

# Land Information Memorandum



Property address:  
132B Hoon Hay Road

LIM number: H00959092  
Page 1

Christchurch City Council  
53 Hereford Street, PO Box 73015  
Christchurch 8154, New Zealand  
Tel 64 3 941 8999  
Fax 64 3 941 8984  
[www.ccc.govt.nz](http://www.ccc.govt.nz)

## Application details

Please supply to      LAYBURN HODGINS LIMITED  
                                 PO BOX 795  
                                 CHRISTCHURCH 8140

Client reference

Phone number         366 2332

Fax number            366 3143

Date issued            14 June 2022

Date received         13 June 2022

## Property details

Property address      132B Hoon Hay Road

Valuation roll number 22951 43402

Valuation information Capital Value: \$510000.00  
                                 Land Value: \$160000.00  
                                 Improvements Value: \$350000.00  
*Please note: these values are intended for Rating purposes*

Legal description     Lot 2 DP 573077

Existing owner         Nelida Lee Pennington  
                                 79 Ravensdale Rise  
                                 Christchurch 8025

## Council references

Debtor number         3158155

Rate account ID       73201739

LIM number             H00959092

Property ID             1194160

## Document information

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

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

The information included in this LIM is based on a search of Council records only and there may be other information relating to the land which is unknown to the Council. Please note that other agencies may also hold information relevant to the property, or administer legislation relevant to the use of the land, for example, the Regional Council (Ecan), Heritage New Zealand Pouhere Taonga, and Land Information New Zealand.

Council records may not show illegal or unauthorised building or works on the property. The applicant is solely responsible for ensuring that the land is suitable for a particular purpose.

A LIM is only valid at the date of issue as information is based only upon information the Council held at the time of that LIM request being made.

## Property file service

This Land Information Memorandum does not contain all information held on a property file. Customers may request property files by phoning the Council's Customer Call Centre on (03) 941 8999, or visiting any of the Council Service Centres. For further information please visit [www.ccc.govt.nz](http://www.ccc.govt.nz).

To enable the Council to measure the accuracy of this LIM document based on our current records, we would appreciate your response should you find any information contained therein which may be considered to be incorrect or omitted. Please telephone the Customer Call Centre on (03) 941 8999.

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

## 1. Special features and characteristics of the land

*Section 44A(2)(a) LGOIMA. This is information known to the Council but not apparent from the district scheme under the Town and Country Planning Act 1977 or a district plan under the Resource Management Act 1991. It identifies each (if any) special feature or characteristic of the land concerned, including but not limited to potential erosion, avulsion, falling debris, subsidence, slippage, alluvion, or inundation, or likely presence of hazardous contaminants.*

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

### | Consultant Report Available

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

### | Fill

This property is located in an area known to have been filled. The year the fill occurred is 2017. The filling was, according to the Councils records carried out in an uncontrolled manner and comprises Unknown Material.

### | Liquefaction Vulnerability

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

### | Softground

Council records show that site contains Soft Ground. Predominant Ground Material: N/A Reason for Assessment: N/A Should further buildings be proposed on this site, specific foundation design may be required.

### | Pool

PoolID Number: 886. This property has a Private In-Ground Swimming Pool which has been Backfilled. This does not necessarily mean the below ground structure of the pool has been removed.

## Related information

- | Fill comment/s is based on the area where the swimming pool was and has since been back filled. The Council has not been supplied a fill certificate that would confirm the fill used and bearing capacity of the fill at the time the work was carried out.
- | There is attached a soil investigation report for this property.

## 2. Private and public stormwater and sewerage drains

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

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

### Related information

- | The drainage works associated with this property has been partially plotted on the Council's drainage plan. A copy of the field Inspectors pickup/approved site plan showing the drains and buildings/house outline is attached.
- | The property is shown to be served by sewer and stormwater drains which are shared.

### 3. Drinking Water Supply

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

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

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

#### Related information

- 1 The property is known to have drinkable water to the dwelling as this is a requirement for a passed final inspection/code compliance certificate. Christchurch City Council is the networked supplier of water to this property. This property is connected to Christchurch City Council Water Supply. The conditions of supply are set out in the Christchurch City Council Water Supply, Wastewater & Stormwater Bylaw (2014), refer to [www.ccc.govt.nz](http://www.ccc.govt.nz). The property is not yet being charged for water supply connection in the rates. The charge for water supply will be added to the rates in the next rates year which starts as of 1 July each year. If you wish to enquire about this please call 941 8999 and ask to speak to the rates team.

## 4. Rates

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

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

### (a) Annual rates

Annual rates to 30/06/2022: \$ 0.00

	Instalment Amount	Date Due
Instalment 1	\$	
Instalment 2	\$	
Instalment 3	\$	
Instalment 4	\$	

Rates owing as at 14/06/2022: \$ 0.00

### (b) Excess water charges

\$ 0.00

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

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

No Reading Required

( To arrange a final water meter reading, please phone (03) 941 8999 or visit [www.ccc.govt.nz](http://www.ccc.govt.nz).

## Related information

- There is no rates values showing as it is the start of the new financial year and the Councils rates team is yet to load the new rating year data into our Council rates database. For new rating year information please contact the rates team on 941-8999.

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

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

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

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

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

### (a) Consents

- | BCN/1973/4759 Applied: 27/07/1973 Status: Completed  
132A Hoon Hay Road Hoon Hay  
Permit issued 17/08/1973  
2 FLATS WITH GARAGES- Historical Reference PER7374084
- | BCN/1974/2350 Applied: 19/04/1974 Status: Completed  
132B Hoon Hay Road Hoon Hay  
Permit issued 16/05/1974  
CARAVAN PORT - FLAT B- Historical Reference PER7475297
- | BCN/1974/5016 Applied: 21/08/1974 Status: Completed  
132B Hoon Hay Road Hoon Hay  
Permit issued 05/09/1974  
SWIMMING POOL & FILTER -FLAT B- Historical Reference PER74750067
- | BCN/1986/3879 Applied: 25/06/1986 Status: Completed  
132B Hoon Hay Road Hoon Hay  
Permit issued 07/07/1986  
CONSERVATORY - FLAT B- Historical Reference PER86870135
- | BCN/2016/5889 Applied: 08/07/2016 Status: Completed  
132A Hoon Hay Road Hoon Hay  
Accepted for processing 11/07/2016  
PIM Granted 18/07/2016  
PIM Issued 19/07/2016  
Building consent granted 20/10/2016  
Building consent issued 25/10/2016  
Code Compliance Certificate Issued 23/11/2017  
Construction of 2 attached dwellings with attached garages

### (b) Certificates

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

### (c) Notices

#### | NonComplying Activity or works

Council Records show that the following activities were undertaken on this property: poll fence non complying  
8/11/2001

Property address:  
132B Hoon Hay Road

l **NonComplying Activity or works**

Council Records show that the following activities were undertaken on this property: poll fence non complying

**(d) Orders**

**(e) Requisitions**

**Related information**

- l Please find an electrical certificate/s attached relating to works that have been carried out on the current building/dwelling at this address.

## 6. Certificates issued by a building certifier

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

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

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## 7. Weathertightness

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

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

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

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## 8. Land use and conditions

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

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

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

### ┆ **Regional plan or bylaw**

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

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

#### **(ii) Christchurch District Plan**

##### ┆ **Liquefaction Management Area (LMA)**

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

##### ┆ **District Plan Zone**

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

### **(b) Resource consents**

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

- ┆ RMA/2016/2804 - Land Use Consent
  - 1/132 Hoon Hay Road Hoon Hay
  - Two attached Units with attached Garages
  - Status: Processing complete
  - Applied 05/10/2016
  - Granted 11/10/2016
  - Decision issued 11/10/2016

- | RMA/2021/1630 - Combined subdivision / land use consent
- 1/132 Hoon Hay Road Hoon Hay
- Fee simple subdivision - two lots and associated land use consent
- Status: Processing complete
- Applied 03/06/2021
- Granted 02/07/2021
- Decision issued 02/07/2021
- s223 Certificate issued 23/02/2022
- s224 Certificate issued 23/02/2022

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## 9. Other land and building classifications

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

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

Please refer to Section 1 for details

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## 10. Network utility information

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

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

! **None recorded for this property**

## 11. Other information

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

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

### (a) Kerbside waste collection

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

### (b) Other

#### | Floor Levels Information

Christchurch City Council holds a variety of information relevant to building/property development across the city. This includes minimum finished floor levels that need to be set to meet the surface water requirements in clause E1.3.2 of the building code (where this applies), and the requirements of the Christchurch District Plan (where a property is in the Flood Management Area). Where this information has been processed for your site, it can be viewed at <https://ccc.govt.nz/floorlevelmap/>, otherwise site specific advice can be obtained by emailing [floorlevels@ccc.govt.nz](mailto:floorlevels@ccc.govt.nz).

#### | Community Board

Property located in Spreydon-Cashmere Community Board.

#### | Guest Accommodation

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

#### | Tsunami Evacuation Zone

This property is not in a tsunami evacuation zone. It is not necessary to evacuate in a long or strong earthquake or during an official Civil Defence tsunami warning. Residents may wish to offer to open their home to family or friends who need to evacuate from a tsunami zone, and should plan with potential guests to do so in advance. More information can be found at <https://ccc.govt.nz/services/civil-defence/hazards/tsunami-evacuation-zones-and-routes/>

#### | Electoral Ward

Property located in Spreydon Electoral Ward

#### | Listed Land Use Register

Property address:  
132B Hoon Hay Road

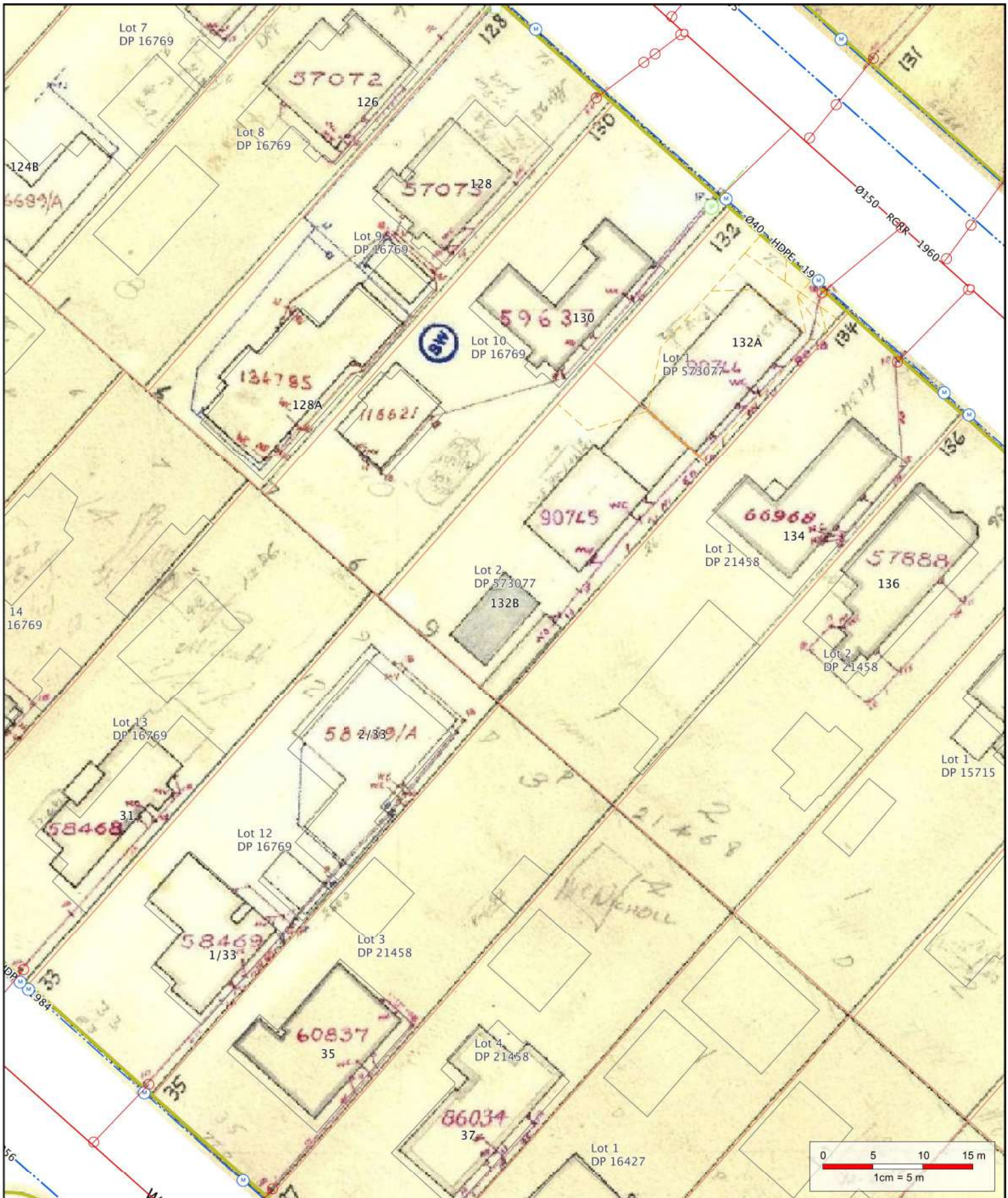
LIM number: H00959092  
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























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

## I **Spatial Query Report**

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




**1 : 500 on A4**  
 14/06/2022 11:27:21 AM  
  
 ph: 941-8300 fax: 941-8385  
 Accuracy not guaranteed. Onsite verification required. Display of data scale dependent, full detail available at 1:500.  
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Private Drainage		Water Intake/Supply	Wastewater	Wastewater	Stormwater	Stormwater
<b>Standard Infrastructure</b>  Bio Gas  Condensate Trap  End Cap  Inlet  Outlet  Valve  Main  Cable	<b>Water Intake/Supply</b>  Connector  Bellows  Connector  Hydrant	 Inlet  Meter  Outlet  Pump  Restrictor  Valve  Air Release  Butterfly  Flow restriction  Gate  Pressure Activated  Sluice  Valve  Reservoir  Structure  Lateral  Main  Sub Main	 End Cap  Valve  Air Gap Separator  Vent  Eye  Eye (Vertical)  Outfall  Pump  Junction  Access  Flush Manhole  Inspection Point  Standard Manhole  Trap  Vented Manhole  Lateral  Main  Pressure Main	 Lateral Fitting  Local Pressure  Control Panel  Boundary Kit  Tank System  Site  Vacuum Chamber  Vacuum Breather <b>Stormwater</b>  Bend  Change  Eye  Flow Restriction  Inlet  Dome Sump  Double Sump  Gross Debris Trap	 Inlet  Inlet Headwall  Pipe End  Silt Trap  Single Sump  Soak Pit  Triple Sump  Junction  Standard Manhole  Outlet  Pump  Structure  Basin  Lateral  Main  Lateral Fitting  Double Sump	<b>All services</b>  Pipe Protection  Abandoned  Proposed  Out of service <b>Landbase</b>  Easement



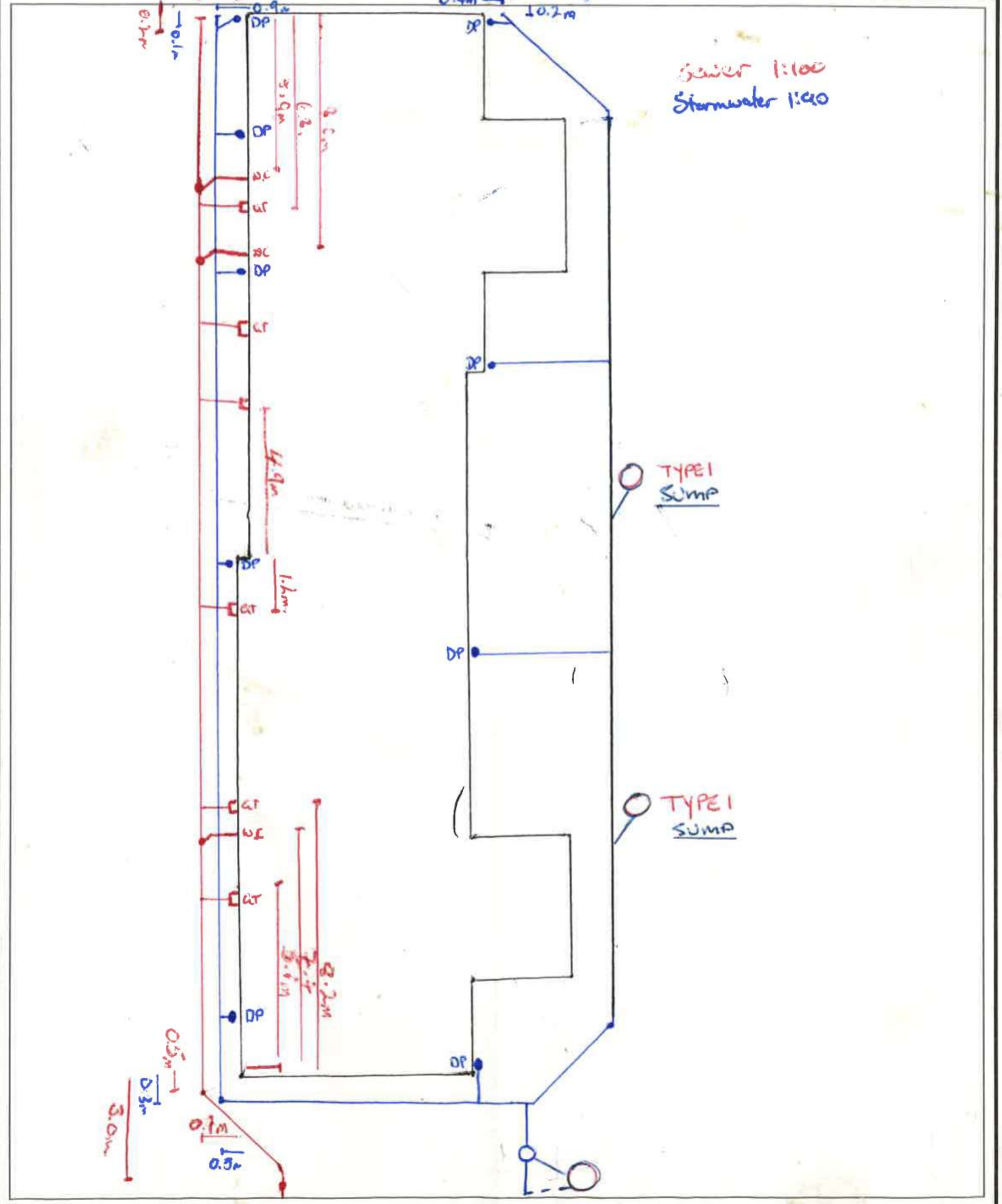
# Flo-Rite Drainage Ltd

## As Built Drainage Plan

Phone: (03) 331 8485  
Fax: (03) 331 8412  
Email: info@flo-rite.co.nz

Address: 132 Hoon Hay Road	Date: 17.2.17	Drainlayer: Lance Cooper #24810 2016/5889
	Consent #: 2016/5889	Council: CHRISTCHURCH

Not to scale



**LEGAL DESCRIPTION:**  
TERRITORIAL AUTHORITY: CHRISTCHURCH CITY COUNCIL  
LOT: 11 DP: 16769  
ADDRESS: 132 HOON HAY ROAD HOON HAY, CHRISTCHURCH

<b>COUNCIL</b>	
HEIGHT:	COMPLIANT
SETBACKS:	COMPLIANT
RECESSION PLANES:	COMPLIANT
<b>ZONES NZS 3604:2011</b>	
SNOW LOAD ZONE:	1KPA
WIND ZONE:	HIGH
WIND REGION:	A
EARTHQUAKE ZONE:	2
EXPOSURE ZONE:	C
<b>AREAS</b>	
SITE AREA:	819m <sup>2</sup>
FLOOR AREA NEW DWELLING (UNIT 1):	127.99m <sup>2</sup>
FLOOR AREA NEW DWELLING (UNIT 2):	131.70m <sup>2</sup>
ROOF AREA (UNIT 1):	154.64m <sup>2</sup>
ROOF AREA (UNIT 2):	162.57m <sup>2</sup>
<b>SITE COVERAGE :</b>	<b>31% (35% ALLOWABLE)</b>

**GENERAL NOTES**  
LANDSCAPING SHOWN ON THIS CONCEPT IS INDICATIVE ONLY AND PURELY FOR PRESENTATION PURPOSES. LANDSCAPING TO BE CONFIRMED BY THE CLIENT. CONCEPT SUBJECT TO RULES AND REGULATIONS ALL DIMENSIONS TO BE CONFIRMED ON SITE. BOUNDARY DIMENSIONS AND BEARING SUBJECT TO CONFIRMATION SITE LEVELS SUBJECT TO CONFIRMATION

**SITE DRAINAGE**  
DRAINLAYER TO CONFIRM DRAINAGE ON SITE PRIOR TO CONSTRUCTION TO VERIFY ADEQUATE FALLS FROM REAR UNIT TO STREET LATERALS


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**BCN/2016/5889**  
**Approved Building Consent Plan**  
17/10/2016
Phil Judge

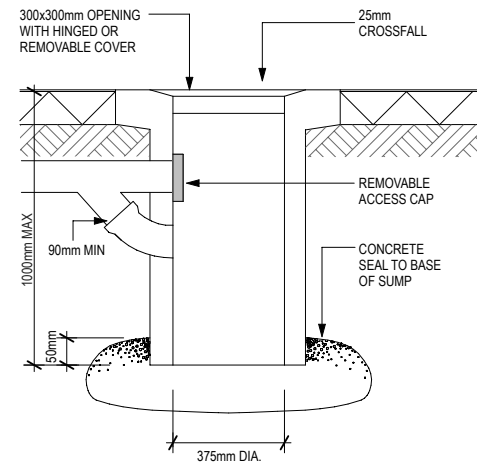


Figure 8: TYPE-ONE SURFACE WATER SUMP. Paragraph 3.6.2

Figure 6: BUBBLE-UP CHAMBER Paragraph 3.4.2

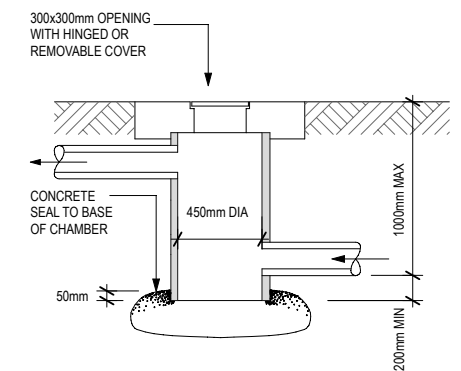
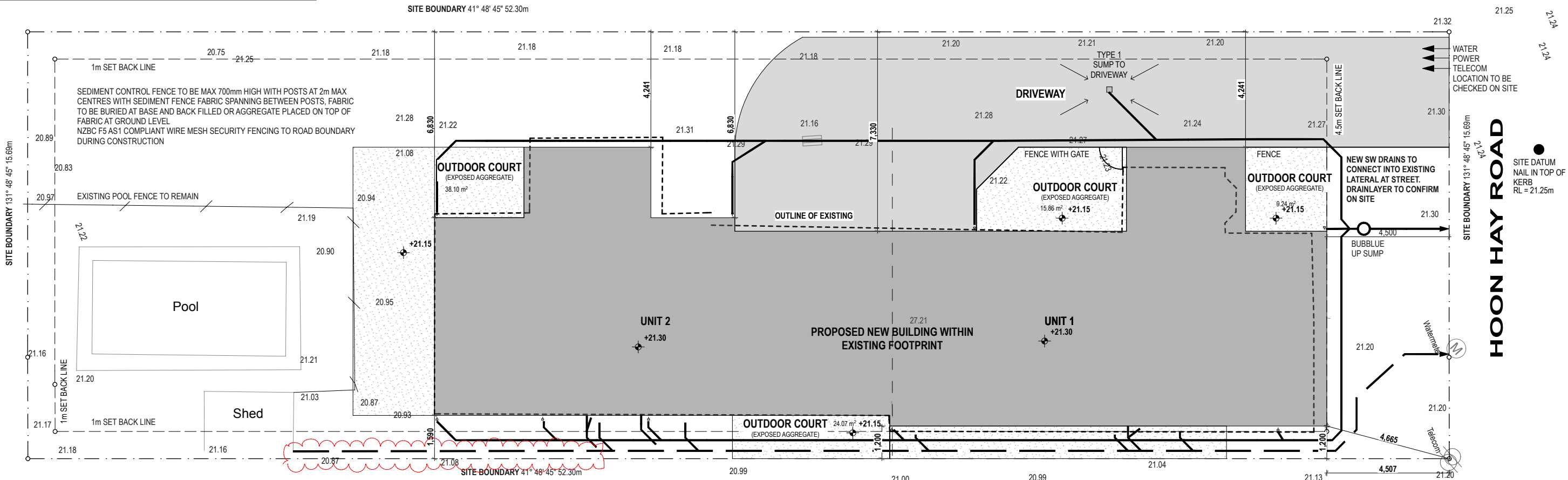


Figure 6: BUBBLE-UP CHAMBER. Paragraph 3.4.2

**SETOUT NOTES**  
CONTRACTOR MUST INDEPENDENTLY VERIFY ALL BOUNDARIES AND DIMENSIONS PRIOR TO SETOUT. ALL SETOUT DIMENSIONS ARE IN HORIZONTAL PLANE AND DO NOT TAKE INTO ACCOUNT VARYING GROUND LEVELS.  
FINISHED FLOOR LEVEL TO BE MAINTAINED AT 225mm CLEARANCE FROM FINISHED GROUND LEVEL.  
ANTI - SLIP: ON ALL ACCESS ROUTES BOTH INTERNAL AND EXTERNAL, PROVIDE ANTI - SLIP SURFACE COMPLYING WITH NZBC D1/AS TABLE 2 (EXCEPT SURFACES IN SIDE ENTRY DOORS OF HOUSING MAYBE CONSIDERED DRY AREAS)

**TOWN PLANNING:**

<b>COUNCIL ZONE:</b>	RESIDENTIAL
<b>MAX BUILDING HEIGHT:</b>	8m
<b>INTERNAL SETBACKS:</b>	
- DWELLING:	1m
- STREET FRONT:	4.5m
<b>RECESSION PLANES:</b>	FROM 2.3m
<b>SITE COVERAGE:</b>	MAX 35%



**SITE / DRAINAGE PLAN**  
**1:150**

**SEDIMENT CONTROL**  
THE CONTRACTOR SHALL TAKE ALL THE STEPS NECESSARY TO CONTROL THE EROSION AND SEDIMENT RUNOFF FROM THE SITE FOR THE DURATION OF THE CONSTRUCTION WORKS. NO RUNOFF WATER CONTAINING SEDIMENT OR SILT IS ALLOWED TO FLOW ACROSS ANY BOUNDARY.  
EROSION AND SEDIMENT CONTROL MAY BE ACHIEVED BY CONSTRUCTING A SEDIMENTS/ SILT TRAP ACROSS THE LOWER END OF ANY SLOPE, WITHIN THE SITE BOUNDARY. THE SEDIMENT/SILT TRAP MAY BE FORMED USING ONE OF THE FOLLOWING METHODS:  
1) PLACE HAY BALES INTO A 200mm DEEP TRENCH. THE HAY BALES ARE TO BE TIED TOGETHER TO CLOSE ALL GAPS BETWEEN THEM AND ANCHORED TO THE GROUND BY STAKING AS REQUIRED.  
2) NATURAL SOIL FROM THE SITE MAY BE USED TO CONSTRUCT AN EARTH BUND OF WIDTH 1.5M, AND THE SITE UPSTREAM OF THIS BUND EXCAVATED TO A DEPTH OF AT LEAST 200MM BELOW EXISTING GROUND LEVEL.  
3) PROPRIETARY BIDIM SC04 FILTER ROLL OR SIMILAR APPROVED ALTERNATIVE.  
SEDIMENT CAN BE CONTAINED WITHIN THE SITE BY CONSTRUCTING A SILT FENCE USING BIDIM A24 GEOTEXTILE OR A SIMILAR APPROVED ALTERNATIVE WHERE EXCAVATED MATERIAL IS STOCKPILED, THIS METHOD IS ALSO TO BE USED TO CONTROL SEDIMENT RUNOFF, WHICH FLOWS ALONG NATURAL WATERCOURSES.

REGULAR INSPECTION AND MAINTENANCE MUST BE CARRIED OUT TO ENSURE THESE TEMPORARY SEDIMENT/SILT TRAPS ARE NOT COMPLETELY CLOGGED BY SEDIMENT OR SILT. SEDIMENT AND SILT COLLECTED AT THE TRAPS MUST BE REGULARLY REMOVED TO ENSURE NO SPILLOVER.  
ARRANGEMENTS MUST BE MADE FOR INSPECTIONS AND MAINTENANCE OF THE SEDIMENT/SILT TRAPS OVER WEEKENDS, DURING PUBLIC HOLIDAYS, OVER ANY EXTENDED PERIODS WHEN NO WORK IS BEING CARRIED OUT, AND WHEN HEAVY RAIN OCCURS OUTSIDE NORMAL WORKING HOURS.  
BEFORE COMMENCEMENT OF THE SITE WORKS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FULL DETAILS, INCLUDING SKETCHES, OF THEIR PROPOSED METHOD FOR EROSION AND SEDIMENT CONTROL WITHIN THE SCOPE OF THE WORKS. THE PROPOSED METHOD MUST BE DESIGNED BY A SUITABLY QUALIFIED PERSON, AND CERTIFIED AS SUITABLE FOR THIS SITE.  
ROOF WATER DOWNPIPES TO BE CONNECTED TO THE PERMANENT UNDERGROUND STORM WATER DRAINAGE SYSTEM AS SOON AS PRACTICAL AFTER THE ROOF IS LAID.

ALLOW FOR SITE INSPECTION TO ESTABLISH ACCURATE LOCATIONS OF EXISTING SERVICES  
CONNECT 100mm dia SEWER TO EXISTING FW LATERAL LOCATION TO BE CONFIRMED ON SITE ( REFER TO COUNCIL DRAINAGE PLAN)  
CONNECT NEW 100mm dia STORM WATER SYSTEM TO EXISTING SW LATERAL LOCATION AT KERB TO BE CONFIRMED ON SITE BY DRAINLAYER

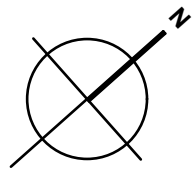
**TEMPORARY USE OF LEGAL ROAD**  
AN APPLICATION IS REQUIRED WHERE ROADWAY, FOOTPATH OR BERM ARE REQUIRED FOR DEVELOPMENT PURPOSES. THIS INCLUDES AREAS USED FOR WASTE SKIPS, PARKING OF CONTRACTORS VEHICLES, ETC. PLEASE NOTE THAT USE OF THIS LAND WITHOUT PERMISSION MAY RESULT IN AN INFRINGEMENT NOTICE BEING ISSUED BY THE PARKING UNIT. CONTACT TRANSPORT AND CITY STREETS UNIT ON TELEPHONE 941 8999.

<b>ISSUE DATE:</b>	<b>VERSION:</b>
30/03/16	02
8/04/16	03
15/06/16	04
12/10/16	05



**JOB TITLE:**  
**HOON HAY ROAD DEVELOPMENT**

**DRAWING TITLE:**  
**SITE & DRAINAGE**



**LEGAL DESCRIPTION:**  
Lot: 11 DP: 16769  
**SITE ADDRESS:**  
132 HOON HAY ROAD  
HOON HAY,  
CHRISTCHURCH

**NOTES:**  
- SUBJECT TO COUNCIL APPROVAL  
- ALL MEASUREMENTS TO BE CONFIRMED ON SITE BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORK  
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<b>ORIGINAL SHEET SIZE:</b>	A3
<b>CHECKED BY:</b>	
<b>DRAWN BY:</b>	CT
<b>SCALE:</b>	1:150, 1:10
<b>JOB #</b>	1559



**SHEET:**  
**A1.1 a**

25 May 2016

Grant Irving  
GI Builders Limited  
104 Malvern Street  
St Albans  
Christchurch

## **Addendum to Geotechnical Assessment Report - 132A and 132B Hoon Hay Road, Christchurch**

### **1.0 Introduction**

GI Builders Limited has engaged AECOM New Zealand Limited (AECOM) to produce this letter report as an addendum to AECOM's existing Geotechnical Assessment Report (GAR) for 132A and 132B Hoon Hay Road, Christchurch, dated 30 January 2015. This commission has been completed in accordance our agreement with GI Builders Limited dated, 4 May 2016.

AECOM's original GAR was produced for IAG New Zealand Limited and outlined a suitable method for repairing and re-levelling the existing foundations. Following the issue of the GAR, we understand that the foundations are now to be rebuilt and the preferred foundation type is a concrete slab foundation.

The purpose of this geotechnical design letter is to re-assess the liquefaction assessment undertaken in the GAR and provide geotechnical design recommendations for new foundations. This geotechnical design letter relies on the information contained in the GAR and the two documents should be read in conjunction.

The following scope of work has been undertaken:

- A review of the GAR completed for the site.
- Re-assessment of liquefaction induced settlement using existing on-site data and updated methodology.
- Assessment of suitable replacement foundation solutions.
- Production of this geotechnical design letter report including estimation of liquefaction-induced ground movements during future design earthquakes and recommendation for suitable new foundation solutions.

This geotechnical assessment does not specifically address environmental or heritage issues which may be associated with the recommended ground treatment and foundation options nor does it account for risk associated with sea level rise.

This report has been prepared in accordance with the Ministry of Building, Innovation and Employment document "Revised Guidance on Repairing and Rebuilding Houses Affected by the Canterbury Earthquake Sequence", version 3, dated December 2012, and subsequent updates, hereafter referred to as the MBIE Guidance.

It is noted that the MBIE Guidance is not meant to function as a prescriptive standard. The introductory sections emphasise the need to use engineering judgment so that new foundations which comply with the New Zealand Building Code are constructed.

**2.0 Property Description**

**2.1 Site Description**

The site is located on the south-western side of Hoon Hay Road at an elevation of approximately 16 m above the Christchurch City Datum (CCD) (approximately 7 m above sea level). It is rectangular in shape, measuring approximately 53 m by 16 m, occupying an area of approximately 850 m<sup>2</sup>. There is a step-down to the garden and pool area of approximately 0.5 m at the rear end of the site (south-west of Unit B).

The site is bounded by residential properties to the north-west, south-west and south-east, and Hoon Hay Road to the north-east. The surrounding topography generally slopes gently down towards the south-east. A tributary of the Heathcote River is present approximately 300 m to the north-east.

A site layout plan is presented in Figure 1.



**Figure 1: Annotated site plan (Google Earth Pro, 2016)**

**2.2 Existing Structures**

The site contains a residential dwelling split into two units (Unit A and Unit B). Both units are single storey with a portion of Unit B being two storey. Both units are timber-framed with heavy-weight brick exterior cladding on the lower storey, light-weight pressed metal cladding on the second storey, and heavy-weight decromastic tile roofing.

The duplex structure includes two attached garages located between the two units, separated by a concrete blockwork firewall. An in-ground swimming pool and wooden shed is present at the rear (south-west) of the site. The pool was disused and only holding water equivalent to about half volume at the time of AECOM's 2014 inspection.

A concrete slab driveway is present along the north-west boundary of the site. The remainder of the site comprises garden areas and paved paths.

**2.2.1 Christchurch City Council Floor Levels**

The CCC floor level database provides information on predicted flood levels and existing and interim floor levels.

The database indicates that the site is not located within a Flood Management Area and that no specific floor level requirements apply. It should be noted that these interim floor level values are subject to review and may change. Therefore, CCC should be contacted directly to provide finished floor level information and recommendations.

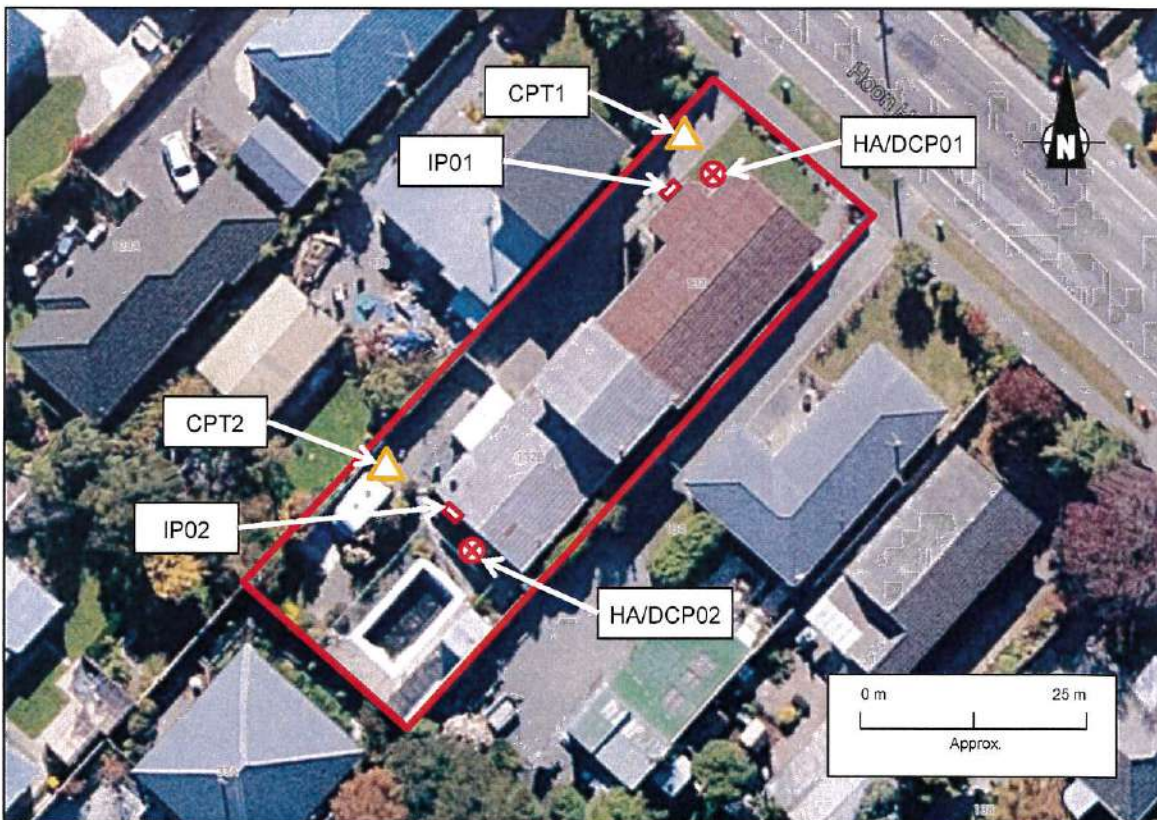
**2.3 Existing and On-site Geotechnical Data**

Details and records of the existing nearby and on-site information are contained in the GAR for the site.

A summary of the on-site AECOM investigations carried out as part of the GAR on 24 and 28 July 2016 is summarised in Table 1 and the locations of the investigations are shown in Figure 2.

**Table 1: AECOM ground investigation**

Hole Number	Depth (m bgl)	Notes
HA/DCP01	2.9	Refusal due to hole collapse. Groundwater encountered at 1.6 m bgl.
HA/DCP02	1.2	Refusal due to hole squeezing. Groundwater not encountered.
IP01	0.55	Target depth. Groundwater not encountered.
IP02	0.5	Target depth. Water ponding at base of excavation.
CPT1	19.9	Target depth. Groundwater inferred at 2.0 m bgl.
CPT2	10.9	Terminated due to dense material and inclination of probe. Groundwater inferred at 1.8 m bgl.



**Figure 2: AECOM investigation locations (Google Earth Pro, 2016)**

### 3.0 Site Geology and Groundwater

The site geology inferred in the GAR is summarised in Table 2.

**Table 2: Summarised site geology**

Material Description	Depth to top (m bgl)	Thickness (m)
Soft to firm SILT and silty CLAY [Topsoil/ Fill]	0.0	0.6–0.8
Interbedded stiff to very stiff SILT and loose to medium dense silty SAND with minor organics [Springston Formation]	0.6–0.8	2.2–2.9
Loose to medium dense SAND [Springston Formation]	3.0–3.5	2.0–2.5
Firm sandy SILT [Springston Formation]	5.5–8.0	0.5–1.5
Interbedded medium dense to very dense SAND and GRAVEL [Springston Formation]	7.0–8.5	6.5–7.0
Interbedded soft to firm SILT with trace organics and loose to medium dense SAND [Springston Formation]	14.0	>6.0

The GAR adopted a groundwater level of 1.6 m bgl for design and assessment purposes. This groundwater level has also been used in the assessments contained in this letter report.

### 4.0 Seismicity

#### 4.1 Site Hazard Spectra and Design Peak Ground Accelerations

The site hazard spectra and resulting seismic PGA values, presented in Table 3, have been determined in accordance with the requirements of the New Zealand Building Code, including NZS 1170.5:2004 and the MBIE Guidance. A Site Subsoil Classification of Class D is recommended, in accordance with NZS 1170.5:2004.

**Table 3: Seismic design accelerations for Importance Level 2 structures**

Design Case	Annual Exceedance Probability	Peak Ground Acceleration
Serviceability Limit State (SLS) Case 1 ( $M_w$ 7.5)	1/25	0.13g
Serviceability Limit State (SLS) Case 2 ( $M_w$ 6.0)	1/25	0.19g
Ultimate Limit State (ULS)	1/500	0.35g

It should be noted that seismic risk and appropriate design accelerations are regularly reviewed by national organisations and government departments. The design seismic accelerations may therefore be subject to change and should be reviewed during detailed design.

#### 4.2 Scaled Conditional Peak Ground Acceleration Values

Conditional PGA values, developed by Bradley and Hughes (2012a and 2012b), are available on the CGD. These values have been scaled to match a design earthquake of moment magnitude ( $M_w$ ) 7.5, in accordance with Boulanger and Idriss (2014), and are presented in Table 4:

**Table 4: Scaled conditional PGA values for the site**

Earthquake Event	Moment Magnitude ( $M_w$ )	Conditional Median PGA (g)	Magnitude Scaling Factor (MSF)	Scaled Conditional Median PGA (g)
4 September 2010	7.1	0.24	1.11	0.22
22 February 2011	6.2	0.42	1.41	0.30
13 June 2011	6.0	0.18	1.48	0.12
23 December 2011	5.9	0.14	1.52	0.09

The scaled conditional median PGA values indicate that the site has experienced an event of at least 170% of an SLS design event during the February 2011 earthquake. In accordance with MBIE Guidance, the site can therefore be regarded as having been 'sufficiently tested' for an SLS design event and as a result, on-site damage is likely to be no worse than that already experienced during future SLS design events.

However, the site did not experience shaking equivalent to a ULS design event. Therefore, it is considered that on-site land damage during a future ULS design event may be worse than that already experienced.

#### 5.0 Geotechnical Assessment

##### 5.1 Liquefaction and Associated Settlement

The AECOM CPT data has been processed using Geologismiki analysis software *CLiq* (Version 1.7.6.34) in order to identify potentially liquefiable material underlying the site. The following methodologies have been followed for liquefaction assessment:

- Liquefaction potential evaluation according to Boulanger and Idriss (2014).
- Fines correction according to Boulanger and Idriss (2014).
- Settlement estimation according to Zhang et al (2002).

A groundwater depth of 1.6 m bgl has been used for the liquefaction assessment.

The ground surface settlement likely to occur as a result of liquefaction to a depth of 19.9 m bgl (maximum depth of CPTs) following future earthquakes was calculated for SLS and ULS design events. An assessment of the upper 10 m of the ground profile was also undertaken in accordance with the index value criteria described within the MBIE Guidance.

The results of this analysis, showing the depth of liquefaction and amount of ground settlement predicted from the CPTs, are shown in Table 5. Selected assessment outputs are presented in Attachment A.

Table 5: Liquefaction depths and predicted settlement

ID No. (depth)	SLS Case 1—Mw = 7.5, PGA = 0.13g <sup>B</sup>			SLS Case 2—Mw = 6.0, PGA = 0.19g <sup>B</sup>			ULS Event—Mw = 7.5, PGA = 0.35g <sup>B</sup>		
	Total Ground Settlement <sup>A</sup> (mm)	MBIE “Index Value” (upper 10m) (mm)	Approximate depth of Liquefaction (m bgl)	Total Ground Settlement <sup>A</sup> (mm)	MBIE “Index Value” (upper 10m) (mm)	Approximate depth of Liquefaction (m bgl)	Total Ground Settlement <sup>A</sup> (mm)	MBIE “Index Value” (upper 10m) (mm)	Approximate depth of Liquefaction (m bgl)
CPT1 (19.9 m)	65	40	6.7 – 7.4 8.0 – 8.2 14.6 – 14.8 15.5 – 16.0	110	85	2.4 – 4.4 5.0 – 5.3 6.5 – 8.3 14.6 – 16.0	230	150	1.6 – 2.1 2.4 – 8.5 9.2 – 9.4 14.6 – 16.0 17.3 – 18.5 18.8 – 19.8
CPT2 (10.9 m)	50	50	2.8 – 3.7 5.4 – 5.6 7.0 – 7.4	80	80	2.8 – 5.6 7.0 – 7.4	115	115	1.6 – 2.3 2.8 – 5.6 7.0 – 7.5 9.5 – 9.8

A – To investigated depth

B – Rounded up to nearest 5 mm

As the two CPTs terminated at different depths, and the above analysis indicates that liquefiable material is present to a depth of at least 19.8 m bgl, it is not considered appropriate to compare the total settlement values between the two CPTs to estimate future differential settlement across the site.

Liquefaction-induced differential settlement can also be estimated as half of the total calculated liquefaction-induced settlement. Therefore, liquefaction-induced differential settlement could be up to 55 mm following an SLS event, and up to 115 mm following a ULS event. New foundations should be designed to accommodate this magnitude of differential settlement.

It is noted that the above analysis liquefaction assessments are 'free field' and do not account for the following factors;

- Variation in ground conditions away from the between CPT locations across the site.
- Liquefaction-induced settlement occurring following multiple seismic events.
- Ejection of liquefied material.
- Building loads or structures on the ground surface.

Therefore, it is possible for the liquefaction-induced settlement to be underestimated.

Groundwater levels can vary seasonally. As liquefaction can only occur beneath the groundwater table, the risk of damage due to liquefaction may vary throughout the year.

The estimated differential settlements only account for settlement of material within the top 19.9 m of the ground surface. It is possible for liquefaction to occur at depths greater than 19.9 m. However, settlements occurring at depth of greater than 19.9 m are unlikely to result in significant ground surface deformations across the footprint of the structure and the predicted settlements estimated are considered appropriate for design.

## **6.0 Lateral Deformation**

### **6.1 Global Lateral Movement**

EQC LiDAR data indicates that approximately 200 mm of local horizontal deformation of the site, towards the south-west, occurred between 4 September 2010 and 13 June 2011.

Therefore, the potential for global lateral movement is considered to be minor to moderate (0 to 300mm), in accordance with Table 12.1 of the MBIE Guidance.

### **6.2 Lateral Spreading and Associated Displacement**

No evidence of significant lateral spreading was noted during the site walkover undertaken during the GAR and no lateral spreading or cracking was observed on the site by EQC following the 2010/2011 Canterbury earthquake sequence.

Therefore, the potential for lateral stretch across the building footprint is considered to be minor to moderate (0 to 200mm), in accordance with Table 12.4 of the MBIE Guidance.

## **7.0 Bearing Strength**

The results of the existing DCP testing undertaken on-site indicate a static ultimate bearing strength (UBS) of 300 kPa, as defined by NZS 3604:2011 to be present from depths of between 1.9 m and 2.1 m bgl.

Ground with a UBS of 200 kPa, in accordance with the MBIE Guidance, was encountered at depths of between 0.6 m and 0.9 m bgl.

## 8.0 Technical Category

The property is currently classified as TC3. Table 6 presents the settlement and lateral spread index criteria for each of the Technical Categories, in accordance with the MBIE Guidance. A Technical Category (TC1, 2 or 3) is assigned to a property based on any of the predicted deformations exceeding the index criteria presented below.

**Table 6: MBIE Liquefaction deformation index criteria**

Technical Category	Vertical Settlement (mm)		Lateral Stretch (mm)
	SLS	ULS	ULS
1	<15	<25	Nil
2	<50	<100	<50
3	>50	>100	>50

Based on the predicted liquefaction-induced vertical settlement and lateral stretch, the site's TC3 classification is considered appropriate.

## 9.0 Foundation Design Recommendation

The GAR outlined a suitable foundation repair methodology for the dwelling. Following the issue of the GAR, we understand that it is currently proposed that the foundation be rebuilt. It is understood that the preferred floor type is concrete.

This section outlines suitable new concrete foundation solutions for the duplex structure at 132A and 132B Hoon Hay road, Christchurch.

### 9.1 Design Constraints

It is advised that all replacement foundations should be constructed according to CCC interim floor level requirements, designed to minimise flood risk. Based on the information provided in Section 2.2.1, the site is not located within a Flood Management Area and that no specific floor level requirements apply. It should be noted that these interim floor level values are subject to review and may change. Therefore, CCC should be contacted directly to provide finished floor level information and recommendations.

Localised areas of soft soil or uncontrolled fill may be present in the base of the excavation. A suitably qualified geotechnical engineer or engineering geologist is required to inspect the base of the excavation prior to placement of fill material.

The proposed solutions provide no improvement to materials at depth and will not prevent liquefaction occurring beneath the dwelling during future seismic events, but they are designed to accommodate the anticipated differential settlement and have the ability to be readily re-levelled.

## 9.2 TC3 Re-levelable Slab

Based on the analysis undertaken above, a TC3 re-levelable slab is considered to be a suitable foundation solution for the proposed structure at this site.

This foundation option comprises a specifically designed concrete foundation that can be re-levelled following settlement during a future seismic event. Available systems include those with two slabs, allowing one to be re-levelled off the other, and systems with inbuilt jacking points, allowing the structure to be re-levelled relatively quickly and easily.

Specific engineering design will be required to provide a re-levelable concrete surface structure that can accommodate the predicted settlements and lateral stretch. The re-levelable slab should be designed such that it meets all of the requirements outlined in the MBIE Guidance, Section 15.4.8, page 15.46. These requirements include but are not limited to satisfying the following expectations after a future seismic event:

- The foundation is easily re-levelable without specialist equipment, techniques or materials.
- The re-leveling and repairing of the foundation and superstructure can be completed within a four week period.
- No damage occurs to the services within the floor plate, and services outside of the foundation are readily repairable following a future earthquake and during the re-leveling process.
- The foundation provides sufficient resistance to lateral displacement of the foundation during ground shaking in a ULS design event.

This foundation requires a gravel raft to be constructed below the re-levelable slab. The base of the gravel raft is extended below the entire house footprint, be founded on ground which has an ultimate bearing strength (UBS) of 200 kPa and extend a minimum of 2.0 m beyond the perimeter foundation line. If there is insufficient space to the property boundaries, this width could be reduced if a layer of geogrid is placed along this edge. Based on AECOM's investigations, ground with an UBS of 200 kPa is likely to be encountered at 0.9 m bgl. Due to the sloping nature of the site, a stepped excavation is likely to be necessary to limit amount of excavation. Localised areas of soft soil or uncontrolled fill will require over excavation and replacement with compacted engineered fill. This is to be determined during the excavation inspection.

Gravel is to be AP40 placed with a maximum of 150 mm lifts, compacted to a minimum Dry Density Ratio of 95% of the Maximum Dry Density (MDD) within  $\pm 2\%$  of the optimum water content, in accordance with the supplier's material specification. This should be confirmed with Nuclear Densometer (NDM) testing in three locations across the raft once half the vertical height of the raft has been compacted and again upon completion of the raft.

A layer of geofabric such as bidim Nonwoven Geotextile A19, or approved equivalent, should line the entire excavation. The purpose of the geotextile is to reduce migration of liquefaction ejecta and fine sediments into the compacted gravel raft.

### **9.3 TC2 Option 2 or 4 concrete slab with shallow ground improvement (Type G1d)**

Based on the analysis undertaken above, a TC2 Option 2 or 4 would be suitable for the site with site ground improvement. Table 15.4 of the MBIE guidance summarises the ground improvement methods suitable for concrete slab foundations. Based on this table, the site constraints, and the analysis contained in this report, a shallow reinforced crushed gravel raft, labelled type G1d, is considered suitable for the site.

The raft is to be a minimum 1.2 m thick below the entire house footprint and extend a minimum of 2.0 m beyond the perimeter foundation line. The raft requires an ultimate bearing strength (UBS) of 200 kPa at the base; this is likely to be encountered at 0.9 m bgl. Localised areas of soft soil or uncontrolled fill will require over excavation and replacement with compacted engineered fill. This is to be determined during the excavation inspection.

A layer of geofabric such as bidim Nonwoven Geotextile A19, or approved equivalent, should line the entire excavation. The purpose of the geotextile is to reduce migration of liquefaction ejecta and fine sediments into the compacted gravel raft.

The geofabric should be overlain by 150 mm lifts of compacted, AP40 with at least 70% gravel having 2 or more broken faces (i.e. predominantly a crushed rock product). A layer of Tensar TriAx TX160 geogrid, or approved equivalent is to be laid at 150 mm and 300 mm above the base of the raft. The geogrid should extend 1.0 m beyond the edge of the raft, in order to be lapped underneath the final layer of fill. Outside the reinforced grid zones, crushed AP65 is suitable.

All gravel should be compacted to a minimum Dry Density Ratio of 95% of the MDD within  $\pm 2\%$  of optimum moisture content. This should be confirmed with NDM testing in three locations across the raft once half the vertical height of the raft has been compacted and again upon completion of the raft.

### **10.0 Other ground improvement methods considered**

#### **10.1 Reinforced stabilised crust (Type G2a)**

Excavated material is stockpiled on-site and stabilised with cement before being compacted back into the excavation. This is similar in construction to the Type G1d option recommended, however, compacted gravel is replaced with the stabilised excavated material. This would require the same geofabric and geogrid specification outlined in Section 9.3 and has a minimum excavation depth of 1.2 m bgl.

This option was not recommended as it requires a large area available for stockpiling and mixing the excavated material before re-compacting. Due to the size of the site this is likely to be a constraining factor. In addition, due to the silt content of the near surface material, additional cement may be required to stabilise the materials.

#### **10.2 Reinforced stabilised crust (Type G1a)**

Excavated material is stockpiled on-site then compacted back into the excavation. This is similar in construction to the Type G1d option recommended, however, compacted gravel is replaced with the excavated material. This would require the same geofabric and geogrid specification outlined in Section 9.3 and has a minimum excavation depth of 2.0 m bgl.

This option was not recommended as the fine grained nature of the material make the re-compacting process difficult to manage and geogrid is largely ineffective in this material unless it is chemically stabilised i.e. with cement or lime.

Groundwater is also likely to be present from 1.6 m bgl and therefore dewatering would likely be required adding additional complexity and expense.

## 11.0 Construction Considerations

### 11.1 Swimming Pool

AECOM is unaware of the plans concerning the existing swimming pool.

If the pool is to remain, the base of the gravel raft may need to be locally excavated so as the base of excavation is not within the area of influence of the pool. This area is defined as the soil above a 45° angle drawn from the base of the pool to the ground surface. If the base of the raft be within this area, the excavation is to be deepened so that it is below the 45° angle.

If the pool is to be backfilled, it should be cleared of all pool infrastructure, including service pipes and backfilled with AP40 gravel and compacted in accordance with the recommendations contained in Section 9.2 above. The pool excavation when backfilled in accordance with the advice contained above could be used for part of the gravel raft beneath the footprint of the new structure.

### 11.2 Excavations

Significantly high strength deposits were not encountered and therefore standard excavation plant may be used during excavation.

### 11.3 Dewatering

Groundwater is assumed to be present from 1.6 m bgl. Excavations are not likely to extend beyond this depth so dewatering is unlikely to be required. However, if the design changes and excavations do extended beyond 1.6 m bgl they may require dewatering. Design of any dewatering methods should be considered at an early stage and designed by a suitably qualified engineer.

### 11.4 Construction Monitoring

The following inspections are required to be made by suitably qualified engineering geologist or geotechnical engineer prior to foundation construction;

- Inspection of the excavation base to confirm the nature and strength of the material at the base of the excavation.
- Inspection of the supplier's fill material specification prior to placement and compaction
- Review of the NDM testing results to confirm adequate compaction has been achieved.

## 12.0 Limitations

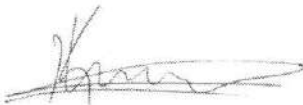
The recommendations and opinions contained in this report are based on a desk study, site observations, and sub-surface investigation. Inferences about ground conditions over the site are made using geological principles and engineering judgment; however, it is possible that conditions over the site may vary and it is therefore not possible to verify the continuity of ground conditions away from the investigation locations.

This report has been prepared for the particular project and purpose described in the brief to us and in this report, and no responsibility is accepted for the use of any part of this report in any other context or for any other purpose.

## 13.0 References

1. Boulanger, R.W., Idriss, I. M. (2014). CPT and SPT based liquefaction triggering procedures. Report No. UCD/CGM-14/01, Center for Geological Modelling, Department of Civil and Environmental Engineering, University of California, Davis, CA, 134 pp.
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3. Bradley and Hughes, 2012b. Conditional Peak Ground Accelerations in the Canterbury Earthquakes for Conventional Liquefaction Assessment: Part 2, Technical Report for the Ministry of Business, Innovation and Employment.
4. Christchurch City Council 2016, Floor Levels website, viewed April 2016, <http://maps.cera.govt.nz/advanced-viewer/?Viewer=Ccc-Floor-Levels>
5. Google Earth Pro, 2016. Viewed May 2016.
6. Google, Inc. 2016, Google Maps, viewed May 2016, <https://www.google.co.nz/maps/preview>
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Yours faithfully



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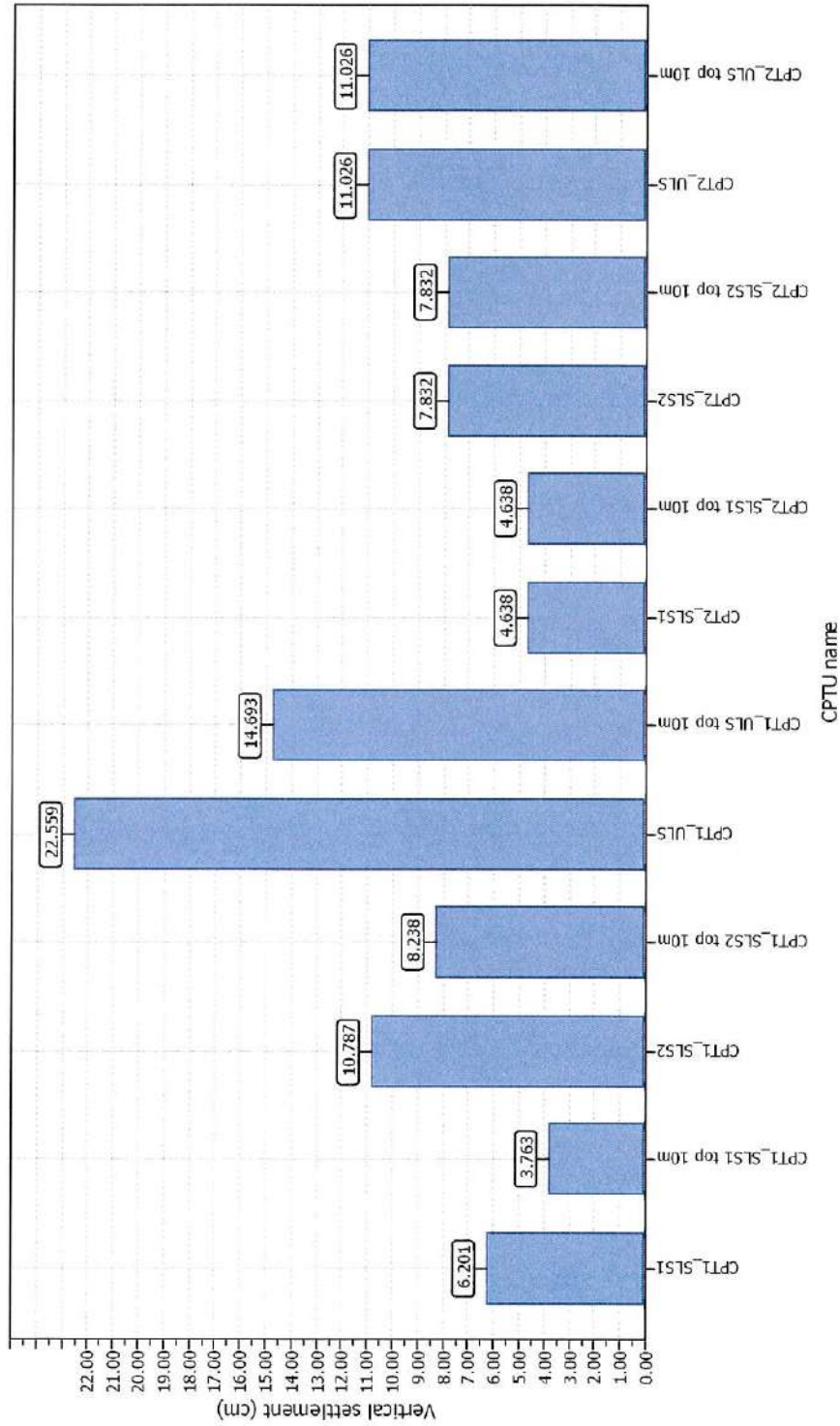
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Direct Dial: +64 3 966 6049  
Direct Fax: +64 3 966 6001

**Attachment A – Liquefaction Analysis Outputs**

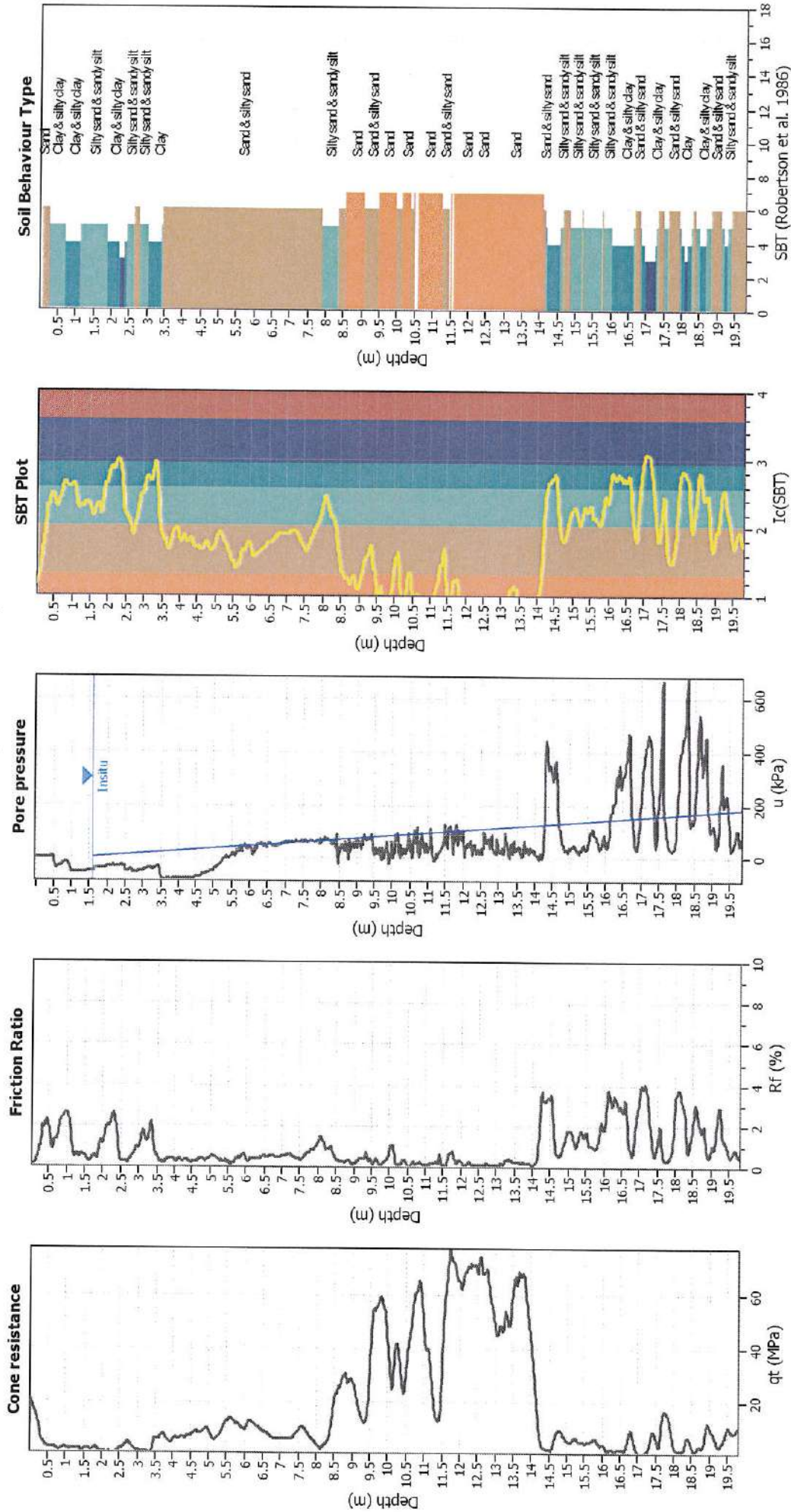
Project title : Liquefaction Assessment

Location : 132 Hoon Hay Road

Overall vertical settlements report



### CPT basic interpretation plots



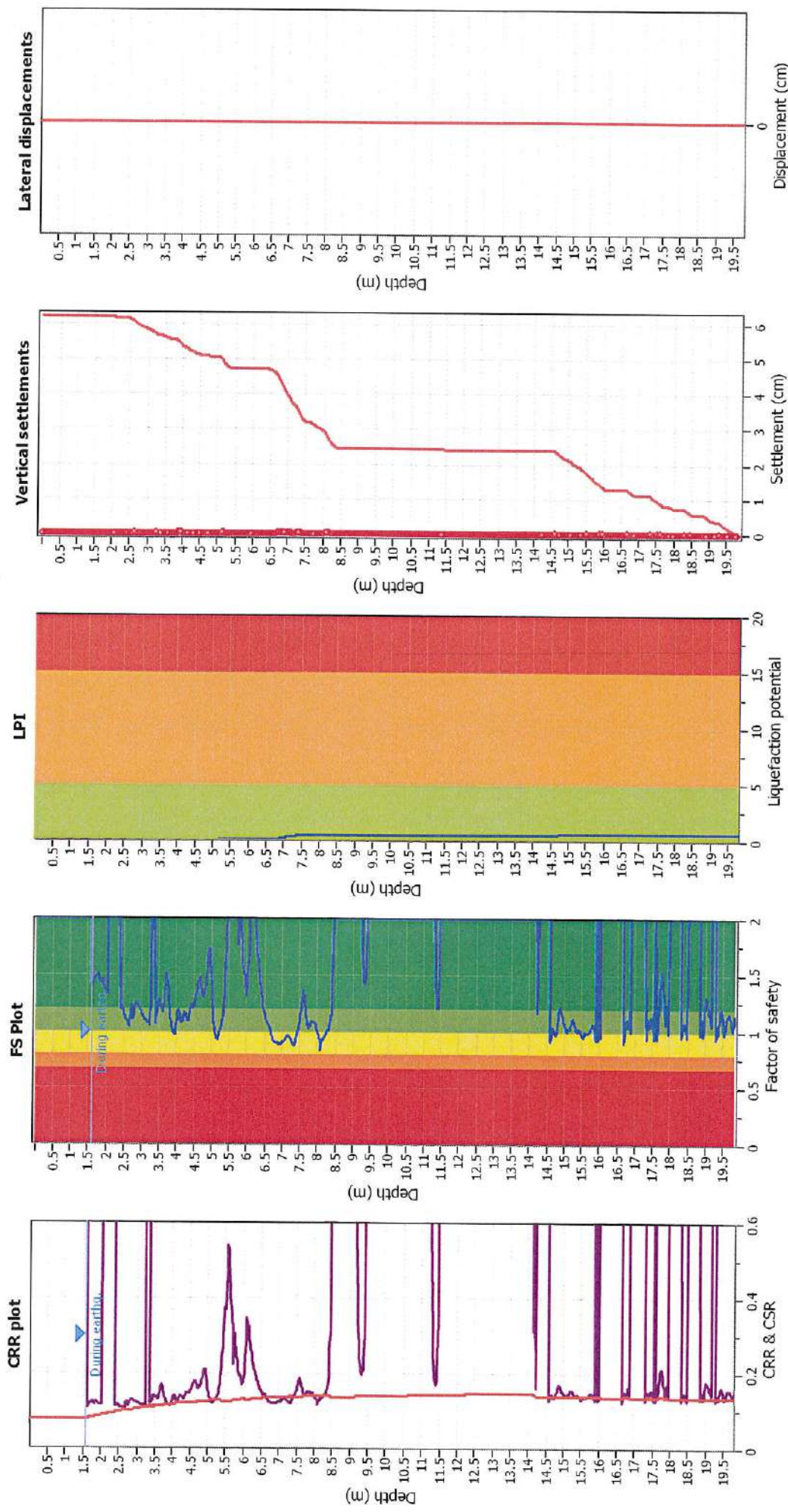
**Input parameters and analysis data**

Analysis method:	B&I (2014)	Fill weight:	N/A
Fines correction method:	B&I (2014)	Transition detect. applied:	No
Points to test:	Based on $I_c$ value	$K_s$ applied:	Yes
Earthquake magnitude $M_w$ :	7.50	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.13	Limit depth applied:	No
Depth to water table (insitu):	1.60 m	Limit depth:	N/A
Depth to GWT (earthq.):	1.60 m		
Average results interval:	3		
$I_c$ cut-off value:	2.60		
Unit weight calculation:	Based on SBT		
Use fill:	No		
Fill height:	N/A		

**SBT legend**

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

### Liquefaction analysis overall plots



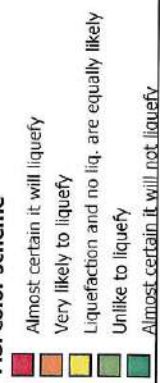
#### Input parameters and analysis data

Analysis method:	B&I (2014)	Fill weight:	N/A
Fines correction method:	B&I (2014)	Transition detect. applied:	No
Points to test:	Based on 1c value	$K_v$ applied:	Yes
Earthquake magnitude $M_w$ :	7.50	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.13	Limit depth applied:	No
Depth to water table (instu):	1.60 m	Limit depth:	N/A

Depth to GW (earth.):	1.60 m	Fill weight:	N/A
Average results interval:	3	Transition detect. applied:	No
1c cut-off value:	2.60	$K_v$ applied:	Yes
Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Use fill:	NO	Limit depth applied:	No
Fill height:	N/A	Limit depth:	N/A

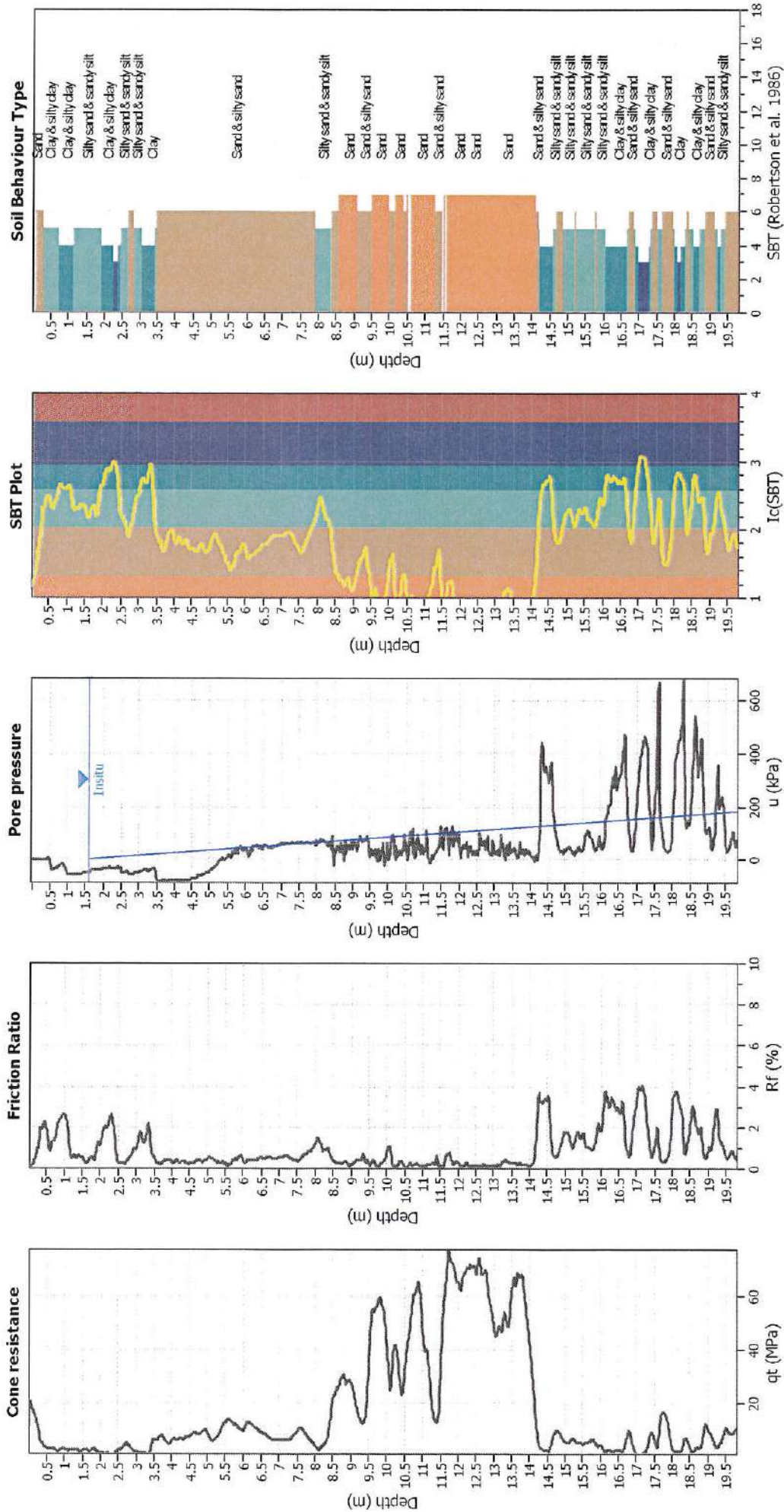
#### F.S. color scheme



#### LPI color scheme



### CPT basic interpretation plots



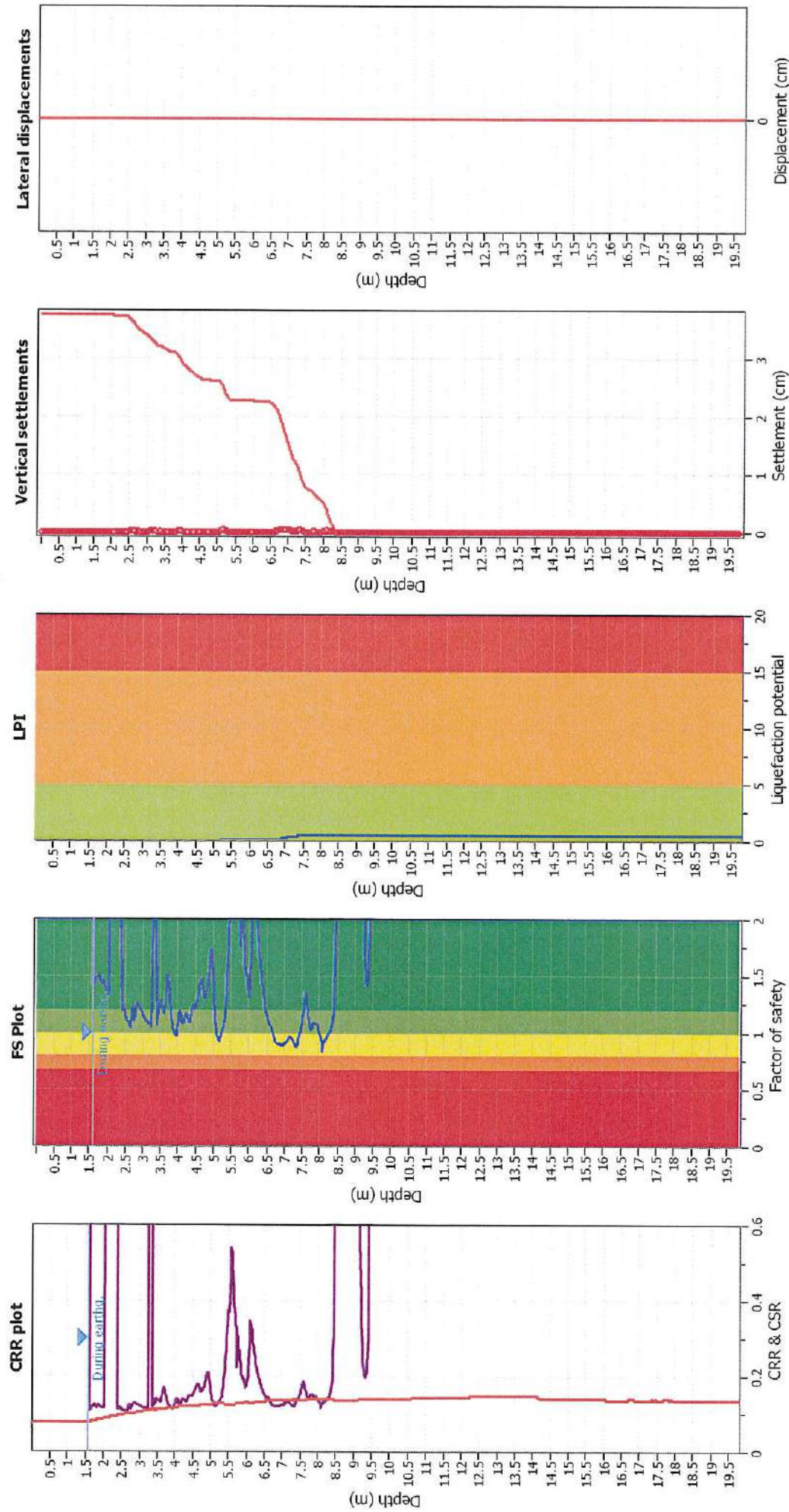
### Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWL (earthq.):	1.60 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K <sub>0</sub> applied:	Yes
Earthquake magnitude M <sub>w</sub> :	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.13	Use fill:	No	Limit depth applied:	Yes
Depth to water table (instfu):	1.60 m	Fill height:	N/A	Limit depth:	10.00 m

### SBT legend

- 1. Sensitive fine grained
- 2. Organic material
- 3. Clay to silty clay
- 4. Clayey silt to silty
- 5. Silty sand to sandy silt
- 6. Clean sand to silty sand
- 7. Gravely sand to sand
- 8. Very stiff sand to
- 9. Very stiff fine grained

### Liquefaction analysis overall plots



#### Input parameters and analysis data

Analysis method: B&I (2014)  
 Fines correction method: B&I (2014)  
 Points to test: Based on I<sub>c</sub> value  
 Earthquake magnitude M<sub>w</sub>: 7.50  
 Peak ground acceleration: 0.13  
 Depth to water table (msitu): 1.60 m

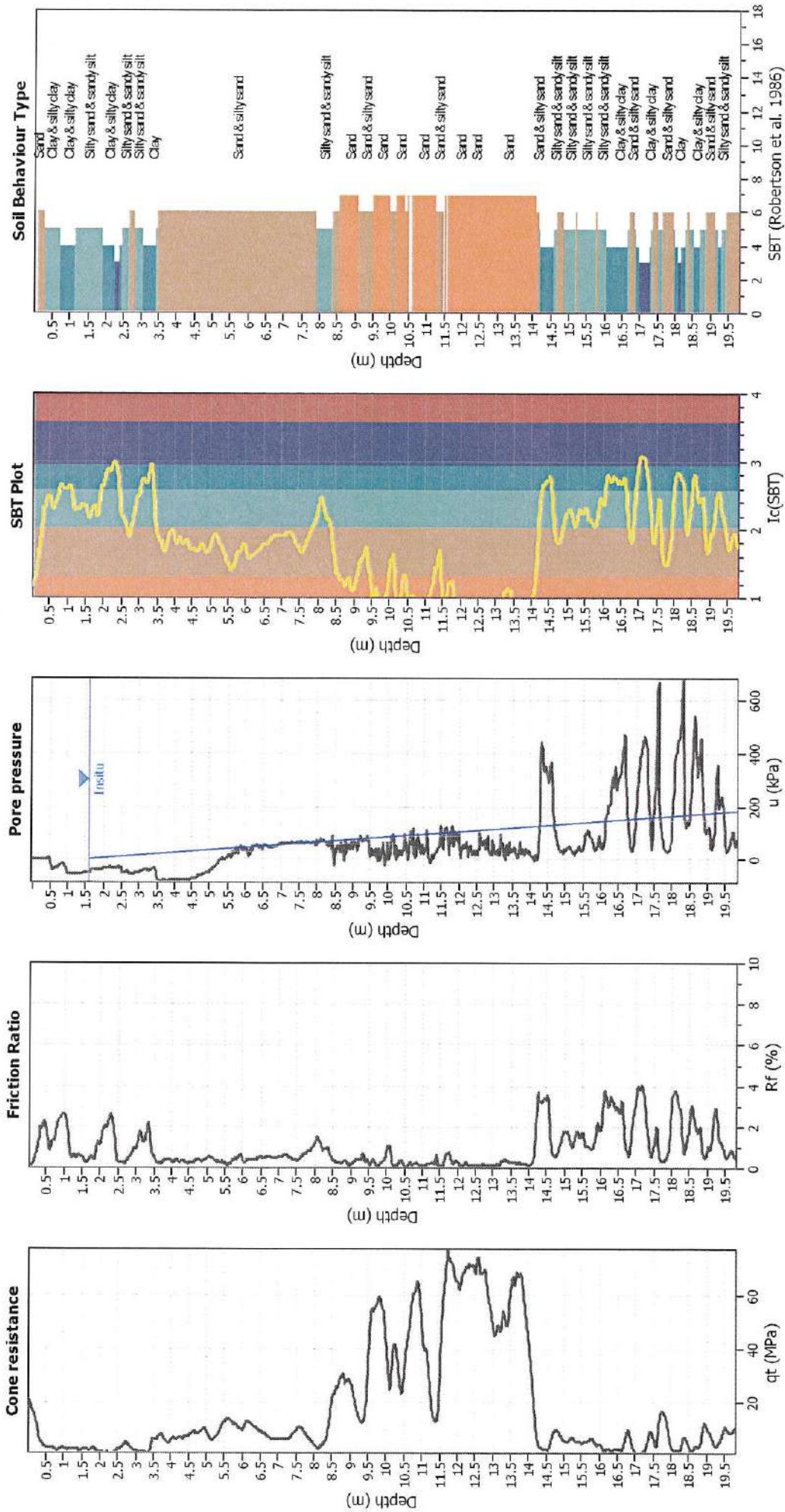
#### F.S. color scheme

Fill weight: N/A  
 Transition detect. applied: No  
 K<sub>s</sub> applied: Yes  
 Clay like behavior applied: Sands only  
 Limit depth applied: Yes  
 Limit depth: 10.00 m

#### LPI color scheme

Almost certain it will liquefy  
 Very likely to liquefy  
 Liquefaction and no liq. are equally likely  
 Unlike to liquefy  
 Almost certain it will not liquefy

### CPT basic interpretation plots



#### SBT legend

- 1. Sensitive fine grained
- 2. Organic material
- 3. Clay to silty clay
- 4. Clayey silt to silty
- 5. Silty sand to sandy silt
- 6. Clean sand to silty sand
- 7. Gravely sand to sand
- 8. Very stiff sand to
- 9. Very stiff fine grained

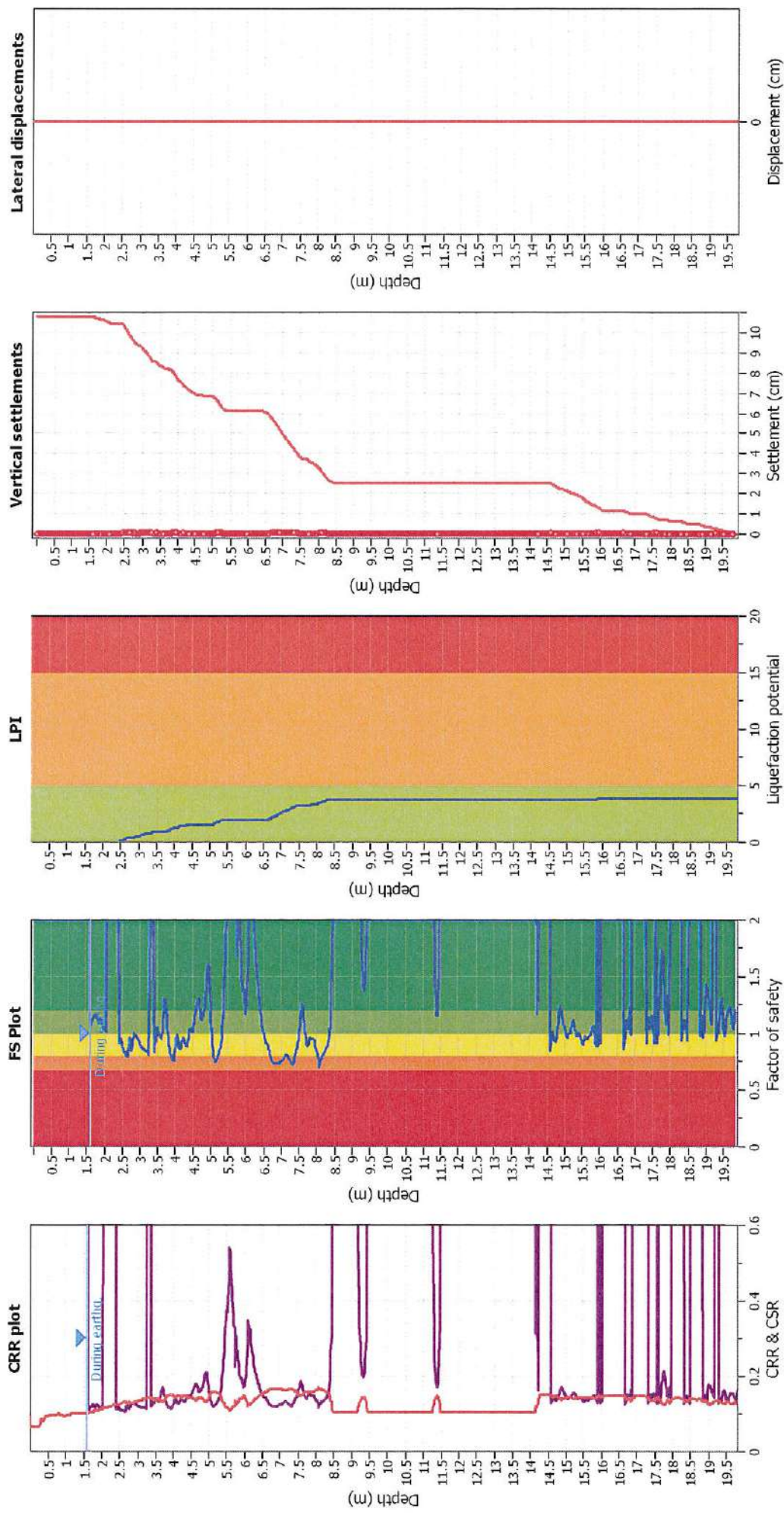
#### Input parameters and analysis data

Analysis method:	B&J (2014)	Fill weight:	N/A
Fines correction method:	B&J (2014)	Transition detect. applied:	No
Points to test:	Based on Ic value	K <sub>s</sub> applied:	Yes
Earthquake magnitude M <sub>w</sub> :	6.00	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.19	Limit depth applied:	No
Depth to water table (Insitu):	1.60 m	Limit depth:	N/A
Depth to GWT (earthq.):	1.60 m		
Average results interval:	3		
Ic cut-off value:	2.60		
Unit weight calculation:	Based on SBT		
Use fill:	No		
Fill height:	N/A		

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Project file: C:\Users\Wilsonj\Desktop\KL132 Hoon Hay Road\132 Hoon Hay Road - 2016.dwg

### Liquefaction analysis overall plots



#### Input parameters and analysis data

Analysis method: B&I (2014)  
 Fines correction method: B&I (2014)  
 Points to test: Based on ic value  
 Earthquake magnitude  $M_w$ : 6.00  
 Peak ground acceleration: 0.19  
 Depth to water table (insitu): 1.60 m

#### F.S. color scheme

Almost certain it will liquefy  
 Very likely to liquefy  
 Liquefaction and no liq. are equally likely  
 Unlike to liquefy  
 Almost certain it will not liquefy

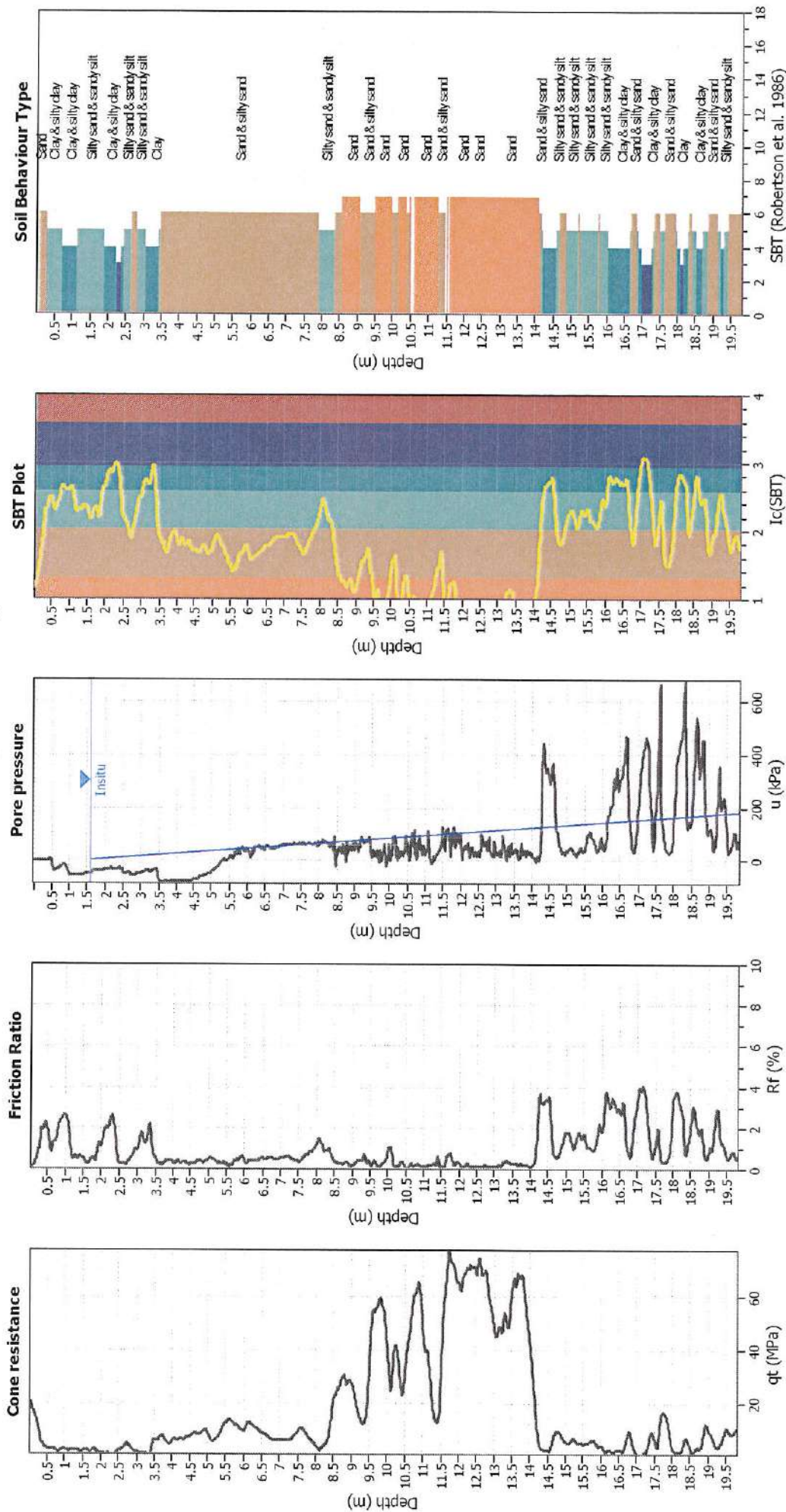
#### LPI color scheme

Very high risk  
 High risk  
 Low risk

#### Fill weight: Transition detect. applied: $K_0$ applied: Clay like behavior applied: Limit depth applied:

Depth to GW (earthq.): 1.60 m  
 Average results interval: 3  
 ic cut-off value: 2.60  
 Unit weight calculation: Based on SBT  
 Use fill: No  
 Fill height: N/A

### CPT basic interpretation plots



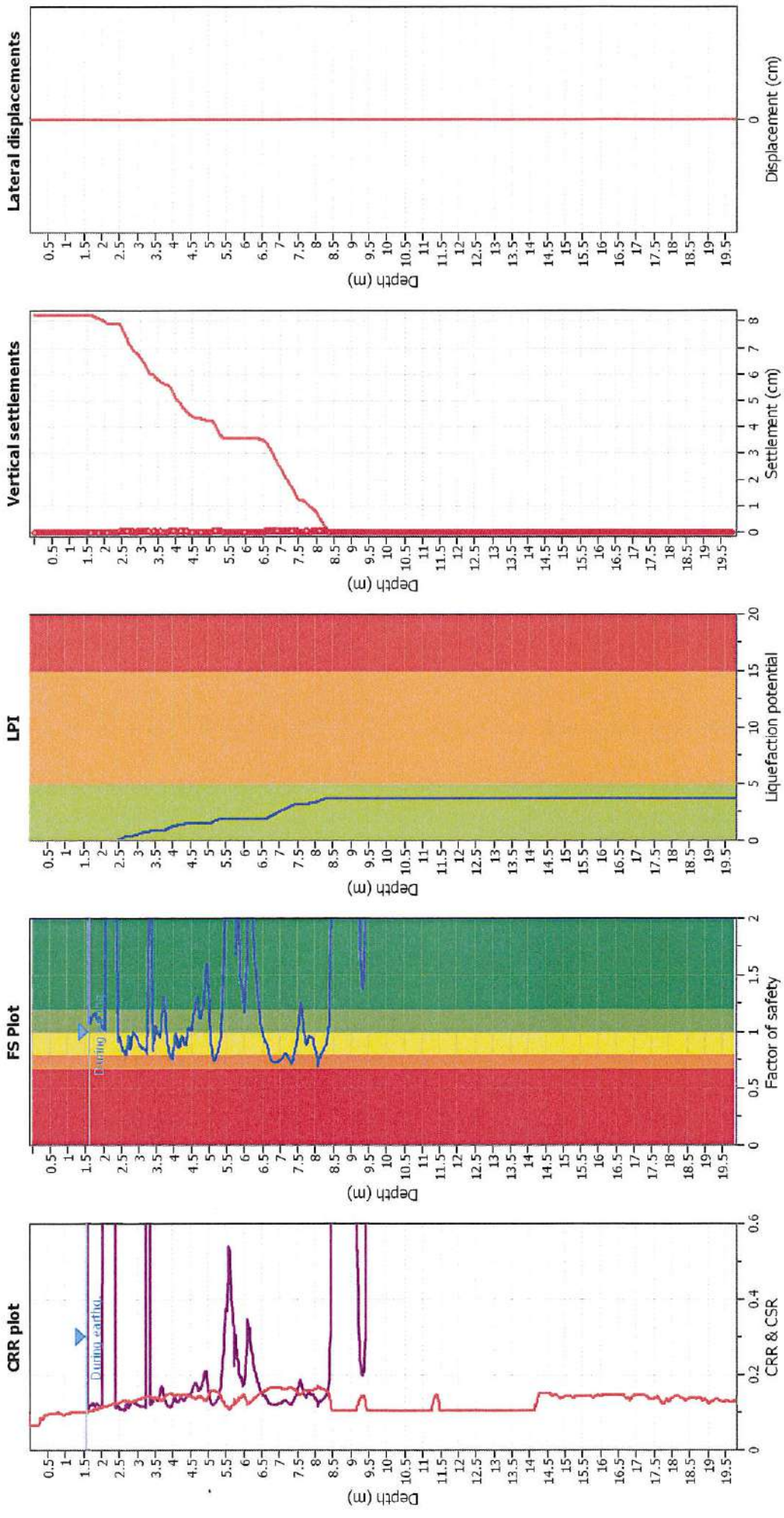
### Input parameters and analysis data

Analysis method:	B&I (2014)	Fill weight:	N/A
Fines correction method:	B&I (2014)	Transition detect. applied:	No
Points to test:	Based on $I_c$ value	$K_c$ applied:	Sands only
Earthquake magnitude $M_w$ :	6.00	Clay like behavior applied:	Yes
Peak ground acceleration:	0.19	Limit depth applied:	Yes
Depth to water table (insttu):	1.60 m	Limit depth:	10.00 m
Depth to GWT (erthqt <sub>1</sub> ):	1.60 m		
Average results interval:	3		
$I_c$ cut-off value:	2.60		
Unit weight calculation:	Based on SBT		
Use fill:	No		
Fill height:	N/A		

### SBT legend

- 1. Sensitive fine grained
- 2. Organic material
- 3. Clay to silty clay
- 4. Clayey silt to silty
- 5. Silty sand to sandy silt
- 6. Clean sand to silty sand
- 7. Gravely sand to sand
- 8. Very stiff sand to
- 9. Very stiff fine grained

### Liquefaction analysis overall plots



### Input parameters and analysis data

Analysis method: B&I (2014)  
 Fines correction method: B&I (2014)  
 Points to test: Based on  $I_c$  value  
 Earthquake magnitude  $M_w$ : 6.00  
 Peak ground acceleration: 0.19  
 Depth to water table (insttu): 1.60 m

Depth to GW (erthq.): 1.60 m  
 Average results interval: 3  
 $I_c$  cut-off value: 2.60  
 Unit weight calculation: Based on SBT  
 Use fill: No  
 Fill height: N/A

Fill weight: N/A  
 Transition detect. applied: No  
 $K_s$  applied: Yes  
 Clay like behavior applied: Sands only  
 Limit depth applied: Yes  
 Limit depth: 10.00 m

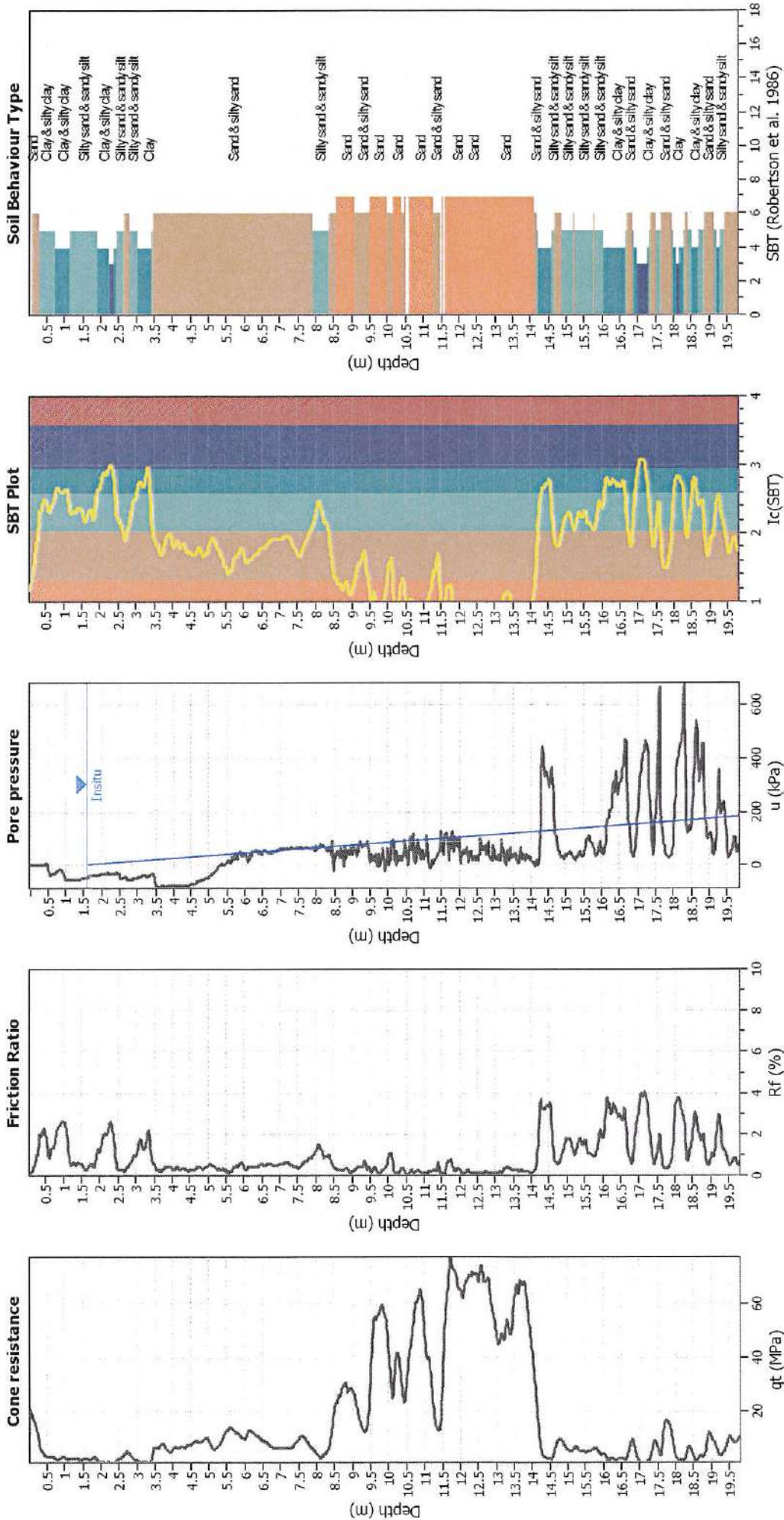
**F.S. color scheme**

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

**LPI color scheme**

- Very high risk
- High risk
- Low risk

### CPT basic interpretation plots



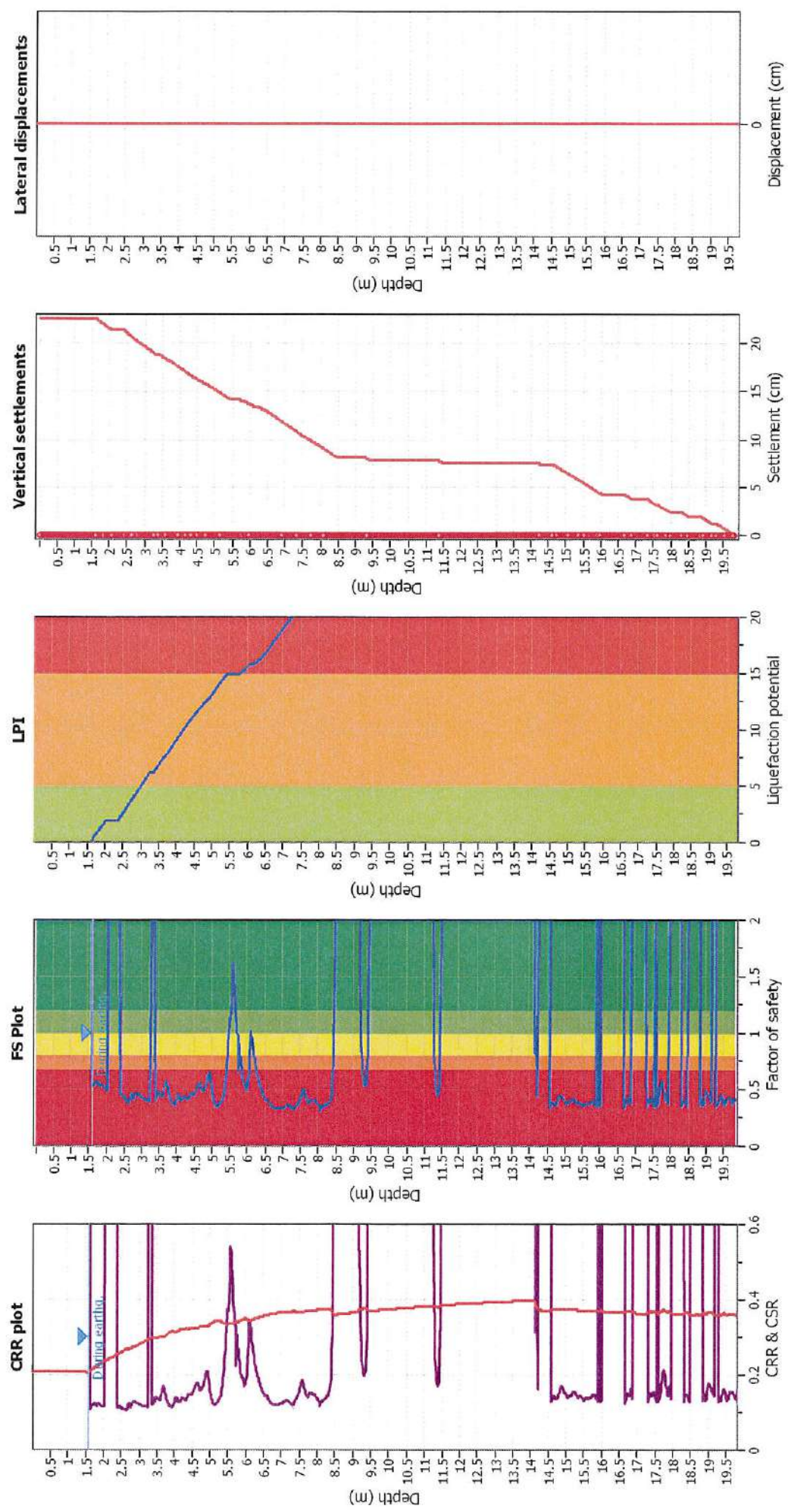
### Input parameters and analysis data

Analysis method:	B&I (2014)	Fill weight:	N/A
Fines correction method:	B&I (2014)	Transition detect. applied:	No
Points to test:	Based on $I_c$ value	$K_g$ applied:	Yes
Earthquake magnitude $M_w$ :	7.50	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.35	Limit depth applied:	No
Depth to water table (instku):	1.60 m	Limit depth:	N/A
Depth to GWL (earthq.):	1.60 m		
Average results interval:	3		
$I_c$ cut-off value:	2.60		
Unit weight calculation:	Based on SBT		
Use fill:	No		
Fill height:	N/A		

### SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

### Liquefaction analysis overall plots



#### Input parameters and analysis data

Analysis method: B&I (2014)  
 Fines correction method: B&I (2014)  
 Points to test: Based on I<sub>c</sub> value  
 Earthquake magnitude M<sub>w</sub>: 7.50  
 Peak ground acceleration: 0.35  
 Depth to water table (insitu): 1.60 m

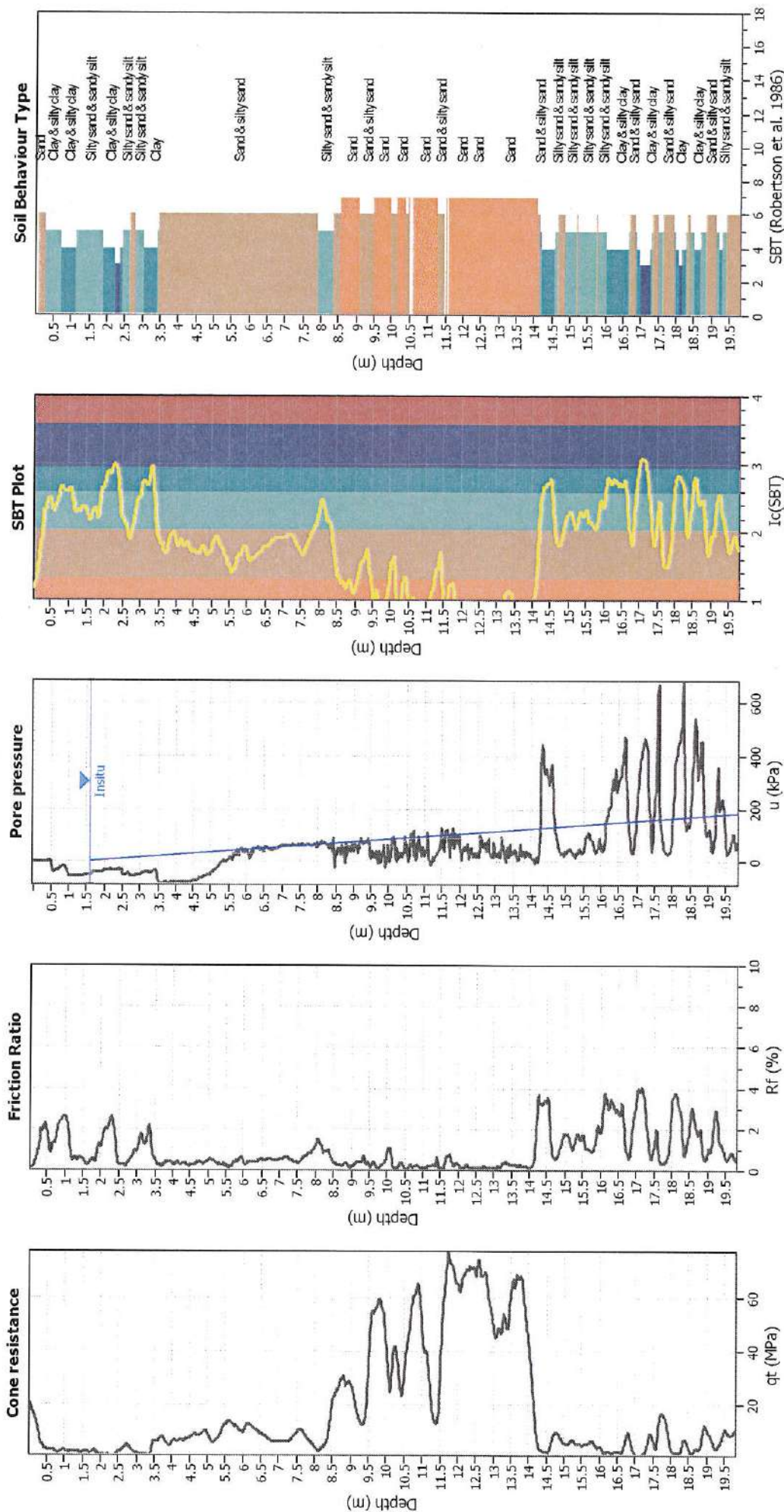
#### F.S. color scheme

Fill weight: N/A  
 Transition detect. applied: No  
 K<sub>0</sub> applied: Yes  
 Clay like behavior applied: Sands only  
 Limit depth applied: No  
 Limit depth: N/A

#### LPI color scheme

Almost certain it will liquefy  
 Very likely to liquefy  
 Liquefaction and no liq. are equally likely  
 Unlike to liquefy  
 Almost certain it will not liquefy

### CPT basic interpretation plots



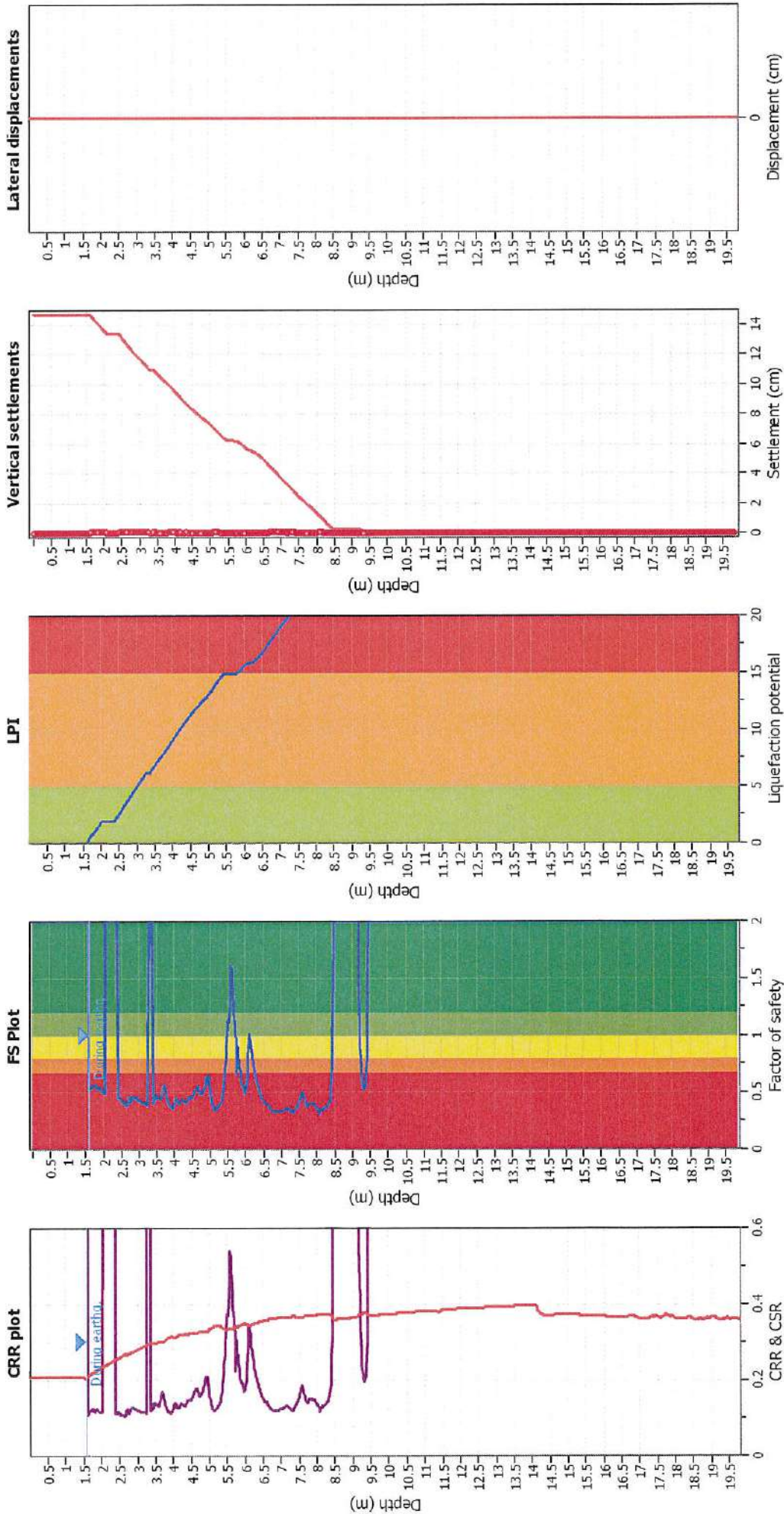
### Input parameters and analysis data

Analysis method:	BB&I (2014)	Fill weight:	N/A
Fines correction method:	BB&I (2014)	Transition detect. applied:	No
Points to test:	Based on Ic value	K <sub>s</sub> applied:	Yes
Earthquake magnitude M <sub>w</sub> :	7.50	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.35	Limit depth applied:	Yes
Depth to water table (insitu):	1.60 m	Limit depth:	10.00 m
Depth to GWL (erthq.):	1.60 m		
Average results interval:	3		
Ic cut-off value:	2.60		
Unit weight calculation:	Based on SBT		
Use fill:	No		
Fill height:	N/A		

### SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

### Liquefaction analysis overall plots



#### Input parameters and analysis data

Analysis method: B&I (2014)  
 Fines correction method: B&I (2014)  
 Points to test: Based on  $I_c$  value  
 Earthquake magnitude  $M_w$ : 7.50  
 Peak ground acceleration: 0.35  
 Depth to water table (mslu): 1.60 m

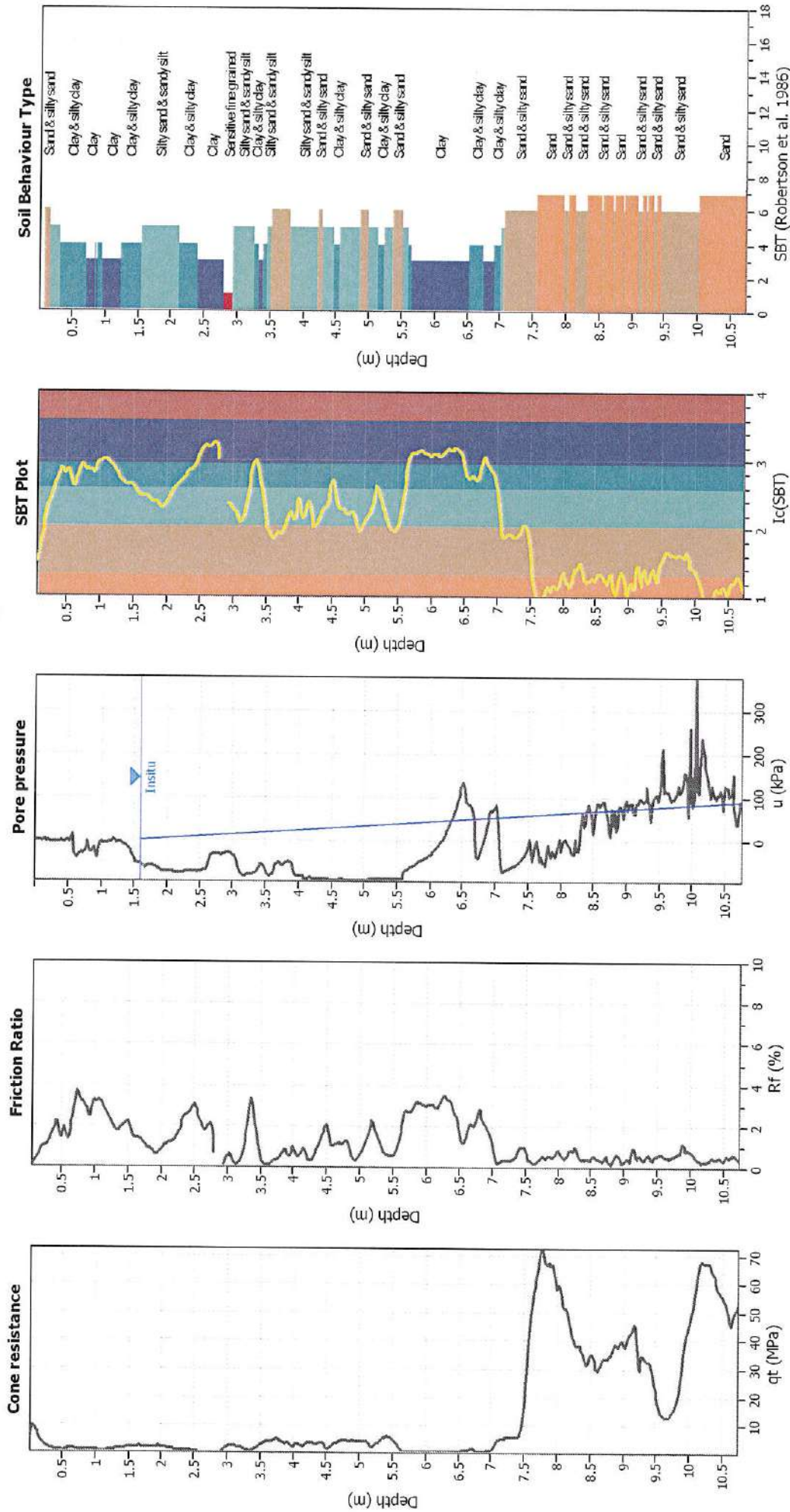
#### F.S. color scheme

Fill weight: N/A  
 Transition detect. applied: No  
 $K_s$  applied: Yes  
 Clay like behavior applied: Sands only  
 Limit depth applied: Yes  
 Limit depth: 10.00 m

#### LPI color scheme

Very high risk  
 High risk  
 Low risk

### CPT basic interpretation plots



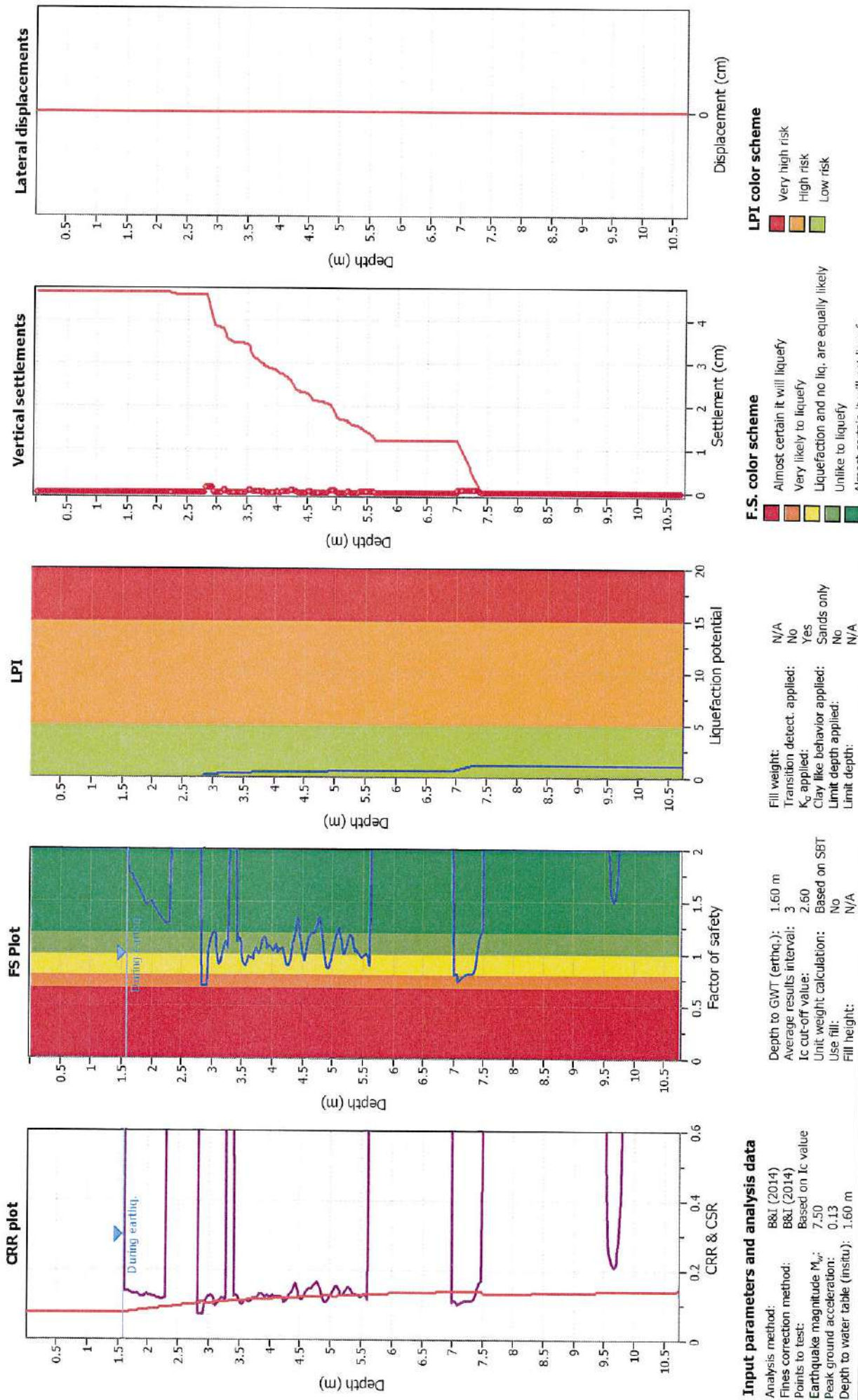
### Input parameters and analysis data

Analysis method:	B&I (2014)	Fill weight:	N/A
Fines correction method:	B&I (2014)	Transition detect. applied:	No
Points to test:	Based on Ic value	K <sub>s</sub> applied:	Yes
Earthquake magnitude M <sub>w</sub> :	7.50	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.13	Limit depth applied:	No
Depth to water table (insitu):	1.50 m	Limit depth:	N/A
Depth to GWT (earthq.):	1.60 m		
Average results interval:	3		
Ic cut-off value:	2.60		
Unit weight calculation:	Based on SBT		
Use fill:	No		
Fill height:	N/A		

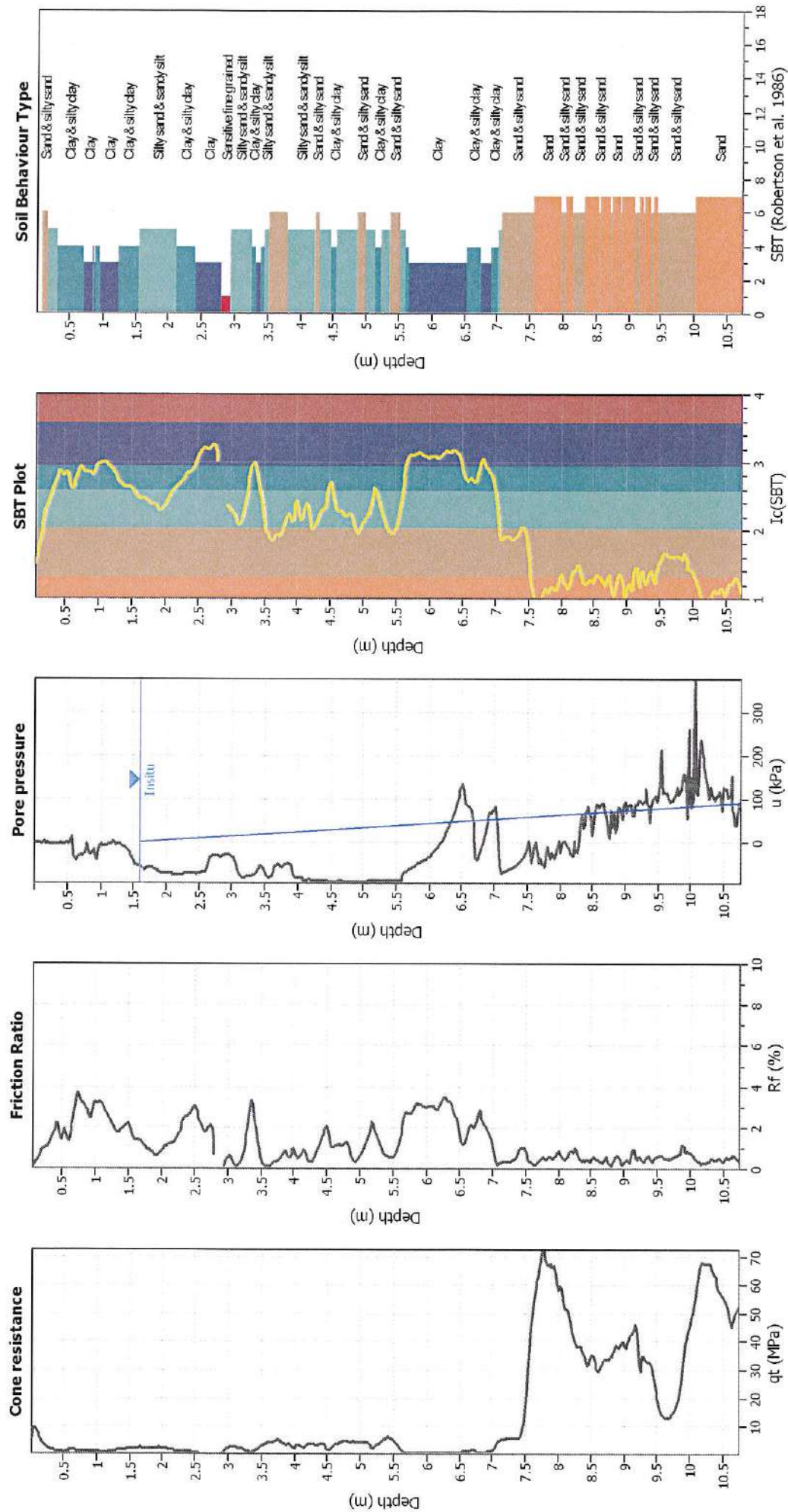
### SBT legend

- 1. Sensitive fine grained
- 2. Organic material
- 3. Clay to silty clay
- 4. Clayey silt to silty
- 5. Silty sand to sandy silt
- 6. Clean sand to silty sand
- 7. Gravely sand to sand
- 8. Very stiff sand to
- 9. Very stiff fine grained

### Liquefaction analysis overall plots



### CPT basic interpretation plots



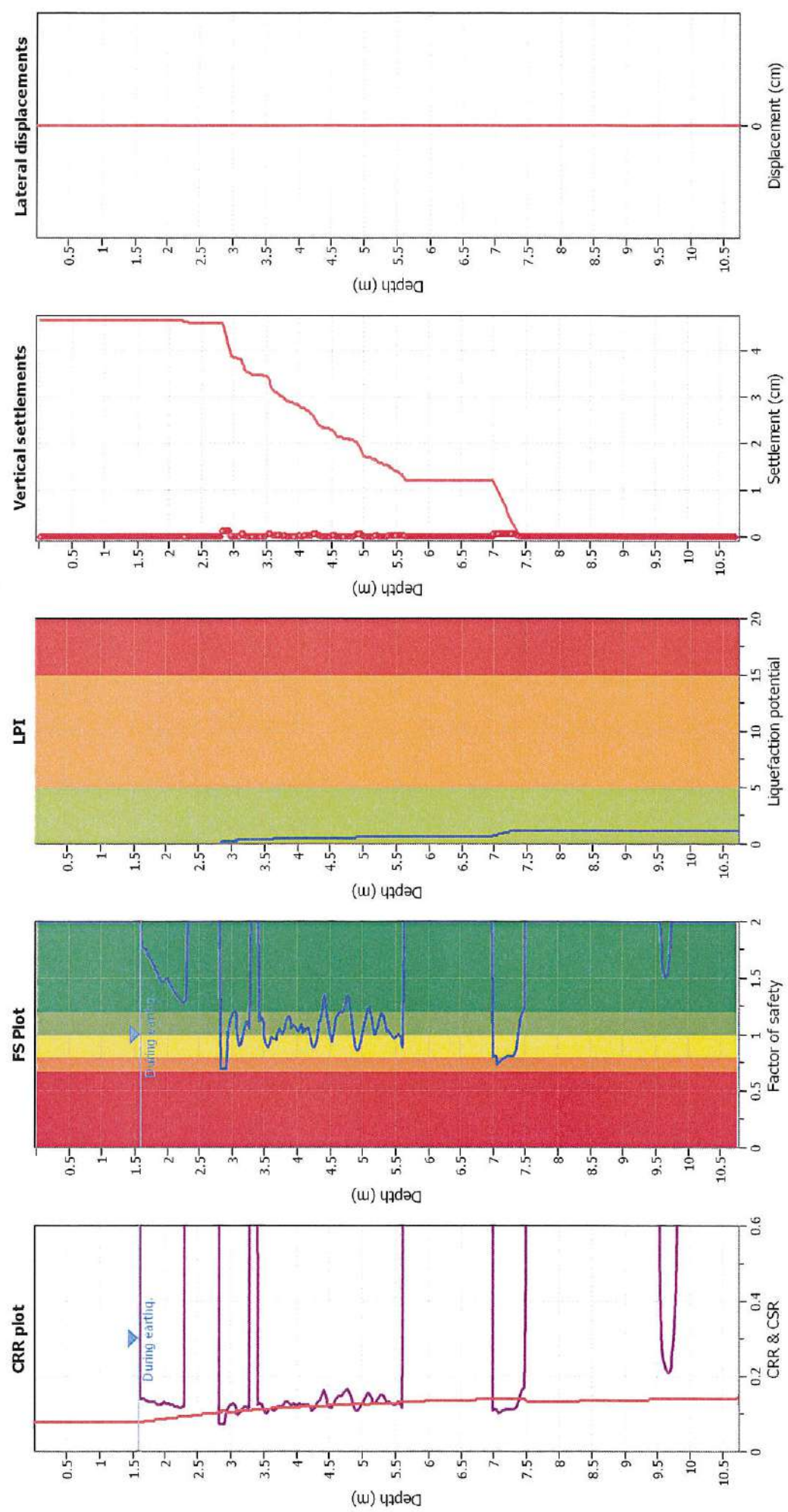
### Input parameters and analysis data

Analysis method:	B&I (2014)	Fill weight:	N/A
Fines correction method:	B&I (2014)	Transition detect. applied:	No
Points to test:	Based on Ic value	K <sub>s</sub> applied:	Yes
Earthquake magnitude M <sub>w</sub> :	7.50	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.13	Limit depth applied:	Yes
Depth to water table (insitu):	1.60 m	Limit depth:	10.00 m
Depth to GWT (earthq.):	1.60 m		
Average results interval:	3		
Ic cut-off value:	2.60		
Unit weight calculation:	Based on SBT		
Use fill:	No		
Fill height:	N/A		

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Project file: C:\Users\Wilsonj\Desktop\KL\132 Hoon Hay Road\132 Hoon Hay Road - 2016.ciq

### Liquefaction analysis overall plots



#### Input parameters and analysis data

Analysis method: B&I (2014)  
 Fines correction method: B&I (2014)  
 Points to test: Based on lc value  
 Earthquake magnitude  $M_w$ : 7.50  
 Peak ground acceleration: 0.13  
 Depth to water table (insitu): 1.60 m

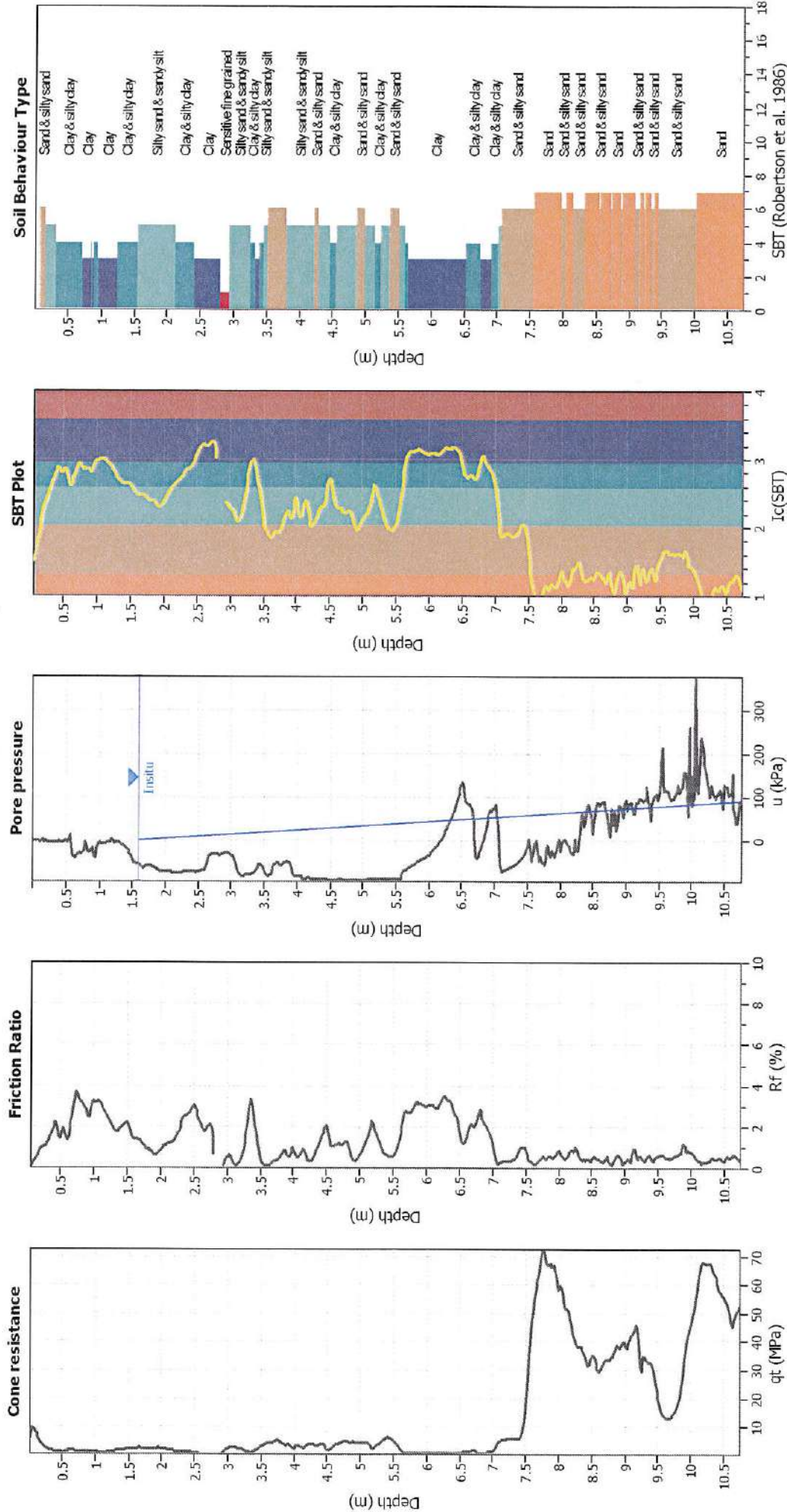
#### F.S. color scheme

Fill weight: N/A  
 Transition detect. applied: No  
 $K_p$  applied: Yes  
 Clay like behavior applied: Sands only  
 Limit depth applied: Yes  
 Limit depth: 10.00 m

#### LPI color scheme

Almost certain it will liquefy  
 Very likely to liquefy  
 Liquefaction and no liq. are equally likely  
 Unlikely to liquefy  
 Almost certain it will not liquefy

### CPT basic interpretation plots



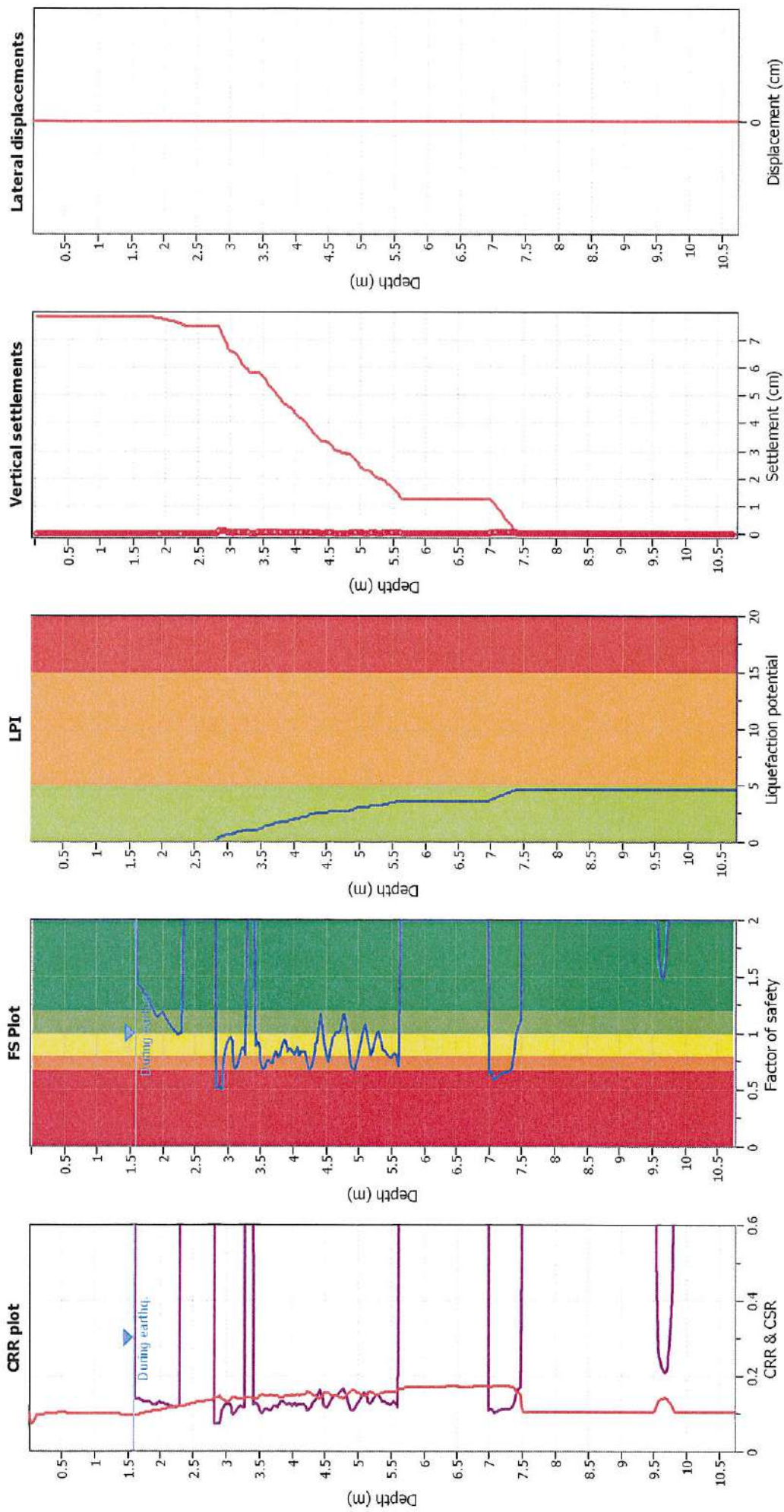
### Input parameters and analysis data

Analysis method:	B&I (2014)	Fill weight:	N/A
Fines correction method:	B&I (2014)	Transition detect. applied:	No
Points to test:	Based on ic value	$K_0$ applied:	Yes
Earthquake magnitude $M_w$ :	6.00	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.19	Limit depth applied:	No
Depth to water table (insitu):	1.60 m	Limit depth:	N/A
Depth to GWL (earthq.):	1.60 m		
Average results interval:	3		
Ic cut-off value:	2.60		
Unit weight calculation:	Based on SBT		
Use fill:	No		
Fill height:	N/A		

### SBT legend

- 1. Sensitive fine grained
- 2. Organic material
- 3. Clay to silty clay
- 4. Clayey silt to silty
- 5. Silty sand to sandy silt
- 6. Clean sand to silty sand
- 7. Gravely sand to sand
- 8. Very stiff sand to
- 9. Very stiff fine grained

### Liquefaction analysis overall plots



#### Input parameters and analysis data

Analysis method: B&I (2014)  
 Fines correction method: B&I (2014)  
 Points to test: Based on Ic value  
 Earthquake magnitude  $M_w$ : 6.00  
 Peak ground acceleration: 0.19  
 Depth to water table (insitu): 1.60 m

#### F.S. color scheme

■ Almost certain it will liquefy  
■ Very likely to liquefy  
■ Liquefaction and no liq. are equally likely  
■ Unlike to liquefy  
■ Almost certain it will not liquefy

#### LPI color scheme

■ Very high risk  
■ High risk  
■ Low risk

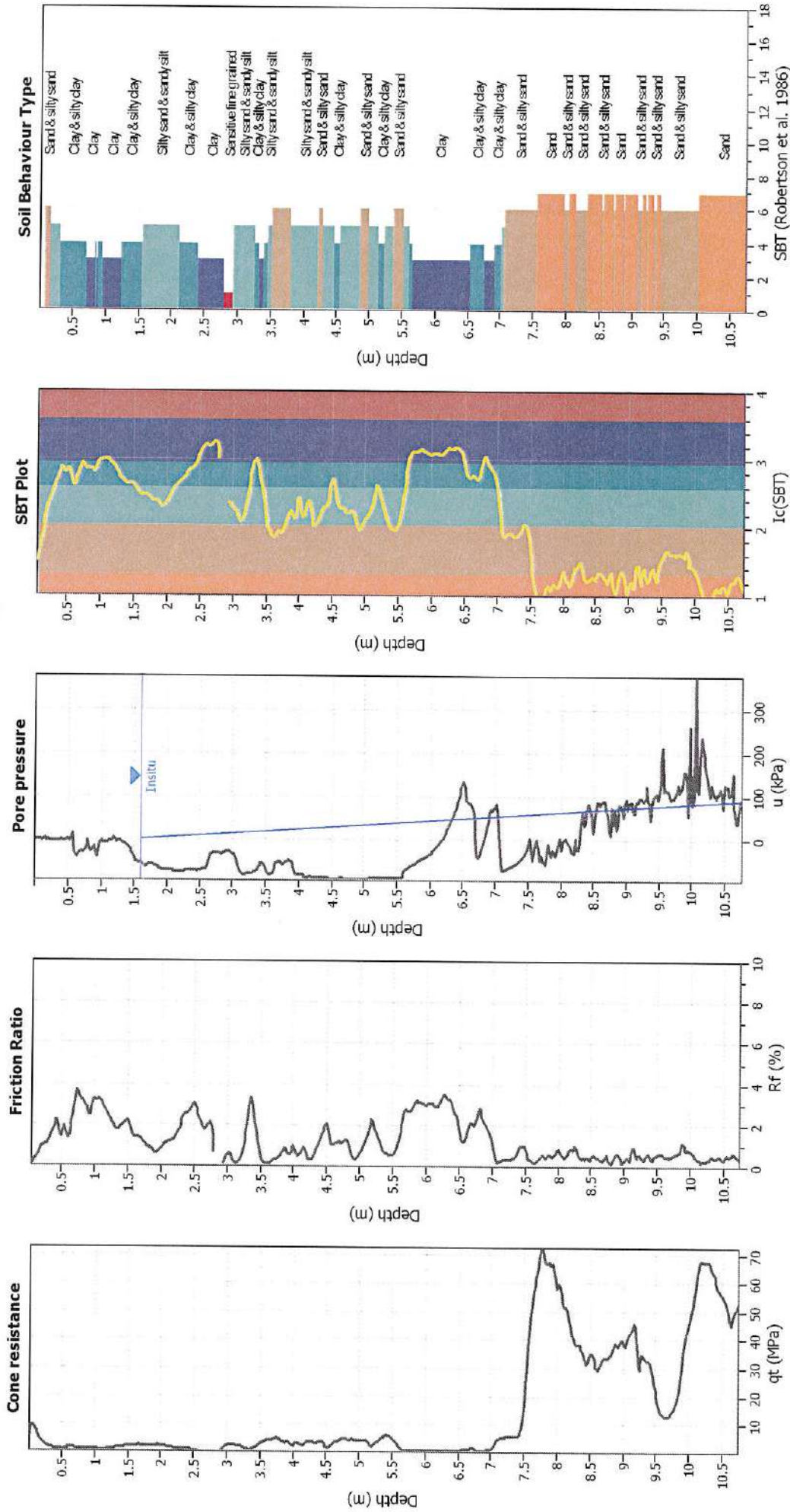
#### Fill weight:

Depth to GW (earthq.): 1.60 m  
 Average results interval: 3  
 Ic cut-off value: 2.60  
 Unit weight calculation: Based on SBT  
 Use fill: No  
 Fill height: N/A

#### Transition detect. applied:

Fill weight: N/A  
 Transition detect. applied: No  
 $K_s$  applied: Yes  
 Clay like behavior applied: Sands only  
 Limit depth applied: No  
 Limit depth: N/A

### CPT basic interpretation plots



### Input parameters and analysis data

Analysis method:	B&I (2014)	Fill weight:	N/A
Fines correction method:	B&I (2014)	Transition detect. applied:	No
Points to test:	Based on Ic value	K <sub>s</sub> applied:	Yes
Earthquake magnitude M <sub>w</sub> :	6.00	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.19	Limit depth applied:	Yes
Depth to water table (insitu):	1.60 m	Limit depth:	10.00 m
Depth to GWL (erthq.):	1.60 m		
Average results interval:	3		
Ic cut-off value:	2.60		
Unit weight calculation:	Based on SBT		
Use fill:	No		
Fill height:	N/A		

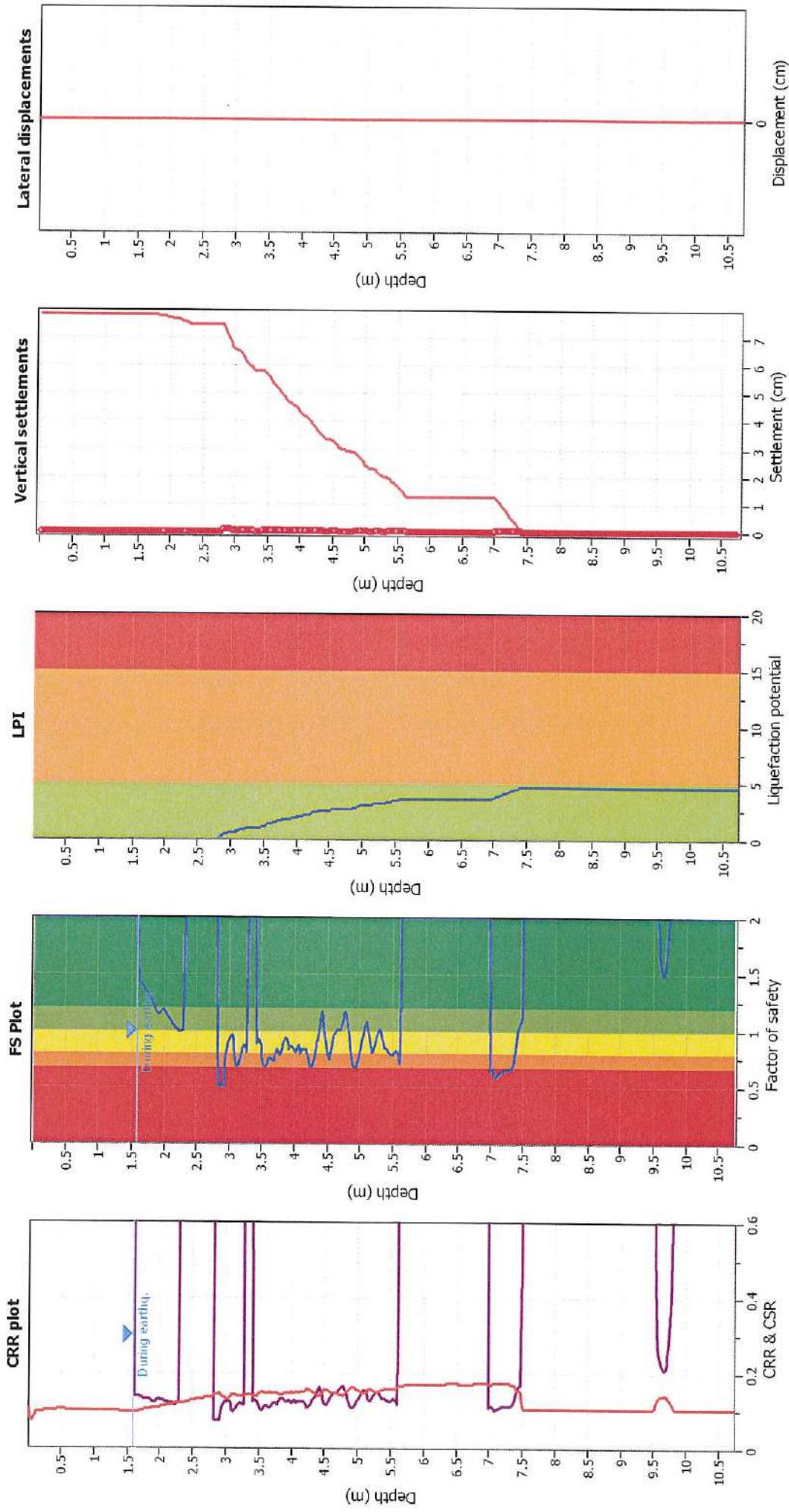
### SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

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Project file: C:\Users\Wilson\X\Desktop\K\132 Hoon Hay Road\132 Hoon Hay Road - 2016.ciq

### Liquefaction analysis overall plots



#### Input parameters and analysis data

Analysis method: B&I (2014)  
 Fines correction method: B&I (2014)  
 Points to test: Based on I<sub>c</sub> value  
 Earthquake magnitude M<sub>w</sub>: 6.00  
 Peak ground acceleration: 0.19  
 Depth to water table (insitu): 1.60 m

Depth to GWL (earthq.): 1.60 m  
 Average results interval: 3  
 I<sub>c</sub> cut-off value: 2.60  
 Unit weight calculation: Based on SBT  
 Use fill: No  
 Fill height: N/A

Fill weight: N/A  
 Transition detect. applied: No  
 K<sub>s</sub> applied: Yes  
 Clay like behavior applied: Sands only  
 Limit depth applied: Yes  
 Limit depth: 10.00 m

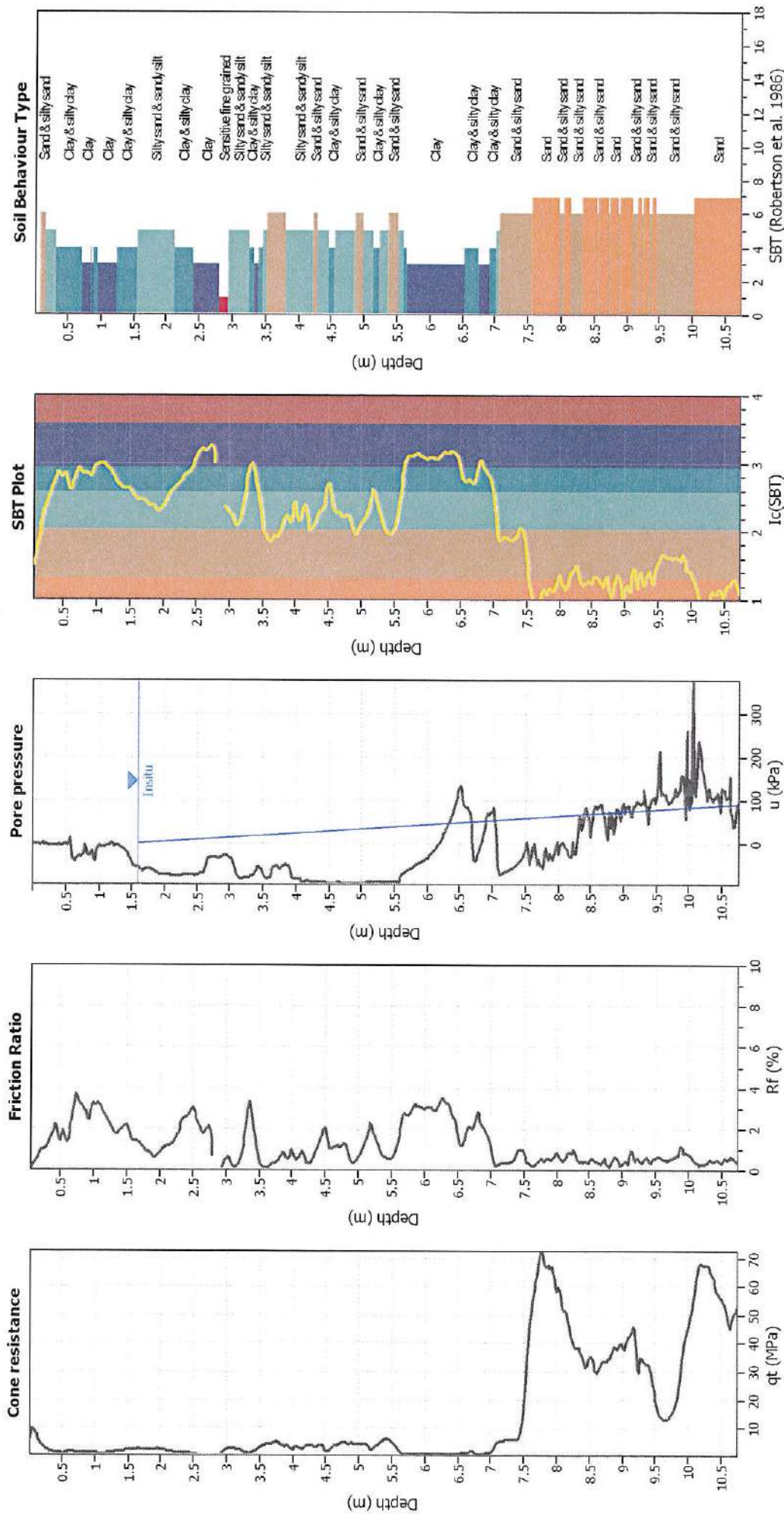
#### F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

#### LPI color scheme

- Very high risk
- High risk
- Low risk

### CPT basic interpretation plots



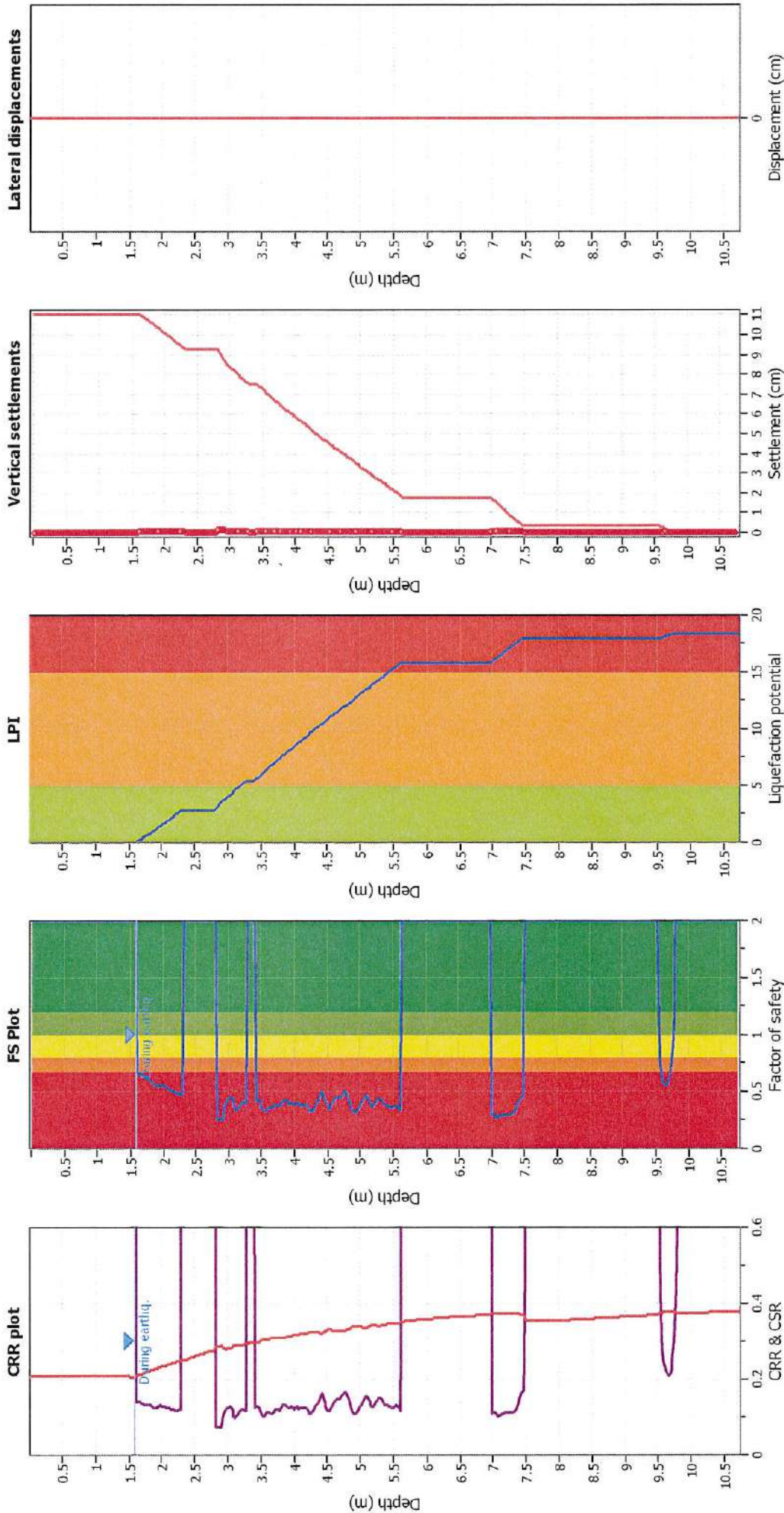
### Input parameters and analysis data

Analysis method:	B&I (2014)	Fill weight:	N/A
Fines correction method:	B&I (2014)	Transition detect. applied:	No
Points to test:	Based on Ic value	K <sub>c</sub> applied:	Yes
Earthquake magnitude M <sub>w</sub> :	7.50	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.35	Limit depth applied:	No
Depth to water table (insitu):	1.60 m	Limit depth:	N/A
Depth to GWL (earthq.):	1.60 m		
Average results interval:	3		
Ic cut-off value:	2.60		
Unit weight calculation:	Based on SBT		
Use fill:	No		
Fill height:	N/A		

### SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

### Liquefaction analysis overall plots



#### Input parameters and analysis data

Analysis method: B&I (2014)  
 Fines correction method: B&I (2014)  
 Points to test: Based on I<sub>c</sub> value  
 Earthquake magnitude M<sub>w</sub>: 7.50  
 Peak ground acceleration: 0.35  
 Depth to water table (insitu): 1.60 m

Depth to GW (earthq.): 1.60 m  
 Average results interval: 3  
 I<sub>c</sub> cut-off value: 2.60  
 Unit weight calculation: Based on SBT  
 Use fill: No  
 Fill height: N/A

Fill weight: N/A  
 Transition detect. applied: No  
 K<sub>s</sub> applied: Yes  
 Clay like behavior applied: Sands only  
 Limit depth applied: No  
 Limit depth: N/A

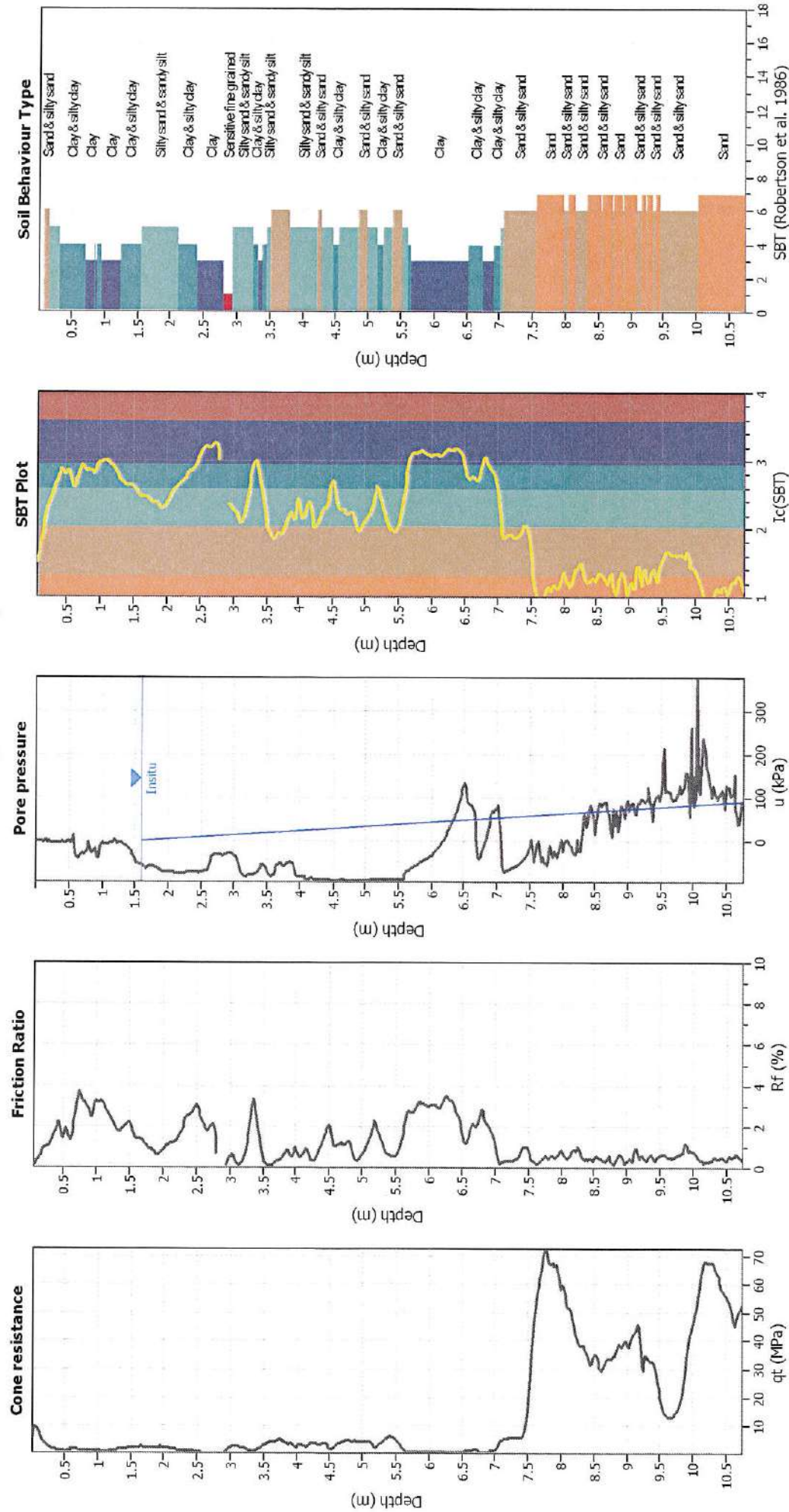
#### F.S. color scheme

Almost certain it will liquefy  
 Very likely to liquefy  
 Liquefaction and no liq. are equally likely  
 Unlikely to liquefy  
 Almost certain it will not liquefy

#### LPI color scheme

Very high risk  
 High risk  
 Low risk

### CPT basic interpretation plots



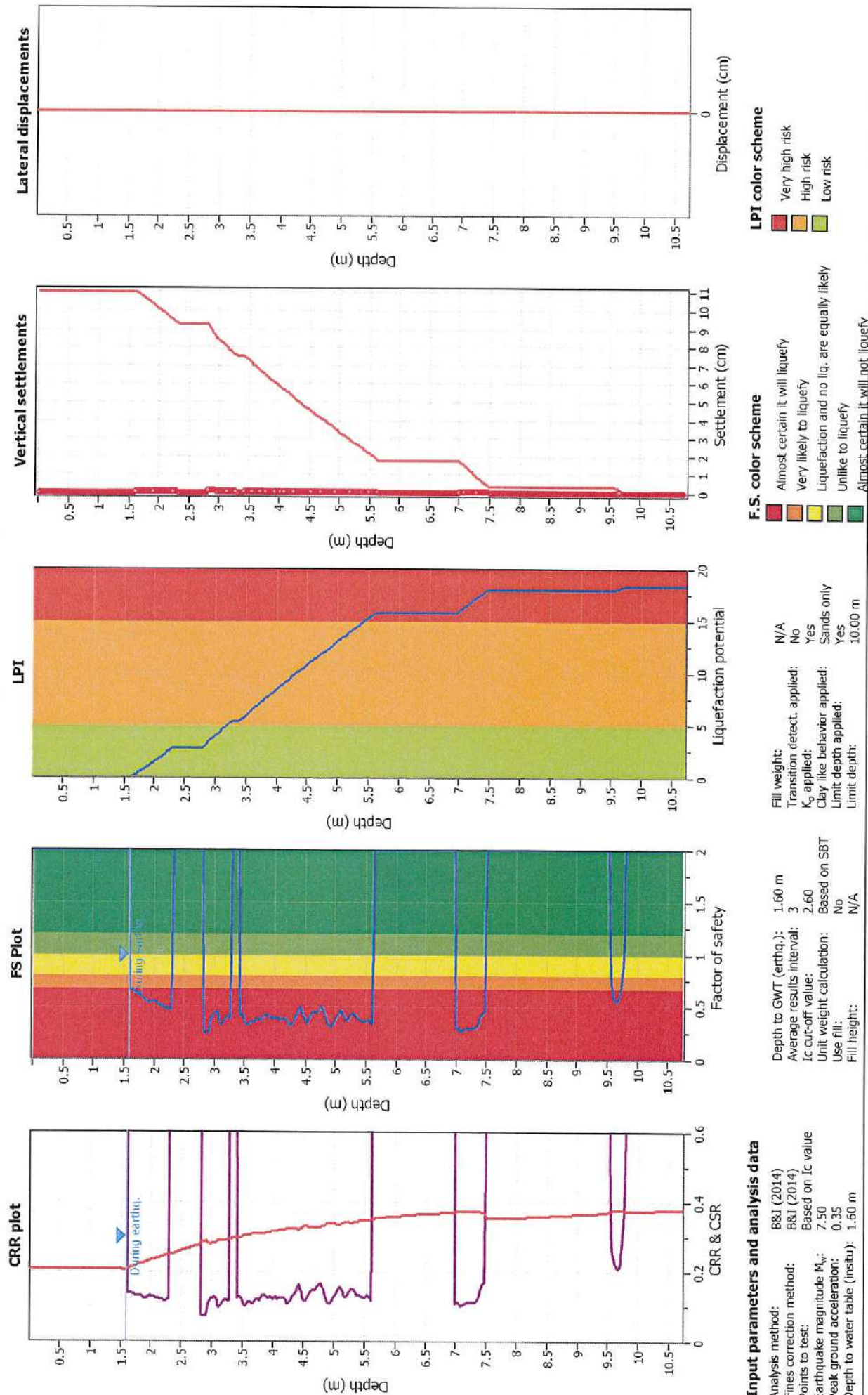
### Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GW (erthq.):	1.60 m	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	$K_0$ applied:	Yes
Earthquake magnitude $M_w$ :	7.50	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.35	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insfu):	1.60 m	Fill height:	N/A	Limit depth:	10.00 m

### SBT legend

- 1. Sensitive fine grained
- 2. Organic material
- 3. Clay to silty clay
- 4. Clayey silt to silty
- 5. Silty sand to sandy silt
- 6. Clean sand to silty sand
- 7. Gravely sand to sand
- 8. Very stiff sand to
- 9. Very stiff fine grained

### Liquefaction analysis overall plots





Reference/Certificate ID No: Downes Electrical 263

This form has been designed to be used by licensed electrical workers to certify that installations or Part installations under Part 1 or Part 2 of AS/NZS 3000 are safe to be connected to the specified system of electrical supply.

Location Details:

132b Hoon Hay Road

Contact Details:  
(Name and address)

Nelida Pennington

Name of  
Electrical worker:

Scott Downes

Registration/Practising  
licence number: E259099

Organisation/company: Downes Electrical

Phone and email:

0273643583 Scott@downeselectrical.com

Name of person(s)  
supervised:

Damien Henderson

CoC

Type of work:

 Additions  Alterations  New work

The prescribed electrical work is:

 Low risk  General  High risk (Specify):

Reference Standards:

 Part 1 of AS/NZS 3000  Part 2 of AS/NZS 3000 Additional Standards:

Description of Work: (including date/s of work and type of supply system)

Install wiring to New House, Including Mains 16mm<sup>2</sup> NS, main earth buried 35mm<sup>2</sup>, Earth Neutral link, Lighting, Power, Heatpump, Under-tile Heating, Electric hot water,

I certify that the completed prescribed electrical work to which this Certificate of Compliance applies has been done lawfully and safely, and the information in the certificate is correct in that the installation, or part of the installation:

Select those that apply:

- Has been installed in accordance with the specified certified design<sup>1</sup>
- Has an earthing system that is correctly rated (where applicable)
- Contains fittings that are safe to connect to a power supply
- Relies on a supplier Declaration of Conformity<sup>1</sup>
- Relies on a manufacturer's instructions<sup>1</sup>
- Has been satisfactorily tested in accordance with the Electricity (Safety) Regulations 2010
- Is safe to connect

Electronic/Other reference:

EES LTD.

Certifier's signature:

Test Results	
Polarity (Independent earth):	0.01
Insulation resistance:	200
Earth Continuity:	0.02
Bonding:	n/a
Fault Loop impedance	0.47
Other (specify):	

Date:

28-08-2017

<sup>1</sup> Attach or reference. If it is impractical to attach a copy of a particular manufacturer's instructions, or of any certified design or supplier declaration of conformity, provide a reference to where the documents can be found, in a readily accessible format, by electronic means.

ESC

I certify that the installation, or part of the installation, to which this Electrical Safety Certificate applies is connected to a power supply and is safe to use.

Certifier's  
name:

Scott Downes

Registration/Practising  
licence number:

E259099

Certifier's  
signature:Certificate  
Issue Date:

28-8-17

Connection  
Date:

28-8-17

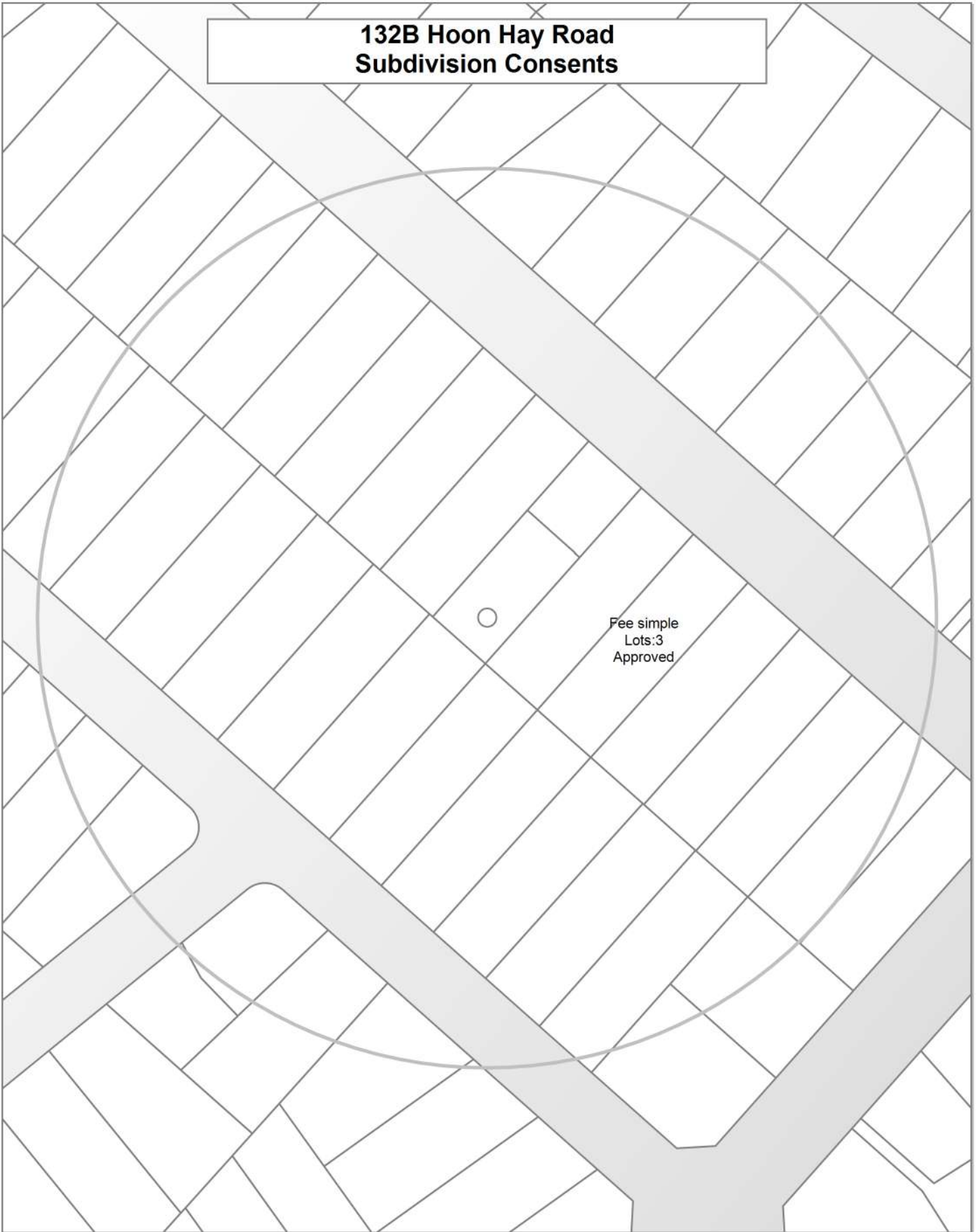
CUSTOMER COPY - THIS IS AN IMPORTANT DOCUMENT AND SHOULD BE RETAINED FOR A MINIMUM OF 7 YEARS

This certificate also confirms that the electrical work complies with the building code for the purposes of Section 19(1)(e) of the Building Act 2004.

## 132B Hoon Hay Road Land Use Consents



**132B Hoon Hay Road  
Subdivision Consents**



## Land Use Resource Consents within 100 metres of 132B Hoon Hay Road

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

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### 1/127 Hoon Hay Road

RMA/2020/2853

Three unit title subdivision and land use consent

Processing complete

Applied 04/12/2020

s223 Certificate issued 27/04/2021

s224 Certificate issued 07/07/2021

Decision issued 24/03/2021

Granted 24/03/2021

RMA/2020/387

Remove an existing dwelling and construct three older persons housing units

Processing complete

Applied 27/02/2020

Decision issued 12/05/2020

Granted 11/05/2020

RMA/2020/917

Encumbrance for three EPH units

Processing complete

Applied 06/05/2020

Encumbrance registered 03/06/2020

### 123 Hoon Hay Road

RMA/2015/583

Additions to dwelling - Historical Reference RMA92028807

Processing complete

Applied 05/03/2015

Decision issued 10/04/2015

Granted 10/04/2015

### 124B Hoon Hay Road

RMA/2007/297

Application to carry out additions to the existing dwelling with the addition of a new bedroom and bathroom - Historical Reference RMA92007510

Processing complete

Applied 12/02/2007

Decision issued 08/03/2007

Granted 08/03/2007

## 126 Hoon Hay Road

RMA/2010/447

Scanned - Garage - Historical Reference RMA92015952

Processing complete

Applied 30/03/2010

Decision issued 21/04/2010

Granted 21/04/2010

## 131 Hoon Hay Road

RMA/2009/46

Application to erect a replacement garage - Historical Reference RMA92013445

Processing complete

Applied 15/01/2009

Decision issued 26/01/2009

Granted 26/01/2009

## 132A Hoon Hay Road

RMA/2016/2804

Two attached Units with attached Garages

Processing complete

Applied 05/10/2016

Decision issued 11/10/2016

Granted 11/10/2016

RMA/2021/1630

Fee simple subdivision - two lots and associated land use consent

Processing complete

Applied 03/06/2021

s223 Certificate issued 23/02/2022

s224 Certificate issued 23/02/2022

Decision issued 02/07/2021

Granted 02/07/2021

## 133 Hoon Hay Road

RMA/2000/2439

Application to locate a garage within the front 4.5metre setback from the road boundary in terms of the Proposed Plan - Historical Reference RMA20003189

Processing complete

Applied 26/09/2000

Decision issued 16/10/2000

Granted 11/10/2000

RMA/2001/1882

Application for alterations to and the erection of an addition at the rear of the existing dwelling which intrudes setback and recession plane - Historical Reference RMA20007781

Processing complete

Applied 06/08/2001

Decision issued 28/08/2001

Granted 28/08/2001

## **136 Hoon Hay Road**

RMA/2021/1878

Fee simple subdivision - three lots

Consent issued

Applied 22/06/2021

Decision issued 19/08/2021

Granted 19/08/2021

Decision issued 19/08/2021

Granted 19/08/2021

RMA/2021/832

Construct three residential units within a social housing complex

Processing complete

Applied 06/04/2021

Decision issued 11/05/2021

Granted 07/05/2021

Decision issued 11/05/2021

Granted 07/05/2021

## **136A Hoon Hay Road**

RMA/2021/1878

Fee simple subdivision - three lots

Consent issued

Applied 22/06/2021

Decision issued 19/08/2021

Granted 19/08/2021

RMA/2021/832

Construct three residential units within a social housing complex

Processing complete

Applied 06/04/2021

Decision issued 11/05/2021

Granted 07/05/2021

## **136B Hoon Hay Road**

RMA/2021/1878

Fee simple subdivision - three lots

Consent issued

Applied 22/06/2021

Decision issued 19/08/2021

Granted 19/08/2021

RMA/2021/832

Construct three residential units within a social housing complex

Processing complete

Applied 06/04/2021

Decision issued 11/05/2021

Granted 07/05/2021

## **2/127 Hoon Hay Road**

RMA/2020/2853

Three unit title subdivision and land use consent

Processing complete

Applied 04/12/2020

s223 Certificate issued 27/04/2021

s224 Certificate issued 07/07/2021

Decision issued 24/03/2021

Granted 24/03/2021

RMA/2020/387

Remove an existing dwelling and construct three older persons housing units

Processing complete

Applied 27/02/2020

Decision issued 12/05/2020

Granted 11/05/2020

RMA/2020/917

Encumbrance for three EPH units

Processing complete

Applied 06/05/2020

Encumbrance registered 03/06/2020

## **3/127 Hoon Hay Road**

RMA/2020/2853

Three unit title subdivision and land use consent

Processing complete

Applied 04/12/2020

s223 Certificate issued 27/04/2021

s224 Certificate issued 07/07/2021

Decision issued 24/03/2021

Granted 24/03/2021

RMA/2020/387

Remove an existing dwelling and construct three older persons housing units

Processing complete

Applied 27/02/2020

Decision issued 12/05/2020

Granted 11/05/2020

RMA/2020/917

Encumbrance for three EPH units

Processing complete

Applied 06/05/2020

Encumbrance registered 03/06/2020

## **30 Wyn Street**

RMA/1989/767

Consent to extend a garage to less than 3m from the road boundary - Historical Reference RES9217433

Processing complete

Applied 18/02/1989

Decision issued 06/03/1989

Granted 06/03/1989

RMA/1992/637

Consent to a crosslease title - Historical Reference RES9217432

Processing complete

Applied 23/07/1992

Decision issued 28/07/1992

Granted 28/07/1992

## 32 Wyn Street

RMA/1998/3061

Application to erect a garage for an existing unit and second dwelling with attached garage with non-compliances with setback; vehicle crossing; recessi - Historical Reference RES990089

Processing complete

Applied 21/12/1998

Decision issued 05/03/1999

Granted 05/03/1999

RMA/1999/5586

Dwelling on Lot 1 intrudes the recession plane on the south west boundary under the Transitional Plan (two Lot fee simple subdivision) - Historical Reference RMA862

Processing complete

Applied 18/03/1999

Decision issued 07/04/1999

Granted 07/04/1999

## 4 Maryhill Avenue

RMA/2000/732

Application for dwelling alterations and additions and to locate a garage forward of dwelling within road boundary setback. - Historical Reference RMA20001401

Processing complete

Applied 16/03/2000

Decision issued 12/04/2000

Granted 12/04/2000

## Data Quality Statement

### Land Use Consents

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

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

## Subdivision Consents

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

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

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

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