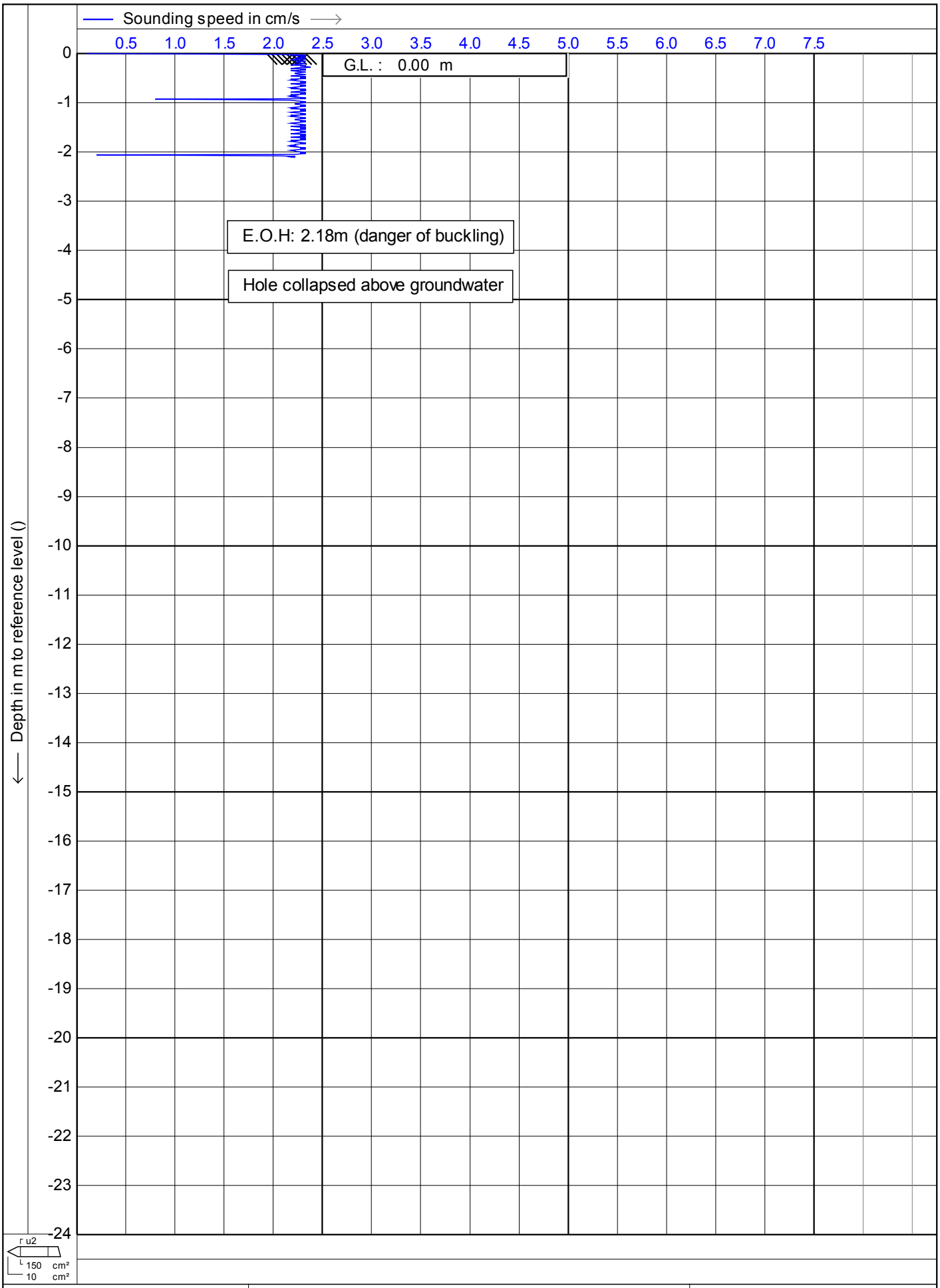
Project : **20 Klinac Lane**

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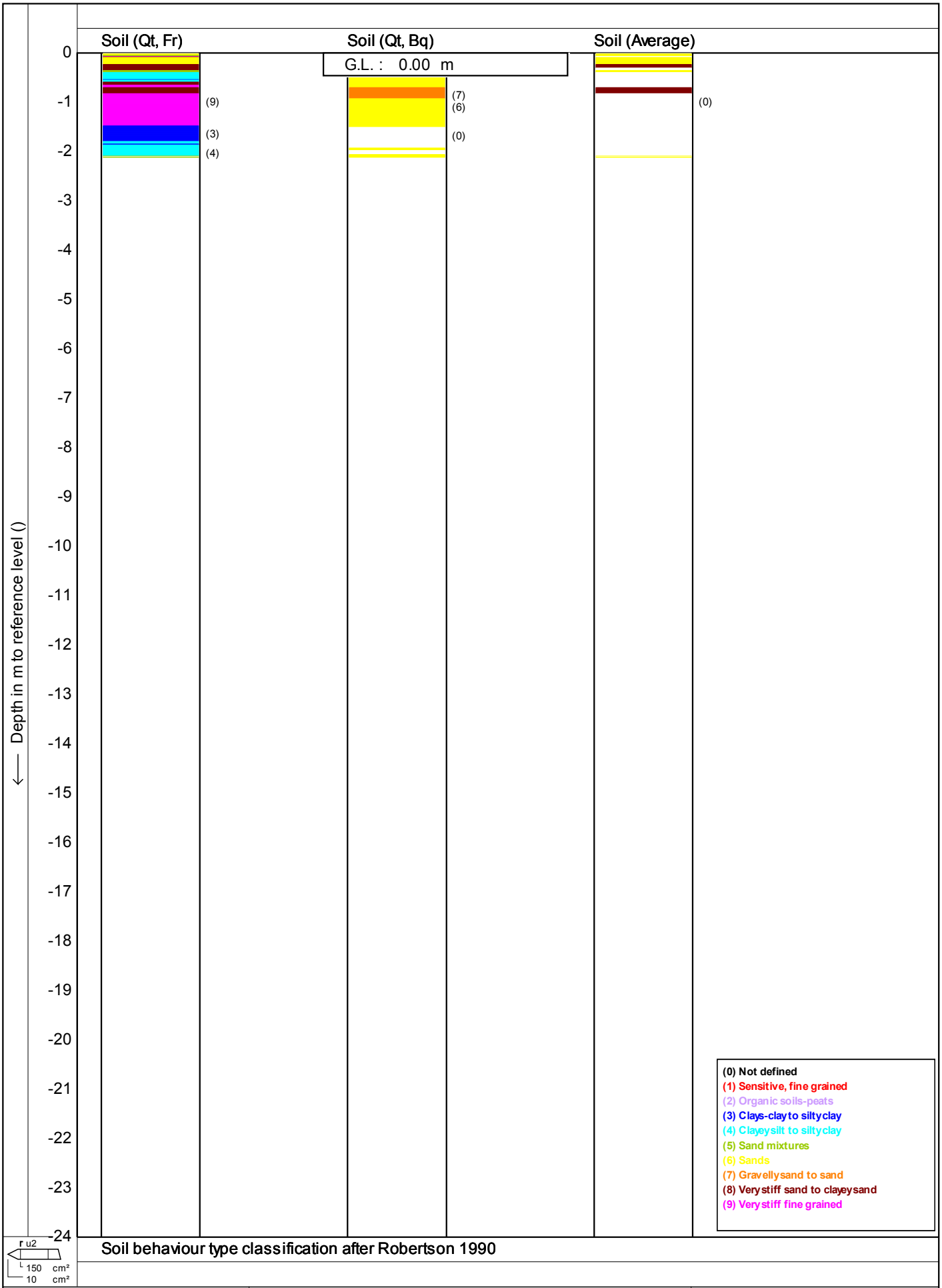
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1.45



Soil behaviour type classification after Robertson 1990

DRILLFORCE
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Test acc NZ class

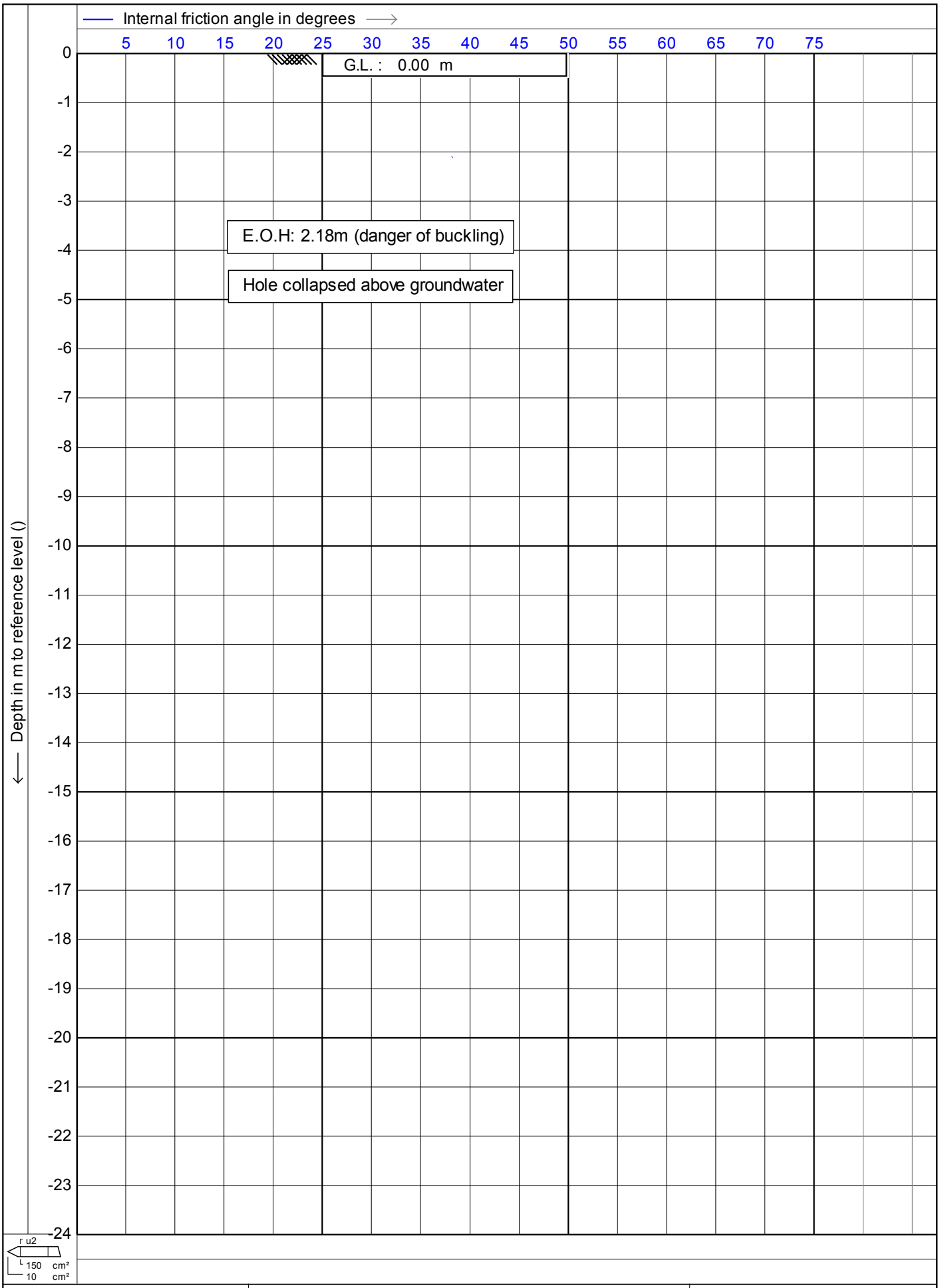
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Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_02** **14/15**

1.45



DRILLFORCE
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Test acc NZ class

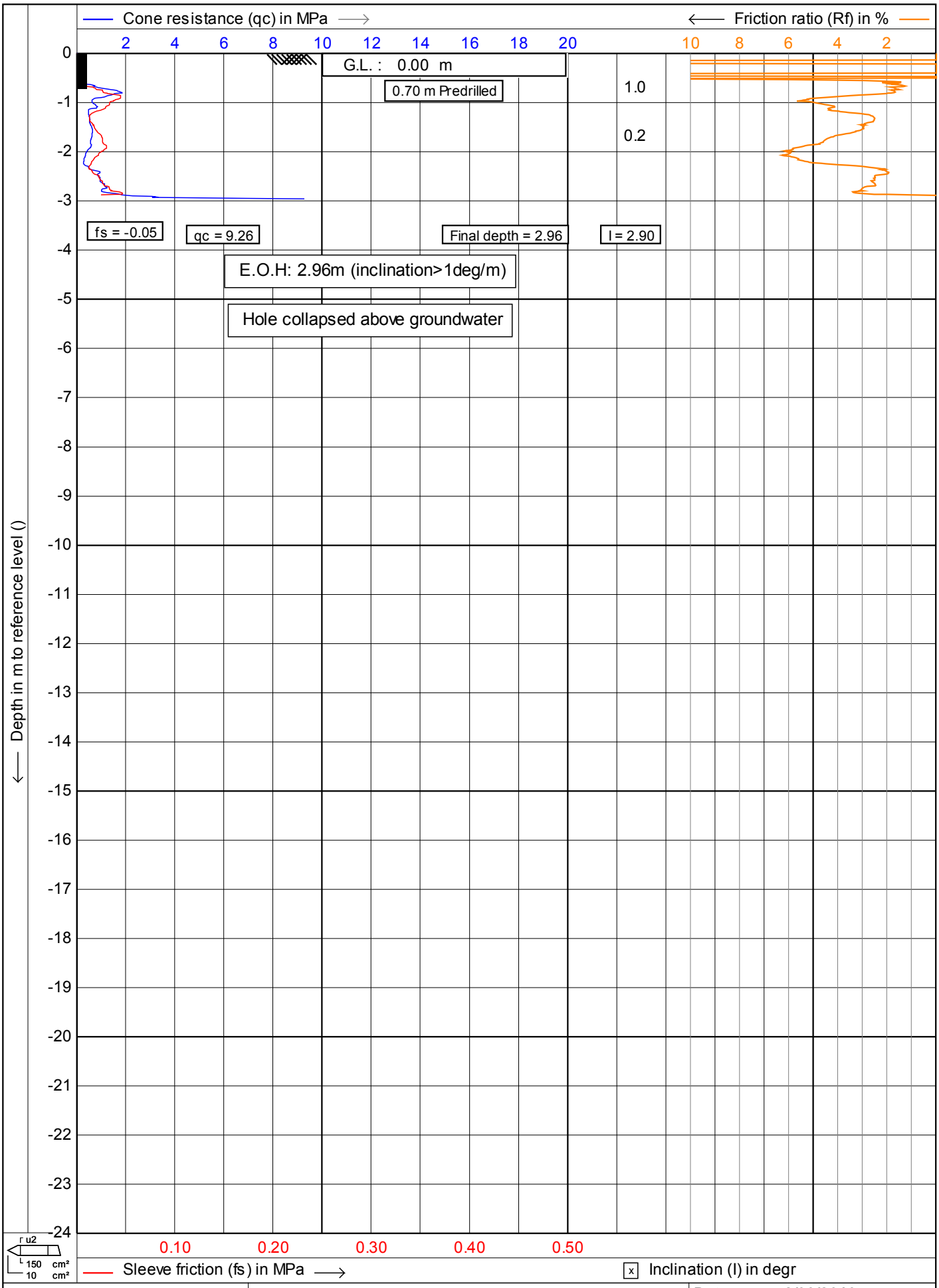
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91615, -35.20837 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_02** **15/15**

1.45



DRILLFORCE
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Test acc NZ class

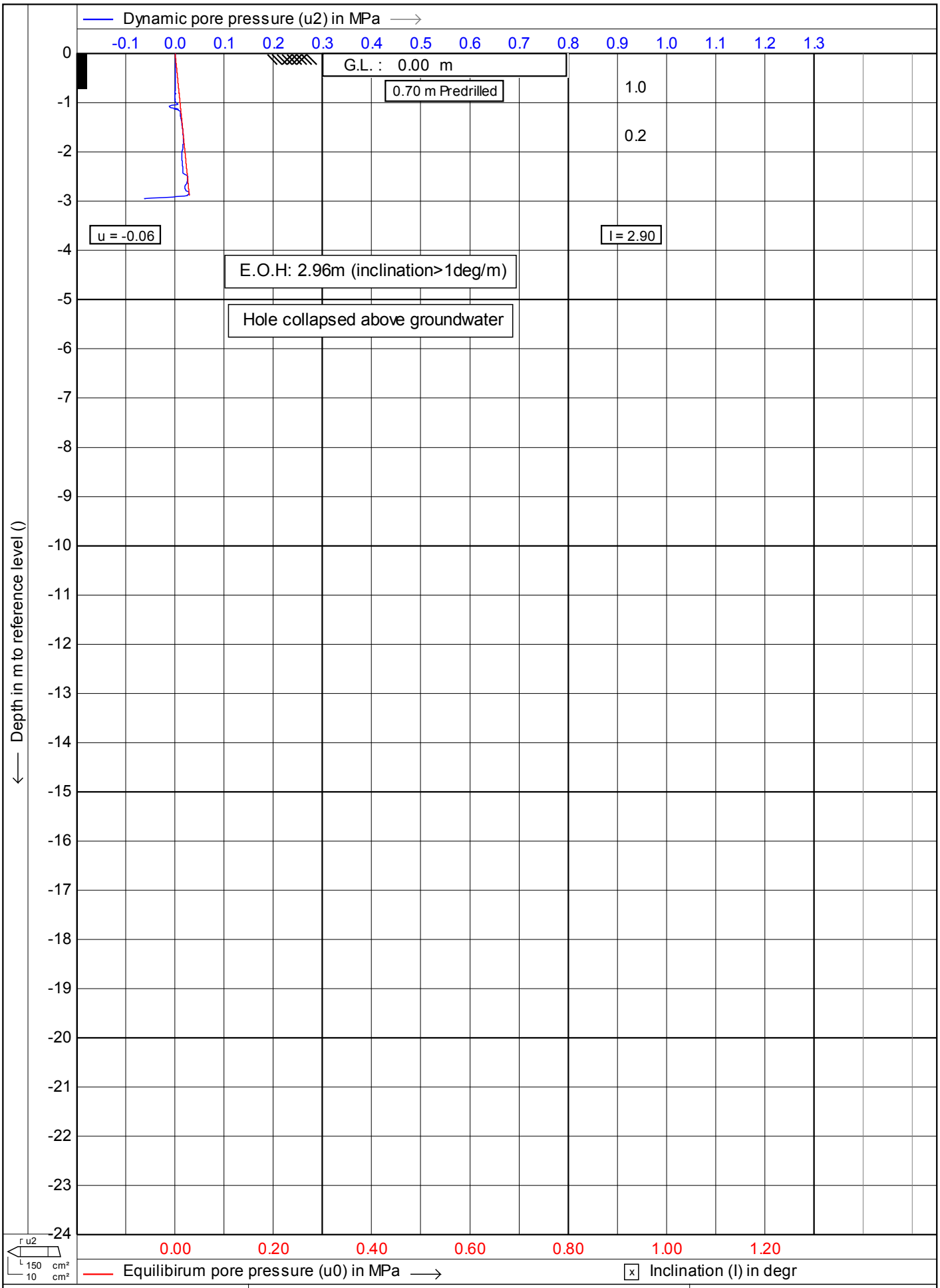
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** 1/15

1.45



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Test acc NZ class

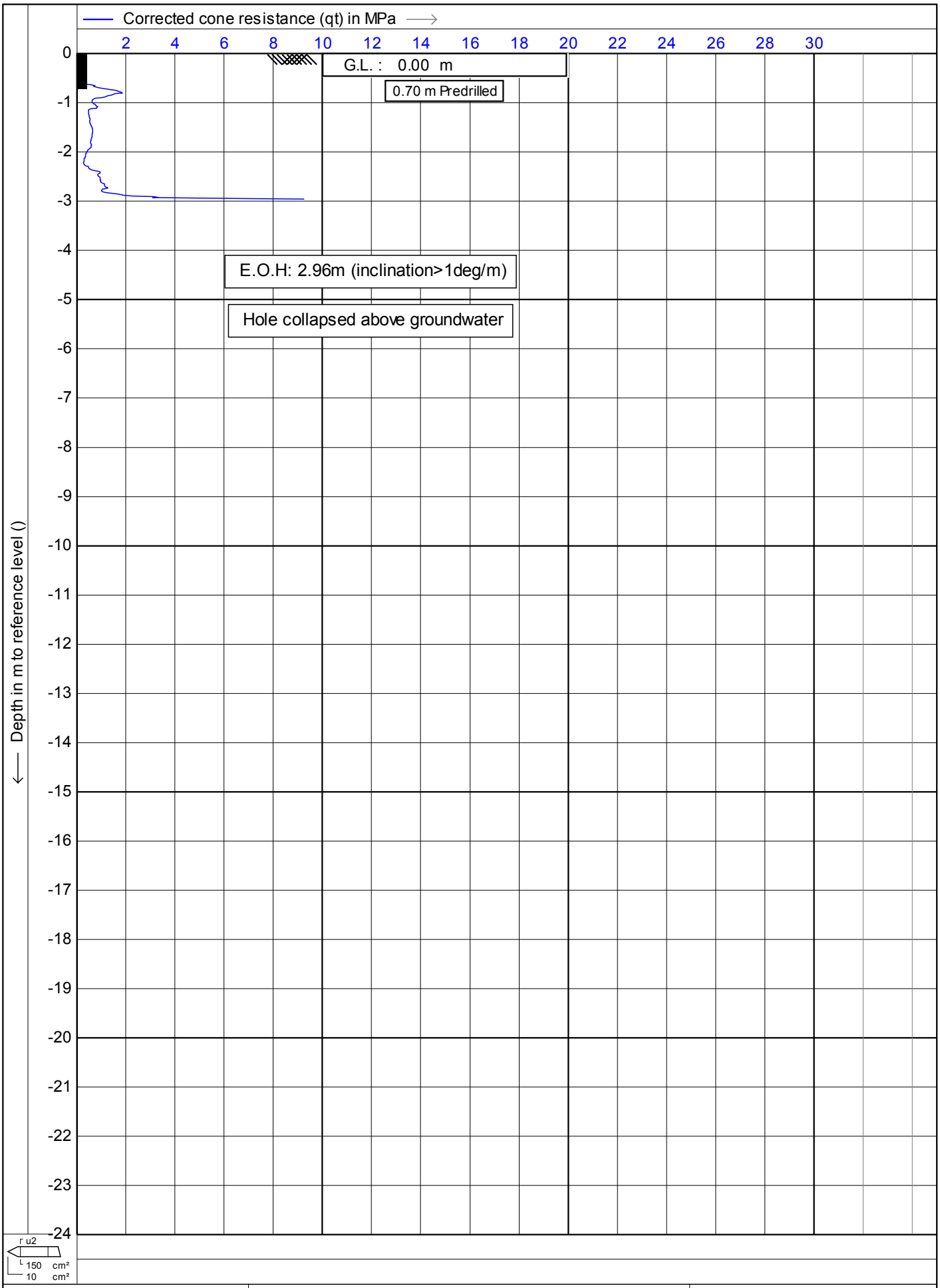
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** 2/15

1.45



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Test acc NZ class

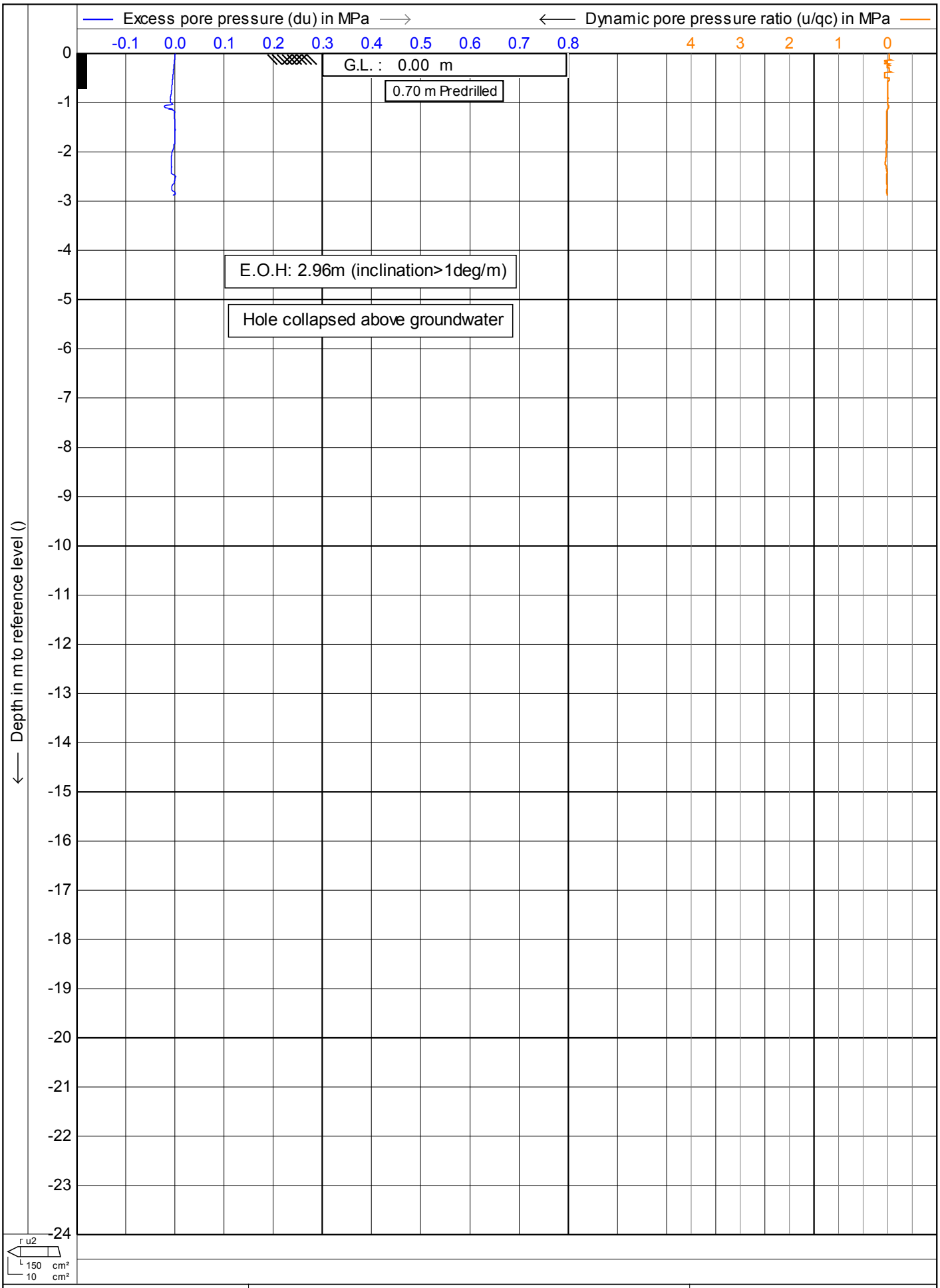
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** **3/15**

1.45



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Test acc NZ class

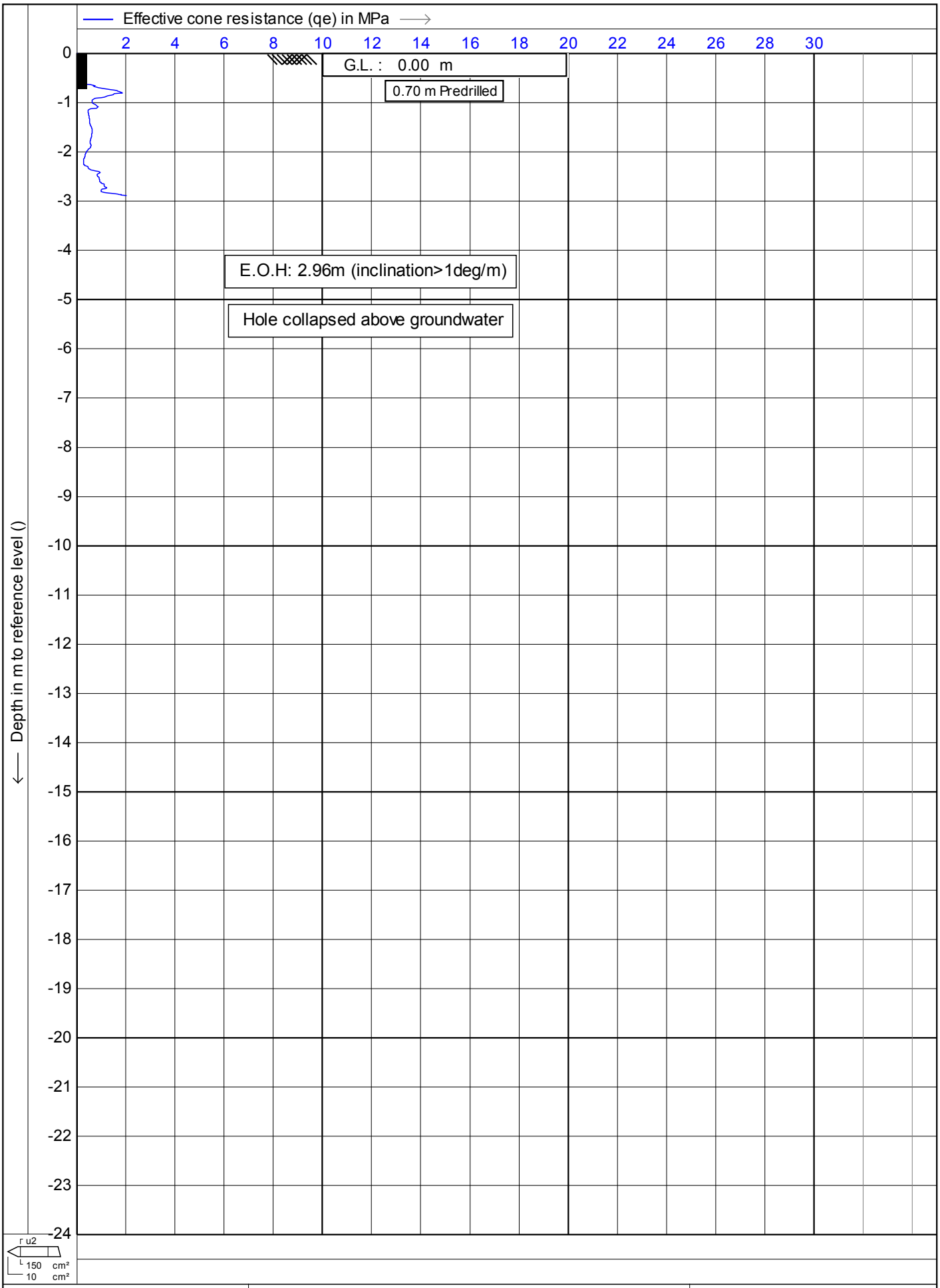
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** **4/15**

1.45



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Test acc NZ class

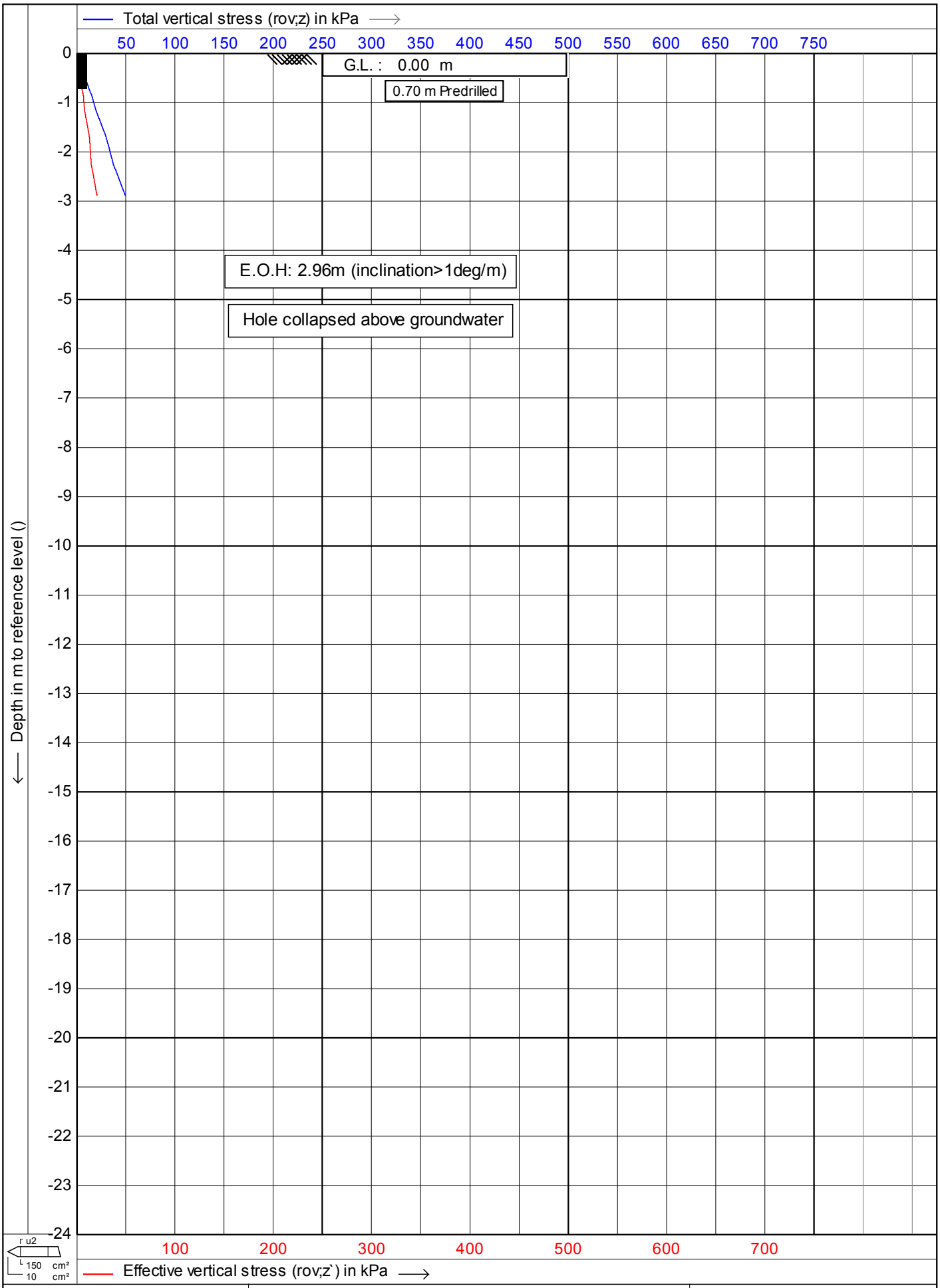
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** **5/15**

1.45



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Test acc NZ class

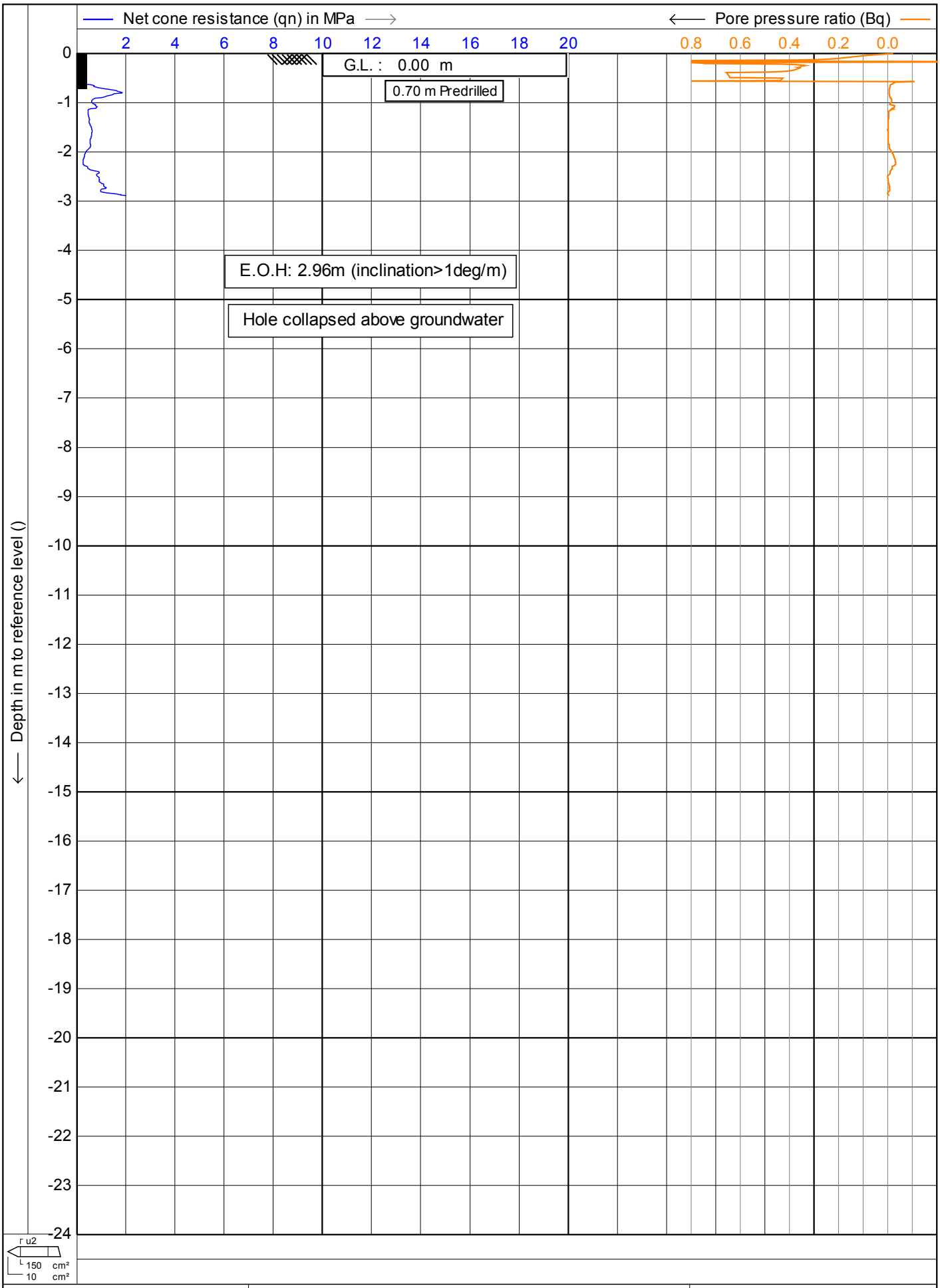
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** **6/15**

1.45



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Test acc NZ class

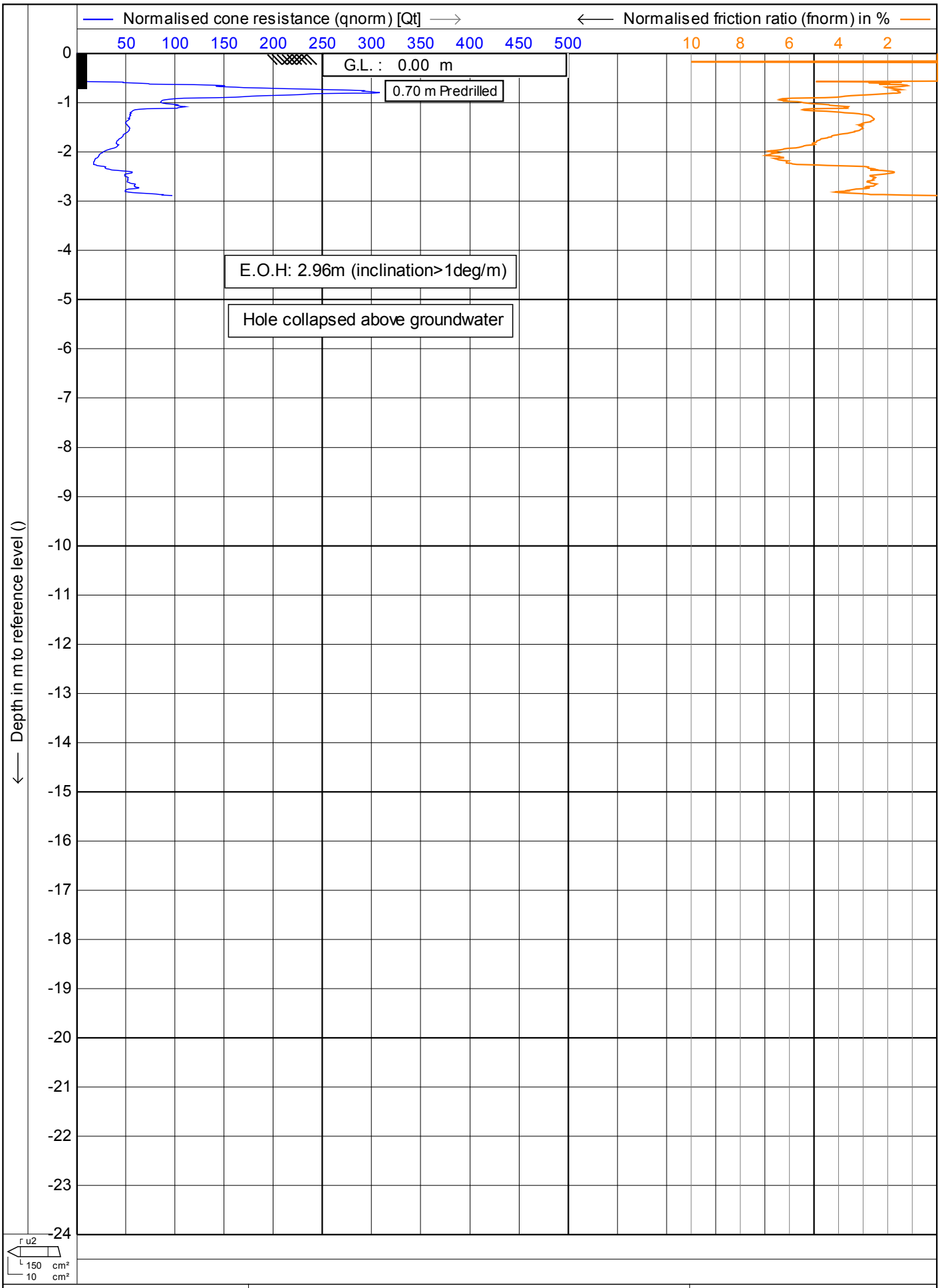
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** 7/15

1.45



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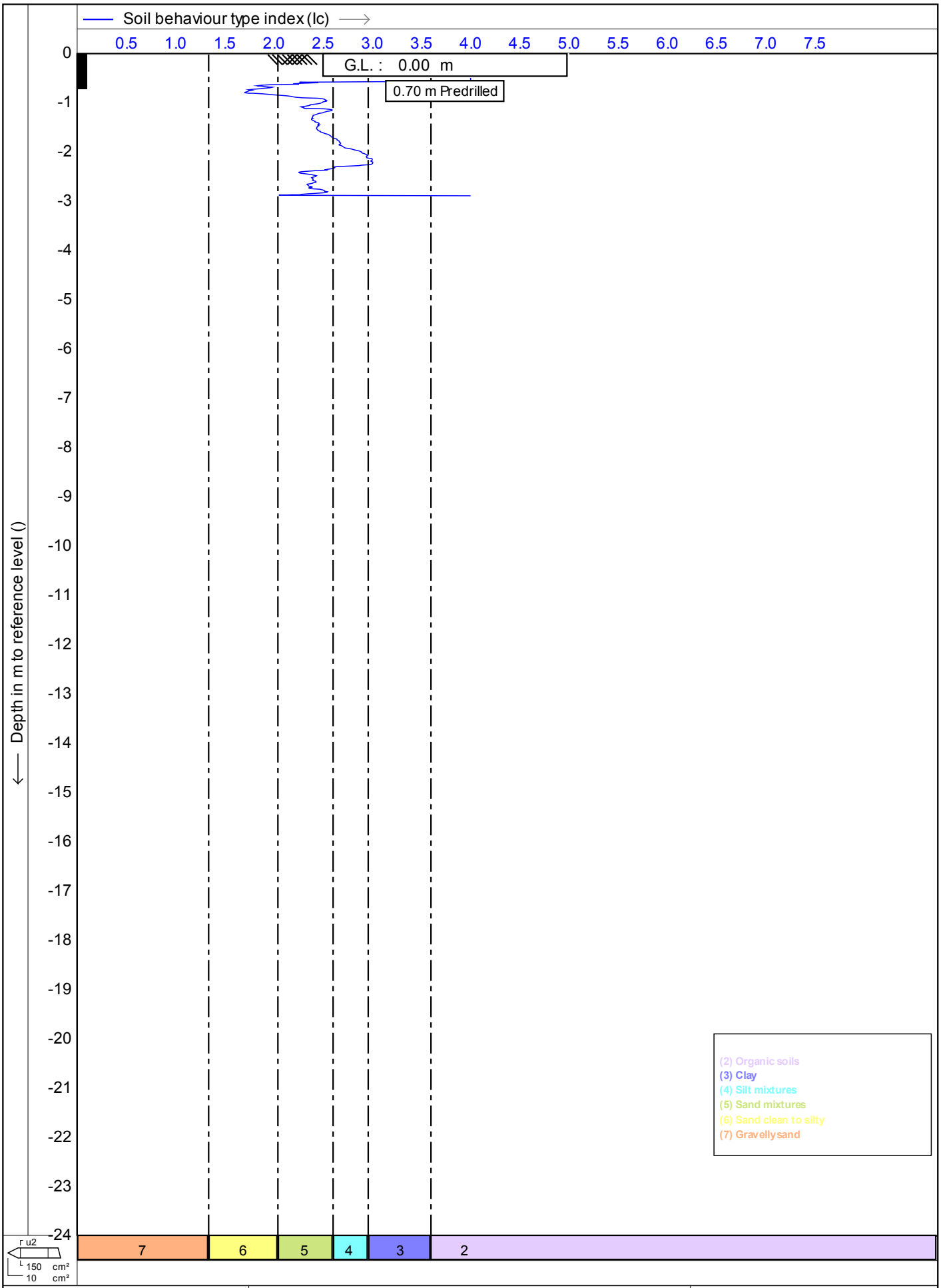
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** 8/15

1.45



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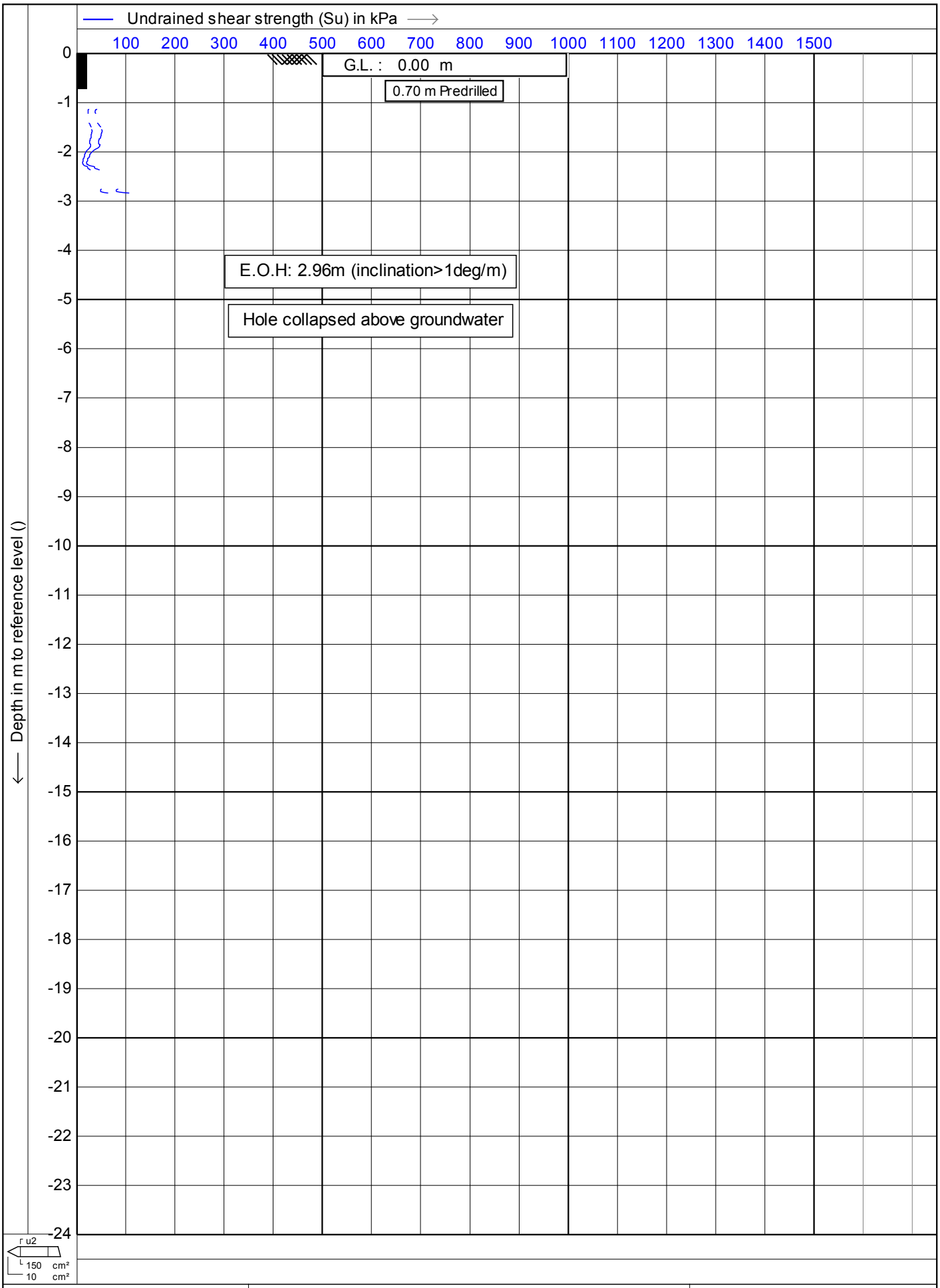
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** **9/15**

1.45



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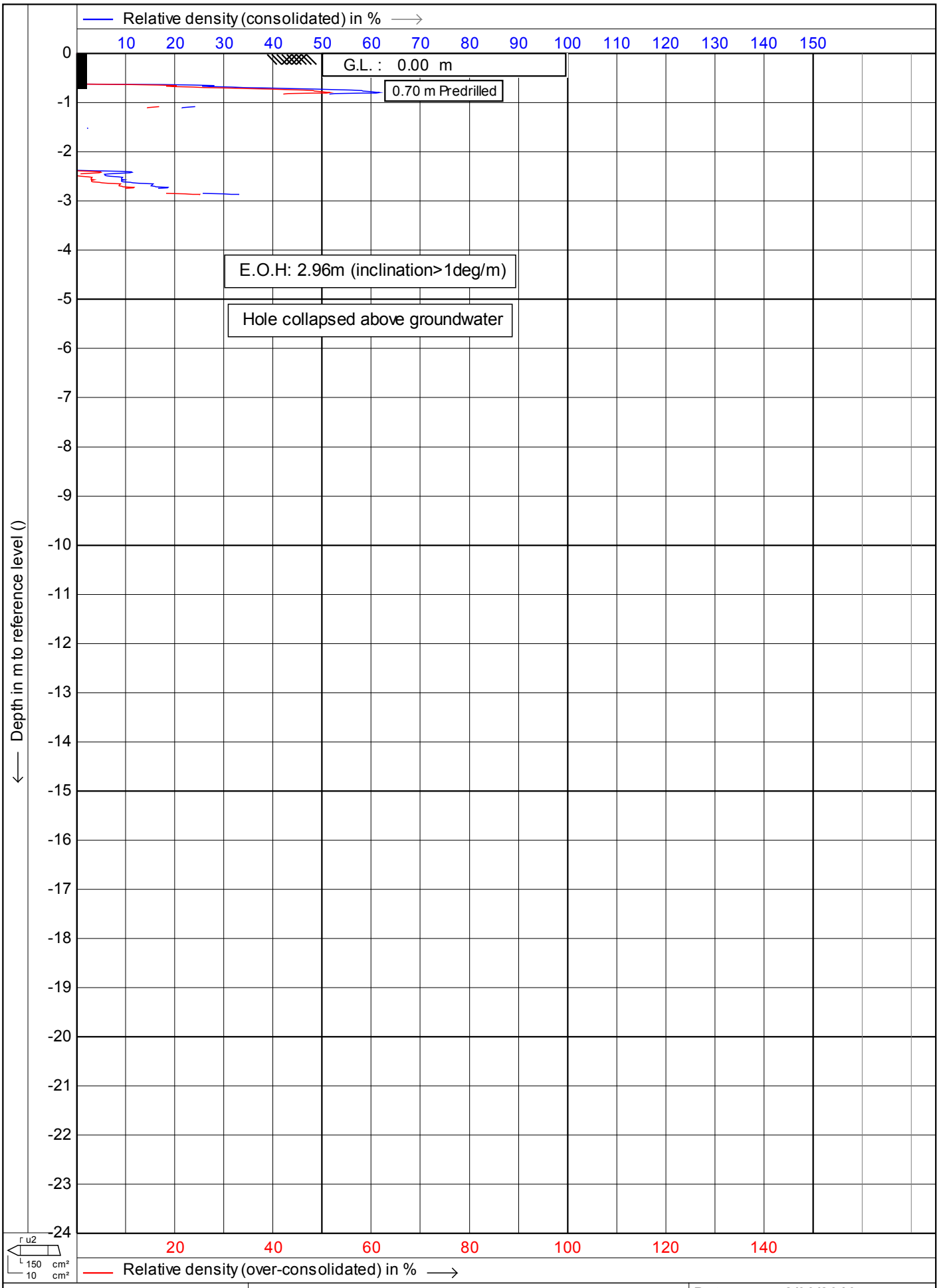
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** **10/15**

1.45



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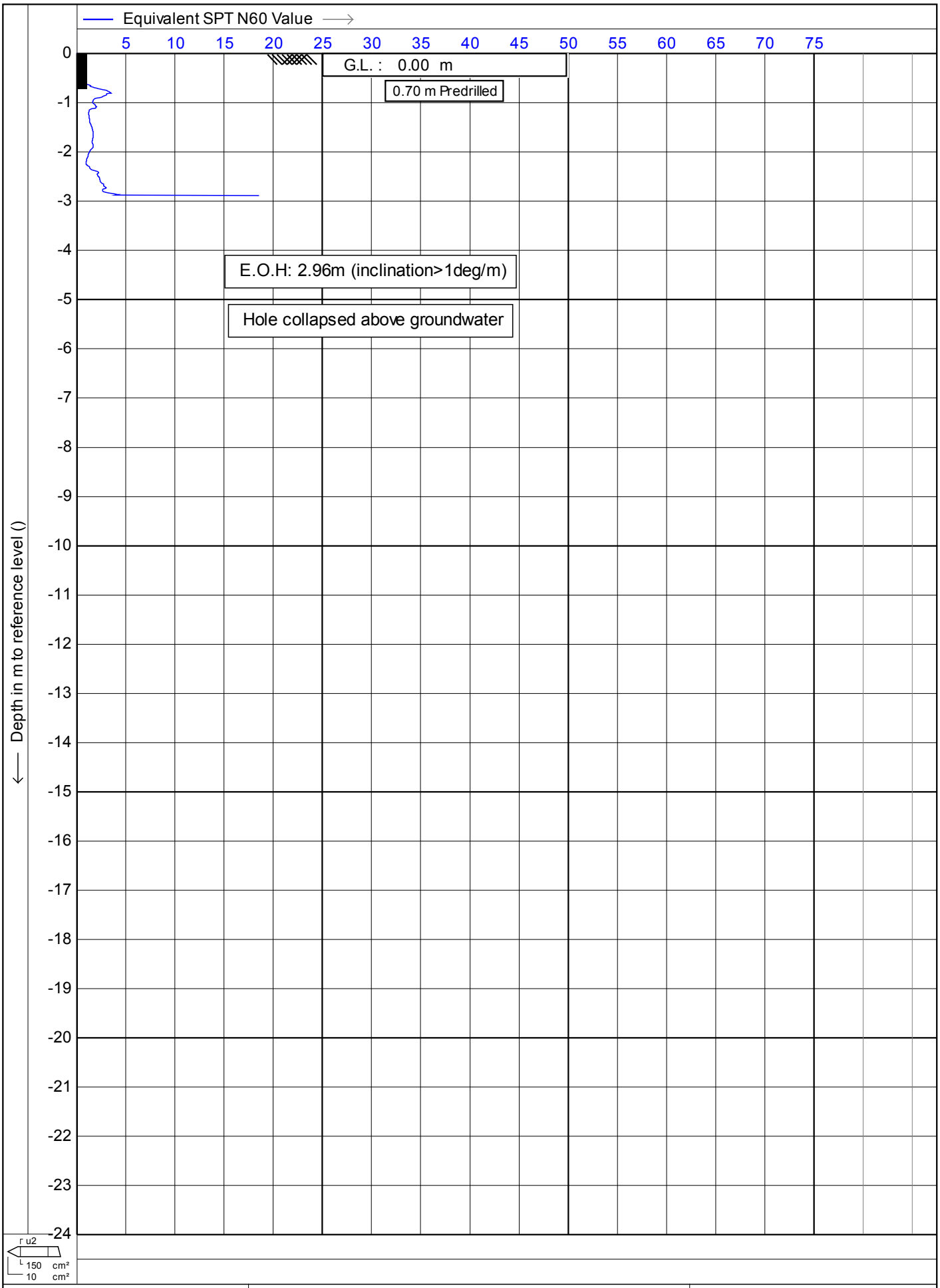
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** **11/15**

1.45



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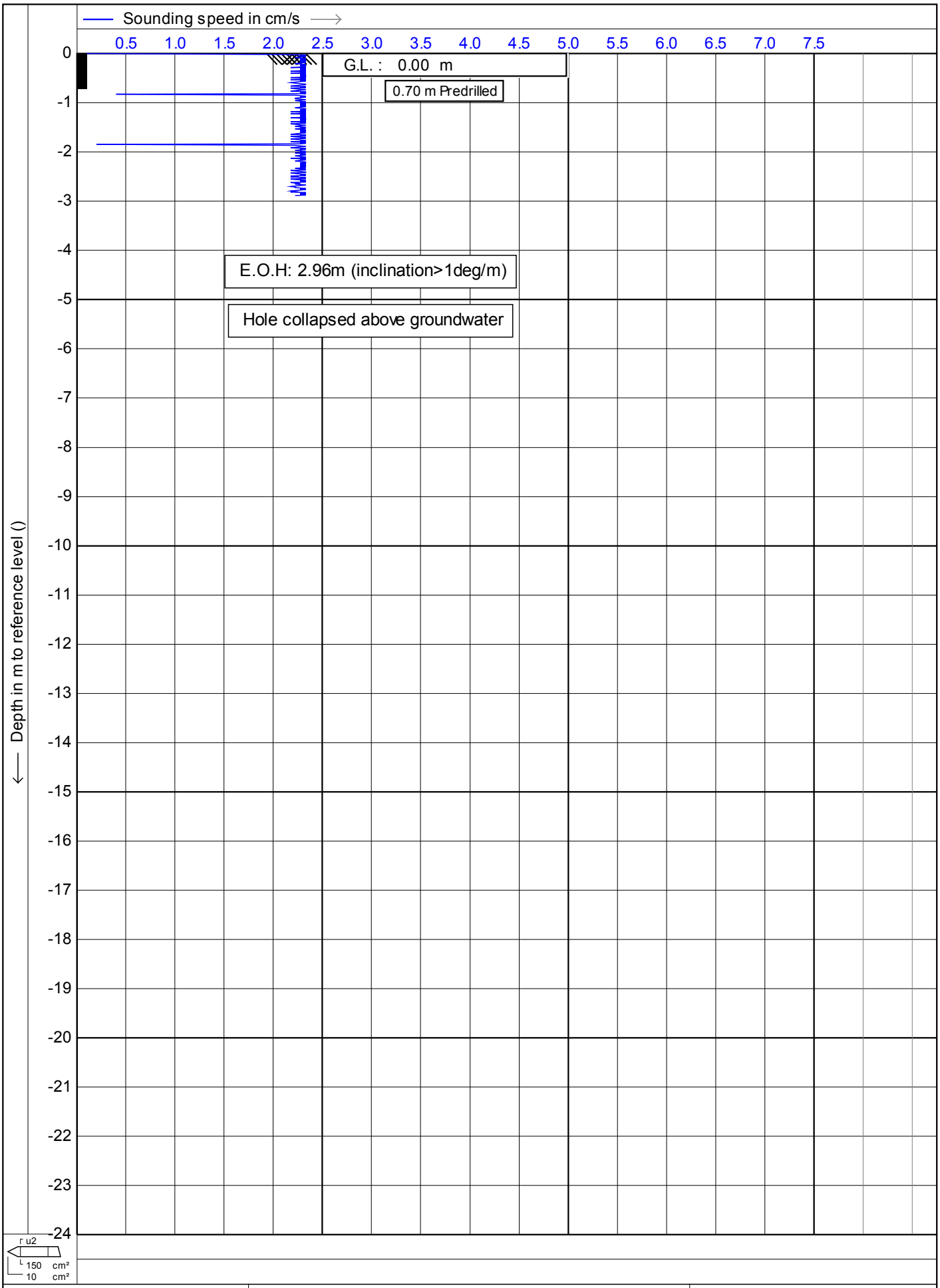
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** 12/15

1.45



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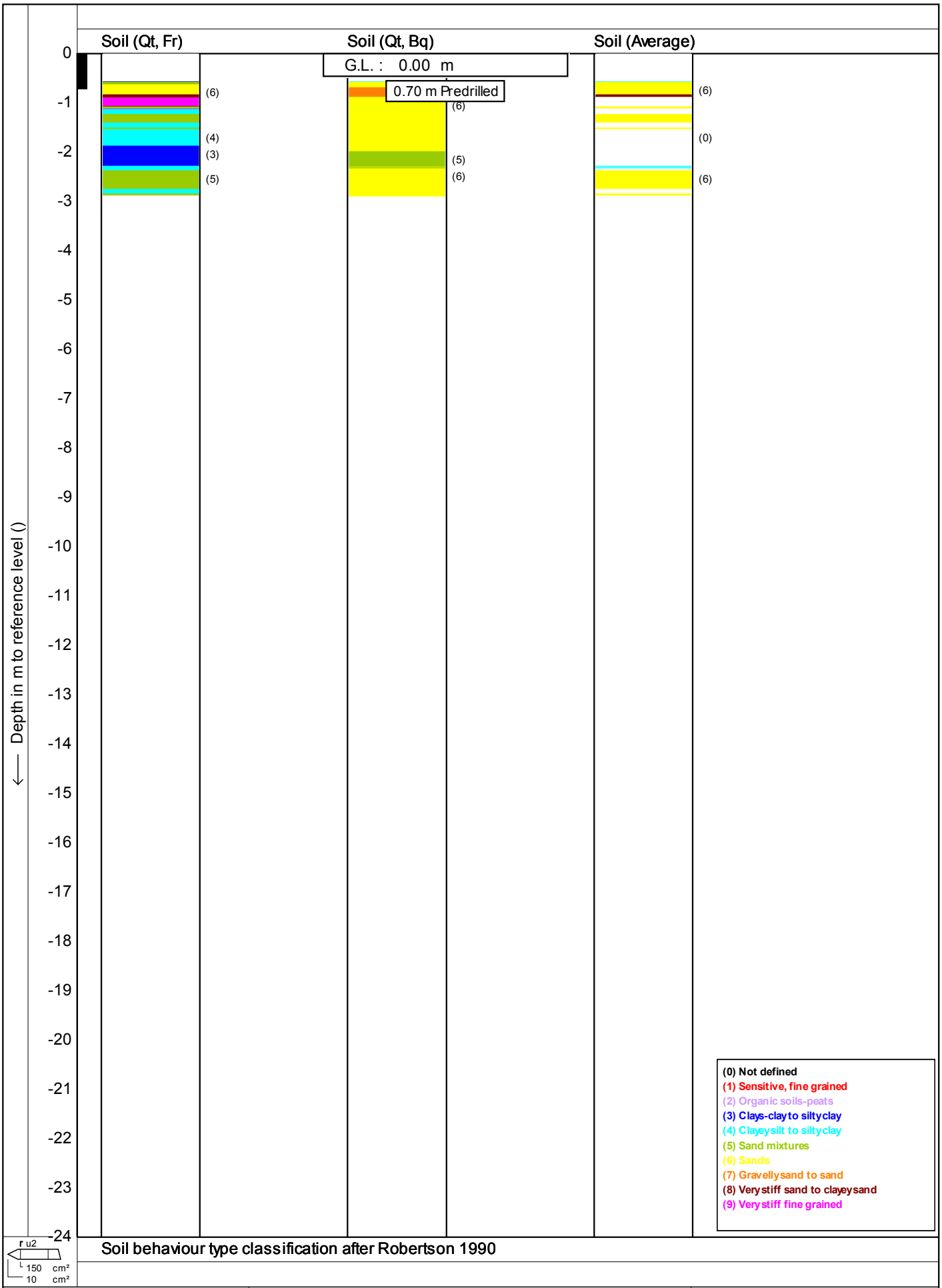
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03**

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Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

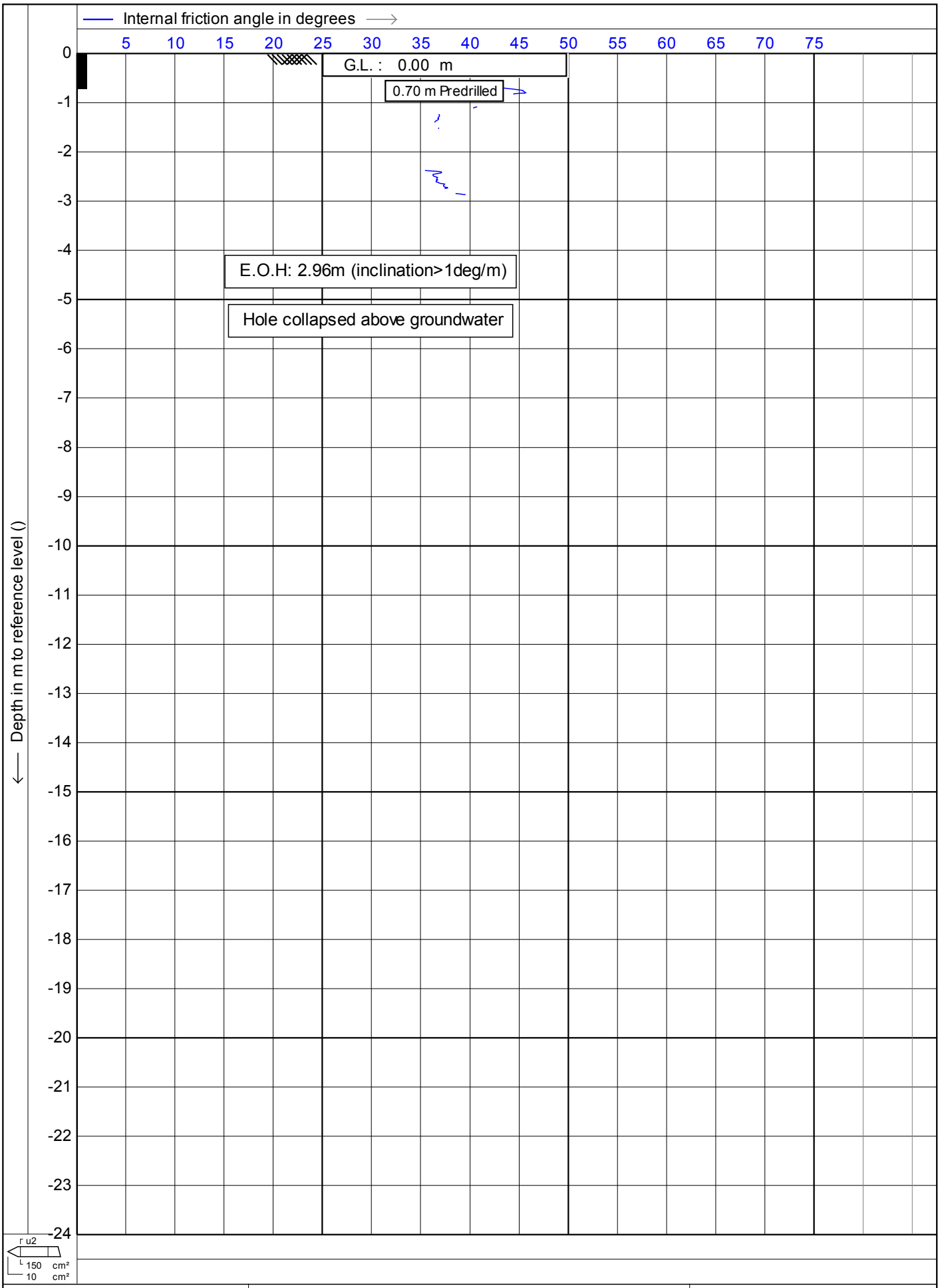
Date : **2/09/2019**

Cone no. : **S10CFIIP.S15297**

Project no. : **DF19GE167**

CPT no. : **CPT_03** **14/15**

1.45



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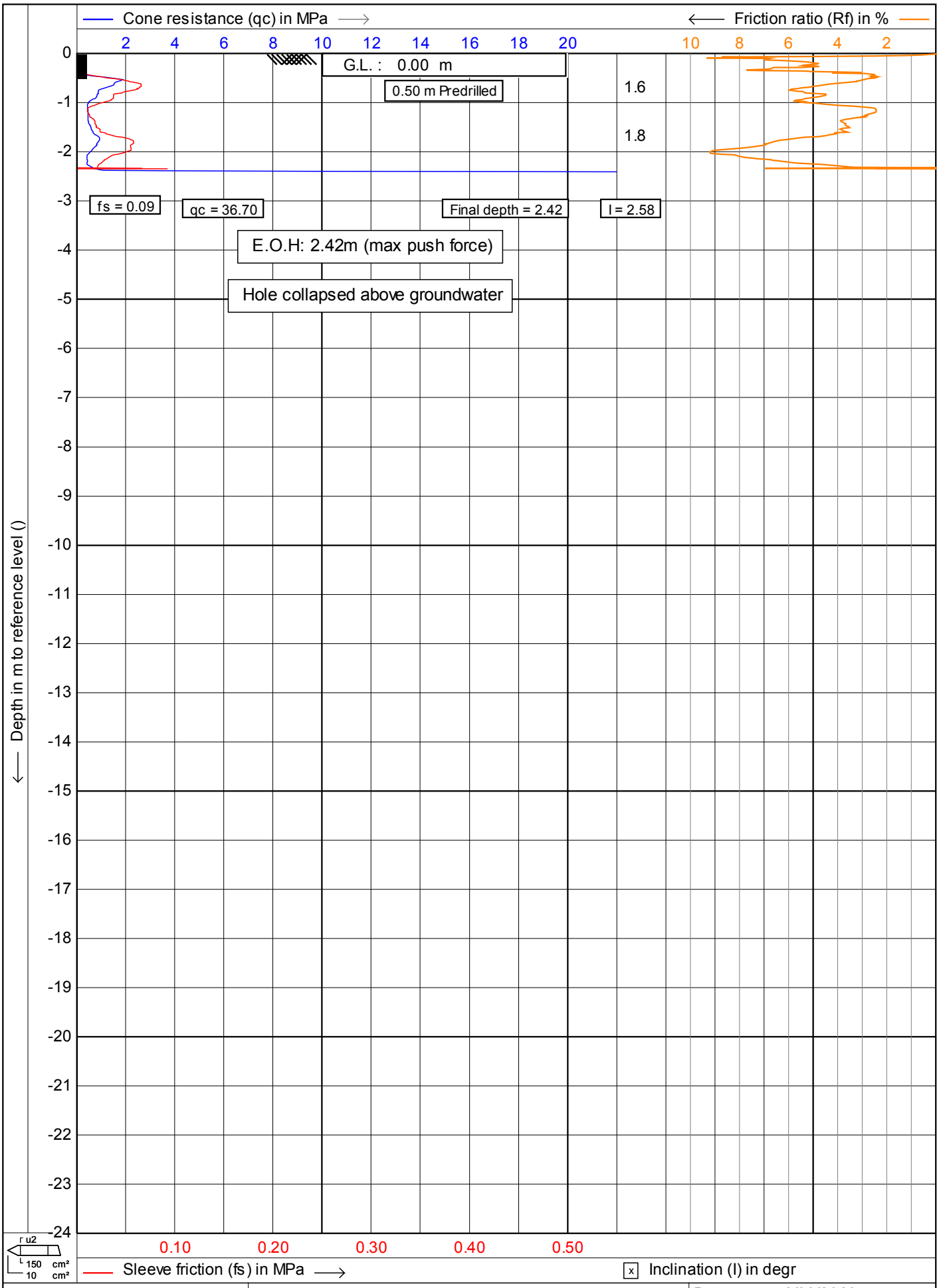
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91602, -35.20816 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15297**
Project no.	: **DF19GE167**
CPT no.	: **CPT_03** **15/15**

1.45



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Test acc NZ class

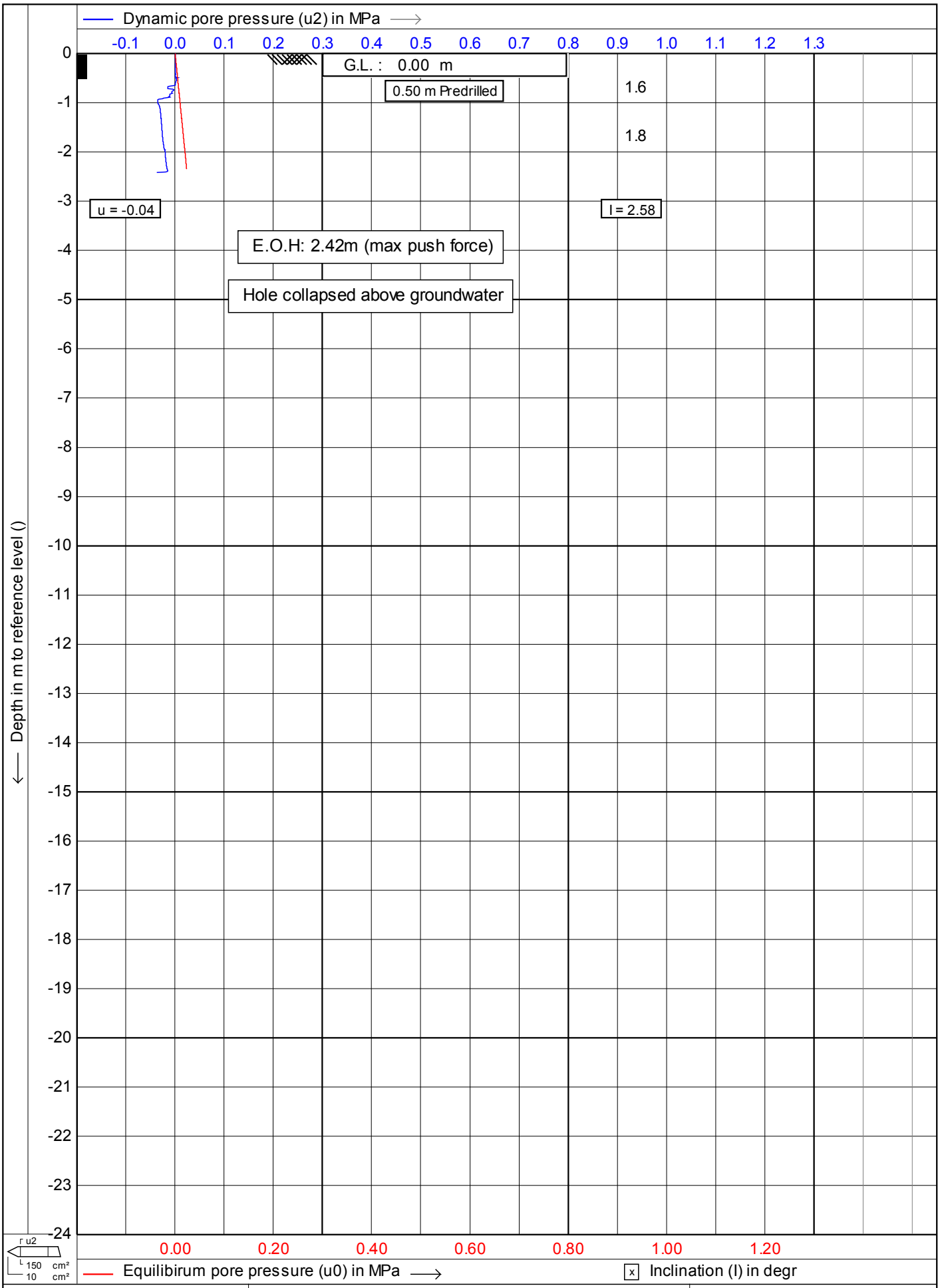
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** 1/15

1.45



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Test acc NZ class

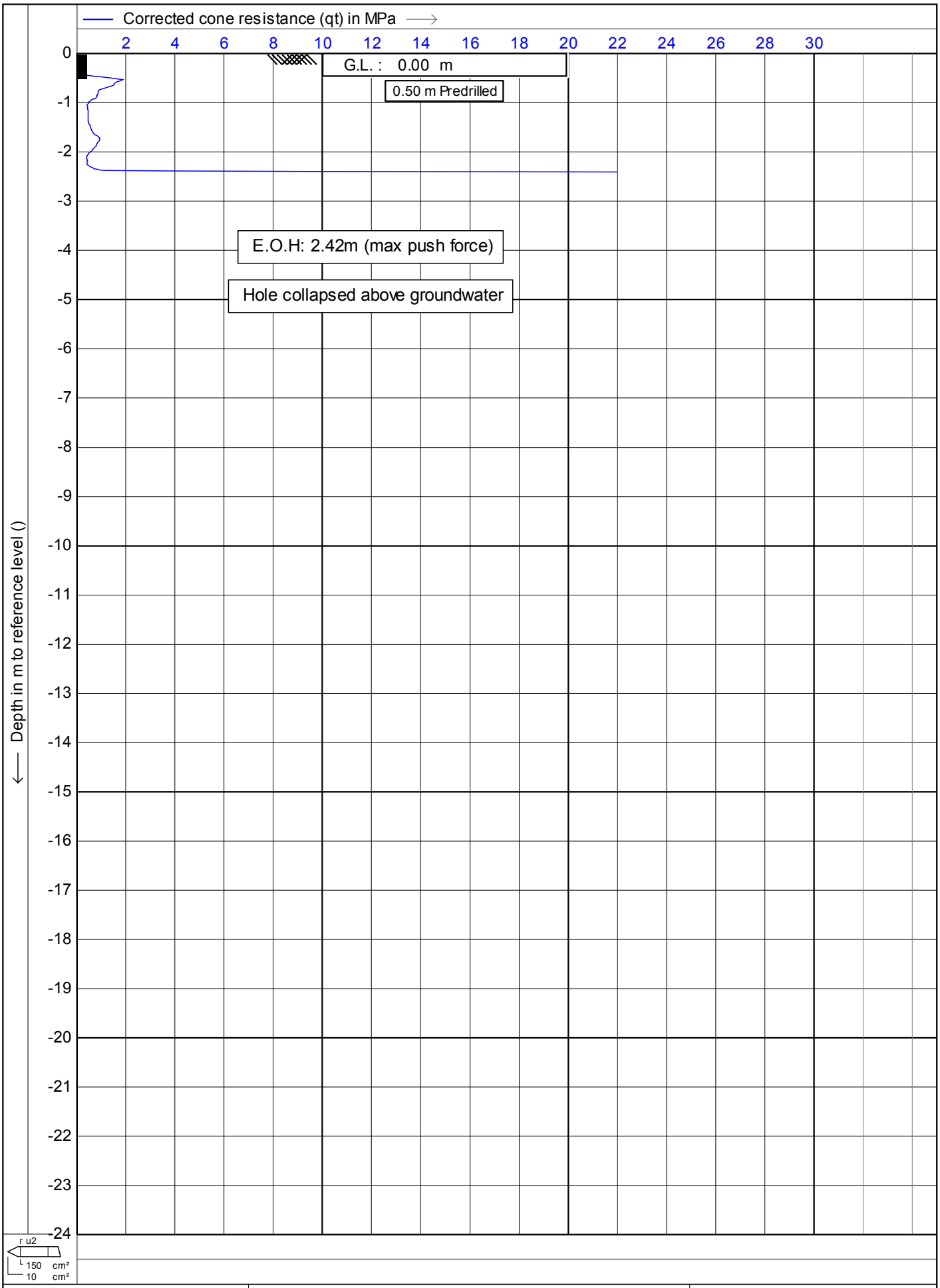
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **2/15**

1.45



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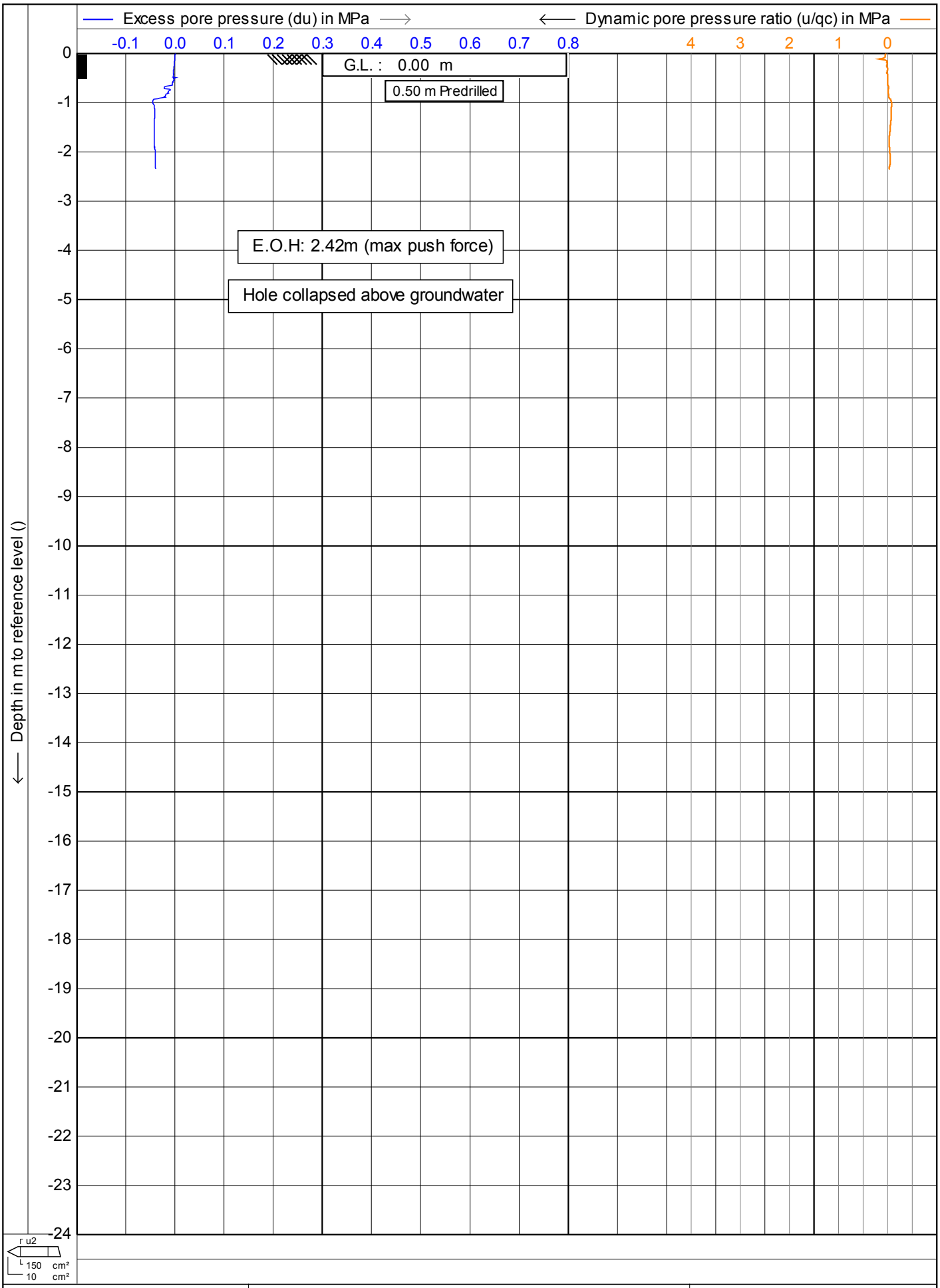
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **3/15**

1.45



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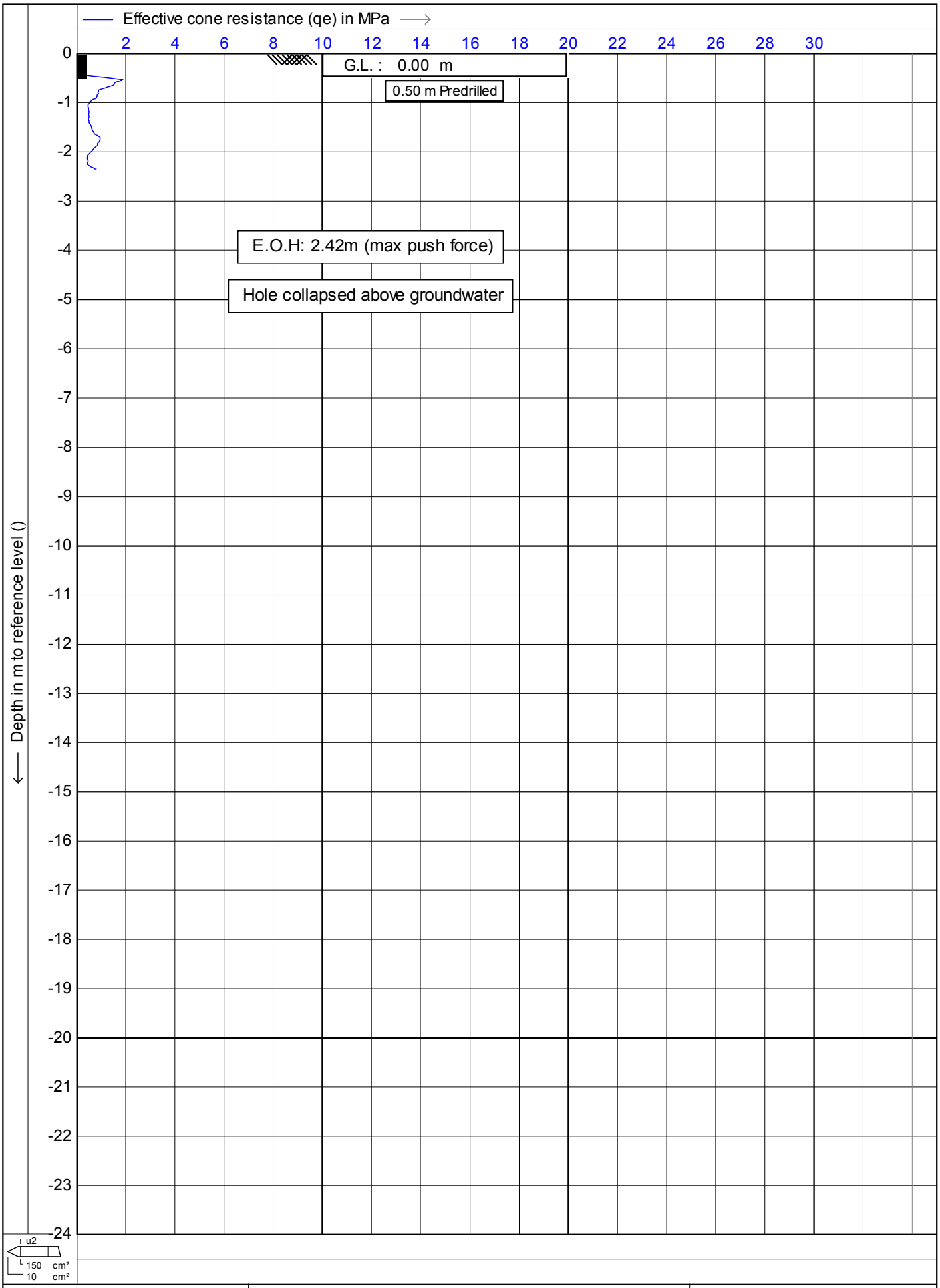
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **4/15**

1.45



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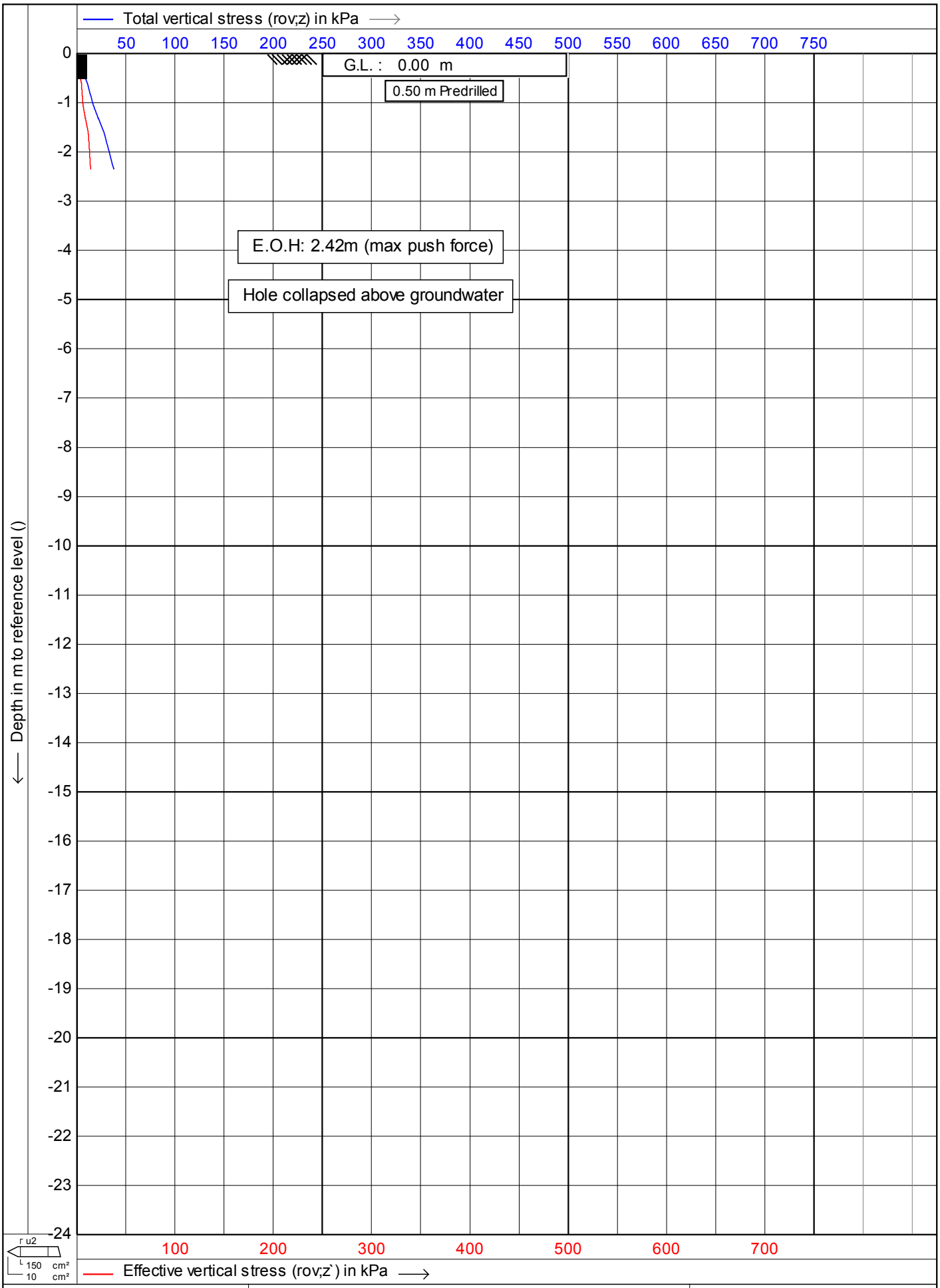
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **5/15**

1.45



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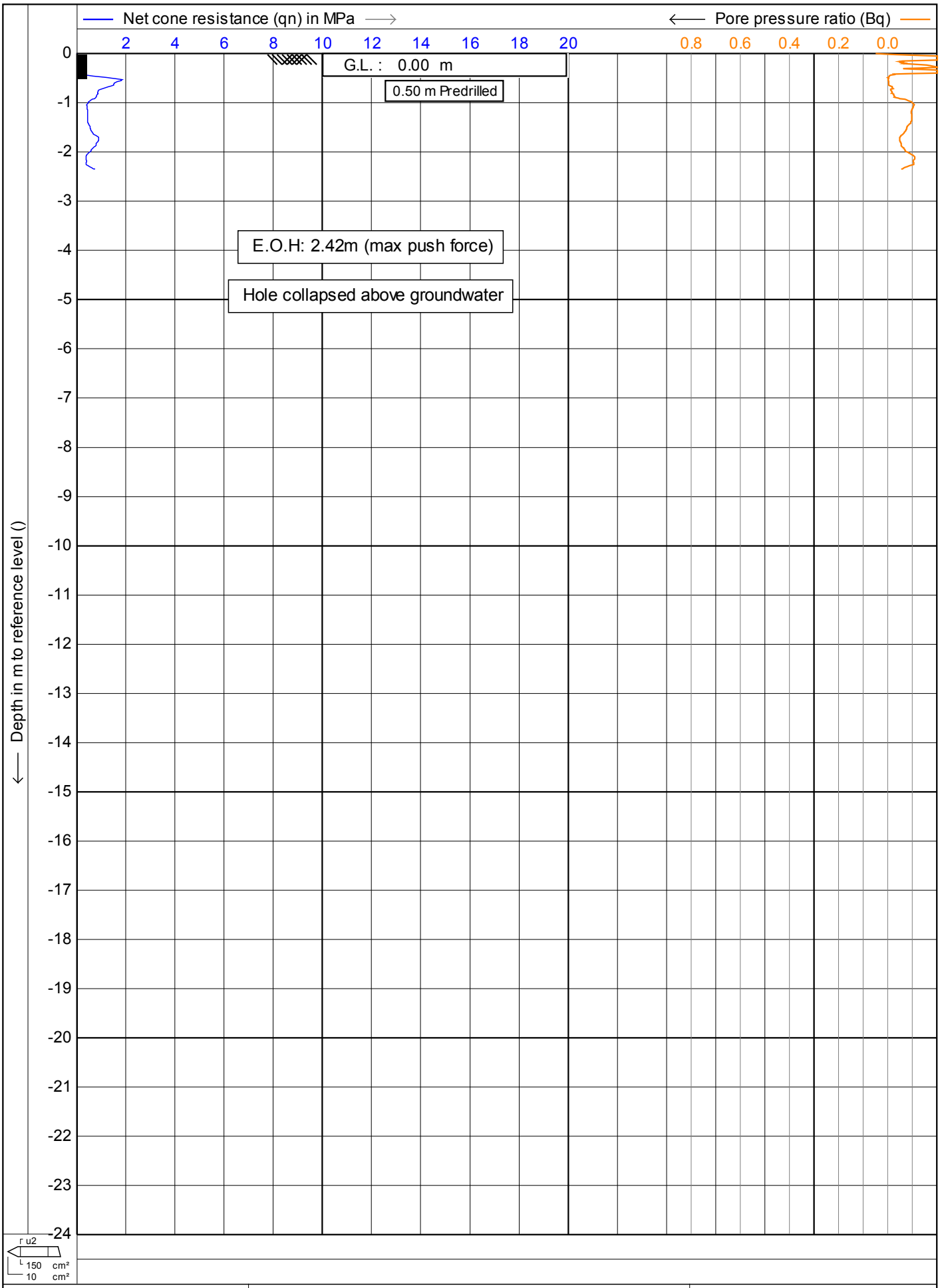
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **6/15**

1.45



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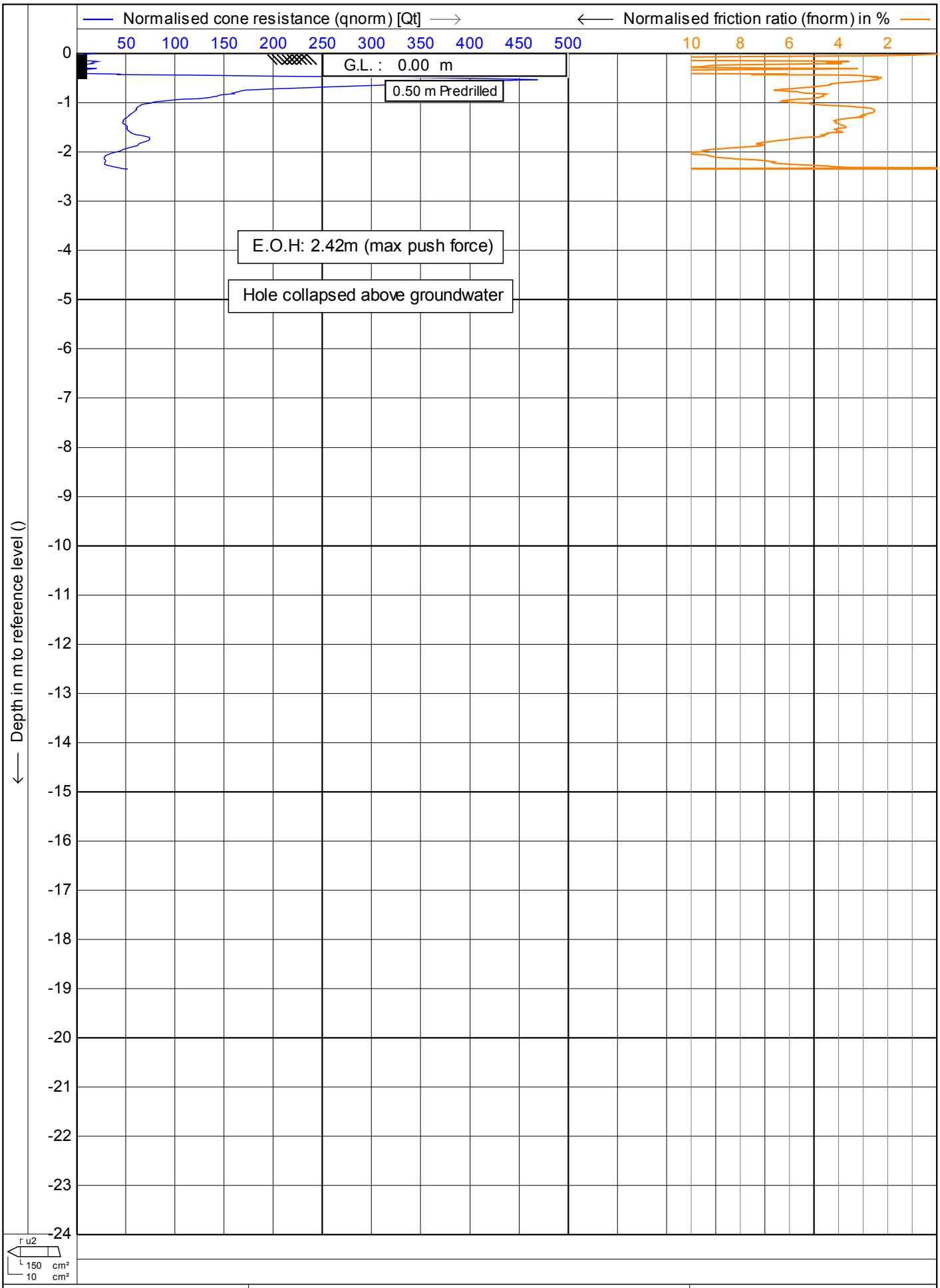
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **7/15**

1.45



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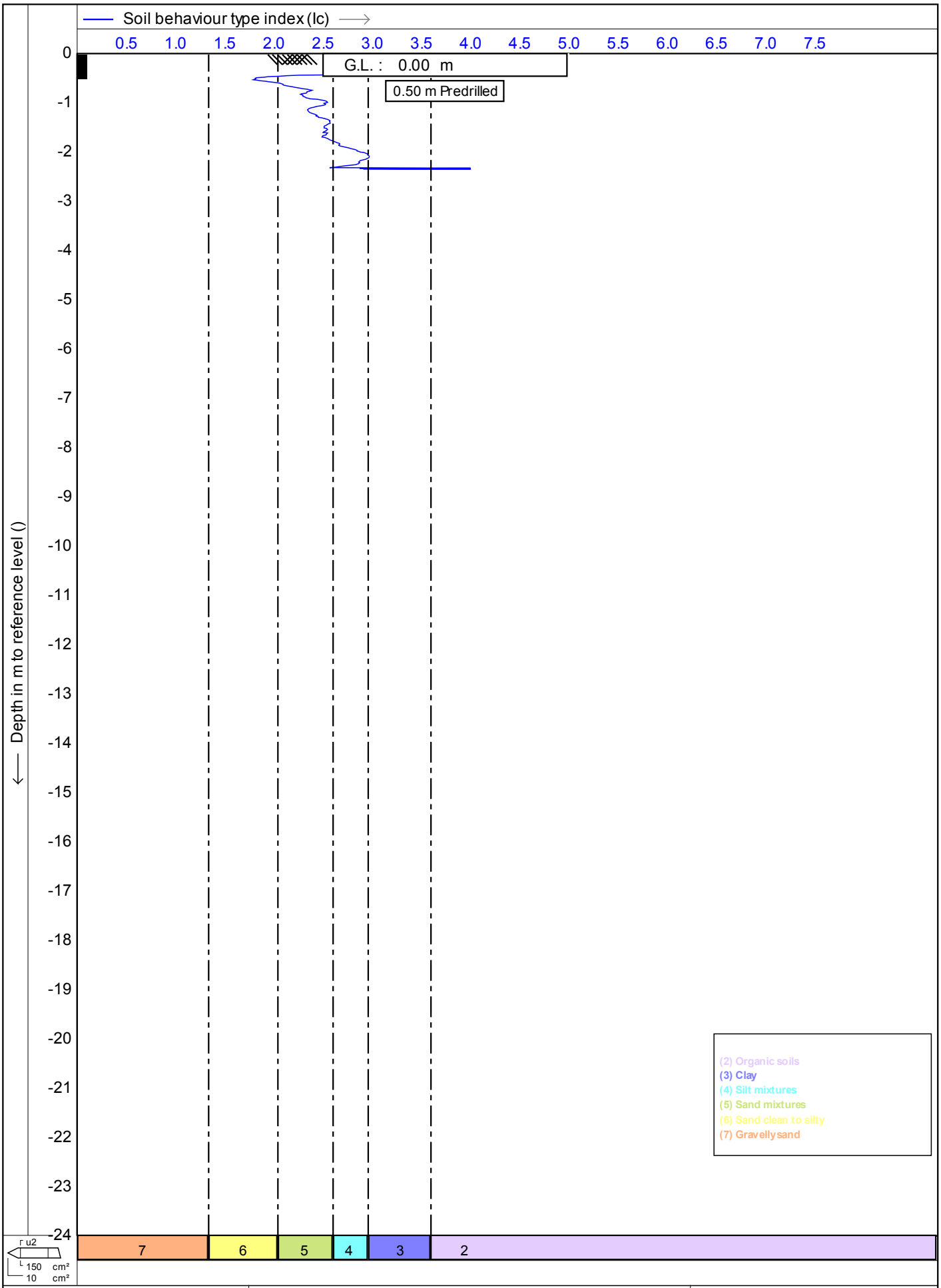
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **8/15**

1.45



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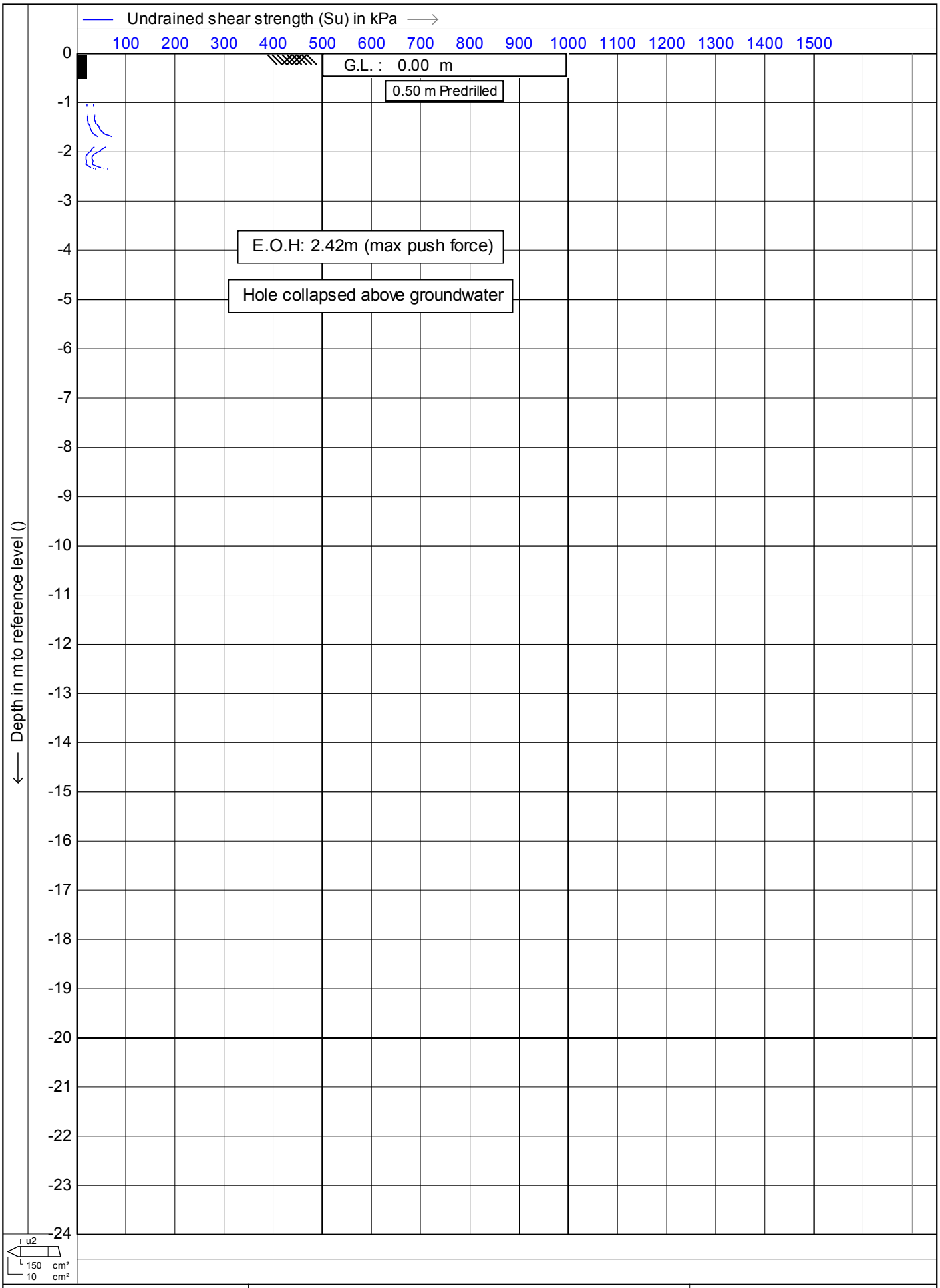
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **9/15**

1.45



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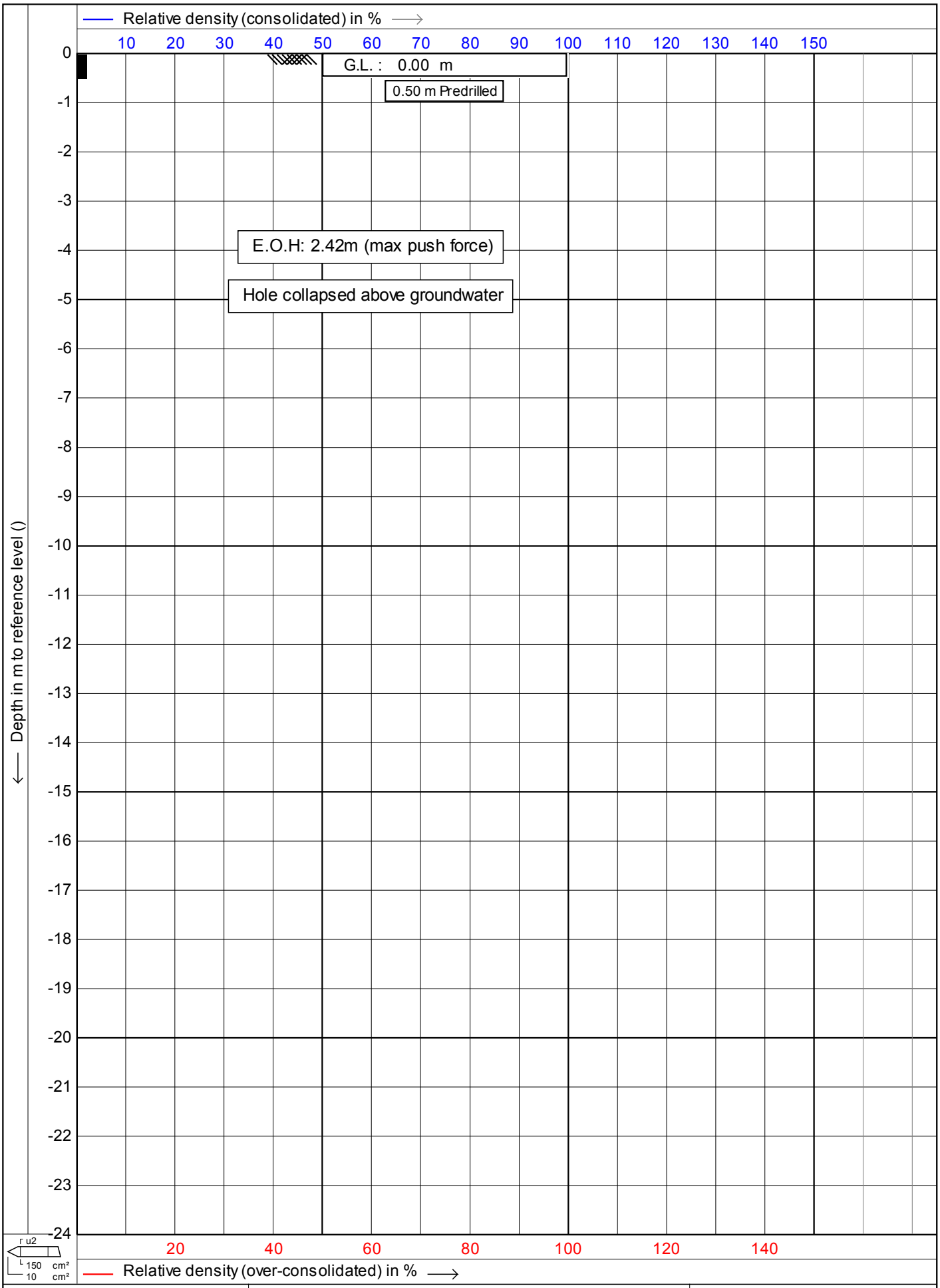
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
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1.45



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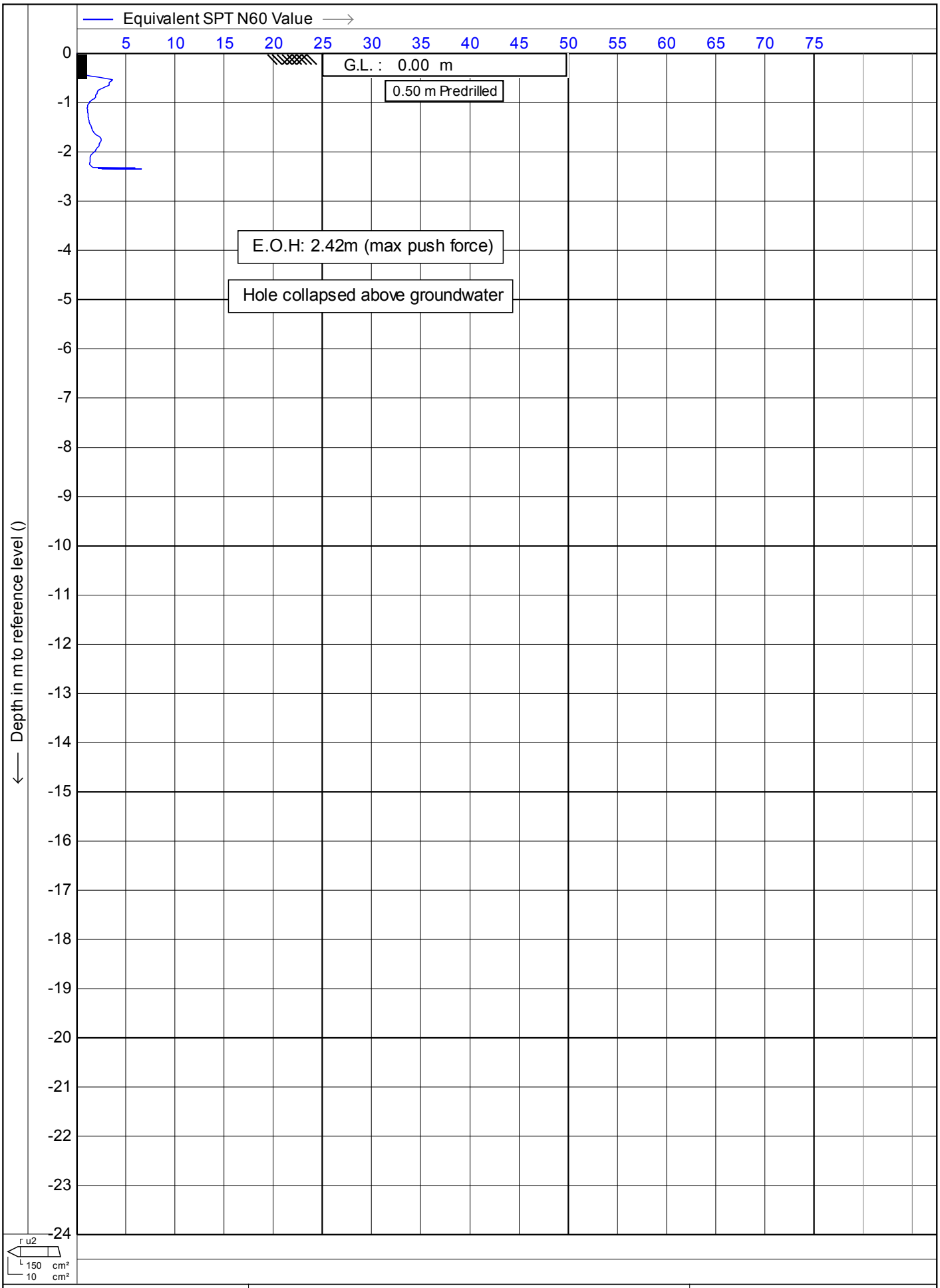
Project : **20 Klinac Lane**

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Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
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1.45



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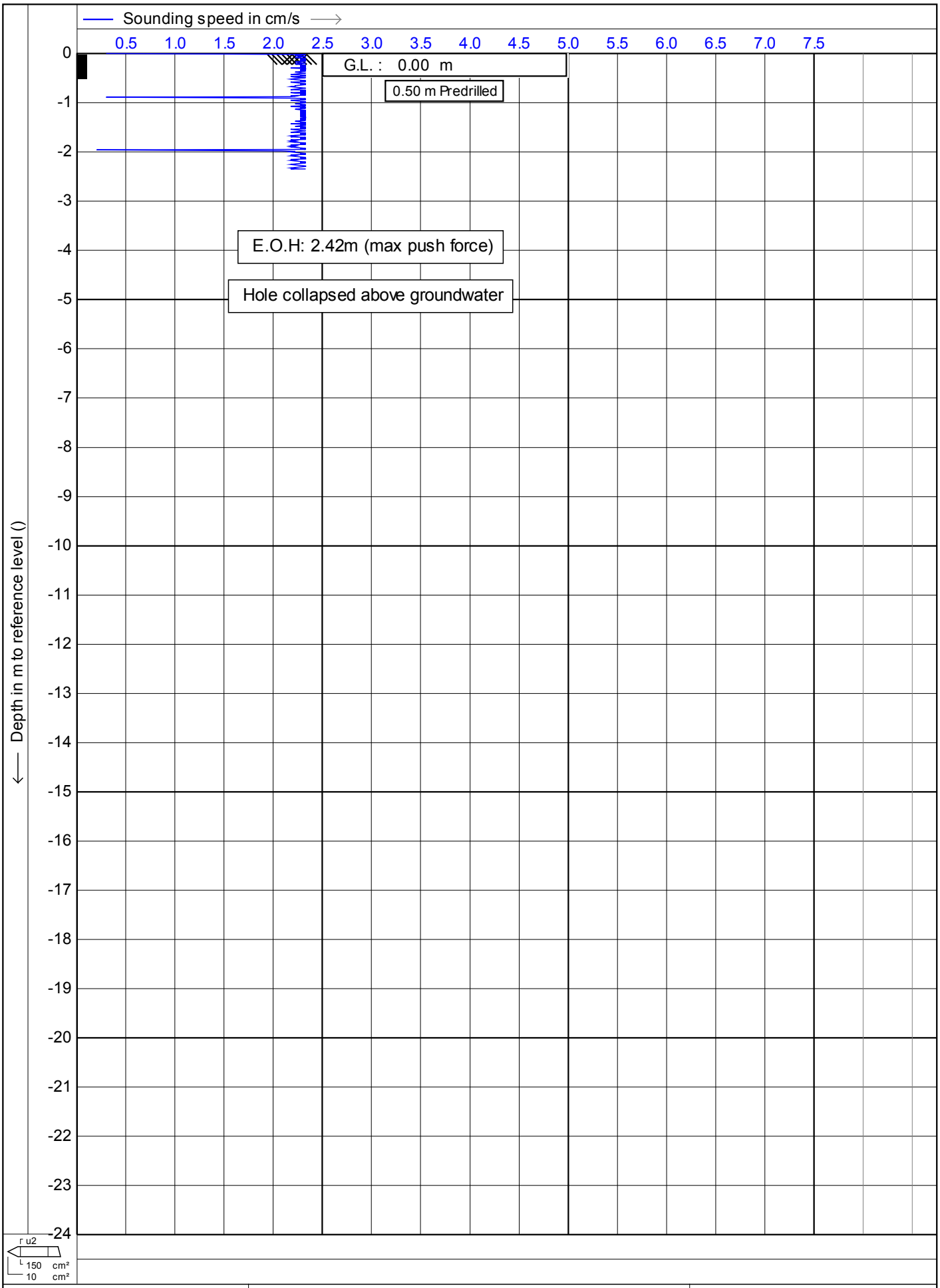
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** 12/15

1.45



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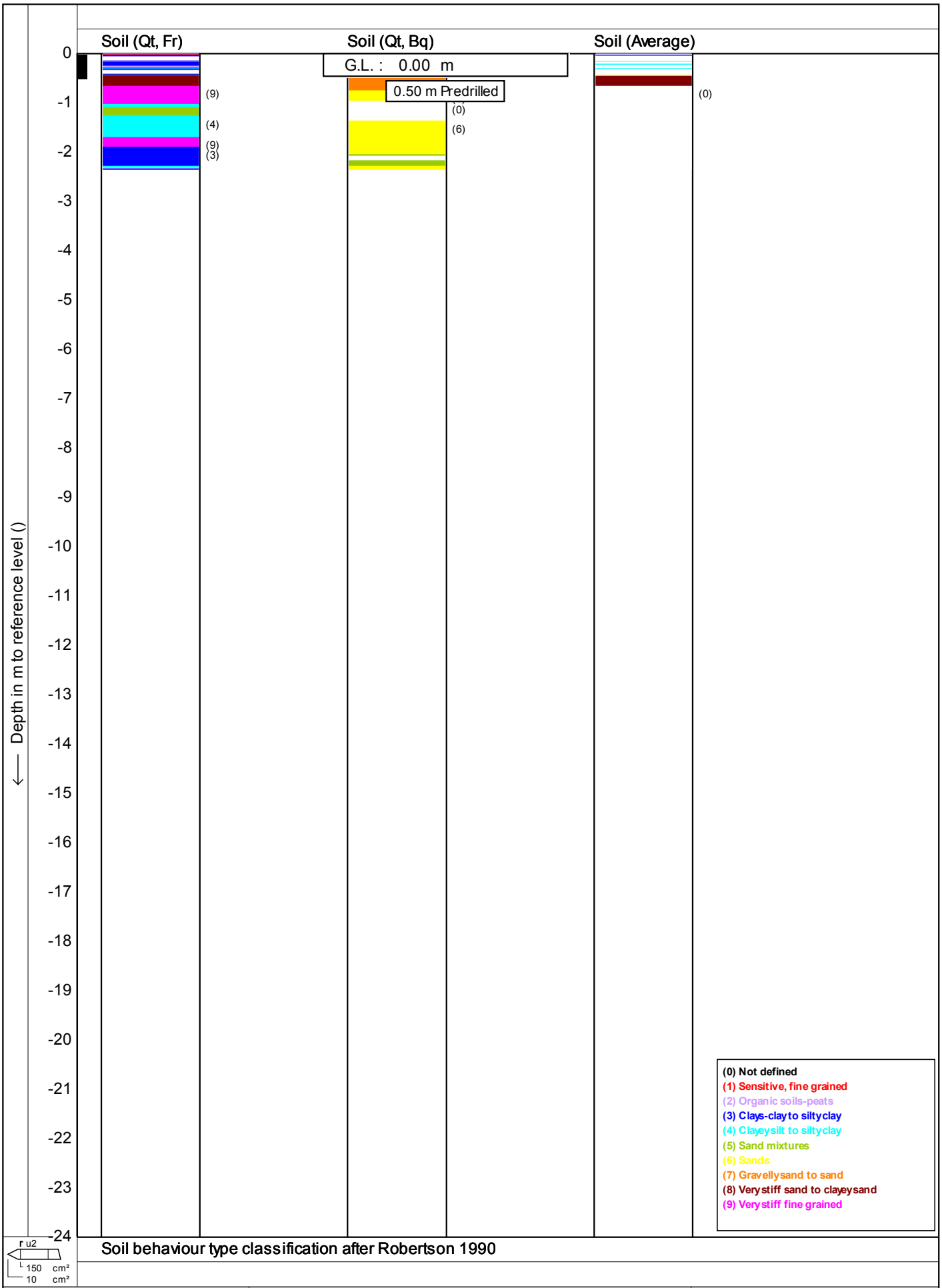
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
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Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **13/15**

1.45



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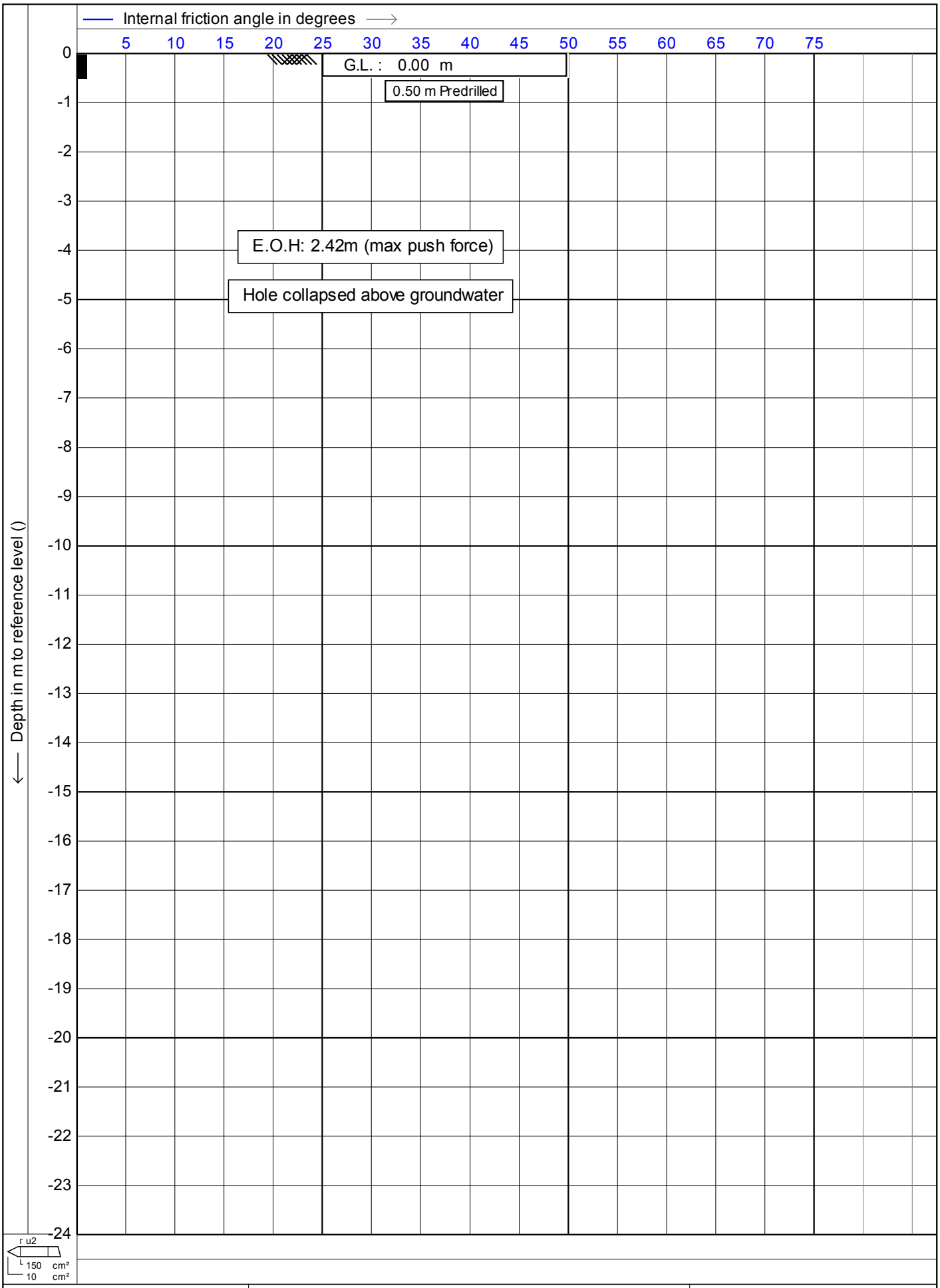
Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
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Project : **20 Klinac Lane**

Location: **20 Klinac Lane, Waipapa**

Position: **173.91617, -35.20817 Garmin EXTREX 10**

Date	: **2/09/2019**
Cone no.	: **S10CFIIP.S15298**
Project no.	: **DF19GE167**
CPT no.	: **CPT_04** **15/15**

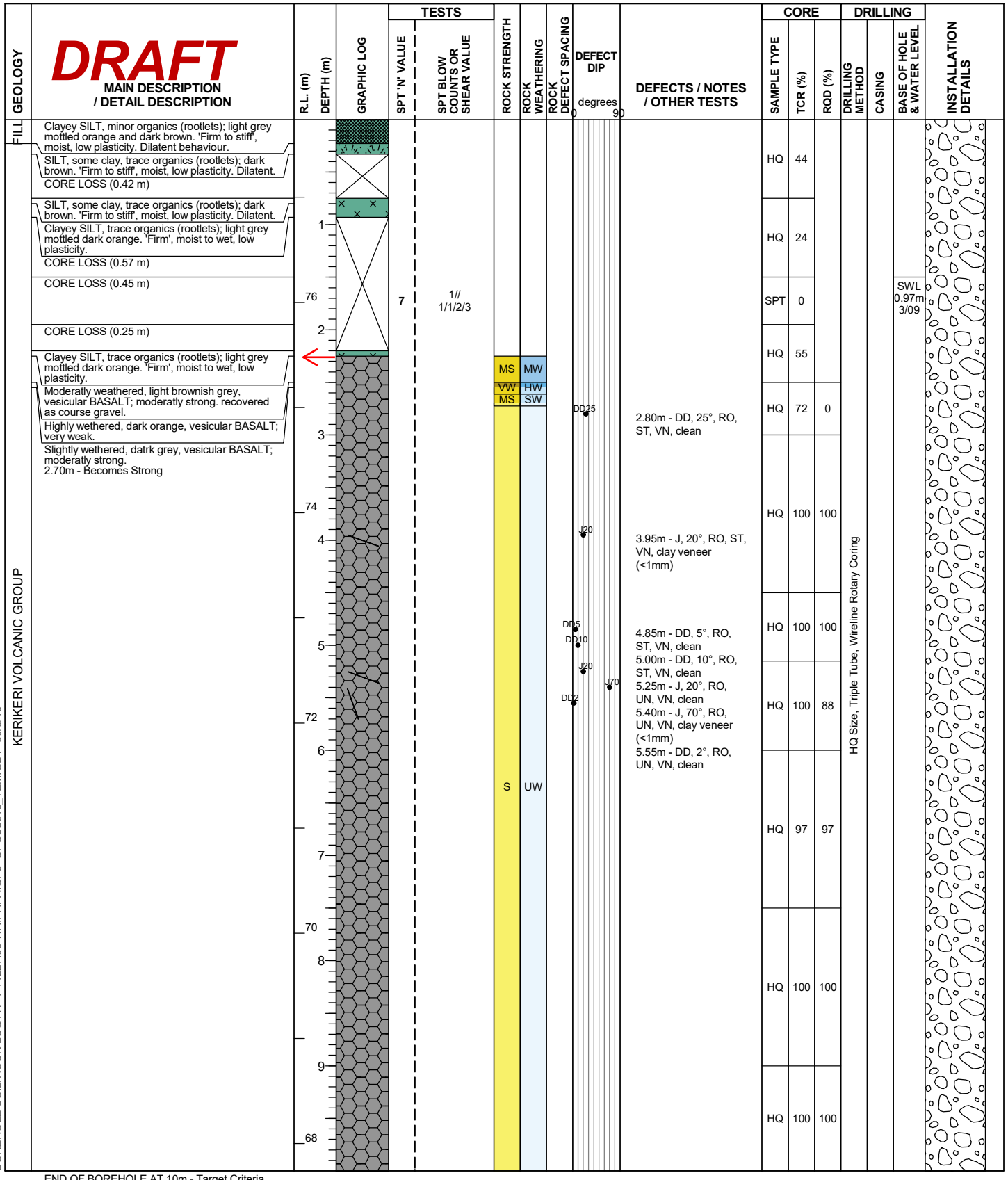
1.45

Borehole No. BH 19-01

Project:	Whiriwhiritoa Stream Crossing	*Coordinates:*	1683391 E 6103466 N
Client:	NZTA	*Ref. Grid:*	NZTM
Project No.:	1-11227.00	*R.L.:*	77.74 m
Location:	Waipapa Waipapa	*Datum:*	

Depth: 10 m

Inclination: Vertical



Notes: END OF BOREHOLE AT 10m - Target Criteria Achieved

Started:	2/09/2019	*Finished:*	3/09/2019
Drilling Co.:	Drill Force NZ Ltd	*Drilling Rig:*	Truck Mounted Rig
Logged by:	RVD	*Checked by:*	A. George

Logged in accordance with NZ Geotechnical Society Guidelines (2005). See attached key sheet for explanation of symbols.

Scale 1:50 @ A4

BOREHOLE SOIL/ROCK LOG A4 1-11227.00 WAIPAPA.GPJ OPUS2016_TEM.GDT 30/9/19

Borehole No. BH 19-01

Project:	Whiriwhiritoa Stream Crossing	*Coordinates:*	1683391 E 6103466 N		
Client:	NZTA	*Ref. Grid:*	NZTM	*Depth:*	10 m
Project No.:	1-11227.00	*R.L.:*	77.74 m	*Inclination:*	Vertical
Location:	Waipapa Waipapa	*Datum:*			

PHOTOGRAPHS





BOREHOLE SOIL/ROCK LOG A4 1-11227.00 WAIPAPA.GPJ OPUS2016_TEM.GDT 30/9/19

Notes:

Started:	2/09/2019	*Finished:*	3/09/2019
Drilling Co.:	Drill Force NZ Ltd	*Drilling Rig:*	Truck Mounted Rig
Logged by:	RVD	*Checked by:*	A. George

Logged in accordance with NZ Geotechnical Society Guidelines (2005). See attached key sheet for explanation of symbols.

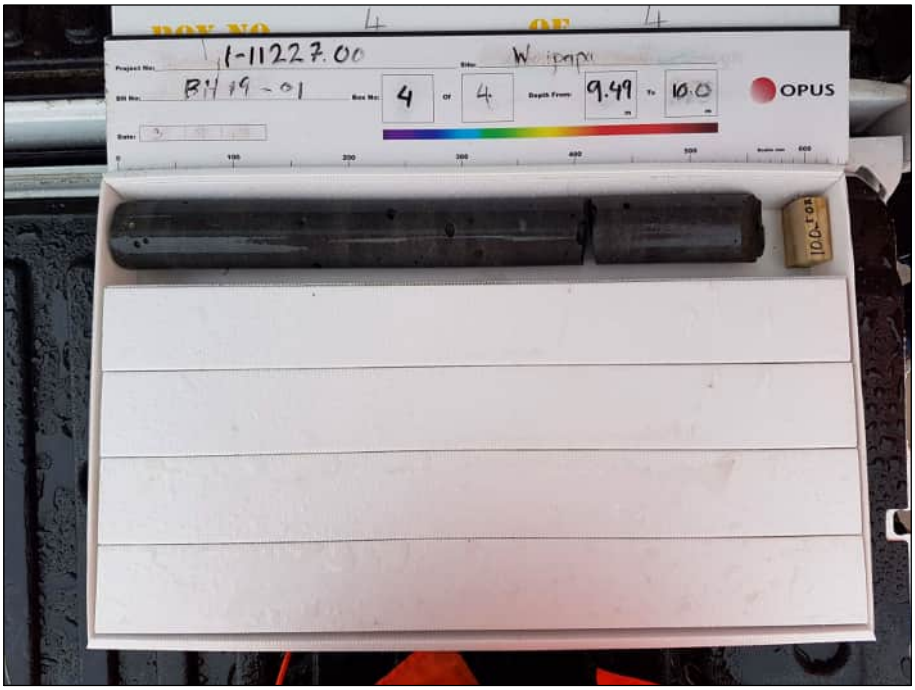
Scale 1:50 @ A4

Borehole No. BH 19-01

Project:	Whiriwhiritoa Stream Crossing	*Coordinates:*	1683391 E 6103466 N		
Client:	NZTA	*Ref. Grid:*	NZTM	*Depth:*	10 m
Project No.:	1-11227.00	*R.L.:*	77.74 m	*Inclination:*	Vertical
Location:	Waipapa Waipapa	*Datum:*			

PHOTOGRAPHS





BOREHOLE SOIL/ROCK LOG A4 1-11227.00 WAIPAPA.GPJ OPUS2016_TEM.GDT 30/9/19

Notes:

Started:	2/09/2019	*Finished:*	3/09/2019
Drilling Co.:	Drill Force NZ Ltd	*Drilling Rig:*	Truck Mounted Rig
Logged by:	RVD	*Checked by:*	A. George

Logged in accordance with NZ Geotechnical Society Guidelines (2005). See attached key sheet for explanation of symbols.

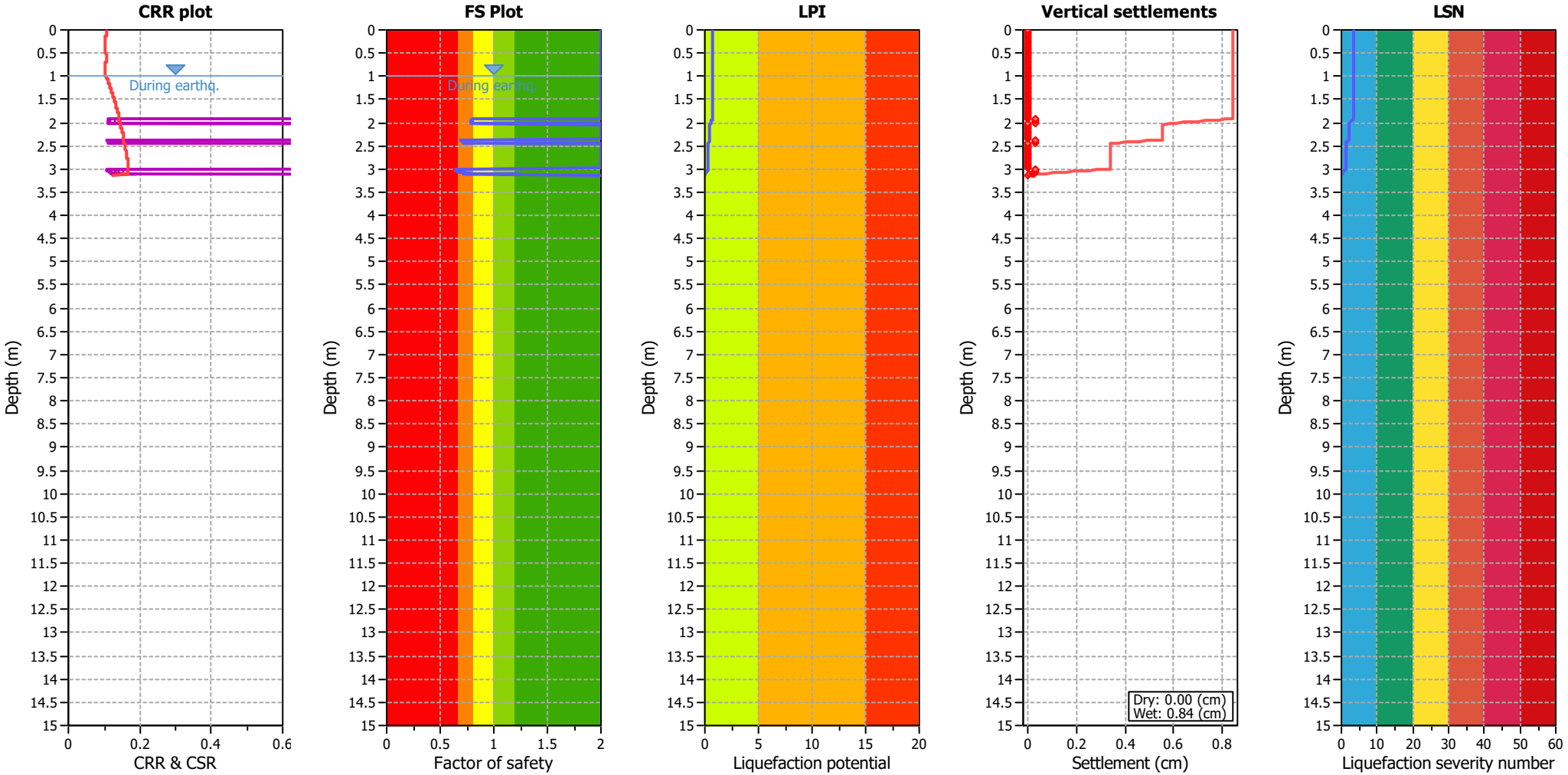
Scale 1:50 @ A4

Appendix C Cliq Outputs

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT01
Total depth: 3.13 m

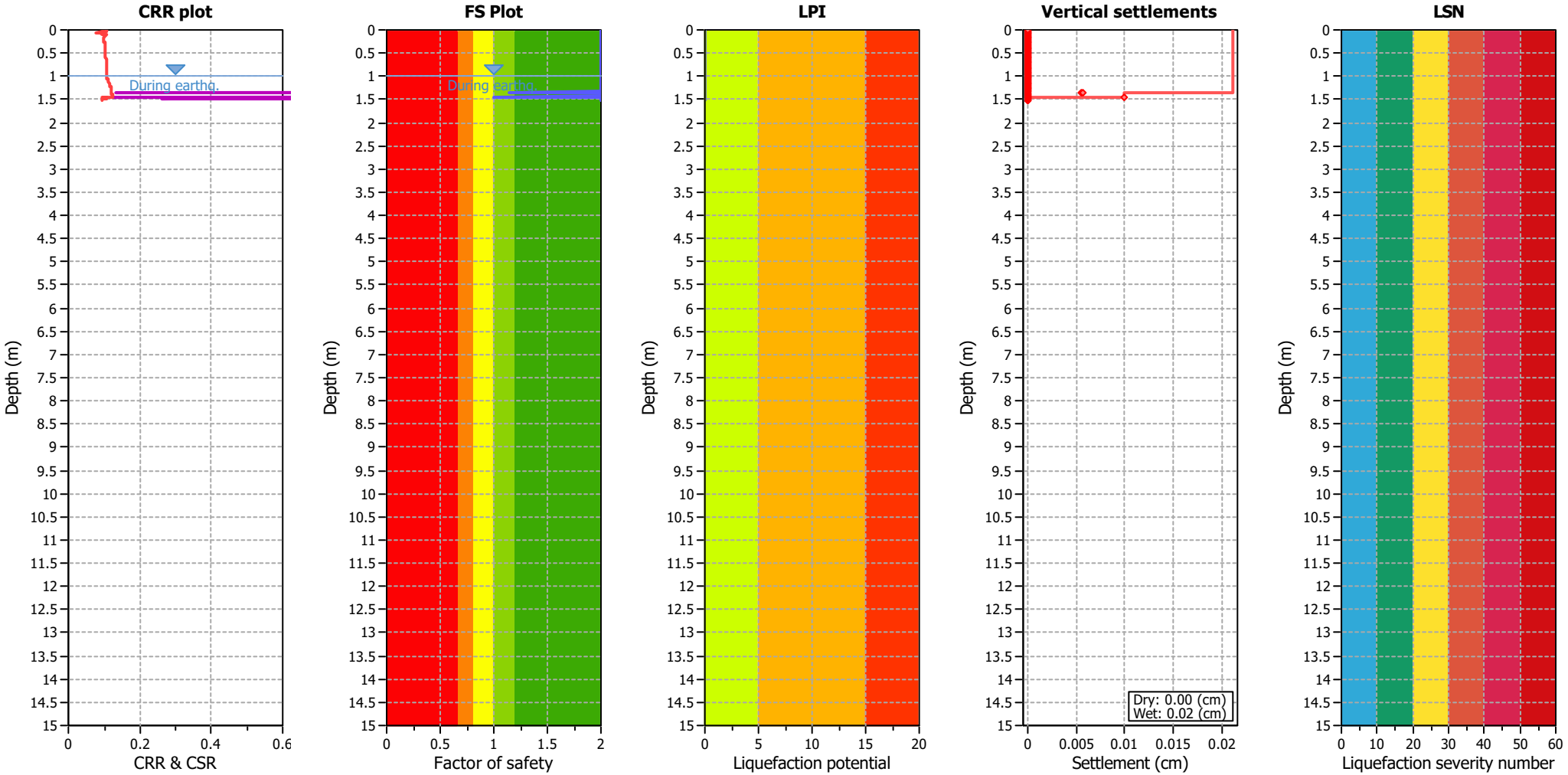


Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.40 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT02
Total depth: 1.53 m

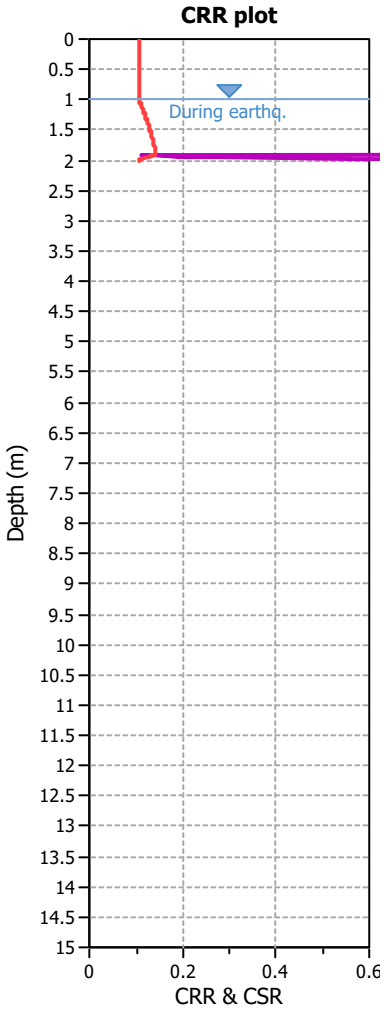


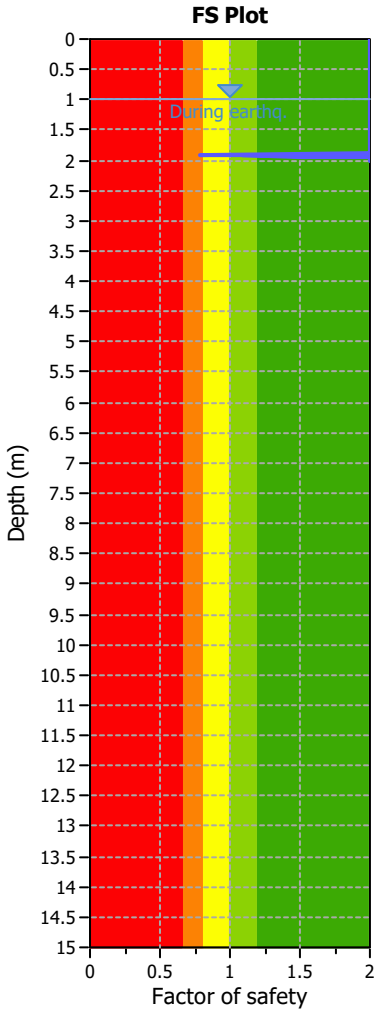
Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.00 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

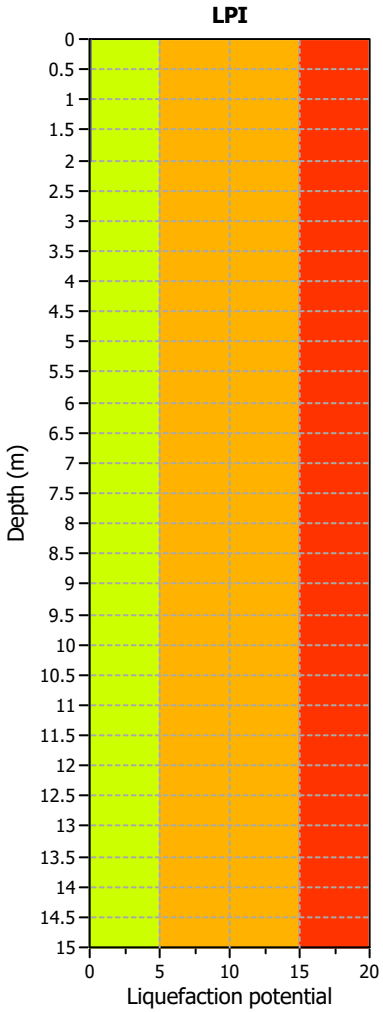
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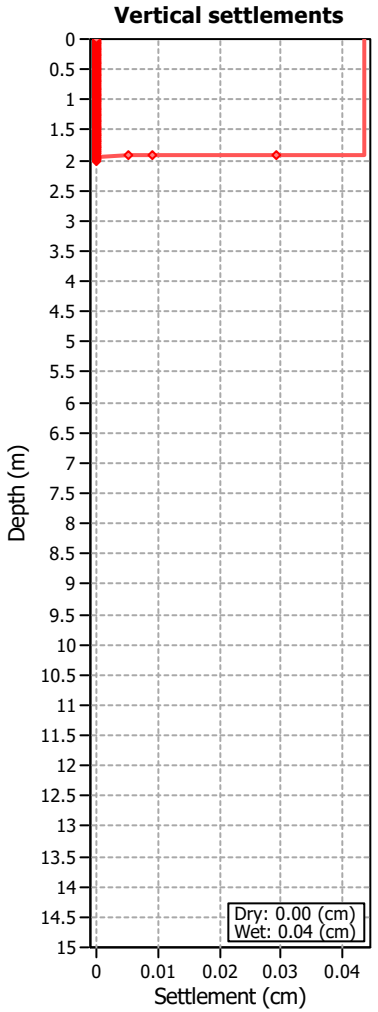
Project: **Waipapa Development**
Location: **P-003194**

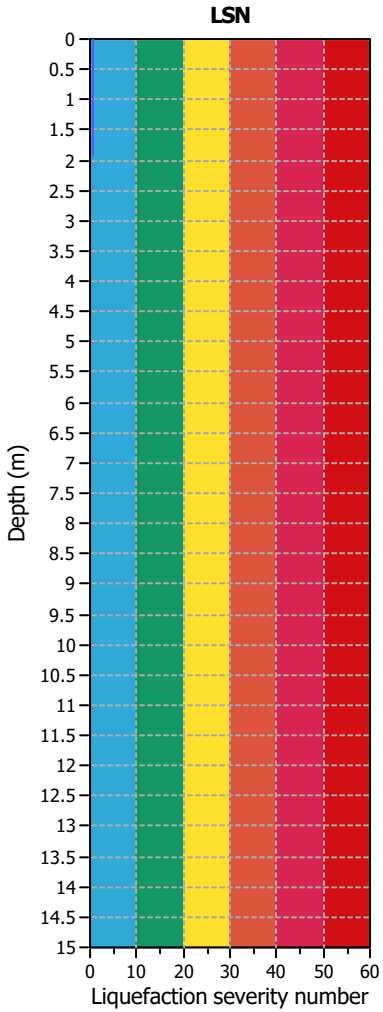
CPT: CPT03
Total depth: 2.00 m









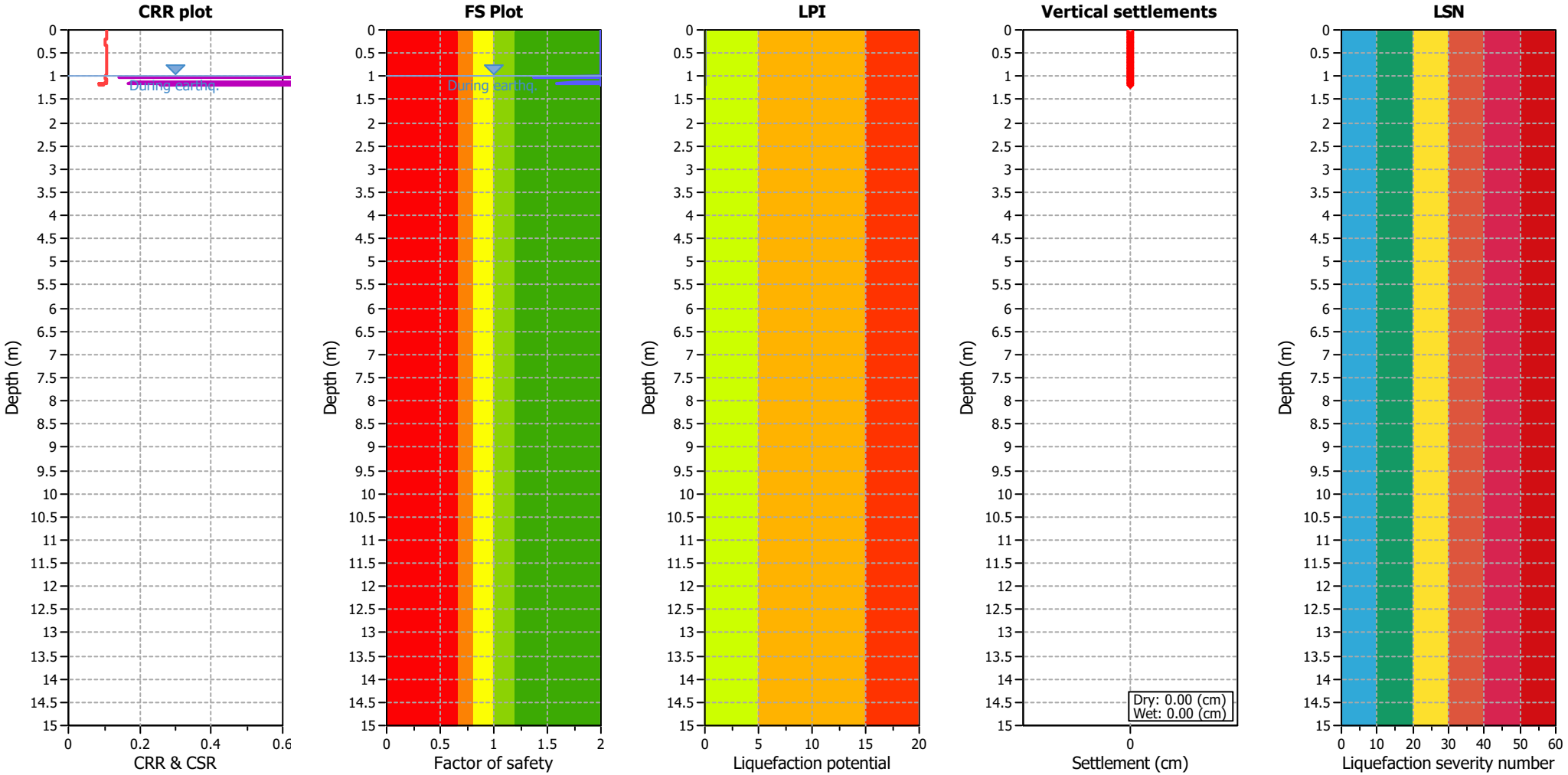


Analysis method:	B&I (2014)	G.W.T. (in-situ):	0.90 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT04
Total depth: 1.19 m

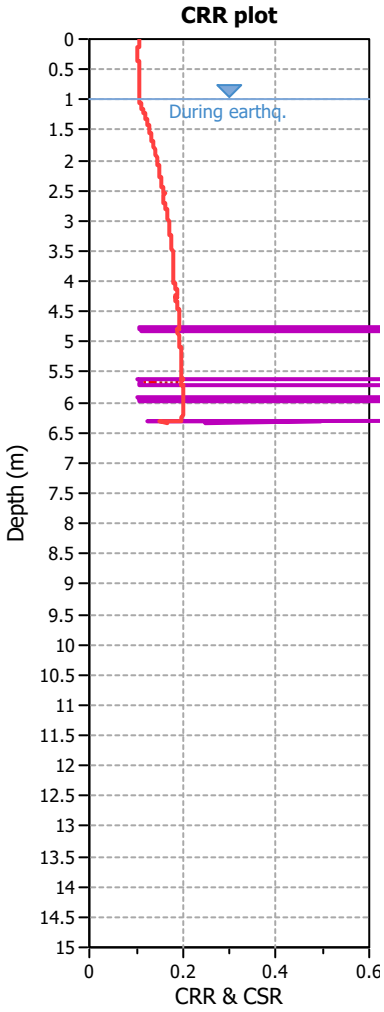


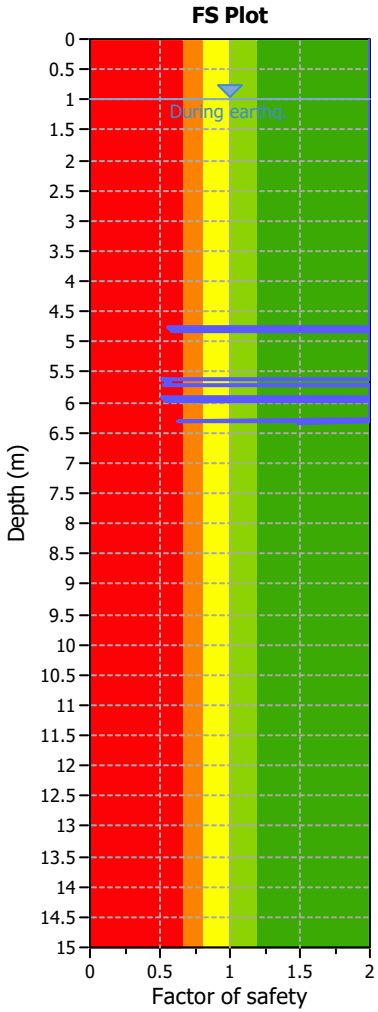
Analysis method:	B&I (2014)	G.W.T. (in-situ):	0.90 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

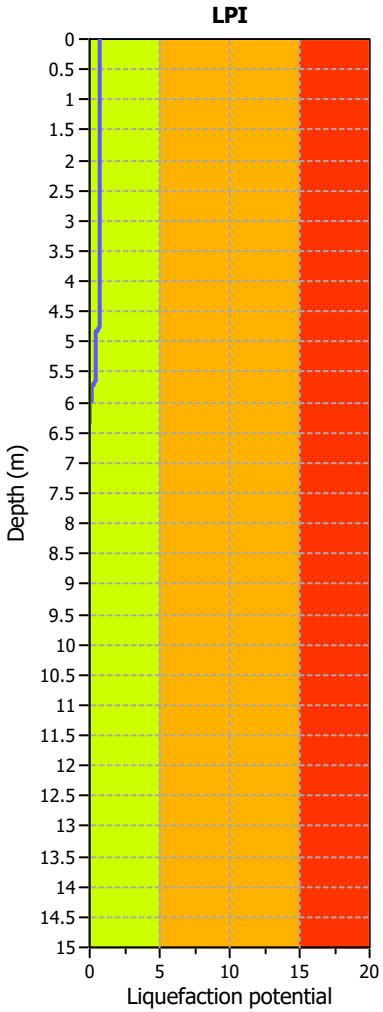
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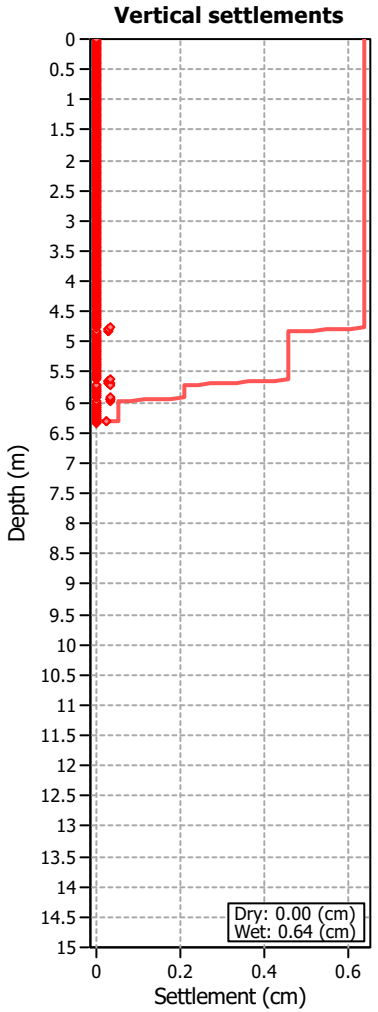
Project: **Waipapa Development**
Location: **P-003194**

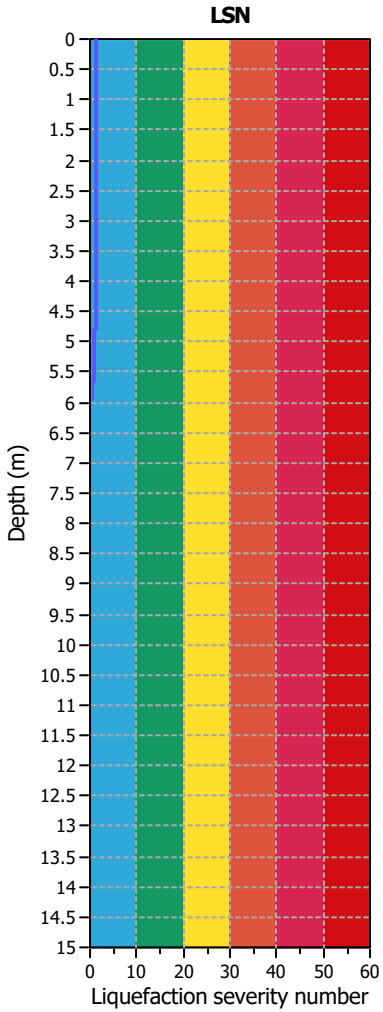
CPT: CPT05
Total depth: 6.33 m









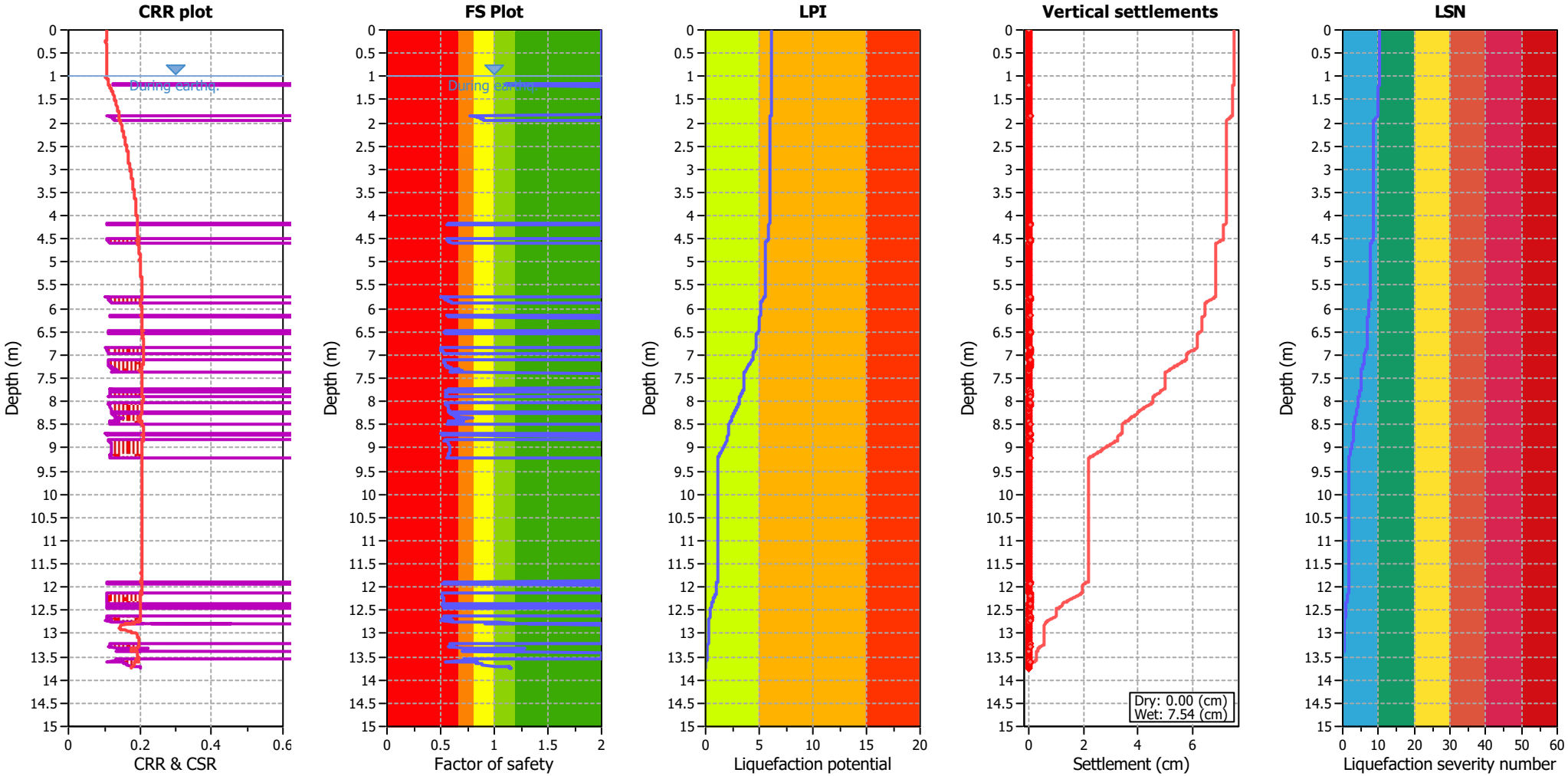


Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.10 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT06
Total depth: 13.76 m

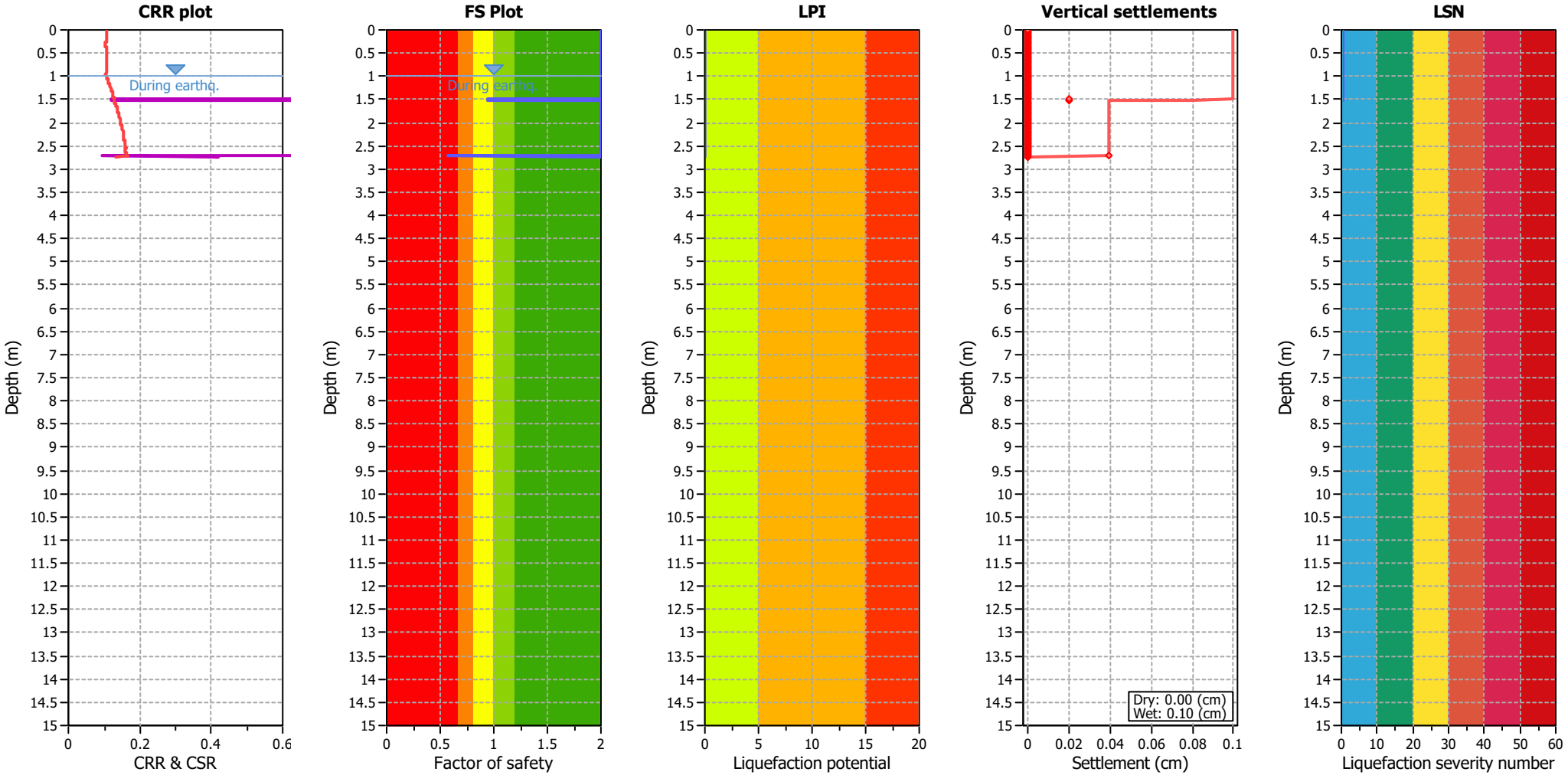


Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.00 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT07
Total depth: 2.74 m

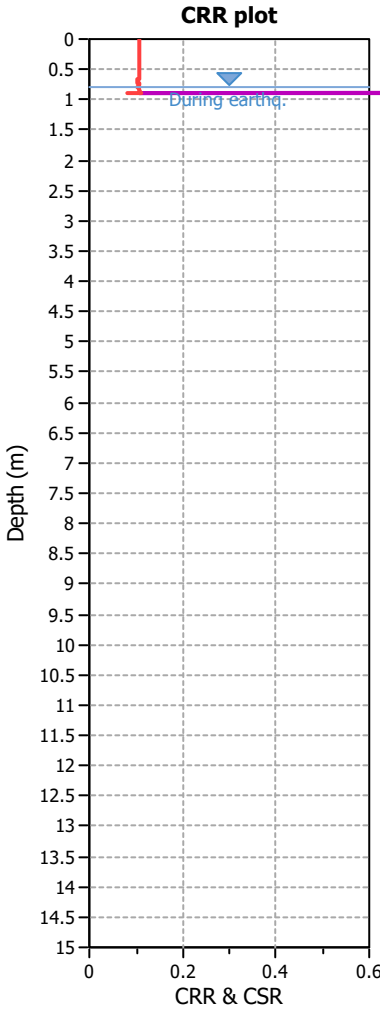


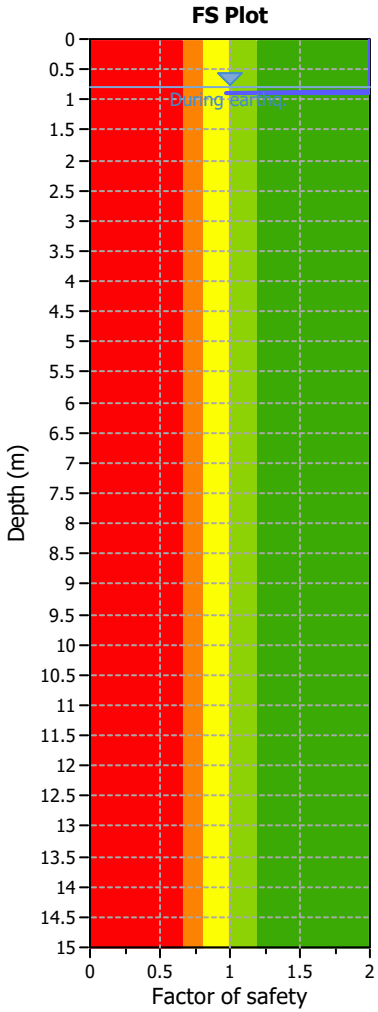
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Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

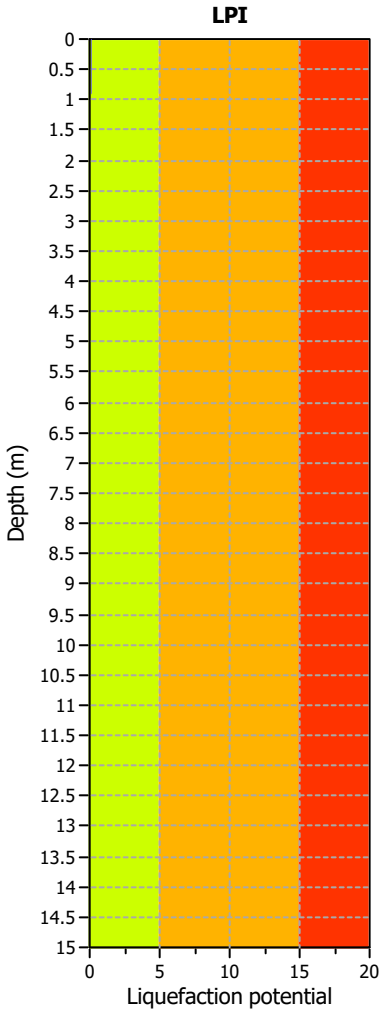
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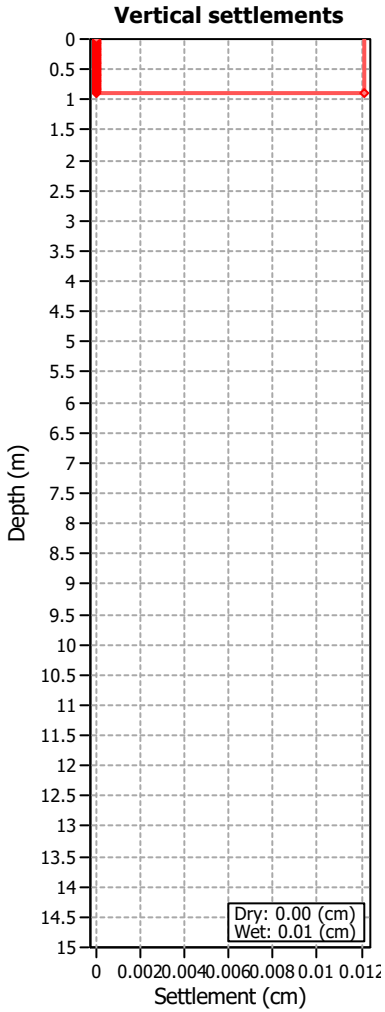
Project: **Waipapa Development**
Location: **P-003194**

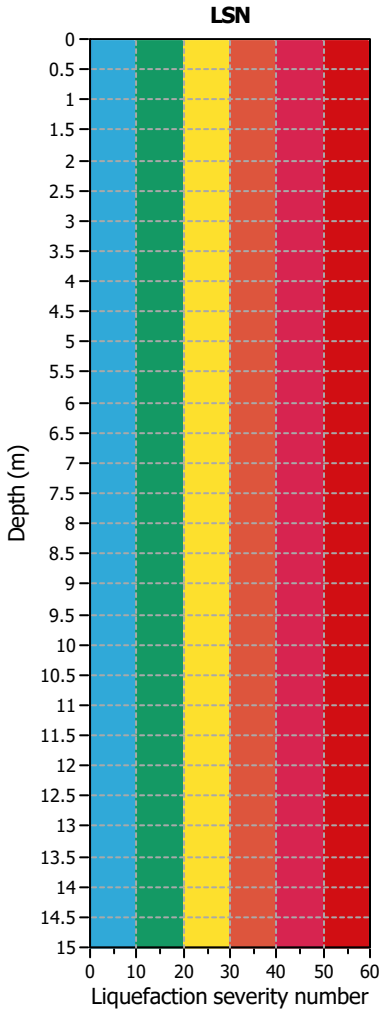
CPT: CPT08
Total depth: 0.89 m









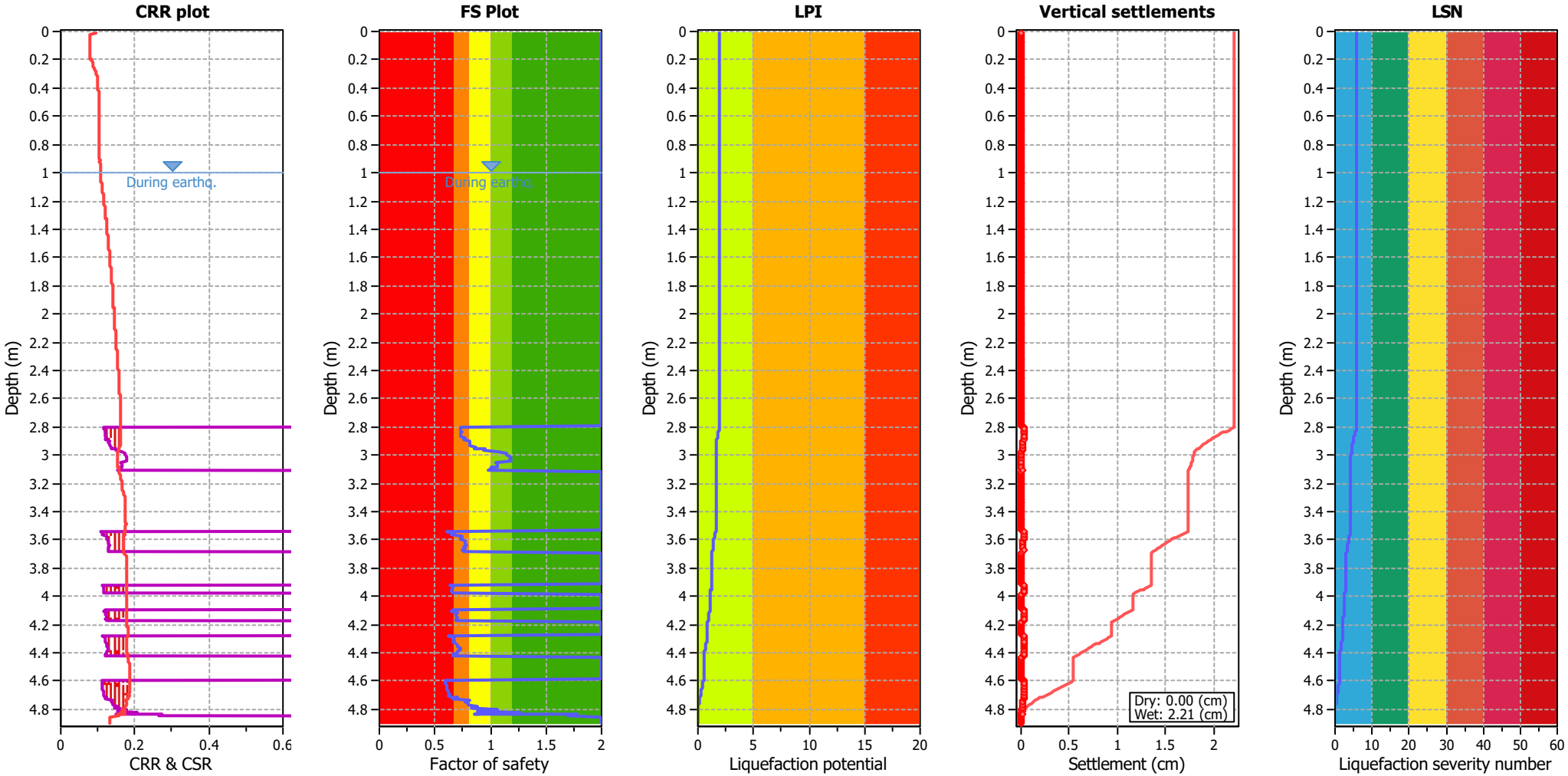


Analysis method:	B&I (2014)	G.W.T. (in-situ):	0.80 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	0.80 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT101
Total depth: 4.90 m

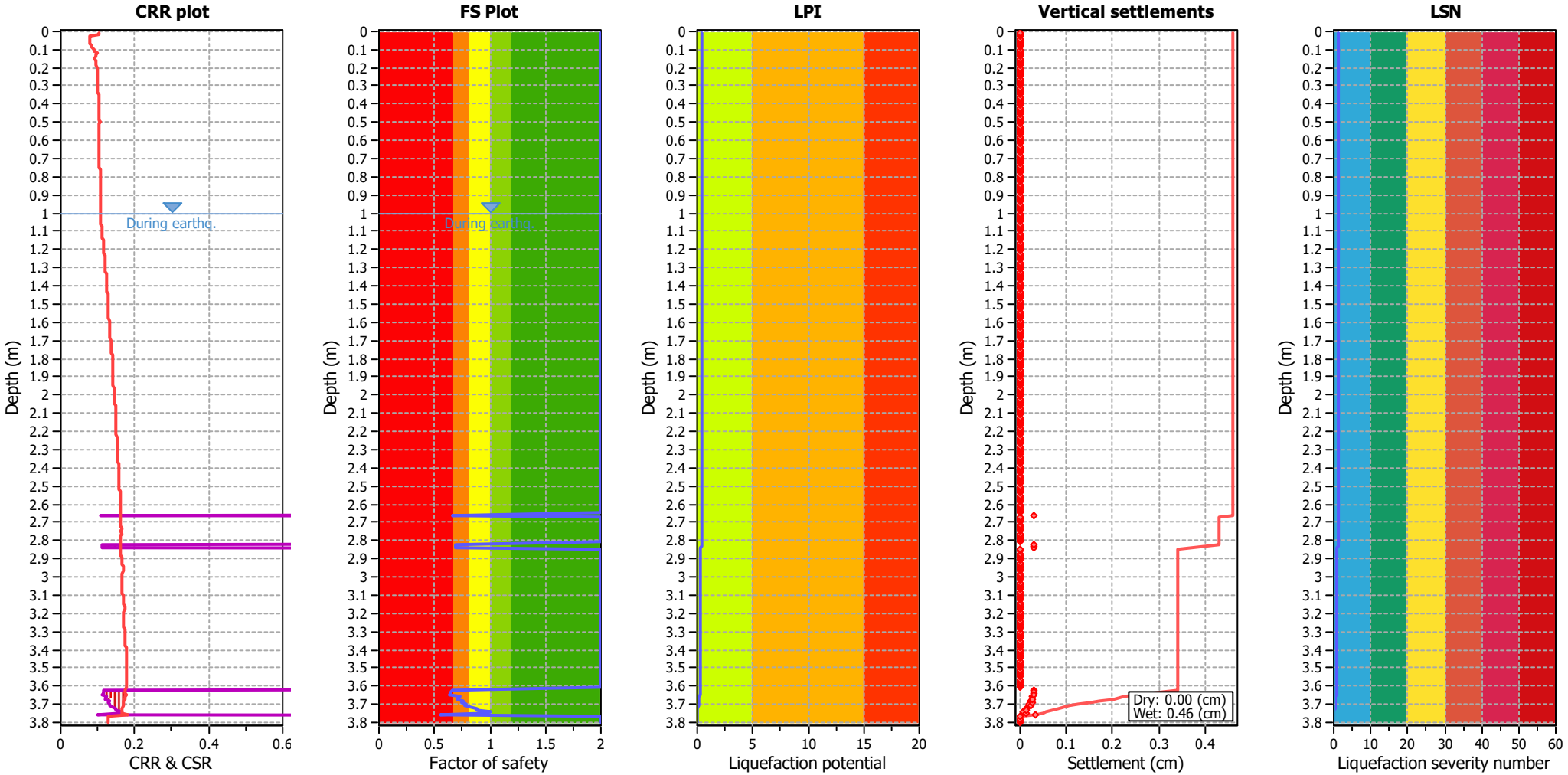


Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.10 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT102
Total depth: 3.80 m

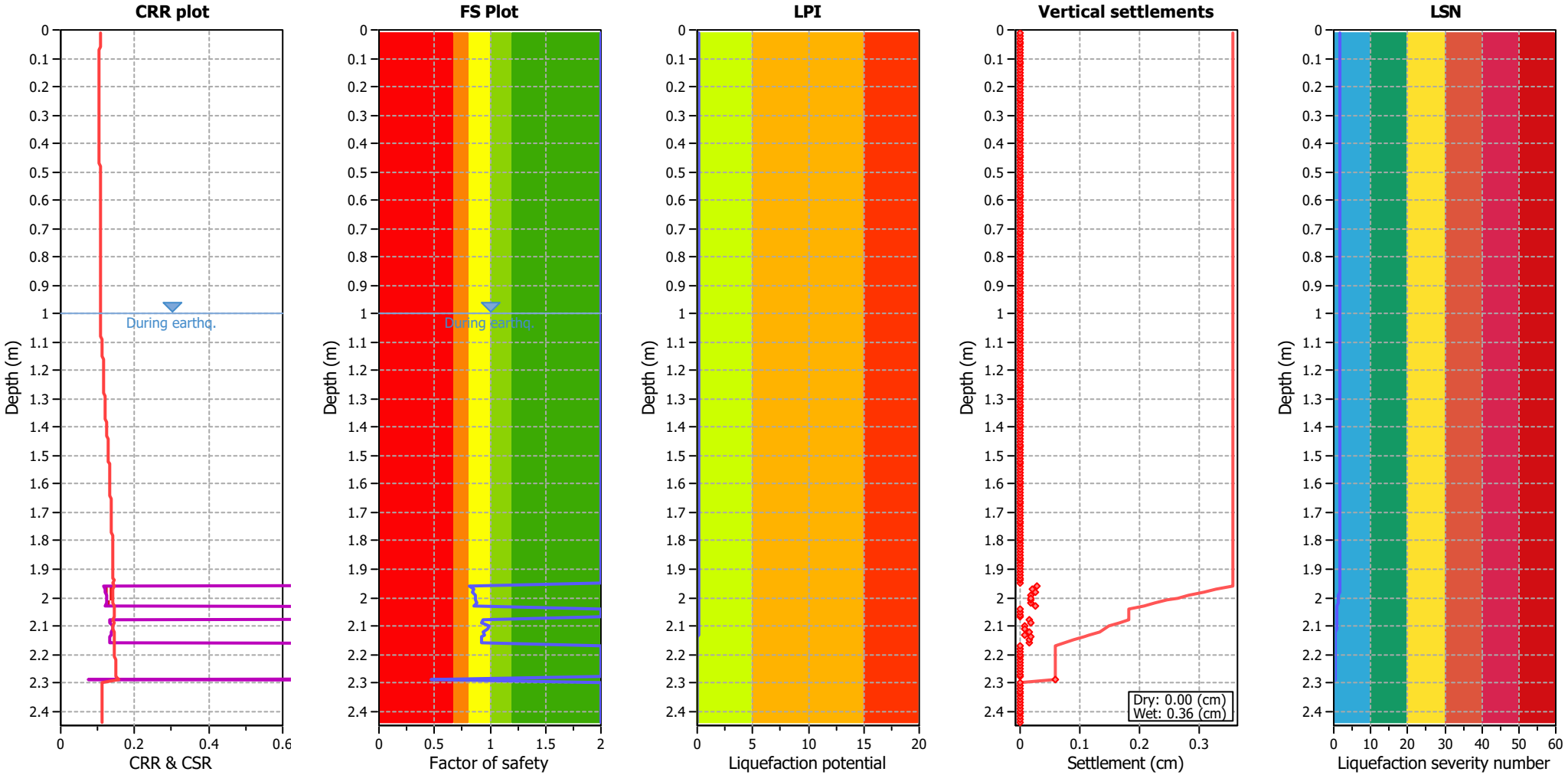


Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.50 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT103
Total depth: 2.44 m

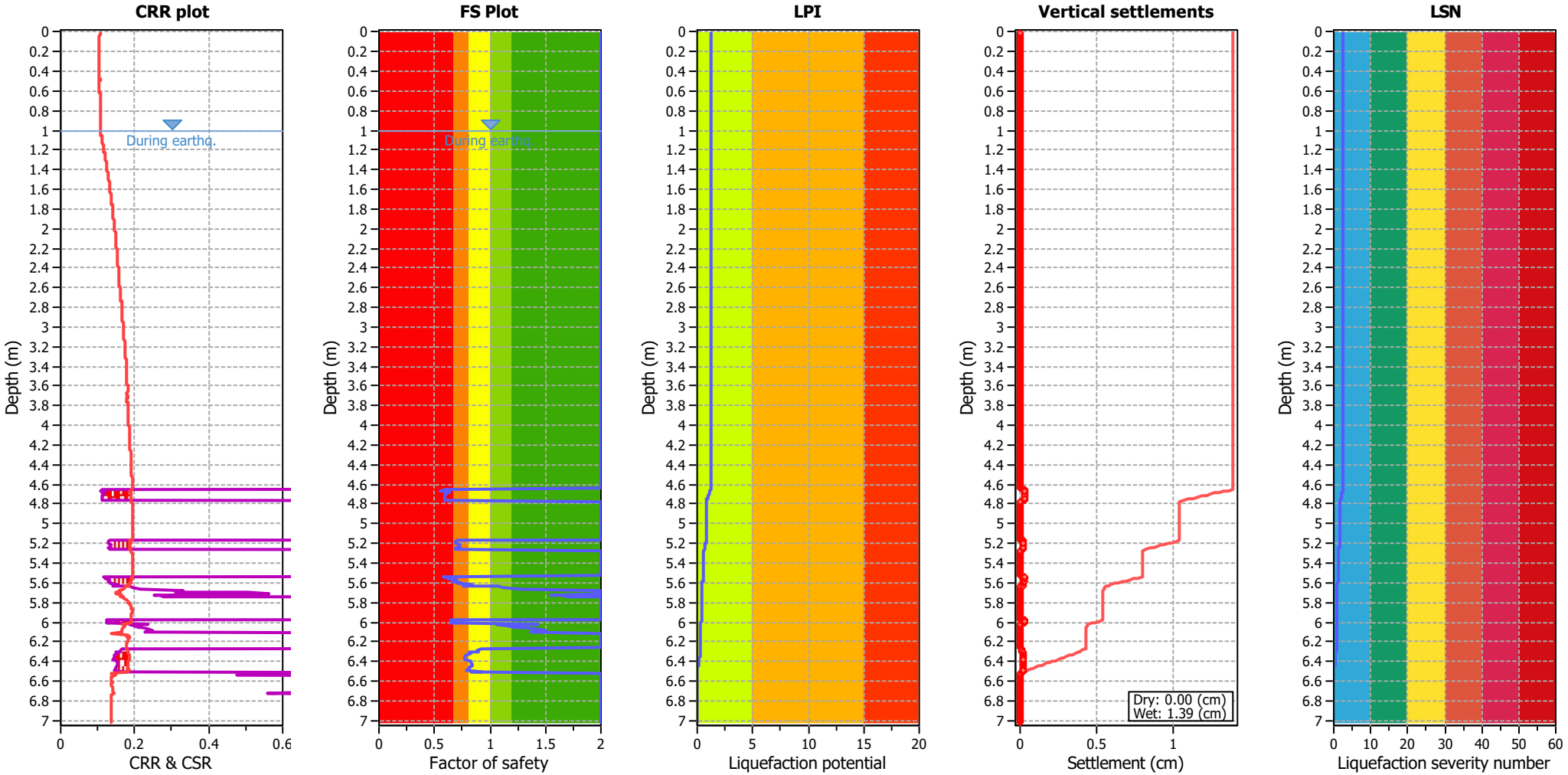


Analysis method:	B&I (2014)	G.W.T. (in-situ):	2.20 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT104
Total depth: 7.02 m

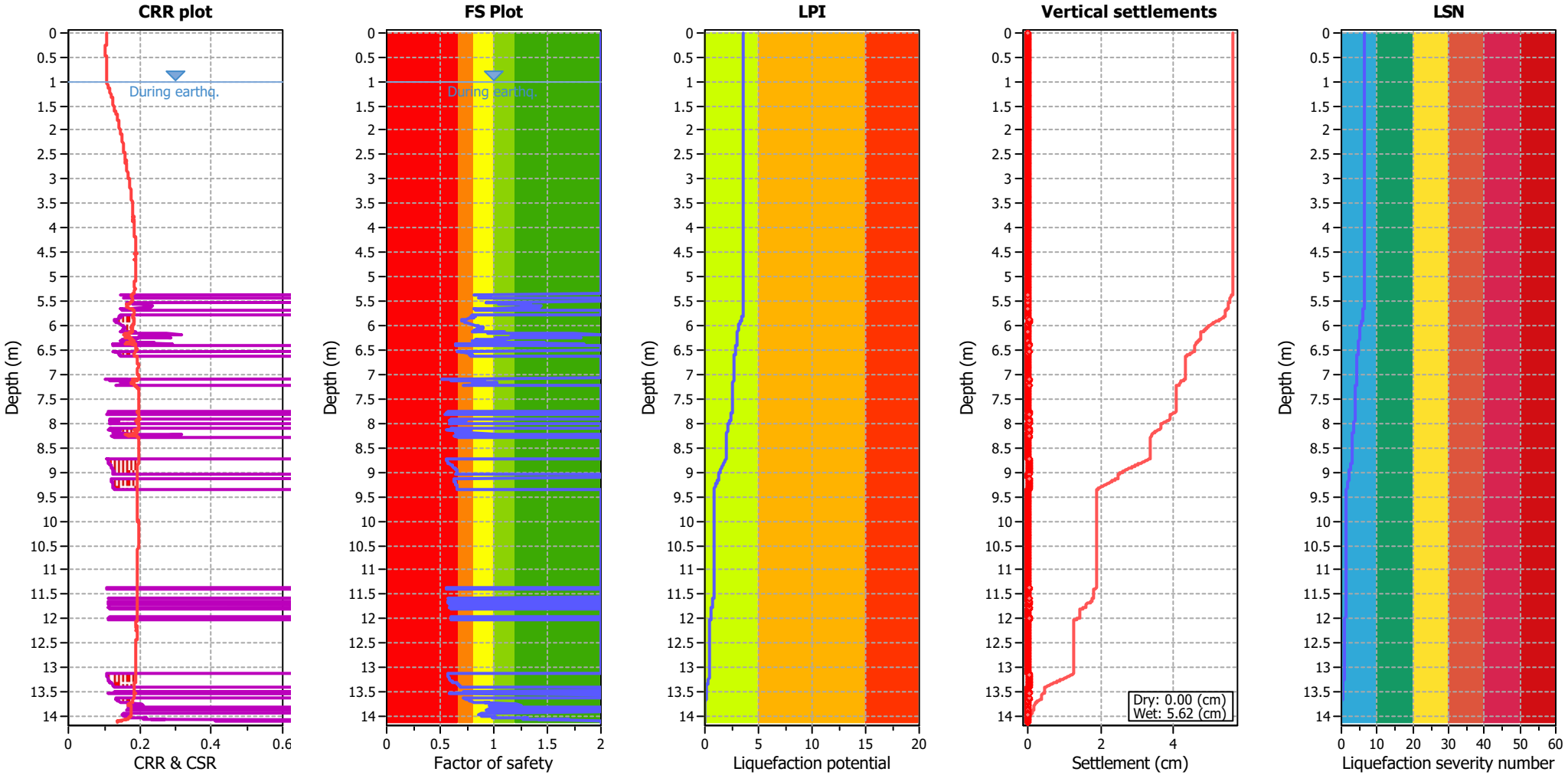


Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.05 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT105
Total depth: 14.12 m

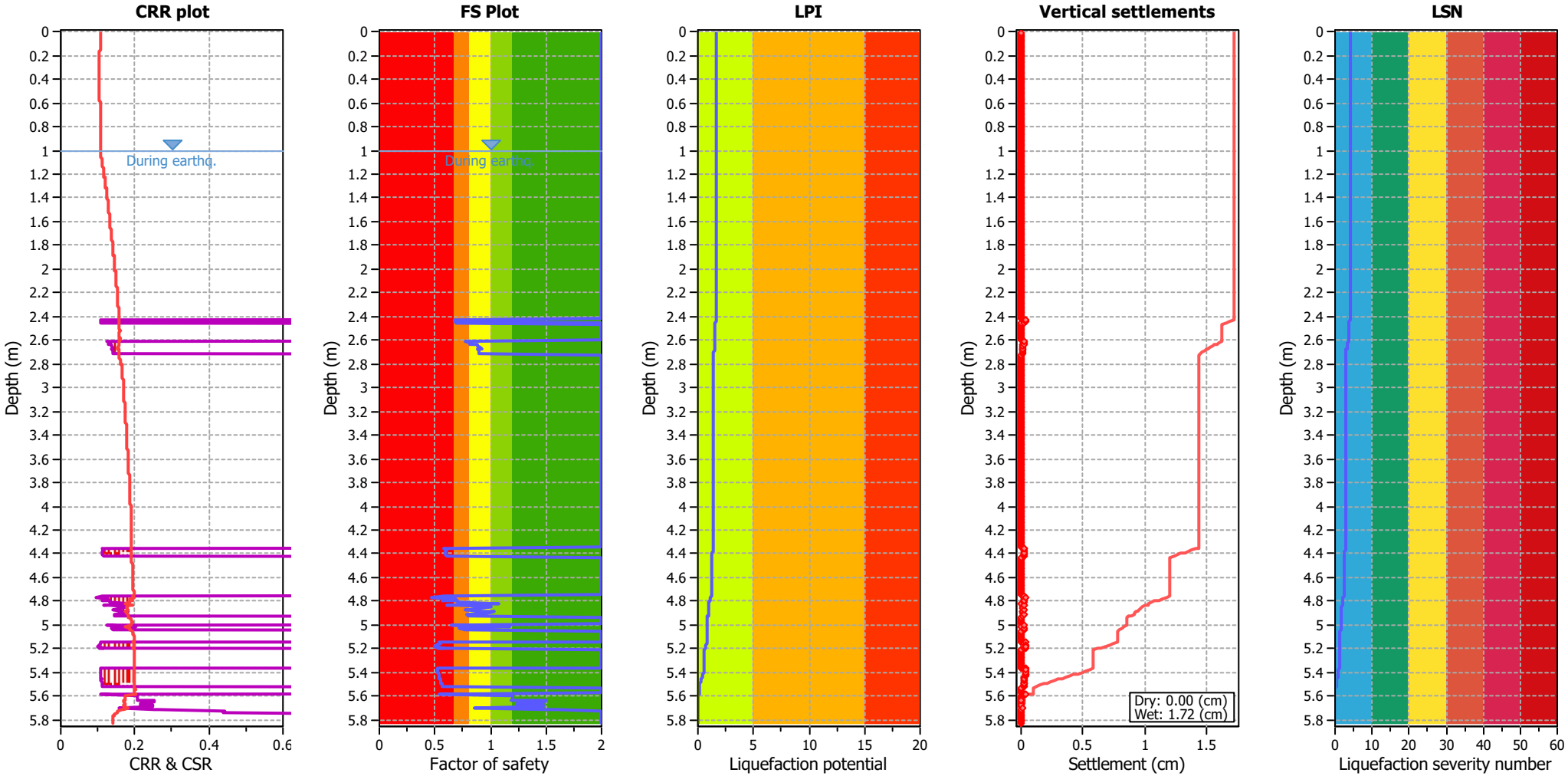


Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.10 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

Initia Limited
Geotechnical Specialists
Unit 6, Level 1, 114 St Georges Bay Road, Parnell, Auckland 1052
http://www.initia.co.nz

Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT106
Total depth: 5.83 m

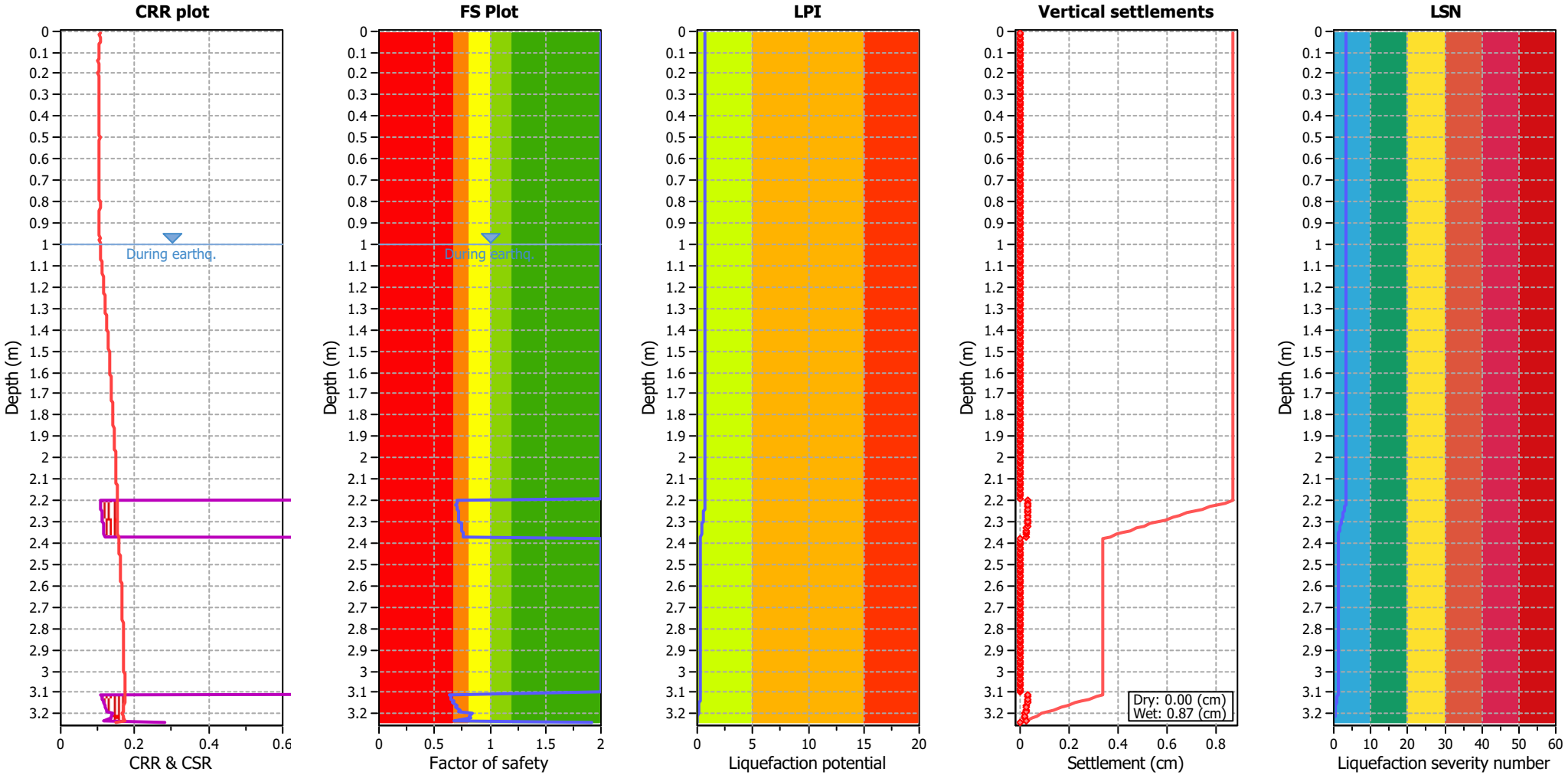


Analysis method:	B&I (2014)	G.W.T. (in-situ):	1.00 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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http://www.initia.co.nz

Project: **Waipapa Development**
Location: **P-003194**

CPT: CPT107
Total depth: 3.24 m



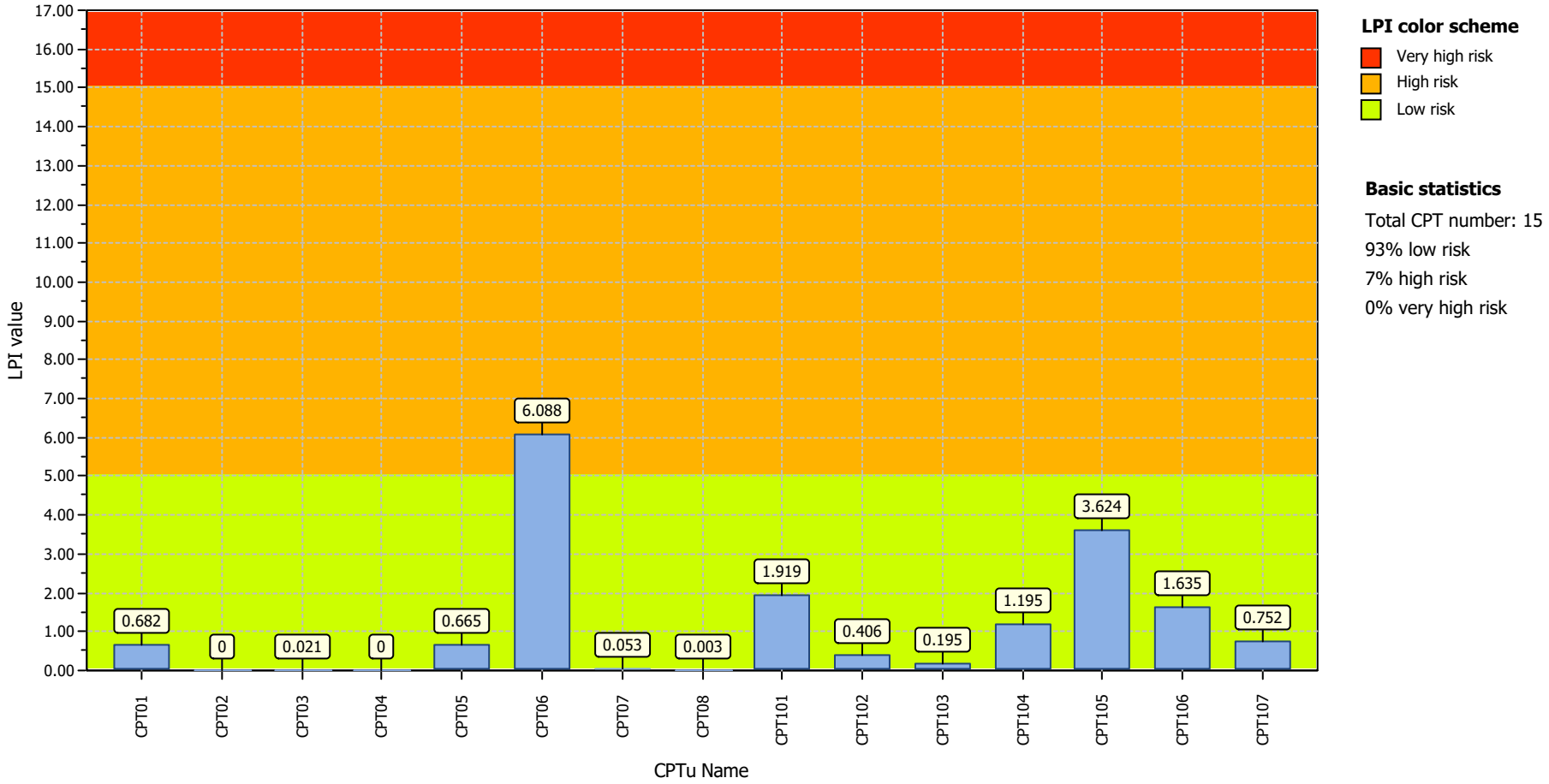
Analysis method:	B&I (2014)	G.W.T. (in-situ):	0.90 m	Use fill:	No	Clay like behavior applied:	.
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	1.00 m	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	6.50	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.19	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

Initia Limited
Geotechnical Specialists
Unit 6, Level 1, 114 St Georges Bay Road, Parnell, Auckland 1052
http://www.initia.co.nz

Project title : Waipapa Development

Location : P-003194

Overall Liquefaction Potential Index report



LPI color scheme

- Very high risk
- High risk
- Low risk

Basic statistics

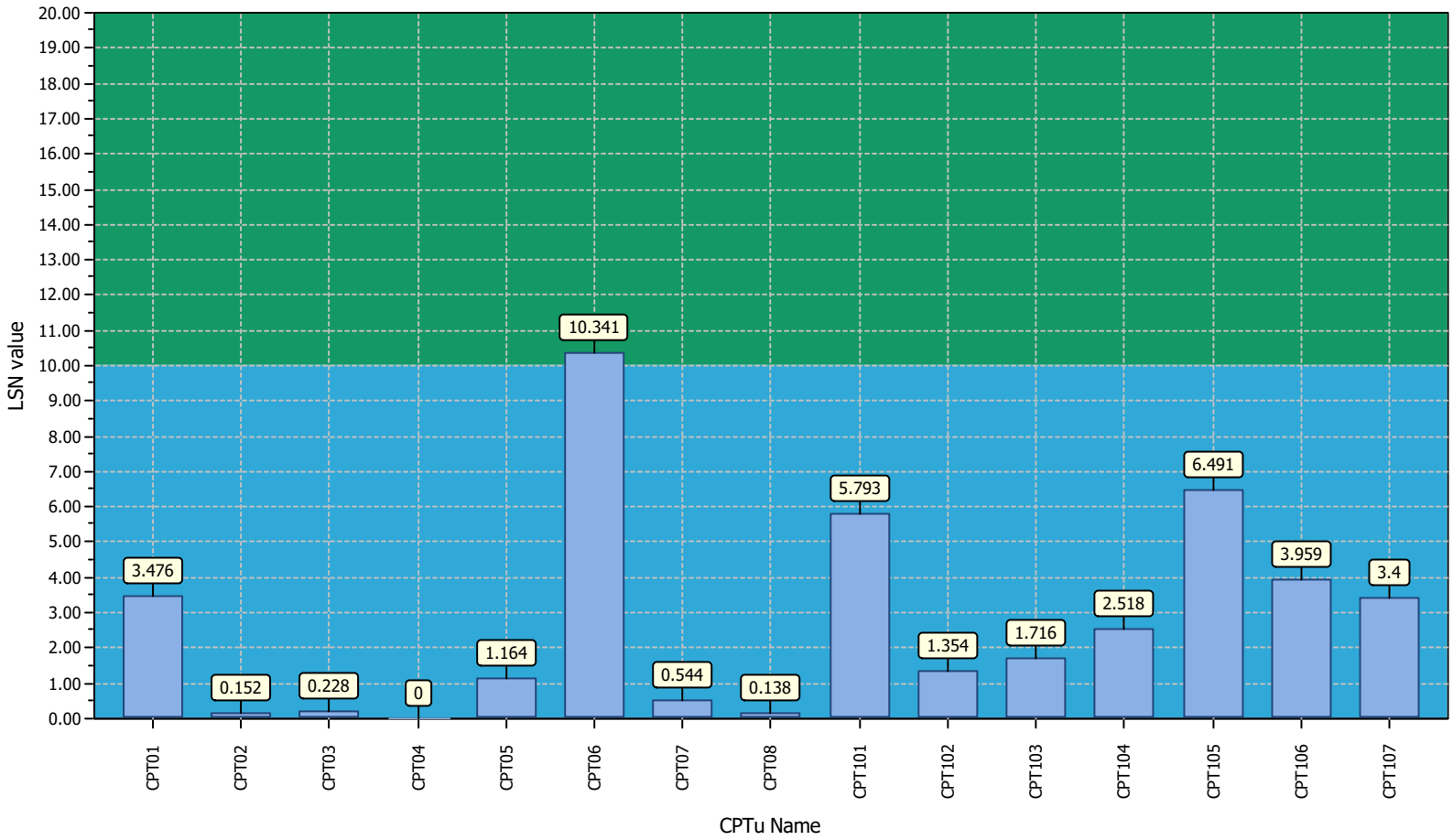
Total CPT number: 15
93% low risk
7% high risk
0% very high risk

Initia Limited
Geotechnical Specialists
Unit 6, Level 1, 114 St Georges Bay Road, Parnell, Auckland 1052
http://www.initia.co.nz

Project title : Waipapa Development

Location : P-003194

Overall Liquefaction Severity Number report



LSN color scheme

- Severe damage
- Major expression of liquefaction
- Moderate to severe exp. of liquefaction
- Moderate expression of liquefaction
- Minor expression of liquefaction
- Little to no expression of liquefaction

Basic statistics

Total CPT number: 15

93% little liquefaction

7% minor liquefaction

0% moderate liquefaction

0% moderate to major liquefaction

0% major liquefaction

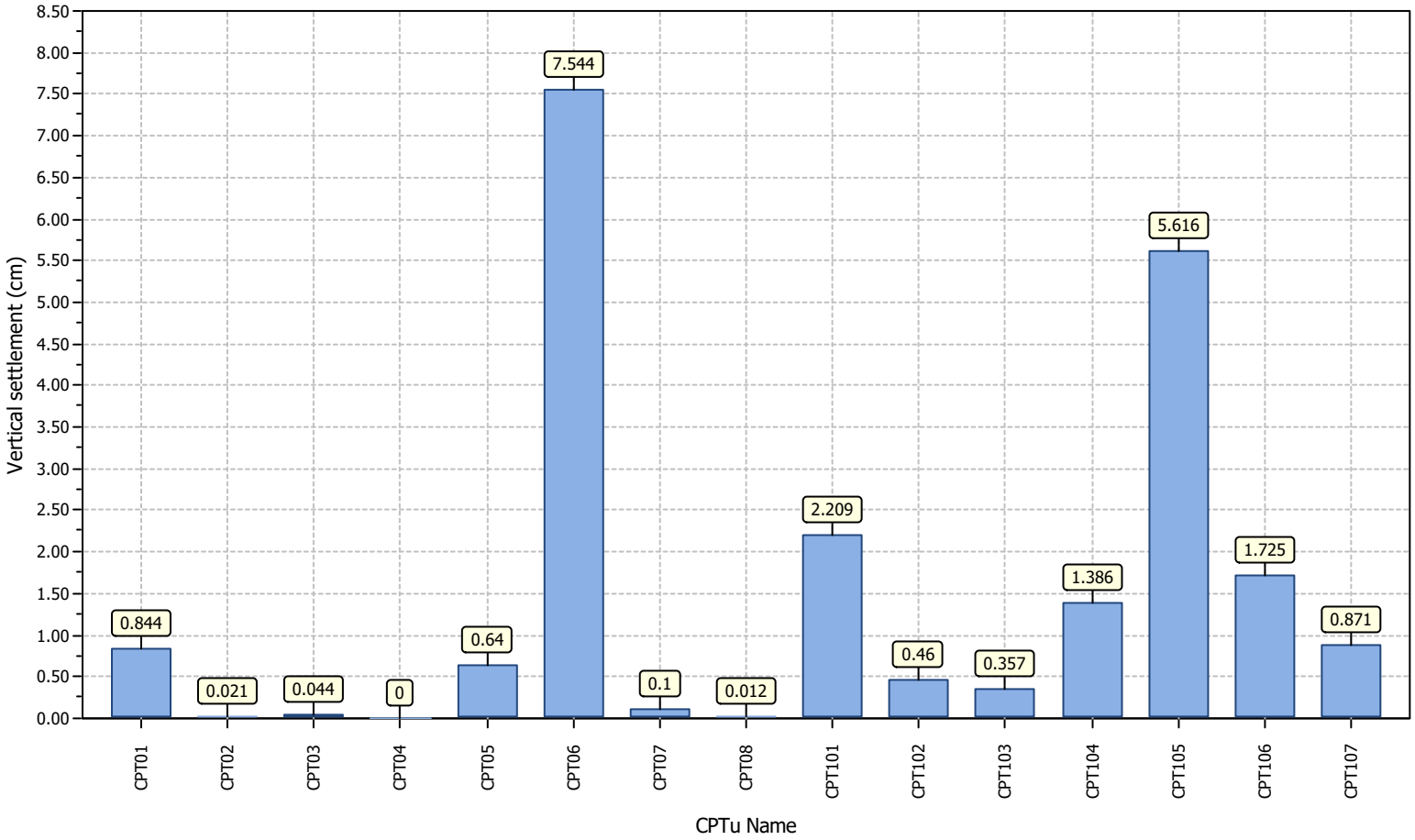
0% severe liquefaction

Initia Limited
Geotechnical Specialists
Unit 6, Level 1, 114 St Georges Bay Road, Parnell, Auckland 1052
http://www.initia.co.nz

Project title : Waipapa Development

Location : P-003194

Overall vertical settlements report



Appendix D Construction Monitoring Requirements

This table documents the required monitoring, observation and testing requirements during the earthworks and construction stages of the project. It is important that this table be updated/revised at the commencement of construction, once the design is complete.

Construction Stage	Summary Design Advice/Parameters	Hold Point	Monitoring Requirement and Acceptance Criteria
Earthworks	Topsoil, unsuitable, and low strength soils to be stripped and removed. Minimum subgrade strength prior to filling.	Pre-fill subgrade assessment	Visual approval by geotechnical engineer. Shear vane testing to confirm minimum Su of 60 kPa. Proof rolling to confirm no weaving/significant surface deflection.
	Fill compacted to achieve 'Engineered Fill' criteria as specified in Section 5.3.4 of this report.	During fill placement and compaction	Cohesive fill compacted to achieve: Min Su = 120 kPa Average Su = 140 kPa (5 consecutive tests). Max air voids: 10% Average air voids: 8%. Hardfill: Min CIV 25 Average CIV 28 (5 consecutive tests).[1]
Ground Improvement	Undercuts are required to remove uncontrolled fill, organic soils, and/or topsoil where identified beneath the hardfill in the storage yard area.	During earthworks	Visual approval by geotechnical engineer. Shear vane testing to confirm minimum Su of 60 kPa.
	Preloading to be applied across parts of Building 3 footprint (in its present locations) prior to foundation and slab construction. Approximately 1 m preload above design subgrade level, maintained for minimum 6 months to be confirmed by specific design.	During preloading period	Continuous settlement monitoring to verify that settlement rates have attenuated to acceptable levels. Settlement monitoring results to be reviewed and approved by Geotechnical Engineer before preload removal.
Foundations	Footings must bear on either natural Late Quaternary colluvial/alluvial soils (Buildings 1 and 2) or Engineered Fill soils following satisfactory preloading (Building 3). Minimum foundation embedment depth of 600 mm below finished ground level. Geotechnical Ultimate Bearing Capacity: 300 kPa.	Following excavation of footings, before placement of site concrete/ blinding and reinforcement	Visual appraisal and minimum undrained shear strength: Su > 60 kPa or Scala blow of 3 per 100 mm penetration (granular)

Construction Stage	Summary Design Advice/Parameters	Hold Point	Monitoring Requirement and Acceptance Criteria
Floor Slab or Pavement Subgrade. [2, 3, 4]	Subgrade CBR: 3% for floor slabs (post-preload for Building 3); and pavement areas (following stripping of uncontrolled fill/topsoil where applicable).	Prior to placement of subbase layers	Minimum undrained shear strength of subgrade: Su = 70 kPa (cohesive) or Scala blow of 3 per 100 mm penetration (granular)

Notes:

1. The Contractor should refer to the Earthworks Specification for a full summary of the required test type, method, frequencies, and acceptance criteria.
2. Geotechnical Engineer is responsible for the monitoring of materials to subgrade level only.
3. Refer to slab designer or structural engineer for compaction/other criteria for subbase layers.
4. Refer to pavement designer or civil engineer for compaction/other criteria of pavement (subbase/basecourse) layers.

4
SO 438821

2
DP 110493

Whiriwhiritoa Stream

Average width of stream 2.5m

stream position

DP 95010

Ⓘ
SO 438821

Ⓓ
DP 514002

Ⓐ
SO 570424

EB

25m offset line

SECTION 3
SO 438821
1.2148ha

14
DP 337517

KLINAC LANE

KLINAC LANE

WBC Developers Limited
Title : 574944
Total Area : 1.2148ha
Zone : Industrial

0 5 10 15 20 25 50

Dir : Drawing001
Scale @ A3 : 1:100
Date : 30/06/2026

SURVEY OF STREAM WIDTH ADJACENT SECTION 3 SO 438821

REF : 8759

DONALDSONS
REGISTERED LAND SURVEYORS

Land / engineering Surveyors & development planners - 90 Kerikeri Road, Kerikeri, Northland, New Zealand - www.donaldsons.net.nz - em: info@donaldsons.net.nz - p:09 4079182

PID: 3345047

Far North District Council

RCPAD

FAR NORTH DISTRICT COUNCIL

FAR NORTH OPERATIVE DISTRICT PLAN
DECISION ON RESOURCE CONSENT APPLICATION (SUBDIVISION)

AND

Pursuant to a Transfer of Powers from Northland Regional Council pursuant to section 33 of the Resource Management Act 1991.

REGIONAL WATER & SOIL PLAN FOR NORTHLAND
DECISION ON RESOURCE CONSENT APPLICATION (DISCHARGE)

COPY

Resource Consent Number: 2170377-RMACOM

Pursuant to section 104B and D of the Resource Management Act 1991 (the Act), the Far North District Council hereby grants resource consent to:

Waipapa Centre Ltd

Proposal A – Subdivision
To subdivide Lot 13 DP 337517 (CFR 154048) into Lots 1 [1930m2] and 2 [1700m2] in the Industrial zone. Lot 2 is to be amalgamated with Lot 12 DP 337517 (CFR 154047) and issued in one title with no additional titles being created.

Proposal B – Land Use
To install a wastewater disposal field in the Industrial zone, breaching Rules 12.7.6.1.2 Setback from Smaller Lakes, Rivers and Wetlands, and 12.7.6.1.4 Land Use Activities Involving Discharges of Human Sewage Effluent.

Proposal C – Land Use (Discharge to Land):
To install a wastewater disposal field that cannot comply with Rule 15.1.4(d) of the Regional Water and Soil Plan. It is proposed to install a wastewater and effluent disposal field in an area affected by NRC's 100 Year Flood extent.

Subject Site Details:

Address:	16 Klinac Lane, Kerikeri 0295
Legal Description:	LOT 12 - 14 DP 337517, Sec 3 SO 438821
Certificate of Title reference:	CT-154048, CT-154047, CT-154049, CT-577944

Pursuant to Section 108 of the Act, this consent is issued subject to the following conditions:

Decision A – Subdivision:

1. The subdivision shall be carried out in accordance with the approved plan of subdivision prepared by *Thomson Survey Ltd*, referenced *Proposed*

Subdivision of Lot 13 DP 337517 and Sewage Easements over Lots 12, 13, 14 DP 337517 and Sect 3 SO 438821, dated *Revision 28/02/2017*, and attached to this consent with the Council's "Approved Stamp" affixed to it.

2. The survey plan, submitted for approval pursuant to Section 223 of the Act shall show:

   (a) All easements to be duly granted or reserved.

   (b) The endorsement of the following conditional amalgamation, pursuant to Section 220(1)(b)(i) of the Resource Management Act 1991;

   That Lot 2 hereon be transferred to the owners of Lot 12 DP 337517 and one CFR issued.' [Request 1445599]

3. Prior to the issuing of a certificate pursuant to Section 224(c) of the Act, the consent holder shall:

   (a) Provide evidence from Council's Infrastructure and Asset Management Department and Council's legal Services that a Licence to Occupy has been obtained for the onsite wastewater drainage that crosses Council's Road Reserve that links Klinac Lane and Skippers Lane.

   (b) Provide evidence from an on-site wastewater system designer that all parts of the existing on-site wastewater treatment and effluent disposal system for Lot 1 (including 100% reserve disposal area) are within the proposed Lot boundary.

   (c) Secure the condition below by way of a Consent Notice issued under Section 221 of the Act, to be registered against the titles of Lots 1 and 2. The costs of preparing, checking and executing the Notice shall be met by the Applicant.

      (i) Lots 1 and 2 contain areas which are identified by Northland Regional Council as likely to be flood susceptible, wherein there is a potential risk to life, property and the environment due to natural hazard processes. At the time of any built development (including works that does not require building or resource consent), a report prepared by a suitably qualified and experienced engineer shall be provided to Council's Consents Engineer or designate for their approval. The report shall set a floor level safe from a 1% AEP flood event including allowance for climate change.

Decision B – Land Use:

No conditions of consent relate to Decision B.

Decision C – Land Use (Discharge to Land):

1. The activity shall be carried out in accordance with the approved plans prepared by Haigh Workman Civil and Structural Engineers Ltd, referenced On-Site Wastewater System (DWG No. 1), dated 11/10/2016, and attached to this consent with the Council's "Approved Stamp" affixed to it.

2. The Consent Holder shall ensure that the on-site wastewater treatment and disposal system is constructed generally in accordance with the recommendations contained within the Wastewater Assessment for Proposed Boundary Adjustment 20 Klinac Lane report prepared by Haigh Workman Civil and Structural Engineers Ltd, dated November 2016, referenced 15 181, and provided with RC 2170377.

3. The volume of wastewater discharged per day, being any 24 consecutive hours, shall not exceed 2,500 litres.

4. The concentration of total suspended solids and five-day biochemical oxygen demand in the treated wastewater, as measured in any wastewater sample collected from the final outlet of the treatment system prior to it being discharged to land, shall not exceed $20g/m^3$ and $30g/m^3$, respectively.

5. The treated wastewater shall not be applied to land at an areal loading rate greater than 4.0 litres per square metre per day.

6. The consent holder shall as a minimum for the duration of this consent, ensure that all wastewater receives secondary treatment prior to being disposed of via buried pressure compensating driplines.

7. The Consent Holder shall, at least two weeks prior to the installation of the wastewater treatment and disposal system, notify the Council's Resource Consents Monitoring Officer in writing of the proposed date that the wastewater treatment and disposal system is to be installed and the name of the proposed installer.

8. The installation of the treatment and disposal system shall be supervised by a suitably qualified and experienced person. The Consent Holder shall, within two weeks after the treatment system has been installed, submit to the Council's Resource Consents Monitoring Officer:

   (i) Final "as built" plans that show the siting of all components of the wastewater treatment and disposal system. For the purpose of this condition, the Consent Holder shall ensure that the "as built" plans are drawn to scale and provide sufficient detail for a Council monitoring officer to locate all features identified on the plans.

9. The Consent Holder shall install and maintain a meter with an accuracy of ±5% on the outlet from the wastewater treatment system balance tank to disposal field. This meter shall be used to measure the quantity of wastewater discharged and shall be installed within one month of the issue of the building Code Compliance Certificate.

10. The Consent Holder shall ensure that an audible and visual high wastewater level alarm system is installed and maintained within all wastewater pump chambers and balance tanks. In addition, there shall be at least 24 hours emergency wastewater storage capacity within the treatment system above the level at which the high wastewater level alarm is activated within one month of the issue of the building Code Compliance Certificate.

11. The Consent Holder shall ensure that there will be no ponding of wastewater within, or surface runoff of any contaminants from the wastewater treatment areas due to flooding or as a result of the exercise of this consent.

12. The Consent Holder shall ensure for the duration of this consent that surface stormwater from surrounding areas are diverted or prevented from entering the treatment system or disposal field.

13. The Consent Holder shall for the duration of this consent keep a written record of the quantity of treated wastewater discharged on a monthly basis. A copy of the written records for the previous year (1 April to 31 March) shall be forwarded to the Council's Resource Consents Monitoring officer or duly delegated officer by 1 May each year, or immediately on written request by the Council.

14. The consent holder shall, for the purposes of adequately monitoring the consents as required under Section 35 of the Act, on becoming aware of any contaminant associated with the consent holder's operations escaping otherwise than in conformity with these consents:

    (i) Immediately take such action, or execute such work as may be necessary, to stop and/or contain such escape;
    (ii) Immediately notify Council by telephone of an escape of contaminant;
    (iii) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
    (iv) Report to Council in writing within one week on the cause of the escape of the contaminant and the steps taken or being taken to effectively control or prevent such escape.

15. The consent holder shall enter into a maintenance contract on an ongoing basis with a suitably qualified and experienced person to maintain the wastewater treatment system so that it works effectively at all times. At a minimum, all maintenance shall be in accordance with the recommendations of the Operation and Maintenance Manual prepared by the system supplier.

16. Vehicles shall be prevented from driving over, or parking on, the disposal area.

17. The wastewater disposal area shall, at all times, be planted with appropriate plant species and shall be adequately maintained so that plant coverage of the area is maximised.

18. In accordance with section 128 of the Resource Management Act 1991, the Far North District Council may serve notice on the consent holder of its intention to review those ongoing conditions of this consent relating to flooding or wastewater discharge flows, annually during the month of July. The review may be initiated for any one or more of the following purposes:

    (i) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a latter stage, or to deal with any such effects following assessment of the result of the Far North District Council of duly delegated Council Officer monitoring the state of the environment in the area.

(ii) To require the adoption of the best practicable option to remove or reduce any adverse effect on the environment.

(iii) To deal with any inadequacies or inconsistencies the Far North District Council or duly delegated Council Officer considers there to be, in the conditions of the consent, following the establishment of the activity the subject of this consent.

(iv) To deal with any material inaccuracies that may in future be found in the information made available with the application (notice may be served at anytime for this reason).

(v) The consent holder shall meet all reasonable costs of any such review.

19. Duration of Consent: This consent shall be valid for a period of 15 years from the date of issue.

Advice Notes for All Decisions

1. Archaeological sites are protected pursuant to the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence, pursuant to the Act, to modify, damage or destroy an archaeological site without an archaeological authority issued pursuant to that Act. Should any site be inadvertently uncovered, the procedure is that work should cease, with the Trust and local iwi consulted immediately. The New Zealand Police should also be consulted if the discovery includes koiwi (human remains). A copy of Heritage New Zealand's Archaeological Discovery Protocol (ADP) is attached for your information. This should be made available to all person(s) working on site.

2. Prior to any bulk earthworks commencing, the Consent Holder shall obtain the appropriate Earthworks Permits in accordance with the Far North District Council Earthworks Control Bylaw 2009. The plans and documents provided with any permit application will need to provide sufficient detail to show compliance with the permitted thresholds of the National Environmental Standard for Assessment and Managing Contaminants in Soil to Protect Human Health and relevant District Plan rules. The owner is to ensure for the duration of the earthworks that no bulk earthworks is to be stored or stockpiled in the NRC map 1% AEP flood hazard area.

3. Any additional impermeable surface coverage or stormwater disposal on lot 2 (i.e. construction of carpark) will need to comply with stormwater discharge consent 20031137801 issued by NRC.

4. Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011

   As part of this consent, the application included a report, provided under Clause 8(4) of the above regulations. The report is entitled Preliminary Site Investigation Report of 16 Klinac Lane, Waipapa [Haigh Workman reference 16 354], prepared by Haigh Workman Civil & Structural Engineers Ltd, signed by Catherine Johnson (prepared), Edward Collings (reviewed), John Papesch (approved), and dated February 2017. The report can be found within the Resource Consent application file.

6. Insofar as the discharge consent is concerned, a "suitably qualified and experienced person" is a person employed or trained by the manufacturer of

the wastewater treatment system installed, or someone who can provide evidence of satisfactory qualifications and/or experience in the type of wastewater treatment and disposal system installed.

7. A list of appropriate plants is included on the back cover of the Northland Regional Council booklet "Looking after your household sewage system.

Reasons for the Decision

1. The Council has determined (by way of an earlier report and resolution) that the adverse environmental effects associated with the proposed activity are no more than minor and that there are no affected persons or affected customary rights group or customary marine title group.

2. The proposed activity is considered to have adequately taken into account, and be consistent with, relevant statutory provisions.

Northland Regional Policy Statement
The operative Regional Policy Statement provides a broad direction and framework for managing and protecting Northland's natural and physical resources. It will influence the content of future regional and district plans. The provisions relevant but not limited to this application (including Policy 7.1.2 New subdivision and land use within 10-year and 100-year flood hazard areas and Policy 4.3 Region-wide water quality management) are considered to be adequately taken into account by the proposal.

The Northland Regional Water & Soil Plan
The Regional Water and Soil Plan (RWSP) controls the matters relating to the use of water, discharges of contaminants to the environment, certain uses of river and lake beds and restrictions on the land. Relevant objectives and policies include those in Section 6 (Maori Culture and Traditions), Section 7 (Water Quality), and Section 8 (Discharges), Section 11 (Use of River and Lake Beds and Development on Floodplains). The proposal is considered consistent with the purposes of the relevant sections of the RWSP. The site contains no known or recorded heritage, archaeological or cultural sites. The applicant has provided evidence that the waste water disposal system, will not adversely impact on nearby water bodies. In summary, the proposal is not contrary to the relevant objectives and policies of the RWSP.

The Operative Far North District Plan
The Industrial zone includes the existing areas of industrial activity and provides for expansion of industry in these areas. The Plan suggests that land zoned Industrial is can effectively manage industrial activities as they are grouped together, having a different standard of character, amenity and scale from that appropriate in other urban zones. Objective 7.8.3.1 and Policy 7.8.4.1 – 7.8.4.5 seek to facilitate a range of industrial activities whilst avoiding, remedying or mitigating any adverse effects that might result on existing activities in or on adjoining land within the District.

Objective 13.3.1, 13.3.2 and policy 13.4.1, 13.4.3 seeks to provide for subdivision of land that is consistent with the purpose of the zones in the District Plan, and ensure subdivision is carried out in a way that is appropriate and does not result in actual or potential adverse effects on the environment which would result directly from the subdivision. They also ensure subdivision

is carried out in a way that does not compromise the life-supporting capacity of the environment, including the acceleration of natural hazards.

Overall, the proposal is considered to be consistent with the objectives and policies of the Operative District Plan.

3. Other matters considered relevant in making this decision
No other matters were considered relevant.

4. Part 2 Matters
The Council has taken into account the purpose & principles outlined in sections 5, 6, 7 & 8 of the Act. It is considered that granting this resource consent application achieves the purpose of the Act.

Section 104D Consideration

Pursuant to s104D of the Resource Management Act 1991 if a proposal is a non-complying activity then it must pass at least one of the gateway tests of either s104D(1)(a) or s104D(1)(b) before an application can be assessed to make a decision under s104B of the Act. If the application does not pass either test of s104D then the application must be declined.

Assessment of Effects
Overall, the proposal is a non-complying activity as the subdivision component of this proposal cannot meet the permitted or discretionary standards for minimum lot size; and does not comply with the boundary adjustment provisions outlined in Rule 13.7.1 of the District Plan.

The potential effects resulting from the subdivision application has been carefully considered. The key effects resulting from the application have been identified and these include:
- On-site wastewater and effluent disposal; and
- Natural Hazards.

It is considered that the resulting effects on each of the above elements from the proposed subdivision will be not more than minor. This was derived from the Wastewater Assessment report prepared by Haigh Workman Civil and Structural Engineers ltd. The potential adverse effects of development occurring within areas affected by the 100 Year Flood Hazard Extent has been addressed within the proposed section 221 consent notice.

District Plan Objectives and Policies
The proposal is considered to be generally in accordance with the relevant objectives and policies of the District Plan.

The application is considered to have passed both gateway tests and can be considered for approval.

5. In summary it is considered that the activity is consistent with the sustainable management purpose of the RMA.

Approval
This resource consent has been prepared by Makarena Dalton Resource Planner and is granted under delegated authority (pursuant to section 34A of the Resource Management Act 1991) from the Far North District Council by:

Wayne Smith, Team Leader Resource Consents

30th May 2017
Date

Right of Objection
If you are dissatisfied with the decision or any part of it, you have the right (pursuant to section 357A of the Resource Management Act 1991) to object to the decision. The objection must be in writing, stating reasons for the objection and must be received by Council within 15 working days of the receipt of this decision.

Lapsing Of Consent

Subdivision and Landuse pursuant to the Far North District Plan
Pursuant to section 125 of the Resource Management Act 1991, this resource consent will lapse 5 years after the date of commencement of consent unless, before the consent lapses;

The consent is given effect to; or

An application is made to the Council to extend the period of consent, and the council decides to grant an extension after taking into account the statutory considerations, set out in section 125(1)(b) of the Resource Management Act 1991.

Discharge to Land pursuant to the Regional Water and Soil Plan
Pursuant to section 125 of the Resource Management Act 1991, this resource consent will lapse 15 years after the date of commencement of consent unless, before the consent lapses;

The consent is given effect to; or

An application is made to the Council to extend the period of consent, and the council decides to grant an extension after taking into account the statutory considerations, set out in section 125(1)(b) of the Resource Management Act 1991.

APPROVED PLAN

PLANNER M. Dall

RC. 2170377 Date 17/05/2017



Issue	Date	Revision
A	11/10/2016	FIRST ISSUE

DWG Site Location Plan

Scale 1:2,000@A3 (20 10 0 20 40 60 m)

Date 11/10/2016

HAIGH WORKMAN LTD
Civil & Structural Engineers

6 Fairway Drive
Kerikeri, BOI

T 09 407 8327
F 09 407 8378
E info@haighworkman.co.nz

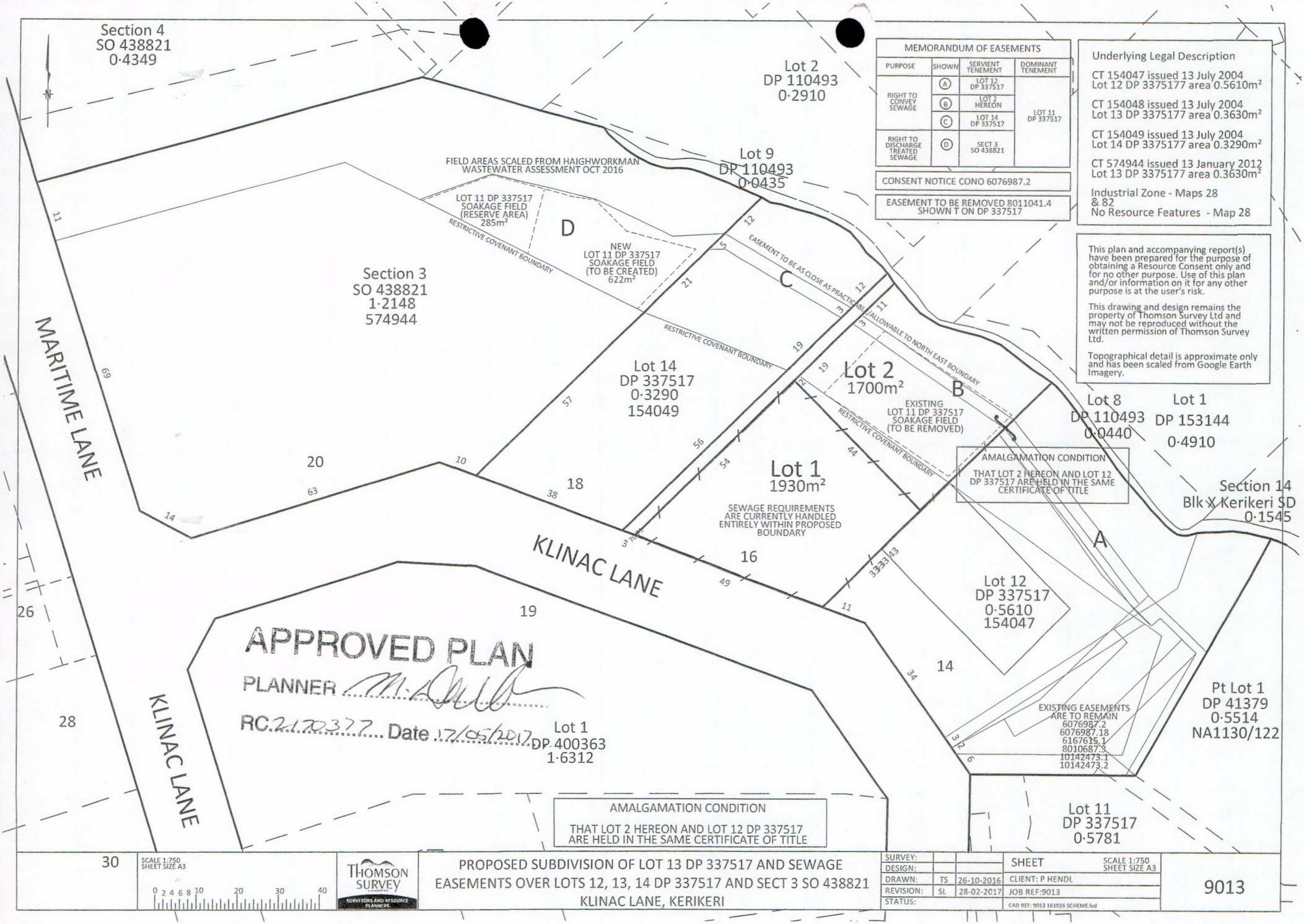
DIMENSIONS MUST NOT BE SCALED OR ASSUMED FROM THESE DRAWINGS

Project On-Site Wastewater System
20 Kiinac Lane, Waipapa

Client Waipapa Centre Ltd

DWG No. 01

Sheet No.


Section 4
SO 438821
0·4349
Lot 2
DP 110493
0·2910
MEMORANDUM OF EASEMENTS
PURPOSE | SHOWN | SERVIENT TENEMENT | DOMINANT TENEMENT
RIGHT TO CONVEY SEWAGE | A | LOT 12 DP 337517 | LOT 11 DP 337517
RIGHT TO CONVEY SEWAGE | B | LOT 2 HEREON | LOT 11 DP 337517
RIGHT TO CONVEY SEWAGE | C | LOT 14 DP 337517 | LOT 11 DP 337517
RIGHT TO DISCHARGE TREATED SEWAGE | D | SECT 3 SO 438821 | LOT 11 DP 337517
CONSENT NOTICE CONO 6076987.2
EASEMENT TO BE REMOVED 8011041.4 SHOWN T ON DP 337517
Underlying Legal Description
CT 154047 issued 13 July 2004
Lot 12 DP 3375177 area 0.5610m²
CT 154048 issued 13 July 2004
Lot 13 DP 3375177 area 0.3630m²
CT 154049 issued 13 July 2004
Lot 14 DP 3375177 area 0.3290m²
CT 574944 issued 13 January 2012
Lot 13 DP 3375177 area 0.3630m²
Industrial Zone - Maps 28 & 82
No Resource Features - Map 28
This plan and accompanying report(s) have been prepared for the purpose of obtaining a Resource Consent only and for no other purpose. Use of this plan and/or information on it for any other purpose is at the user's risk.
This drawing and design remains the property of Thomson Survey Ltd and may not be reproduced without the written permission of Thomson Survey Ltd.
Topographical detail is approximate only and has been scaled from Google Earth Imagery.
FIELD AREAS SCALED FROM HAIGHWORKMAN WASTEWATER ASSESSMENT OCT 2016
LOT 11 DP 337517 SOAKAGE FIELD (RESERVE AREA) 285m²
NEW LOT 11 DP 337517 SOAKAGE FIELD (TO BE CREATED) 622m²
RESTRICTIVE COVENANT BOUNDARY
EASEMENT TO BE AS CLOSE AS PRACTICABLE/ALLOWABLE TO NORTH EAST BOUNDARY
Lot 9
DP 110493
0·0435
Section 3
SO 438821
1·2148
574944
Lot 14
DP 337517
0·3290
154049
Lot 2
1700m²
EXISTING LOT 11 DP 337517 SOAKAGE FIELD (TO BE REMOVED)
Lot 1
1930m²
SEWAGE REQUIREMENTS ARE CURRENTLY HANDLED ENTIRELY WITHIN PROPOSED BOUNDARY
AMALGAMATION CONDITION
THAT LOT 2 HEREON AND LOT 12 DP 337517 ARE HELD IN THE SAME CERTIFICATE OF TITLE
Lot 8
DP 110493
0·0440
Lot 1
DP 153144
0·4910
Section 14
Blk X Kerikeri SD
0·1545
Lot 12
DP 337517
0·5610
154047
Pt Lot 1
DP 41379
0·5514
NA1130/122
EXISTING EASEMENTS ARE TO REMAIN
6076987.2
6076987.18
6167615.1
8010687.3
10142473.1
10142473.2
Lot 11
DP 337517
0·5781
MARITIME LANE
KLINAC LANE
KLINAC LANE
APPROVED PLAN
PLANNER
RC 2170377 Date 17/05/2017
Lot 1
DP 400363
1·6312
AMALGAMATION CONDITION
THAT LOT 2 HEREON AND LOT 12 DP 337517 ARE HELD IN THE SAME CERTIFICATE OF TITLE
SCALE 1:750
SHEET SIZE A3
0 2 4 6 8 10 20 30 40
THOMSON SURVEY
SURVEYORS AND RESOURCE PLANNERS
PROPOSED SUBDIVISION OF LOT 13 DP 337517 AND SEWAGE EASEMENTS OVER LOTS 12, 13, 14 DP 337517 AND SECT 3 SO 438821
KLINAC LANE, KERIKERI
SURVEY:
DESIGN:
DRAWN: TS 26-10-2016
REVISION: SL 28-02-2017
STATUS:
SHEET SCALE 1:750 SHEET SIZE A3
CLIENT: P HENDL
JOB REF:9013
CAD REF: 9013 161026 SCHEME.lcd
9013

Resource Consent

FILE: 42366
(01 and 02)
New

Document Date: 20.04.2021

Pursuant to the Resource Management Act 1991, the Northland Regional Council (hereinafter called "the council") does hereby grant a Resource Consent to:

WBC DEVELOPERS LTD

To undertake the following activities on Sec 3 SO 438821 (12 Klinac Lane, Waipapa and 20 Klinac Lane, Waipapa), at or about location co-ordinates 1683430E 6103485N:

Note: All location co-ordinates in this document refer to Geodetic Datum 2000, New Zealand Transverse Mercator Projection.

AUT.042366.01.01	**Discharge secondary treated wastewater to land.**
AUT.042366.02.01	**Discharge contaminants (odour) to air.**

Subject to the following conditions:

AUT.042366.01 – Discharge to Land:

1 The volume of wastewater discharged per day, being any 24 consecutive hours, shall not exceed 4.4 cubic metres.

2 As a minimum, all wastewater shall be treated and disposed of via a system that is of a similar design, size and location as that shown on the **attached** Ecogent plans titled:

(a) "*Proposed Onsite Wastewater Layout*"; Project: 12, 20 Klinac Lane, Waipapa, On-site Wastewater Treatment and Disposal; drawing Number: ECO1177-01; Revision A, Dated 03/03/21;

(b) "*Typical AES Disposal Bed Cross Sections*"; Project: 12, 20 Klinac Lane, Waipapa, On-site Wastewater Treatment and Disposal; Drawing number ECO1177-04; Revision A; Dated 03/03/21;

(c) "*Proposed AES Sand Bed Detail*" Project: 12, 20 Klinac Lane, Waipapa, On-site Wastewater Treatment and Disposal; Drawing number ECO1177-03; Revision C; Dated 09/04/21.

However, if there are any differences or apparent conflict between these documents and any conditions of this consent, then the conditions of consent shall prevail.

3 An audible and visual high wastewater level alarm system shall be installed and maintained within all wastewater pump chambers. In addition, there shall be at least 24 hours emergency wastewater storage capacity within the treatment system above the level at which the high wastewater level alarm is activated.

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4 All kitchen wastewater is to discharge to an appropriately sized grease trap prior to discharge to the central treatment plant.

5 The treated wastewater shall not be applied to land at an areal loading rate greater than 10 litres per square metre per day.

6 A meter that has a measurement error of ±5% or less shall be installed and maintained to measure all water entering the building. This measurement will be used as a proxy to measure the quantity of treated wastewater discharged to land.

7 The Consent Holder shall keep written records of the quantity of treated wastewater discharged to land each month. A copy of the written record for the previous year (1 July to 31 June) shall be forwarded to the council's assigned monitoring officer by the following 31 July or immediately on written request by the council.

8 Stormwater from all roofed and paved areas shall be diverted away from the wastewater treatment and disposal areas. In addition, stormwater from surrounding areas and groundwater shall be prevented from entering the treatment system, and stormwater from surrounding areas shall, as far as is practicable, be prevented from entering the disposal area.

9 The Consent Holder shall, at least two weeks prior to the installation of the wastewater treatment and disposal system commencing notify the council's assigned monitoring officer in writing of the proposed date that the wastewater treatment and disposal system is to be installed and the name of the proposed installer.

10 The installation of the treatment and disposal system shall be supervised by a suitably qualified and experienced person. The Consent Holder shall, within two weeks after the wastewater treatment and disposal system has been installed, submit to the council's assigned monitoring officer:

(a) A certificate of compliance or a written statement from the suitably qualified and experienced person. The certificate or statement shall provide sufficient details and information to enable the council's assigned monitoring officer to verify compliance with Conditions 2 to 8; and

(b) Final "as built" plans that show the siting of all components of the wastewater treatment and disposal system. For the purpose of this Condition, the Consent Holder shall ensure that the "as built" plans are drawn to scale and provide sufficient detail for a council monitoring officer to locate all features identified on the plans.

11 The wastewater disposal area shall, at all times, be planted with appropriate plant species and shall be adequately maintained so that plant coverage of the area is maximised.

12 A reserve disposal area that is equal to at least 30 percent of the design disposal area shall remain undeveloped for future use if required. For this condition, "undeveloped" is defined as not being covered by an impermeable surface or permanent structure.

13 There shall be no ponding of wastewater within, or surface runoff of any contaminants from, the wastewater treatment and disposal area as a result of the exercise of this consent.

14 The Consent Holder shall have a contract with a suitably qualified and experienced person to maintain the wastewater treatment and disposal system so that it works effectively at all times. A written record of all maintenance undertaken on the wastewater treatment and disposal system shall be kept. A copy of this record shall be forwarded immediately to the council's assigned monitoring officer on written request.

Advice Note: *For compliance purposes, a "suitably qualified and experienced person" is a person employed or trained by the manufacturer of the wastewater treatment system, or someone who can provide evidence of satisfactory qualifications and/or experience in maintaining the type of wastewater treatment and disposal system installed.*

AUT.042366.02 – Discharge to Air:

15 The operation of the wastewater treatment and disposal system shall not give rise to any discharge of contaminants to air at or beyond the legal boundary of Sec 3 SO 438821 that are deemed by a council monitoring officer to be noxious, dangerous, offensive, or objectionable.

General Conditions:

16 The Consent Holder shall notify the council in writing if the property is sold, within four weeks of the sale. This is to allow the council, if required, to initiate the transfer of these consents to the new owners.

17 The Consent Holder shall provide written details to the council's assigned monitoring officer of any proposed significant change to the maximum number of staff/customers in the shopping block or any new wastewater connection to the treatment and disposal system at least one month prior to any proposed change being made.

Advice Note: *If the proposed alteration may result in non-compliance with the conditions of these consents or adverse effects that are greater than those authorised by these consents, then either a change to the conditions under Section 127 of the Resource Management Act or new consents would need to be obtained.*

18 The Consent Holder shall, on becoming aware of any discharge associated with the Consent Holder's operations that is not authorised by these consents:

(a) Immediately take such action, or execute such work as may be necessary, to stop and/or contain the discharge; and

(b) Immediately notify the council by telephone of the discharge; and

(c) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the discharge; and

(d) Report to the council's Compliance Manager in writing within one week on the cause of the discharge and the steps taken, or being taken, to effectively control or prevent the discharge.

For telephone notification during the council's opening hours, the council's assigned monitoring officer for these consents shall be contacted. If that person cannot be spoken to directly, or it is outside of the council's opening hours, then the Environmental Hotline shall be contacted.

Advice Note: *The Environmental Hotline is a 24 hour, seven day a week, service that is free to call on 0800 504 639.*

19 These consents shall lapse on 31 October 2025 unless, before this date, the consent has been given effect to.

Advice Note: *An application can be made to the council in accordance with Section 125 of the Act to extend the period after which the consents lapse. Such an application must be made before the consents lapse.*

20 The council may, in accordance with Section 128 of the Resource Management Act 1991 (The Act) serve notice on the Consent Holder of its intention to review the conditions of these consents annually during the month of October. The review may be initiated for any one or more of the following purposes:

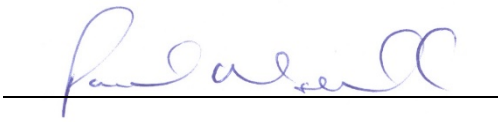
(a) To deal with any adverse effects on the environment that may arise from the exercise of these consents and which it is appropriate to deal with at a later stage; or

(b) To require the adoption of the best practicable option to remove or reduce any adverse effect on the environment.

The Consent Holder shall meet all reasonable costs of any such review.

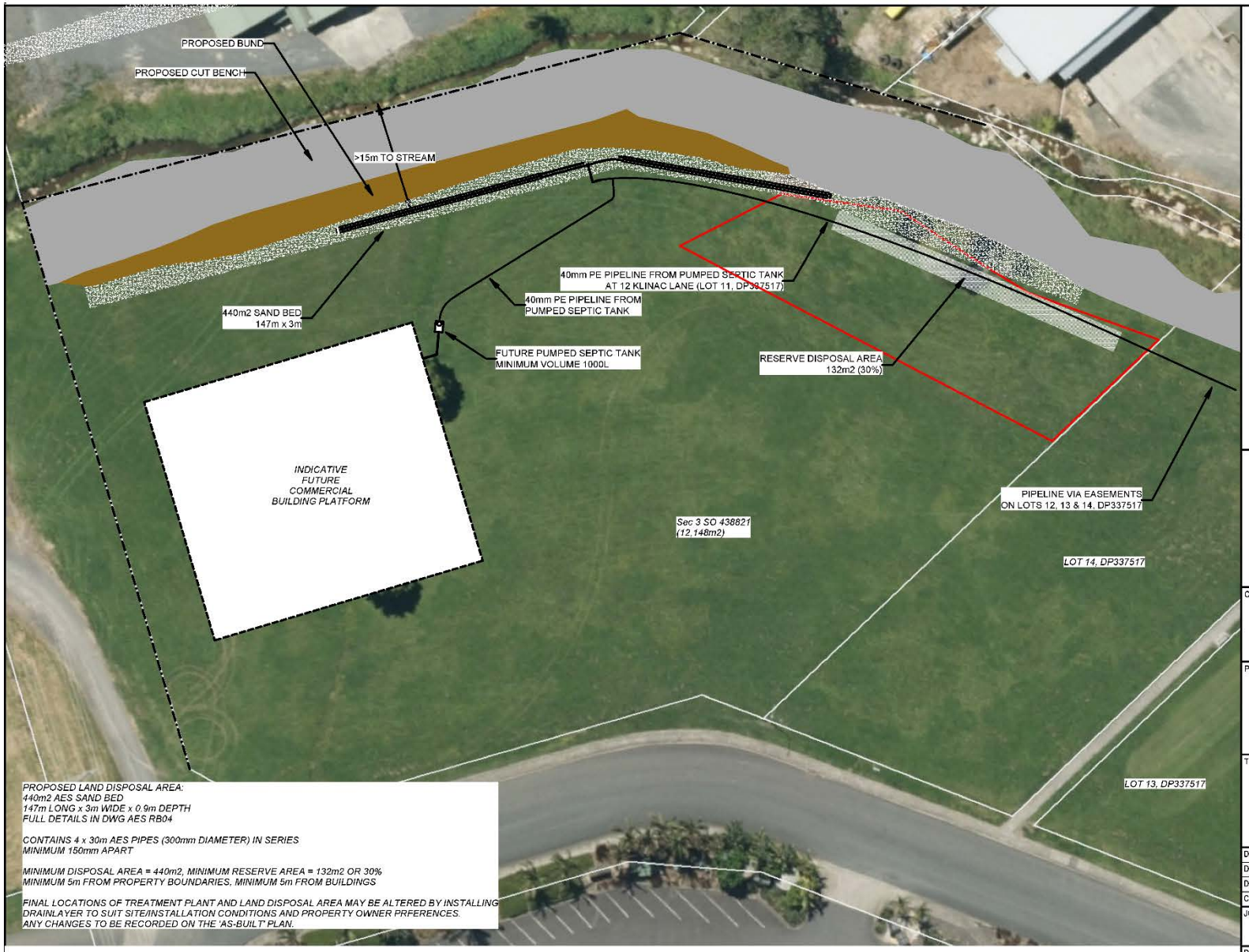
EXPIRY DATE: 31 MARCH 2036

These consents are granted this Twentieth day of April 2021 under delegated authority from the council by:



Paul Maxwell
Coastal and Works Consents Manager

Note: *The plans attached to this consent are reduced copies and therefore may not be to scale and may be difficult to read. In the event that compliance and/or enforcement action is to be based on compliance with the attached plans, it is important that the original plans, are sighted and used. Originals of the plans referred to are available for viewing at the council's Whangārei office.*



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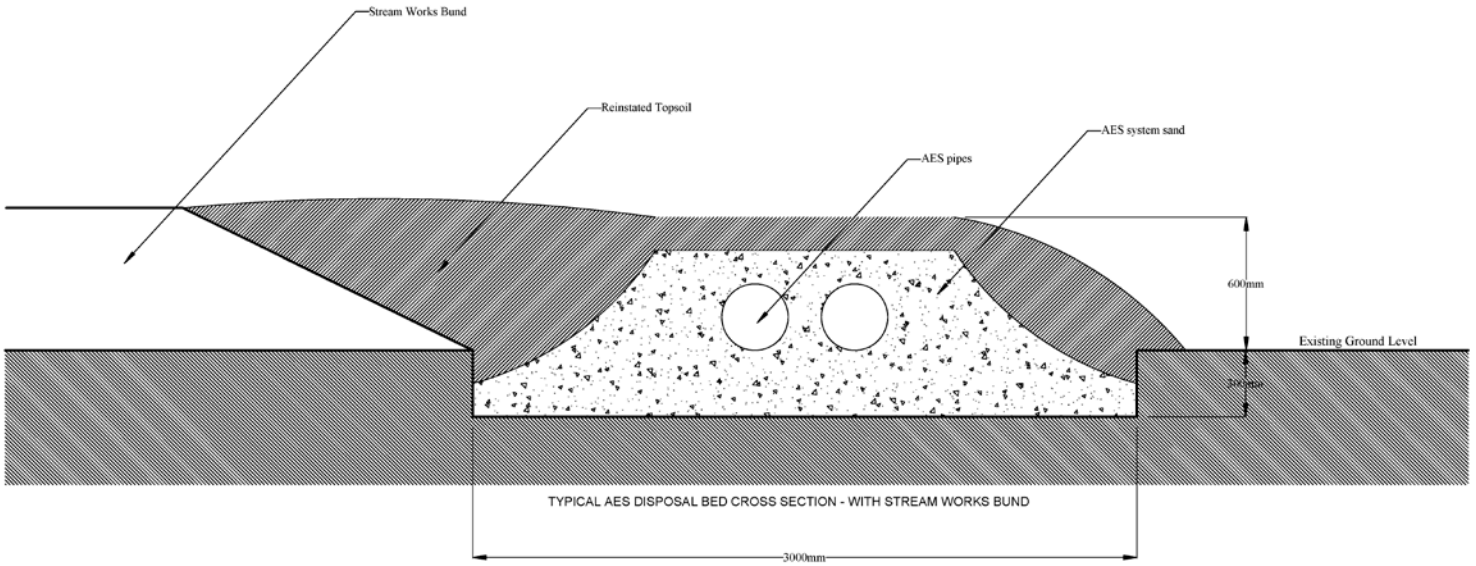
CLIENT
PETE HENDL

PROJECT
12, 20 KLINAC LANE
WAIPAPA
ON-SITE WASTEWATER
TREATMENT AND DISPOSAL

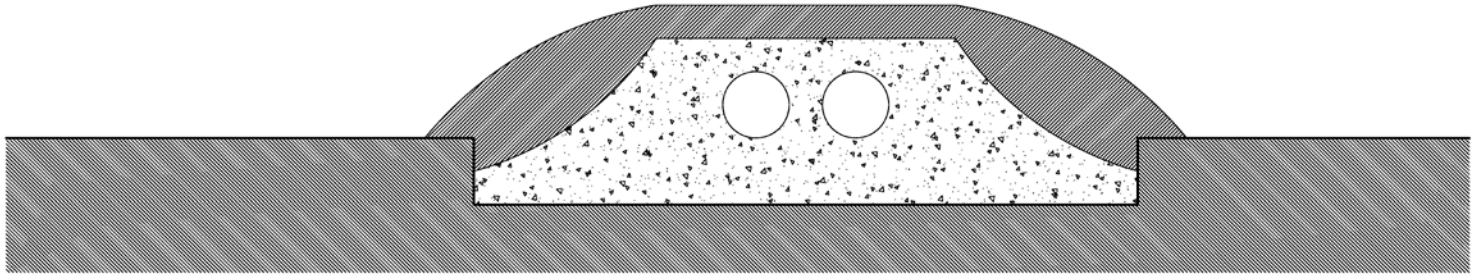
TITLE
PROPOSED ONSITE
WASTEWATER LAYOUT

DATE	03/03/21	
DRAWN	MR	
DESIGN	MR	
CHECKED	MB	

JOB No. ECO1177
SCALE. 1:500@A3
DWG No. ECO1177-01
REV. A



TYPICAL AES DISPOSAL BED CROSS SECTION - WITH STREAM WORKS BUND



TYPICAL AES DISPOSAL BED CROSS SECTION - NO STREAM WORKS BUND

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CLIENT
PETE HENDL

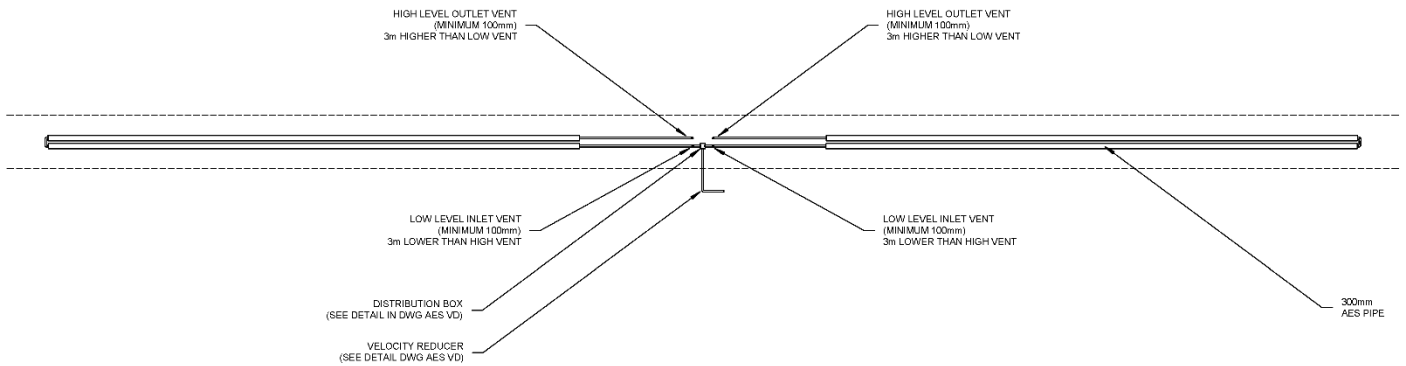
PROJECT
12, 20 KLINAC LANE
WAIPAPA
ON-SITE WASTEWATER
TREATMENT AND DISPOSAL

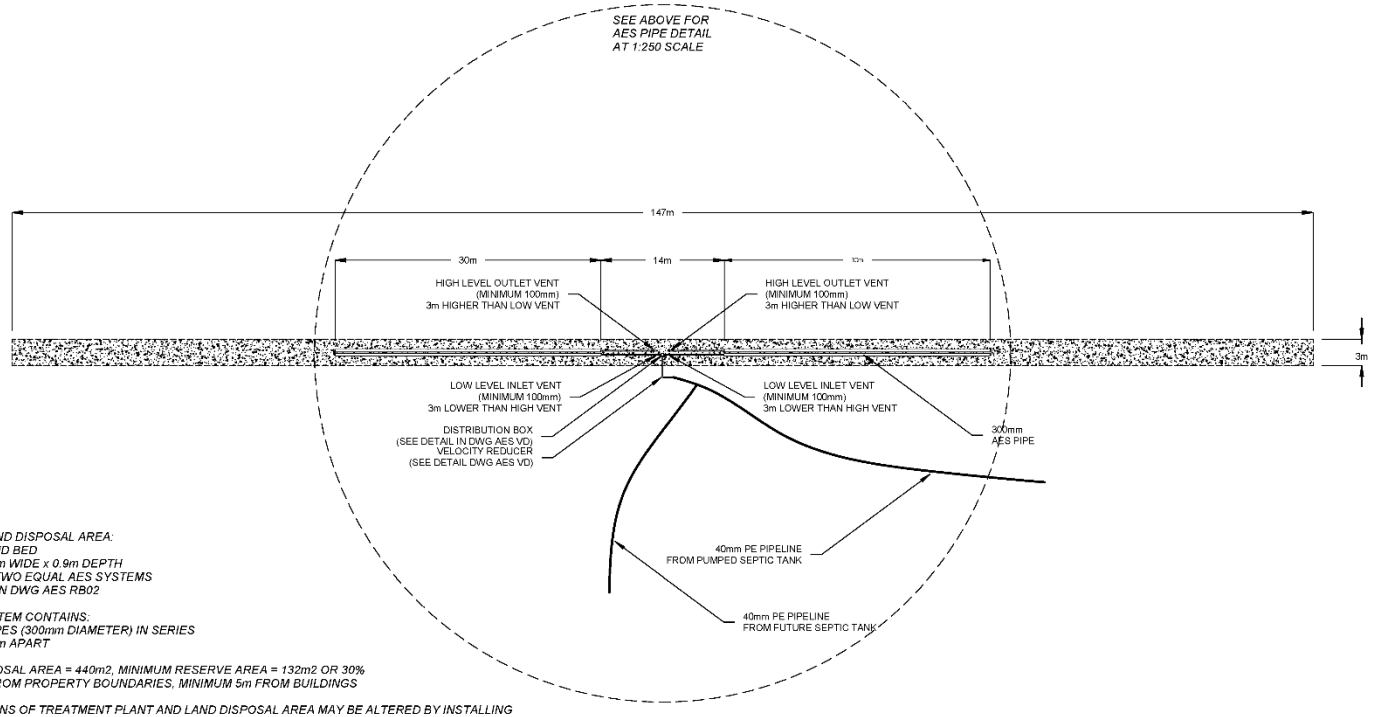
TITLE
TYPICAL AES
DISPOSAL BED
CROSS SECTIONS

DATE	03/03/21	
DRAWN	MR	
DESIGN	MR	
CHECKED	MB	

JOB No.	SCALE.
ECO1177	1:20@A3

DWG No.	REV.
ECO1177-04	A





PROPOSED LAND DISPOSAL AREA:
440m2 AES SAND BED
147m LONG x 3m WIDE x 0.9m DEPTH
CONSISTS OF TWO EQUAL AES SYSTEMS
FULL DETAILS IN DWG AES RB02

EACH AES SYSTEM CONTAINS:
2 x 30m AES PIPES (300mm DIAMETER) IN SERIES
MINIMUM 150mm APART

MINIMUM DISPOSAL AREA = 440m2, MINIMUM RESERVE AREA = 132m2 OR 30%
MINIMUM 5m FROM PROPERTY BOUNDARIES, MINIMUM 5m FROM BUILDINGS

FINAL LOCATIONS OF TREATMENT PLANT AND LAND DISPOSAL AREA MAY BE ALTERED BY INSTALLING DRAINLAYER TO SUIT SITE/INSTALLATION CONDITIONS AND PROPERTY OWNER PRFERENCES. ANY CHANGES TO BE RECORDED ON THE 'AS-BUILT' PLAN.

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CLIENT
PETE HENDL

PROJECT
12, 20 KLINAC LANE
WAIPAPA
ON-SITE WASTEWATER
TREATMENT AND DISPOSAL

TITLE
PROPOSED AES
SAND BED
DETAIL

DATE	09/04/21	
DRAWN	MR	
DESIGN	MR	
CHECKED	MB	
JOB No. ECO1177		SCALE. 1:500@A3
DWG No. ECO1177-03		REV. C

Resource Consent

FILE: 42366
(01 and 02)
Change

Document Date: 04.03.2025

Pursuant to the Resource Management Act 1991, the Northland Regional Council (hereinafter called "the council") does hereby grant a Resource Consent to:

WBC DEVELOPERS LTD

To undertake the following activities on Sec 3 SO 438821 (12 Klinac Lane, Waipapa and 20 Klinac Lane, Waipapa), at or about location co-ordinates 1683430E 6103485N:

Note: All location co-ordinates in this document refer to Geodetic Datum 2000, New Zealand Transverse Mercator Projection.

AUT.042366.01.02 **Discharge secondary treated wastewater to land.**

AUT.042366.02.01 **Discharge contaminants (odour) to air.**

Subject to the following conditions:

AUT.042366.01 – Discharge to Land:

1 The volume of wastewater discharged per day, being any 24 consecutive hours, shall not exceed 4.4 cubic metres.

2 As a minimum, all wastewater shall be treated and disposed of via a system that is of a similar design, size and location as that shown on the **attached** Ecogent plans titled:

(a) "*Proposed Onsite Wastewater Layout*"; Project: 12, 20 Klinac Lane, Waipapa, On-site Wastewater Treatment and Disposal; drawing Number: ECO1177-06; Revision A, Dated 21/11/24; and

(b) "*Proposed Conventional Bed Detail*"; Project: 12, 20 Klinac Lane, Waipapa, On-site Wastewater Treatment and Disposal; Drawing number ECO1177-07; Revision A; Dated 21/11/24.

However, if there are any differences or apparent conflict between these documents and any conditions of this consent, then the conditions of consent shall prevail.

3 An audible and visual high wastewater level alarm system shall be installed and maintained within all wastewater pump chambers. In addition, there shall be at least 24 hours emergency wastewater storage capacity within the treatment system above the level at which the high wastewater level alarm is activated.

4 All kitchen wastewater is to discharge to an appropriately sized grease trap prior to discharge to the central treatment plant.

Northland REGIONAL COUNCIL
Te Kaunihera ā rohe o Te Taitokerau

5 The treated wastewater shall not be applied to land at an areal loading rate greater than 10 litres per square metre per day.

6 A meter that has a measurement error of ±5% or less shall be installed and maintained to measure all water entering the building. This measurement will be used as a proxy to measure the quantity of treated wastewater discharged to land.

7 The Consent Holder shall keep written records of the quantity of treated wastewater discharged to land each month. A copy of the written record for the previous year (1 July to 31 June) shall be forwarded to the council's assigned monitoring officer by the following 31 July or immediately on written request by the council.

8 Stormwater from all roofed and paved areas shall be diverted away from the wastewater treatment and disposal areas. In addition, stormwater from surrounding areas and groundwater shall be prevented from entering the treatment system, and stormwater from surrounding areas shall, as far as is practicable, be prevented from entering the disposal area.

9 The Consent Holder shall, at least two weeks prior to the installation of the wastewater treatment and disposal system commencing notify the council's assigned monitoring officer in writing of the proposed date that the wastewater treatment and disposal system is to be installed and the name of the proposed installer.

10 The installation of the treatment and disposal system shall be supervised by a suitably qualified and experienced person. The Consent Holder shall, within two weeks after the wastewater treatment and disposal system has been installed, submit to the council's assigned monitoring officer:

(a) A certificate of compliance or a written statement from the suitably qualified and experienced person. The certificate or statement shall provide sufficient details and information to enable the council's assigned monitoring officer to verify compliance with Conditions 2 to 8; and

(b) Final "as built" plans that show the siting of all components of the wastewater treatment and disposal system. For the purpose of this Condition, the Consent Holder shall ensure that the "as built" plans are drawn to scale and provide sufficient detail for a council monitoring officer to locate all features identified on the plans.

11 The wastewater disposal area shall, at all times, be planted with appropriate plant species and shall be adequately maintained so that plant coverage of the area is maximised.

12 A reserve disposal area that is equal to at least 30 percent of the design disposal area shall remain undeveloped for future use if required. For this condition, "undeveloped" is defined as not being covered by an impermeable surface or permanent structure.

13 There shall be no ponding of wastewater within, or surface runoff of any contaminants from, the wastewater treatment and disposal area as a result of the exercise of this consent.

14 The Consent Holder shall have a contract with a suitably qualified and experienced person to maintain the wastewater treatment and disposal system so that it works effectively at all times. A written record of all maintenance undertaken on the wastewater treatment and disposal system shall be kept. A copy of this record shall be forwarded immediately to the council's assigned monitoring officer on written request.

Advice Note: *For compliance purposes, a "suitably qualified and experienced person" is a person employed or trained by the manufacturer of the wastewater treatment system, or someone who can provide evidence of satisfactory qualifications and/or experience in maintaining the type of wastewater treatment and disposal system installed.*

AUT.042366.02 – Discharge to Air:

15 The operation of the wastewater treatment and disposal system shall not give rise to any discharge of contaminants to air at or beyond the legal boundary of Sec 3 SO 438821 that are deemed by a council monitoring officer to be noxious, dangerous, offensive, or objectionable.

General Conditions:

16 The Consent Holder shall notify the council in writing if the property is sold, within four weeks of the sale. This is to allow the council, if required, to initiate the transfer of these consents to the new owners.

17 The Consent Holder shall provide written details to the council's assigned monitoring officer of any proposed significant change to the maximum number of staff/customers in the shopping block or any new wastewater connection to the treatment and disposal system at least one month prior to any proposed change being made.

Advice Note: *If the proposed alteration may result in non-compliance with the conditions of these consents or adverse effects that are greater than those authorised by these consents, then either a change to the conditions under Section 127 of the Resource Management Act or new consents would need to be obtained.*

18 The Consent Holder shall, on becoming aware of any discharge associated with the Consent Holder's operations that is not authorised by these consents:

(a) Immediately take such action, or execute such work as may be necessary, to stop and/or contain the discharge; and

(b) Immediately notify the council by telephone of the discharge; and

(c) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the discharge; and

(d) Report to the council's Compliance Manager in writing within one week on the cause of the discharge and the steps taken, or being taken, to effectively control or prevent the discharge.

For telephone notification during the council's opening hours, the council's assigned monitoring officer for these consents shall be contacted. If that person cannot be spoken to directly, or it is outside of the council's opening hours, then the Environmental Hotline shall be contacted.

Advice Note: *The Environmental Hotline is a 24 hour, seven day a week, service that is free to call on 0800 504 639.*

19 These consents shall lapse on 31 October 2025 unless, before this date, the consent has been given effect to.

Advice Note: *An application can be made to the council in accordance with Section 125 of the Act to extend the period after which the consents lapse. Such an application must be made before the consents lapse.*

20 The council may, in accordance with Section 128 of the Resource Management Act 1991 (The Act) serve notice on the Consent Holder of its intention to review the conditions of these consents annually during the month of October. The review may be initiated for any one or more of the following purposes:

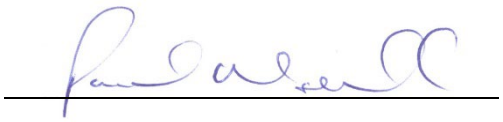
(a) To deal with any adverse effects on the environment that may arise from the exercise of these consents and which it is appropriate to deal with at a later stage; or

(b) To require the adoption of the best practicable option to remove or reduce any adverse effect on the environment.

The Consent Holder shall meet all reasonable costs of any such review.

EXPIRY DATE: **31 MARCH 2036**

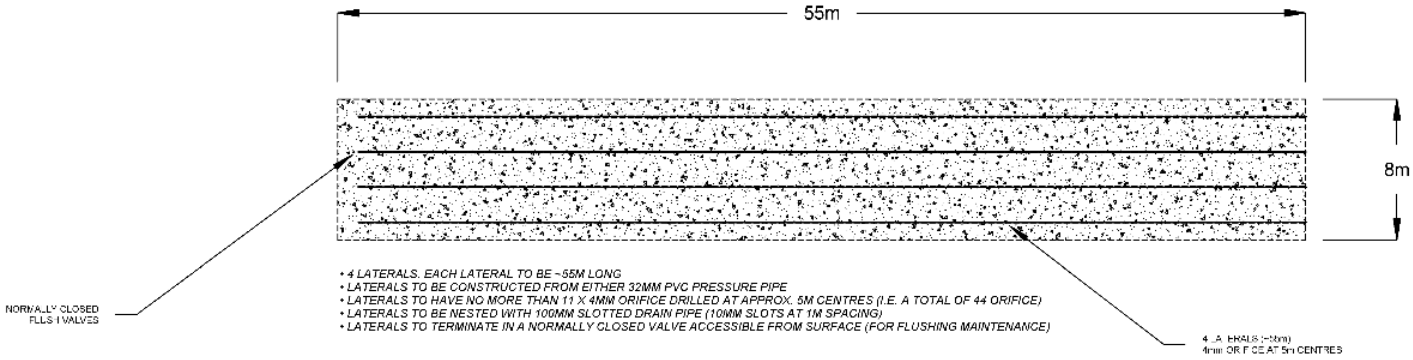
These changes to Condition 2 are granted this Fourth day of March 2025 under delegated authority from the council by:



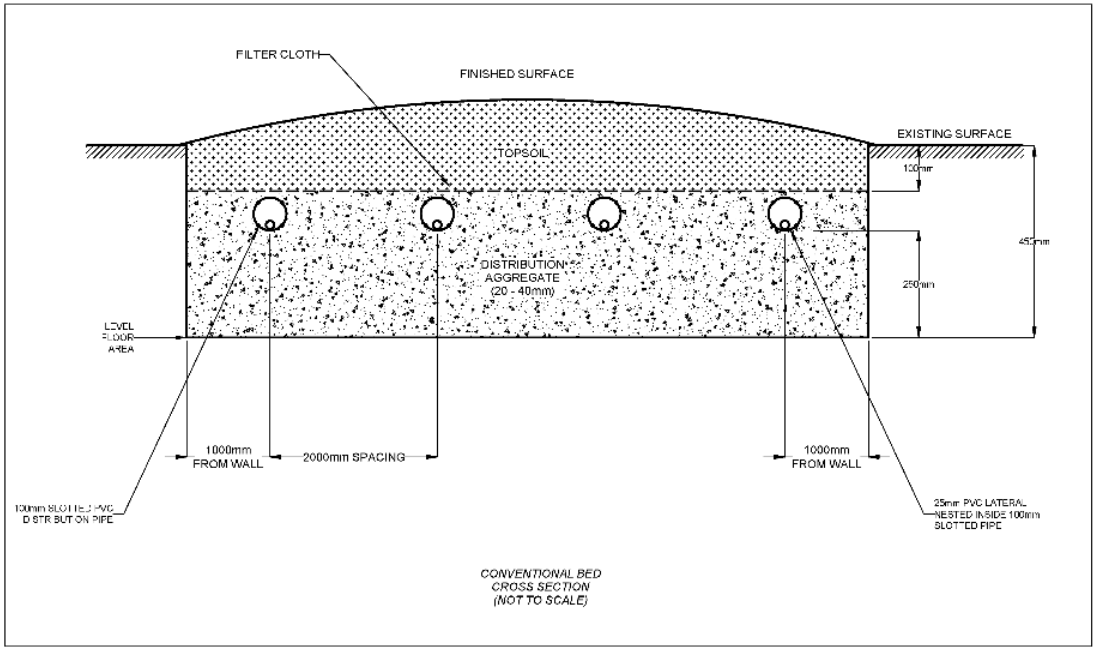
Paul Maxwell
Coastal and Works Consents Manager

Note: *The plans attached to this consent are reduced copies and therefore may not be to scale and may be difficult to read. In the event that compliance and/or enforcement action is to be based on compliance with the attached plans, it is important that the original plans, are sighted and used. Originals of the plans referred to are available for viewing at the council's Whangārei office.*


RESERVE DISPOSAL AREA
132m2 (30%)
e.g. 55m LONG x 2.4m WIDE
>15m TO STREAM
40mm PE PIPELINE FROM PUMP STATION AT 12 KLINAC LANE (LOT 11, DP337517)
EASEMENT BOUNDARY
ELOY OXYFIX C-90 CB28-38 AEROBIC WASTEWATER TREATMENT PLANT
CONVENTIONAL SOAKAGE BED
440m2 (SEE DETAIL ECO1177-07)
e.g. 55m LONG x 8m WIDE x 0.45m DEEP
PIPELINE VIA EASEMENTS ON LOTS 12, 13 & 14, DP337517
Sec 3 SO 438827
(12,148m2)
>5m TO BOUNDARY
LOT 14, DP337517
LOT 13, DP337517
PROPOSED LAND DISPOSAL AREA:
440m2 CONVENTIONAL SOAKAGE BED
55m LONG x 8m WIDE x 0.45m DEPTH
FULL DETAILS IN DWG ECO1177-07
MINIMUM DISPOSAL AREA = 440m2, MINIMUM RESERVE AREA = 132m2 OR 30%
MINIMUM 5m FROM PROPERTY BOUNDARIES, MINIMUM 5m FROM BUILDINGS
FINAL LOCATIONS OF TREATMENT PLANT AND LAND DISPOSAL AREA MAY BE ALTERED BY INSTALLING DRAINLAYER TO SUIT SITE/INSTALLATION CONDITIONS AND PROPERTY OWNER PRFERENCES.
ANY CHANGES TO BE RECORDED ON THE 'AS-BUILT' PLAN.
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CLIENT
PETE HENDL
PROJECT
12, 20 KLINAC LANE
WAIPAPA
ON-SITE WASTEWATER
TREATMENT AND DISPOSAL
TITLE
PROPOSED ONSITE
WASTEWATER LAYOUT
DATE 2/01/24
DRAWN MR
DESIGN MR
CHECKED MR
JOB No. ECO1177
SCALE. 1:500@A3
DWG No. ECO1177-06
REV. A



- *4 LATERALS. EACH LATERAL TO BE ~55M LONG*
- *LATERALS TO BE CONSTRUCTED FROM EITHER 32MM PVC PRESSURE PIPE*
- *LATERALS TO HAVE NO MORE THAN 11 X 4MM ORIFICE DRILLED AT APPROX. 5M CENTRES (I.E. A TOTAL OF 44 ORIFICE)*
- *LATERALS TO BE NESTED WITH 100MM SLOTTED DRAIN PIPE (10MM SLOTS AT 1M SPACING)*
- *LATERALS TO TERMINATE IN A NORMALLY CLOSED VALVE ACCESSIBLE FROM SURFACE (FOR FLUSHING MAINTENANCE)*



CONVENTIONAL BED
CROSS SECTION
(NOT TO SCALE)

PROPOSED LAND DISPOSAL AREA:
440m2 CONVENTIONAL SOAKAGE BED
55m LONG x 8m WIDE x 0.45m DEPTH

MINIMUM DISPOSAL AREA = 440m2. MINIMUM RESERVE AREA = 132m2 OR 30%
MINIMUM 5m FROM PROPERTY BOUNDARIES. MINIMUM 5m FROM BUILDINGS

FINAL LOCATIONS OF TREATMENT PLANT AND LAND DISPOSAL AREA MAY BE ALTERED BY INSTALLING DRAINLAYER TO SUIT SITE/INSTALLATION CONDITIONS AND PROPERTY OWNER PREFERENCES. ANY CHANGES TO BE RECORDED ON THE 'AS-BUILT' PLAN.

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CLIENT
PETE HENDL

PROJECT
12, 20 KLINAC LANE
WAIPAPA
ON-SITE WASTEWATER TREATMENT AND DISPOSAL

TITLE
PROPOSED CONVENTIONAL SOAKAGE BED DETAIL

DATE	2/01/24
DRAWN	MR
DESIGN	MR
CHECKED	MB
JOB No.	SCALE.
ECO177	1:250@A3
DWG No.	REV.
ECO177-07	A

DECISION ON COMBINED RESOURCE CONSENT APPLICATION

UNDER THE RESOURCE MANAGEMENT ACT 1991

Decision

Pursuant to section 34(1) and sections 104, 104B, 106 and Part 2 of the Resource Management Act 1991 (the Act), the Far North District Council **grants** land use and subdivision resource consent for a Discretionary Activity, subject to the conditions listed below, to:

Applicant: WBC Developers Limited

Council Reference: 2240105-RMACOM

Property Address: 20 Klinac Lane, Waipapa 0230

Legal Description: Sec 3 SO 438821 (RT 574944)

The activities to which this decision relates are listed below:

Activity 1:

To increase the size of the wastewater disposal area on site breaching the 30m waterbody setback under Rule 12.7.6.1.4 LAND USE ACTIVITIES INVOLVING DISCHARGES OF HUMAN SEWAGE EFFLUENT and 12.7.6.3 DISCRETIONARY ACTIVITIES

Activity 2:

Subdivision to create one additional lot of a compliant minimum lot size in breach of Rule 13.7 CONTROLLED (SUBDIVISION) ACTIVITIES

Subdivision and Land Use Conditions

Pursuant to sections 108 and 220 of the Act, this subdivision consent is granted subject to the following conditions:

1. The activity shall be carried out in accordance with the approved Scheme Plan "Lot 1 & 2 being a Proposed Subdivision of section 3 SO438821" by Donaldson's Surveyors Limited (Ref. No.: 8343, dated 22/06/2023), attached to this consent with Council's "Approved Stamp" affixed to it.

Survey plan approval (s223) conditions

2. The survey plan, submitted for approval pursuant to Section 223 of the Act shall show:

    a. All easements in the memorandum to be duly granted or reserved including Area G for the extended wastewater field.

3. Prior to the approval of the survey plan pursuant to Section 223 of the Act, the consent holder shall:

    a. Provide written confirmation from power and telecommunications utility service operators of their consent conditions in accordance with FNDC Engineering Standards Revised March 2009, District Plan requirements and any other requirements that apply at the time and show any necessary easements on the survey plan to the approval of the Subdivision Officer.

    b. Create easements over services and overland stormwater flow paths where such infrastructure is located on private property to the approval of Council's Resource Consent Engineer.

Section 224(c) compliance conditions

4. Prior to the issuing of a certificate pursuant to section 224(c) of the Act, the consent holder shall:

    a. Provide written confirmation from power & telecommunications utility service operators of their consent conditions for this development have been satisfied in accordance with the Engineering Standards, District Plan requirements and any other requirements that apply at the time to the approval of Council's Development Engineer.

    b. Provide to the Council written confirmation from a licensed cadastral surveyor that all services are contained within the easements provided.

    c. Be responsible for arranging for buried services to be located and marked prior to commencing works and is also responsible for the repair and reinstatement of any footpath, kerb, channel and underground services damaged as a result of any works on site.

    d. Upgrade the vehicle crossings to provide a double-width entrance to the lot boundary of Lot 1 and a single-width entrance to Lot 2, which complies with FNDC/S/1 and 2 of the FNDC Engineering Standards 2009 and NZS4404:2004.

    e. Provide evidence by way of a Producer Statement from a suitably qualified engineering professional, an independent qualified person, or written confirmation from Council's Development Engineer, that the works in accordance with condition 4 (d) have been completed.

5. Secure the conditions below by way of a Consent Notice issued under section 221 of the Act, to be registered against the titles of the affected allotment. The costs of preparing, checking and executing the Notice shall be met by the consent holder:

    a. In conjunction with the construction of any future building requiring a wastewater system on proposed Lots 1 and 2, the Lot owner shall obtain a Building Consent and install a wastewater treatment and effluent disposal system on the Lot. The system shall be designed by a Chartered Professional Engineer or registered drainlayer in accordance with ARC TP 58 requirements

and shall reference the recommendations of the Kerikeri Drainage Ltd Site Suitability Wastewater Report dated 17/08/2023 and submitted in support of the application. **[Lots 1 and 2]**

b. The wastewater system installation shall include an agreement with the system supplier or its authorised agent for the ongoing operation and maintenance of the wastewater treatment and the effluent disposal system. **[Lots 1 and 2]**

c. Following 12 months of operation of the wastewater treatment and effluent disposal system the lot owner shall provide certification to Council that the system is operating in accordance with its design criteria. **[Lot 1 and 2]**

d. In conjunction with the construction of any building requiring a potable water supply on proposed Lots 1 and 2, a water collection system with sufficient supply for firefighting purposes is to be provided by way of tanks or other approved means and are to be positioned so that it is safely accessible for this purpose within the Lot. These provisions will be in accordance with the New Zealand Fire Fighting Water Supply Code of Practice SNZ PAS 4509:2008. **[Lots 1 and 2]**

e. In conjunction with any future development on proposed Lots 1 and 2, the Lot owner shall submit a stormwater management report that is prepared by a Chartered Professional Engineer or suitably qualified person in accordance with the FNDC Engineering Standards for Council approval. Stormwater runoff from new buildings and impermeable surface areas on proposed Lots 1 and 2 shall be restricted to that of pre-development levels for the 10% and 1% AEP storm events plus an allowance for climate change. Overland/secondary flowpaths that can accommodate the 1% AEP storm event shall also be provided on the proposed Lots and are to be unobstructed by new buildings, other structures or landscaping. **[Lots 1 and 2]**

f. In conjunction with any future development on proposed Lots 1 and 2, the Lot owner shall submit a flood hazard report that is prepared by a Chartered Professional Engineer or suitably qualified person in accordance with the FNDC Engineering Standards for Council approval. **[Lots 1 and 2]**

g. The minimum finished floor level (FFL) of any building shall be 300mm above the Recurrence Level (RL) shown on the flooding plan prepared by Donaldsons reference 8343 dated 22/06/2023. **[Lots 1 and 2]**

h. The earth bund on the northern boundary of Lots 1 and 2 adjacent to Whiriwhiritoa Stream shall be maintained in perpetuity by the owners of the lots for flood protection purposes. **[Lots 1 and 2]**

Subdivision Advice Notes

Lapsing of Consent

1. *Pursuant to section 125 of the Act, this resource consent will lapse 5 years after the date of commencement of consent unless, before the consent lapses;*
   a) A survey plan is submitted to Council for approval under section 223 of the RMA before the lapse date, and that plan is deposited within three years of the date of approval of the survey plan in accordance with section 224(h) of the RMA; or

b) An application is made to the Council to extend the period of consent, and the council decides to grant an extension after taking into account the statutory considerations, set out in section 125(1)(b) of the Act.

General

2. *This consent has been granted on the basis of all the documents and information provided by the consent holder, demonstrating that the new lot(s) can be appropriately serviced (infrastructure and access).*

Land Use Advice Notes

Lapsing of Consent

1. *Pursuant to section 125 of the Act, this resource consent will lapse 5 years after the date of commencement of consent unless, before the consent lapses;*
   a) The consent is given effect to; or
   b) An application is made to the Council to extend the period of consent, and the council decides to grant an extension after taking into account the statutory considerations, set out in section 125(1)(b) of the Act.

General Advice Notes

Right of Objection

1. *If you are dissatisfied with the decision or any part of it, you have the right (pursuant to section 357A of the Act) to object to the decision. The objection must be in writing, stating reasons for the objection and must be received by Council within 15 working days of the receipt of this decision.*

Archaeological Sites

2. *Archaeological sites are protected pursuant to the Heritage New Zealand Pouhere Taonga Act 2014. It is an offence, pursuant to the Act, to modify, damage or destroy an archaeological site without an archaeological authority issued pursuant to that Act. Should any site be inadvertently uncovered, the procedure is that work should cease, with the Trust and local iwi consulted immediately. The New Zealand Police should also be consulted if the discovery includes koiwi (human remains). A copy of Heritage New Zealand's Archaeological Discovery Protocol (ADP) is attached for your information. This should be made available to all person(s) working on site.*

General Advice Notes

3. *During the assessment of your application it was noted that a private Land Covenant exists on your property. Council does not enforce private land covenants, and this does not affect Council approving your plans. However, you may wish to get independent legal advice, as despite having a resource consent from Council, the private land covenant can be enforced by those parties specified in the covenant.*

Reasons for the Decision

1. By way of an earlier report that is contained within the electronic file of this consent, it was determined that pursuant to sections 95A and 95B of the Act the proposed activity will not have, and is not likely to have, adverse effects on the environment that are more than minor, there are also no affected persons and no special circumstances

exist. Therefore, under delegated authority, it was determined that the application be processed without notification.

2. The application is for a Discretionary Activity resource consent, as such all matters of relevance can be considered in assessment of effects.

3. In regard to section 104(1)(a) of the Act the actual and potential effects of the proposal will be acceptable as:

    a) The subdivision is consistent with the industrial character and amenity of the receiving environment, which includes recent low density industrial development.
    b) Safe and practicable vehicle access is provided for subject to upgrade works to existing crossings.
    c) The lots are capable of supporting on-site services for water, stormwater and wastewater.
    d) The communal wastewater field will be protected from the flood hazard and will not result in discharges to the adjoining stream.
    e) The existing flood hazard can be managed to protect future development and mitigate downstream effects.
    f) The proposal will also result in positive effects, including the economic and social well-being of the applicant.

4. In regard to section 104(1)(ab) of the Act there are no offsetting or environmental compensation measures proposed or agreed to by the applicant for the activity.

5. In regard to section 104(1)(b) of the Act the following statutory documents are considered to be relevant to the application:
    a. National Environmental Standard for Assessing Contaminants in Soil to Protect Human Health (NESCS),
    b. National Policy Statement for Freshwater,
    c. National Environmental Standard for Freshwater,
    d. Northland Regional Policy Statement 2016,
    e. Operative Far North District Plan 2009,
    f. Proposed Far North District Plan 2022

    Operative Far North District Plan

    7.8 INDUSTRIAL ZONE

    7.8.3.1 To avoid, remedy or mitigate adverse effects of new industrial activities on existing activities in the Industrial zone, and on activities on adjoining land, and on the natural and physical resources of the District.

    7.8.4.2 That the range of activities provided for in the Industrial zone be limited only by the acceptability of the effects generated by the particular activity in relation to other activities in the zone.

    7.8.4.4 All activities should provide for a stormwater disposal system incorporating Low Impact Design principles, particularly for car park and landscaped areas.

    7.8.4.5 That stormwater disposal systems do not result in suspended solids, industrial by-products, oil, or other contaminated substance or waste entering the stormwater collection

system in concentrations that are likely to pose an immediate or long term hazard to human health or the environment

CHAPTER 12.4: NATURAL HAZARDS

12.4.3.2 To ensure that development does not induce natural hazards or exacerbate the effects of natural hazards.

12.4.4.1 That earthworks and the erection of structures not be undertaken in areas where there is a significant potential for natural hazards unless they can be carried out in such a way so as to avoid being adversely affected by the natural hazards, and can avoid exacerbating natural hazards.

12.7 LAKES, RIVERS, WETLANDS AND THE COASTLINE

12.7.3.5 To avoid the adverse effects from inappropriate use and development of the margins of lakes, rivers, indigenous wetlands and the coastline.

12.7.4.4 That adverse effects of activities on the surface of lakes and rivers in respect of noise, visual amenity of the water body, life supporting capacity of aquatic habitats, on-shore activities, the natural character of the water body or surrounding area, water quality and Maori cultural values, are avoided, remedied or mitigated.

13 SUBDIVISION

13.3.1 To provide for the subdivision of land in such a way as will be consistent with the purpose of the various zones in the Plan, and will promote the sustainable management of the natural and physical resources of the District, including airports and roads and the social, economic and cultural well being of people and communities.

13.3.2 To ensure that subdivision of land is appropriate and is carried out in a manner that does not compromise the life-supporting capacity of air, water, soil or ecosystems, and that any actual or potential adverse effects on the environment which result directly from subdivision, including reverse sensitivity effects and the creation or acceleration of natural hazards, are avoided, remedied or mitigated.

13.3.7 To ensure the relationship between Maori and their ancestral lands, water, sites, wahi tapu and other taonga is recognised and provided for.

13.3.8 To ensure that all new subdivision provides an electricity supply sufficient to meet the needs of the activities that will establish on the new lots created.

13.3.10 To ensure that the design of all new subdivision promotes efficient provision of infrastructure, including access to alternative transport options, communications and local services.

13.4.1 That the sizes, dimensions and distribution of allotments created through the subdivision process be determined with regard to the potential effects including cumulative effects, of the use of those allotments on:
(a) natural character, particularly of the coastal environment;
(b) ecological values;
(c) landscape values;
(d) amenity values;
(e) cultural values;
(f) heritage values; and
(g) existing land uses.

13.4.5 That access to, and servicing of, the new allotments be provided for in such a way as will avoid, remedy or mitigate any adverse effects on neighbouring property, public roads (including

State Highways), and the natural and physical resources of the site caused by silt runoff, traffic, excavation and filling and removal of vegetation.

13.4.11 That subdivision recognises and provides for the relationship of Maori and their culture and traditions, with their ancestral lands, water, sites, waahi tapu and other taonga and shall take into account the principles of the Treaty of Waitangi.

Proposed Far North District Plan

Subdivision

SUB-O1

Subdivision results in the efficient use of land, which:

a. *achieves the objectives of each relevant zone, overlays and district wide provisions;*
b. *contributes to the local character and sense of place;*
c. *avoids reverse sensitivity issues that would prevent or adversely affect activities already established on land from continuing to operate;*
d. *avoids land use patterns which would prevent land from achieving the objectives and policies of the zone in which it is located;*
e. *does not increase risk from natural hazards or risks are mitigates and existing risks reduced; and*
f. *manages adverse effects on the environment.*

SUB-P3

Provide for subdivision where it results in allotments that:

a. *are consistent with the purpose, characteristics and qualities of the zone;*
b. *comply with the minimum allotment sizes for each zone;*
c. *have an adequate size and appropriate shape to contain a building platform; and*
d. *have legal and physical access.*

SUB-P4

Manage subdivision of land as detailed in the district wide, natural environment values, historical an cultural values and hazard and risks sections of the plan

SUB-P9

Avoid subdivision rural lifestyle subdivision in the Rural Production zone and Rural residential subdivision in the Rural Lifestyle zone unless the development achieves the environmental outcomes required in the management plan subdivision rule.

SUB-P11

Manage subdivision to address the effects of the activity requiring resource consent including (but not limited to) consideration of the following matters where relevant to the application:

a. *consistency with the scale, density, design and character of the environment and purpose of the zone;*
b. *the location, scale and design of buildings and structures;*
c. *the adequacy and capacity of available or programmed development infrastructure to accommodate the proposed activity; or the capacity of the site to cater for on-site infrastructure associated with the proposed activity;*
d. *managing natural hazards;*

e. *Any adverse effects on areas with historic heritage and cultural values, natural features and landscapes, natural character or indigenous biodiversity values; and*
f. *any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.*

Light Industrial

LIZ-O3

Enable land use and subdivision in the Light Industrial zone where there is adequacy and capacity of available or programmed development infrastructure to support it.

LIZ-O4

The adverse environmental effects generated by light industrial activities are managed, in particular at zone boundaries.

LIZ-P2

Require all subdivision in the Light Industrial zone to provide the following reticulated services to the boundary of each lot:

a. *telecommunications:*

i. *fibre where it is available;*

ii. *copper where fibre is not available;*

iii. *copper where the area is identified for future fibre deployment.*

b. *local electricity distribution network; and*

c. *wastewater, potable water supply and stormwater where it is available.*

LIZ-P6

Manage land use and subdivision to address the effects of the activity requiring resource consent, including (but not limited to) consideration of the following matters where relevant to the application:

a. *consistency with the scale, density, design and character of the light industrial environment and purpose of the zone;*

b. *the location, scale and design of buildings or structures, outdoor storage areas, parking and internal roading;*

c. *for non-industrial activities:*

i. *scale and compatibility with industrial activities;*

ii. *potential reverse sensitivity effects on industrial activities.*

d. *at zone interfaces:*

i. *any setbacks, fencing, screening or landscaping required to address potential conflicts;*

ii. *any adverse effects on the character and amenity of adjacent zones.*

e. *the adequacy and capacity of available or programmed development infrastructure to accommodate the proposed activity; including:*

i. *opportunities for low impact design principles;*

ii. *management of three waters infrastructure and trade waste such as industrial by-products.*

iii. *managing natural hazards;*

iv. *the adequacy of roading infrastructure to service the proposed activity;*

v. *any adverse effects on historic heritage and cultural values, natural features and landscapes or indigenous biodiversity; and*

vi. *any historical, spiritual, or cultural association held by tangata whenua, with regard to the matters set out in Policy TW-P6.*

Natural Hazards:

NH-O2

Land use and subdivision does not increase the risk from natural hazards or risks are mitigated, and existing risks are reduced where there are practicable opportunities to do so.

NH-P2

Manage land use and subdivision so that natural hazard risk is not increased or is mitigated, giving consideration to the following:

a. *the nature, frequency and scale of the natural hazard;*
b. *not increasing natural hazard risk to other people, property, infrastructure and the environment beyond the site;*
c. *the location of building platforms and vehicle access;*
d. *the use of the site, including by vulnerable activities;*
e. *the location and types of buildings or structures, their design to mitigate the effects and risks of natural hazards, and the ability to adapt to long term changes in natural hazards;*
f. *earthworks, including excavation and fill;*
g. *location and design of infrastructure;*
h. *activities that involve the use and storage of hazardous substances;*
i. *aligning with emergency management approaches and requirements;*
j. *whether mitigation results in transference of natural hazard risk to other locations or exacerbates the natural hazard; and*
k. *reduction of risk relating to existing activities.*

District Plan Assessment

The proposed subdivision meets the controlled activity standard for lot size minimum and will enable low density industrial activities consistent with the character of the receiving environment. Visual effects of future development can be adequately managed by bulk and location standards.

Compliant vehicle access is provided for subject to upgrade works, and on-site servicing for water, stormwater and wastewater can be provided. Wastewater field expansion will not adversely affect the receiving environment of the adjoining stream due to existing bunding.

The site is subject to flood hazards and future development should be managed so as not to exacerbate the hazard. The existing bund provides some protection from the flood hazard.

For this resource consent application the relevant provisions of both an operative and any proposed plan must be considered. Weighting is relevant if different outcomes arise from assessments of objectives and policies under both the operative and proposed plans.

As the outcomes sought are the same under the operative and the proposed plan frameworks, no weighting is necessary.

6. In regard to section 104(1)(c) of the Act there are no other matters relevant to the application.

7. In terms of s106 of the RMA the proposal is not considered to give rise to a significant risk from natural hazards subject to conditions on future development, and sufficient provision has been made for legal and physical access to the proposed allotments. Accordingly, Council is able to grant this subdivision consent subject to the conditions above.

8. Based on the assessment above the activity will be consistent with Part 2 of the Act.

   The activity will avoid, remedy or mitigate any potential adverse effects on the environment while providing for the sustainable management of natural and physical resources and is therefore in keeping with the Purpose and Principles of the Act. There are no matters under section 6 that are relevant to the application. The proposal is an efficient use and development of the site that will maintain existing amenity values without compromising the quality of the environment. The activity is not considered to raise any issues in regard to Te Tiriti o Waitangi.

9. Overall, for the reasons above it is appropriate for consent to be granted subject to the imposed conditions.

Approval

This resource consent has been prepared by Katrina Roos, Associate Principal Planner, Boffa Miskell. I have reviewed this and the associated information (including the application and electronic file material) and for the reasons and subject to the conditions above, and under delegated authority, grant this resource consent.



Name: William (Bill) Smith Date: 16 October 2023

Title: Independent Hearings Commissioner

Appendix E

On-site Wastewater Disposal Site Evaluation Investigation Checklist

On-site Wastewater Disposal Site Evaluation Investigation Checklist

PART A: Contact Details

1. Applicant Details:

Applicant Name	WBC DEVELOPERS LTD	
Company Name		

	First Name(s)	Surname
Property Owner Name(s)	Peter	Hendl
Nature of Applicant*	**Owners**	

(i.e. Owner, Lessee, Prospective Purchaser, Developer)*

2. Consultant/Site Evaluator Details:

Consultant/Agent Name	Ecogent Limited			
Site Evaluator Name	Matt Riddell			
Postal Address	PO Box 55144			
	Eastridge			
	Auckland			
Phone Number	Business	021314230	Private	
	Mobile	021314230	Fax	
Name of Contact Person	Matt Riddell			
Email Address	matt@ecogent.co.nz			

3. Are there any previous existing discharge consents relating to this proposal or other waste discharge/disposal on the site?

Yes	✓	No		(Please tick)

If yes, give Reference Number(s) and Description.

AUT.042366.01.02 - Discharge secondary treated wastewater to land

4. List any other consents in relation to this proposal site and indicate whether or not they have been applied for or granted.
If so, specify Applicant Details and Consent No.:
(e.g. Land Use, Water Take, Subdivision, Earthworks Stormwater Consents)

Original Building Consent – circa 2006
Pending COA application for the 2024 onsite wastewater upgrade - COA-2027-4/0

PART B: Property Details

1. Property for which this application relates:

Physical Address of Property	20 Klinac Road, Waipapa
Territorial Local Authority	Far North District Council
Regional Council	Northland Regional Council
Legal Status of Activity	Permitted: Controlled: Discretionary: ✓
Relevant Regional Rule(s) [Note 1]	Northland Regional Plan C.6.1.5
Total Property Area (m^2)	12,148m^2
Map Grid Reference of Property [Note 2]	1683520mE, 6103450mN

Notes:

1. *In the Auckland Region, the relevant Permitted Activity criteria is as specified in the ARC Air Land and Water Plan (ARC: ALWP) Rule 5.5.24 (refer Appendix C TP58), and until this Plan comes into force the PA criteria is specified in the ARC Transitional Regional Plan for "On-site Disposal of Domestic Wastewater".*
2. *NZMS 260 series, scale 1:50,000*

2. Legal description of land (as shown on Certificate of Title):

Lot No.		DP No.		CT No.	**574944**
Other (specify)	**Section 3 Survey Office Plan 438821**				

Please ensure copy of Certificate of Title is attached.

PART C: Site Assessment – Surface Evaluation

(Refer TP58 – Sn 5.1 General Purpose of site Evaluation and Sn 5.2.2(a) Site Surface Evaluation)
Note: Underlined terms defined in Table 1, attached

1. Has a <u>Desk Study</u> been undertaken for this property?

Yes	✓	No		(Please tick)

If yes, please specify the findings of the <u>Desk Study</u>, and if not please specify why this was not considered necessary.

Supporting reports & discharge consent provided previously

2. Has a <u>Slope Stability</u> Assessment been carried out on the property?

Yes		No	✓	(Please tick)

If no, why not?

Flat site with no evidence of land instability

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If yes, please give details of report (and if possible, please attach report):

Author	
Company/Agency	
Date of Report	
Brief Description of Report:	

3. Site Characteristics (See Table 1 attached):

Provide descriptive details below:

Performance of Adjacent Systems:
To our knowledge local wastewater systems of the same type that have been designed, installed
correctly are performing well.
Estimated Rainfall and Seasonal Variation:
1500mm~1800mm/year
Data from Kerikeri airport.
Vegetation Cover:
Grass
Slope Shape:
Flat
Slope Angle:
<5°
Surface Water Drainage Characteristics:
>15m to nearest surface identified on GIS
Flooding Potential:
Land disposal outside the 1:10 year flood hazard zone but within the 1:50 and 1:100 year flood
hazard zone shown on NRC GIS
If yes, specify relevant flood levels on appended site plan, i.e. one in 5 year and/or 20 year and/or 100 year return period flood level, relative to disposal area.
Surface Water Separation:
>15m to nearest overland flow path & surface water
Site Clearances (Provide general description here and specific dimensions in part 6 below and in Site Plan):
Complies with TP58 recommendations - refer supplied site plan for separation distances
Site Characteristics:

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4. Site Geology of the subject property.

Northland Allochthon

Geological Map Reference Number	

5. What Aspect(s) does the proposed disposal system face (please tick)?

North	
North-West	
North-East	✓
East	

West	
South-West	
South-East	
South	

6. Site clearances, which should also be shown on the site plan:

Separation Distance from	Treatment Separation Distance (m)	Disposal Field Separation Distance (m)
Boundaries	**>1.5m**	**>1.5m**
Surface Water	**>15m**	**>15m**
Groundwater	**>3m**	**>3m**
Stands of Trees/Shrubs	**N/A**	**N/A**
Wells, water bores	**N/Am**	**N/A**
Embankments/retaining walls	**N/A**	**N/A**
Buildings	**>3m**	**>3m**
Other (specify)		

PART D: Site Assessment – Subsoil Investigation

(Refer TP58 – Sn 5.1 General Purpose of Site Evaluation, Sn 5.2.2(b) Site Surface Evaluation and Sn5.3 Subsurface Investigations)
Note: Underlined terms defined in Table 2, attached

1. Please identify the soil profile determination method:

Test Pit		Depth		No. of Test Pits	
Bore Hole	✓	Depth 1.2m		No. of Bore Holes	3
Other (specify)					
Soil Report Attached?		Yes		No	✓ (Please Tick)

2. Was fill material intercepted during the subsoil investigation?

Yes		No	✓	(Please tick)

If yes, please specify the effect of the fill on wastewater disposal.

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3. Has percolation testing been carried out?

Yes	✓	No		(Please tick)

If yes, please specify the method.

Percolation testing of the land disposal area carried out by Duffill Watts King in 2005					
Test Report Attached? (Please tick)		Yes		No	✓

4. Are surface water interception/diversion drains required?

Yes		No	✓	(Please tick)

If yes, please show on site plan

5. Please state the depth of the seasonal water table:

Winter	>1(m) estimated			
Summer	>1(m)			
Please indicative whether measured	✓	Or estimated		(Please tick)

6. Are there any potential <u>short circuit paths?</u>

Yes		No	✓	(Please tick)

If the answer is yes, please explain how these have been addressed.

7. Based on results of subsoil investigation above please indicate the disposal field soil category.
(Refer TP58 table 5.1):

Is Topsoil Present? Yes	If so, Topsoil Depth?	0.05(m)

Soil Category	Description	Drainage	Tick one
1	Gravel, coarse sand	Rapid draining	
2	Coarse to medium sand	Free draining	
3	Medium-fine & loamy sand	Good drainage	
4	Sandy loam, loam and silt loam	Moderate drainage	
5	Sandy clay-loam, clay loam & silty clay-loam	Moderate to slow drainage	✓
6	Sandy clay, non-swelling clay & silty clay	Slow draining	
7	Swelling clay, grey clay, hardpan	Poorly or non-draining	

Reasons for placing is stated category.

Local knowledge & subsoil observations.
Based on soil descriptions in TP58 (3rd Edition)

PART E: Discharge Details

1. Water supply source for the property (please tick):

Rainwater (roof collection)	
Bore/well	
Public supply	✓

2. **Calculate the maximum daily volume of wastewater to be discharged, unless accurate water meter readings are available *(Refer TP58 Table 6.1 and 6.2):***

Number of Tenancies	12 (9 existing, 3 future)	
Design Occupancy	4 staff per existing retail unit	7 units x 4 = 28 staff
Per capita Wastewater Production	50	(Litres per staff per day)
Existing Retail units	1400	(Litres per day)
Lunch bar	50 patrons x 15 = 750	(Litres per day)
Café	60 patrons x 25 = 1500	(Litres per day)
3 future retail units	15 staff x 50 = 750	3 units x 5 = 15 staff
Total Daily Wastewater Production	4400	(Litres per day)
Total Measured Daily Wastewater	3650	(Litres per day)

3. Do you propose to install:

a) Full Water Conservation Devices?	Yes		No	✓	(Please tick)
b) Water Recycling – what %?	%		No	✓	(Please tick)

If you have answered yes, please provide additional information including the estimated reduction in water usage:

4. Is Daily Wastewater Discharge Volume more than 2000 litres:

Yes	✓	(Please tick)
No		(Please tick)

Note if the answer to the above is yes an ARC wastewater discharge permit will be required.

5. Gross Lot Area to Discharge Ratio:

Gross Lot Area	**~12,148**	**m^2**
Total Daily Wastewater Production	**4400**	**(Litres per day) (from above)**
Lot Area to Discharge Ratio	**>2.7**	

~~**6. Does this Proposal comply with the Auckland Regional Council Gross Lot Area to Discharge Ratio of greater than 1.5 ?**~~

~~Yes~~		~~No~~		~~(Please tick)~~

~~**7. Does this proposal comply with the Auckland Regional Council Gross Lot Area to Discharge Ratio of greater than 3.?**~~

Yes		No		(Please tick)

8. Is an Auckland Regional Council Discharge Consent required?

Yes		No		(Please tick)

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PART F: Primary Treatment *(Refer TP58 Section 7.2)*

1. Please indicate below the no. and capacity (litres) of all septic tanks including type (single/dual chamber grease traps) to be installed or currently existing:

Number of Tanks	Type of Tank	Capacity of Tank (Litres)
	Total Capacity	

2. Is a Septic Tank Outlet Filter to be installed?

Yes		No		(Please tick)

If yes, please state the type.

PART G: Secondary and Tertiary Treatment

(Refer TP58 Section 7.3, 7.4, 7.5 and 7.6)

1. Please indicate the type of additional treatment, if any, proposed to be installed in the system (please tick):

Secondary Treatment			
Home aeration plant			
Commercial aeration plant	✓		
Intermediate sand filter			
Recirculating sand filter			
Recirculating textile filter			
Clarification tank			
Tertiary Treatment			
Ultraviolet disinfection			
Chlorination			
Other		Specify	**Eloy Oxyfix C-90 aerobic WWTP**

E

PART H: Land Disposal Method *(Refer TP58 Section 8)*

1. Please indicate the proposed loading method (please tick):

Gravity	
Dosing Siphon	
Pump	✓

2. Is a high water level alarm being installed in pump chambers?

Yes	✓		No	(Please tick)

3. If a pump is being used, please provide the following information:

Total Design Head	~16	(m)
Pump Chamber Volume	5000	(Litres)
Emergency Storage Volume	5000	(Litres)

4. Please identify the type(s) of land disposal method proposed for this site (please tick). (*Refer TP58 Sections 9 and 10):*

Surface Dripper Irrigation		
Sub-surface Dripper Irrigation		
Standard Trench		
Deep Trench		
Mound		
Evapo-transpiration Beds		
Other (Please Specify)	✓	**Conventional Soakage Bed**

5. Please identify the loading rate you propose for the option selected in Part H, Section 4 above stating the reasons for selecting this loading rate:

Loading Rate		**10**	**(Litres/m^2/day)**
Disposal Area	Basal		**(m^2)**
	Areal	**440**	**(m^2)**

Explanation *(Refer TP58 Sections 9 and 10)*

Daily flow / loading rate 4400 / 10 = 440m^2

6. What is the available reserve wastewater disposal area? *(Refer TP58 Table 5.3)*

Reserve Disposal Area (m^2)	132
Percentage of Primary Disposal Area (%)	30

7. Please provide a detailed description of the design and dimensions of the disposal field and attach a detailed plan of the field relative to the property site:

Description and Dimensions of Disposal Field:

440m2 soakage bed,
e.g. 8mW x 55mL with four distribution laterals at 2m spacings terminating in a flush valve

Plan Attached?	Yes	✓		No		(Please tick)

If not, explain why not.

PART I: Maintenance & Management *(Refer TP58 Section 12.2)*

1. Has a maintenance agreement been made with the treatment and disposal system suppliers?

Yes	✓		No		(Please tick)

PART J: Assessment of Environmental Effects

1. Is an assessment of environmental effects (AEE) included with application?
(Refer TP58 section 5. Ensure all issues concerning potential effects addressed)

Yes	✓		No		(Please tick)

2. Are there any specific environmental constraints?

Yes			No	✓	(Please tick)

If yes, please explain.

PART K: Is Your Application Complete?

1. In order to provide a complete application you have remembered to:

Fully Complete this Assessment Form	✓
Include a *Location Plan and Site Plan* (with Scale Bars)	✓
Include a Property Title (Certificate of Title)	✓
Attach an Assessment of Environmental Effects (AEE)	✓

2. Declaration

I hereby certify that, to the best of my knowledge and belief, the information given in this application is true and complete.

Name	Matt Riddell	**Signature**	
Position	Engineer	**Date**	07/09/26