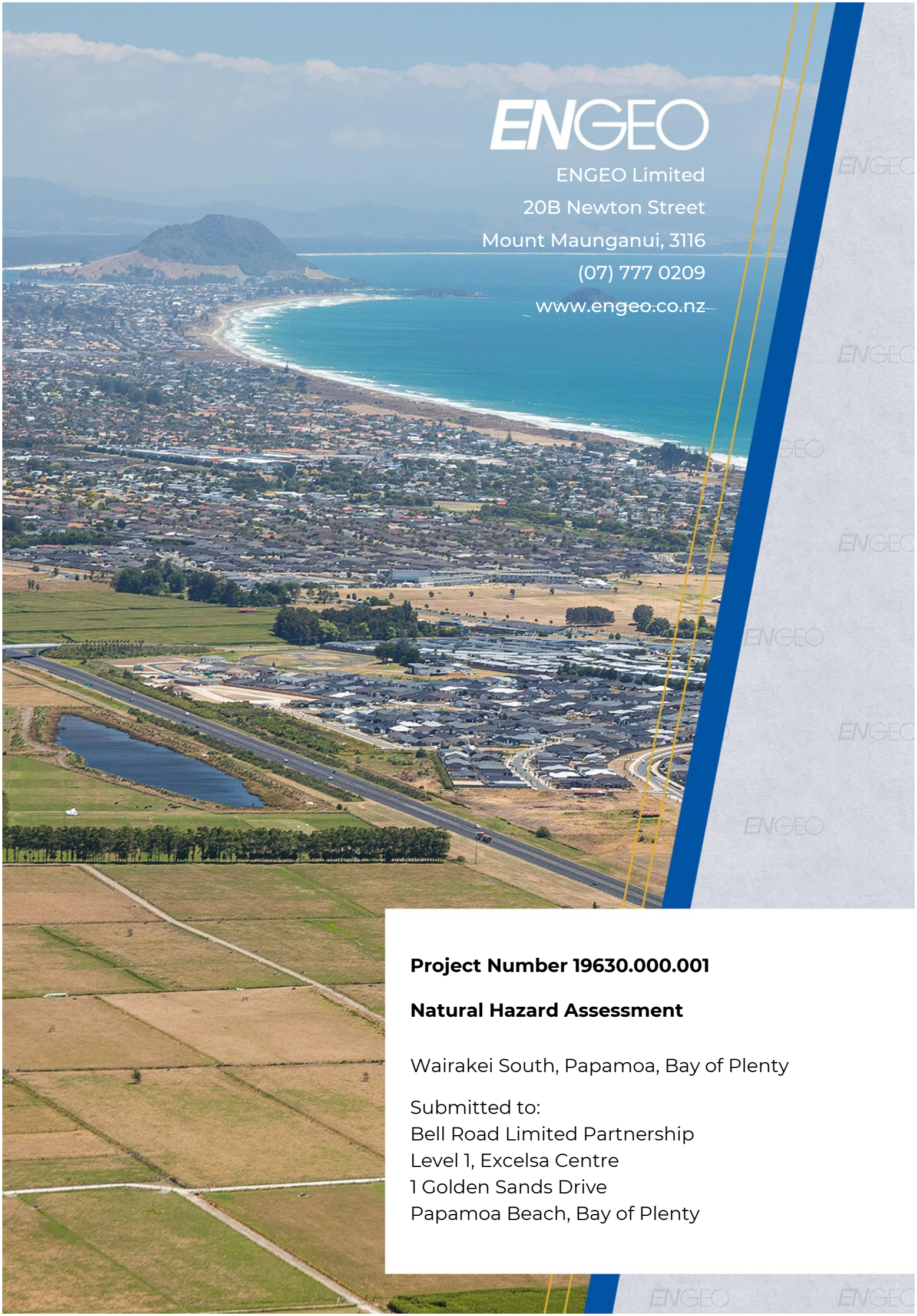
Appendix Q

Natural Hazard Assessment Report



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Project Number 19630.000.001

Natural Hazard Assessment

Wairakei South, Papamoa, Bay of Plenty

Submitted to:
Bell Road Limited Partnership
Level 1, Excelsa Centre
1 Golden Sands Drive
Papamoa Beach, Bay of Plenty

Executive Summary

This report presents the assessment of Natural Hazards affecting the proposed residential and commercial development of Wairakei South. This assessment has been undertaken in accordance with the requirements of the Bay of Plenty Regional Council Regional Policy Statement requirements to assess Natural Hazard risks outlined in RPS Appendix L.

Our assessment follows investigations, analysis, and reporting carried out by ENGEO and previously by others for the development.

Assessment of hazards including Volcanic Activity, Earthquake, Coastal Erosion, Coastal Inundation, and Extreme Rainfall have all been assessed.

The assessment was undertaken using qualitative methods prescribed in Appendix L and considered Primary and Secondary Assessment likelihood exceedance return periods where applicable and where required calculated the annual individual fatality risk (AIFR) based on an estimated population base of 7,500 for the development.

Liquefaction and landslide edge stability hazards were assessed to have a pre-mitigation risk of high and medium, respectively. Mitigation measures have been considered as part of the Geotechnical Interpretive Report for the development and outlined in brief in this RPS NHA assessment.

Mitigation for liquefaction risks include construction of a thick stiffened engineered fill platform (crust) for the future building development areas of the site which will act to reduce surface manifestation of liquefaction effects. Lifeline and / or essential services with high importance will require specific design of ground improvements and / or foundation systems that address liquefaction risk through either or a combination of mitigation, reduction, or management of the effects of liquefaction (total and differential settlement and surface expression effects). These are expected to be included as part of future engineering approval works and building consent applications.

Mitigation for earthquake induced land instability of formed engineered fill slopes include a range of ground improvement options to specifically address seismic deformation of the platforms and to mitigate flow failure conditions during and immediately following significant earthquakes events.

We consider that the mitigations proposed to be implemented as part of the development will serve to reduce the assessed risks posed by these natural hazards to the built environment and to future users. Following Appendix L post-mitigation risk assessment criteria, these hazards have been assessed to reduce to low (liquefaction) and medium (landslide edge stability) respectively. We note however that the likelihood of these natural hazards occurring will not change.

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1 Introduction

ENGEO Ltd was requested by Bell Road Limited Partnership to prepare a Natural Hazard Assessment for their proposed land development at Wairakei South, Papamoa, (herein referred to as 'the site', shown in Figure 1).

This report has been prepared to support a Fast Track application for Resource Consent (Subdivision) as part of the intended residential land development.

Figure 1: Site Location

2 Natural Hazard Assessment Methodology

The operative Bay of Penty Regional Council (BoPRC) Regional Policy Statement (RPS) Natural Hazards Provisions have been designed to influence resource consents and the development of regional, city, and district plans as they coincide with natural hazards. The RPS was made operative in 2014, with Change 2 (Natural Hazards) merged in the RPS and made operative from 6 July 2016, the latest version of the RPS being 8 April 2025. The change required a 'risk-based approach' be taken to the management of natural hazards across the region.

Section 104 of the Resource Management Act 1991 (RMA) requires that for a Resource Consent, a consent authority should 'have regard' to the relevant provisions of the Regional Policy Statement (RPS). Therefore, to support the proposed development, a Natural Hazard Risk Assessment (NHRA) should assess the risk posed to the proposed development from natural hazards utilising the framework of the RPS. Due consideration is to be given to how possible mitigation measures may be used to limit the effect of the hazards to the built environment and reduce potential harm to future users.

The NHRA is a broadly qualitative and probabilistic process that compares the consequence level of specific hazard for differing design events considering the following elements.

- Health and safety (fatalities and injuries);
- The effects to lifeline utilities and services; and

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- The ongoing functionality of buildings, with varying degrees of emphasis placed on critical buildings (such as hospitals) or socially / culturally significant buildings (marae, places of worship, schools, etc.).

To meet the provision of the RPS, the following scope of works was undertaken:

- A desktop study, including but not limited to a review of the following:
    - Available geomorphological, geological, and hydrological conditions.
    - The Western Bay of Plenty District Council (WBoPDC), Tauranga City Council (TCC) and BoPRC online natural hazard maps.
    - Scientific reports and maps pertaining to the hazards on the site from publicly available sources.
    - Previous geotechnical reporting undertaken by ENGEO and others on the subject site and surrounding land parcels where considered appropriate.
- A risk assessment, completed in accordance with Appendix L of the RPS, undertaken using the information available above and considering the post-development landform.
- A summary of suggested controls that would help reduce the likely consequential effects of a hazard occurring, where required.

The NHRA does not supersede any process or function of the Building Act 2004 which also gives provision to natural hazards through S106 of the RMA and regulates building work through the Building Code to protect loss of life and amenity.

We consider this assessment meets or exceeds the natural hazards assessment requirements of the National Policy Statement for Natural Hazards 2025.

3 Site Description

3.1 Location

The site comprises a total of approximately 350 ha of agricultural land, comprised of eight property parcels located along Bell Road in Wairakei South. The site is legally described as:

- Lot 2 DPS 81677 – 151,685 m^2
- Lot 1 DPS 54113 – 91,825 m^2
- Lot 1 DPS 81677 – 26,974 m^2
- Lot 1 DPS 69524 – 156,134 m^2
- Lot 1 DP 537375 – 156,095.30 m^2
- Section 13 SO 458365 – 600,239 m^2
- Lot 1 DP 29530 – 1,139,069 m^2
- Lot 2, DP 553506 – 992,416 m^2

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The site generally comprises low lying farmland with a number of smaller agricultural and light industry operations. The site is bordered by the Tauranga Eastern Link (TEL) to the north and the Kopuaroa canal to the south. The Papamoa East Interchange (PEI) is situated along the northeast boundary of the property providing future access to State Highway 2 and Papamoa East.

The site is generally near level with elevations typically between 0.9 m and 1.88 m RL (NZVD). The northern property has a slight fall, from 3 m RL in the northwest to a RL of 0.7 m in the southeast where the Papamoa peat swamps meet the Papamoa sand dune. In the properties south of Bell Road, a small terrace feature with an elevation of approximately 2.4 m is present in the southwest. A stopbank separating the site from the Kopuaroa canal is present along the southern boundary at an elevation of 4.0 m RL.

Alongside the canal to the south, the site is crossed by a number of surface drains, and a number of weirs are located within the circa 7 m wide drain adjacent to Bell Road. The drainage channels and canal all flow into the nearby Kaituna River located to the southeast of the site.

3.2 Proposed Development

Based on Boffa Miskell draft Masterplan dated December 2025, the development comprises approximately 2,700 new residential lots with associated roads, reserves stormwater ponds and infrastructure. The development also proposes to incorporate a mixed light industry / commercial business area, primary school, and a number of smaller neighbourhood centres.

Access to the development will be via the Papamoa East interchange, as well as local road connections from Bell Road. The existing network of smaller farm drainage ditches and larger drainage features like the Bell Road Drain are to be filled and replaced with a smaller number of wider engineered swales that convey stormwater towards stormwater storage zones in the east and south of the development. Stormwater discharge from these stormwater storage zones will then be conveyed via gravity and pumped methods to the Kaituna River for the eastern storage zone and via the Kopuaroa Canal for the southern storage zone.

Earthworks plans show proposed bulk filling to raise the level of the site to between 3.5 m RL and 5.2 m RL with the formation of large development platforms between the swale locations. These development platforms are formed with a crowned high point through the centre to allow overland flow to discharge uniformly around the platforms and into the stormwater swales.

3.3 Geology and Geomorphology

The 356 ha site is located within the wider Maketu Basin moving from southwest to northeast, the basin infill has resulted in a series of low terraces comprising Pleistocene to Holocene aged tephras and localised paleosols typically overlying Mangaone Subgroup tephras, back-dune swamp and marshland environments and coastal sand dunes. The development of these various sedimentary deposits followed a period of tectonic subsidence, with similar sequences of sedimentary accretion occurring to the north from Waihi Beach to Tauranga harbour area, and south across Maketu, Pukehina, and Matata. Equivalent sedimentary basins also formed in north Whakatāne and at Ohiwa harbour.

Published geological maps of the Tauranga area (Briggs et al., 1996) and Rotorua (Leonard et al., 2010) indicate the Kaituna floodplain which spans the vast majority of the site is dominated by peat and Holocene age alluvium deposits described as “alluvial and colluvial gravel and sand dominated by pumice clast, silt, and clay with local peat beds”.

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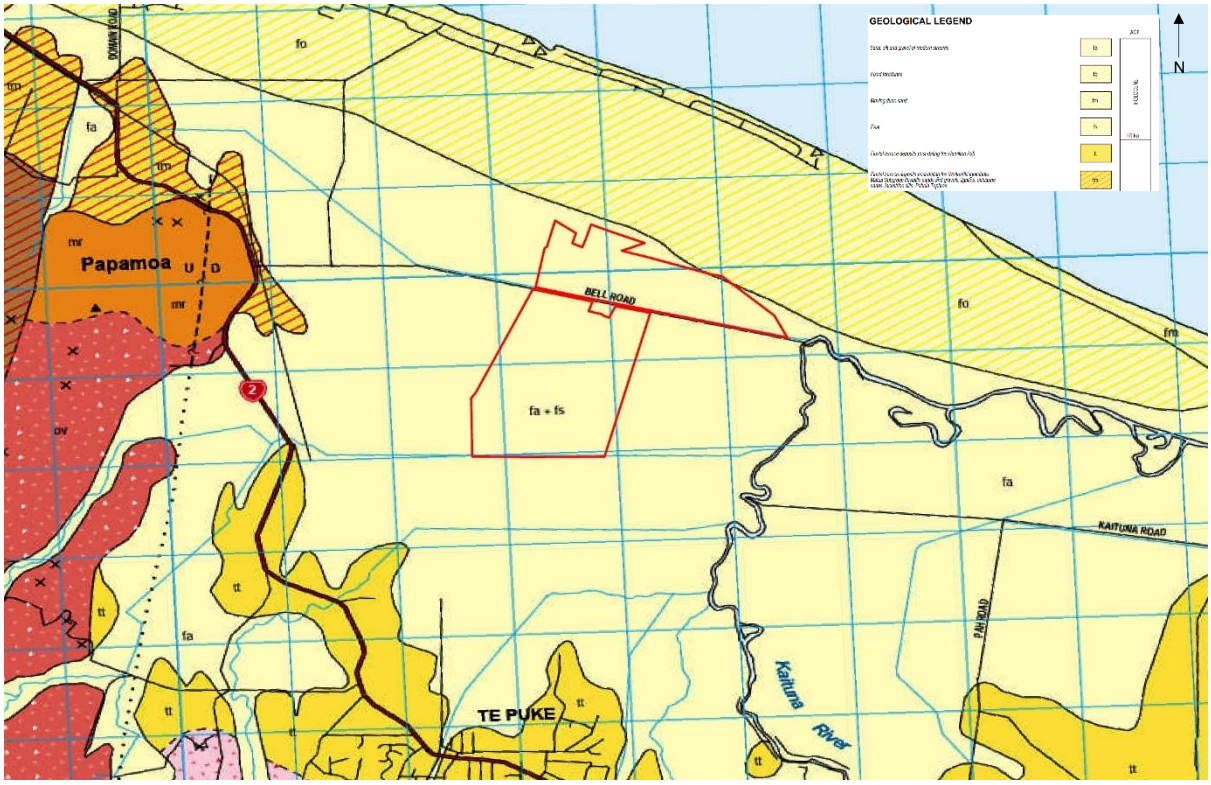
The approximate location of the site on the published geological map (Briggs et al., 1996) is shown in Figure 2 below. As can be seen from this figure, the northern boundary of the site spans the geological boundary between the back-dune Kaituna Swamp environment which covers the majority of the site and the coastal cyclic and fixed dune deposits which underly Pāpāmoa and Pāpāmoa East populus to the north. These fixed foredunes, which extend throughout Pāpāmoa comprise Holocene age coastal beach deposits of “sand and minor gravel” (Briggs et al., 1996). The near surface organic deposits present across much of the Pāpāmoa and Kaituna Swamp areas include a number of reference tephra deposits. Radiocarbon dating of these tephra beds confirm that they were sourced from either Okataina complex (Rotorua) or Taupo complex volcanic centres. These include Rotomahana Mud (Tarawera), 1886 AD; Kaharoa Tephra, approximately 1300 AD; and Taupo Tephra approximately 175 AD (Newnham et al., 1995).

Figure 2: Site Geological Setting



Base Figure obtained from Briggs et al., (1996). Geology of the Tauranga Area 1:50,000 [Map]. Site Boundary shown in red.

The Tauranga Eastern Link was constructed on a combination of coastal dune deposits (to the north) and swamp deposits to the south. The transition of the TEL alignment onto swamp deposits occurs at approximately the Pāpāmoa Eastern Interchange (PEI) as it deviates across the floodplain towards Te Puke.

At its closest point, the Kaituna River's current channel alignment is currently 650 m southeast of the eastern corner of the site (north of Bell Road). Since the 1940s, the river has made several small adjustments, previously passing within 150 metres of this eastern corner (based on available historical aerial data on Retrolens). Changes in the rivers alignment are believed to be as a result of both significant flooding events and man-made realignments from farming / land use activities. Previous efforts to change the lower Kaituna River alignment have been made in the past as a result of flooding of the Maketu lowlands (Ford’s Cut) with further stopbank, canals, and weirs constructed to manage flood effects.

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Farm drainage features are generally present across the entire site, with notable water conveyance features being the:

- The Bell Road drain, which follows the northern side of Bell Road, bisecting the site.
- The Kopuaroa Canal, which borders the southern site boundary.

Both major water features discharge directly into the Kaituna River east of the site. Within the Kaituna swamp farmlands, a number of shallow drainage ditch networks have been formed to drain fields and control ponding across the paddocks, most of which led to the construction of the two main drainage features noted above.

3.4 Geotechnical Investigations and Ground Model

A number of previous geotechnical investigations have been conducted at the site, together with recent investigations undertaken by ENGEO. The extent of these investigations is outlined in our Geotechnical Factual Report (ENGEO Ltd, 2025)

The geological units, as interpreted from ENGEO investigations and previous site investigations, are generally consistent with published geology. The units are briefly summarised in Table 1, with further description provided in subsequent sections.

Table 1: Summary of Geological Units

ID	Geological Unit	Description
1	FILL	Variable. Encountered as a mixture of poorly graded sands, gravels, and silts. Typically associated with the construction of farm access tracks, farm building platforms and raceways. At least one engineered fill platform (3 m depth) is known where peat was undercut from beneath a proposed milking shed (refer Drawing 111). Variable depth of fill (approximately 1 m) is expected along the majority of existing farm tracks.
2	TOPSOIL	Typically an organic silt with fine sand, generally 0.3 m thick. A tephra marker bed, 50 – 100 mm thick layer of Kaharoa ash (fine sand) is present at the base of the unit.
3A	PUMICE AIRFALL DEPOSITS	Localised deposits of poorly graded gravel or silts and silty gravel, typically situated at or above 1.5 m RL within the south block overlying peat deposits. Where encountered this unit is up to 1.0 m thick, however generally less than 0.5 m thick.
3B	PEAT	Soft fibrous peat, comprising moderate plasticity organic silts, clays, and wood inclusions throughout. Decomposition of wood inclusions is variable throughout the material ranging from non-decomposed logs to partly decomposed fibrous organics. Thickness of peat generally ranges between 1.5 to 2.0 m across the site. The maximum encountered depth of 3.5 m was encountered in within the south-eastern portion of the northern development block (immediately north of Bell Road Drain), and the eastern and south-western portion of the southern block. The peat deposits transition out towards the north, at the toe of undulating dune sands topography. Inferred peat thicknesses are provided on Drawing D110 to D112.

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ID	Geological Unit	Description
4A	DUNE SANDS	Fine to medium grained, aeolian dune sands, with variable CPT qc values ranging from generally 2 MPa to 16 MPa. Inferred to be encountered beneath topsoil across dune topography in the north, likely transiting beneath the peat into the alluvial sands along this fringe environment.
4B	ALLUVIAL SANDS	Loose fine to coarse alluvial sands, typically well graded with CPT qc values typically less than 4 MPa, and SPT-N values typically below 5. Loose sand typically forms the upper 1 m of the alluvial sands located immediately beneath peat deposits across most of the site.
4C		Medium dense to coarse alluvial sands, typically well graded with CPT qc values ranging from generally 4 MPa to 16 MPa, and SPT-N values from generally 5 to 20.
5A	ESTUARINE MUDS	Soft to stiff, normally consolidated clayey pumiceous silts, with typical CPT qc values less than 0.6 MPa are interbedded within the alluvial sequence. These units and inferred to infill former paleochannels cut into the underlying fluvial deposits (Unit 5b). Highly variable in spatial extents and depth, these deposits are generally concentrated in the south and east. Spatial variability of these channels is problematic to map at the current resolution of site investigation data, however the inferred indicative extents are shown on the appended isopach plan (Drawings D113 to D115). The depth to the top of this unit generally appears to range between 6 – 8 m bgl in the south block and approximately 10 m in the east of the north block. Encountered thicknesses ranging from 1 m to 10 m.
5B	FLUVIAL DEPOSITS	Laterally discontinuous, interbedded stiff silts and fine to coarse loose sands with variable gravel content. Typical qc ranges from 0.6 to 4 MPa, and SPT values of typically 0 to 5.
6	LOWER FLUVIAL DEPOSITS	Typically fine to coarse medium dense to dense sands and gravels with interbedded silt lenses. This unit typically has a high pumice content, and shows dilatant behaviour in the fine sands and silty layers. CPT qc values typically in excess of 12 MPa and SPT-N values of 15+.
7	LOWER ESTUARINE MUDS	Normally consolidated stiff silt, encountered at depths of circa 27 – 30 m. This unit was inferred from the deeper tests of sCPT2 and sCPT3 being at least 1.2 m thick.

3.5 Seismic Setting

The North Island of New Zealand contains many active faults which have been mapped by GNS, primarily contained within two regional fault belts that converge at Whakatāne. These are the Taupō Fault Belt, containing predominantly northeast trending normal faults, and the North Island Shear belt, comprised primarily of strike-slip faults.

The nearest active fault to the site, as mapped by GNS, is the Otamarakau Fault located approximately 27 km southeast of the site. The Otamarakau Fault is a normal fault with unknown rupture characteristics and not listed as a major fault in Table 3.6 of NZS 1170.5:2004[1].

[1] Standards New Zealand. (2004). Structural design actions – Part 5: Earthquake actions – New Zealand. Published 21/12/04.

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Although not shown on the GNS active fault database, the Taupō Fault Belt forms part of the wider *extensional Havre Trough – Taupo Rift fault zone* tectonic domain which extends approximately 150 km offshore from the Bay of Plenty coastline generally contained between Mayor Island in the west and White Island in the east. Based on the 2013 GNS report[2] the nearest offshore faults are a series of faults extending northeast offshore of Maketu. The faults are approximately 20 km east-north-east of the site.

For geotechnical assessment, peak ground accelerations have been adopted from Appendix A of MBIE Module 1 (MBIE & NZGS, 2016) for Te Puke.

Table 2: Summary of Peak Ground Acceleration Values Adopted for Analysis

AEP (%)	R	PGA	M
4	25	0.06	6
0.2	500	0.32	6
0.1	1000	0.41	6
0.04	2500	0.57	6
0.033*	3030	0.57	6

* Module 1 does not assess amax values for 0.033% AEP events and as such the 0.04% AEP event has been adopted.

4 RPS Appendix L Notes

This risk identification procedure evaluates the requirement to undertake an assessment of the site's susceptibility to each natural hazard (Appendix L assessment). For the purpose of this assessment, natural hazards are defined as those listed in *Policy NH 7A.*

The risk assessment presented herein is in general accordance with Figure 4 of Appendix L.

The following notes are made with respect to the assessment undertaken:

- As the development area is greenfield land and greater than 5 ha, a quantitative approach should be adopted.
- Likelihoods for risk assessment for each hazard category have been taken from Table 20 within Appendix L. Where no published information on the specified AEP is published the nearest published AEP event has been adopted for assessment in line with the BOPRC guidance document Section 3.1.
- Potential consequences for each hazard, with the exception of slope stability related hazards, have been assessed based on the built environment and lifeline utilities outlined within Table 21 of Appendix L.

[2] Litchfield, N. J et al. (2013). A model of active faulting in New Zealand: fault zone parameters description. GNS Science Report 2012/19. October 2013

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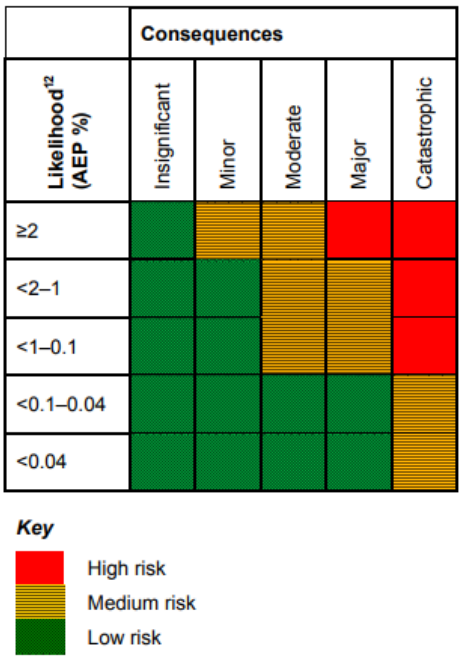
- The risk screening matrix adopted for assessment of risk level is presented on page 374 within Appendix L and duplicated below.
- Slope stability consequences have been assessed based on the Australian Geomechanics Society Landslide Risk Management Framework (AGS, 2007)
- For Annual Individual Fatality Risk (AIFR) calculations, the number of anticipated (modelled) deaths is taken as the maximum value of deaths stated in Table 21 of Appendix L for the assessed consequence level.
- For AIFR calculations, the population of the site is taken as the average number of people per household in New Zealand (2.7 people) based on StatsNZ (*New Data Shows 1 in 9 Children under the Age of Five Lives in a Multi-Family Household*, n.d.) multiplied by the proposed 2,700 lots = 7,290 people. A population of 7500 has been adopted for assessment.

Figure 3: Appendix L Risk Screening Matrix



Obtained from Proposed Change 2 (Natural Hazards) to the Bay of Plenty Regional Policy Statement Appendix L, page 374.

5 Risk Analysis and Evaluation (Appendix L)

5.1 Volcanic Activity

Within the Bay of Plenty Region there are four active volcanic centres (active in last 20,000 years); the Okataina Volcanic Centre, Pūtauaki (Mt Edgecumbe), Tuhua (Mayor Island) and Whakaari (White Island) (*Volcanic Activity - Information Page*, n.d.).

5.1.1 Pyroclastic and Lava Flow

Based available GNS data (*Volcanoes Are New Zealand's Landscape*, n.d.), the site lies outside the mapped hazard zones for pyroclastic and lava flows from the Okataina Volcanic Centre (Nairn, 1992), White Island (Nairn, 1996), and Mayor Island ("Volcanic Hazards at Mayor Island," 1995) and as such, the risk of pyroclastic and lava flow is considered to be low and not considered further.

Table 3: Pyroclastic and Lava Flow Risk Level Assessment

Assessment	AEP (%)	Assessed Consequence	Justification	Risk Level
Primary	0.1	Insignificant	Outside mapped hazard zones	Low
Secondary	0.2	Insignificant	Outside mapped hazard zones	Low
	0.005	Insignificant	Outside mapped hazard zones	Low

Table 4: Pyroclastic and Lava Flow AIFR Calculation – Secondary Assessment

AEP (%)	Consequence	D	P	N	AIFR = (D x P) / N	AIFR Risk Level
0.2	Insignificant	0	0.002	7500	0	Low
0.005	Insignificant	0	0.00005	7500	0	Low

D = number of anticipated deaths, N = maximum population present within hazard assessment area at any point in time over a 24-hour period, P = annual exceedance probability.

5.1.2 Landslip, Debris Flow, and Lahar

Based on available GNS data, the site lies outside the mapped hazard zones for landslip and debris flow from the Okataina Volcanic Centre, White Island, and Mayor Island and as such, the risk of landslip, and debris flow is considered to be low and not considered further.

Published information suggests that following an eruption of the Okataina Volcanic Centre, the Kaituna River Floodplain is located within an area at risk from post eruption flooding and lahars (Nairn, 2002). Although the site is within the Kaituna River floodplain, areas mapped as at risk of lahar or flooding inundation area predominantly to the east of the river itself, whilst the site is located west of the river on the edge of the mapped hazard zone.

No information is provided on the depth of potential flooding or inundation, therefore as development landform modifications include elevating the site by approximately 2 m above the surrounding floodplain the risk of inundation from post eruption flooding or lahars is considered to be low.

The recurrence interval of a Okataina Volcanic Centre is between 700 and 3000 years and as such an AEP of 0.14% is adopted for this assessment.

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Table 5: Landslip, Debris Flow, and Lahar Risk Level Assessment

Assessment	AEP (%)	Assessed Consequence	Justification	Risk Level
Primary & Secondary	0.14	Insignificant	Outside mapped hazard zones, and landform to be elevated above surrounding floodplain	Low

Table 6: Landslip, Debris Flow and Lahar AIFR Calculation – Secondary Assessment

AEP (%)	Consequence	D	P	N	AIFR = (D x P) / N	AIFR Risk Level
0.14	Insignificant	0	0.0014	7500	0	Low

D = number of anticipated deaths, N = maximum population present within hazard assessment area at any point in time over a 24-hour period, P = annual exceedance probability.

5.1.3 Ash Fall

At present, there is no published ash fall hazard information provided by regional and district councils for the coastal Bay of Plenty.

New Zealand Ash Fall Probabilistic Volcanic Hazard Study (Hurst & Smith, 2010) shows ash fall isopachs for 1 in 500 year and 1 in 10,000-year ash fall events. The 500-year volcanic hazard map is dominated by the effects of Taranaki and Ruapehu volcanoes and the Ngauruhoe / Tongariro Volcanic Centre and indicates that no ash fall would be expected in the coastal Bay of Plenty region from a 500-year event.

In the 10,000-year event ash fall from the Taupō and Okataina Volcanic Centres has the largest influence in the Bay of Plenty, where 64 to 128 mm of ash fall would be expected. It must be noted, any uncertainties in the volcanic history of any of these volcanoes as well as the prevailing wind direction can have a large influence on the final hazard estimates.

Published information on 1 in 1,000-year ash fall events are not available and therefore, the event closest to the likelihood in *Table 20* is the 1 in 500-year event. For this purpose of this assessment, this is the AEP used for the primary assessment. The 1 in 10,000-year event is used for the secondary assessment.

Table 7: Ash Fall Risk Level Assessment

Assessment	AEP (%)	Assessed Consequence	Justification	Risk Level
Primary	0.2	Insignificant	No ash fall predicted	Low
Secondary	0.01	Minor	Up to 128 mm ashfall predicted; weaker roof structures may collapse under 100 mm ash thickness; roads may need to be cleared to reduce dust nuisance and prevent stormwater systems becoming blocked	Low

Table 8: Ash Fall AIFR Calculation – Secondary Assessment

AEP (%)	Consequence	D	P	N	AIFR = (D x P) / N	AIFR Risk Level
0.01	Minor	1	0.0001	7500	1.3×10^{-8}	Low

D = number of anticipated deaths, N = maximum population present within hazard assessment area at any point in time over a 24-hour period, P = annual exceedance probability.

5.1.4 Geothermal Hazard

Based on the definition by Waikato Regional Council (where 70% of New Zealand's geothermal systems are located) geothermal hazards include scalding hot water and boiling mud, geyser eruptions, Hydrothermal eruptions, acidic water, steam, and other gases which can be toxic, geothermally altered unstable ground, and subsidence.

Within the Bay of Plenty Region there are a number of known geothermal systems, these are: Rotorua; Kawerau; Tauranga; Mayor Island; White Island; Whale Island; Waimangu-Rotomahana-Tarawera; Taheke, Tikitere-Ruahine and Rotoiti; Rotomā-Tikorangi; Rotomā-Puhi Puhi; Rotokawa-Mokoia; Awakeri; Pukehinau; and Manaohau.

The site is located within the Tauranga Geothermal system area, which is a large low-temperature geothermal system (between 30°C and 70°C) that shares the same aquifer as the cold groundwater resource and encompasses a large majority of the Bay of Plenty region stretching from Waihi Beach in the north to Paeangaroa in the east.

No published data is available that would indicate geothermal hazards (as defined by BOPRC) associated with the Tauranga Geothermal system. The risk is therefore considered to be low and not considered further.

It must be noted that there may be other small surface features or warm water springs outside these areas which are not known to BOPRC.

Table 9: Geothermal Hazard Risk Level Assessment

Assessment	AEP (%)	Assessed Consequence	Justification	Risk Level
Primary	0.1	Insignificant	Outside mapped hazard zones	Low
Secondary	0.2	Insignificant	Outside mapped hazard zones	Low
	0.005	Insignificant	Outside mapped hazard zones	Low

Table 10: Geothermal Hazard AIFR Calculation – Secondary Assessment

AEP (%)	Consequence	D	P	N	AIFR = (D x P) / N	AIFR Risk Level
0.1	Insignificant	0	0.002	7500	0	Low
0.005	Insignificant	0	0.00005	7500	0	Low

D = number of anticipated deaths, N = maximum population present within hazard assessment area at any point in time over a 24-hour period, P = annual exceedance probability.

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5.1.5 Caldera Unrest

The nearest mapped calderas are the Rotorua Caldera and Okataina Caldera which are located within the Taupō Volcanic Zone at distances of approximately 32 km to the south and southeast of the site respectively.

Hazards associated with caldera unrest are considered to be ground shaking from earthquakes, ground deformation including uplift and subsidence, gas poisoning, and hydrothermal system changes including large steam explosions.

The hazard associated with seismic ground shaking is realised as liquefaction or slope instability hazards, both of which are addressed within Sections 5.2.1 and 5.3.2 respectively and therefore not considered further in this section.

Based on the simplified volcanic hazard map presented within the Rotorua Hazard GNS Report (Scott, 2010), the subject site is located outside any areas of considerable land damage from a Okataina Volcanic Centre eruption and therefore the risk is considered to be low. The recurrence interval of a Okataina Volcanic Centre is between 700 and 3,000 years and as such an AEP of 0.14% is adopted for this assessment.

Table 11: Caldera Unrest Risk Level Assessment

Assessment	AEP (%)	Assessed Consequence	Justification	Risk Level
Primary & Secondary	0.14	Insignificant	Outside mapped hazard zones	Low

Table 12: Caldera Unrest AIFR Calculation – Secondary Assessment

AEP (%)	Consequence	D	P	N	AIFR = (D x P) / N	AIFR Risk Level
0.14	Insignificant	0	0.0014	7500	0	Low

D = number of anticipated deaths, N = maximum population present within hazard assessment area at any point in time over a 24-hour period, P = annual exceedance probability.

5.2 Earthquake

5.2.1 Liquefaction and Lateral Spreading

Liquefaction is a well recognised natural hazard within the Bay of Plenty locality. The site is mapped within an area zoned "*Possible*" based on the 2021 Tonkin & Taylor Bay of Plenty Regional Liquefaction Vulnerability Assessment (Jacka, 2021).

Previous investigations and recent investigations undertaken by ENGEO include a series of CPTs across the development that enabled site specific liquefaction analyses to be undertaken using the proprietary software CLiq (v.2.3.1.15). Our analyses has adopted the following assumptions:

- CPT locations shown on the Geotechnical Investigation plan in Appendix 1.
- Analyses have been split into the North Block (being north of Bell Road) and South Block (South of Bell Road).

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- Post development ground levels were adopted based on information received from Maven on 8 September 2025. Where CPTs are located where stormwater reserves, roads or similar are proposed, the nearest proposed building platform levels have been adopted.
- Post development fill thicknesses consider the difference from existing ground level to proposed ground level. Potential elastic settlement of soils units or consolidation of peat or estuarine muds has not been considered. ENGEO has considered that although the peat may undergo considerable consolidation, the change in elevation of the underlying loose sands beneath the peat remains negligible for the purpose of the liquefaction assessment.
- In the absence of specific hydrogeological modelling, groundwater levels have been conservatively taken as 1 m higher than pre-development ground level.
- Soil ageing effects have not been considered.
- Engineered fills consider and average unit weight of 16 kN/m^3
- Analyses adopt the Boulanger and Idriss liquefaction triggering method (Boulanger & Idriss, 2014) liquefaction triggering method and Zhang et al. (Zhang et al., 2002) procedures for estimating volumetric strain and vertical settlement.
- Peak Ground Accelerations adopted for analyses are as specified in Section 3.5 above.
- Groundwater levels based on monitoring completed to date together with reference to TCC regional borehole and groundwater monitoring datasets.

Copies of the analyses are presented in Appendix 3 and can be summarised as follows:

- Liquefaction is triggered within the alluvial sands, fluvial deposits, and discrete lenses within the lower fluvial deposits underlying the site.
- The liquefaction response of the site generally displays a step change behaviour, with triggering predominantly occurring at PGAs of between 0.1 g and 0.2 g (earthquake return periods of generally 1/50 to 1/200 years). Due to the variable density of the sands some CPTs exhibit a more linear trend with liquefaction increasing as PGA increases to generally PGAs of 0.3 g. This stepped response is shown in Figure 4 and Figure 5 below.
- Once liquefaction is fully triggered, land performance (free field vertical settlement) during earthquake events greater than approximately 0.32 g (1 in 500-year event) is relatively consistent for PGA of up to 0.7 g (upper limit of the assessment range).
- Free-field vertical settlement between typically 150 mm and 400 mm can be expected for the post development landform following earthquake events with return periods greater than 1/250 years
- Based on the interpreted ground profile, traditional lateral spreading is not predicted to occur as liquefiable layers are constrained at depth below a non-liquefiable crust of engineered fill and peat. Notwithstanding this, the effects of strength loss due to liquefaction of the soils is expected to influence the stability of the proposed fill embankments that form the edge of the development. These effects are assessed in the landslip section below and are not further considered within this section.

- Ground damage indices; Liquefaction Potential Index (LPI) and Liquefaction Severity Number (LSN) indicate that above a return period of 1 in 500 years liquefaction is likely to completely develop in soils susceptible to liquefaction, however, due to the non-liquefiable surface crust of peat and engineered fill, surface expression of liquefaction is anticipated to be generally minor.
- Where the engineered crust is thinner than anticipated by our analysis; such as in surface water swales or roading channels, the risk of surface expression is more likely and may pose a risk to services.

Table 13: Numerical Liquefaction Assessment

AEP (%)	PGA[1] (g)	LPI Assessment	LSN Assessment	Total Vertical Settlement Assessment	General Performance / Consequence Level[1]
0.1 (1 in 1,000 year)	0.41	High risk to very high risk (7 to 37)	Little to moderate expression of liquefaction (4 to 27)	135 mm to 535 mm	L3 to L4 High to Severe
0.2 (1 in 500 year)	0.32	High risk to very high risk (5 to 28)	Little to moderate expression of liquefaction (4 to 26)	115 mm to 520 mm	L3 to L4 High to Severe
0.033 (1 in 3,030 year)*	0.57	High to very high risk (11 to 40)	Little to moderate expression of liquefaction (4 to 29)	155 mm to 540 mm	L3 to L4 High to Severe

[1] MBIE Module 3, Table 5.1 (MBIE & NZGS, 2021).

* Module 1 does not assess amax values for 0.033% AEP events and as such the 0.04% AEP event has been adopted.

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Figure 4: Liquefaction Induced Vertical Settlement (North Block) Post Development

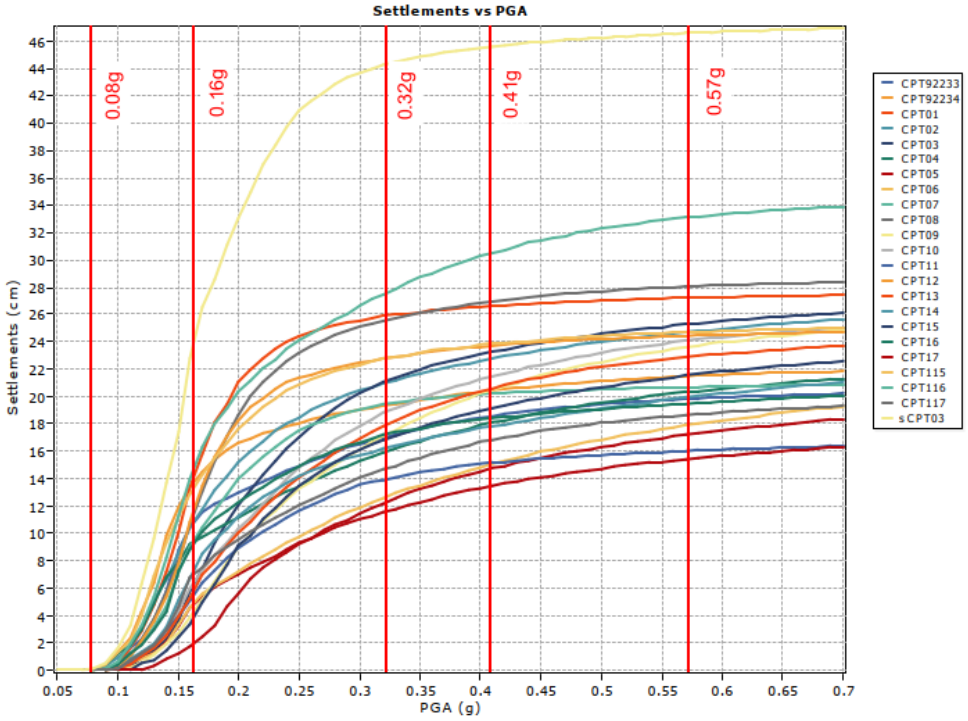
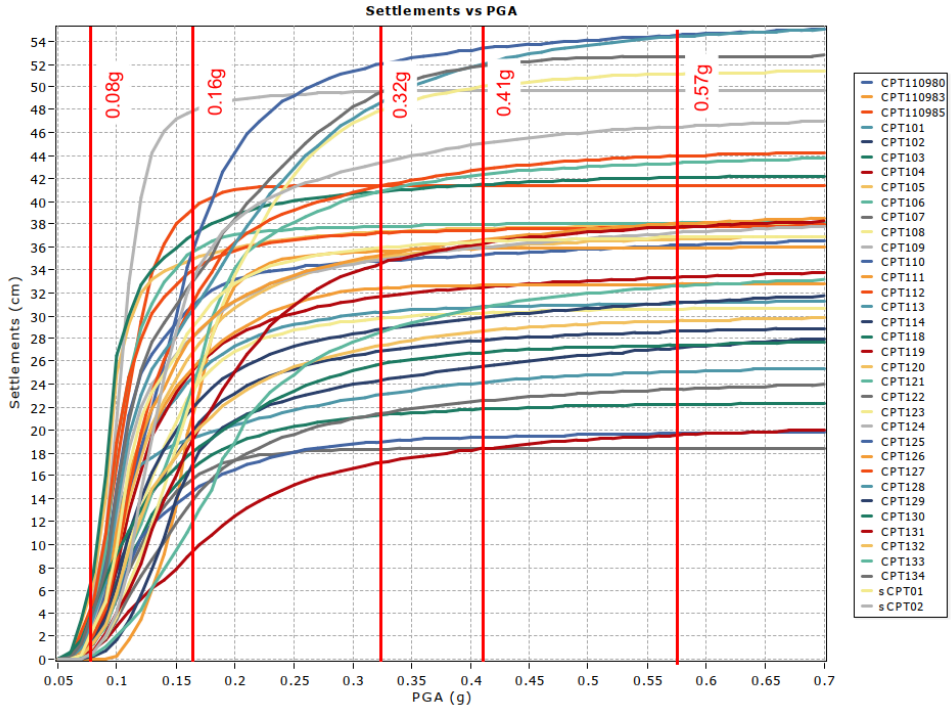


Figure 5: Liquefaction Induced Vertical Settlement (South Block) Post Development



5.2.2 Non-Liquefiable Crust Thickness

A non-liquefiable crust at the ground surface, such as the proposed engineered fill at the site, acts to decrease the manifestation and settlement impact of liquefaction, as noted most recently in the Canterbury earthquake sequence (Cubrinovski et al., 2019). These effects are generally observed when lateral spreading is absent and when the crust has sufficient thickness and strength to limit differential settlements for relatively light structures on shallow foundations.

Evidence from the Canterbury earthquake sequence suggests that a non-liquefied crust at the ground surface, and / or highly inter-layered silty soils in the top 5 to 6 m, reduced or suppressed the effects of liquefaction and its manifestation on the ground surface (Cubrinovski et al., 2019).

Bowen et al. (2013) evaluated the relationship between the non-liquefiable crust layer (H1) and the thickness of the underlying liquefiable layer (H2), building on Ishihara's (1985) earlier methods using data from multiple sites affected by the Canterbury earthquake sequence. Their findings indicate that crust thickness plays a significantly greater role than the thickness of liquefiable soils beneath. For moderate earthquake magnitudes (i.e., PGA less than 0.5 g), a crust thickness of approximately 3.5 to 4.0 m is generally sufficient to largely mitigate liquefaction-induced surface damage.

Based on the CPT data, and considering the peat deposits, topsoil and proposed engineered fill thickness acting collectively as a non-liquefiable crust, the site is generally expected to have between a 4 and 7 m crust thickness (an average of 5.5 m), as shown in Figure 6 below. Crust thickness has been taken as the difference in post development landform RL to base of Peat RL (this conservatively ignores consolidation effects of deeper estuarine soil underlying the peat from preloading which would increase the crust thickness).

Our liquefaction analyses also quantitatively demonstrate that this engineered crust thickness provides on average a 60% reduction in LSN values to the development from pre-development level. Figure 6 below provides a comparison of the LSN values pre and post landform development.

Along the dunes to the north, the non-liquefiable crust reduces as a function of both depth to groundwater (at RL 2 m) and the *in situ* sands along this boundary are susceptible to liquefaction where located below the groundwater table.

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Figure 6: Non-Liquefiable Crust Thickness Against LSN Comparison (0.41g)

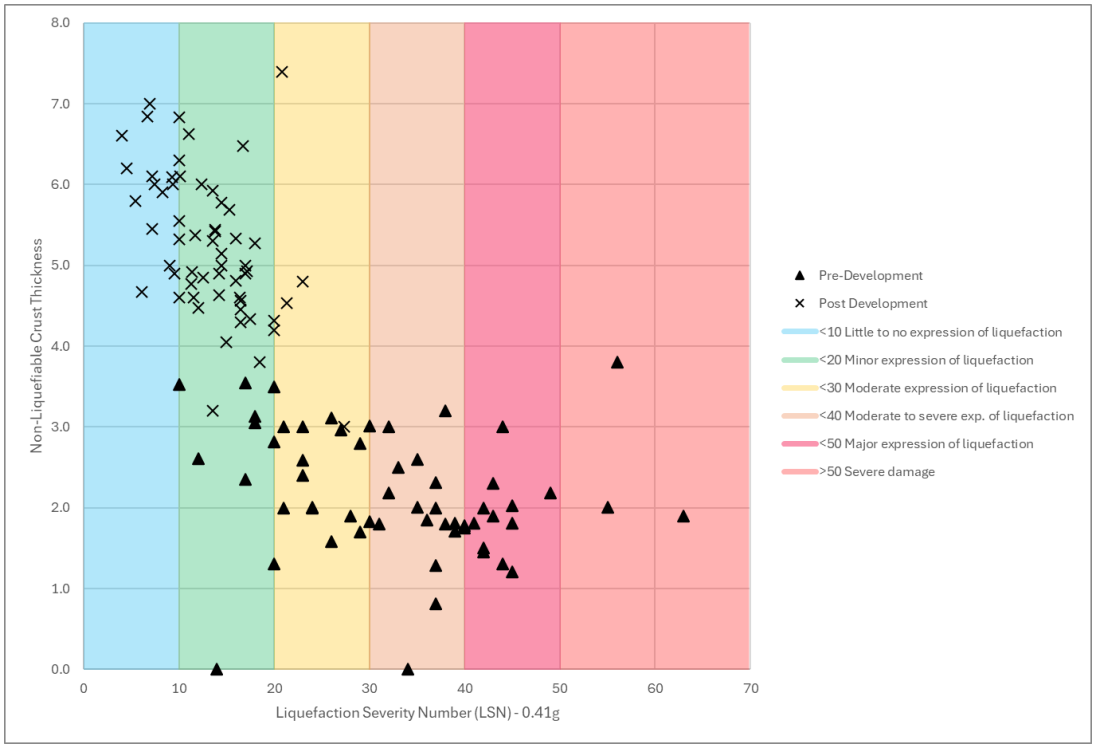

Table 14: Liquefaction Risk Level Assessment (Post Development Conditions Only)

Assessment	AEP (%)	Assessed Consequence	Justification	Risk Level
Primary	0.1	Potential Impacts on buildings – Catastrophic Lifelines utilities – Major Health & Safety - Moderate	130 mm to 535 mm of free field settlement predicted across the entire development area. Compromised functionality of > 50% of buildings within the area possible. Line services for subdivision affected significantly, however town / city populations less affected, likelihood of restoration within six weeks to six months. Assessed health and safety risk due to liquefaction / earthquake, 2 to 10 dead, and / or 11 – 100 injured within development area	High

Based on the above assessment, the risk is assessed as High for the purpose of Policy NH 3B and therefore mitigation measures must be implemented to reduce the level of risk. Further information on mitigation measures and additional risk assessment is provided in Section 6 below.

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5.2.3 Fault Rupture

As stated in Section 3.5 above the nearest, mapped, active fault to the site is the Otamarakau Fault located 27 km southeast of the site. At this distance the site is located well outside recommended fault avoidance zones (Kerr et al., 2003) and as such, the risk of fault rupture is considered to be low.

We have considered previous publications by GNS which consider active faulting models across New Zealand which also include offshore active faults (Litchfield et al., 2013) within the Bay of Plenty in the area known as the Havre Trough and northern Taupo Rift, an extension of the Whakatāne Graben. Most of the mapped faults in this study are derived from seismic reflection data with the majority of faults being normal. The nearest offshore faults from this study are approximately 15 to 20 km to the northeast. These fault traces have not been confirmed to reach the coast. An estimated slip rate for faults in the vicinity of the site is between 0.55 and 0.9 mm/yr (of the order of 50 – 100 mm per century).

The hazards associated with ground shaking are realised as liquefaction or slope instability. The effects of seismic shaking to building are managed through the structural design process, in the accordance with the building code, and therefore it is not considered further.

Given the site's considerable distance from mapped faults, the risk to the development associated with ground lurching and fault related subsidence / uplift effects (including ground rupture) are considered to be low.

GNS was commissioned in 2017 to undertake site specific active fault hazard studies for growth areas of Tauriko West and Te Tumu, with Te Tumu being east towards the coastline from this development. The study of the Te Tumu area involving review of LiDAR and geological desktop studies, together with review of topography and DEM's found no evidence of active faulting within the area. Their review included assessment of older surfaces within the northeast and southwest which include the subject site. They concluded that none of the surface features are indicative of topographic scarps indicative of active faults. The report also concluded that noted inactive faults mapped by Leonard within the Maketu cliffs southeast of the development indicate that fault displacements ceased some 240,000 years ago.

Table 15: Fault Rupture Risk Level Assessment

Assessment	AEP (%)	Assessed Consequence	Justification	Risk Level
Primary	0.017	Insignificant	Located over 15 km from nearest mapped active fault	Low
Secondary	0.2	Insignificant	Located over 15 km from nearest mapped active fault	Low
	0.005	Insignificant	Located over 15 km from nearest mapped active fault	Low

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Table 16: Fault Rupture AIFR Calculation – Secondary Assessment

AEP (%)	Consequence	D	P	N	AIFR = (D x P) / N	AIFR Risk Level
0.2	Insignificant	0	0.002	7,500	0	Low
0.005	Insignificant	0	0.00005	7,500	0	Low

D= number of anticipated deaths, N= maximum population present within hazard assessment area at any point in time over a 24 hour period, P = annual exceedance probability.

5.2.4 Landslide and Rockfall

The existing landform comprises near level farmland with occasional drainage ditch features being typically 150 m intervals across the development area. The risk of static and seismic instability is considered low for the existing greenfields environment, such that specific analysis is not considered necessary for natural hazard assessments. The post development conditions include a raised development platform situated above and adjacent to soils susceptible to liquefaction and lateral spreading risk, with elevated groundwater levels and future stormwater conveyance swales forming free edges is localised areas around the perimeter of the development.

To assess the seismic stability risk, quantitative slope stability analyses were undertaken considering static, seismic conditions with non-liquefied soils and seismic conditions with liquefied soils. These were run adopting idealised development cross sections considering the following conditions;

- A generalised development platform formed at 4.3 m RL.
- A generalised ground model comprising strata outlined in Section 3.4 above.
- The filled platform comprising pumiceous imported fill sources.
- Analysis considered edge stability against the existing farm perimeter conditions being 1.0 m RL, proposed future wetlands being 0.6 m RL and development either sides of swales being formed at 0.6 m RL and between 20 to 40 m wide.
- Slopes formed from the development platform to the edge were considered at 1(v) in 2(h) to consider worst case conditions in engineered fill.

When assessing the stability of a slope, we consider Factor of Safety (FoS) of a slope to resist failure. The FoS is a ratio of resisting forces to the forces driving the slope towards failure. A FoS = 1.0 indicates that the slope is at the point of instability. Soil parameters consider long term and short term strengths when assessing various critical conditions.

When considering static cases, long term parameters are considered with FoS of 1.5 under normal conditions and 1.3 under elevated pore pressure conditions being adopted. When considering seismic cases, short term parameters are considered and FoS may be considered less than 1.0 provided assessment of likely deformations under such cases are considered with respect to the total mass of soil being mobilised to consider the % of strain the ground is experiencing during such an event.

In addition, where seismic analyses result in FoS < 1.0, flow failure analysis is undertaken to consider factors of safety of the slopes where the soils prone to liquefaction have liquefied soil parameters. Under such analysis, earthquake loading is not applied.

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Slope stability analyses was undertaken using the proprietary software SLIDE 2, version 8 (Rocscience) adopting GLE Morgenstern-Price methods for considering circular and complex failure surfaces. Parameters were selected based on review of investigation data and adopting average *in situ* direct and inferred parameters which are included in the stability outputs in Appendix 3 for long term, short term and liquefied conditions, where appropriate.

Analysis to assess displacements under liquefied conditions with seismicity have been checked for the three options to consider the resilience of the landform where strong earthquake motion occurs while liquefied soil is present or under subsequent aftershocks while soils are in a liquefied state. These assessments have been undertaken using the Bray and Macedo (Bray et al., 2018) methods incorporating shallow crustal earthquake conditions.

The analysis indicates that under these conditions calculated 50% probability exceedance displacements range between 160 mm to 240 mm under a 1/500 year return period event, and between 250 mm and 370 mm under a 1/1000 year return period event for remediation Options 2 and 3. Calculated 50% probability exceedance displacements for Option 1 are less than 100 mm for similar return period events. The quantum of displacement from these analyses within typical return periods for 1/500 year and 1/1000 year events are generally in-line with embankments that are considered serviceable following an earthquake event (Lawson, 2018).

The table below considers the proposed landform under worst case conditions of the remedial options considered for the proposed embankment works.

Table 17: Seismic Slope Stability Assessment (Remediated Embankment Designs)

Scenario / Slope	AEP (%)	PGA (g)	FOS of Liquefied Soil Case	Liquefied Soil Yield PGA (g)	Assessed Displacement, 50th Percentile Probability (mm)	Failure Surface Length (m)	Strain within failure zone (%)
Perimeter Edge and Wetland	0.1	0.41	0.17	0.04	350	80 m	0.44%
	0.2	0.32	0.21	0.04	250	80 m	0.31%
	0.033	0.57	0.12	0.04	600	80 m	0.75%
Internal Swales	0.1	0.41	0.65	0.2	<100	40 m	0.25%
	0.2	0.32	0.78	0.2	<100	40 m	0.25%
	0.033	0.57	0.58	0.2	<100	40 m	0.25%

Our analysis indicates that the engineered embankment options proposed to form the development platforms at the site will exhibit some displacements under seismic loading combined with liquefied soils. Flow failure conditions have been addressed by the design of the engineered embankment options to resist flow failure conditions under high return period earthquake events. Our risk assessment based on these analyses are presented below.

Table 18: Landslide Risk Level Assessment

Assessment	AEP (%)	Assessed Consequence	Justification	Risk Level
Primary	0.1	Potential Impacts on buildings – Major Lifelines utilities – Major Health & Safety - Moderate	Assumed 21 – 49% of buildings within hazard assessment area have functionality compromised. Lifeline utility services for the development out for one week to one month which affect the population base of more the 20%. Estimated 2 – 10 dead and / or 11 – 100 injured.	Medium
Secondary	0.2	Potential Impacts on buildings – Major Lifelines utilities – Major Health & Safety - Moderate	Assumed 21 – 49% of buildings within hazard assessment area have functionality compromised. Lifeline utility services for the development out for one week to one month which affect the population base of more the 20%. Estimated 2 – 10 dead and / or 11 – 100 injured.	Medium
	0.033	Potential Impacts on buildings – Major Lifelines utilities – Major Health & Safety - Moderate	Assumed 21 – 49% of buildings within hazard assessment area have functionality compromised. Lifeline utility services for the development out for one week to one month which affect the population base of more the 20%. Estimated 2 – 10 dead and / or 11 – 100 injured.	Medium

Table 19: Landslide AIFR Calculation – Secondary Assessment

AEP (%)	Consequence	D	P	N	AIFR = (D x P) / N	AIFR Risk Level
0.1	Major	10	0.001	7,500	1.3×10^{-6}	Low
0.2	Major	10	0.002	7,500	2.7×10^{-6}	Low
0.033	Major	10	0.00033	7,500	4.4×10^{-7}	Low

Based on the above assessment, the risk is assessed as Low as part of the Secondary Assessment for the purpose of Policy NH 3B. Mitigation of risks associated with development of the platform and edge stability is discussed in further detail in Section 6.2 below, however this does not change the assessment of risks presented above.

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5.2.5 Tsunami

Recently published tsunami modelling (Roger et al., 2025) issued by BoPRC have been assessed for 21 different offshore earthquake centres which form the basis for the National Tsunami Hazard Model (NTHM2021) with a maximum tsunami wave height of between 4 and 6 m within the Bay of Plenty which was scaled to 5 m, and a Mean High Water Spring (MHWS) level of 0.9 m (MVD-1953) used as the initial high tide water level. For this modelling, selected existing stop banks and bridges were also removed which includes the stopbanks surrounding the lower Kaituna in proximity to the site.

The proposed development is to include construction of filled development platforms set between 3.6 m RL and 5.1 m RL, compared to the average existing ground level of 1.2 m RL. The latest tsunami wave inundation modelling indicates that inundation within the development area for a 5 m wave, considered to be an ARI 2,500 year event, is from 0 m up to 1.0 m above existing (current) ground levels. On this basis, the proposed development is expected to remain above the inundation level.

The site is considered to be almost entirely within the tsunami evacuation zone. With respect to the inundation models, safe evacuation paths for residents include two paths;

- Exiting the development via Papamoa East Interchange and travelling south to areas south of Rangiuru Business Park where inundation is not expected to occur.
- Exiting the development via Bell Road west and travelling inland towards either Te Puke south or the Papamoa Hills where inundation is not expected to occur.

Both of the above evacuation routes may be considered for foot traffic under emergency conditions to provide safe evacuation of affected populations within the expected 40 minute tsunami arrival time. It should be acknowledged that given the elevation of the proposed development, a shelter in place option is available to the affected population as inundation is not expected to affect the proposed development platforms.

Table 20: Tsunami Risk Level Assessment

Assessment	AEP (%)	Assessed Consequence	Justification	Risk Level
Primary	0.01	Insignificant	Development and evacuation routes above inundation levels.	Low
Secondary	0.2	Insignificant	Development and evacuation routes above inundation levels.	Low
	0.04	Insignificant	Development and evacuation routes above inundation levels.	Low

Table 21: Tsunami AIFR Calculation – Secondary Assessment

AEP (%)	Consequence	D	P	N	AIFR = (D x P) / N	AIFR Risk Level
0.2	Insignificant	0	0.002	12,700	0	Low
0.005	Insignificant	0	0.00005	12,700	0	Low

D= number of anticipated deaths, N= maximum population present within hazard assessment area at any point in time over a 24 hour period, P = annual exceedance probability.

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5.3 Coastal and Marine Processes

5.3.1 Coastal Erosion and Coastal Inundation

Published coastal erosion and inundation zones are available on WBOPDC Mapi and TCC Mapi show these coastal erosion zones are typically limited to 100 m inland from the coast for sea level rise events up to 1.4 m by 2130 and coastal inundation restricted to the fringes of the Tauranga Harbour and Pukehina Inlet. The site is located approximately 1.6 kilometres from the nearest coastline (Papamoa Beach) and is outside the mapped coastal erosion or inundation zones. The risk is therefore considered to be low for all AEP events and not considered further.

Table 22: Coastal and Marine Process Risk Level Assessment

Assessment	AEP (%)	Assessed Consequence	Justification	Risk Level
Primary	1	Insignificant	Outside mapped hazard zones, 1.6 km from coastline	Low
Secondary	2	Insignificant	Outside mapped hazard zones, 1.6 km from coastline	Low
	0.2	Insignificant	Outside mapped hazard zones, 1.6 km from coastline	Low

Table 23: Coastal and Marine Process AIFR Calculation – Secondary Assessment

AEP (%)	Consequence	D	P	N	AIFR = (D x P) / N	AIFR Risk Level
2	Insignificant	0	0.2	400	0	Low
0.2	Insignificant	0	0.002	400	0	Low

D = number of anticipated deaths, N = maximum population present within hazard assessment area at any point in time over a 24-hour period, P = annual exceedance probability.

5.4 Extreme Rainfall

5.4.1 Flooding

Flood hazard mapping published by WBoPDC shows that almost the entire site is vulnerable to flooding under the existing levels. Flood modelling prepared for this area for WBoPDC was undertaken by Tonkin & Taylor (Fifield, 2021). Maven have taken the previous modelling dataset and produced pre-development (existing) flood models and post development flood models for the return periods required for the RPS assessment. Excepts from the pre and post development flood depths and flow velocities are provided in Appendix 5.

The detailed flood models prepared by Maven factor in climate change effects (climate change to 3.68 °C with sea level of 1.59 m) and consider the existing flood mitigation measures in place within the vicinity of the development including the stop banks supporting the Kopuaroa Canal and Kaituna River and pump stations and flood weirs located within the canals and adjacent to the Kaituna River. Excerpts from Maven's assessments are provided below for the pre-development case, post development case and difference for 5, 10, 50, 100, and 500 year return period rainfall events.

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Figure 7: Maven Flood Model Results

Table 13 – Pre-Development for Climate Change 3.68°C with SLR 1.59m

	5-year	10-year	50-year	100-year	500-year	
Site Flow	17.04	49.22	79.536	137.36	222.15	m^3/s
Time of Peak	01/01/2000 0:40	01/01/2000 0:10	01/01/2000 0:30	01/01/2000 0:00	31/12/1999 23:50	hh:mm
Flood Level	1.85 (North) 1.09(South)	2.01 (North) 1.92 (South)	2.46 (North) 2.46 (South)	2.60(North) 2.60(South)	3.30(North) 3.30(South)	m NZVD16
Flood Depth	0.13(North) 0.62(South)	0.29 (North) 1.45 (South)	0.74 (North) 1.99(South)	0.88 (North) 2.13 (South)	1.58 (North) 2.83 (South)	m

Table 14 – Post-Development for Climate Change 3.68°C with SLR 1.59m

	5-year	10-year	50-year	100-year	500-year	
Site Flow	17.58	52.46	83.57	129.42	193.36	m^3/s
Time of Peak	01/01/2000 0:40	01/01/2000 0:20	31/12/1999 23:50	31/12/1999 23:50	31/12/1999 23:50	hh:mm
Flood Level	1.76 (North) 0.76 (South)	2.05 (North) 1.58(South)	2.26 (North) 2.25(South)	2.49 (North) 2.49 (South)	3.32 (North) 3.32 (South)	m NZVD16
Flood Depth	0.07(North) 0.30(South)	0.35 (North) 1.12(South)	0.55 (North) 1.78(South)	0.78(North) 2.03 (South)	1.61North) 2.86(South)	m

Table 15 – Difference for Climate Change 3.68°C with SLR 1.59m

	5-year	10-year	50-year	100-year	500-year	
Site Flow	+0.5	+3.4	+4.0	-8.0	-28.8	m^3/s
Time of Peak	Same time	Same time	Same time	Same time	Same time	hh:mm
Flood Level	-0.09(North) -0.33(South)	+0.04(North) -0.34(South)	-0.20(North) -0.21(South)	-0.11(North) -0.11(South)	+0.02(North) +0.02(South)	m NZVD16
Flood Depth	-0.06(North) -0.32(South)	+0.06(North) -0.33(South)	-0.19(North) -0.21(South)	-0.10(North) -0.10(South)	+0.03(North) +0.02(South)	m

The proposed development levels have been formed to mitigate flooding on the development platforms under all cases, with the maximum increase in flood level being 330 mm within the southern area under a 5 year return period storm event and the maximum flood depth increase being 60 mm within the northern portion of the development under a 10 year return period event. The majority of modelled cases indicate a general decrease in flood levels across the storm frequencies between pre and post development.

We note that the current site has been subject to several flooding events causing widespread inundation of the paddocks with inundation occurring within some of the farm buildings and close to inundating the existing residential properties across the land parcels. The proposed landform design, stormwater conveyance, and attenuation design and flood modelling of the post development case would address flood risks observed across the property in future flood events.

The results of our risk assessment are presented below.

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Table 24: Flooding Risk Assessment

Assessment	AEP (%)	Assessed Consequence	Justification	Risk Level
Primary	1	Insignificant	Post development levels for development set based on flood modelling. Climate adjusted flood modelling does not impact development areas.	Low
Secondary	2	Insignificant	Post development levels for development set based on flood modelling. Climate adjusted flood modelling does not impact development areas.	Low
	0.2	Insignificant	Post development levels for development set based on flood modelling. Climate adjusted flood modelling does not impact development areas.	Low

Table 25: Flooding AIFR Calculation – Secondary Assessment

AEP (%)	Consequence	D	P	N	AIFR = (D x P) / N	AIFR Risk Level
1	Insignificant	0	0.01	400	0	Low
2	Insignificant	0	0.02	400	0	Low
0.2	Insignificant	0	0.002	400	0	Low

D = number of anticipated deaths, N = maximum population present within hazard assessment area at any point in time over a 24-hour period, P = annual exceedance probability.

5.4.2 Rainfall Triggered Landslides and Debris Flow (Lahar)

The site does not include any natural slopes that will trigger significant landsliding as part of future extreme rainfall events. Analysis of the proposed development platform slopes have been assessed using elevated pore pressure analysis (ru = 0.1) to the affected soils to replicate wetting fronts. Factors of safety for the design cases assessed were considered appropriate under these elevated cases, such that failure of these engineered slopes is unlikely to occur during extreme rainfall events.

With regard to rainfall triggered debris flow, we consider that any debris flow from extreme rainfall events within the upper Kaituna River catchment would likely breach the river banks within the rural farmland south of Te Puke (i.e. north and south of Maungarangi Road) where the Kaituna River becomes less incised and the paleo-floodplains begin, such that significant deposition of debris flow into the subject site is unlikely that far from the source area.

Our risk assessment is presented below.

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Table 26: Extreme Rainfall Landslide Risk Assessment

Assessment	AEP (%)	Assessed Consequence	Justification	Risk Level
Primary	1	Insignificant	No natural slopes at risk of failure due to extreme rainfall. Engineered slopes designed to mitigate risk.	Low
Secondary	2	Insignificant	No natural slopes at risk of failure due to extreme rainfall. Engineered slopes designed to mitigate risk.	Low
	0.2	Insignificant	No natural slopes at risk of failure due to extreme rainfall. Engineered slopes designed to mitigate risk.	Low

Table 27: Extreme Rainfall Landslide AIFR Calculation – Secondary Assessment

AEP (%)	Consequence	D	P	N	AIFR = (D x P) / N	AIFR Risk Level
1	Insignificant	0	0.01	7,500	0	Low
2	Insignificant	0	0.02	7,500	0	Low
0.2	Insignificant	0	0.002	7,500	0	Low

6 Mitigation Measures

As outlined in Section 5, our NHRA has identified a high risk to the development due to liquefaction and a medium risk to the development from earthquake induced instability along the fill embankment margins. Proposed measures to address these risks are discussed below.

6.1 Liquefaction Mitigation

The proposed landform for the development is to several metres of engineered fill comprising compacted dense pumice soil with additional reinforcement and / or cohesive fill use for the perimeter of the development platforms. The non-liquefiable crusts across the development is expected to range between 4 m and 7 m in thickness (average 5.5 m). The effects of this crust have been shown (Figure 6) to demonstrably reduce liquefaction severity from moderate / severe to little / minor.

As outlined in Section 5.3 above, Bowen et al. (2013) also concluded that a crust thickness of approximately 3.5 to 4.0 m is generally sufficient to largely mitigate liquefaction-induced surface damage, and as such, we anticipate that the proposed development earthworks will contribute a significant amount of mitigation to both liquefaction manifestation and severity.

To further reduce the potential impacts of liquefaction to buildings, foundation design options for future residential buildings will incorporate specification for earthquake resilient foundation systems developed in general accordance with the MBIE Build It Right Canterbury Guidelines Technical Category 2.

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For future light commercial and industrial building applications specifically engineered foundation systems and floor construction will also be specified to account for the estimated total and differential liquefaction induced settlements being considered at the site.

Essential and lifeline services infrastructure such as stormwater pump stations and culverts beneath proposed roading networks are expected to be designed to include geotechnical remediation works such as shallow or deep ground improvements to reduce liquefaction induced total and differential settlement to prevent collapse of these structures for the designed importance level required for their ongoing serviceability. Specific design of these systems will be provided as part of detailed design prior to consent and / or engineering approval works.

Following application of the above measures we consider that the residual liquefaction risk to the development in regards to building and health and safety / life risk to be low. Our mitigated risk assessment table for liquefaction is provided below:

Table 28: Liquefaction Mitigation Risk Level Assessment

Assessment	AEP (%)	Assessed Consequence	Justification	Risk Level
Primary	0.1	Minor	Significant non-liquefiable crust thickness. Lifeline services to be supported by specific ground improvement as part of detailed design.	Low
Secondary	0.2	Minor	Significant non-liquefiable crust thickness. Lifeline services to be supported by specific ground improvement as part of detailed design.	Low
	0.033	Moderate	Significant non-liquefiable crust thickness. Lifeline services to be supported by specific ground improvement as part of detailed design.	Low

Table 29: Liquefaction Mitigation AIFR Calculation – Secondary Assessment

AEP (%)	Consequence	D	P	N	AIFR = (D x P) / N	AIFR Risk Level
0.2	Minor	0	0.002	7,500	0	Low
0.033	Moderate	0	0.00005	7,500	0	Low

D= number of anticipated deaths, N= maximum population present within hazard assessment area at any point in time over a 24 hour period, P = annual exceedance probability.

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6.2 Edge Stability Mitigation

The risk of slope instability as a result of future significant earthquake events occurring within proximity to the site will be reduced by the construction of specifically engineered development platforms that provide resistance to embankment edge stability conditions, with a range of geotechnical design options currently being considered including:

- Deep Ground Improvement supporting the edge of the development platforms providing a cut off for liquefaction and associated lateral spreading effects.
- Adoption of cohesive fill as part of the engineered embankment together with high strength basal geogrid reinforcement within the edge zones to resist seismic deformation and flow failure conditions.
- Installation of geogrid reinforcement layers within the embankment edge zones to resist seismic deformation and flow failure conditions.
- Near surface shallow ground improvement layers between development platforms to increase near surface soil modulus, mitigate surface manifestation and flow failure conditions occurring.

These options have been provided in our Geotechnical Interpretive Report for the development in full with excerpts of the analysis options presented in Appendix 4.

The quantum of displacement from the analysis of remediated slopes are generally in-line with embankments that are considered serviceable following an earthquake event (Lawson, 2018).

The zones of treatment however, need to be considered with respect to the future built form in each stage as part of detailed design so that transitions between reinforcement / stabilised edge works and the unreinforced/non-stabilised bulk landform behind are not situated beneath future building development or critical inground infrastructure. These transitions therefore should be considered along future lot boundaries, road reserve, or reserve areas.

7 Risk Assessment Summary and Conclusions

Based on the results of our assessment above, we consider that the proposed development has given due regard to the natural hazards required to be assessed in accordance with the BOPRC Natural Hazards Regional Policy Statement. A summary of the development risk level is provided in Table 29 below.

Of the natural hazards assessed, we consider that the risk of both liquefaction and earthquake induced landslide activity require mitigation in order to reduce the consequences, with mitigation methods considered within relevant sections above. The residual risks associated with these hazards are considered low following mitigation through engineering design. The requirements to address these risks should be included as a condition of resource consent for the development and implemented through earthworks consents and building consent phases.

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Table 30: Summary of Development Risk Level

Natural Hazard		Assessed Risk Level	Mitigation Measures	Development Risk Level
Volcanic activity	pyroclastic and lava flow	Low	None	Low
	landslip, debris flow and lahar	Low	None	Low
	ash fall	Low	None	Low
	geothermal hazard	Low	None	Low
	caldera unrest	Low	None	Low
Earthquake	liquefaction and lateral spreading	High	Development platform providing liquefaction resistant crust, edge stabilisation design options. Specifically design Foundations for buildings and essential services.	Low
	fault rupture	Low	None	Low
	landslide and rock fall (edge stability)	Medium	Edge stabilisation design options for development platform	Medium
	tsunami	Low	None	Low
Coastal / marine processes	coastal erosion	Low	None	Low
	coastal inundation	Low	None	Low
Extreme rainfall	landslip and debris flow / flood	Low	None	Low
	flooding	Low	None	Low

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8 Limitations

i. We have prepared this report in accordance with the brief as provided. This report has been prepared for the use of our client, Bell Road Limited Partnership, their professional advisers the relevant Territorial Authorities, and the appointed Fast Track Panel in relation to the specified project brief described in this report. No liability is accepted for the use of any part of the report for any other purpose or by any other person or entity.

ii. The recommendations in this report are based on the ground conditions indicated from published sources, site assessments and subsurface investigations described in this report based on accepted normal methods of site investigations. Only a limited amount of information has been collected to meet the specific financial and technical requirements of the client's brief and this report does not purport to completely describe all the site characteristics and properties. The nature and continuity of the ground between test locations has been inferred using experience and judgement and it should be appreciated that actual conditions could vary from the assumed model.

iii. Subsurface conditions relevant to construction works should be assessed by contractors who can make their own interpretation of the factual data provided. They should perform any additional tests as necessary for their own purposes.

iv. This Limitation should be read in conjunction with the Engineering NZ / ACENZ Standard Terms of Engagement.

v. This report is not to be reproduced either wholly or in part without our prior written permission.

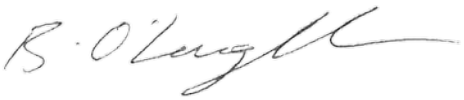
We trust that this information meets your current requirements. Please do not hesitate to contact the undersigned on (07) 777 0209 if you require any further information.

Report prepared by

Greg Snook, CMEngNZ (PEngGeol), TCC Category 1 Geo-Professional

Associate Engineering Geologist

Report reviewed by



Ben O'Loughlin, CGeol, CMEngNZ (PEngGeol), Category 1 Geo-Professional

Principal Engineering Geologist

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APPENDIX 1:

Investigation Plans

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CAD File: Z:\Drafting\19001 to 20000\19630 - Bell Road Development, Papamoa\DWG Files\04-Site Plan\PB-19630-SP-160925.dwg

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GEOTECHNICAL SITE PLANS

BELL ROAD DEVELOPMENT PAPAMOA TAURANGA

DECEMBER 2025
PROJECT NO: 19630.000.001

LOCATION MAP

DRAWING NO.	DRAWING TITLE	REV.	DATE
100	GEOTECHNICAL SITE PLAN - OVERVIEW	B	26.09.25
101	GEOTECHNICAL SITE PLAN - NORTH BLOCK	B	26.09.25
102	GEOTECHNICAL SITE PLAN - SOUTH BLOCK	B	26.09.25
110	GEOTECHNICAL INFERRED THICKNESS OF PEAT DEPOSITS - OVERALL PLAN	C	26.09.25
111	GEOTECHNICAL INFERRED THICKNESS OF PEAT DEPOSITS - NORTH BLOCK	B	18.09.25
112	GEOTECHNICAL INFERRED THICKNESS OF PEAT DEPOSITS - SOUTH BLOCK	B	18.09.25
113	GEOTECHNICAL INFERRED THICKNESS OF ESTUARINE MUD DEPOSITS - OVERALL PLAN	B	26.09.25
114	GEOTECHNICAL INFERRED THICKNESS OF ESTUARINE MUD DEPOSITS - NORTH BLOCK	A	18.09.25
115	GEOTECHNICAL INFERRED THICKNESS OF ESTUARINE MUD DEPOSITS - SOUTH BLOCK	A	18.09.25
116	OMITTED	-	-
117	CONCEPTUAL ENGINEERING GEOLOGICAL MODEL	A	25.09.25
118	GEOLOGICAL CROSS SECTION A - A' 1.5 X VERTICAL EXAGGERATION	2	21.10.25
119	GEOLOGICAL CROSS SECTION B - B' 1.5 X VERTICAL EXAGGERATION	2	21.10.25

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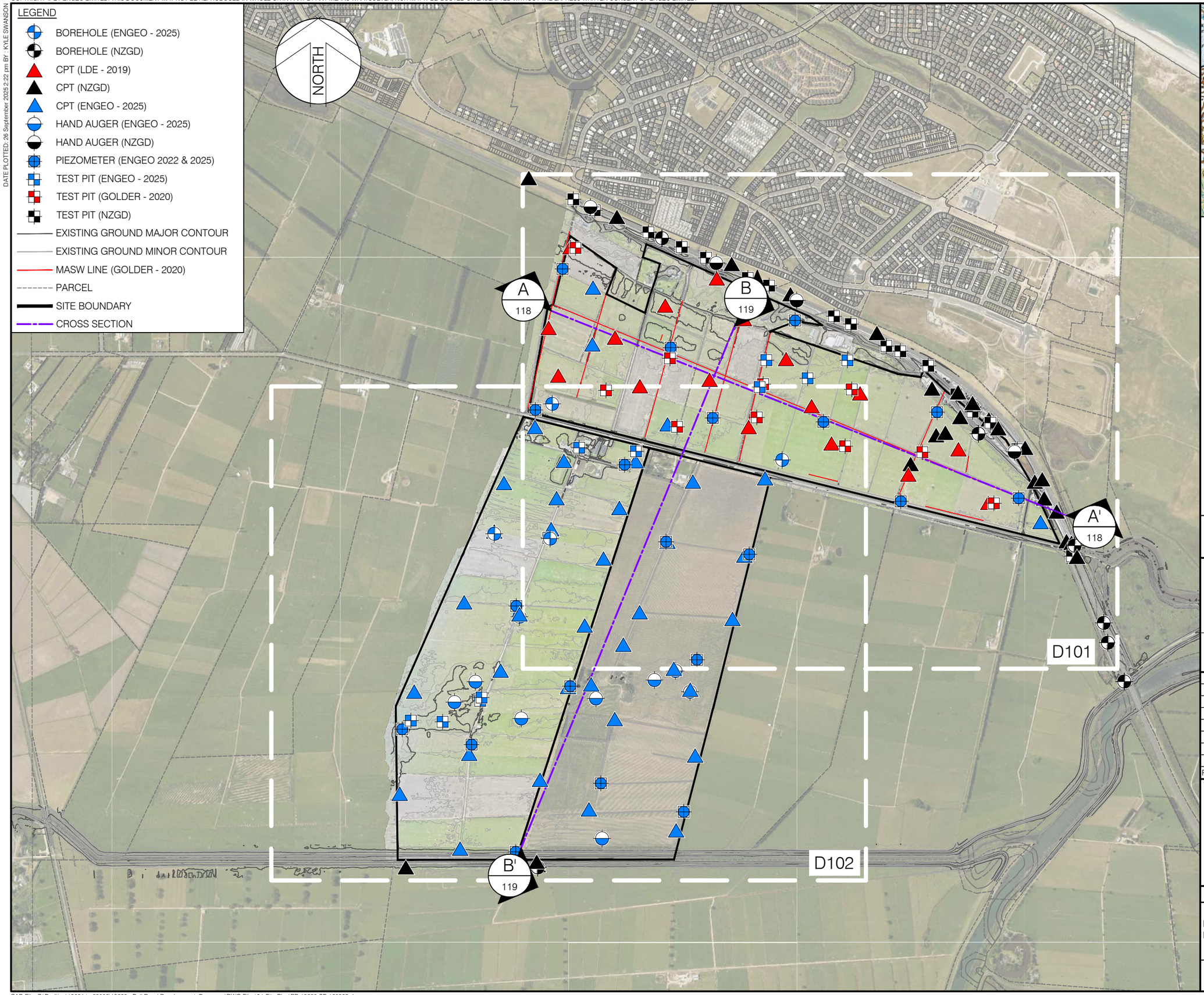
LEGEND

- BOREHOLE (ENGEO - 2025)
- BOREHOLE (NZGD)
- CPT (LDE - 2019)
- CPT (NZGD)
- CPT (ENGEO - 2025)
- HAND AUGER (ENGEO - 2025)
- HAND AUGER (NZGD)
- PIEZOMETER (ENGEO 2022 & 2025)
- TEST PIT (ENGEO - 2025)
- TEST PIT (GOLDER - 2020)
- TEST PIT (NZGD)
- EXISTING GROUND MAJOR CONTOUR
- EXISTING GROUND MINOR CONTOUR
- MASW LINE (GOLDER - 2020)
- PARCEL
- SITE BOUNDARY
- CROSS SECTION



NOTES:

1. SURVEY, DRONE AERIAL, AND EXISTING CONTOURS PROVIDED BY MAVEN. RECEIVED MAY 29 2025 AND AUGUST 26, 2025.
2. COORDINATE ORIGIN: BAY OF PLENTY, PROJECTION: GEODETIC 2000.
3. VERTICAL DATUM: NZVD 2016.
4. PARCELS SOURCED FROM LINZ DATA SERVICE AND LICENSED FOR RE-USE UNDER THE CREATIVE COMMONS ATTRIBUTION 4.0 NEW ZEALAND LICENSE (SOURCE DATE JUNE 20 2025).
5. AERIAL IMAGE SOURCED FROM LINZ DATA SERVICE AND LICENSED FOR RE-USE UNDER THE CREATIVE COMMONS ATTRIBUTION 4.0 NEW ZEALAND LICENSE (BAY OF PLENTY 0.2m RURAL AERIAL PHOTOS 2023-2024).
6. NZ TOPO250 MAP SOURCED FROM LINZ DATA SERVICE AND LICENSED FOR RE-USE UNDER THE CREATIVE COMMONS ATTRIBUTION 4.0 NEW ZEALAND LICENSE.

0 100 200 300 400 500m
SCALE 1:15,000

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Rev	Date	Description	Drwn	Chkd
B	26.09.25	Client Issue	KS	GMS
A	29.08.25	Client Issue	KS	GMS

Title:

GEOTECHNICAL SITE PLAN - OVERVIEW

Client: Bell Road Limited Partnership		Drawing: 100
Project: Bell Road Development Papamoa Tauranga	Designed: DH Drawn: KS Checked: GMS Date: 26.09.25	Size: A3
Project No: 19630.000.001	Scale: 1:15000	Rev: B

CAD File: Z:\Drafting\19001 to 20000\19630 - Bell Road Development, Papamoa\DWG Files\04-Site Plan\RB-19630-SP-160925.dwg
XREF's: X-19630-Drone Aerial-2; X-19630-SURVEY; X-19630-TOPO 250 MAP; X-19630-PARCELS; X-19630-PEAT SURFACE COUNTOURS 0.5m; X-Ex Contours-250807; X-19630-MUDSTONE COUNTOURS 1.0m; ENGEO_Logo; X-19630-AERIAL RURAL-2023-2024-V2

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NORTH

STATE HIGHWAY 2

BELL ROAD

INFERRED GEOLOGICAL BOUNDARY

643.5 m

A 118 — A' 118

B 119

LEGEND

- BOREHOLE (ENGEO - 2025)
- BOREHOLE (NZGD)
- CPT (LDE - 2019)
- CPT (NZGD)
- CPT (ENGEO - 2025)
- HAND AUGER (ENGEO - 2025)
- HAND AUGER (NZGD)
- PIEZOMETER (ENGEO 2022 & 2025)
- TEST PIT (ENGEO - 2025)
- TEST PIT (GOLDER - 2020)
- TEST PIT (NZGD)
- EXISTING GROUND MAJOR CONTOUR
- EXISTING GROUND MINOR CONTOUR
- MASW LINE (GOLDER - 2020)
- PARCEL
- SITE BOUNDARY
- CROSS SECTION

NOTES:

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3. VERTICAL DATUM: NZVD 2016.
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5. AERIAL IMAGE SOURCED FROM LINZ DATA SERVICE AND LICENSED FOR RE-USE UNDER THE CREATIVE COMMONS ATTRIBUTION 4.0 NEW ZEALAND LICENSE (BAY OF PLENTY 0.2m RURAL AERIAL PHOTOS 2023-2024).
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SCALE 1:7500

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Rev	Date	Description	Drwn	Chkd
B	26.09.25	Client Issue	KS	GMS
A	29.08.25	Client Issue	KS	GMS

Title:

GEOTECHNICAL SITE PLAN - NORTH BLOCK

Client: Bell Road Limited Partnership		Drawing: 101
Project: Bell Road Development Papamoa Tauranga	Designed: DH Drawn: KS Checked: GMS Date: 26.09.25	Size: A3
Project No: 19630.000.001	Scale: 1:7500	Rev: B

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XREF's: X-19630-Drone Aerial-2; X-19630-SURVEY; X-19630-TOPO 250 MAP; X-19630-PARCELS; X-19630-PEAT SURFACE COUNTOURS 0.5m; X-Ex Contours-250807; X-19630-MUDSTONE COUNTOURS 1.0m; ENGEO_Logo; X-19630-AERIAL RURAL-2023-2024-V2

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LEGEND

- BOREHOLE (ENGEO - 2025)
- BOREHOLE (NZGD)
- CPT (LDE - 2019)
- CPT (NZGD)
- CPT (ENGEO - 2025)
- HAND AUGER (ENGEO - 2025)
- HAND AUGER (NZGD)
- PIEZOMETER (ENGEO 2022 & 2025)
- TEST PIT (ENGEO - 2025)
- TEST PIT (GOLDER - 2020)
- TEST PIT (NZGD)
- EXISTING GROUND MAJOR CONTOUR
- EXISTING GROUND MINOR CONTOUR
- MASW LINE (GOLDER - 2020)
- PARCEL
- SITE BOUNDARY
- CROSS SECTION

NORTH

BELL ROAD

L01 L02 L05 L08

NOTES:

1. SURVEY, DRONE AERIAL, AND EXISTING CONTOURS PROVIDED BY MAVEN. RECEIVED MAY 29 2025 AND AUGUST 26, 2025.
2. COORDINATE ORIGIN: BAY OF PLENTY, PROJECTION: GEODETIC 2000.
3. VERTICAL DATUM: NZVD 2016.
4. PARCELS SOURCED FROM LINZ DATA SERVICE AND LICENSED FOR RE-USE UNDER THE CREATIVE COMMONS ATTRIBUTION 4.0 NEW ZEALAND LICENSE (SOURCE DATE JUNE 20 2025).
5. AERIAL IMAGE SOURCED FROM LINZ DATA SERVICE AND LICENSED FOR RE-USE UNDER THE CREATIVE COMMONS ATTRIBUTION 4.0 NEW ZEALAND LICENSE (BAY OF PLENTY 0.2m RURAL AERIAL PHOTOS 2023-2024).
6. NZ TOPO250 MAP SOURCED FROM LINZ DATA SERVICE AND LICENSED FOR RE-USE UNDER THE CREATIVE COMMONS ATTRIBUTION 4.0 NEW ZEALAND LICENSE.

0 50 100 200 300m
SCALE 1:7500

ENGEO

Tauranga Office
1/314 Maunganui Road, Mt Maunganui 3116
Tel: 07 777 0209, www.engeo.co.nz

Rev	Date	Description	Drwn	Chkd
B	26.09.25	Client Issue	KS	GMS
A	29.08.25	Client Issue	KS	GMS

Title:

GEOTECHNICAL SITE PLAN - SOUTH BLOCK

Client: Bell Road Limited Partnership		Drawing: 102
Project: Bell Road Development Papamoa Tauranga	Designed: DH Drawn: KS Checked: GMS Date: 26.09.25	Size: A3
Project No: 19630.000.001	Scale: 1:7500	Rev: B

CAD File: Z:\Drafting\19001 to 20000\19630 - Bell Road Development, Papamoa\DWG Files\04-Site Plan\RB-19630-SP-160925.dwg
XREF's: X-19630-Drone Aerial-2; X-19630-SURVEY; X-19630-TOPO 250 MAP; X-19630-PARCELS; X-19630-PEAT SURFACE COUNTOURS 0.5m; X-Ex Contours-250807; X-19630-MUDSTONE COUNTOURS 1.0m; ENGEO_Logo; X-19630-AERIAL RURAL-2023-2024-V2

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DATE PLOTTED: 26 September 2025 2:22 pm BY: KYLE SWANSON

LEGEND

- ?— INFERRED GEOLOGICAL BOUNDARY
- INFERRED PEAT THICKNESS MAJOR CONTOUR
- INFERRED PEAT THICKNESS MINOR CONTOUR
- SITE BOUNDARY
- PARCEL
- CROSS SECTION
- NO SURFICIAL PEAT

NORTH

A 118

B 119

A' 118

B' 119

INFERRED GEOLOGICAL BOUNDARY

PEAT BENEATH SURFACE AIRFALL DEPOSITS

D111

D112

NOTES:

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5. NZ TOPO250 MAP SOURCED FROM LINZ DATA SERVICE AND LICENSED FOR RE-USE UNDER THE CREATIVE COMMONS ATTRIBUTION 4.0 NEW ZEALAND LICENSE.
6. PEAT THICKNESSES ARE INFERRED ONLY. PEAT THICKNESS HAS BEEN CONSERVATIVELY MODELLED USING UPPER BOUND THICKNESS WHERE DISPARITY IN NEARBY INVESTIGATION DATA EXISTS.

0 100 200 300 400 500m
SCALE 1:15,000

ENGEO

Tauranga Office
1/314 Maunganui Road, Mt Maunganui 3116
Tel: 07 777 0209, www.engeo.co.nz

Rev	Date	Description	Drwn	Chkd
C	26.09.25	Client Issue	KS	GMS
B	18.09.25	Client Issue	KS	GMS
A	23.07.25	For Information	KS	GMS

Title:

GEOTECHNICAL INFERRED THICKNESS OF PEAT DEPOSITS - OVERALL PLAN

Client: Bell Road Limited Partnership		Drawing: 110
Project: Bell Road Development Papamoa Tauranga	Designed: DH Drawn: KS Checked: GMS Date: 26.09.25	Size: A3
Project No: 19630.000.001	Scale: 1:15000	Rev: C

CAD File: Z:\Drafting\19001 to 20000\19630 - Bell Road Development, Papamoa\DWG Files\04-Site Plan\RB-19630-SP-160925.dwg
XREF's: X-19630-Drone Aerial-2; X-19630-SURVEY; X-19630-TOPO 250 MAP; X-19630-PARCELS; X-19630-PEAT SURFACE COUNTOURS 0.5m; X-Ex Contours-250807; X-19630-MUDSTONE COUNTOURS 1.0m; ENGEO_Logo; X-19630-AERIAL RURAL-2023-2024-V2

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DATE PLOTTED: 26 September 2025 2:22 pm BY: KYLE SWANSON

NORTH

STATE HIGHWAY 2

BELL ROAD

INFERRED GEOLOGICAL BOUNDARY

MASW-17

LEGEND

- BOREHOLE (ENGEO - 2025)
- BOREHOLE (NZGD)
- CPT (LDE - 2019)
- CPT (NZGD)
- CPT (ENGEO - 2025)
- HAND AUGER (ENGEO - 2025)
- HAND AUGER (NZGD)
- PIEZOMETER (ENGEO 2022 & 2025)
- TEST PIT (ENGEO - 2025)
- TEST PIT (GOLDER - 2020)
- TEST PIT (NZGD)
- [XXm] INFERRED PEAT THICKNESS
- INFERRED GEOLOGICAL BOUNDARY
- INFERRED PEAT THICKNESS MAJOR CONTOUR
- INFERRED PEAT THICKNESS MINOR CONTOUR
- MASW LINE (GOLDER - 2020)
- SITE BOUNDARY
- PARCEL
- NO SURFICIAL PEAT

NOTES:

1. SURVEY, DRONE AERIAL, AND EXISTING CONTOURS PROVIDED BY MAVEN. RECEIVED MAY 29 2025 AND AUGUST 26, 2025.
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5. NZ TOPO250 MAP SOURCED FROM LINZ DATA SERVICE AND LICENSED FOR RE-USE UNDER THE CREATIVE COMMONS ATTRIBUTION 4.0 NEW ZEALAND LICENSE.
6. PEAT THICKNESSES ARE INFERRED ONLY. PEAT THICKNESS HAS BEEN CONSERVATIVELY MODELLED USING UPPER BOUND THICKNESS WHERE DISPARITY IN NEARBY INVESTIGATION DATA EXISTS.

0 50 100 200 300m
SCALE 1:7500

ENGEO

Tauranga Office
1/314 Maunganui Road, Mt Maunganui 3116
Tel: 07 777 0209, www.engeo.co.nz

Rev	Date	Description	Drwn	Chkd
B	18.09.25	Client Issue	KS	GMS
A	23.07.25	For Information	KS	GMS

Title:

GEOTECHNICAL INFERRED THICKNESS OF PEAT DEPOSITS - NORTH BLOCK

Client: Bell Road Limited Partnership		Drawing: 111
Project: Bell Road Development Papamoa Tauranga	Designed: DH Drawn: KS Checked: GMS Date: 18.09.25	Size: A3
Project No: 19630.000.001	Scale: 1:7500	Rev: B

CAD File: Z:\Drafting\19001 to 20000\19630 - Bell Road Development, Papamoa\DWG Files\04-Site Plan\RB-19630-SP-160925.dwg
XREF's: X-19630-Drone Aerial-2; X-19630-SURVEY; X-19630-TOPO 250 MAP; X-19630-PARCELS; X-19630-PEAT SURFACE COUNTOURS 0.5m; X-Ex Contours-250807; X-19630-MUDSTONE COUNTOURS 1.0m; ENGEO_Logo; X-19630-AERIAL RURAL-2023-2024-V2

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DATE PLOTTED: 26 September 2025 2:22 pm BY: KYLE SWANSON

LEGEND

- BOREHOLE (ENGEO - 2025)
- BOREHOLE (NZGD)
- CPT (LDE - 2019)
- CPT (NZGD)
- CPT (ENGEO - 2025)
- HAND AUGER (ENGEO - 2025)
- HAND AUGER (NZGD)
- PIEZOMETER (ENGEO 2022 & 2025)
- TEST PIT (ENGEO - 2025)
- TEST PIT (GOLDER - 2020)
- TEST PIT (NZGD)
- [XXm] INFERRED PEAT THICKNESS
- INFERRED PEAT THICKNESS MAJOR CONTOUR
- INFERRED PEAT THICKNESS MINOR CONTOUR
- MASW LINE (GOLDER - 2020)
- SITE BOUNDARY
- PARCEL
- NO SURFICIAL PEAT

NORTH

PRIOR EARTHWORKS AND ENGINEERED FILL REPLACEMENT

INFERRED AREA OF SURFICIAL PUMICE AIRFALL DEPOSITS (ENCOUNTERED BELOW TOPSOIL THICKNESS RANGE FROM 0.3m TO 1.5m)

BELL ROAD

L01 L02 L05 L08

TP02 [1.5m]
PZ03
BH01 [1.7m]
CPT101 [1.7m]
CPT116 [1.2m]
TP04 [1.4m]
PZ02
TP06 [2.6m]
CPT14 [3.3m]
PZ05
CPT15 [1.6m]
BH03 [3.3m]
TP106 [1.5m]
PZ13 [1.5m]
SCPT02 [0.0m] FILL
TP105 [1.2m]
CPT104 [0.9m]
CPT118 [1.6m]
CPT120 [1.7m]
CPT121 [2.7m]
CPT106 [1.7m]
CPT102 [1.5m]
CPT103 [2.1m]
BH05
CPT119 [1.7m]
PZ16 [1.3m]
BH02 [1.2m]
PZ21 [1.5m]
CPT123 [2.8m]
PZ19 [1.5m]
CPT122 [3.3m]
CPT105 [1.5m]
CPT107 [1.5m]
BH04 [1.8m]
PZ15 [1.7m]
CPT133 [1.9m]
CPT108 [1.1m]
CPT124 [1.8m]
CPT125 [3.6m]
CPT134 [3.0m]
PZ20 [1.5m]
CPT110 [2.7m]
HA06 [1.5m]
CPT109 [2.3m]
HA05 [2.5m]
TP107 [0.5m]
TP109 [0.0m]
TP108 [0.0m]
HA07 [0.9m]
TP110 [0.0m]
PZ10 [0.0m]
PZ14 [1.7m]
SCPT01 [2.4m]
PZ12 [2.9m]
CPT132 [2.1m]
CPT111 [2.9m]
HA08 [1.9m]
CPT130 [1.7m]
HA01 [0.8m]
HA02 [2.0m]
CPT131 [1.5m]
HA04 [1.5m]
CPT126 [1.6m]
CPT129 [1.2m]
PZ18 [1.0m]
CPT114 [1.6m]
CPT112 [2.8m]
PZ17 [0.8m]
CPT128 [1.2m]
CPT127 [1.5m]
HA03 [1.1m]
CPT113 [3.2m]
PZ11 [2.5m]
CPT110983 [2.5m]
BH_112218 [2.5m]
CPT_110980 [2.5m]
CPT_110985 [3.2m]

1.5 2.0 2.5 3.0 3.5 1.0

NOTES:

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0 50 100 200 300m
SCALE 1:7500

ENGEO

Tauranga Office
1/314 Maunganui Road, Mt Maunganui 3116
Tel: 07 777 0209, www.engeo.co.nz

Rev	Date	Description	Drwn	Chkd
B	18.09.25	Client Issue	KS	GMS
A	23.07.25	For Information	KS	GMS

Title:

GEOTECHNICAL INFERRED THICKNESS OF PEAT DEPOSITS - SOUTH BLOCK

Client: Bell Road Limited Partnership

Project: Bell Road Development Papamoa Tauranga

Designed: DH
Drawn: KS
Checked: GMS
Date: 18.09.25

Drawing: 112
Size: A3

Project No: 19630.000.001

Scale: 1:7500

Rev: B

CAD File: Z:\Drafting\19001 to 20000\19630 - Bell Road Development, Papamoa\DWG Files\04-Site Plan\RB-19630-SP-160925.dwg
XREF's: X-19630-Drone Aerial-2; X-19630-SURVEY; X-19630-TOPO 250 MAP; X-19630-PARCELS; X-19630-PEAT SURFACE COUNTOURS 0.5m; X-Ex Contours-250807; X-19630-MUDSTONE COUNTOURS 1.0m; ENGEO_Logo; X-19630-AERIAL RURAL-2023-2024-V2

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DATE PLOTTED: 26 September 2025 2:22 pm BY: KYLE SWANSON

LEGEND

- INFERRED GEOLOGICAL BOUNDARY
- INFERRED PEAT THICKNESS MAJOR CONTOUR
- INFERRED PEAT THICKNESS MINOR CONTOUR
- SITE BOUNDARY
- PARCEL
- CROSS SECTION
- NO SURFICIAL PEAT

NORTH

A 118

B 119

A' 118

B' 119

INFERRED GEOLOGICAL BOUNDARY

D114

D115

NOTES:

1. SURVEY, DRONE AERIAL, AND EXISTING CONTOURS PROVIDED BY MAVEN. RECEIVED MAY 29 2025 AND AUGUST 26, 2025.
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0 100 200 300 400 500m
SCALE 1:15,000

ENGEO

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1/314 Maunganui Road, Mt Maunganui 3116
Tel: 07 777 0209, www.engeo.co.nz

Rev	Date	Description	Drwn	Chkd
B	26.09.25	Client Issue	KS	GMS
A	18.09.25	Client Issue	KS	GMS

Title:

GEOTECHNICAL INFERRED THICKNESS OF ESTUARINE MUD DEPOSITS - OVERALL PLAN

Client: Bell Road Limited Partnership		Drawing: 113
Project: Bell Road Development Papamoa Tauranga	Designed: DH Drawn: KS Checked: GMS Date: 26.09.25	Size: A3
Project No: 19630.000.001	Scale: 1:15000	Rev: B

CAD File: Z:\Drafting\19001 to 20000\19630 - Bell Road Development, Papamoa\DWG Files\04-Site Plan\RB-19630-SP-160925.dwg
XREF's: X-19630-Drone Aerial-2; X-19630-SURVEY; X-19630-TOPO 250 MAP; X-19630-PARCELS; X-19630-PEAT SURFACE COUNTOURS 0.5m; X-Ex Contours-250807; X-19630-MUDSTONE COUNTOURS 1.0m; ENGEO_Logo; X-19630-AERIAL RURAL-2023-2024-V2

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DATE PLOTTED: 26 September 2025 2:23 pm BY: KYLE SWANSON

NORTH

STATE HIGHWAY 2

BELL ROAD

INFERRED GEOLOGICAL BOUNDARY

MASW-17

LEGEND

- BOREHOLE (ENGEO - 2025)
- BOREHOLE (NZGD)
- CPT (LDE - 2019)
- CPT (NZGD)
- CPT (ENGEO - 2025)
- HAND AUGER (ENGEO - 2025)
- HAND AUGER (NZGD)
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- TEST PIT (ENGEO - 2025)
- TEST PIT (GOLDER - 2020)
- TEST PIT (NZGD)
- [XXm] INFERRED MUD THICKNESS
- INFERRED GEOLOGICAL BOUNDARY
- INFERRED MUD THICKNESS MAJOR CONTOUR
- INFERRED MUD THICKNESS MINOR CONTOUR
- MASW LINE (GOLDER - 2020)
- SITE BOUNDARY
- PARCEL

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0 50 100 200 300m
SCALE 1:7500

ENGEO

Tauranga Office
1/314 Maunganui Road, Mt Maunganui 3116
Tel: 07 777 0209, www.engeo.co.nz

Rev	Date	Description	Drwn	Chkd
A	18.09.25	Client Issue	KS	GMS

Title: GEOTECHNICAL INFERRED THICKNESS OF ESTUARINE MUD DEPOSITS - NORTH BLOCK

Client: Bell Road Limited Partnership

Drawing: 114

Project: Bell Road Development Papamoa Tauranga

Designed: DH
Drawn: KS
Checked: GMS
Date: 18.09.25

Size: A3

Project No: 19630.000.001

Scale: 1:7500

Rev: A

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CAD File: Z:\Drafting\19001 to 20000\19630 - Bell Road Development, Papamoa\DWG Files\04-Site Plan\RB-19630-SP-160925.dwg
XREF's: X-19630-Drone Aerial-2; X-19630-SURVEY; X-19630-TOPO 250 MAP; X-19630-PARCELS; X-19630-PEAT SURFACE COUNTOURS 0.5m; X-Ex Contours-250807; X-19630-MUDSTONE COUNTOURS 1.0m; ENGEO_Logo; X-19630-AERIAL RURAL-2023-2024-V2

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DATE PLOTTED: 26 September 2025 2:23 pm BY: KYLE SWANSON

LEGEND

- BOREHOLE (ENGEO - 2025)
- BOREHOLE (NZGD)
- CPT (LDE - 2019)
- CPT (NZGD)
- CPT (ENGEO - 2025)
- HAND AUGER (ENGEO - 2025)
- HAND AUGER (NZGD)
- PIEZOMETER (ENGEO 2022 & 2025)
- TEST PIT (ENGEO - 2025)
- TEST PIT (GOLDER - 2020)
- TEST PIT (NZGD)
- [XXm] INFERRED MUD THICKNESS
- —?— INFERRED GEOLOGICAL BOUNDARY
- INFERRED MUD THICKNESS MAJOR CONTOUR
- INFERRED MUD THICKNESS MINOR CONTOUR
- MASW LINE (GOLDER - 2020)
- SITE BOUNDARY
- PARCEL

NORTH

BELL ROAD

L01 L02 L05 L08

TP02 CPT113 TP102 CPT1 PZ03 BH01 PZ02 TP06 PZ05 CPT101 CPT116 TP04 CPT14 CPT15 TP106 TP105 BH03 PZ13 SCPT02 CPT104 CPT121 CPT120 CPT118 CPT106 [0.7m] CPT102 CPT103 [4.5m] BH05 CPT119 [2.3m] PZ16 BH02 [2.75m] PZ21 CPT123 PZ19 CPT105 [2.0m] CPT122 [1.3m] CPT107 [5.9m] BH04 [6.5m+] PZ15 CPT133 [6.2m] CPT108 [2.5m] CPT124 CPT125 CPT134 PZ20 CPT110 [1.7m] HA06 PZ12 CPT130 [4.3m] HA01 HA02 CPT131 [5.1m] CPT132 CPT111 HA08 HA04 CPT109 HA05 TP107 TP108 HA07 CPT126 TP109 TP110 PZ10 PZ14 SCPT01 CPT129 [8.9m] PZ18 CPT114 CPT112 CPT128 PZ17 CPT127 HA03 CPT113 PZ11 CPT110983 CPT_110985 CPT110980 BH112218

1.0 2.0 3.0 4.0 5.0 6.0 7.0 8.0

NOTES:

1. SURVEY, DRONE AERIAL, AND EXISTING CONTOURS PROVIDED BY MAVEN. RECEIVED MAY 29 2025 AND AUGUST 26, 2025.
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0 50 100 200 300m
SCALE 1:7500

ENGEO

Tauranga Office
1/314 Maunganui Road, Mt Maunganui 3116
Tel: 07 777 0209, www.engeo.co.nz

Rev	Date	Description	Drwn	Chkd
A	18.09.25	Client Issue	KS	GMS

Title:

GEOTECHNICAL INFERRED THICKNESS OF ESTUARINE MUD DEPOSITS - SOUTH BLOCK

Client: Bell Road Limited Partnership		Drawing: 115
Project: Bell Road Development Papamoa Tauranga	Designed: DH Drawn: KS Checked: GMS Date: 18.09.25	Size: A3
Project No: 19630.000.001	Scale: 1:7500	Rev: A

CAD File: Z:\Drafting\19001 to 20000\19630 - Bell Road Development, Papamoa\DWG Files\04-Site Plan\RB-19630-SP-160925.dwg
XREF's: X-19630-Drone Aerial-2; X-19630-SURVEY; X-19630-TOPO 250 MAP; X-19630-PARCELS; X-19630-PEAT SURFACE COUNTOURS 0.5m; X-Ex Contours-250807; X-19630-MUDSTONE COUNTOURS 1.0m; ENGEO_Logo; X-19630-AERIAL RURAL-2023-2024-V2

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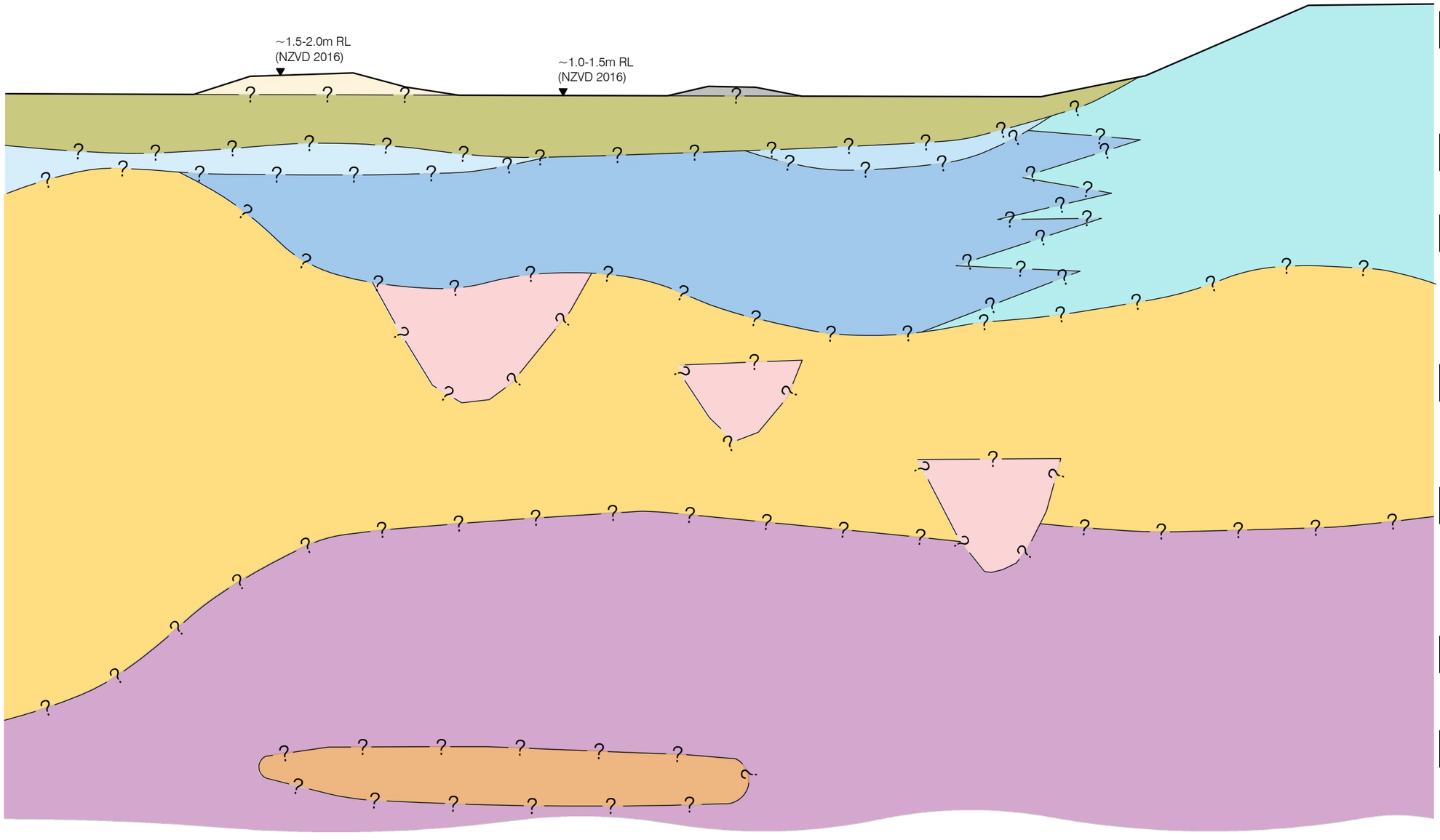
DATE PLOTTED: 25 September 2025 2:44 pm BY: KYLE SWANSON

NOTES:
1. THIS CONCEPT ENGINEERING GEOLOGICAL MODEL IS PROVIDED TO CONVEY OUR GENERAL CONCEPTUAL UNDERSTANDING OF THE GROUND CONDITIONS ONLY. IT IS NOT TO SCALE.
2. REFERENCE SHALL BE MADE TO THE PROJECT LEAPFROG MODEL FOR SCALED SECTIONS.



LEGEND:

1. FILL: (VARIABLE. ENCOUNTERED AS A MIXTURE OF POORLY GRADED SANDS, GRAVELS AND SILTS. TYPICALLY ASSOCIATED WITH THE CONSTRUCTION OF FARM ACCESS TRACKS, FARM BUILDING PLATFORMS AND RACEWAYS.)

3A. PUMICE AIRFALL DEPOSITS: (LOCALIZED DEPOSITS OF POORLY GRADED GRAVEL OR SILTY GRAVEL. TYPICALLY SITUATED AT OR ABOVE 1.5m RL WITHIN THE SOUTH BLOCK. RANGES FROM 0 TO 1m THICK)

3B. PEAT: (SOFT AND HIGHLY COMPRESSIBLE FIBROUS PEAT, COMPRISING MODERATE PLASTICITY ORGANIC SILTS AND WOOD INCLUSIONS THROUGHOUT. GENERALLY RANGES FROM 1.5 TO 2.0m ACROSS THE DEVELOPMENT, INCREASING TO 3m IN THE SOUTHEAST AND PINCHING OUT AT THE BASE OF THE DUNES TO THE NORTH)

4A. DUNE SANDS: (FINE TO MEDIUM GRAINED, AEOLIAN DUNE SANDS, WITH VARIABLE CPT QC VALUES RANGING FROM GENERALLY 2 MPa TO 16 MPa. CONSIDERED SUSCEPTIBLE TO EFFECTS OF LIQUEFACTION)

4B. LOOSE ALLUVIAL SANDS: (LOOSE FINE TO COARSE ALLUVIAL SANDS, TYPICALLY WELL GRADED WITH CPT QC VALUES TYPICALLY LESS THAN 4MPa, AND SPT-N VALUES TYPICALLY BELOW 5. LOOSE SAND TYPICALLY FORMS THE UPPER 1m OF THE ALLUVIAL SANDS LOCATED IMMEDIATELY BENEATH PEAT DEPOSITS ACROSS MOST OF THE SITE. CONSIDERED SUSCEPTIBLE TO EFFECTS OF LIQUEFACTION)

4C. MEDIUM DENSE ALLUVIAL SANDS: (MEDIUM DENSE TO COARSE ALLUVIAL SANDS, TYPICALLY WELL GRADED WITH CPT QC VALUES RANGING FROM GENERALLY 4MPa TO 16 MPa, AND SPT-N VALUES FROM GENERALLY 5 TO 20. CONSIDERED SUSCEPTIBLE TO EFFECTS OF LIQUEFACTION)

5A. ESTUARINE MUDS: (SOFT TO STIFF, NORMALLY CONSOLIDATED CLAYEY PUMICEOUS SILTS, WITH TYPICAL CPT QC VALUES LESS THAN 0.6 MPa ARE INTERBEDDED WITHIN THE ALLUVIAL SEQUENCE. INFERRED TO INFILL FORMER PALEOCHANNELS CUT INTO THE FLUVIAL DEPOSITS. HIGHLY VARIABLE IN SPATIAL EXTENTS AND DEPTH. SUSCEPTIBLE TO CONSOLIDATION)

5B. FLUVIAL DEPOSITS: (LATERALLY DISCONTINUOUS, INTERBEDDED STIFF SILTS AND FINE TO COARSE LOOSE SANDS WITH VARIABLE GRAVEL CONTENT. TYPICAL QC RANGES FROM 0.6 TO 4MPa, AND SPT VALUES OF TYPICALLY 0 TO 5)

6. LOWER FLUVIAL DEPOSITS: (TYPICALLY FINE TO COARSE MEDIUM DENSE TO DENSE SANDS AND GRAVELS WITH INTERBEDDED SILT LENSES. HIGH PUMICE CONTENT , AND SHOWS DILATANT BEHAVIOUR IN THE FINE SANDS AND SILTY LAYERS. CPT QC VALUES TYPICALLY IN EXCESS OF 12 MPa AND SPT-N VALUES OF 15+.)

7. LOWER ESTUARINE MUDS: (NORMALLY CONSOLIDATED STIFF SILT, ENCOUNTERED AT DEPTHS OF CIRCA 27-30m)

CONCEPTUAL ENGINEERING GEOLOGICAL MODEL
SCALE: NTS

Rev	Date	Description	Drwn	Chkd
A	25.09.25	Final	KS	GMS

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Tel: 07 777 0209
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Title: CONCEPTUAL ENGINEERING GEOLOGICAL MODEL

Client: Bell Road Limited Partnership

Project: Bell Road Development
Papamoa Tauranga

Designed: DH
Drawn: KS
Checked: GMS
Date: 25.09.25

Proj No: 19630.000.001
Scale: NTS

Drawing: 117
Size: A3
Rev: A

CAD File: Z:\Drafting\19001 to 20000\19630 - Bell Road Development, Papamoa\DWG Files\04-Site Plan\RB-19630-SP-160925.dwg
XREF's: X-19630-Drone Aerial-2; X-19630-SURVEY; X-19630-TOPO 250 MAP; X-19630-PARCELS; X-19630-PEAT SURFACE COUNTOURS 0.5m; X-19630-AERIAL RURAL-2023-2024; X-Ex Contours-250807; X-19630-MUDSTONE COUNTOURS 1.0m; ENGEO_Logo

ORIGINAL FIGURE PRINTED IN COLOUR

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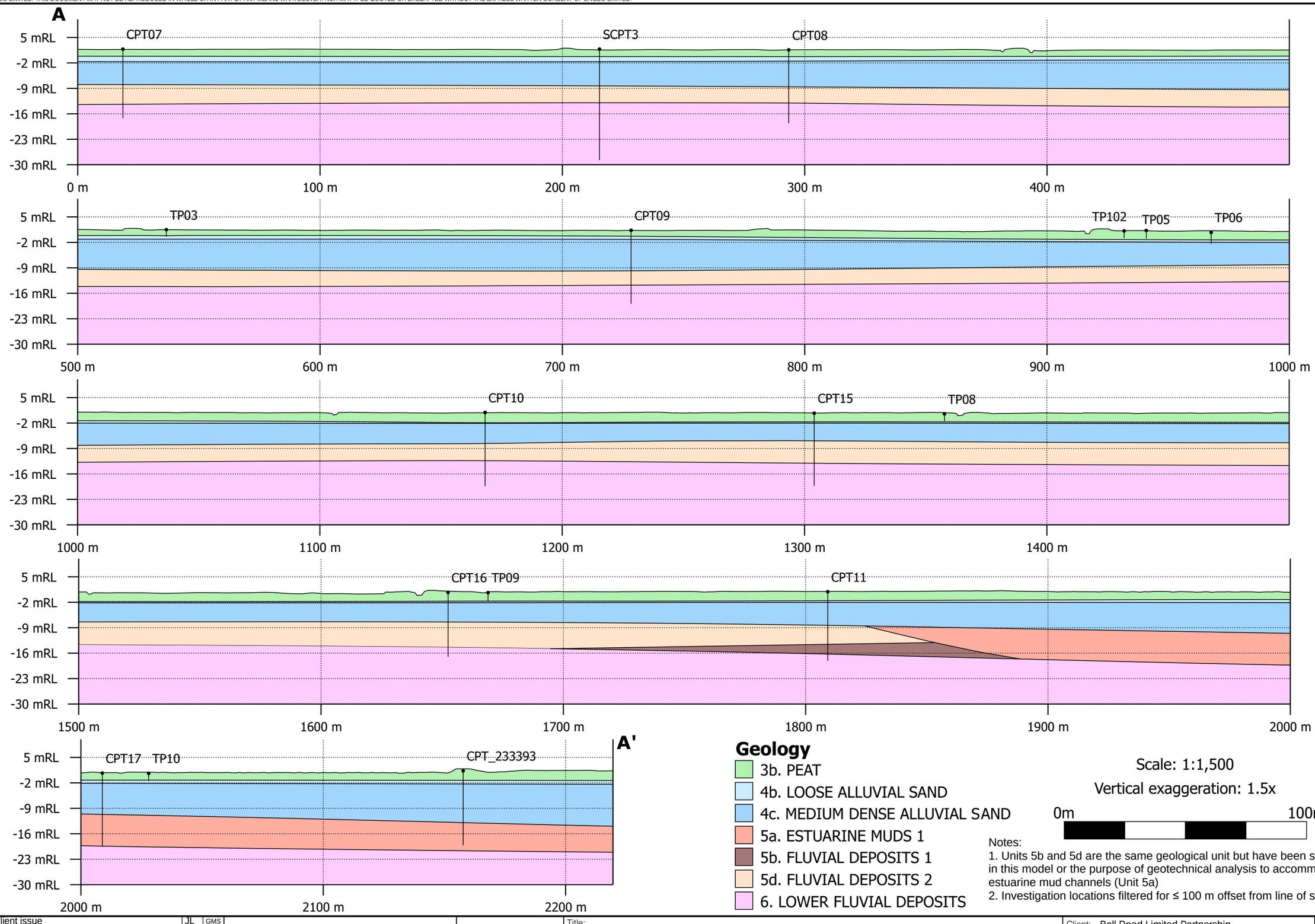

Geology

- 3b. PEAT
- 4b. LOOSE ALLUVIAL SAND
- 4c. MEDIUM DENSE ALLUVIAL SAND
- 5a. ESTUARINE MUDS 1
- 5b. FLUVIAL DEPOSITS 1
- 5d. FLUVIAL DEPOSITS 2
- 6. LOWER FLUVIAL DEPOSITS

Scale: 1:1,500

Vertical exaggeration: 1.5x

0m 100m

Notes:
1. Units 5b and 5d are the same geological unit but have been separated in this model or the purpose of geotechnical analysis to accommodate estuarine mud channels (Unit 5a)
2. Investigation locations filtered for ≤ 100 m offset from line of section

Rev	Date	Description	Drwn	Chkd
1	25.09.2025	Client issue	JL	GMS
2	21.10.2025	Updated with peer reviewer comments	JL	GMS

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Title:

Geological Cross Section A - A'
1.5 x Vertical Exaggeration

Client: Bell Road Limited Partnership

Project: Bell Road Development,Papamoa, Tauranga

Proj No: 19630.000.001

Designed: JL
Drawn: JL
Checked: GMS
Date: 21.10.2025
Scale: 1:1500

Figure No: 118
Size: A3
Rev: 2

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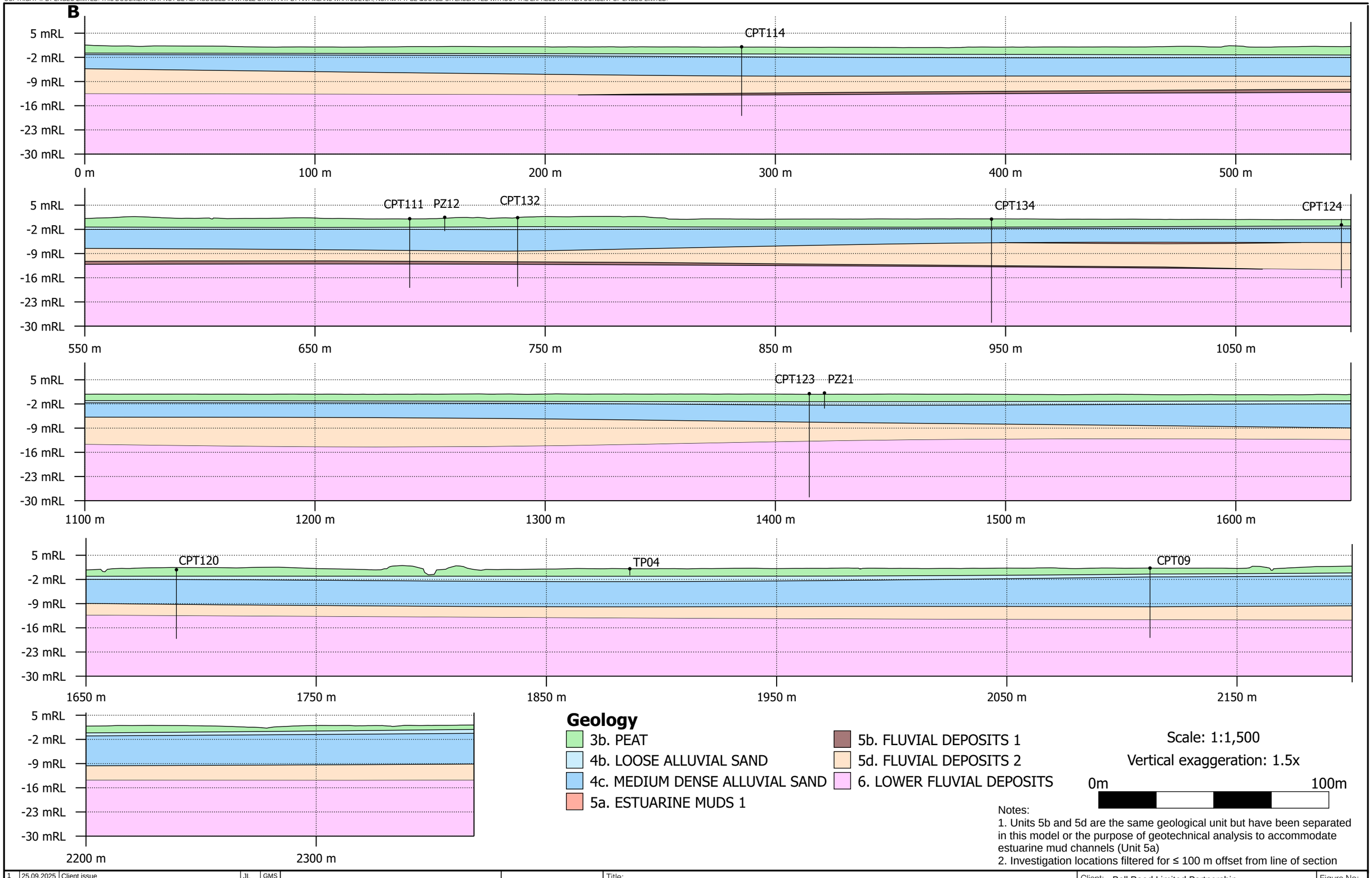

Geology

- 3b. PEAT
- 4b. LOOSE ALLUVIAL SAND
- 4c. MEDIUM DENSE ALLUVIAL SAND
- 5a. ESTUARINE MUDS 1
- 5b. FLUVIAL DEPOSITS 1
- 5d. FLUVIAL DEPOSITS 2
- 6. LOWER FLUVIAL DEPOSITS

Scale: 1:1,500

Vertical exaggeration: 1.5x

0m 100m

Notes:
1. Units 5b and 5d are the same geological unit but have been separated in this model or the purpose of geotechnical analysis to accommodate estuarine mud channels (Unit 5a)
2. Investigation locations filtered for ≤ 100 m offset from line of section

Rev	Date	Description	Drwn	Chkd
1	25.09.2025	Client issue	JL	GMS
2	21.10.2025	Updated with peer reviewer comments	JL	GMS

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Title: Geological Cross Section A - A'
1.5 x Vertical Exaggeration

Client: Bell Road Limited Partnership

Project: Bell Road Development,Papamoa, Tauranga

Designed: JL
Drawn: JL
Checked: GMS
Date: 21.10.2025
Scale: 1:1500

Proj No: 19630.000.001

Figure No: 118
Size: A3
Rev: 2

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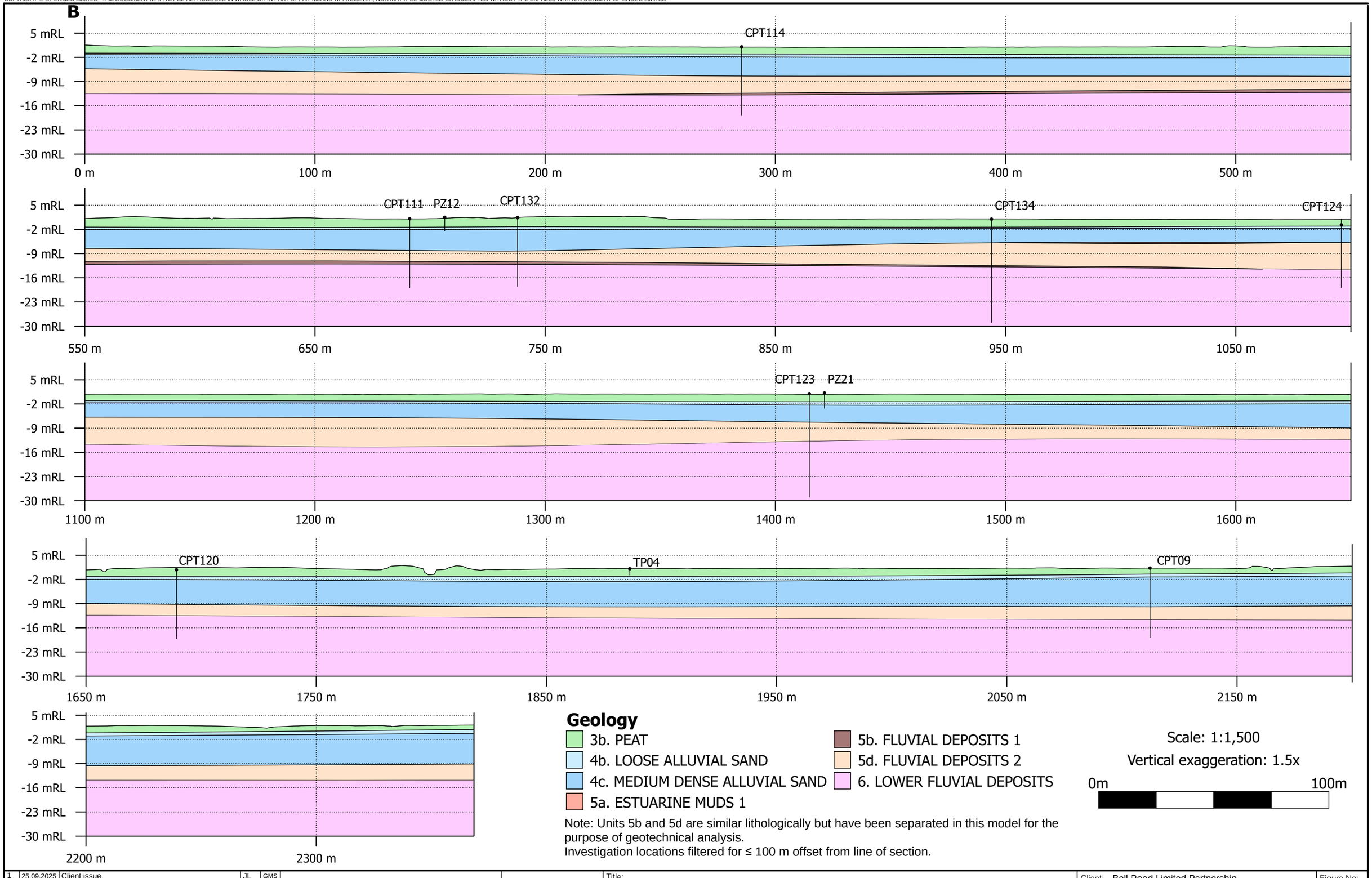

Geology

- 3b. PEAT
- 4b. LOOSE ALLUVIAL SAND
- 4c. MEDIUM DENSE ALLUVIAL SAND
- 5a. ESTUARINE MUDS 1
- 5b. FLUVIAL DEPOSITS 1
- 5d. FLUVIAL DEPOSITS 2
- 6. LOWER FLUVIAL DEPOSITS

Note: Units 5b and 5d are similar lithologically but have been separated in this model for the purpose of geotechnical analysis.
Investigation locations filtered for ≤ 100 m offset from line of section.

Scale: 1:1,500
Vertical exaggeration: 1.5x
0m 100m

Rev	Date	Description	Drwn	Chkd
1	25.09.2025	Client issue	JL	GMS
2	21.10.2025	Updated with peer reviewer comments	JL	GMS

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Mount Maunganui
Tel: 09 972 2205
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Title: Geological Cross Section A - A'
1.5 x Vertical Exaggeration

Client: Bell Road Limited Partnership
Project: Bell Road Development,Papamoa, Tauranga
Proj No: 19630.000.001
Designed: JL
Drawn: JL
Checked: GMS
Date: 21.10.2025
Scale: 1:1500
Figure No: 118
Size: A3
Rev: 2

ORIGINAL FIGURE PRINTED IN COLOUR

APPENDIX 2:

Development Plans (Maven)

Please refer to ***Appendix D - Engineering Drawings (incl. Scheme Plan) (Maven)*** in the appendices to the Wairakei South FastTrack Application

APPENDIX 3:

Liquefaction Analysis Outputs

19630.000.001 Bell Road Development - Post Development
Liquefaction Assessment, October 2025

										Return Period			1/25 AEP 4%			1/100 AEP 1%			1/500 AEP 0.2%			1/1000 AEP 0.1%			1/2500 AEP 0.04%			
		Adopted Post Development RL	Pre-development RL	Adopted Fill Height	Topsoil & Peat Thickness	Base of Peat RL	Non-Liquefiable Crust Thickness	Pre-development Groundwater Level	Adopted Post Development Groundwater Table	Settlements	LSN	LPI	Settlements	LSN	LPI	Settlements	LSN	LPI	Settlements	LSN	LPI	Settlements	LSN	LPI	Notes
		mRL	mRL	m	m	mRL	m	mbgl	mbgl	mm			mm			mm			mm			mm			mm			
	MIN	3.8	0.6	1.0	0	-3	3.2	0	0	0	0	0	17	1	0	116	4	5	135	4	7	154	4	11	
	AVG.	4.3	1.4	2.9	2	-1	5.3	0	2	1	0	0	153	7	3	275	12	17	292	13	22	305	14	27	
	MAX	5.0	3.2	4.3	4	1	7.4	3	3	13	2	0	430	16	12	502	26	28	524	27	37	540	29	40	
Block	CPT ID																								
Northern	CPT92233	4.2	1.2	3.0	3.1	-1.9	6.1	0.1	2.0	0	0	0	105	1	1	170	6	9	186	7	13	198	8	18	
	CPT92234	4.2	0.9	3.3	3.0	-2.1	6.3	0.1	2.3	0	0	0	134	5	2	193	9	13	204	10	16	215	11	21	
	CPT01	4.6	2.2	2.5	1.8	0.4	4.2	0.1	1.5	0	0	0	134	11	3	259	19	24	266	20	30	272	20	36	
	CPT02	3.8	2.3	1.5	2.3	0.0	3.8	0.1	0.5	0	0	0	105	8	3	209	16	19	228	19	25	247	21	33	
	CPT03	4.2	3.2	1.0	0.0	n/a	n/a	1.2	0.0	0	0	0	135	15	5	230	26	23	240	27	29	255	29	36	Dune topography. No peat.
	CPT04	3.8	2.2	1.6	1.6	0.6	3.2	0.1	0.6	0	0	0	92	9	3	160	13	13	181	14	17	203	14	22	
	CPT05	4.6	1.5	3.1	1.8	-0.3	4.9	0.1	2.1	0	0	0	45	2	1	122	8	7	148	10	11	171	11	15	
	CPT06	4.2	0.8	3.5	2.4	-1.6	5.8	0.1	2.5	0	0	0	45	1	1	124	4	6	170	5	9	180	7	14	
	CPT07	4.2	1.8	2.5	1.9	-0.1	4.3	0.1	1.5	0	0	0	90	8	2	194	16	19	202	17	24	207	17	29	
	CPT08	4.2	1.6	2.6	2.0	-0.4	4.6	0.1	1.6	0	0	0	106	7	2	255	15	20	270	16	25	280	17	32	
	CPT09	4.4	1.3	3.2	1.5	-0.2	4.6	0.1	2.2	0	0	0	38	2	0	171	9	11	205	10	16	236	11	23	
	CPT10	3.8	0.9	3.0	3.1	-2.2	6.0	0.1	2.0	0	0	0	60	1	1	190	6	9	215	7	14	240	9	20	
	CPT11	4.6	0.8	3.8	2.2	-1.4	6.0	0.1	2.8	0	0	0	51	2	1	140	8	9	152	9	12	160	10	17	
	CPT12	4.4	1.7	2.7	2.2	-0.5	4.9	0.1	1.7	0	0	0	108	8	2	228	16	21	237	17	27	245	17	33	
	CPT13	4.2	1.3	2.9	1.7	-0.4	4.6	0.1	1.9	0	0	0	52	2	1	179	10	11	206	12	17	229	13	23	
	CPT14	4.2	0.8	3.5	3.6	-2.8	7.0	0.1	2.5	0	0	0	67	2	1	162	7	10	178	7	13	199	7	18	
	CPT15	5.0	0.7	4.3	1.8	-1.1	6.1	0.1	3.3	0	0	0	33	2	0	170	9	10	190	10	14	215	11	19	
	CPT16	4.2	0.8	3.4	2.8	-2.0	6.2	0.1	2.4	0	0	0	88	1	1	172	4	9	184	5	13	195	6	17	
	CPT17	4.6	0.6	4.0	1.9	-1.3	5.9	0.1	3.0	0	0	0	17	1	0	116	7	8	135	8	12	154	9	17	
	CPT115	4.4	1.7	2.7	1.8	-0.1	4.5	0.1	1.7	0	0	0	129	14	4	228	21	22	238	21	28	247	22	34	
	CPT116	4.2	1.1	3.1	1.5	-0.4	4.6	0.1	2.1	0	0	0	140	9	3	275	15	21	305	17	27	331	17	34	
	CPT117	4.6	0.6	4.0	2.6	-2.0	6.6	0.1	3.0	0	0	0	68	2	0	147	4	5	169	4	7	186	4	11	
	sCPT03	4.8	1.8	3.0	1.9	-0.1	4.9	0.1	2.0	0	0	0	228	11	5	442	13	18	456	14	23	465	15	27	
Southern	CPT110980	4.2	1.3	2.9	2.5	-1.2	5.4	0.1	1.9	0	0	0	259	11	7	341	14	25	348	14	30	356	14	35	
	CPT110983	4.2	3.2	1.0	n/a	n/a	n/a	3.3	1.4	9	2	0	322	14	12	369	15	28	370	15	32	370	15	36	Undertaken on Stopbank. Groundwater modified.
	CPT110985	4.2	1.8	2.4	2.6	-0.8	5.0	0.1	1.4	4	0	0	348	9	8	413	9	23	413	9	26	413	9	29	
	CPT101	5	1.6	3.4	1.9	-0.3	5.3	0.1	2.4	0	0	0	170	10	4	293	18	22	304	18	28	310	18	33	
	CPT102	4.2	1.0	3.2	0.8	0.2	4.1	0.1	2.2	0	0	0	124	8	3	252	14	18	268	15	22	281	16	27	
	CPT103	4.8	1.7	3.2	2.4	-0.8	5.6	0.1	2.2	0	0	0	115	7	3	201	9	10	212	10	13	218	10	15	
	CPT104	4.2	1.1	3.1	1.2	-0.1	4.3	0.1	2.1	0	0	0	176	10	4	300	16	22	317	18	28	330	18	35	
	CPT105	4.2	1.0	3.2	1.8	-0.8	5.0	0.1	2.2	0	0	0	308	11	7	366	17	24	372	17	28	376	17	33	
	CPT106	3.8	1.5	2.3	2.0	-0.5	4.3	0.1	1.3	3	0	0	310	14	8	380	20	28	380	20	32	380	20	37	
	CPT107	4.8	1.3	3.5	1.8	-0.5	5.3	0.1	2.5	0	0	0	87	7	2	181	16	17	186	16	22	186	16	26	
	CPT108	3.9	0.7	3.2	1.3	-0.6	4.5	0.1	2.2	0	0	0	130	9	2	287	16	19	300	17	23	304	17	28	
	CPT109	4.6	1.5	3.1	2.6	-1.1	5.7	0.1	2.1	0	0	0	430	10	7	492	15	26	495	15	30	498	15	36	
	CPT110	4	1.6	2.4	3.0	-1.4	5.4	0.1	1.4	0	0	0	119	8	5	182	11	16	190	12	19	195	12	22	
	CPT111	3.8	1.1	2.7	3.2	-2.1	5.9	0.1	1.7	0	0	0	200	8	6	316	13	22	326	14	26	328	14	30	
	CPT112	5	2.0	3.0	3.0	-1.0	6.0	0.1	2.0	0	0	0	290	12	7	367	12	23	372	12	26	376	12	30	
	CPT113	4.4	2.5	1.9	3.5	-1.1	5.5	0.1	0.9	13	0	0	185	7	7	226	7	15	239	7	17	250	7	19	
	CPT114	4.2	1.1	3.1	2.0	-0.9	5.1	0.1	2.1	0	0	0	144	8	3	273	14	20	286	15	25	300	15	30	
	CPT118	4.8	1.7	3.1	1.8	-0.1	4.9	0.1	2.1	2	0	0	327	13	8	401	17	26	410	17	31	418	17	35	
	CPT119	3.8	1.3	2.5	2.0	-0.7	4.5	0.1	1.5	0	0	0	62	6	2	158	11	11	175	12	14	190	13	18	
	CPT120	4.6	0.8	3.8	2.0	-1.2	5.8	0.1	2.8	0	0	0	151	9	3	330	14	21	348	15	27	361	15	33	
	CPT121	4	0.9	3.1	3.0	-2.1	6.1	0.1	2.1	0	0	0	150	4	3	383	8	13	408	9	17	426	10	22	
	CPT122	4	0.7	3.3	3.5	-2.8	6.8	0.1	2.3	0	0	0	68	1	1	193	6	12	211	7	16	227	7	21	
	CPT123	4.6	1.0	3.6	3.0	-2.0	6.6	0.1	2.6	0	0	0	93	3	1	438	10	15	481	11	21	505	11	27	
	CPT124	4.5	1.1	3.4	2.0	-0.9	5.4	0.1	2.4	0	0	0	212	4	4	334	13	22	351	14	28	366	14	34	
	CPT125	3.8	1.1	2.7	3.8	-2.7	6.5	0.1	1.7	1	0	0	237	9	5	502	16	24	524	17	30	540	17	36	
	CPT126	4	1.0	3.0	1.8	-0.8	4.8	0.1	2.0	0	0	0	209	4	4	332	10	19	350	11	23	368	13	30	
	CPT127	4	0.9	3.1	1.7	-0.9	4.9	0.1	2.1	0	0	0	210	4	4	392	11	21	410	13	37	429	14	34	
	CPT128	4.2	0.9	3.3	1.3	-0.4	4.6	0.1	2.3	0	0	0	235	6	5	447	13	21	495	14	26	532	15	33	
	CPT129	4.2	0.8	3.4	1.3	-0.5	4.7	0.1	2.4	0	0	0	77	2	0	230	6	6	243	6	9	259	7	12	
	CPT130	4.8	1.4	3.4	4.0	-2.6	7.4	0.1	2.4	0	0	0	118	13	3	228	20	20	250	21	26	265	21	32	
	CPT131	4.2	0.9	3.3	2.0	-1.1	5.3	0.1	2.3	0	0	0	97	5	1	319	9	9	348	10	13	370	11	17	
	CPT132	3.9	1.4	2.5	2.3	-0.9	4.8	0.1	1.5	0	0	0	151	10	5	266	16	22	282	16	27	295	16	32	
	CPT133	4	1.1	2.9	2.0	-0.9	4.9	0.1	1.9	0	0	0	52	4	1	261	11	9	285	11	11	315	12	14	
	CPT134	4.7	1.0	3.7	3.1	-2.1	6.8	0.1	2.7	0	0	0	238	6	4	459	10	20	503	10	23	524	10	27	
	sCPT01	4.4	1.9	2.5	2.8	-0.9	5.3	0.1	1.5	0	0	0	240	11	7	352	13	21	360	14	25	366	14	30	
	sCPT02	4.4	2.6	1.8	3.0	-0.4	4.8	0.6	1.4	0	0	0	298	16	8	431	23	28	450	23	34	464	23	40	

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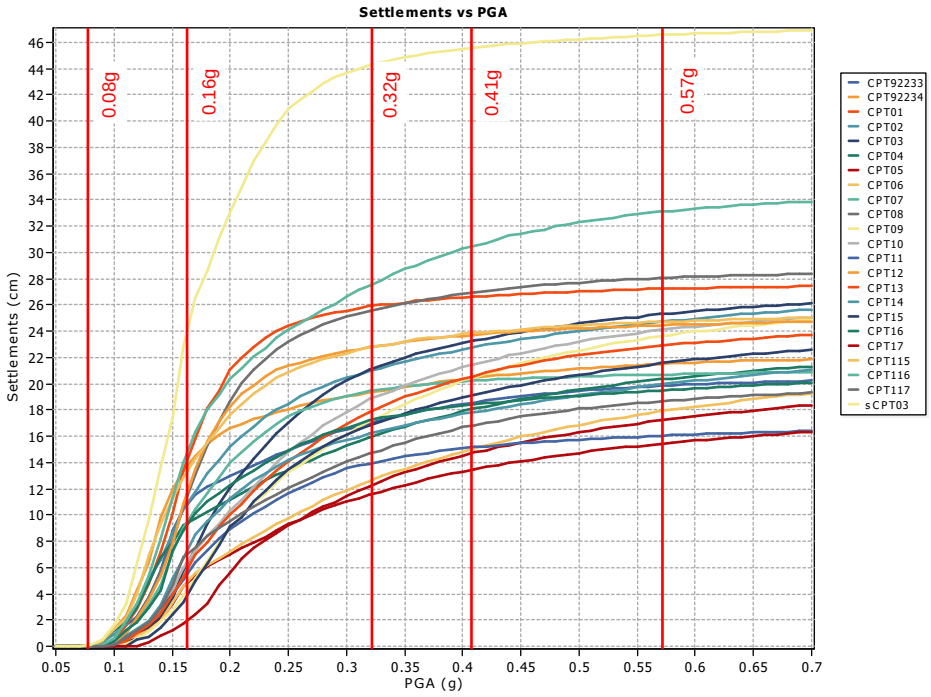
PGA Based Parametric Analysis



:: CPT main liquefaction parameters details ::

CPT Name	Assesment method	Earthquake Mag.	GWT in situ (m)	GWT earthq. (m)
CPT92233	Boulanger & Idriss (2014)	6.00	0.00	2.00
CPT92234	Boulanger & Idriss (2014)	6.00	0.00	2.30
CPT01	Boulanger & Idriss (2014)	6.00	0.00	1.50
CPT02	Boulanger & Idriss (2014)	6.00	0.00	0.50
CPT03	Boulanger & Idriss (2014)	6.00	1.20	2.20
CPT04	Boulanger & Idriss (2014)	6.00	0.00	0.60
CPT05	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT06	Boulanger & Idriss (2014)	6.00	0.00	2.50
CPT07	Boulanger & Idriss (2014)	6.00	0.00	1.50
CPT08	Boulanger & Idriss (2014)	6.00	0.00	1.60
CPT09	Boulanger & Idriss (2014)	6.00	0.00	2.20
CPT10	Boulanger & Idriss (2014)	6.00	0.00	2.00
CPT11	Boulanger & Idriss (2014)	6.00	0.00	2.80
CPT12	Boulanger & Idriss (2014)	6.00	0.00	1.70
CPT13	Boulanger & Idriss (2014)	6.00	0.00	1.90

PGA Based Parametric Analysis

CPT14	Boulanger & Idriss (2014)	6.00	0.00	2.50
CPT15	Boulanger & Idriss (2014)	6.00	0.00	3.30
CPT16	Boulanger & Idriss (2014)	6.00	0.00	2.40
CPT17	Boulanger & Idriss (2014)	6.00	0.00	3.00
CPT115	Boulanger & Idriss (2014)	6.00	0.00	1.70
CPT116	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT117	Boulanger & Idriss (2014)	6.00	0.00	3.00
sCPT03	Boulanger & Idriss (2014)	6.00	0.00	2.00

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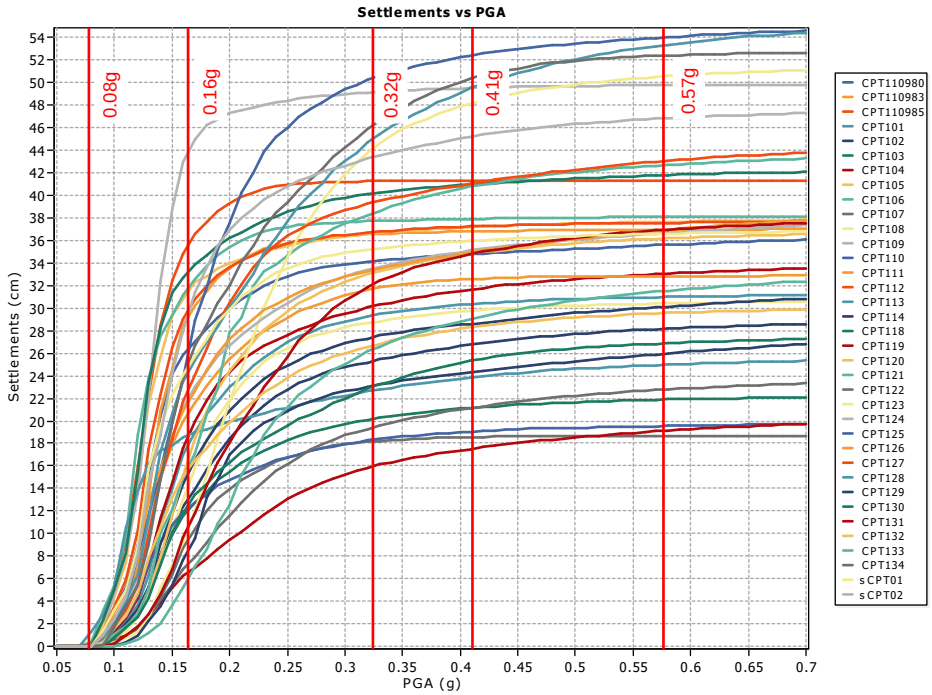
PGA Based Parametric Analysis



:: CPT main liquefaction parameters details ::

CPT Name	Assesment method	Earthquake Mag.	GWT in situ (m)	GWT earthq. (m)
CPT110980	Boulanger & Idriss (2014)	6.00	0.00	1.90
CPT110983	Boulanger & Idriss (2014)	6.00	0.00	1.40
CPT110985	Boulanger & Idriss (2014)	6.00	0.00	1.40
CPT101	Boulanger & Idriss (2014)	6.00	0.00	2.40
CPT102	Boulanger & Idriss (2014)	6.00	0.00	2.20
CPT103	Boulanger & Idriss (2014)	6.00	0.00	2.20
CPT104	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT105	Boulanger & Idriss (2014)	6.00	0.00	2.20
CPT106	Boulanger & Idriss (2014)	6.00	0.00	1.30
CPT107	Boulanger & Idriss (2014)	6.00	0.00	2.50
CPT108	Boulanger & Idriss (2014)	6.00	0.00	2.20
CPT109	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT110	Boulanger & Idriss (2014)	6.00	0.00	1.40
CPT111	Boulanger & Idriss (2014)	6.00	0.00	1.70
CPT112	Boulanger & Idriss (2014)	6.00	0.00	2.00

PGA Based Parametric Analysis

CPT113	Boulanger & Idriss (2014)	6.00	0.00	0.90
CPT114	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT118	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT119	Boulanger & Idriss (2014)	6.00	0.00	1.50
CPT120	Boulanger & Idriss (2014)	6.00	0.00	2.80
CPT121	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT122	Boulanger & Idriss (2014)	6.00	0.00	2.30
CPT123	Boulanger & Idriss (2014)	6.00	0.00	2.60
CPT124	Boulanger & Idriss (2014)	6.00	0.00	2.40
CPT125	Boulanger & Idriss (2014)	6.00	0.00	1.70
CPT126	Boulanger & Idriss (2014)	6.00	0.00	2.00
CPT127	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT128	Boulanger & Idriss (2014)	6.00	0.00	2.30
CPT129	Boulanger & Idriss (2014)	6.00	0.00	2.40
CPT130	Boulanger & Idriss (2014)	6.00	0.00	2.40
CPT131	Boulanger & Idriss (2014)	6.00	0.00	2.30
CPT132	Boulanger & Idriss (2014)	6.00	0.00	1.50
CPT133	Boulanger & Idriss (2014)	6.00	0.00	1.90
CPT134	Boulanger & Idriss (2014)	6.00	0.00	2.70
sCPT01	Boulanger & Idriss (2014)	6.00	0.00	1.50
sCPT02	Boulanger & Idriss (2014)	6.00	0.60	1.40

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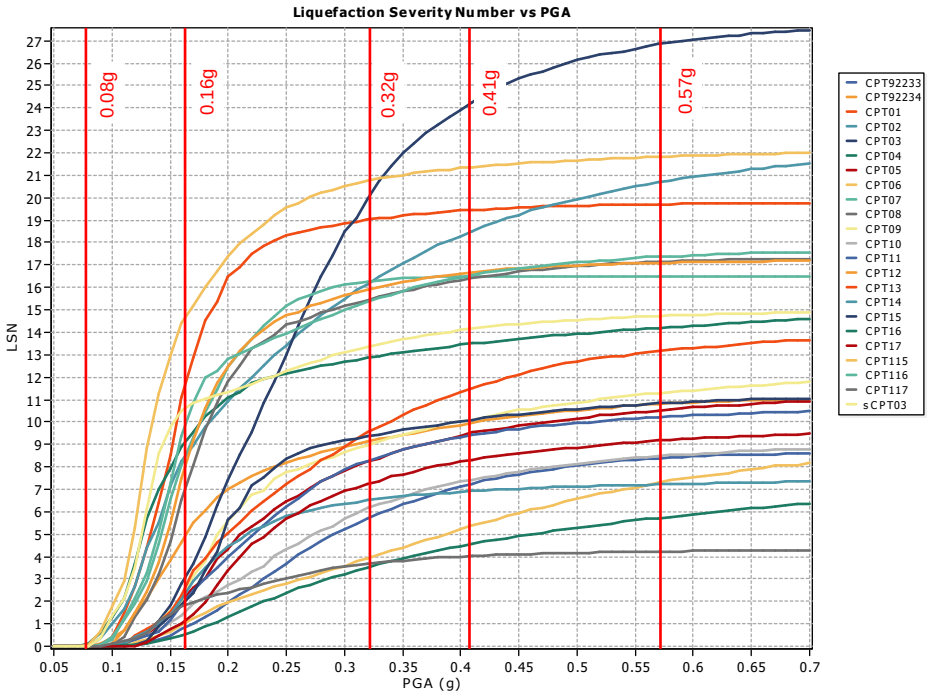

:: CPT main liquefaction parameters details ::

CPT Name	Assesment method	Earthquake Mag.	GWT in situ (m)	GWT earthq. (m)
CPT92233	Boulanger & Idriss (2014)	6.00	0.00	2.00
CPT92234	Boulanger & Idriss (2014)	6.00	0.00	2.30
CPT01	Boulanger & Idriss (2014)	6.00	0.00	1.50
CPT02	Boulanger & Idriss (2014)	6.00	0.00	0.50
CPT03	Boulanger & Idriss (2014)	6.00	1.20	2.20
CPT04	Boulanger & Idriss (2014)	6.00	0.00	0.60
CPT05	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT06	Boulanger & Idriss (2014)	6.00	0.00	2.50
CPT07	Boulanger & Idriss (2014)	6.00	0.00	1.50
CPT08	Boulanger & Idriss (2014)	6.00	0.00	1.60
CPT09	Boulanger & Idriss (2014)	6.00	0.00	2.20
CPT10	Boulanger & Idriss (2014)	6.00	0.00	2.00
CPT11	Boulanger & Idriss (2014)	6.00	0.00	2.80
CPT12	Boulanger & Idriss (2014)	6.00	0.00	1.70
CPT13	Boulanger & Idriss (2014)	6.00	0.00	1.90

PGA Based Parametric Analysis

CPT14	Boulanger & Idriss (2014)	6.00	0.00	2.50
CPT15	Boulanger & Idriss (2014)	6.00	0.00	3.30
CPT16	Boulanger & Idriss (2014)	6.00	0.00	2.40
CPT17	Boulanger & Idriss (2014)	6.00	0.00	3.00
CPT115	Boulanger & Idriss (2014)	6.00	0.00	1.70
CPT116	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT117	Boulanger & Idriss (2014)	6.00	0.00	3.00
sCPT03	Boulanger & Idriss (2014)	6.00	0.00	2.00

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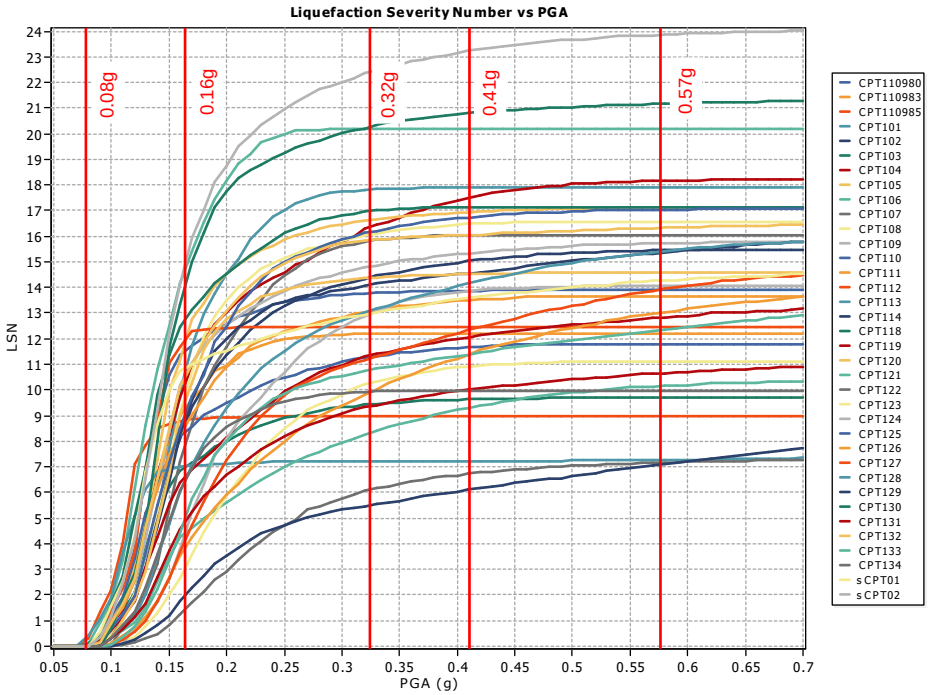

:: CPT main liquefaction parameters details ::

CPT Name	Assesment method	Earthquake Mag.	GWT in situ (m)	GWT earthq. (m)
CPT110980	Boulanger & Idriss (2014)	6.00	0.00	1.90
CPT110983	Boulanger & Idriss (2014)	6.00	0.00	1.40
CPT110985	Boulanger & Idriss (2014)	6.00	0.00	1.40
CPT101	Boulanger & Idriss (2014)	6.00	0.00	2.40
CPT102	Boulanger & Idriss (2014)	6.00	0.00	2.20
CPT103	Boulanger & Idriss (2014)	6.00	0.00	2.20
CPT104	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT105	Boulanger & Idriss (2014)	6.00	0.00	2.20
CPT106	Boulanger & Idriss (2014)	6.00	0.00	1.30
CPT107	Boulanger & Idriss (2014)	6.00	0.00	2.50
CPT108	Boulanger & Idriss (2014)	6.00	0.00	2.20
CPT109	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT110	Boulanger & Idriss (2014)	6.00	0.00	1.40
CPT111	Boulanger & Idriss (2014)	6.00	0.00	1.70
CPT112	Boulanger & Idriss (2014)	6.00	0.00	2.00

PGA Based Parametric Analysis

CPT113	Boulanger & Idriss (2014)	6.00	0.00	0.90
CPT114	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT118	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT119	Boulanger & Idriss (2014)	6.00	0.00	1.50
CPT120	Boulanger & Idriss (2014)	6.00	0.00	2.80
CPT121	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT122	Boulanger & Idriss (2014)	6.00	0.00	2.30
CPT123	Boulanger & Idriss (2014)	6.00	0.00	2.60
CPT124	Boulanger & Idriss (2014)	6.00	0.00	2.40
CPT125	Boulanger & Idriss (2014)	6.00	0.00	1.70
CPT126	Boulanger & Idriss (2014)	6.00	0.00	2.00
CPT127	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT128	Boulanger & Idriss (2014)	6.00	0.00	2.30
CPT129	Boulanger & Idriss (2014)	6.00	0.00	2.40
CPT130	Boulanger & Idriss (2014)	6.00	0.00	2.40
CPT131	Boulanger & Idriss (2014)	6.00	0.00	2.30
CPT132	Boulanger & Idriss (2014)	6.00	0.00	1.50
CPT133	Boulanger & Idriss (2014)	6.00	0.00	1.90
CPT134	Boulanger & Idriss (2014)	6.00	0.00	2.70
sCPT01	Boulanger & Idriss (2014)	6.00	0.00	1.50
sCPT02	Boulanger & Idriss (2014)	6.00	0.60	1.40

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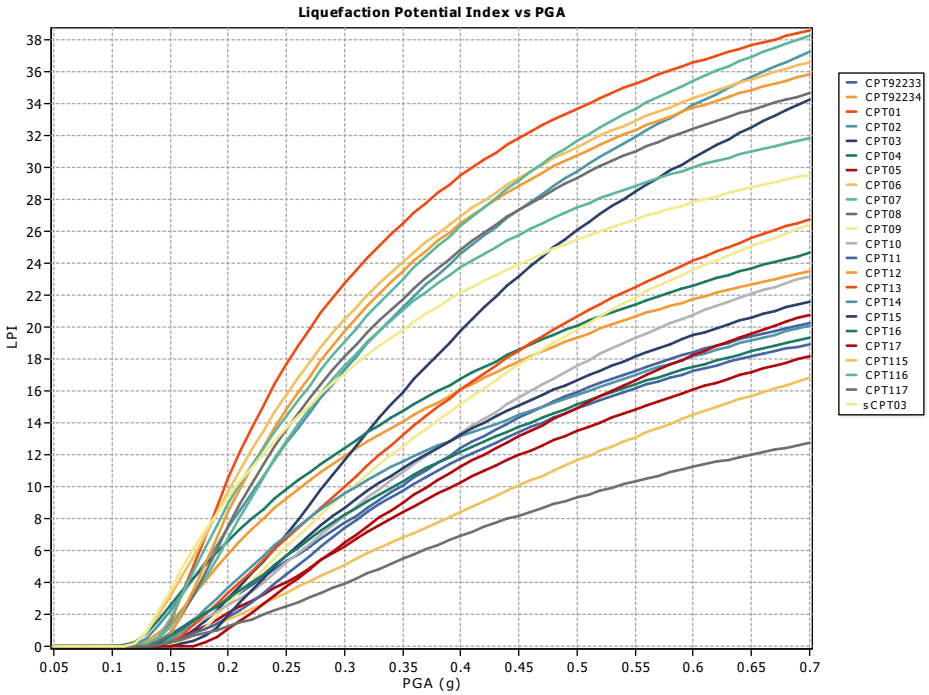
PGA Based Parametric Analysis



:: CPT main liquefaction parameters details ::

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CPT02	Boulanger & Idriss (2014)	6.00	0.00	0.50
CPT03	Boulanger & Idriss (2014)	6.00	1.20	2.20
CPT04	Boulanger & Idriss (2014)	6.00	0.00	0.60
CPT05	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT06	Boulanger & Idriss (2014)	6.00	0.00	2.50
CPT07	Boulanger & Idriss (2014)	6.00	0.00	1.50
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CPT09	Boulanger & Idriss (2014)	6.00	0.00	2.20
CPT10	Boulanger & Idriss (2014)	6.00	0.00	2.00
CPT11	Boulanger & Idriss (2014)	6.00	0.00	2.80
CPT12	Boulanger & Idriss (2014)	6.00	0.00	1.70
CPT13	Boulanger & Idriss (2014)	6.00	0.00	1.90

PGA Based Parametric Analysis

CPT14	Boulanger & Idriss (2014)	6.00	0.00	2.50
CPT15	Boulanger & Idriss (2014)	6.00	0.00	3.30
CPT16	Boulanger & Idriss (2014)	6.00	0.00	2.40
CPT17	Boulanger & Idriss (2014)	6.00	0.00	3.00
CPT115	Boulanger & Idriss (2014)	6.00	0.00	1.70
CPT116	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT117	Boulanger & Idriss (2014)	6.00	0.00	3.00
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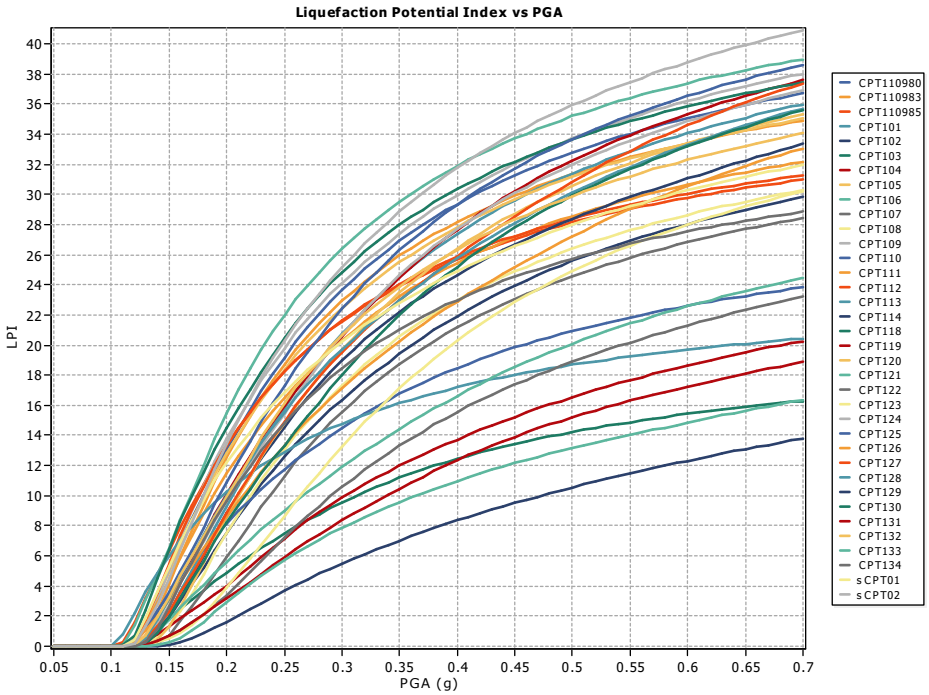

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CPT101	Boulanger & Idriss (2014)	6.00	0.00	2.40
CPT102	Boulanger & Idriss (2014)	6.00	0.00	2.20
CPT103	Boulanger & Idriss (2014)	6.00	0.00	2.20
CPT104	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT105	Boulanger & Idriss (2014)	6.00	0.00	2.20
CPT106	Boulanger & Idriss (2014)	6.00	0.00	1.30
CPT107	Boulanger & Idriss (2014)	6.00	0.00	2.50
CPT108	Boulanger & Idriss (2014)	6.00	0.00	2.20
CPT109	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT110	Boulanger & Idriss (2014)	6.00	0.00	1.40
CPT111	Boulanger & Idriss (2014)	6.00	0.00	1.70
CPT112	Boulanger & Idriss (2014)	6.00	0.00	2.00

PGA Based Parametric Analysis

CPT113	Boulanger & Idriss (2014)	6.00	0.00	0.90
CPT114	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT118	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT119	Boulanger & Idriss (2014)	6.00	0.00	1.50
CPT120	Boulanger & Idriss (2014)	6.00	0.00	2.80
CPT121	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT122	Boulanger & Idriss (2014)	6.00	0.00	2.30
CPT123	Boulanger & Idriss (2014)	6.00	0.00	2.60
CPT124	Boulanger & Idriss (2014)	6.00	0.00	2.40
CPT125	Boulanger & Idriss (2014)	6.00	0.00	1.70
CPT126	Boulanger & Idriss (2014)	6.00	0.00	2.00
CPT127	Boulanger & Idriss (2014)	6.00	0.00	2.10
CPT128	Boulanger & Idriss (2014)	6.00	0.00	2.30
CPT129	Boulanger & Idriss (2014)	6.00	0.00	2.40
CPT130	Boulanger & Idriss (2014)	6.00	0.00	2.40
CPT131	Boulanger & Idriss (2014)	6.00	0.00	2.30
CPT132	Boulanger & Idriss (2014)	6.00	0.00	1.50
CPT133	Boulanger & Idriss (2014)	6.00	0.00	1.90
CPT134	Boulanger & Idriss (2014)	6.00	0.00	2.70
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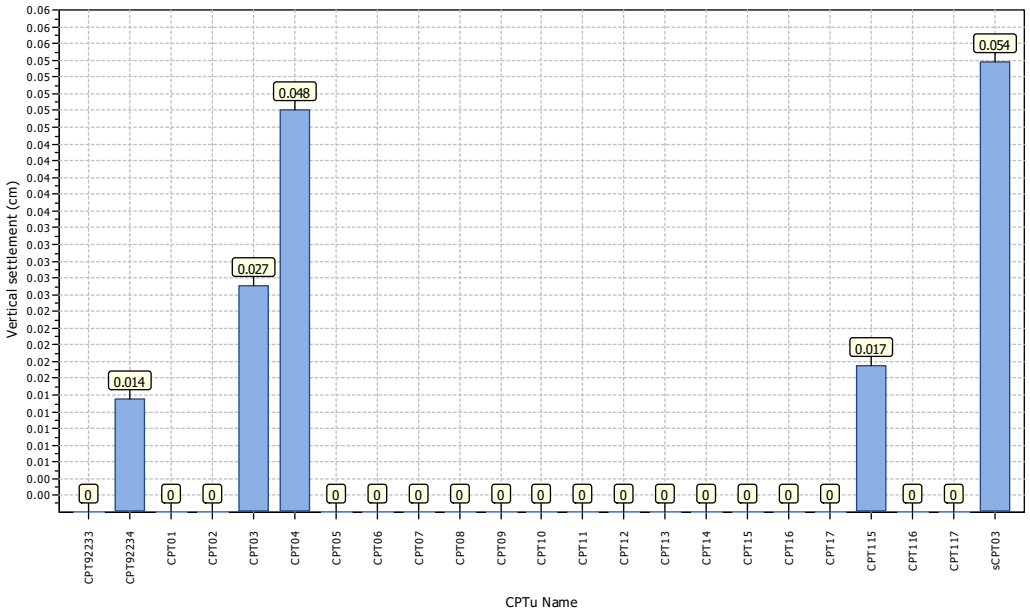
Project title : Bell Road Development - PostDevelopment 0.08g

Location : North Block, Bell Road, Papamoa

Overall vertical settlements report



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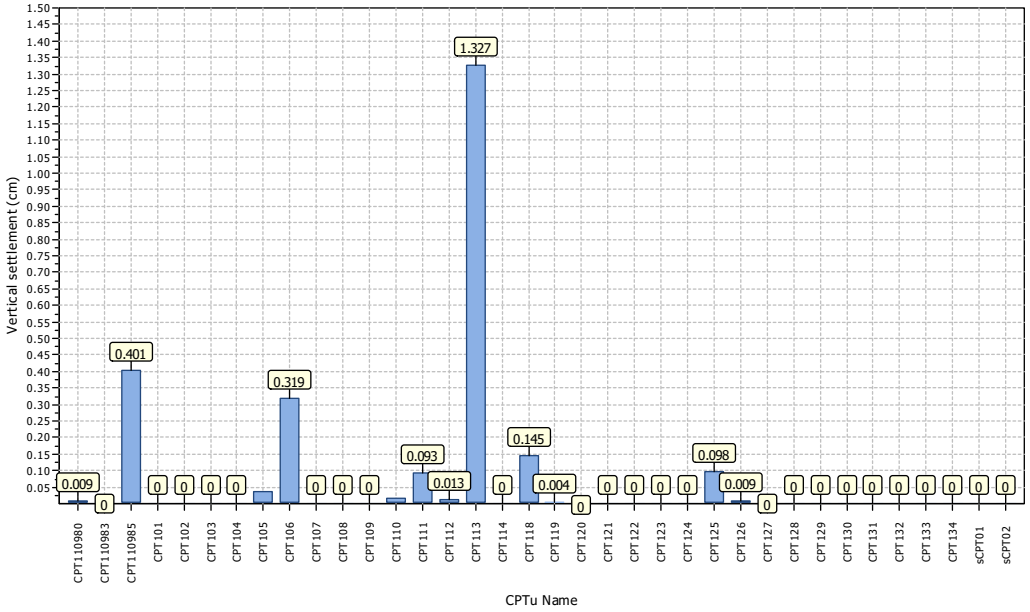
Project title : Bell Road Development - PostDevelopment 0.08g

Location : South Block, Bell Road, Papamoa

Overall vertical settlements report



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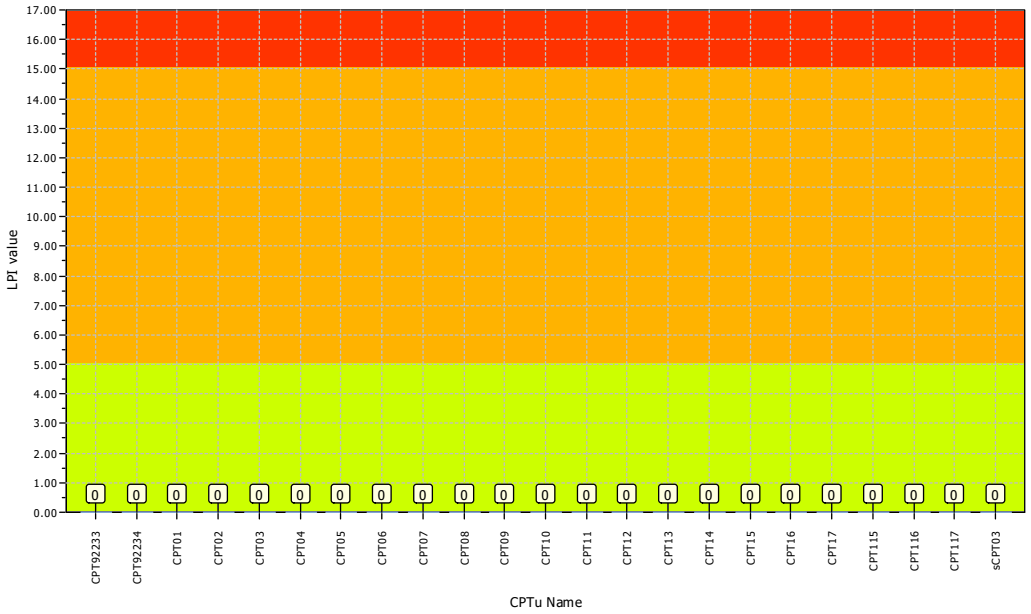
Project title : Bell Road Development - PostDevelopment 0.08g

Location : North Block, Bell Road, Papamoa

Overall Liquefaction Potential Index report



LPI color scheme

- Very high risk
- High risk
- Low risk

Basic statistics

Total CPT number: 23
100% low risk
0% high risk
0% very high risk

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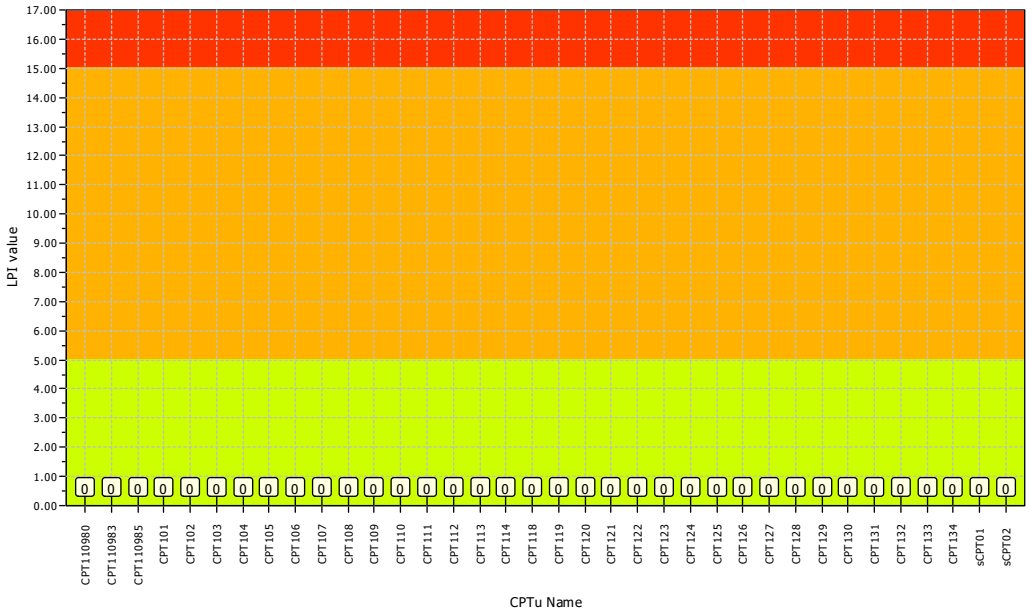
Overall Liquefaction Potential Index report



LPI color scheme

- Very high risk
- High risk
- Low risk

Basic statistics

Total CPT number: 36
100% low risk
0% high risk
0% very high risk

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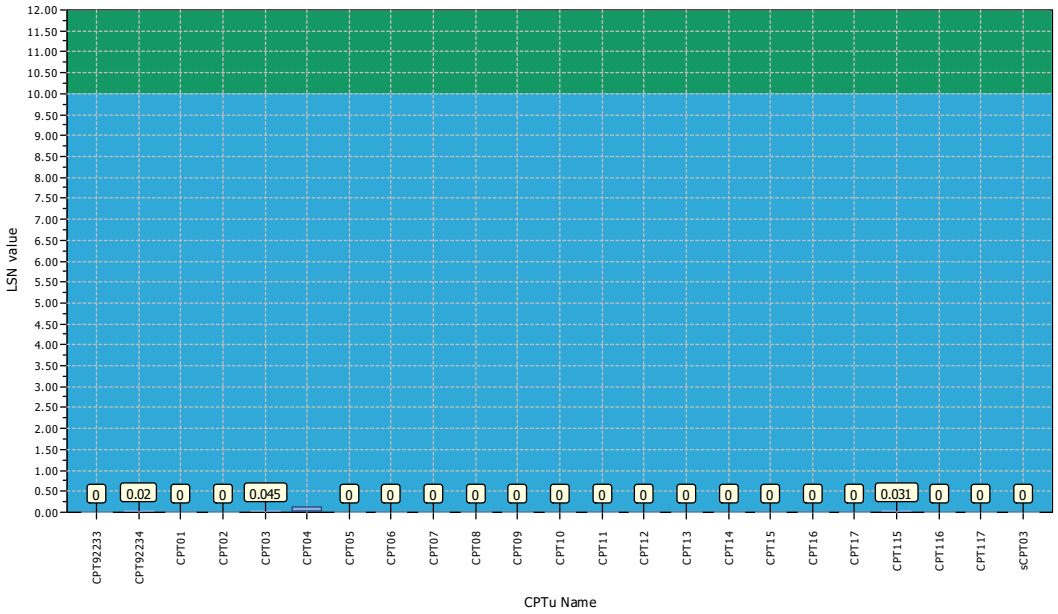
Project title : Bell Road Development - PostDevelopment 0.08g

Location : North Block, Bell Road, Papamoa

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: 23

100% little liquefaction

0% minor liquefaction

0% moderate liquefaction

0% moderate to major liquefaction

0% major liquefaction

0% severe liquefaction

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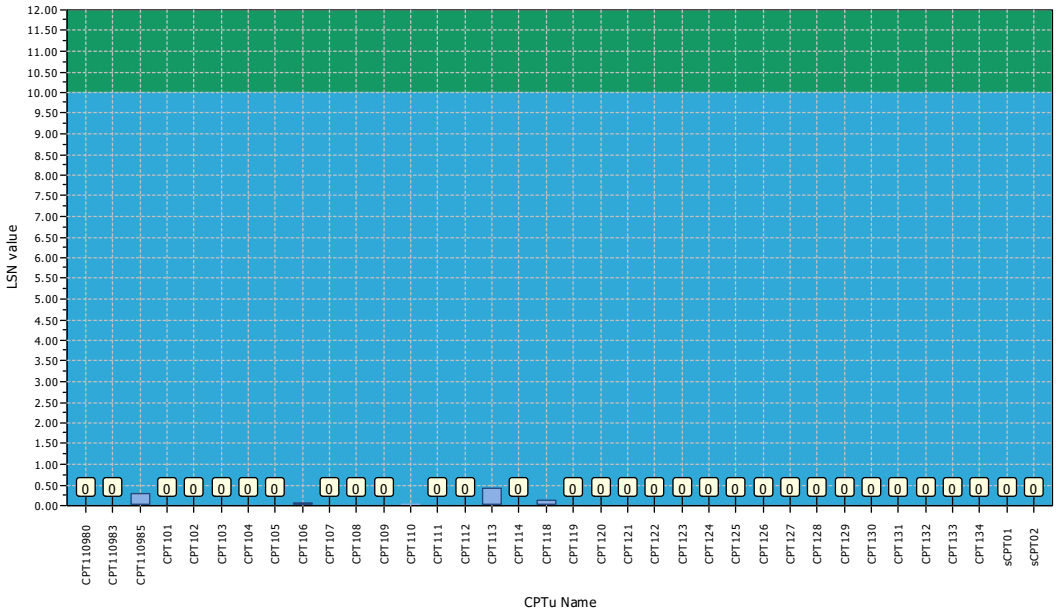
Project title : Bell Road Development - PostDevelopment 0.08g

Location : South Block, Bell Road, Papamoa

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: 36

100% little liquefaction

0% minor liquefaction

0% moderate liquefaction

0% moderate to major liquefaction

0% major liquefaction

0% severe liquefaction

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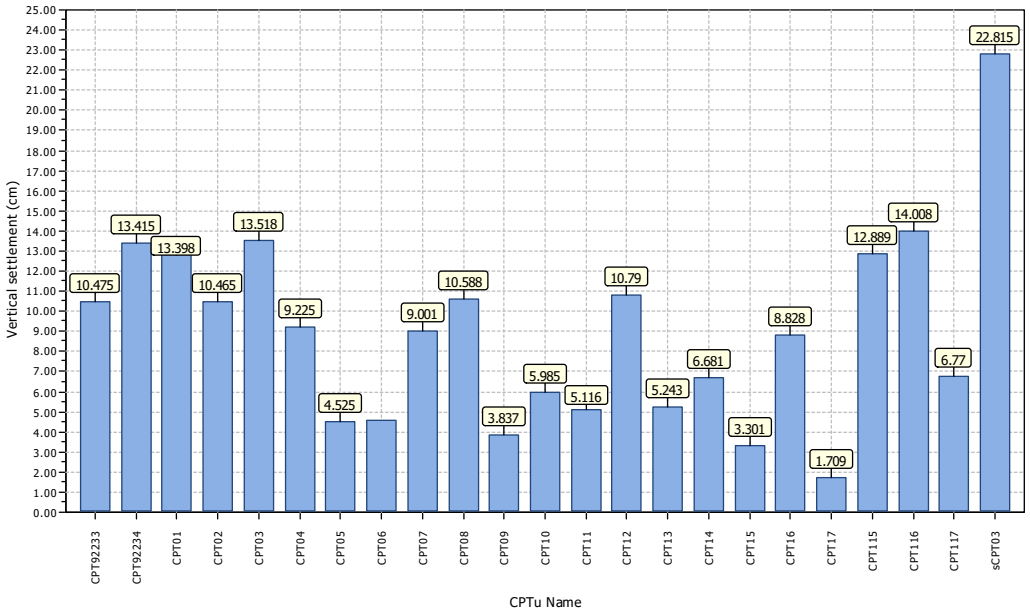
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.16g

Location : North Block, Bell Road, Papamoa

Overall vertical settlements report

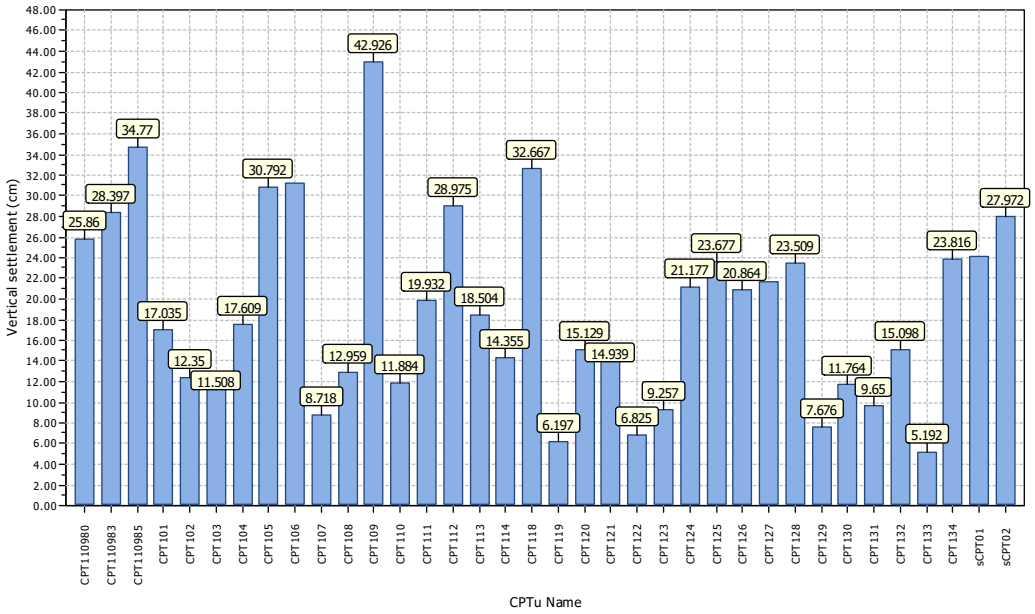


ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.16g

Location : South Block, Bell Road, Papamoa

Overall vertical settlements report

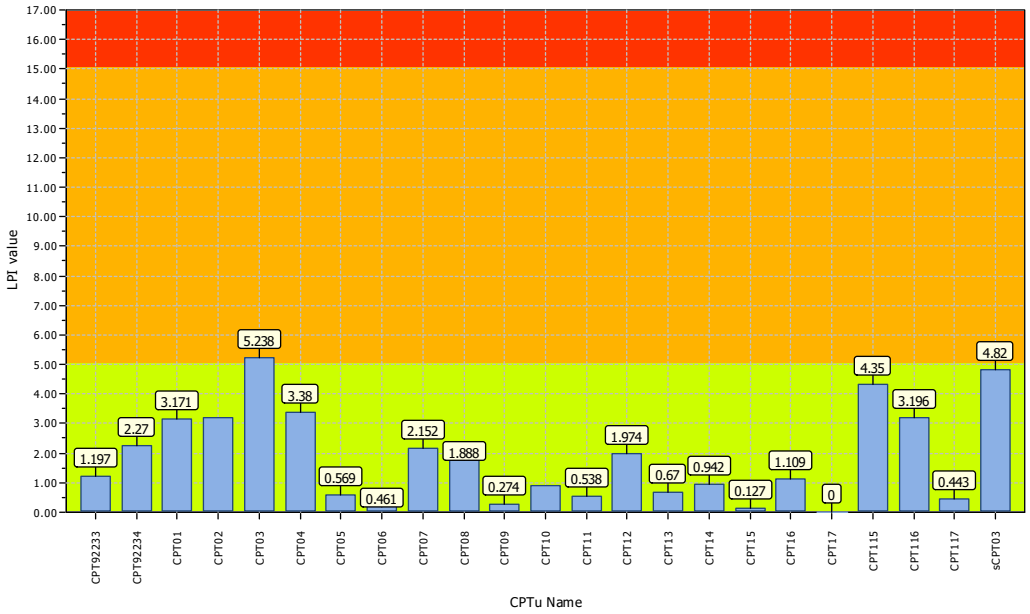


ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.16g

Location : North Block, Bell Road, Papamoa

Overall Liquefaction Potential Index report



LPI color scheme

- Very high risk
- High risk
- Low risk

Basic statistics

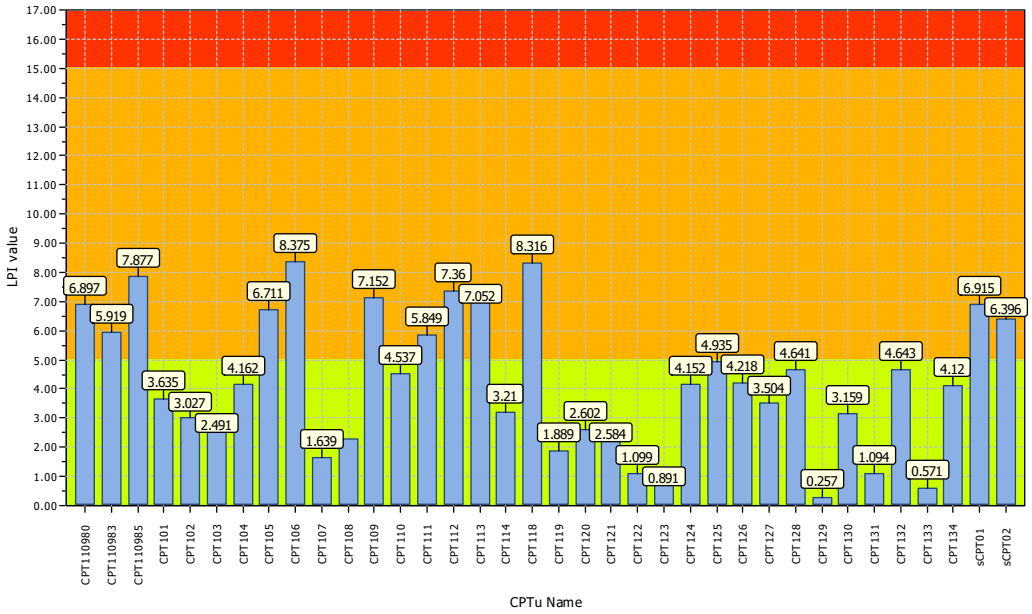
Total CPT number: 23
96% low risk
4% high risk
0% very high risk

ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.16g

Location : South Block, Bell Road, Papamoa

Overall Liquefaction Potential Index report



LPI color scheme

- Very high risk
- High risk
- Low risk

Basic statistics

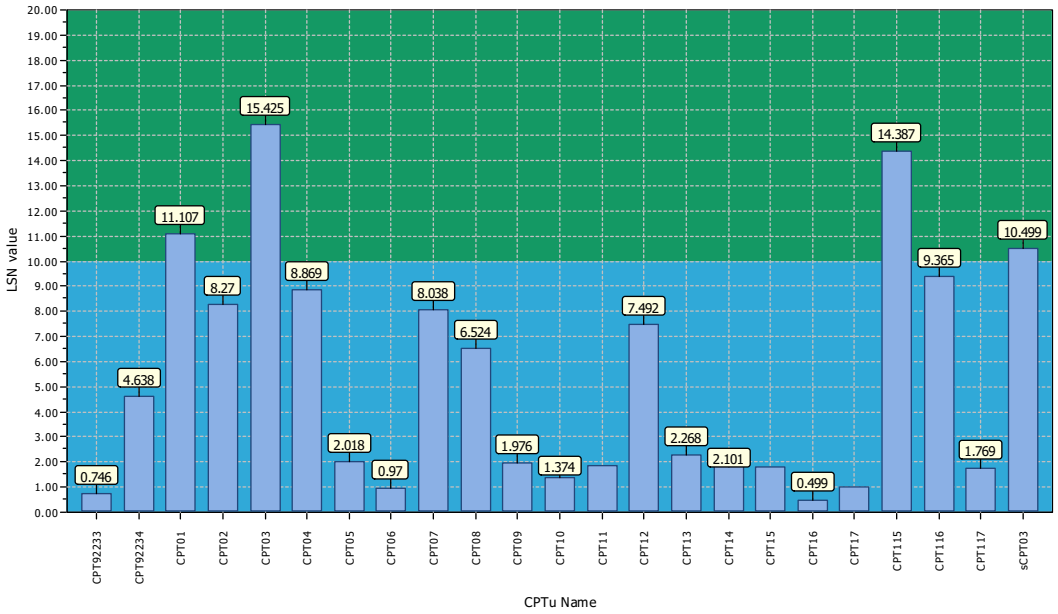
Total CPT number: 36
67% low risk
33% high risk
0% very high risk

ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.16g

Location : North Block, Bell Road, Papamoa

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: 23

83% little liquefaction

17% minor liquefaction

0% moderate liquefaction

0% moderate to major liquefaction

0% major liquefaction

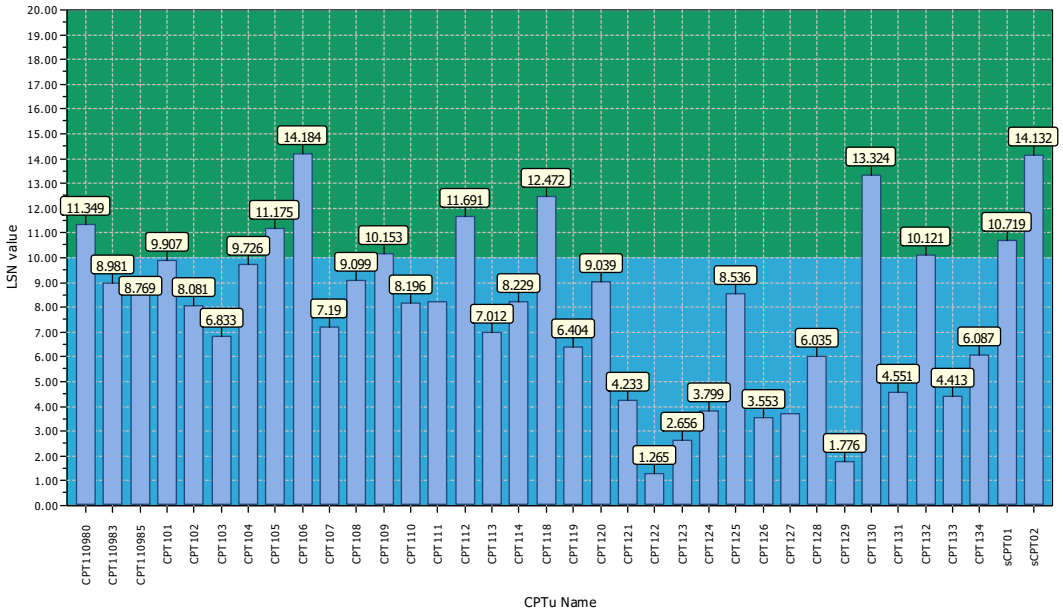
0% severe liquefaction

ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.16g

Location : South Block, Bell Road, Papamoa

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: 36

72% little liquefaction

28% minor liquefaction

0% moderate liquefaction

0% moderate to major liquefaction

0% major liquefaction

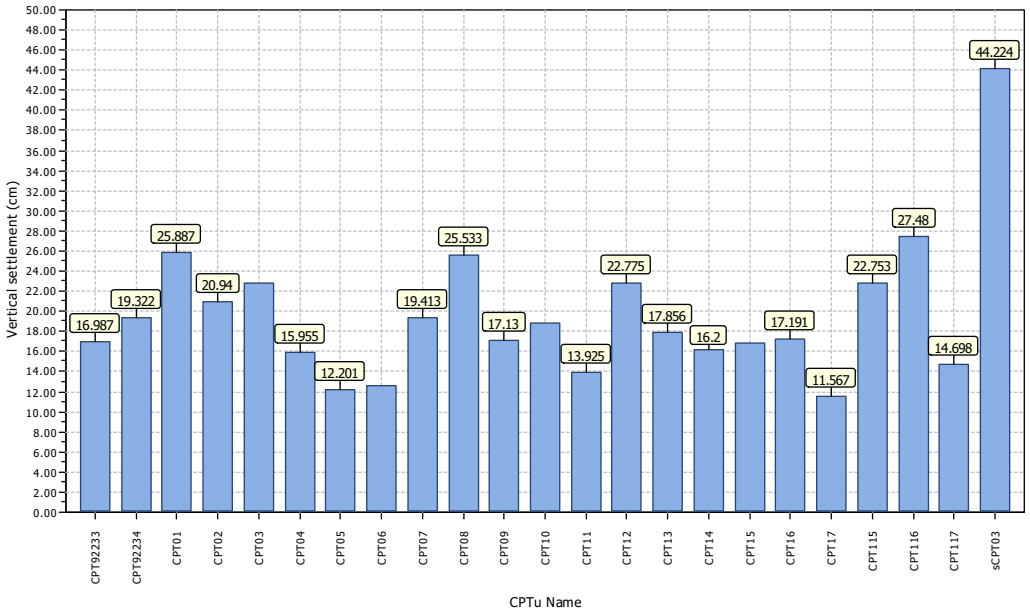
0% severe liquefaction

ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.32g

Location : North Block, Bell Road, Papamoa

Overall vertical settlements report

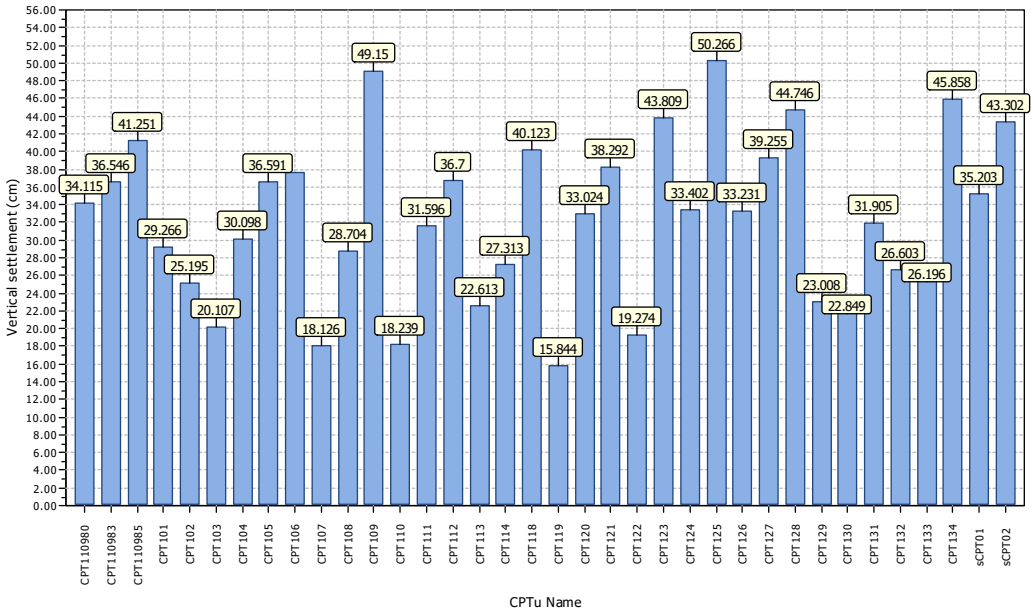


ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.32g

Location : South Block, Bell Road, Papamoa

Overall vertical settlements report

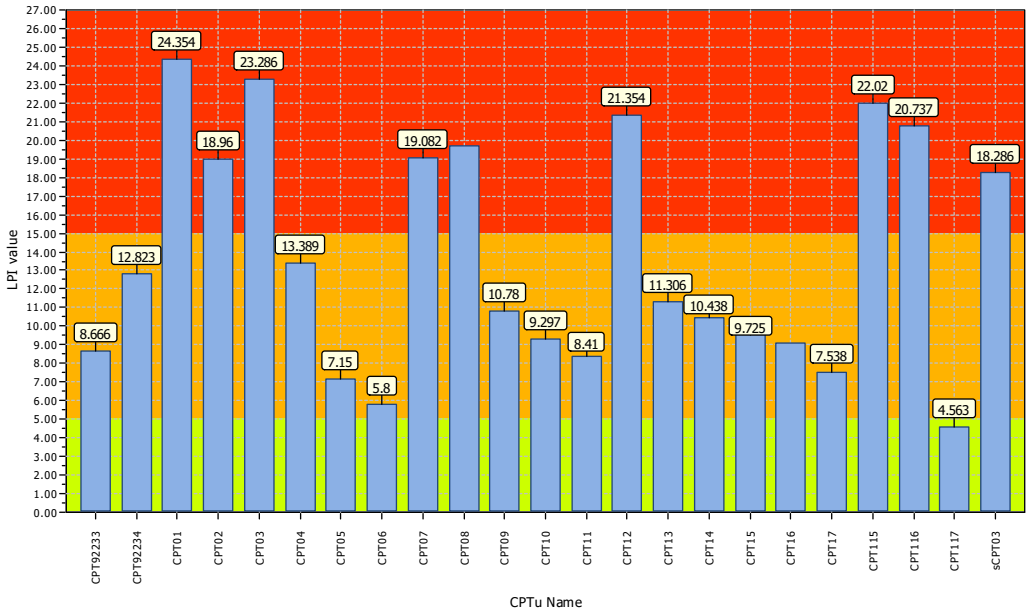


ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.32g

Location : North Block, Bell Road, Papamoa

Overall Liquefaction Potential Index report



LPI color scheme

- Very high risk
- High risk
- Low risk

Basic statistics

Total CPT number: 23

4% low risk

57% high risk

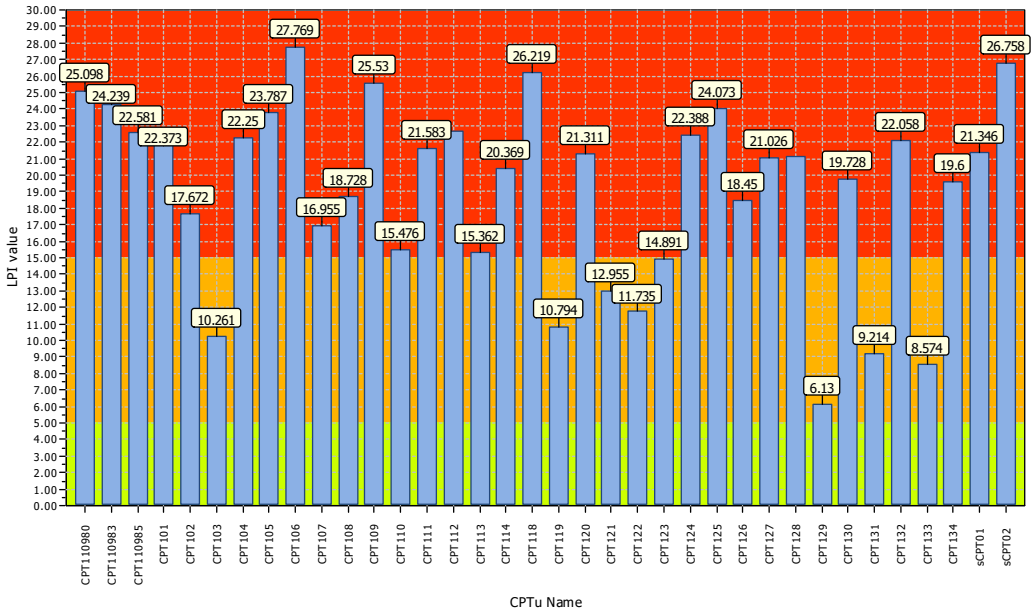
39% very high risk

ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.32g

Location : South Block, Bell Road, Papamoa

Overall Liquefaction Potential Index report



LPI color scheme

- Very high risk
- High risk
- Low risk

Basic statistics

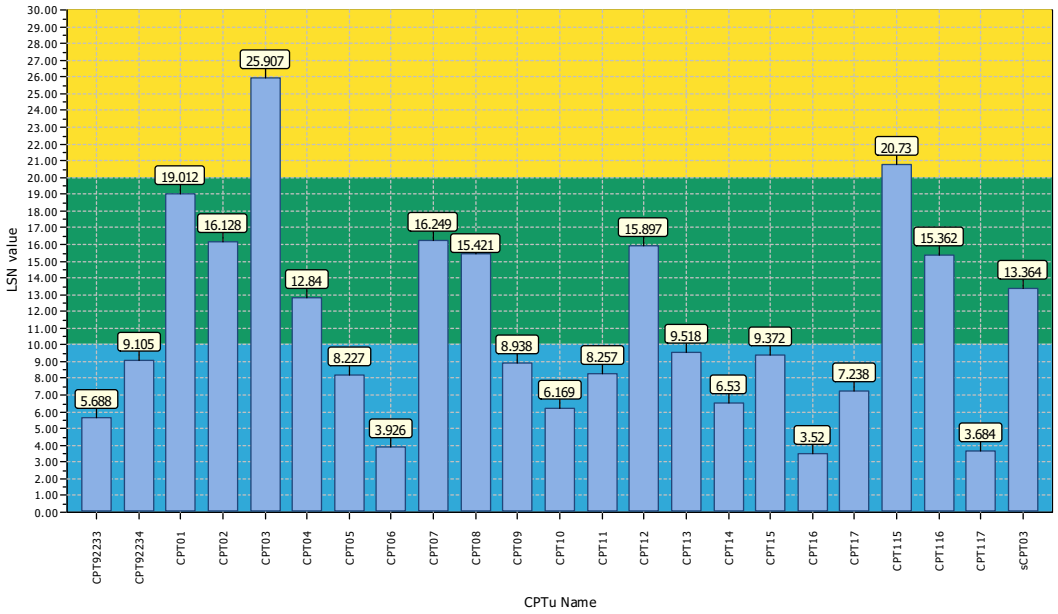
Total CPT number: 36
0% low risk
22% high risk
78% very high risk

ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.32g

Location : North Block, Bell Road, Papamoa

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: 23

57% little liquefaction

35% minor liquefaction

9% moderate liquefaction

0% moderate to major liquefaction

0% major liquefaction

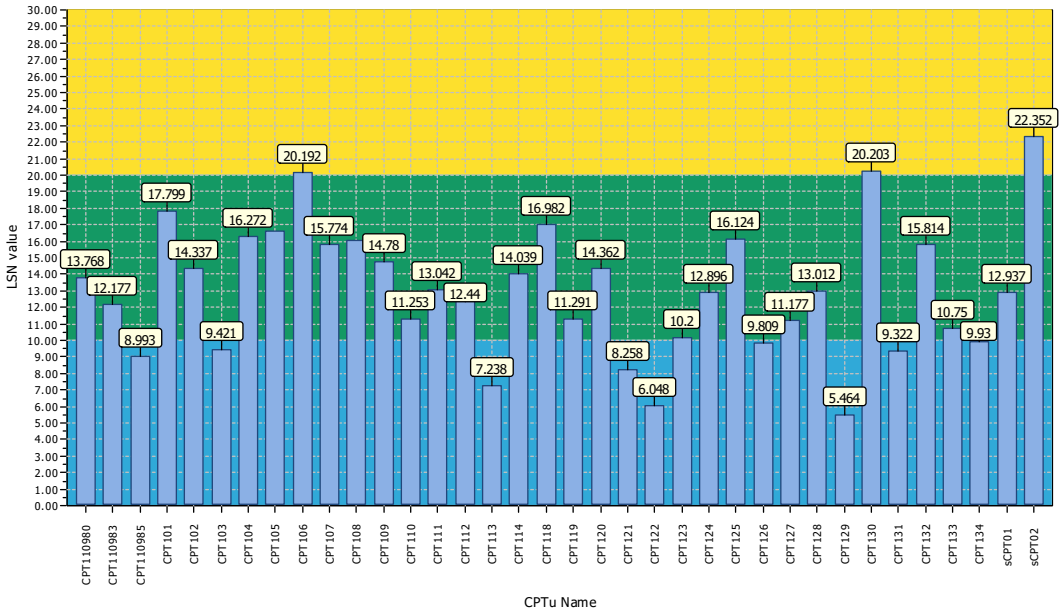
0% severe liquefaction

ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.32g

Location : South Block, Bell Road, Papamoa

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: 36

25% little liquefaction

67% minor liquefaction

8% moderate liquefaction

0% moderate to major liquefaction

0% major liquefaction

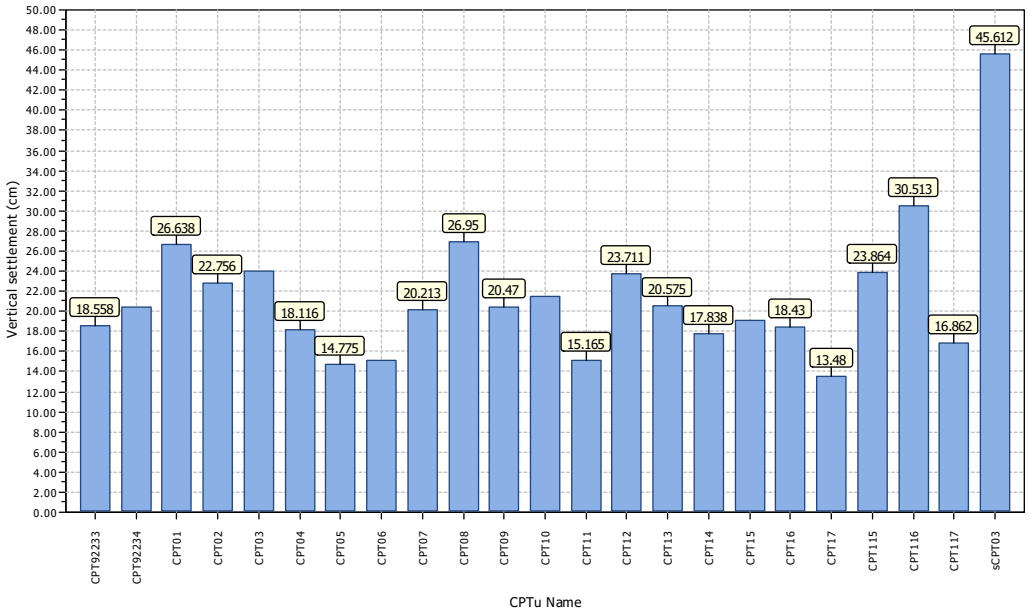
0% severe liquefaction

ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.41g

Location : North Block, Bell Road, Papamoa

Overall vertical settlements report

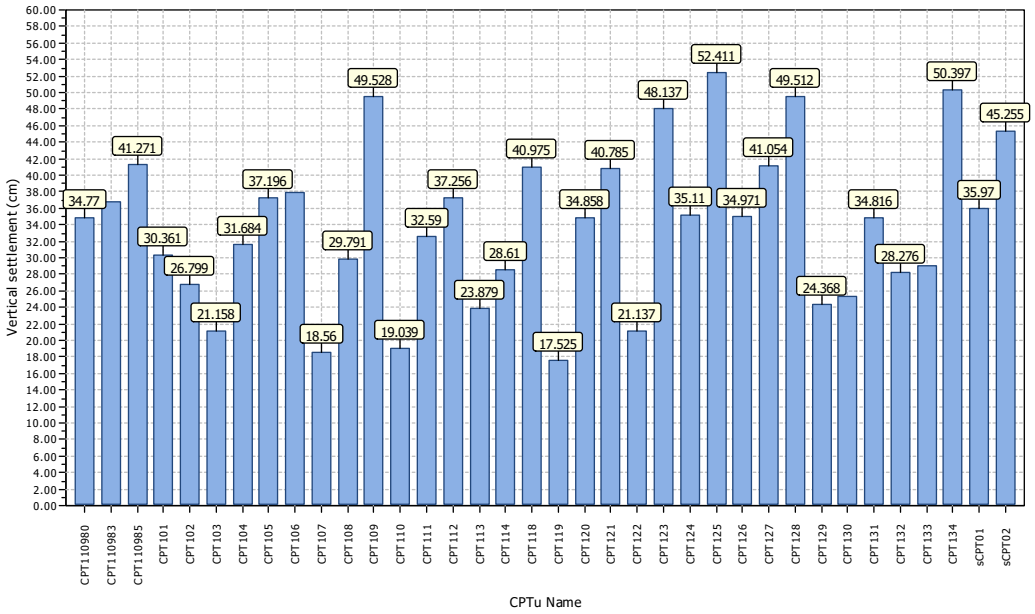


ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.41g

Location : South Block, Bell Road, Papamoa

Overall vertical settlements report

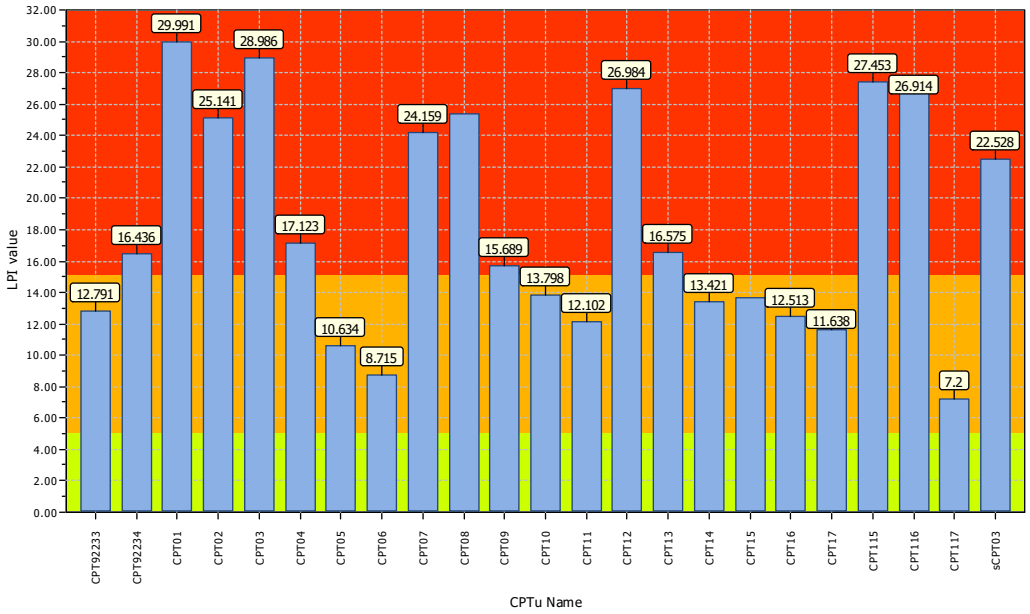


ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.41g

Location : North Block, Bell Road, Papamoa

Overall Liquefaction Potential Index report



LPI color scheme

- Very high risk
- High risk
- Low risk

Basic statistics

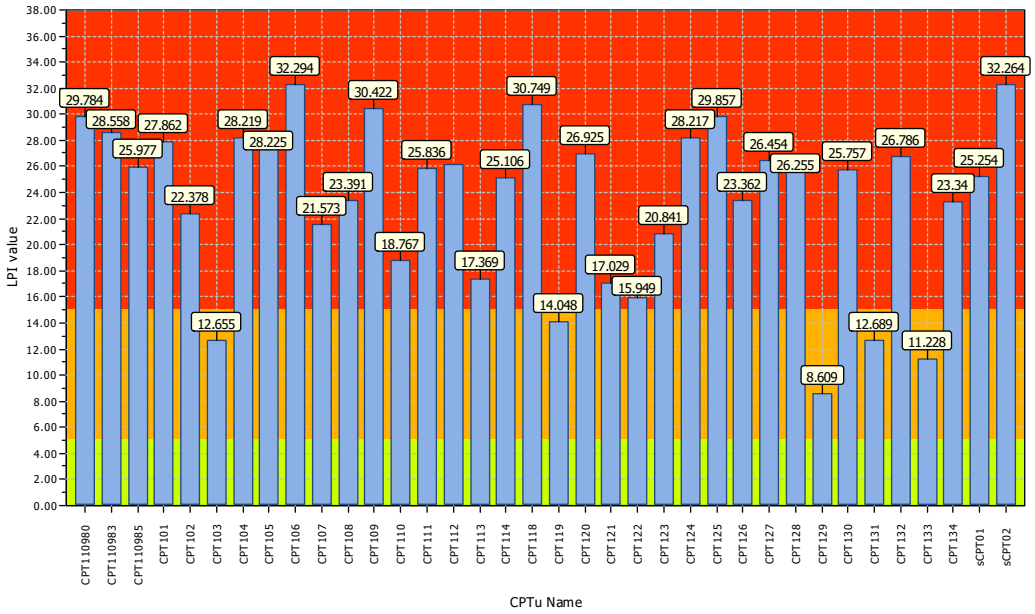
Total CPT number: 23
0% low risk
43% high risk
57% very high risk

ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.41g

Location : South Block, Bell Road, Papamoa

Overall Liquefaction Potential Index report



LPI color scheme

- Very high risk
- High risk
- Low risk

Basic statistics

Total CPT number: 36

0% low risk

14% high risk

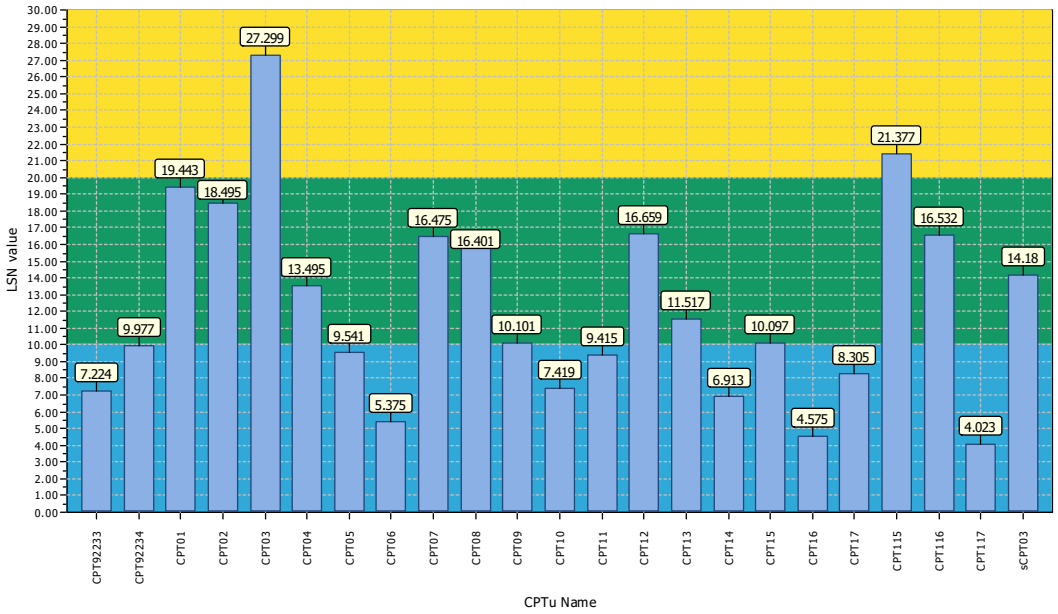
86% very high risk

ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.41g

Location : North Block, Bell Road, Papamoa

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: 23

43% little liquefaction

48% minor liquefaction

9% moderate liquefaction

0% moderate to major liquefaction

0% major liquefaction

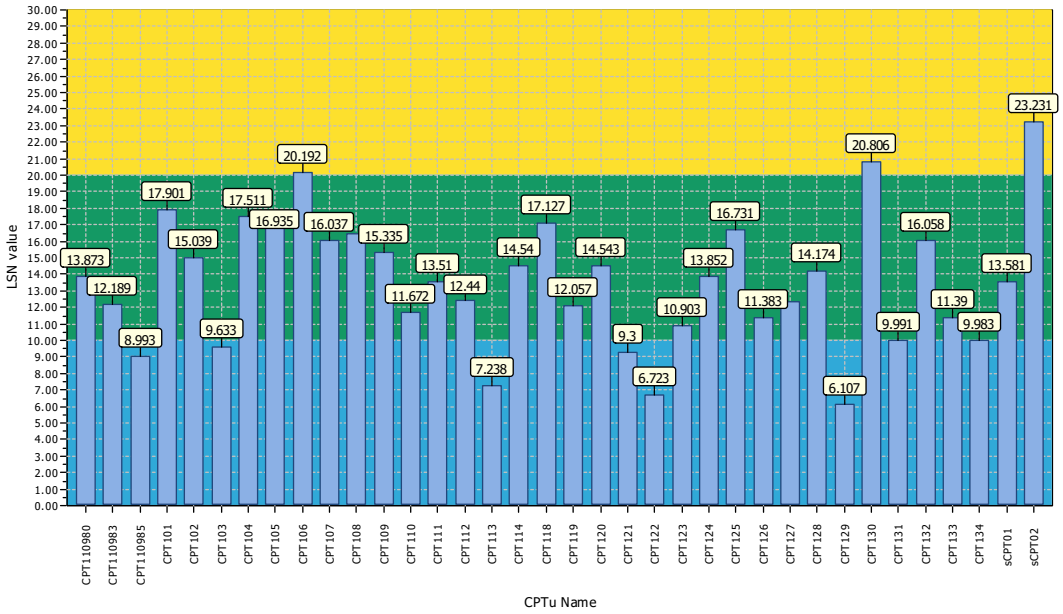
0% severe liquefaction

ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.41g

Location : South Block, Bell Road, Papamoa

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: 36

22% little liquefaction

69% minor liquefaction

8% moderate liquefaction

0% moderate to major liquefaction

0% major liquefaction

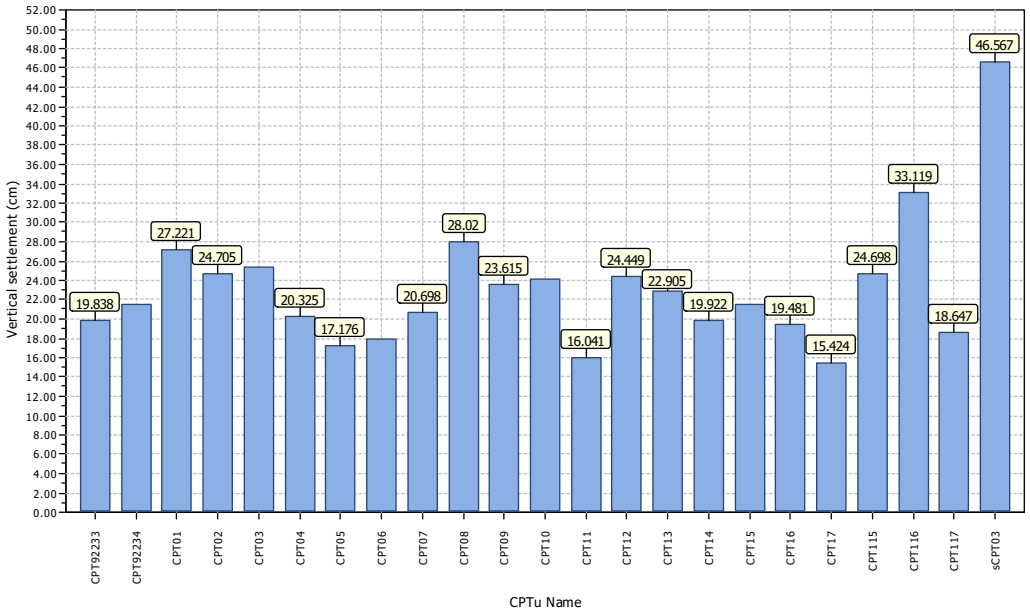
0% severe liquefaction

ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.57g

Location : North Block, Bell Road, Papamoa

Overall vertical settlements report

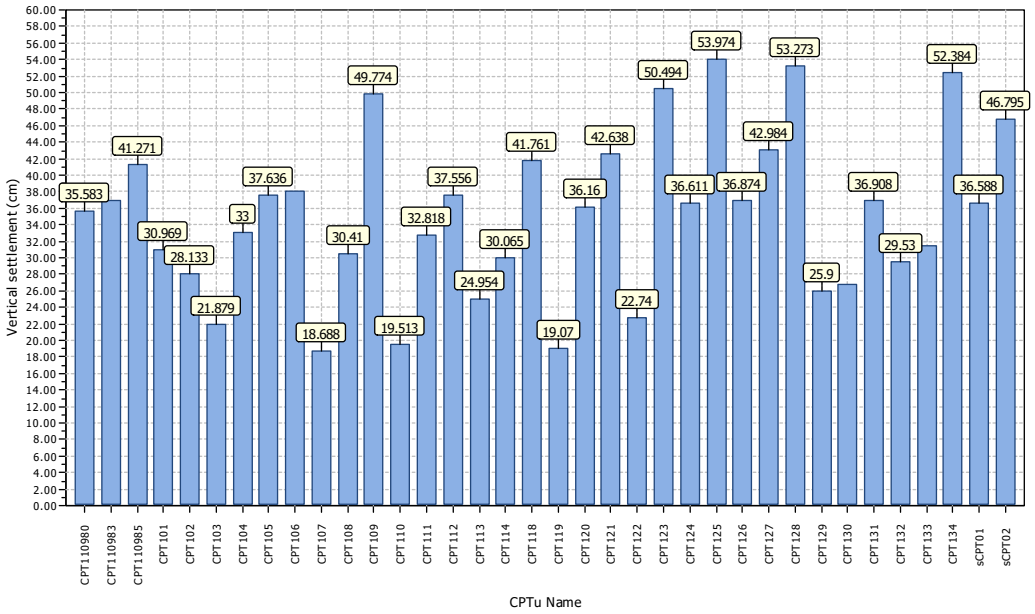


ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.41g

Location : South Block, Bell Road, Papamoa

Overall vertical settlements report

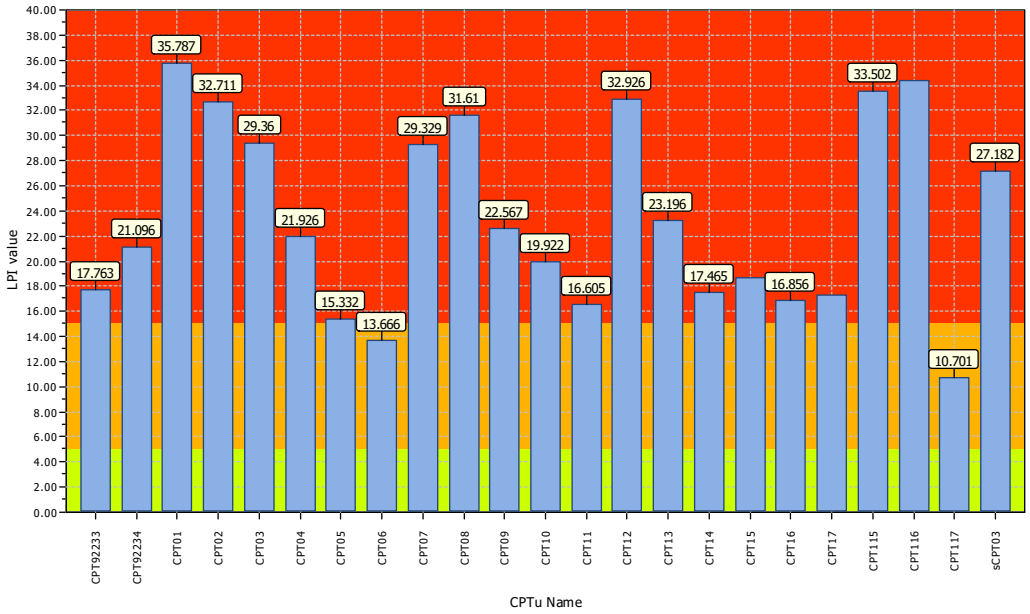


ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.57g

Location : North Block, Bell Road, Papamoa

Overall Liquefaction Potential Index report



LPI color scheme

- Very high risk
- High risk
- Low risk

Basic statistics

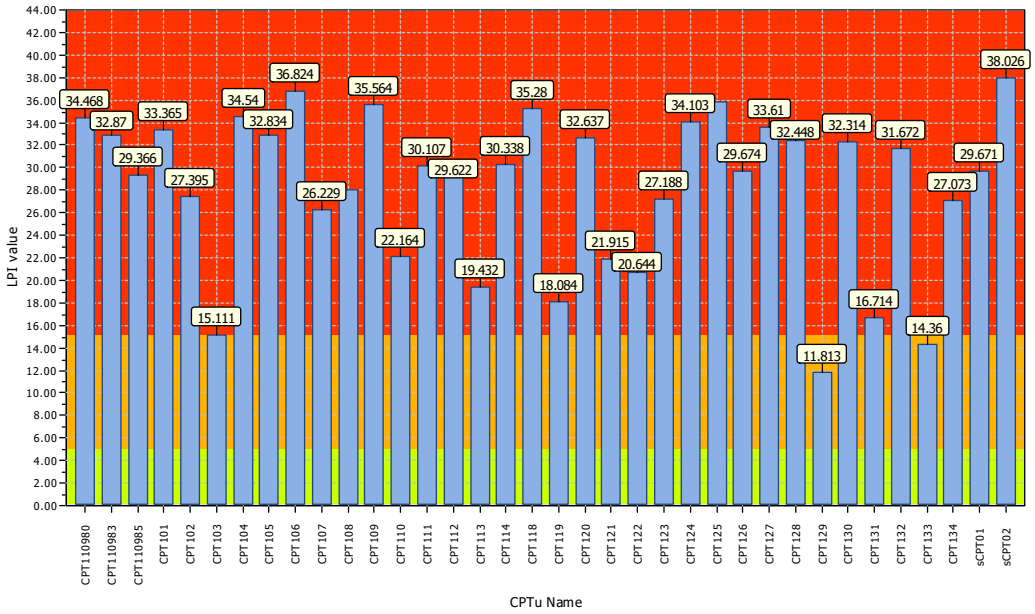
Total CPT number: 23
0% low risk
9% high risk
91% very high risk

ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.41g

Location : South Block, Bell Road, Papamoa

Overall Liquefaction Potential Index report



LPI color scheme

- Very high risk
- High risk
- Low risk

Basic statistics

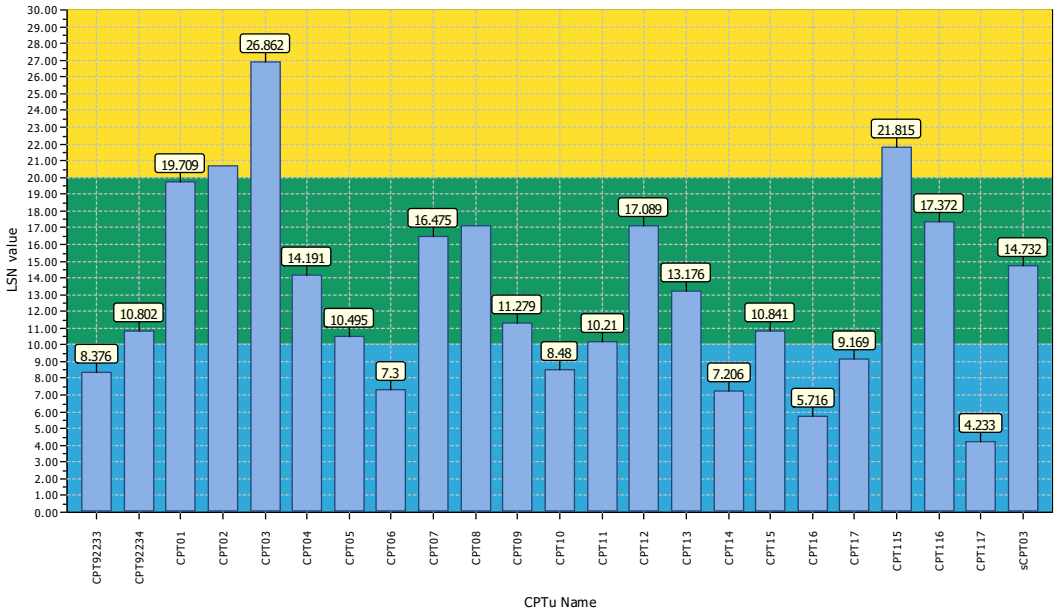
Total CPT number: 36
0% low risk
6% high risk
94% very high risk

ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.57g

Location : North Block, Bell Road, Papamoa

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: 23

30% little liquefaction

57% minor liquefaction

13% moderate liquefaction

0% moderate to major liquefaction

0% major liquefaction

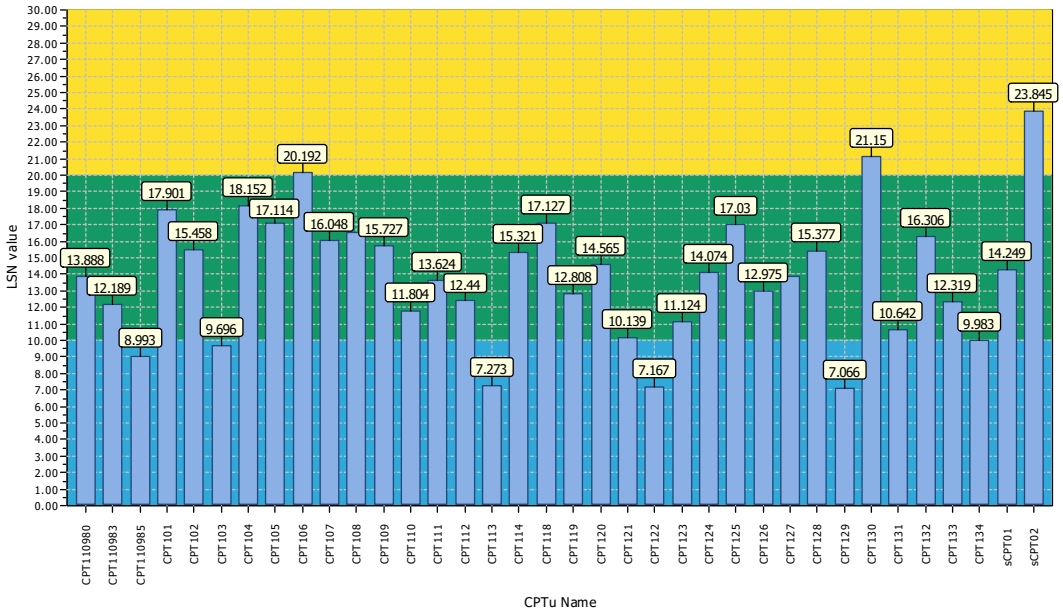
0% severe liquefaction

ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.41g

Location : South Block, Bell Road, Papamoa

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: 36

17% little liquefaction

75% minor liquefaction

8% moderate liquefaction

0% moderate to major liquefaction

0% major liquefaction

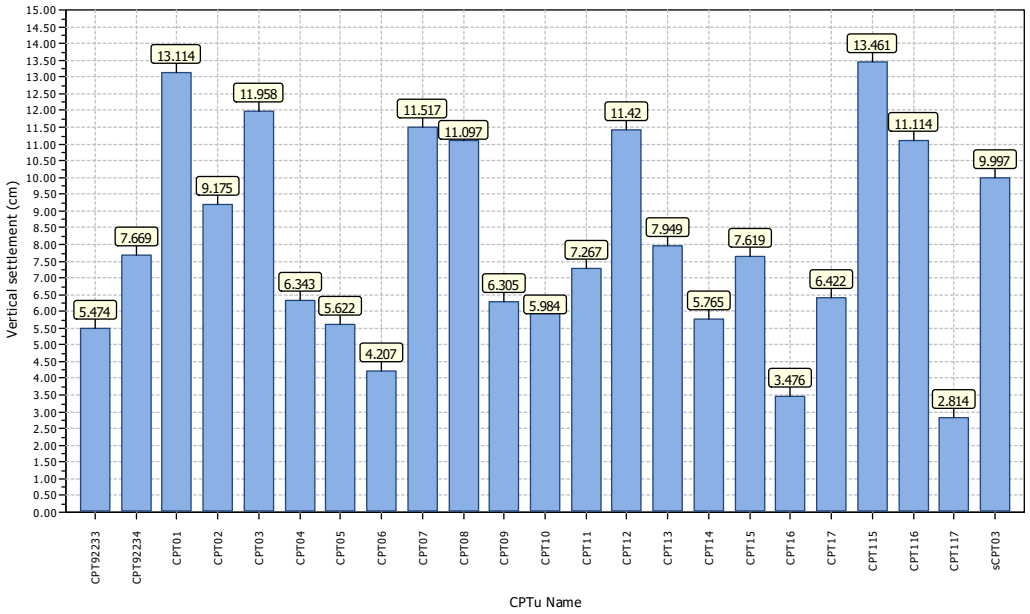
0% severe liquefaction

ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

Project title : Bell Road Development - PostDevelopment 0.41g (Index Settlements)

Location : Bell Road, Papamoa

Overall vertical settlements report

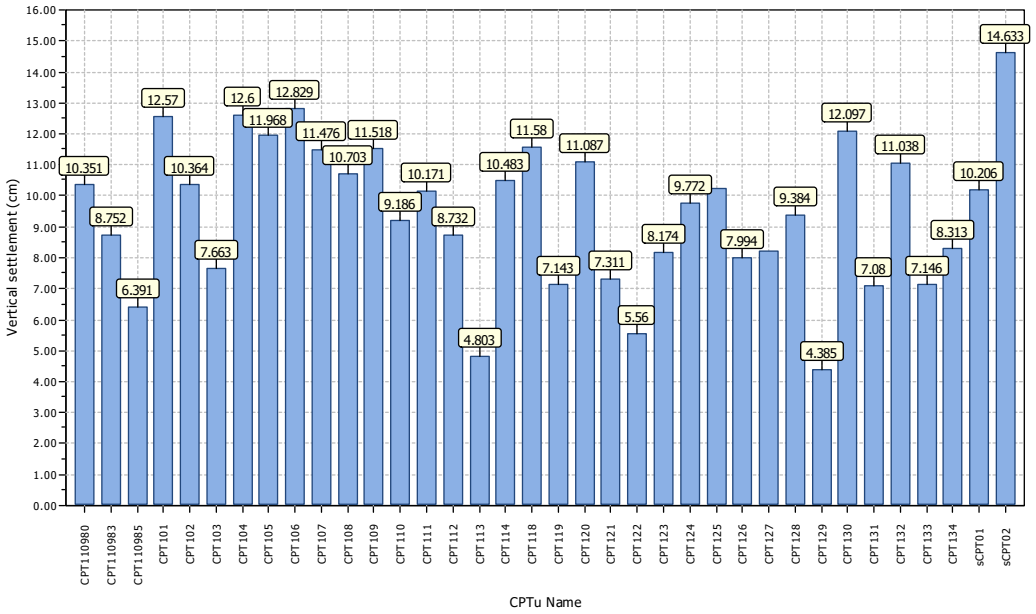


ENGEO Ltd
Tauranga Office
1/314 Maunganui Road, Mount Maunganui
www.engeo.co.nz

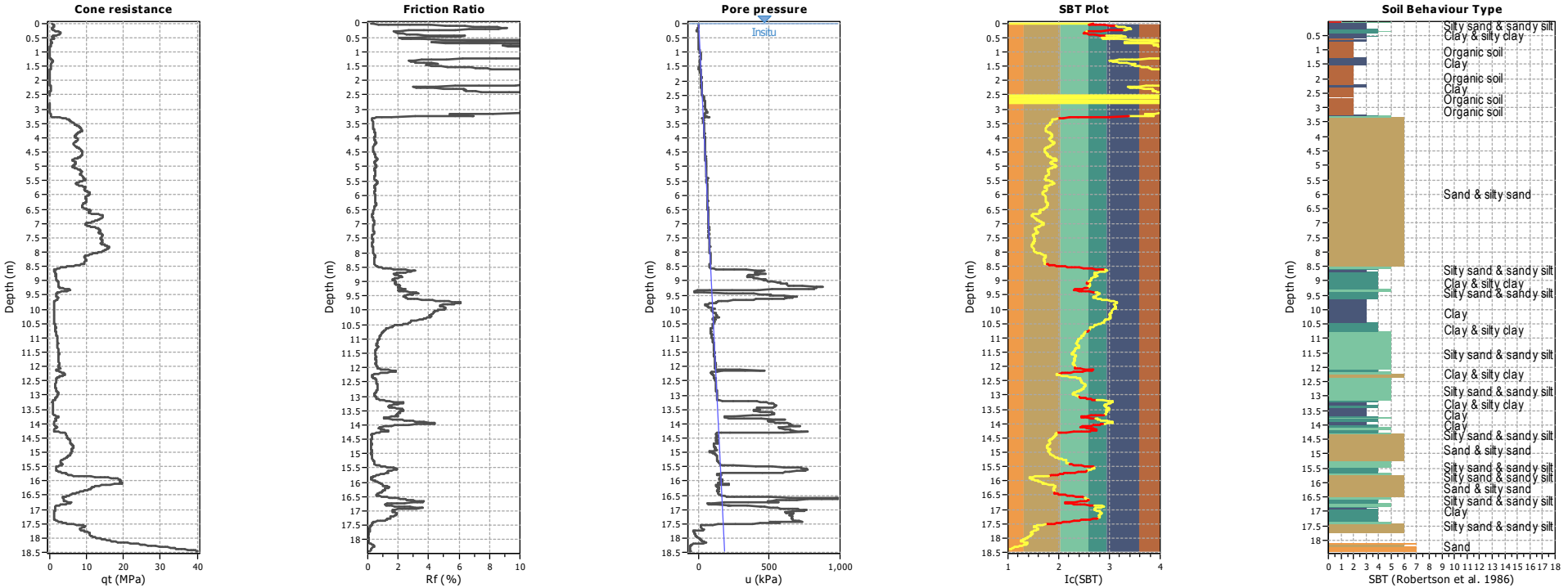
Project title : Bell Road Development - PostDevelopment 0.41g (Index Settlements)

Location : Bell Road, Papamoa

Overall vertical settlements report



CPT basic interpretation plots



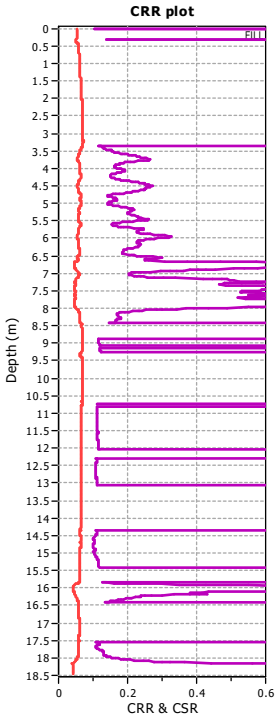
Input parameters and analysis data

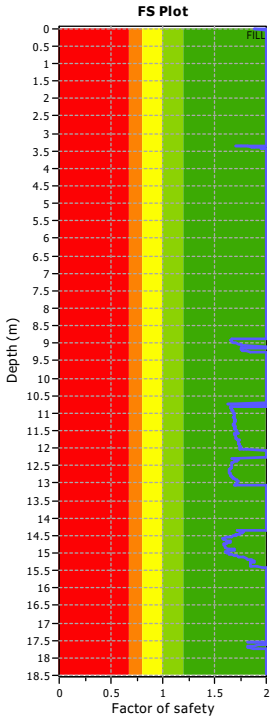
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

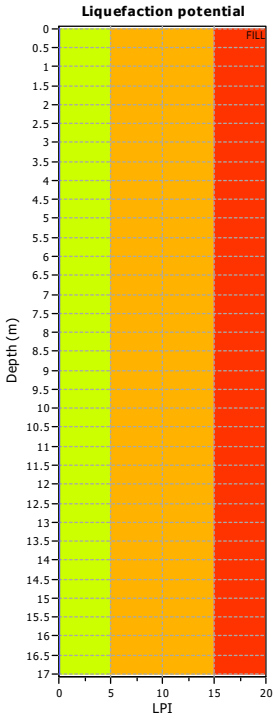
SBT legend

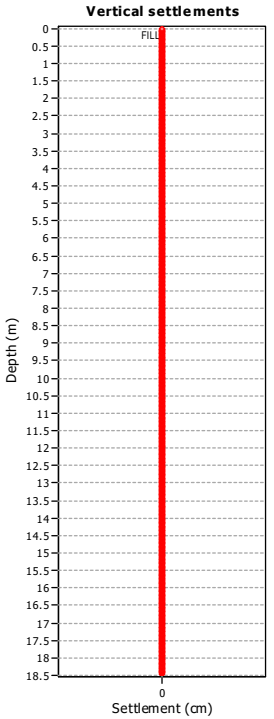
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

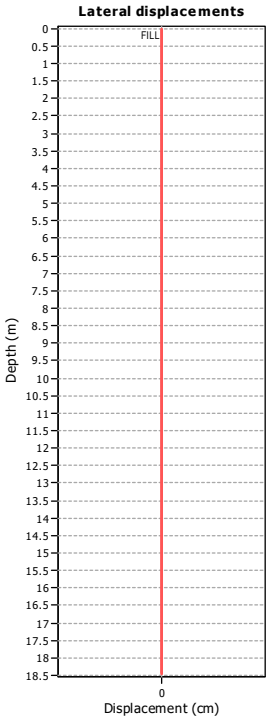
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

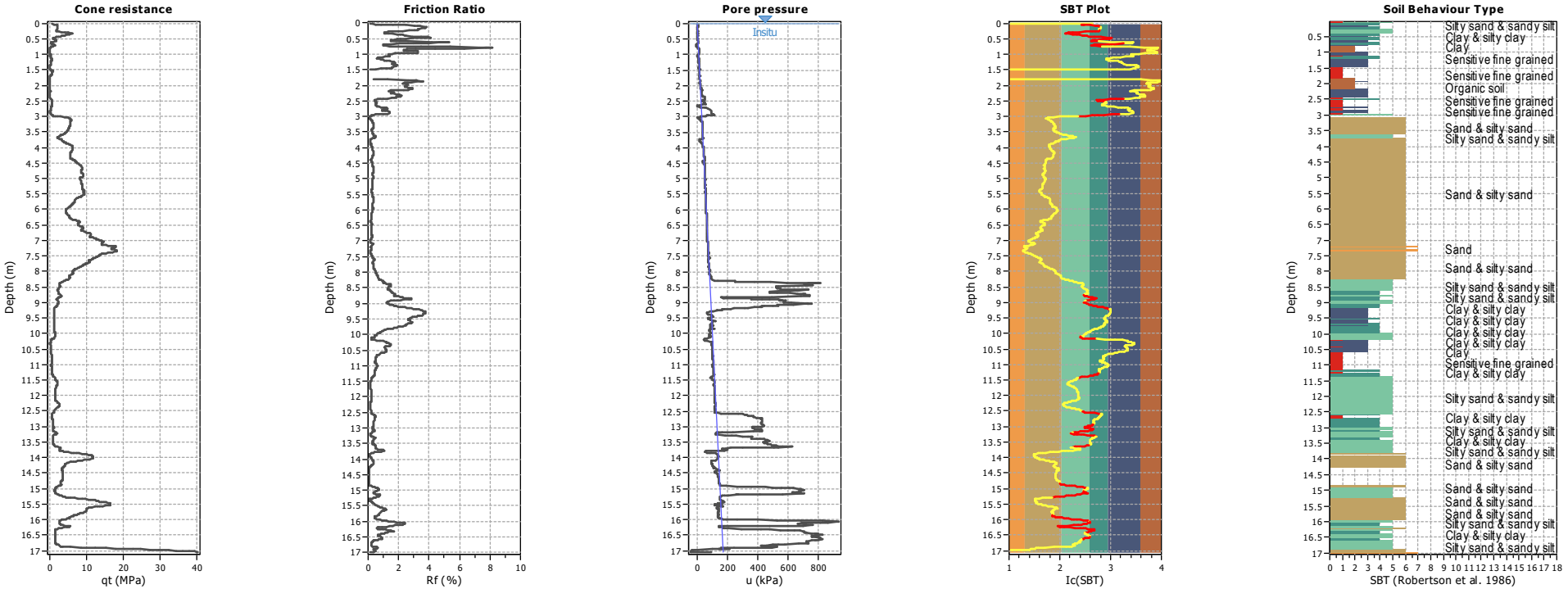
F.S. color scheme

- 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



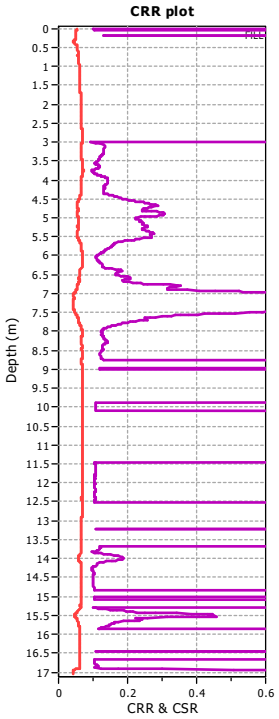
Input parameters and analysis data

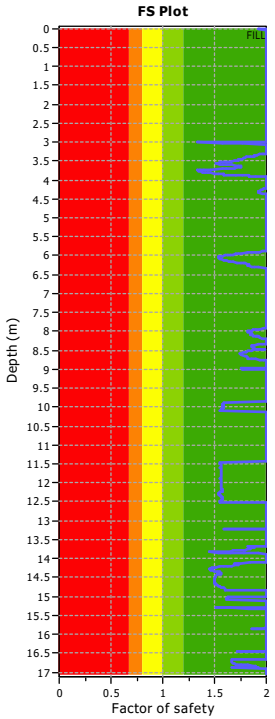
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.30 m	Limit depth:	N/A

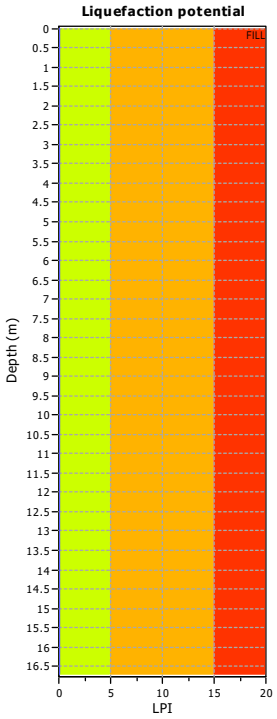
SBT legend

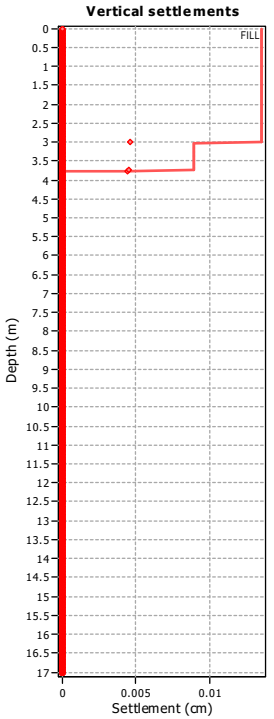
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

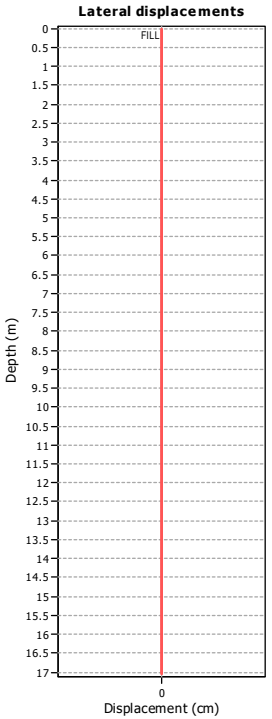
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.30 m	Limit depth:	N/A

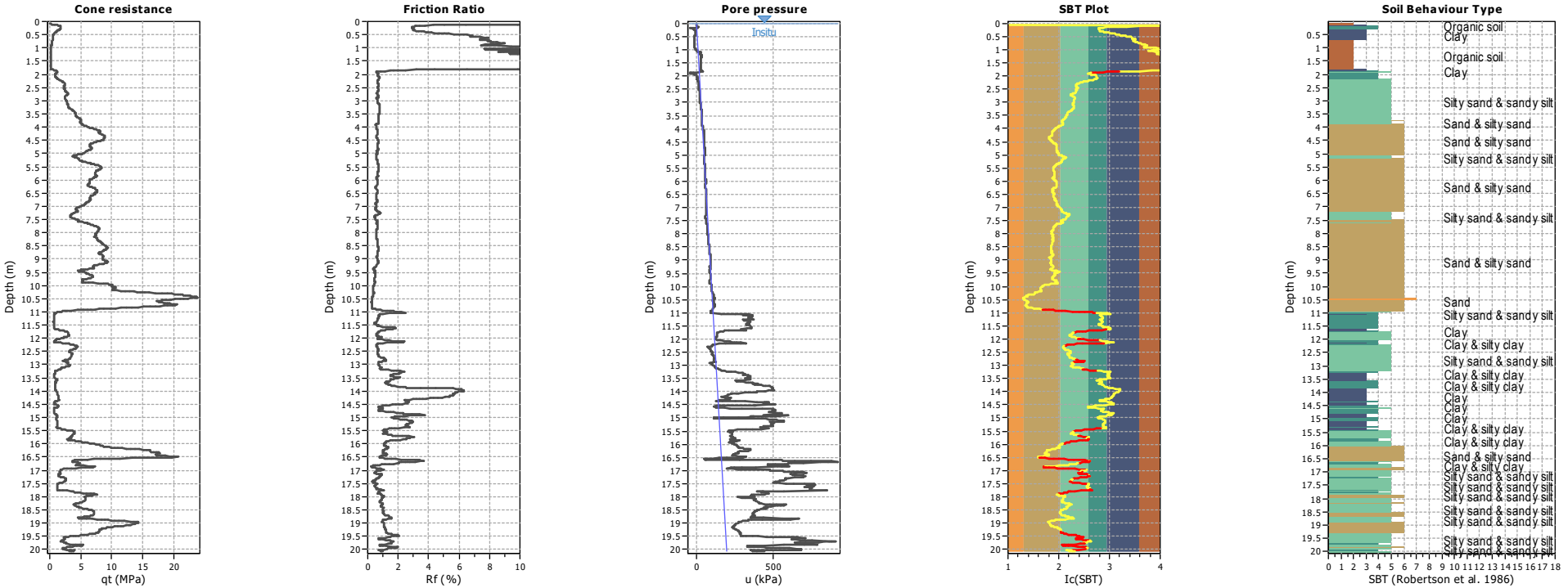
F.S. color scheme

- 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



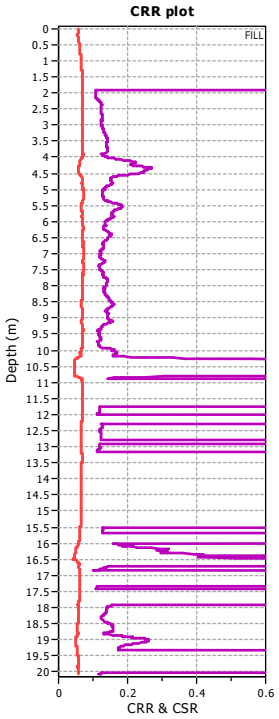
Input parameters and analysis data

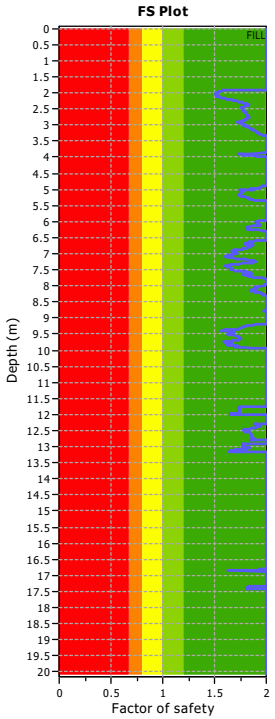
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

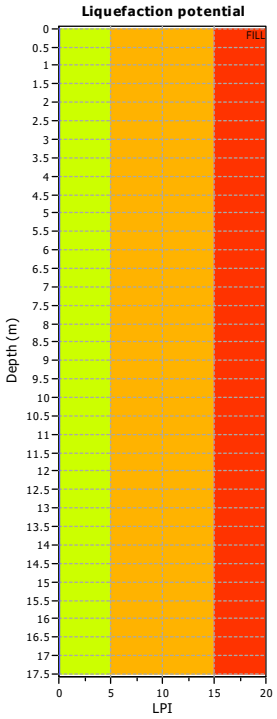
SBT legend

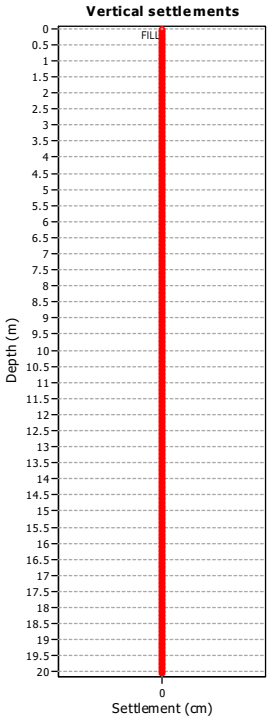
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

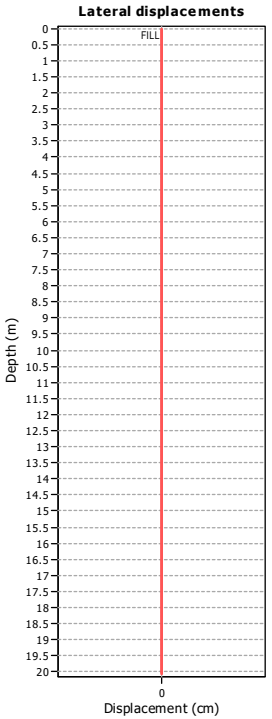
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

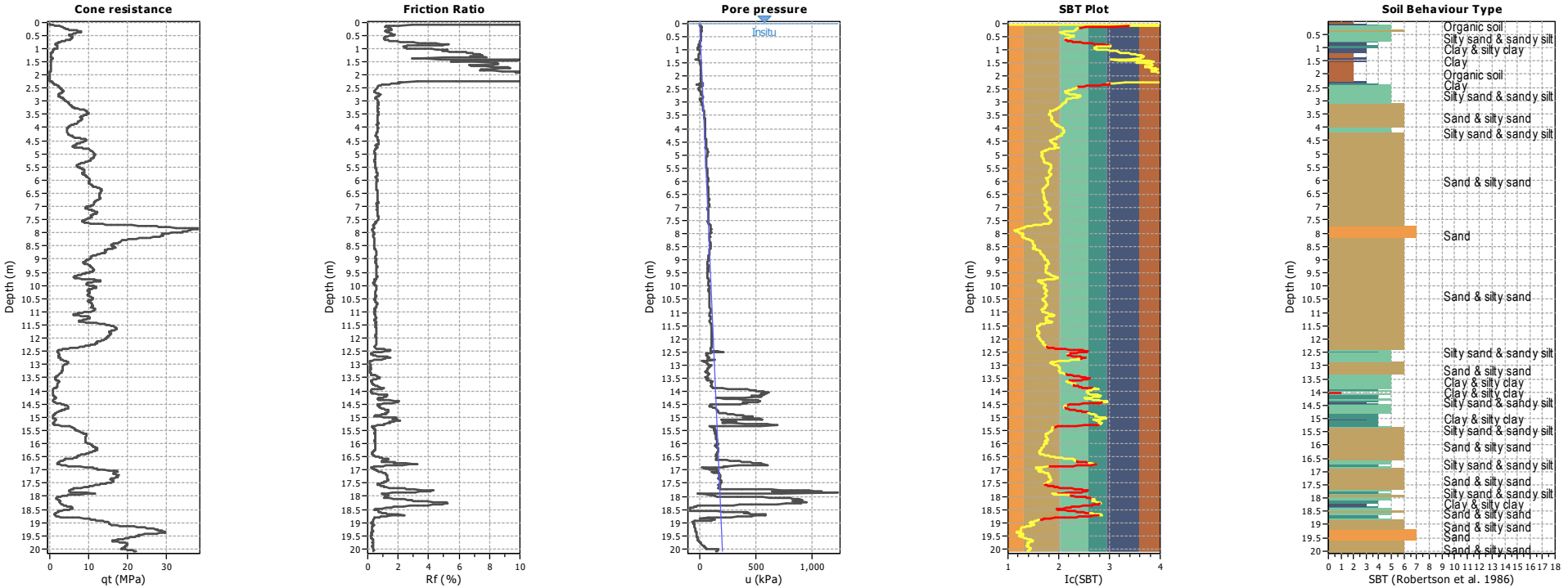
F.S. color scheme

- 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



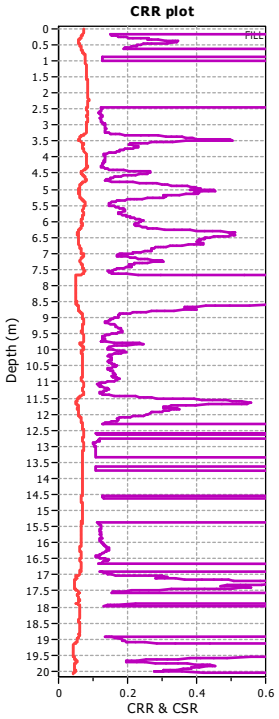
Input parameters and analysis data

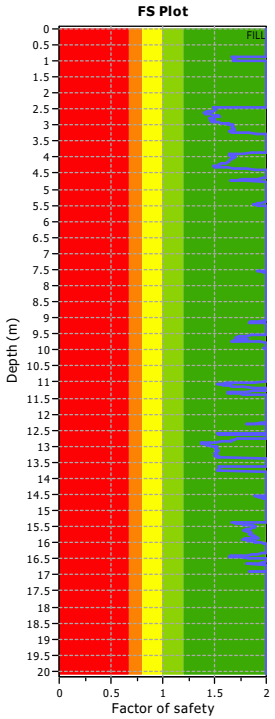
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	0.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.50 m	Limit depth:	N/A

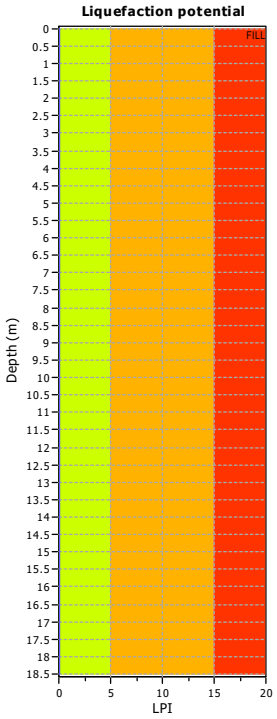
SBT legend

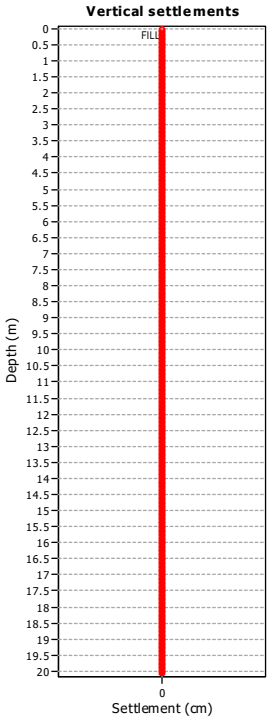
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

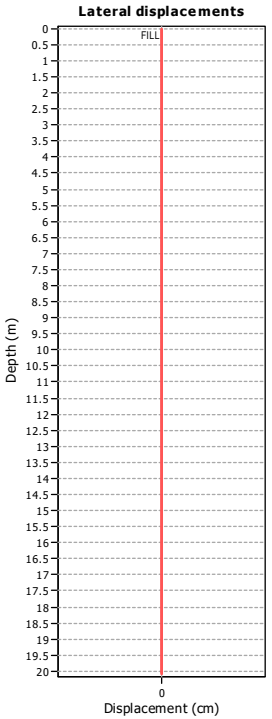
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	0.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.50 m	Limit depth:	N/A

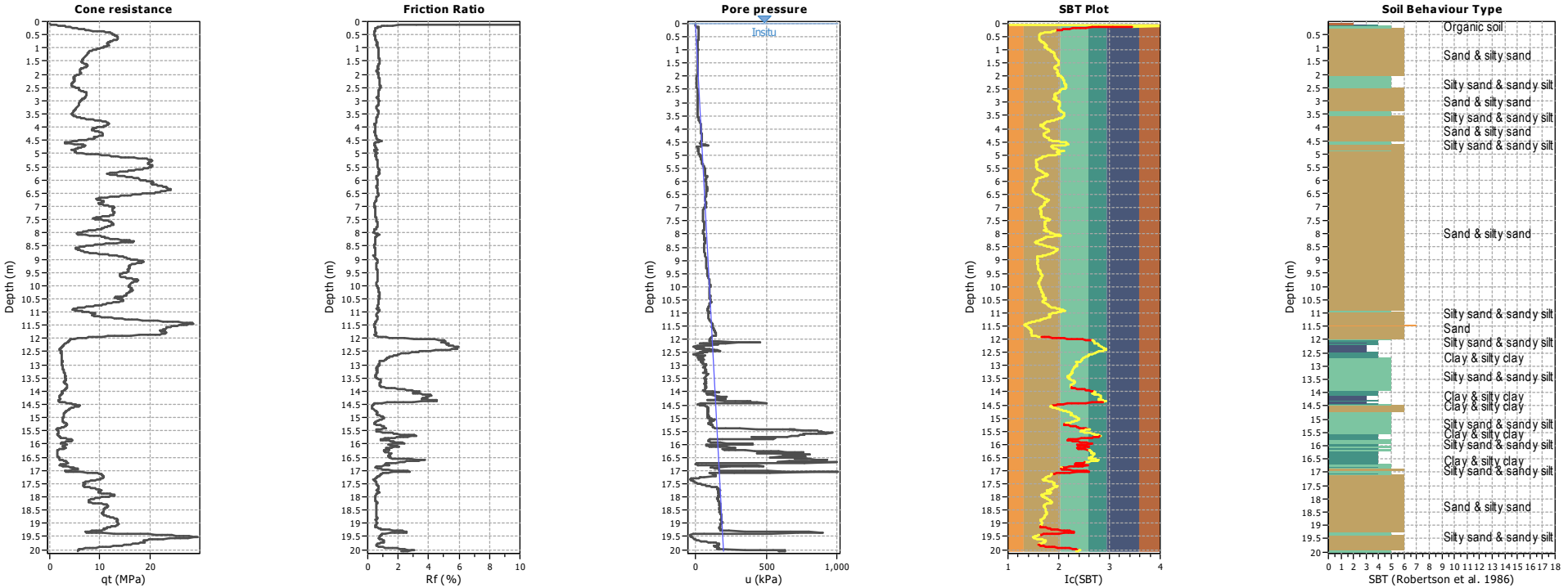
F.S. color scheme

- 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



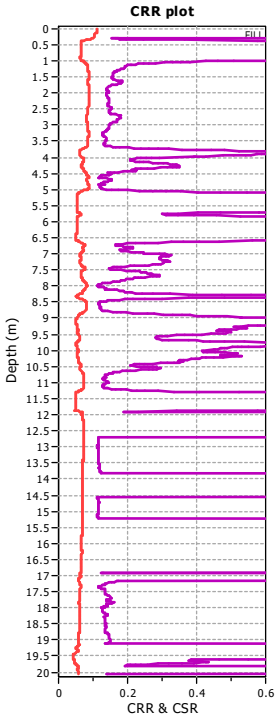
Input parameters and analysis data

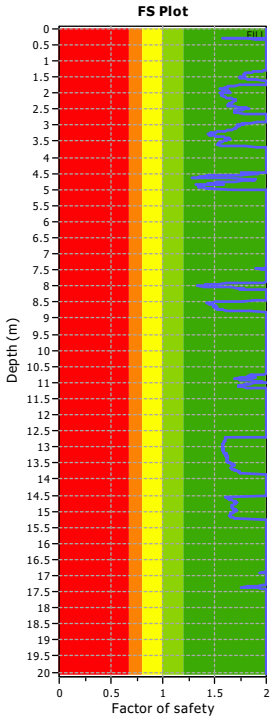
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	0.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.00 m	Limit depth:	N/A

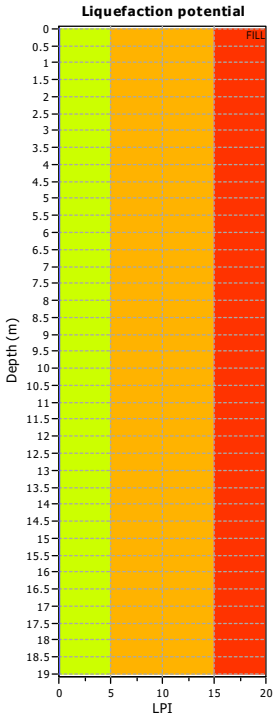
SBT legend

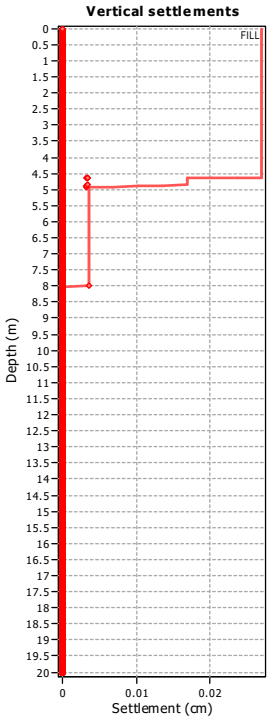
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

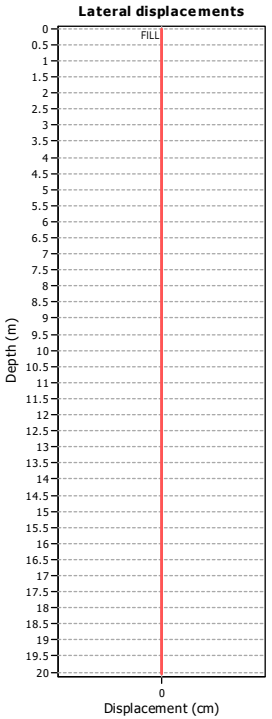
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	0.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.00 m	Limit depth:	N/A

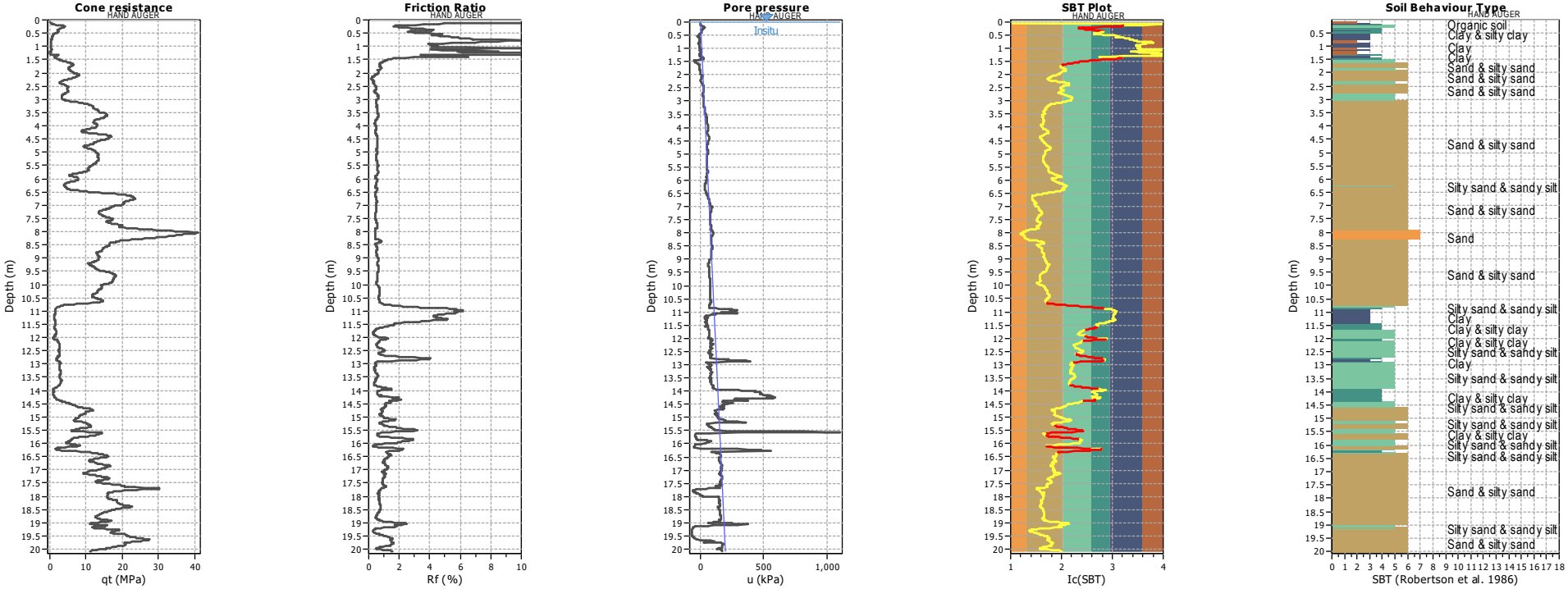
F.S. color scheme

- 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



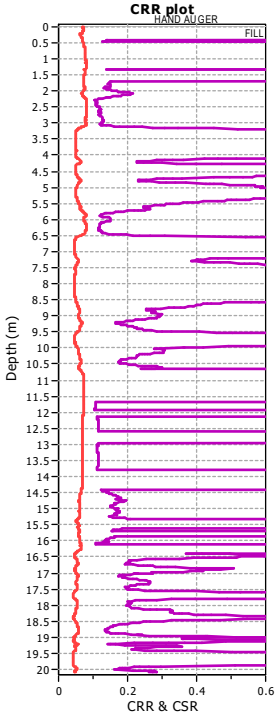
Input parameters and analysis data

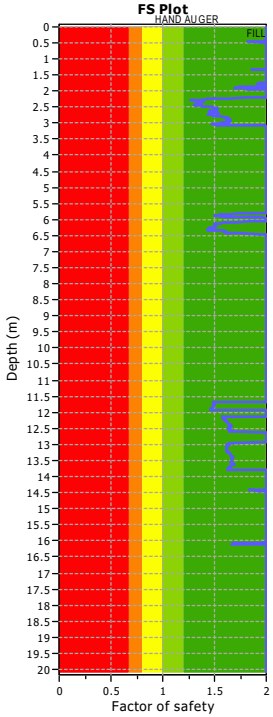
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	0.60 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.60 m	Limit depth:	N/A

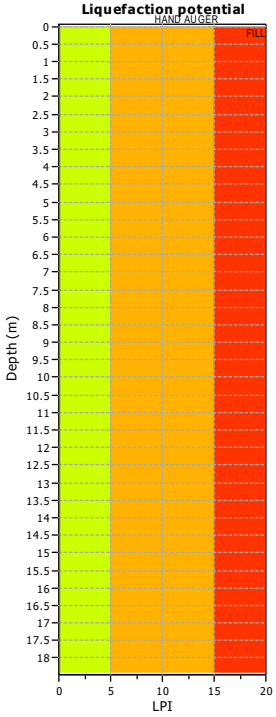
SBT legend

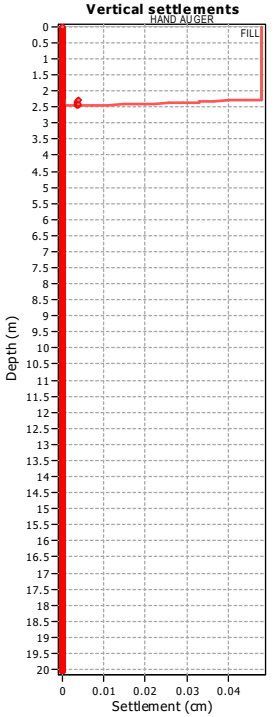
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

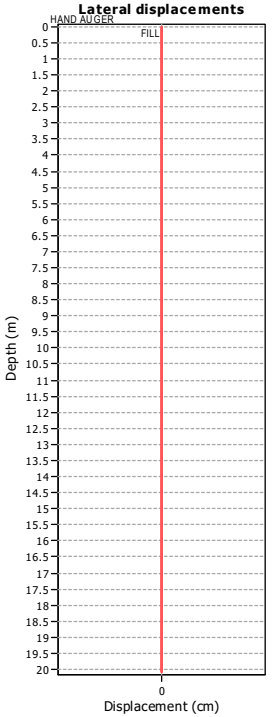
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	0.60 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.60 m	Limit depth:	N/A

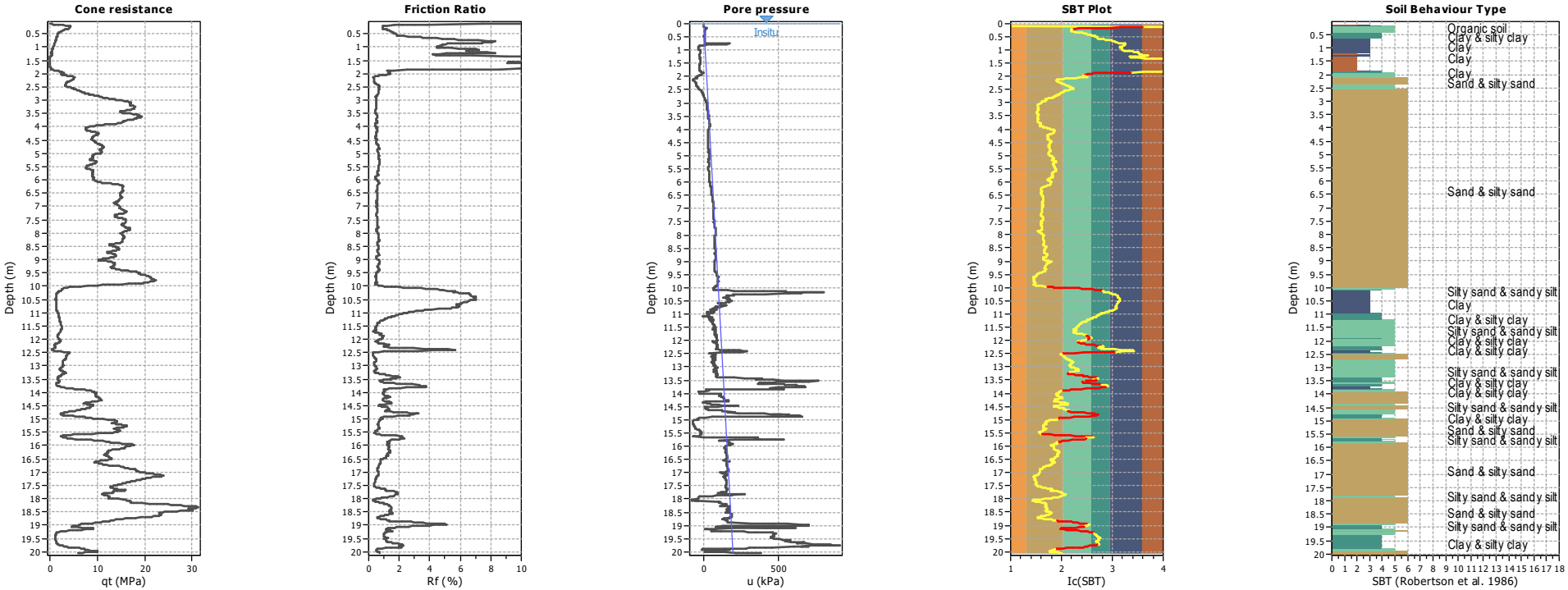
F.S. color scheme

- 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



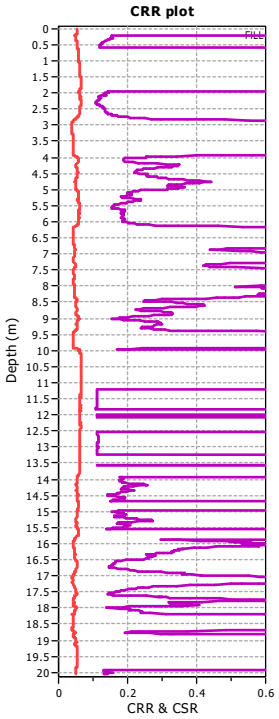
Input parameters and analysis data

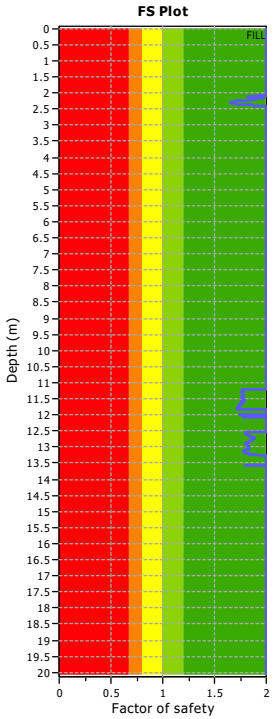
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

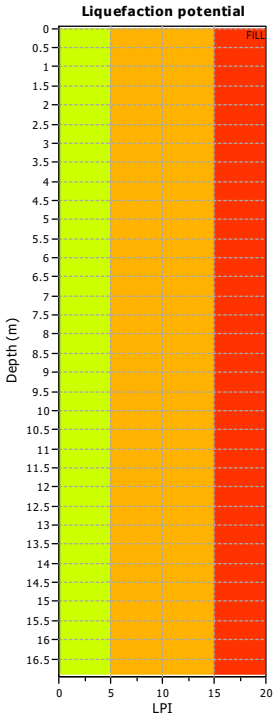
SBT legend

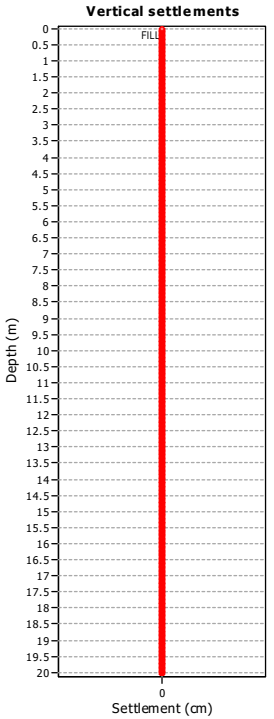
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

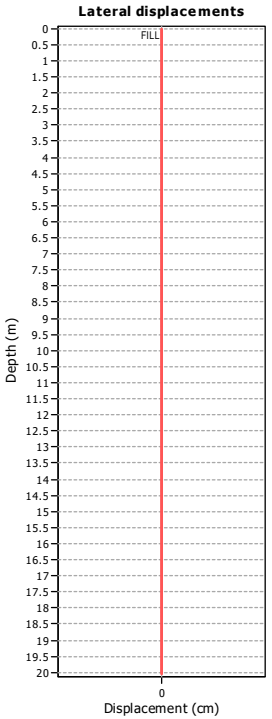
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

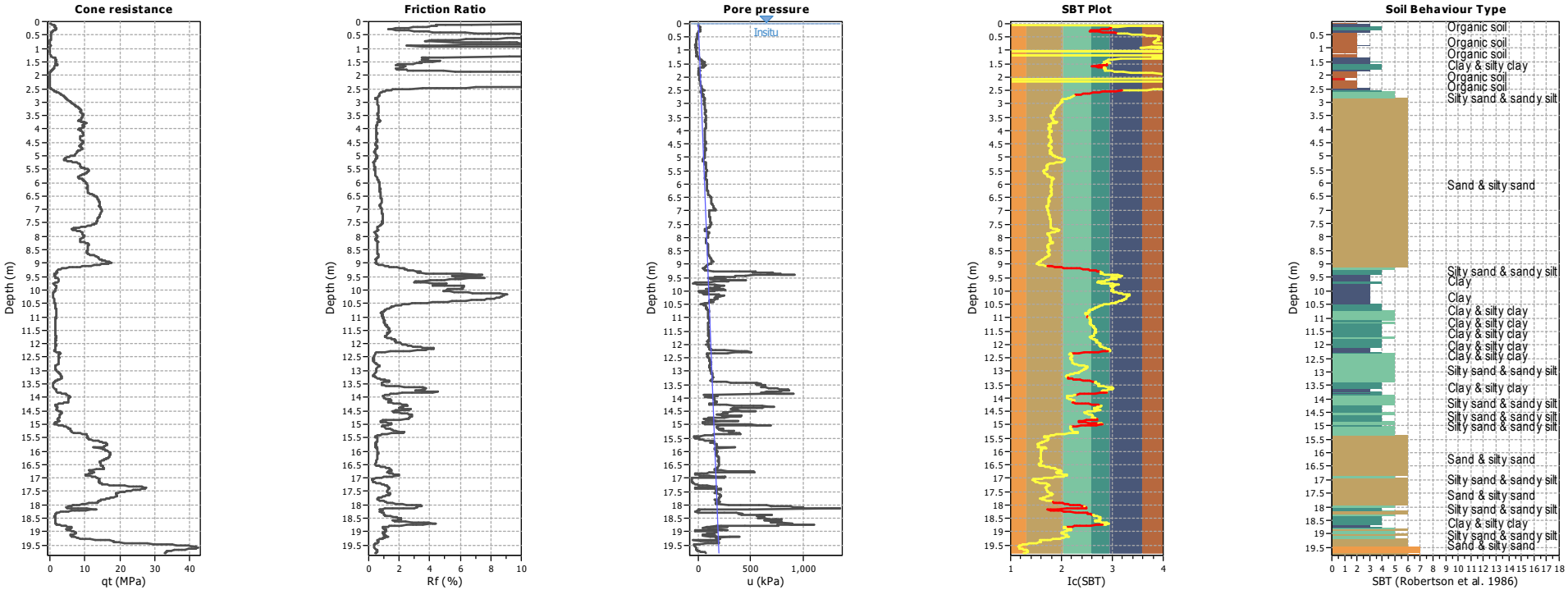
F.S. color scheme

- 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



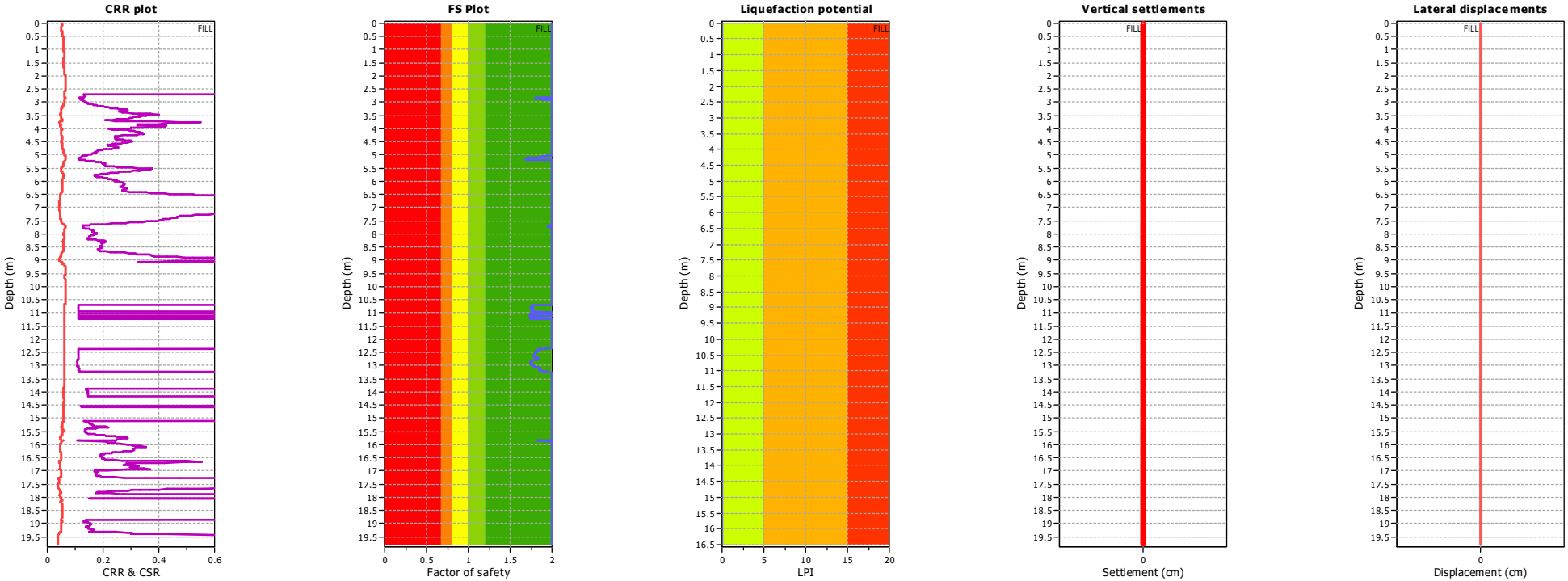
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.50 m	Limit depth:	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)	Depth to GWT (erthq.):	2.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.50 m	Limit depth:	N/A

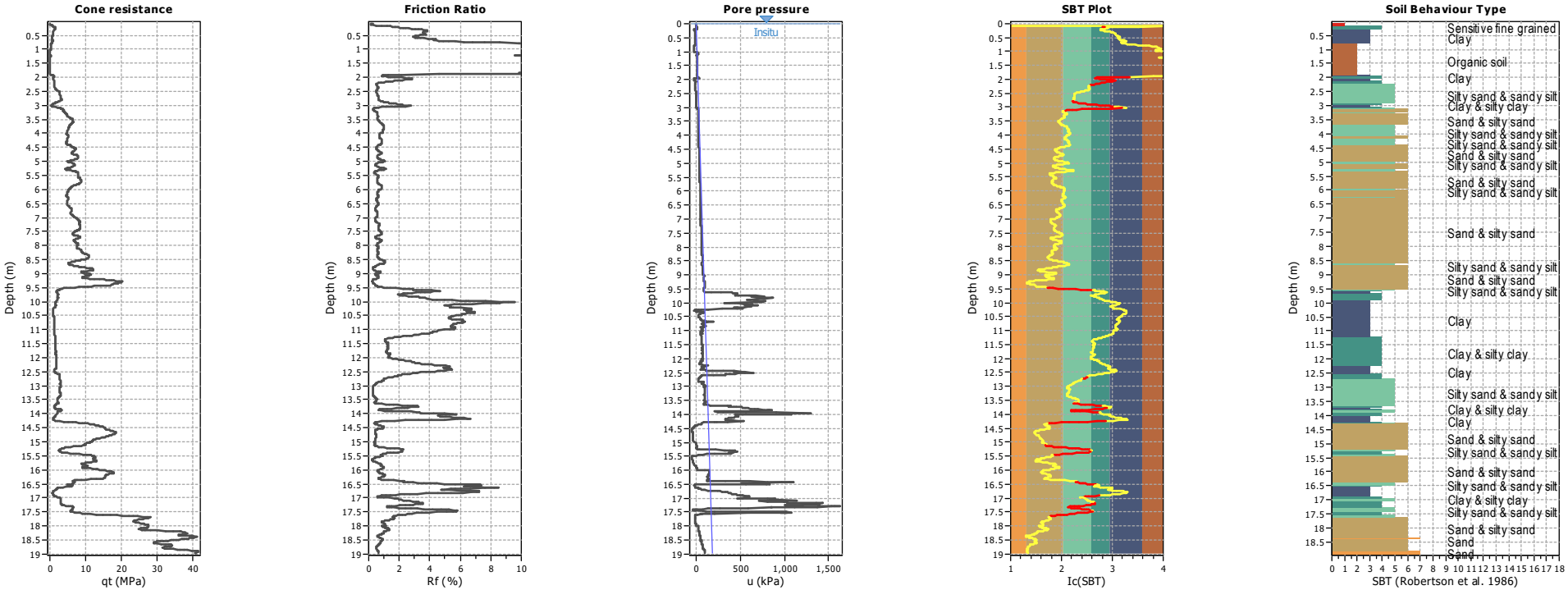
F.S. color scheme

- 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



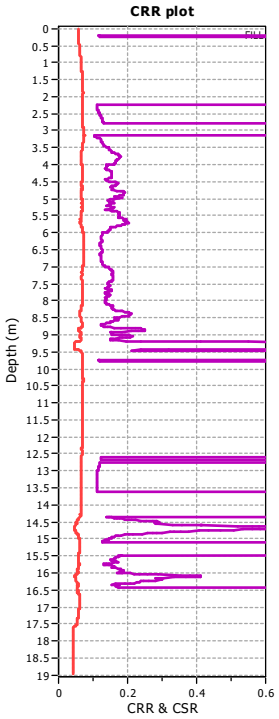
Input parameters and analysis data

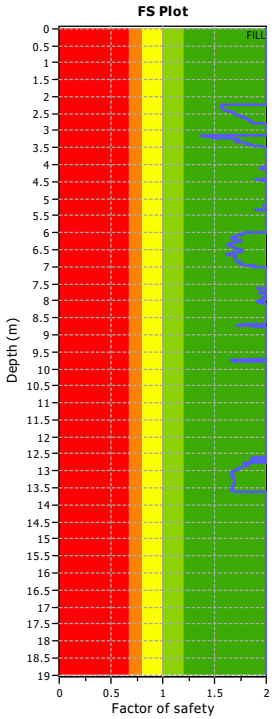
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

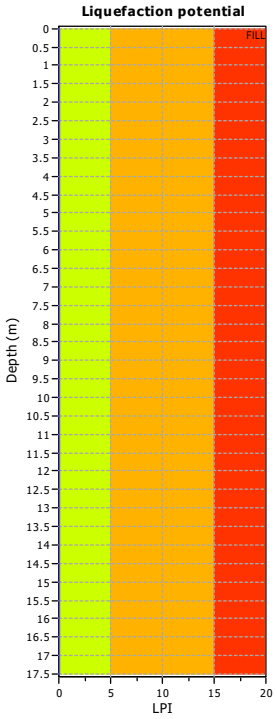
SBT legend

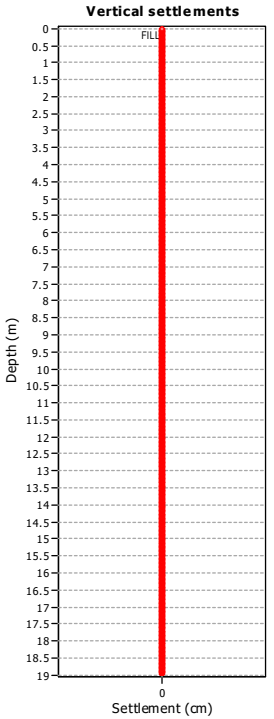
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

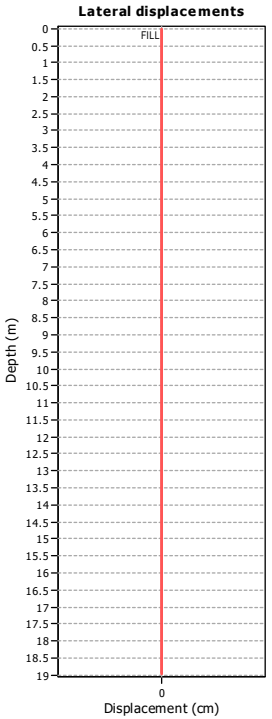
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

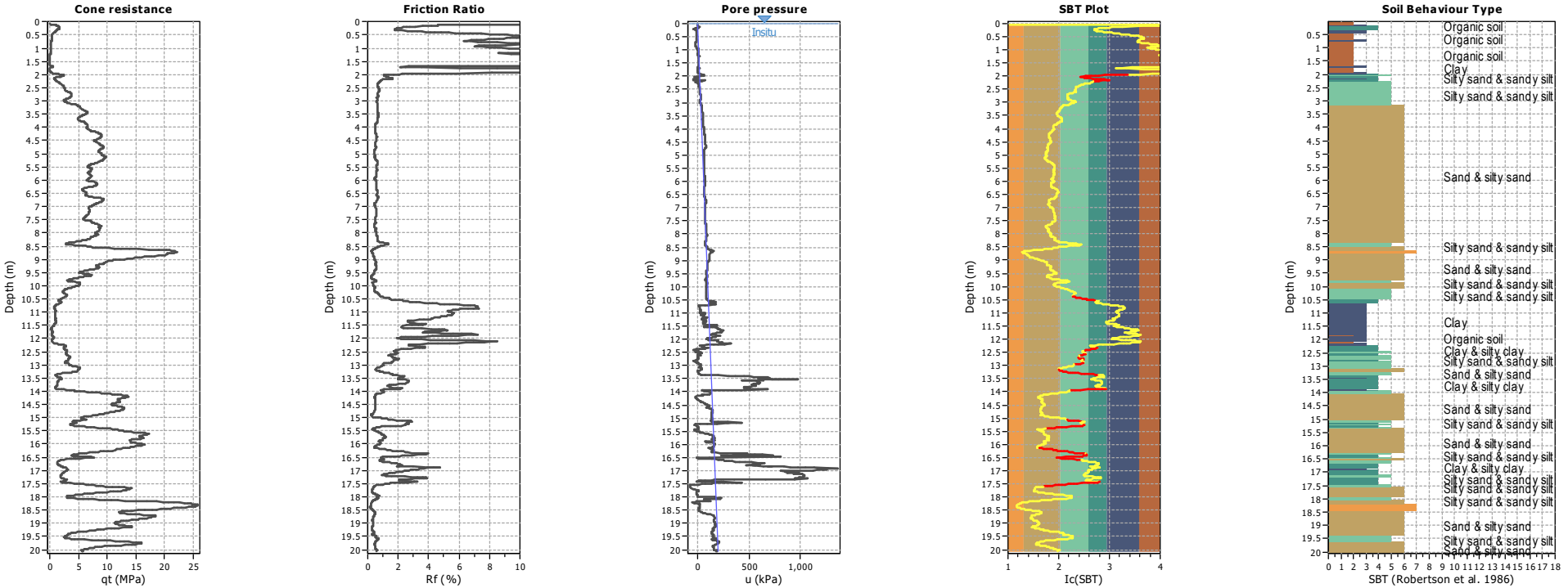
F.S. color scheme

- 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



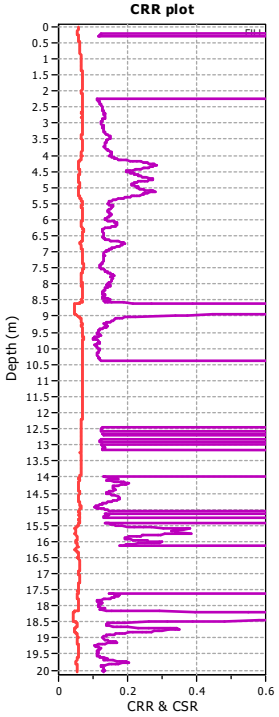
Input parameters and analysis data

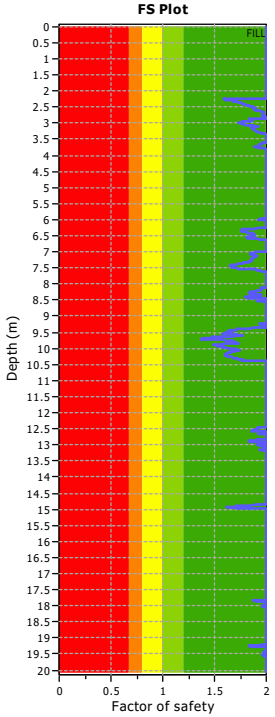
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.60 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.60 m	Limit depth:	N/A

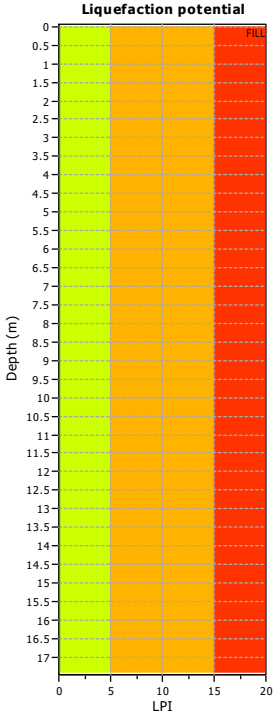
SBT legend

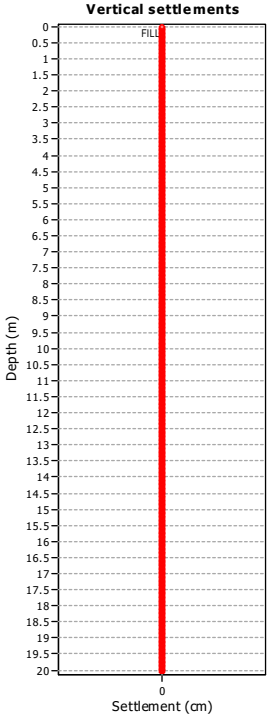
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

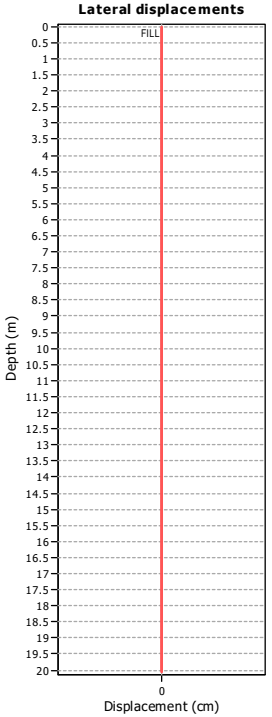
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.60 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.60 m	Limit depth:	N/A

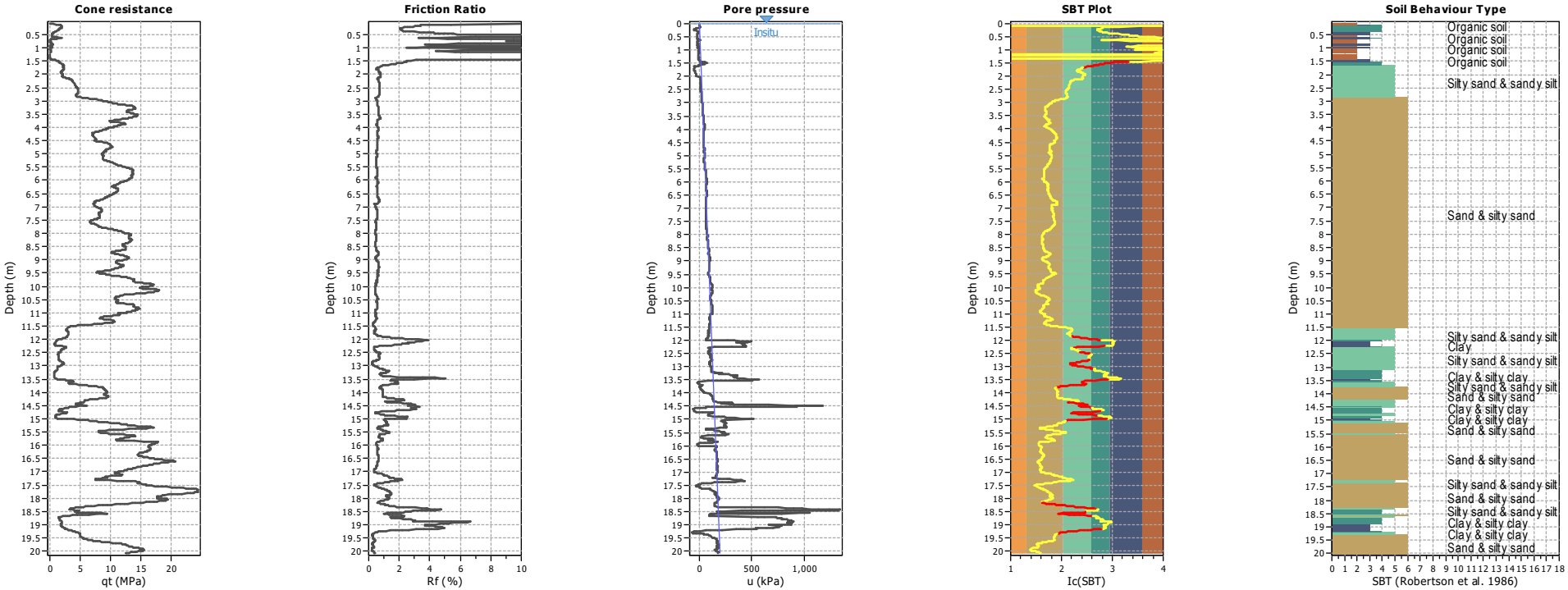
F.S. color scheme

- 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



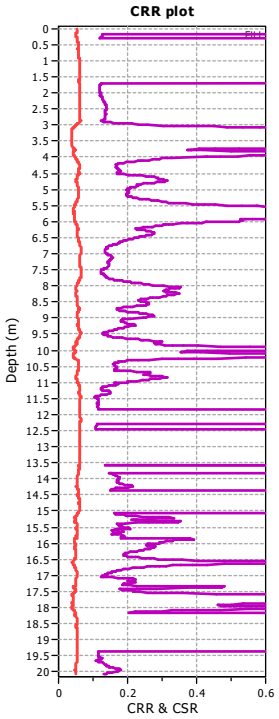
Input parameters and analysis data

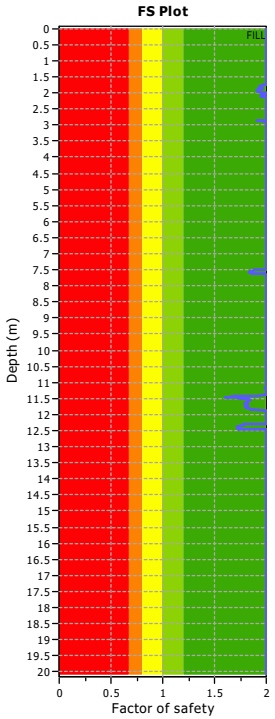
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

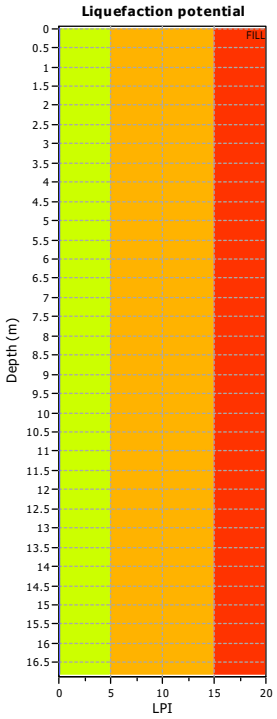
SBT legend

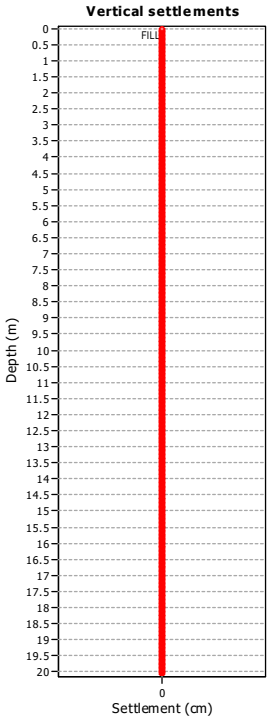
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

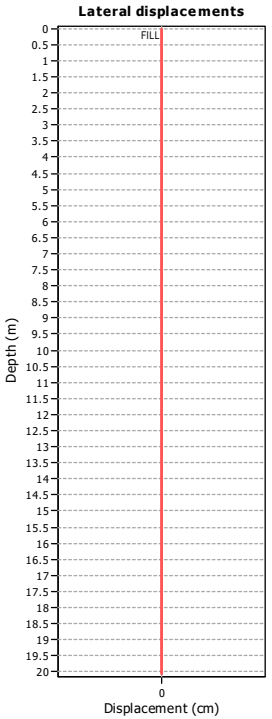
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

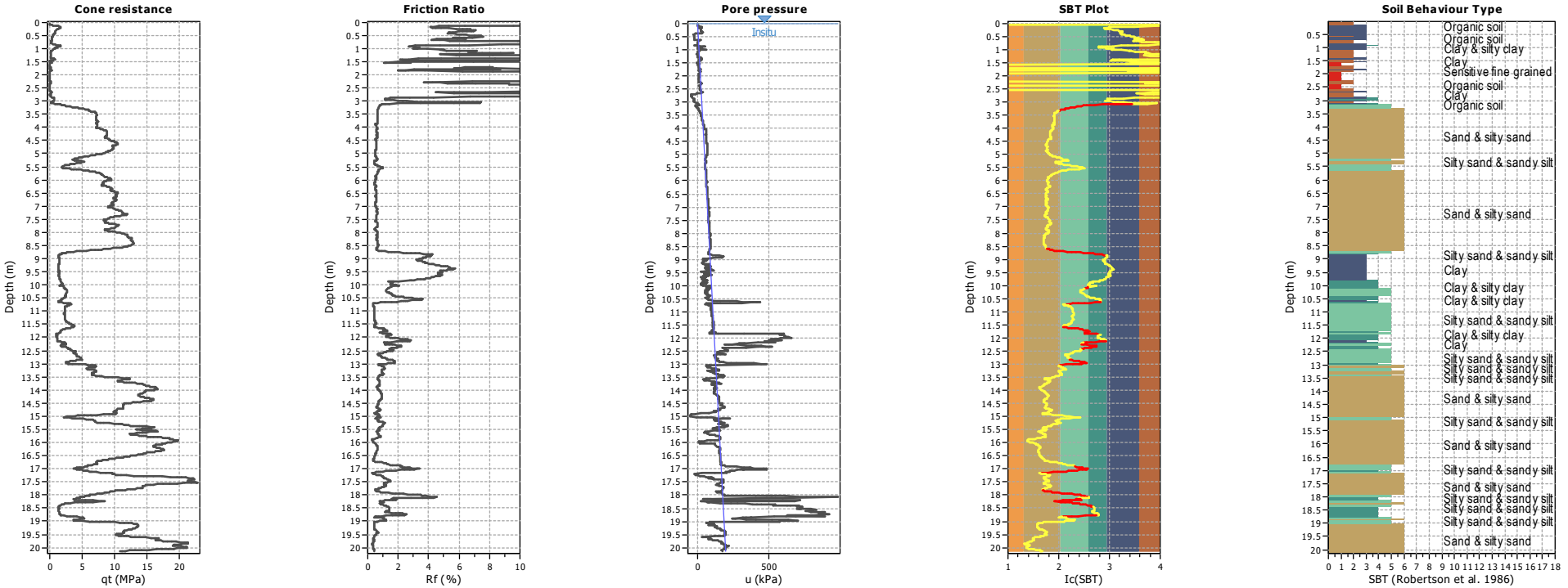
F.S. color scheme

- 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



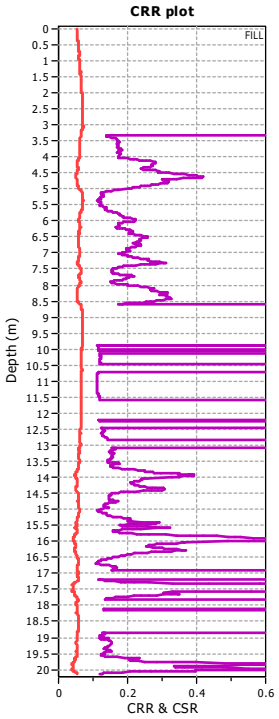
Input parameters and analysis data

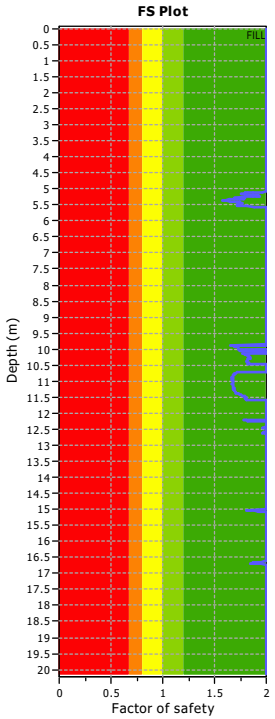
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

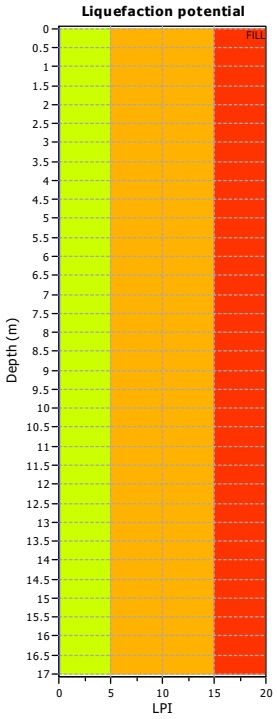
SBT legend

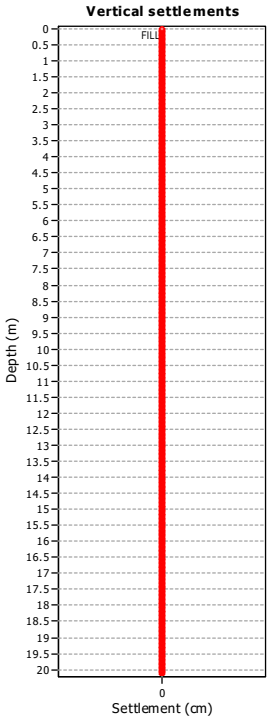
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

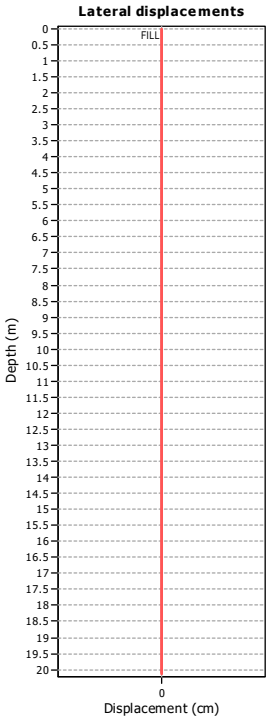
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

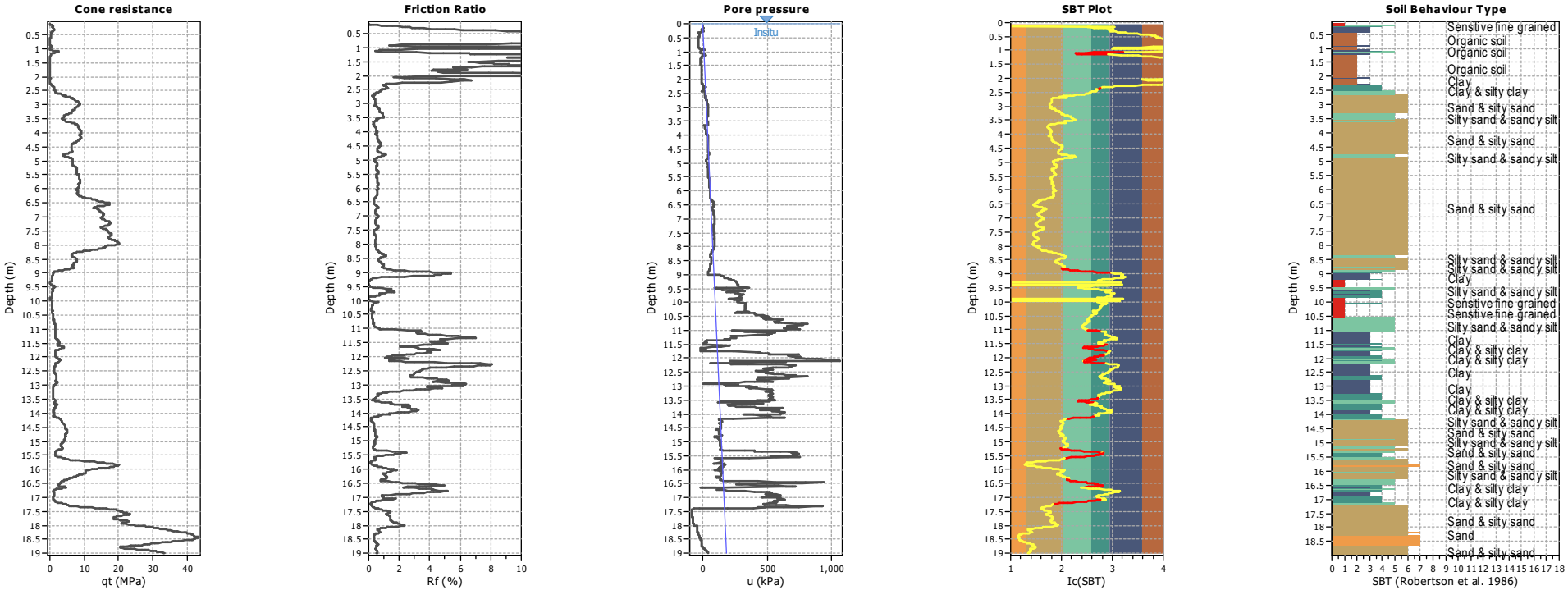
F.S. color scheme

- 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



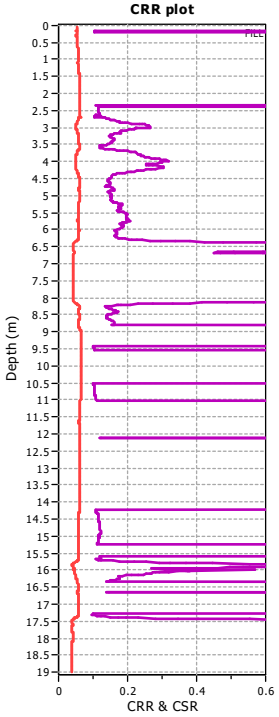
Input parameters and analysis data

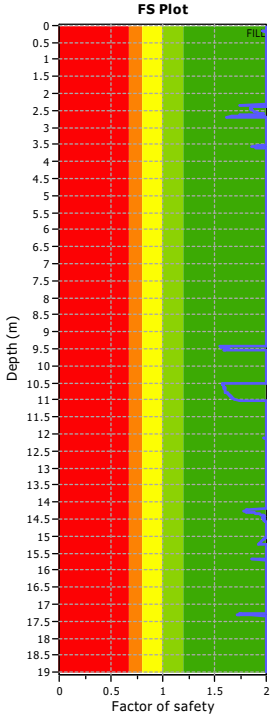
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.80 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.80 m	Limit depth:	N/A

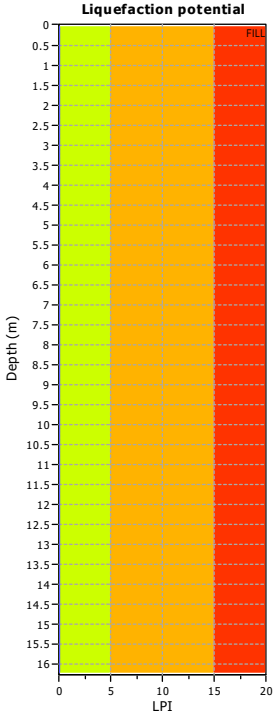
SBT legend

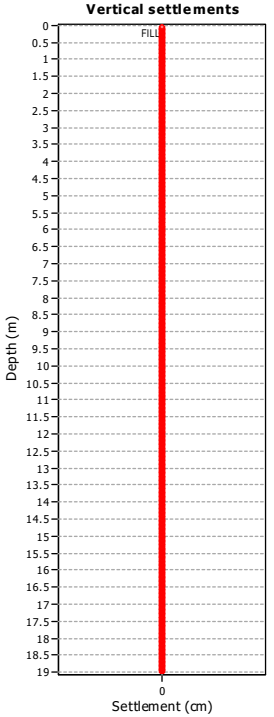
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

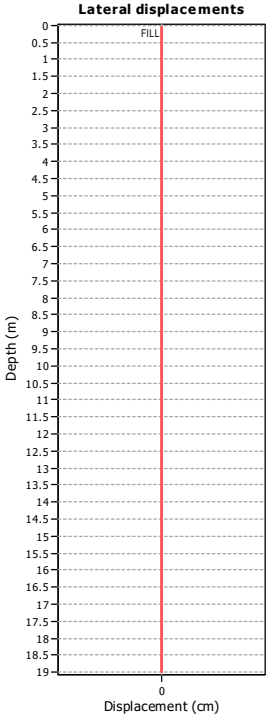
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.80 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.80 m	Limit depth:	N/A

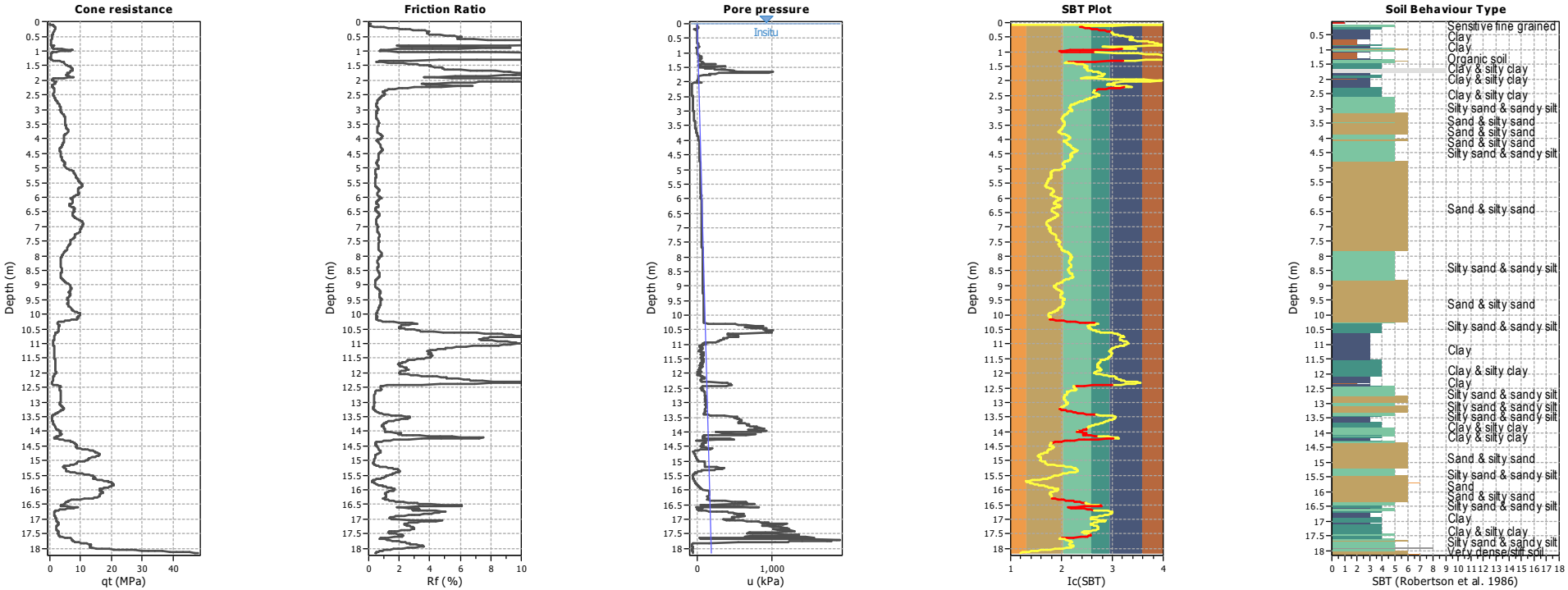
F.S. color scheme

- 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



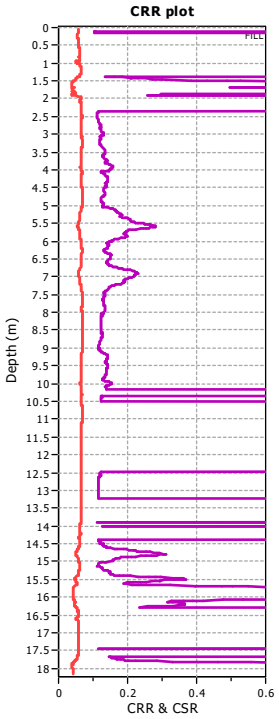
Input parameters and analysis data

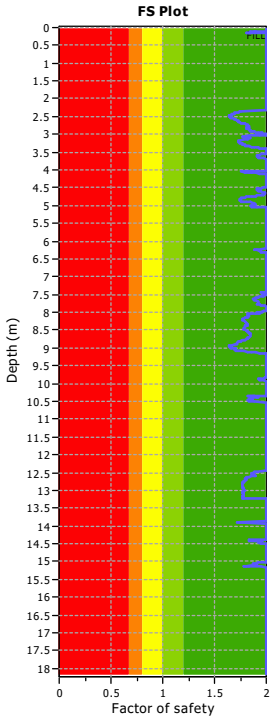
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.70 m	Limit depth:	N/A

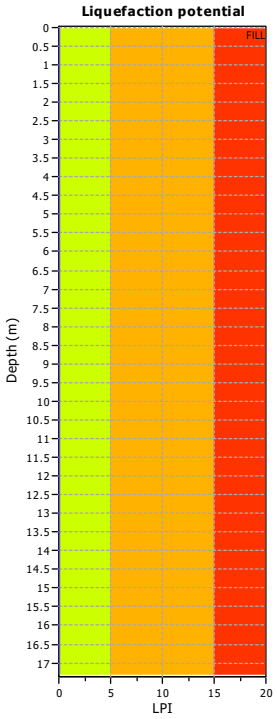
SBT legend

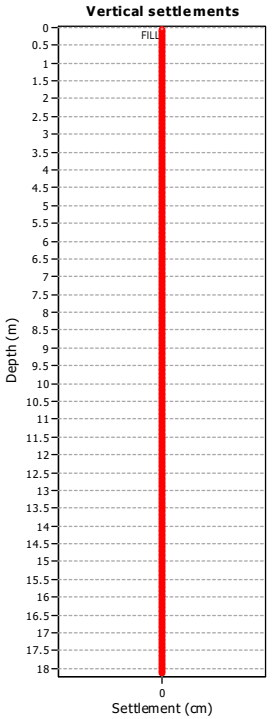
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

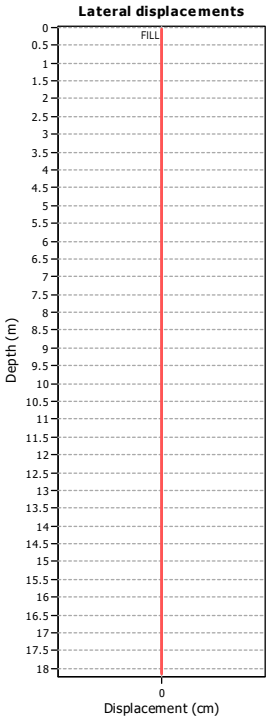
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.70 m	Limit depth:	N/A

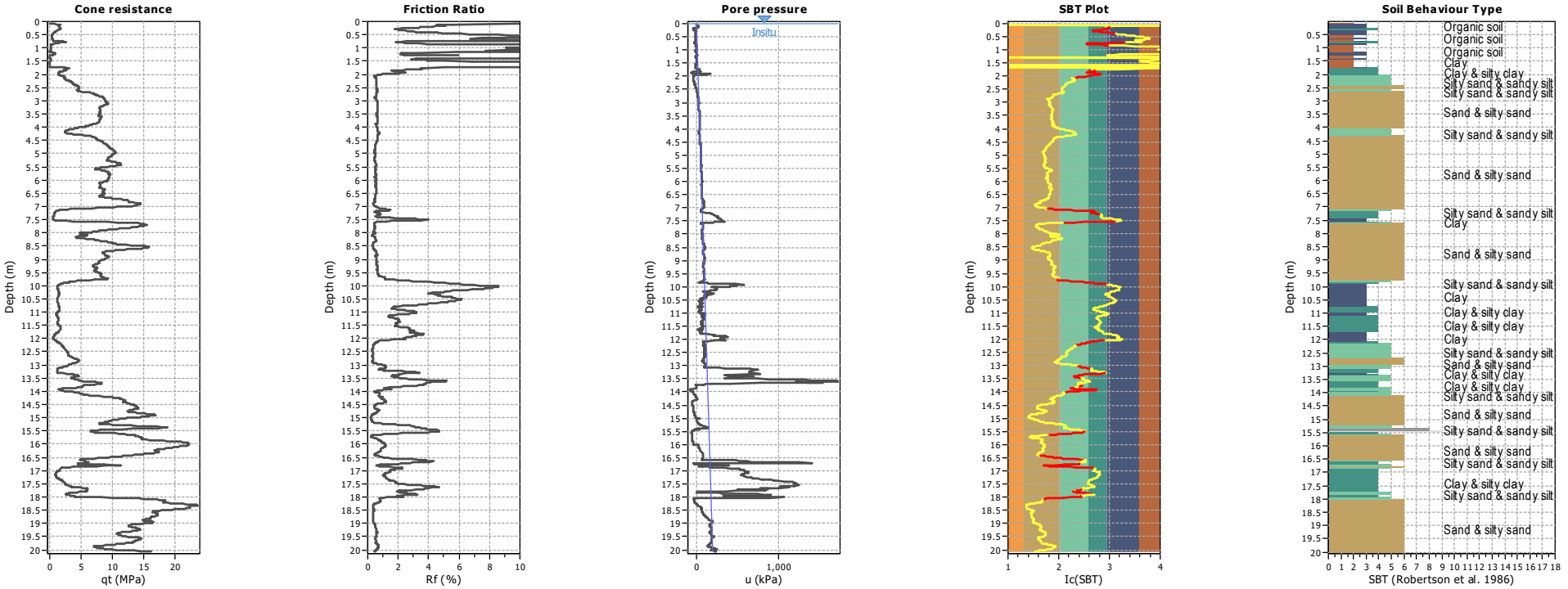
F.S. color scheme

- 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



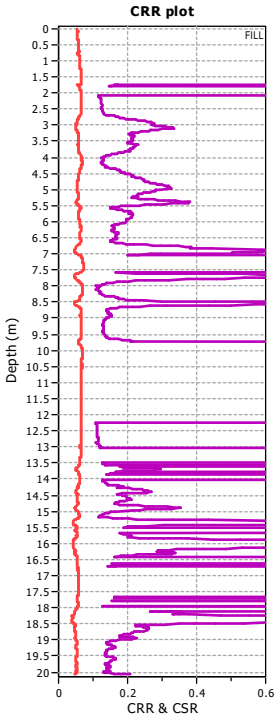
Input parameters and analysis data

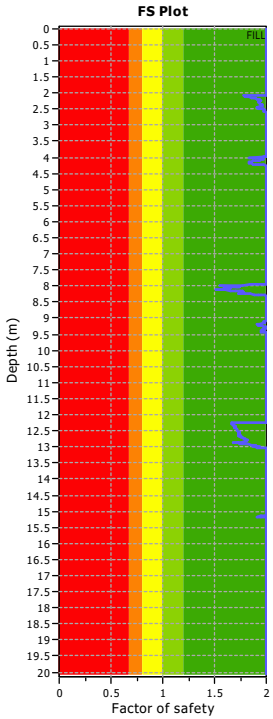
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.90 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.90 m	Limit depth:	N/A

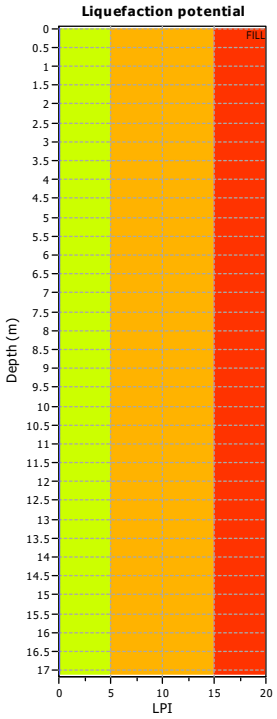
SBT legend

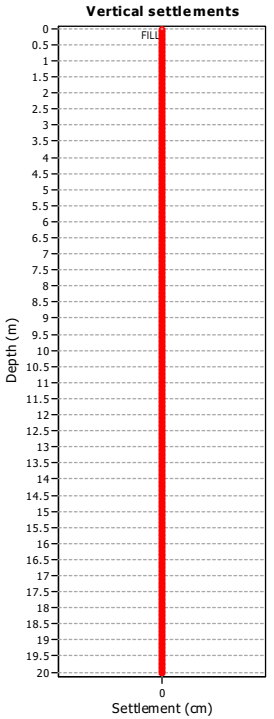
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

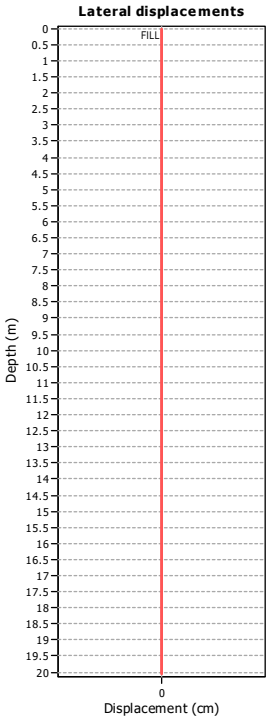
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.90 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.90 m	Limit depth:	N/A

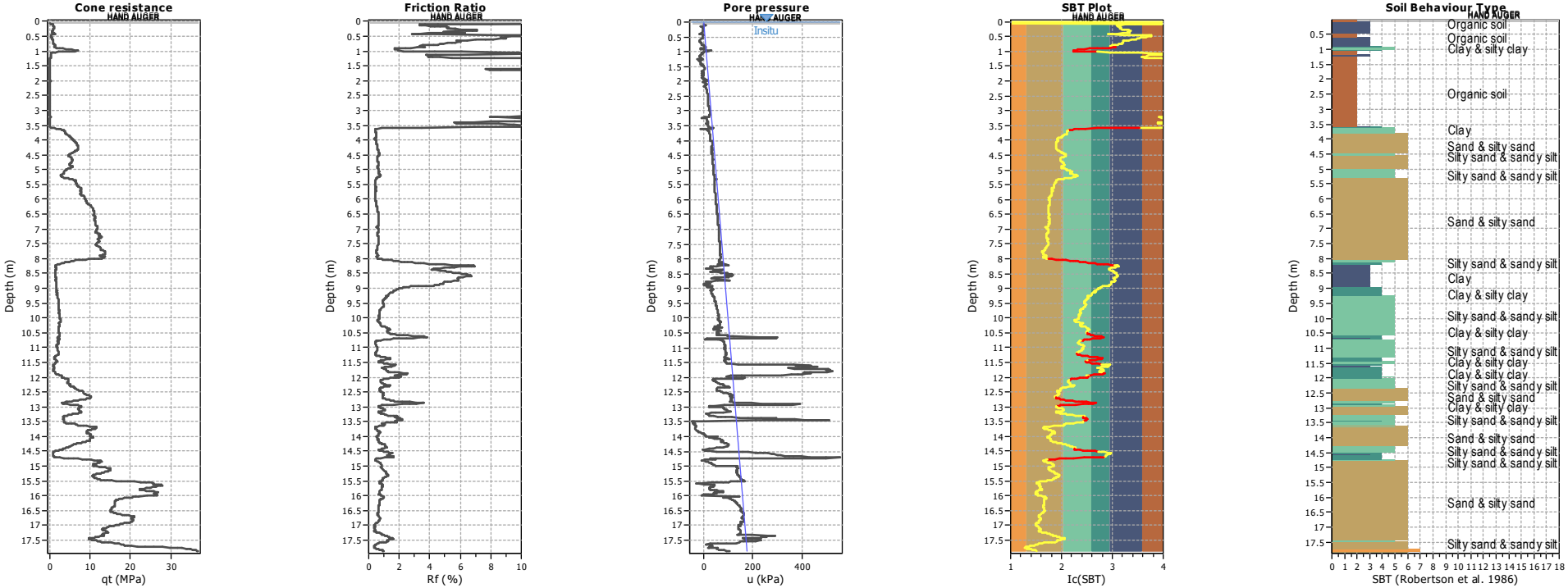
F.S. color scheme

- 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



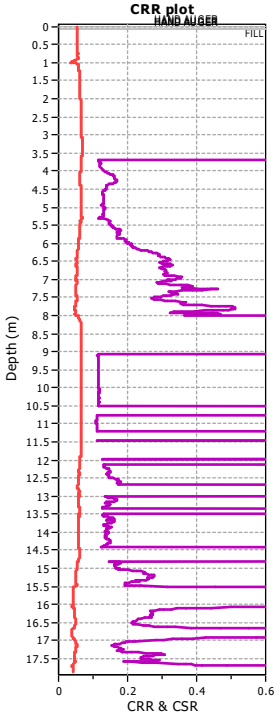
Input parameters and analysis data

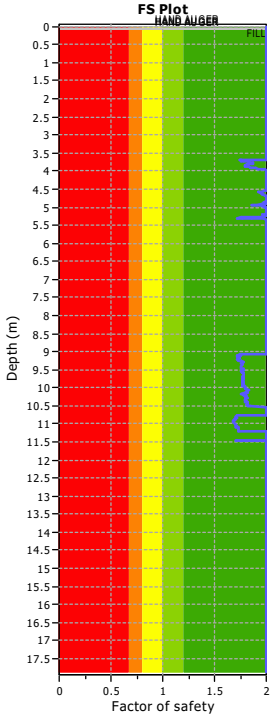
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.50 m	Limit depth:	N/A

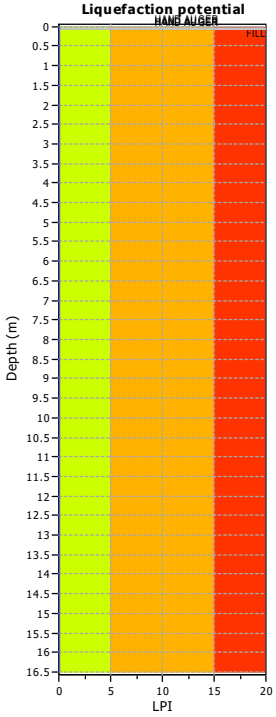
SBT legend

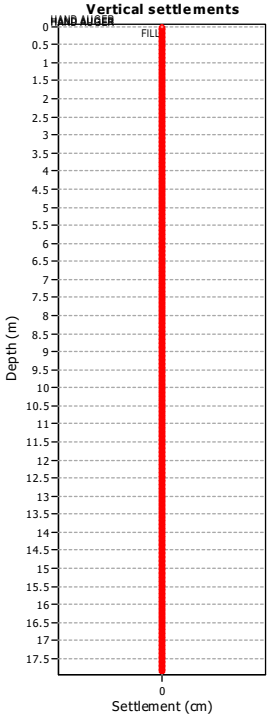
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

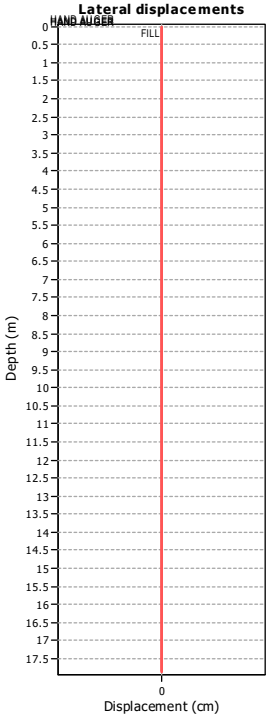
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.50 m	Limit depth:	N/A

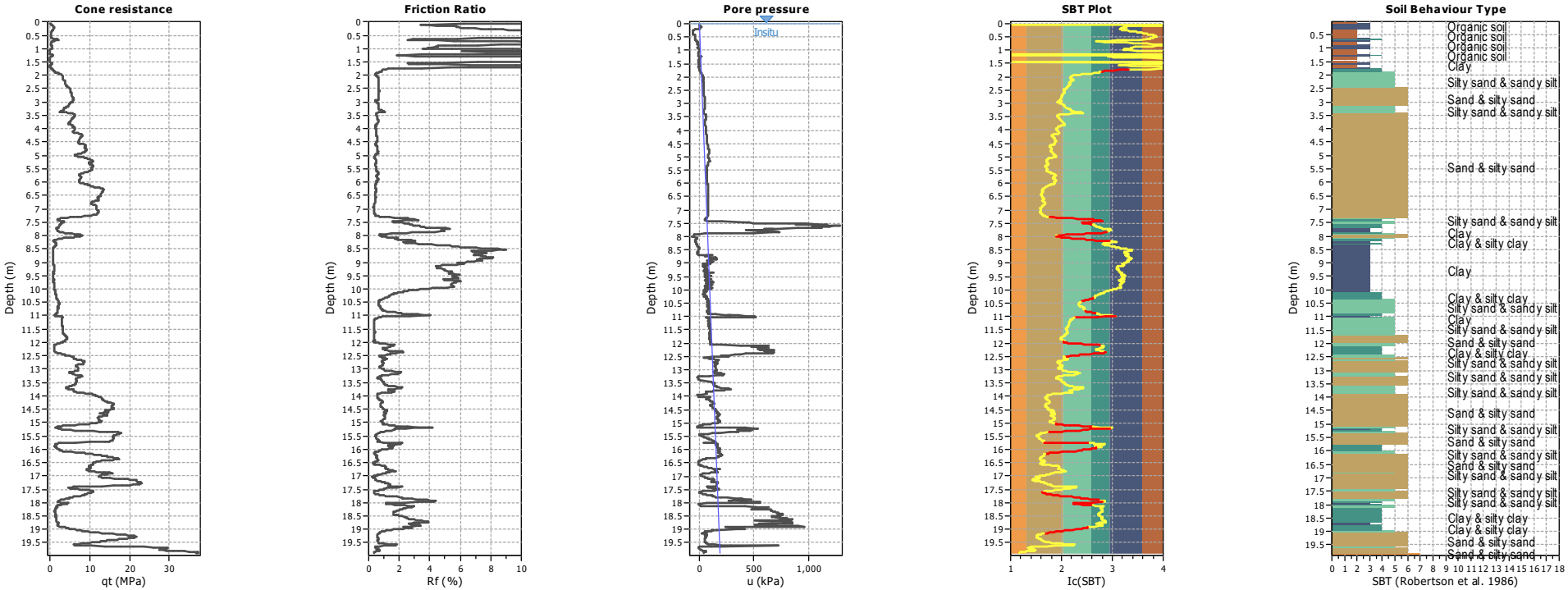
F.S. color scheme

- 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



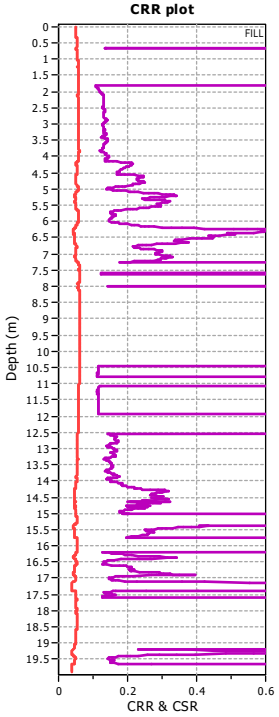
Input parameters and analysis data

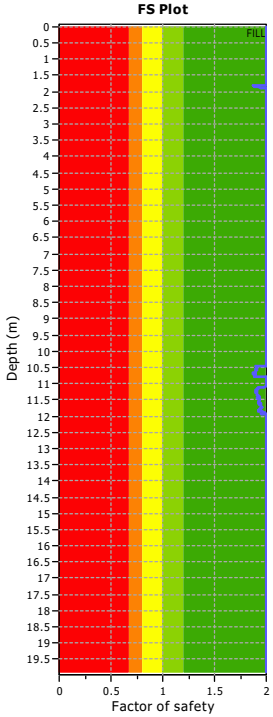
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	3.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	4.30 m	Limit depth:	N/A

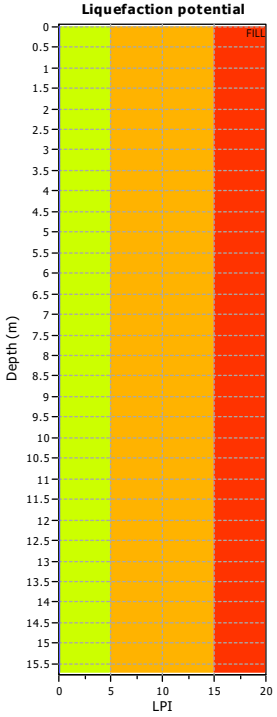
SBT legend

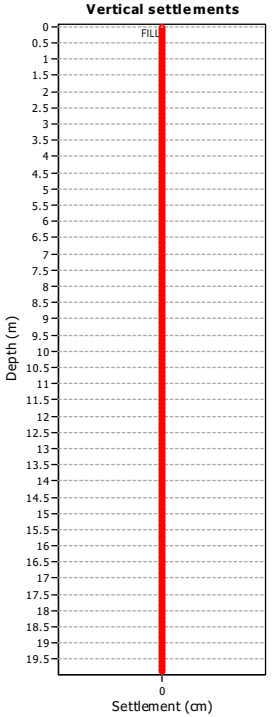
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

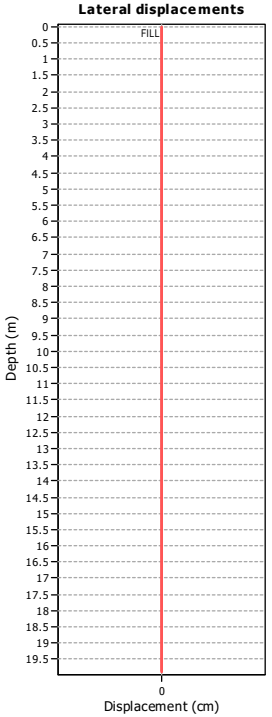
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	3.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	4.30 m	Limit depth:	N/A

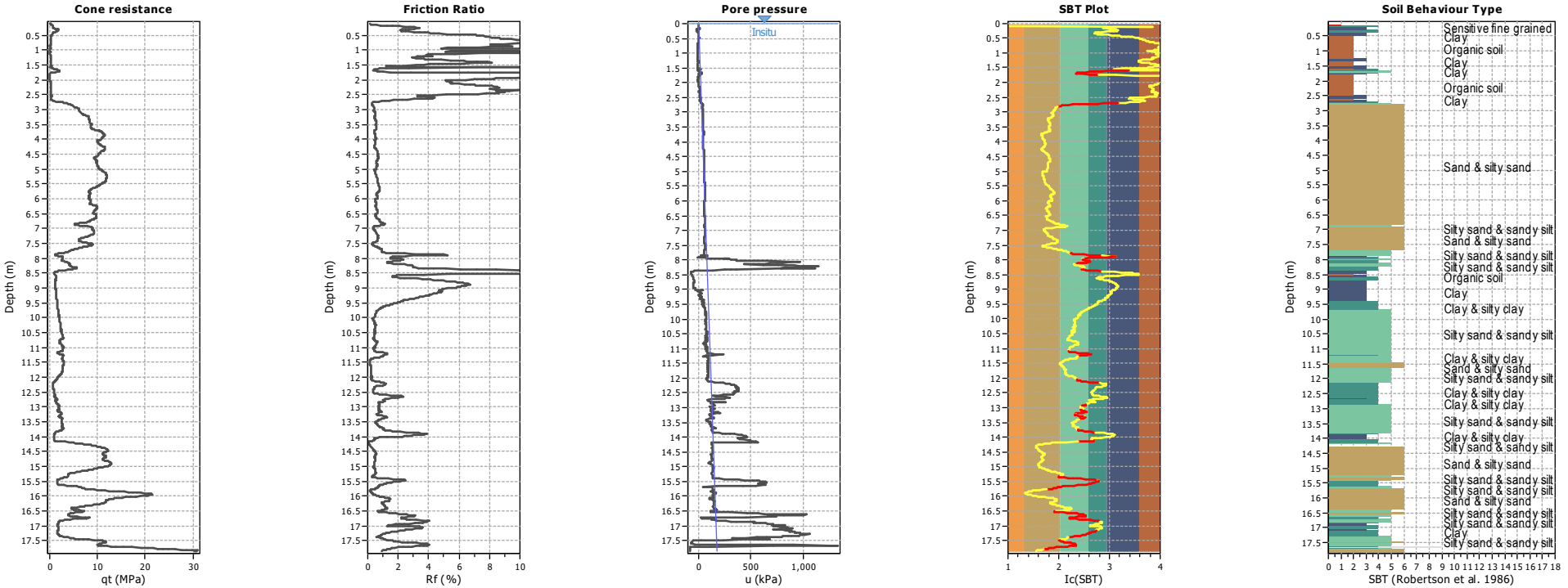
F.S. color scheme

- 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



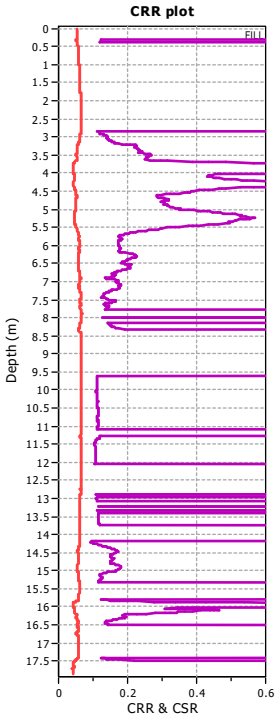
Input parameters and analysis data

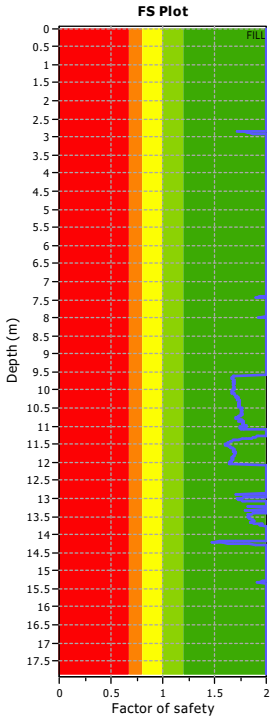
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

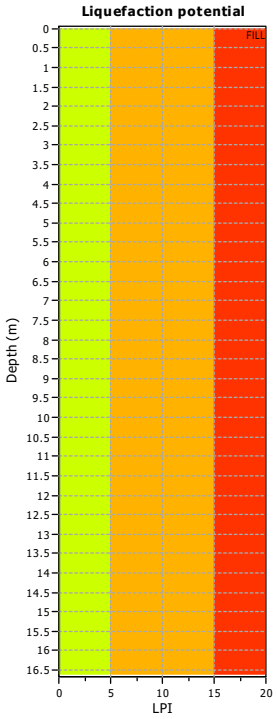
SBT legend

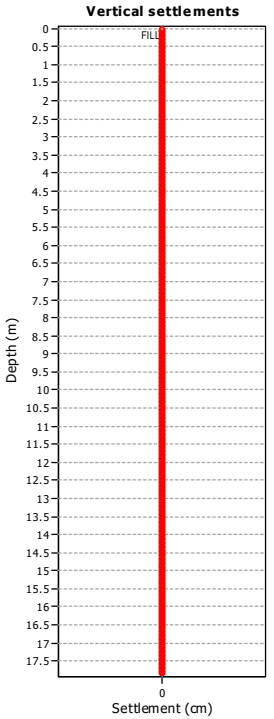
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

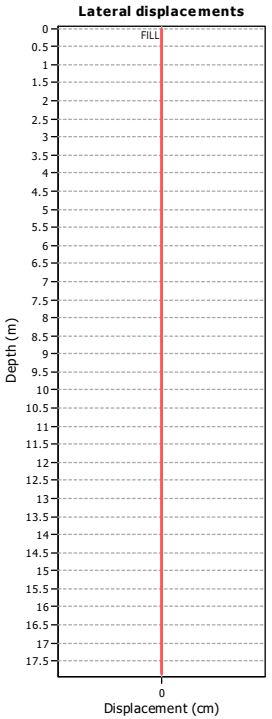
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

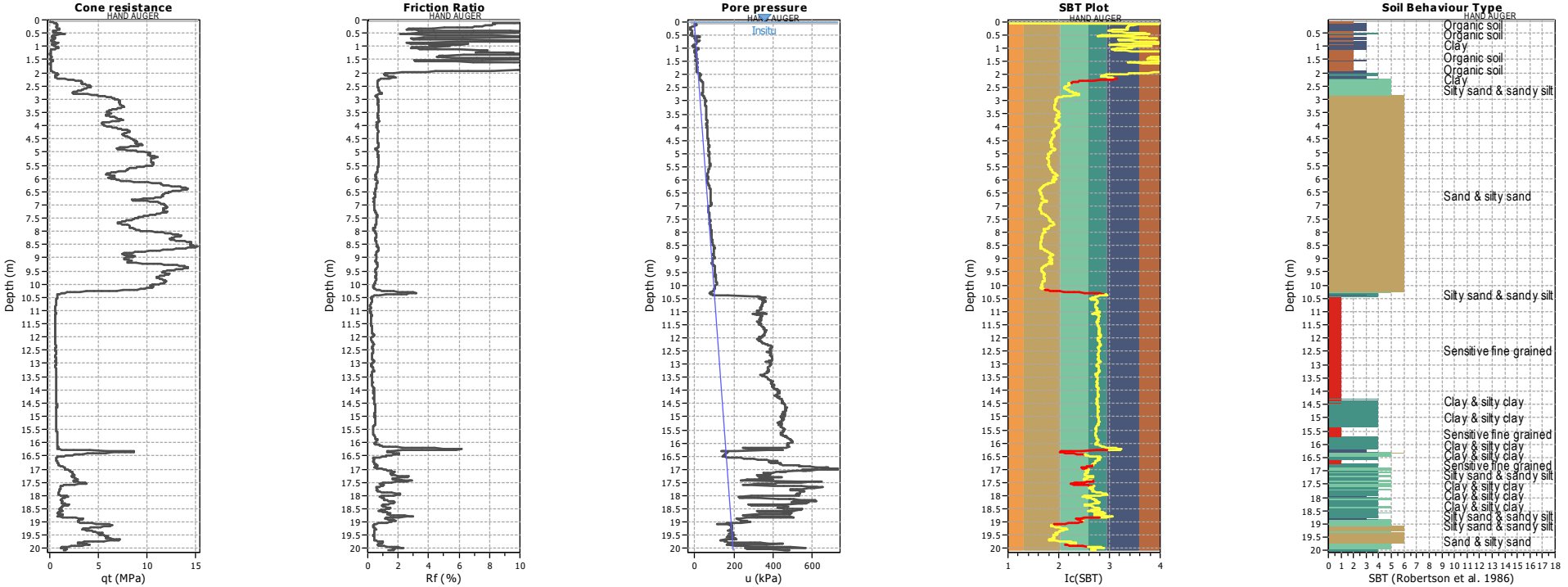
F.S. color scheme

- 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



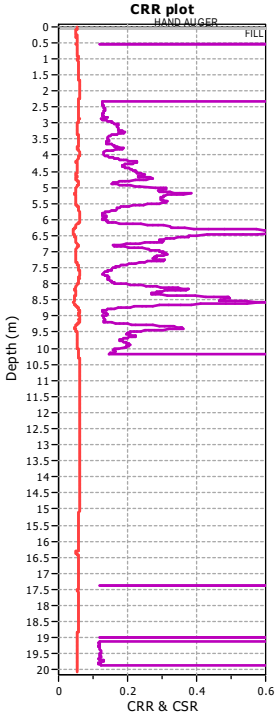
Input parameters and analysis data

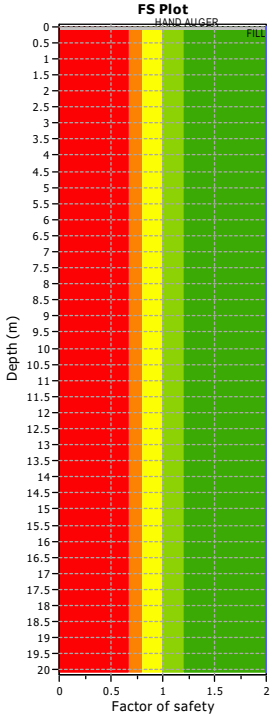
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	3.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	4.00 m	Limit depth:	N/A

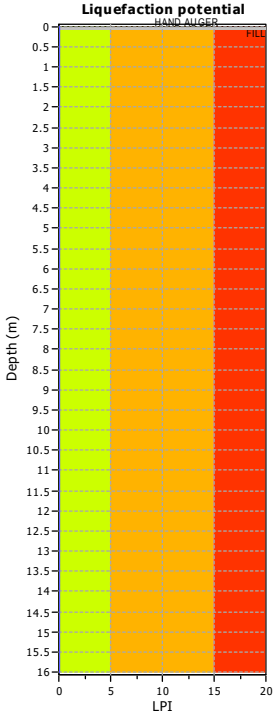
SBT legend

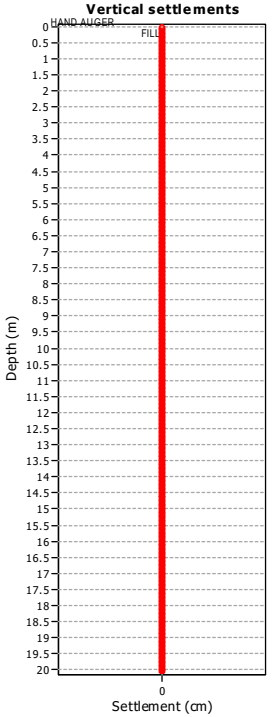
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

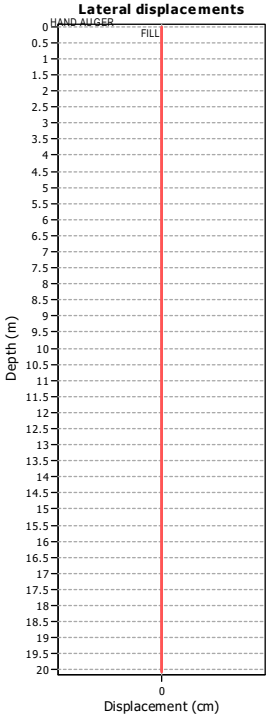
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	3.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	4.00 m	Limit depth:	N/A

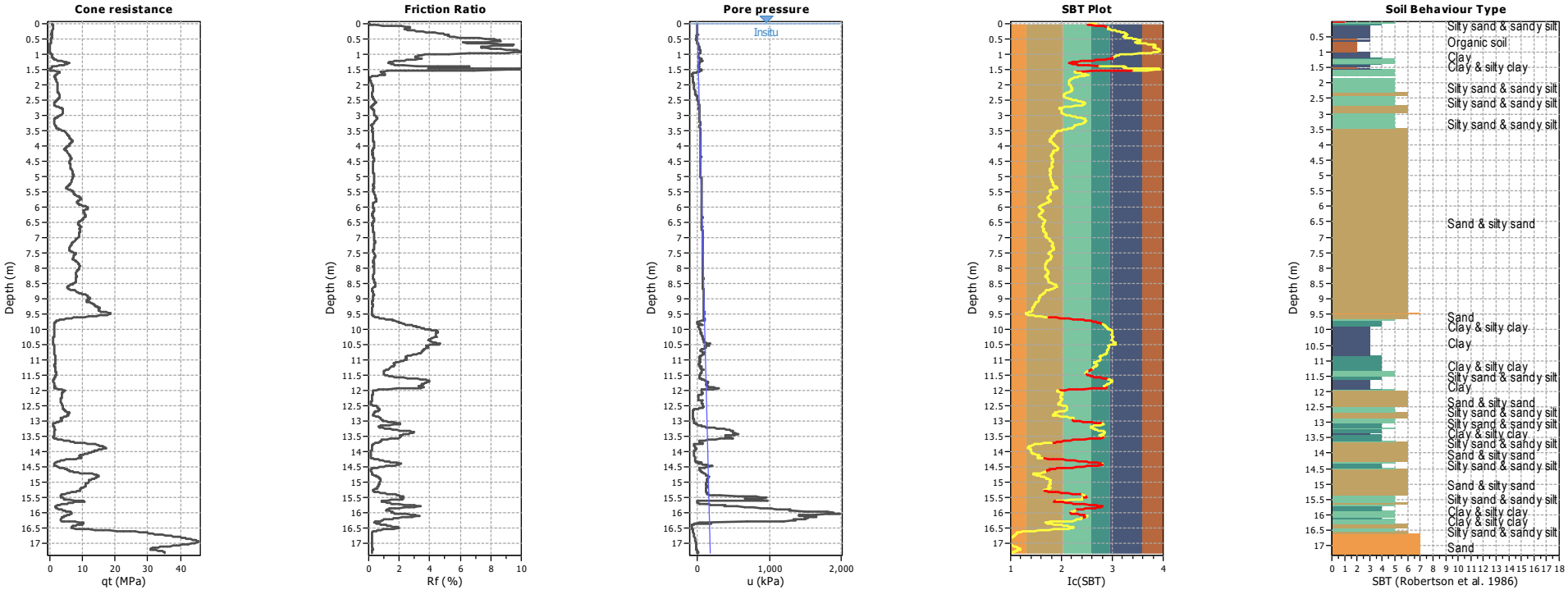
F.S. color scheme

- 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



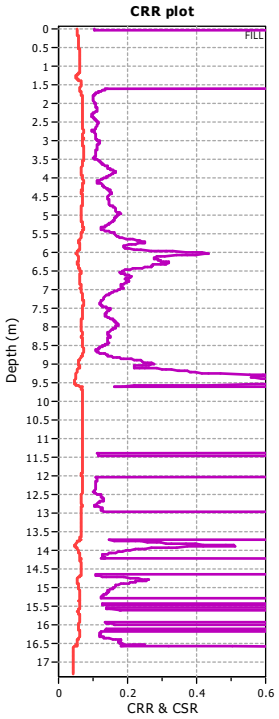
Input parameters and analysis data

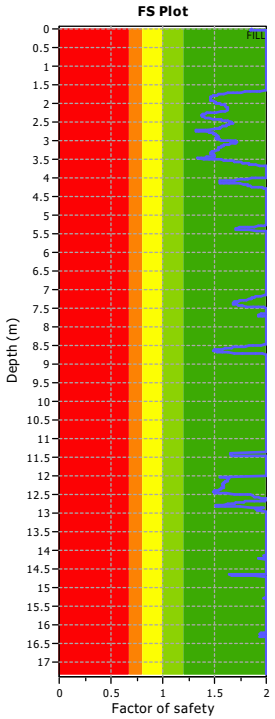
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.70 m	Limit depth:	N/A

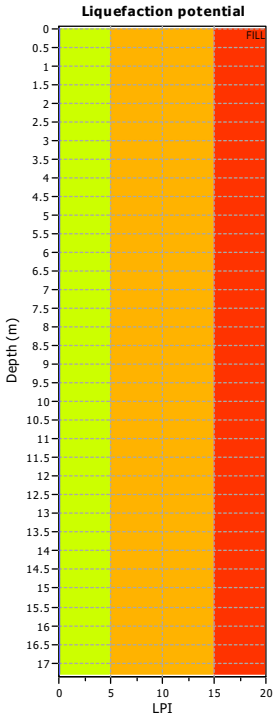
SBT legend

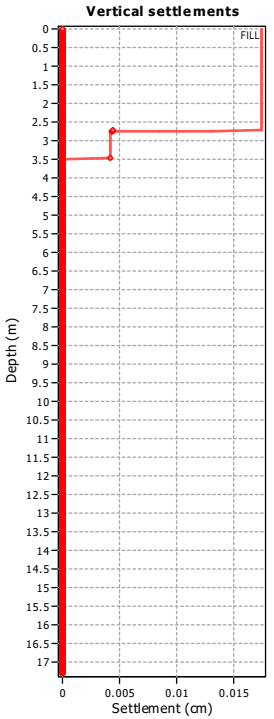
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

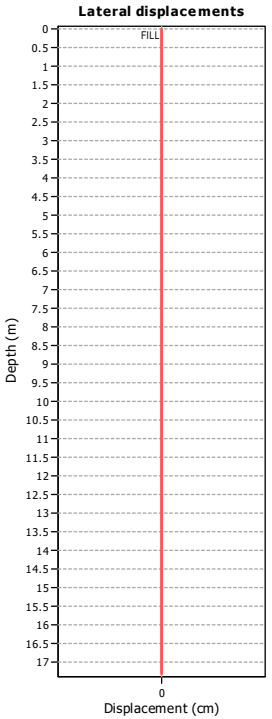
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.70 m	Limit depth:	N/A

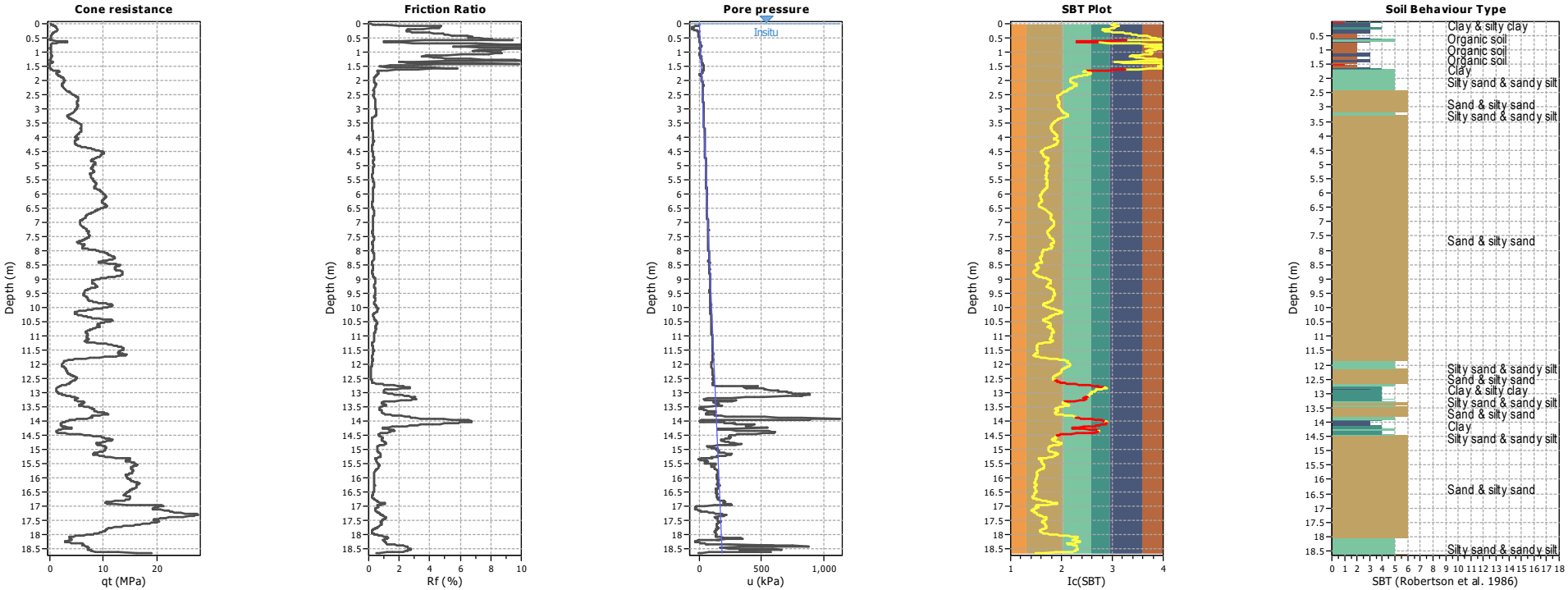
F.S. color scheme

- 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



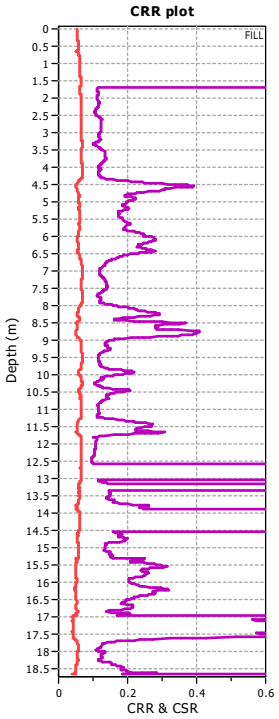
Input parameters and analysis data

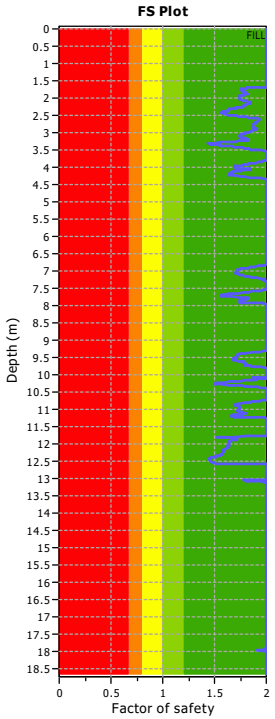
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

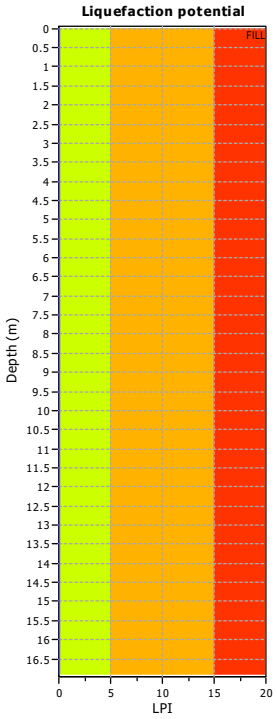
SBT legend

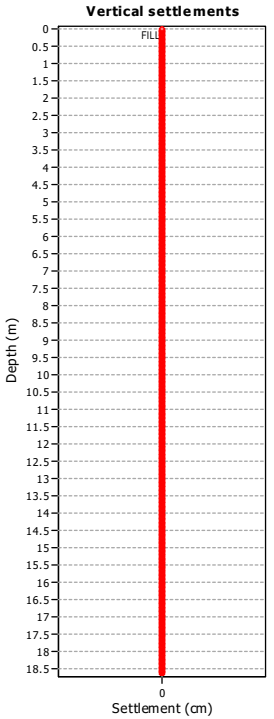
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

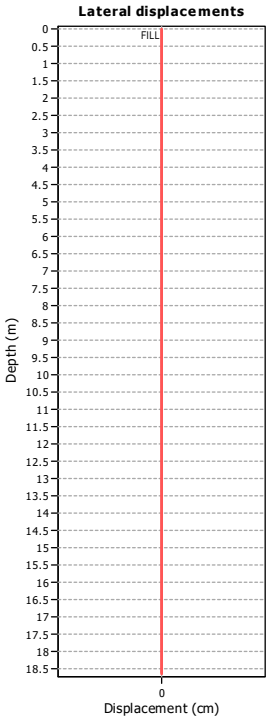
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

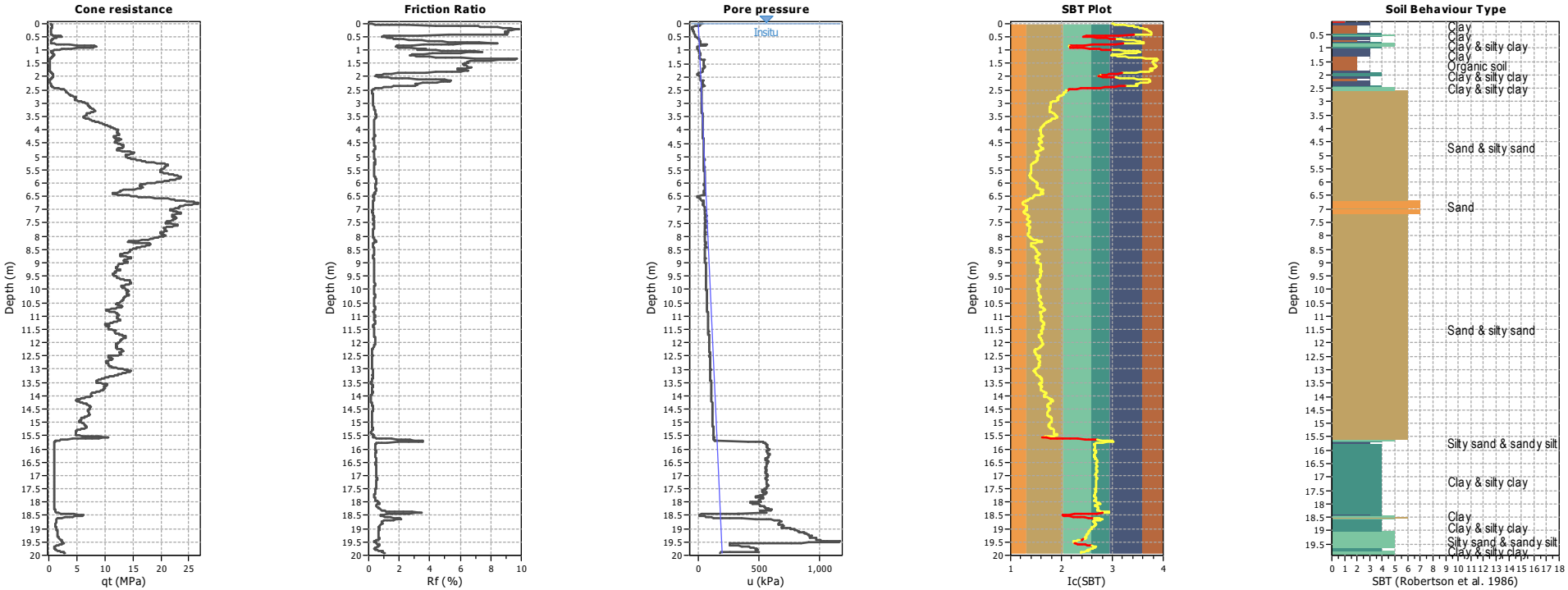
F.S. color scheme

- 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



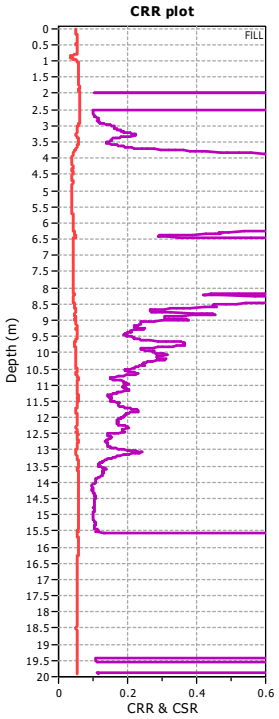
Input parameters and analysis data

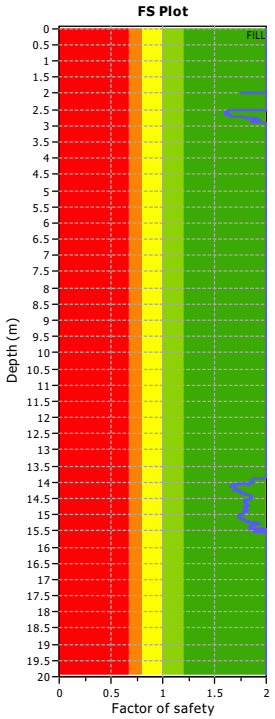
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	3.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	4.00 m	Limit depth:	N/A

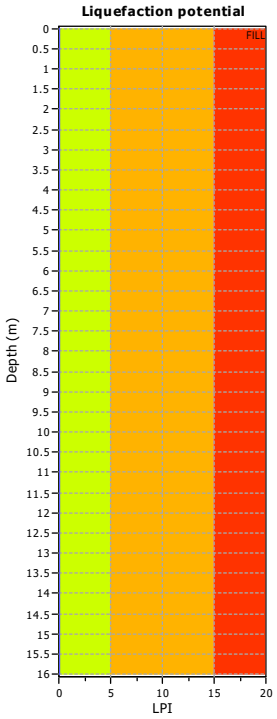
SBT legend

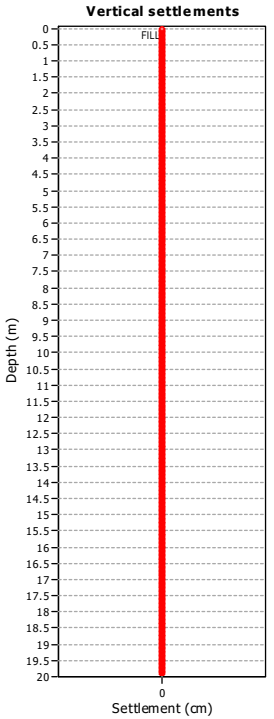
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

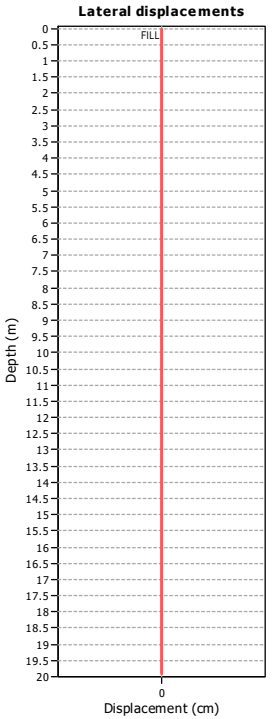
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	3.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	4.00 m	Limit depth:	N/A

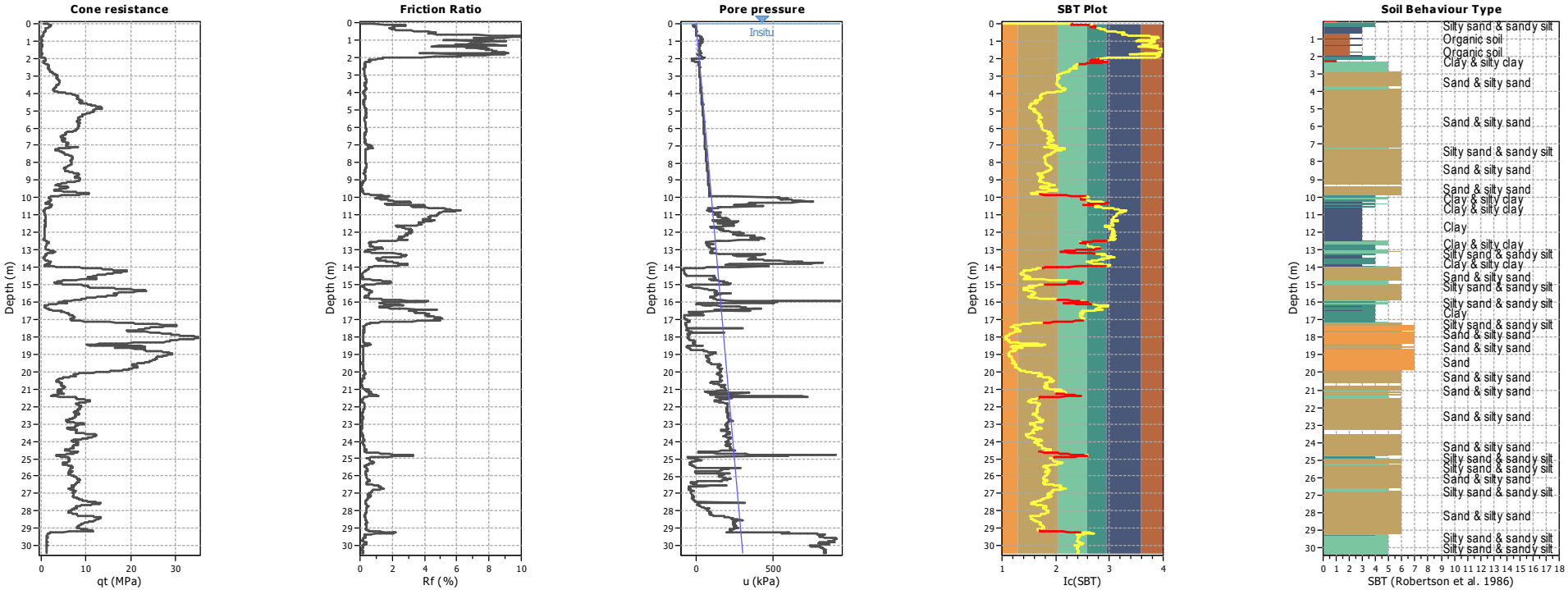
F.S. color scheme

- 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



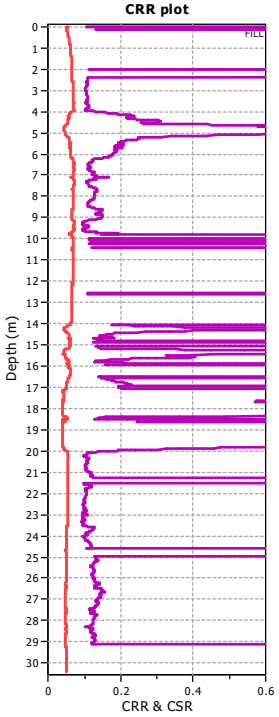
Input parameters and analysis data

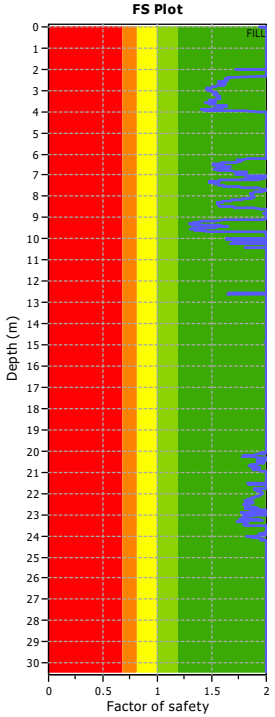
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

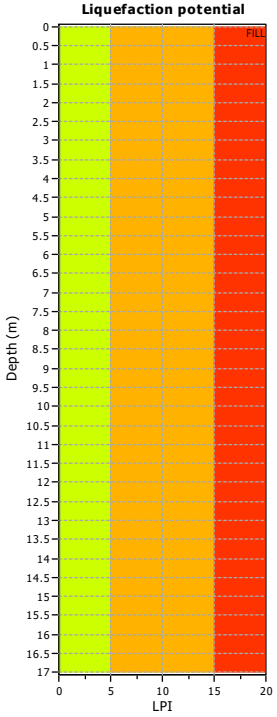
SBT legend

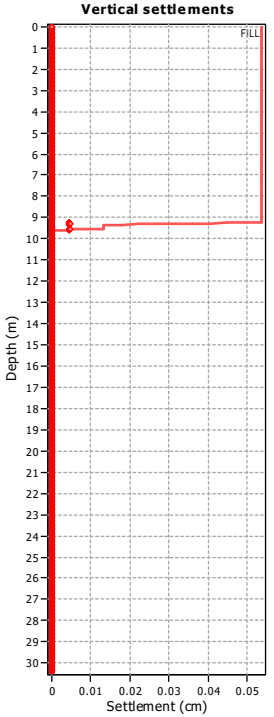
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

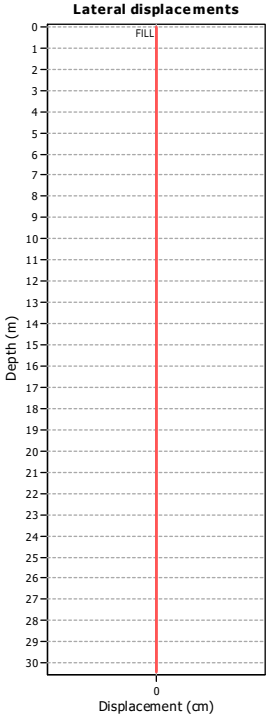
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

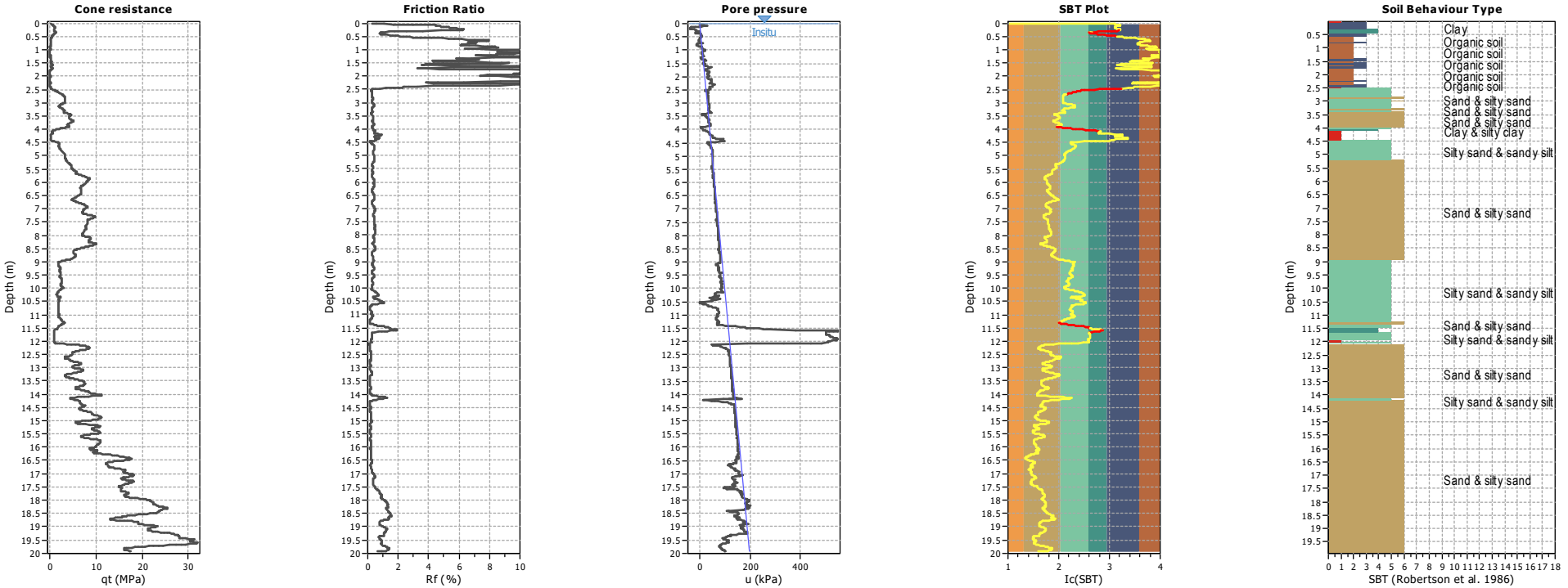
F.S. color scheme

- 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



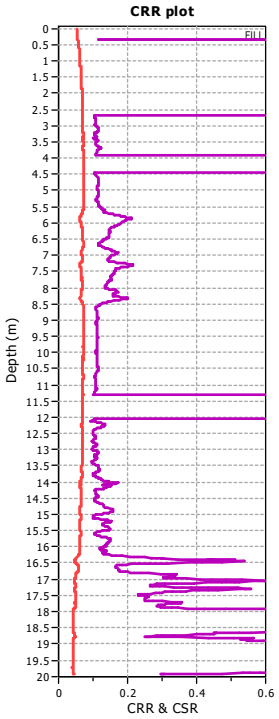
Input parameters and analysis data

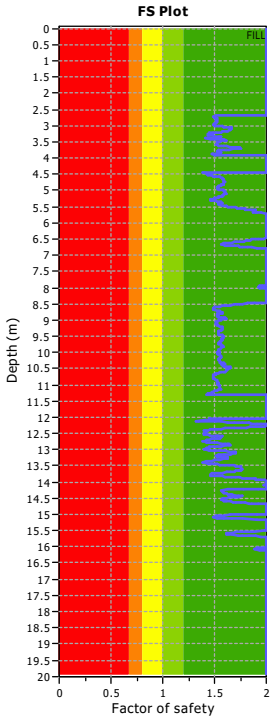
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.90 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.90 m	Limit depth:	N/A

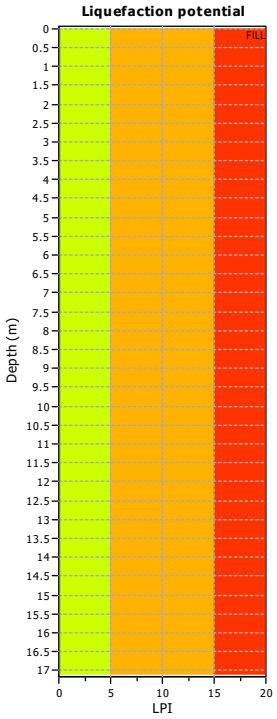
SBT legend

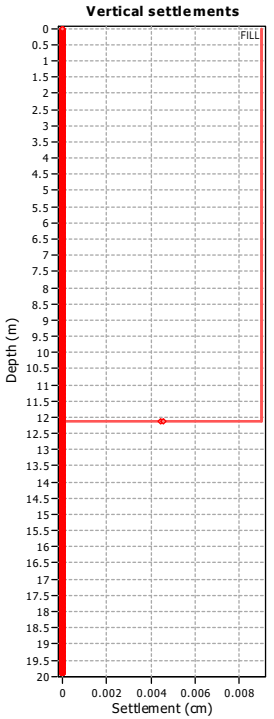
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

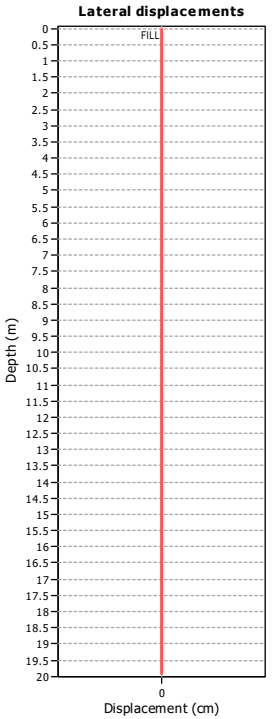
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.90 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.90 m	Limit depth:	N/A

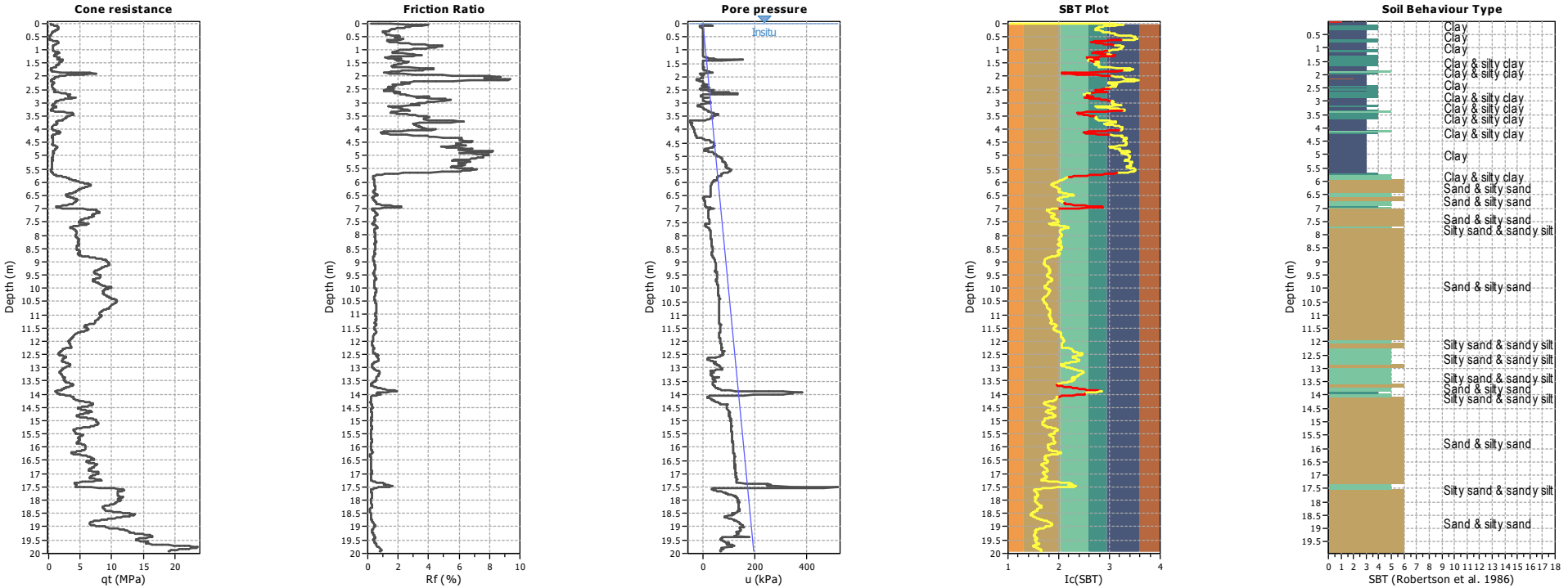
F.S. color scheme

- 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



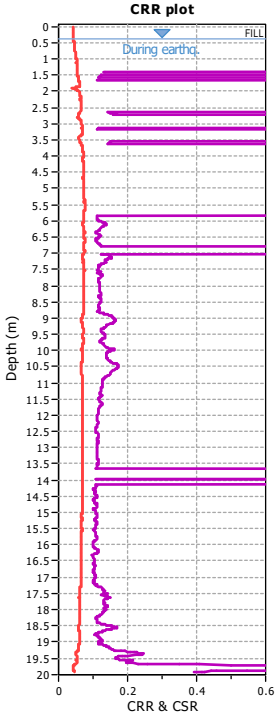
Input parameters and analysis data

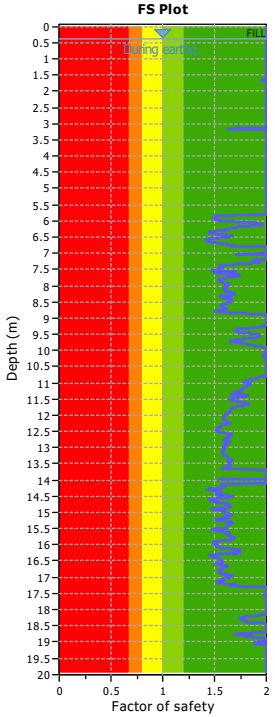
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.00 m	Limit depth:	N/A

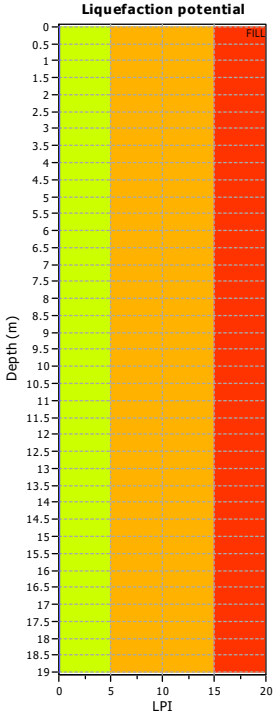
SBT legend

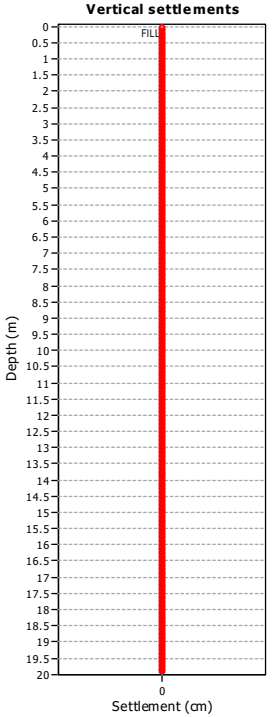
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

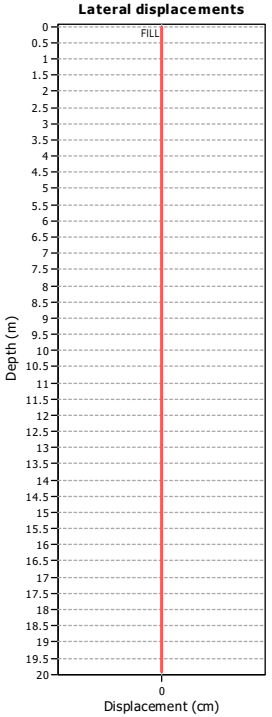
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.00 m	Limit depth:	N/A

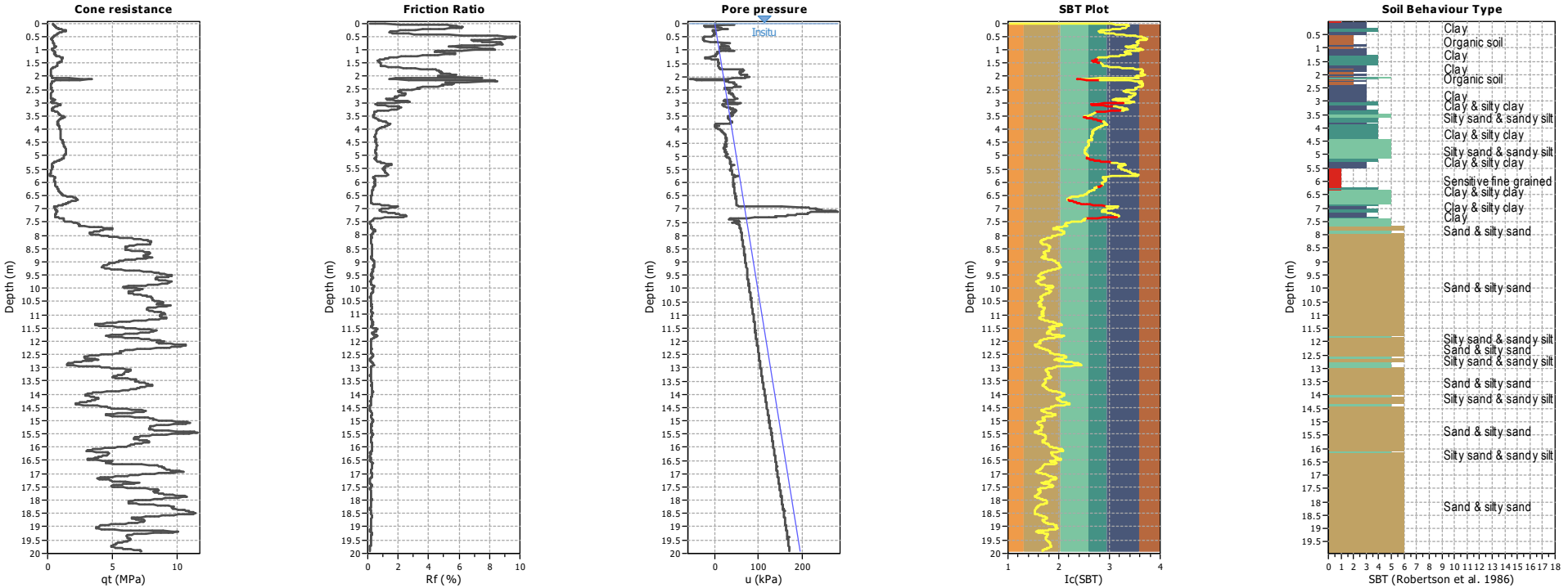
F.S. color scheme

- 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



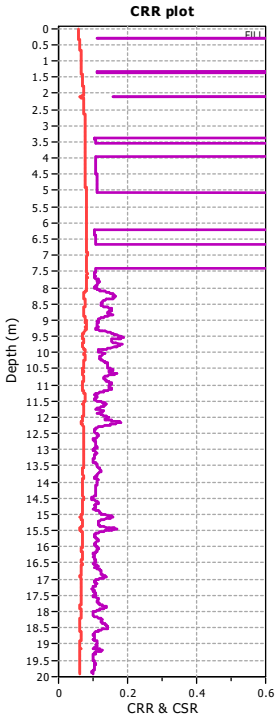
Input parameters and analysis data

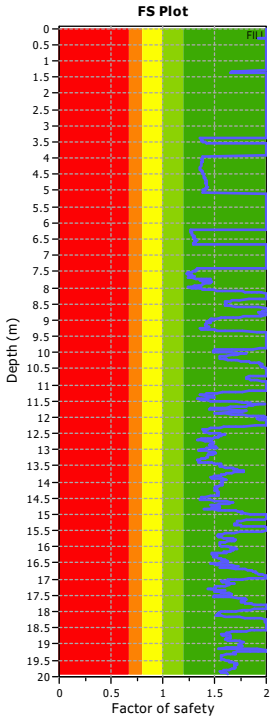
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.40 m	Limit depth:	N/A

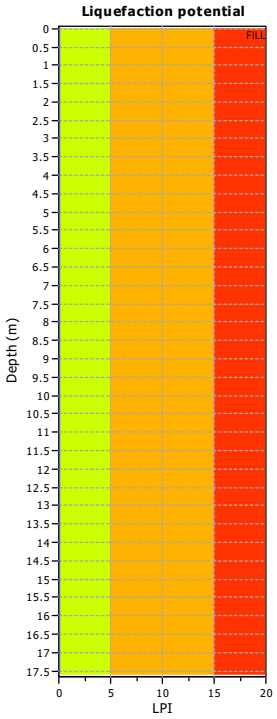
SBT legend

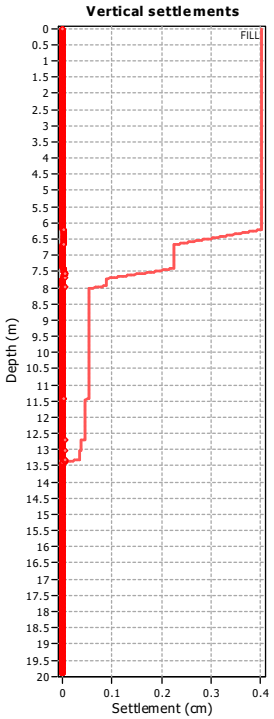
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

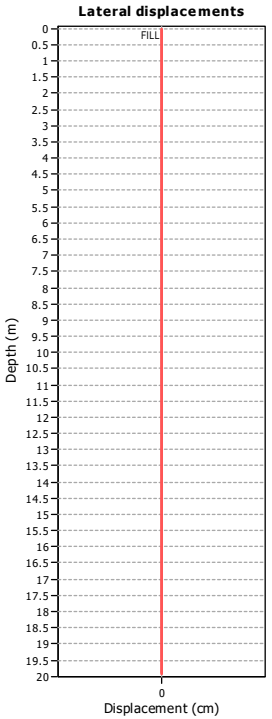
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.40 m	Limit depth:	N/A

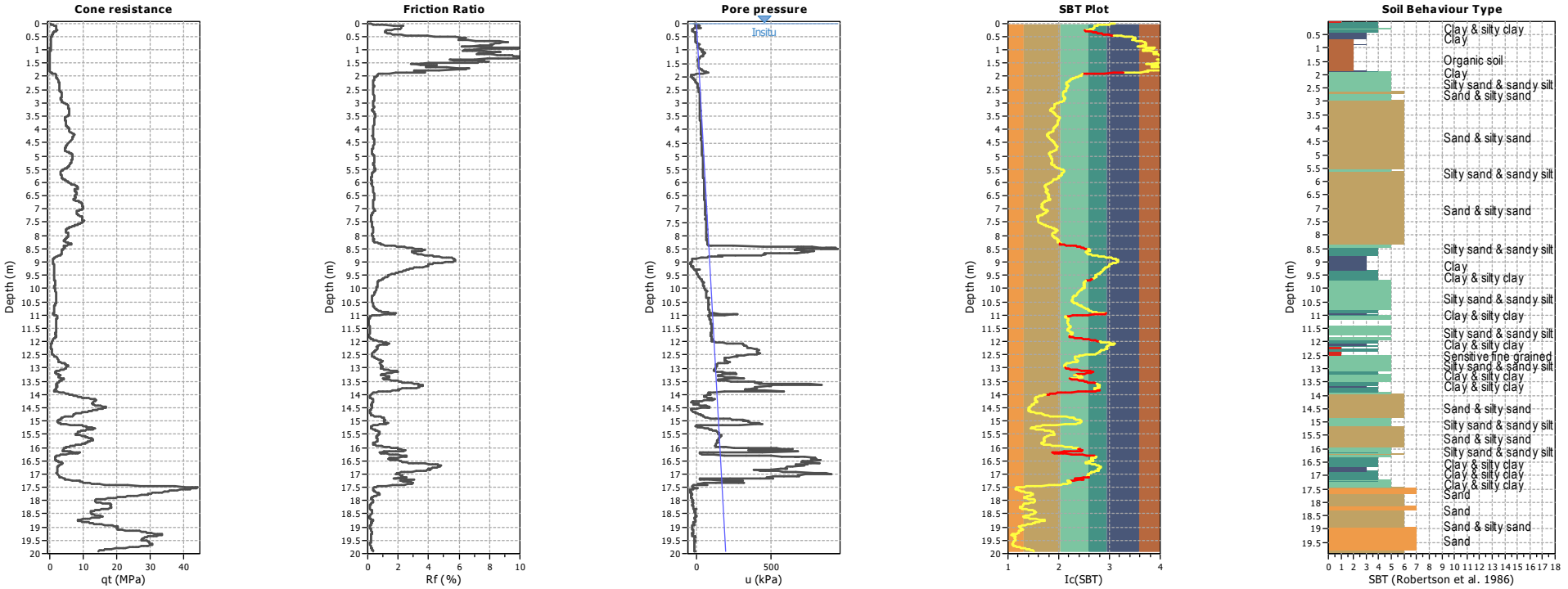
F.S. color scheme

- 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



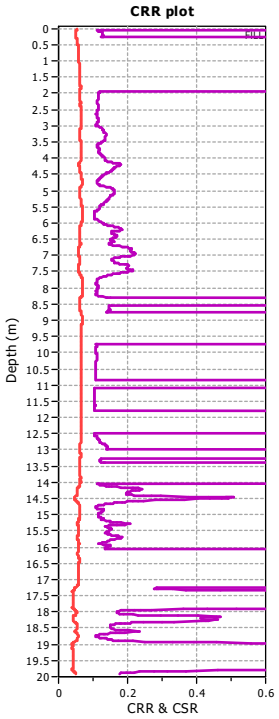
Input parameters and analysis data

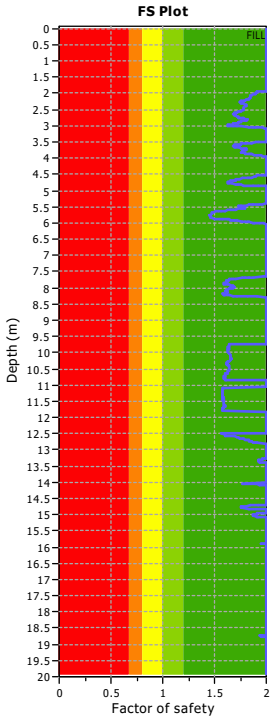
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

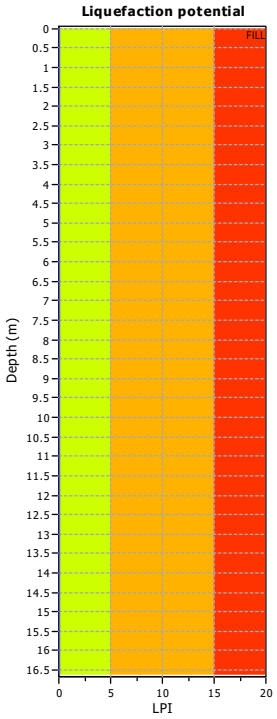
SBT legend

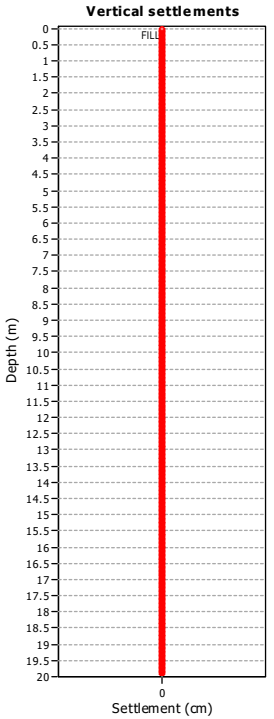
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

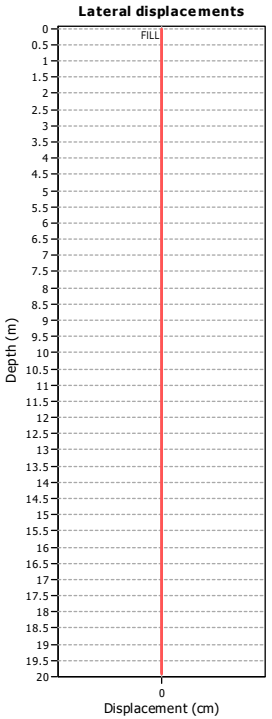
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

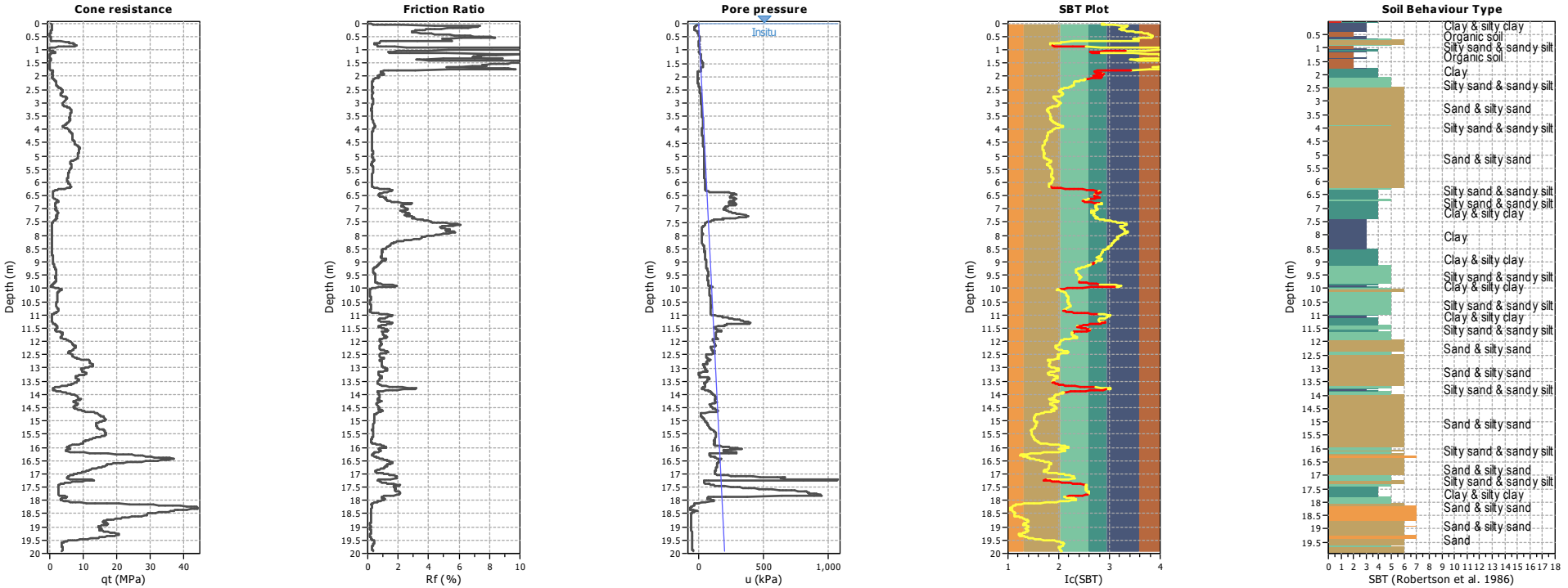
F.S. color scheme

- 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



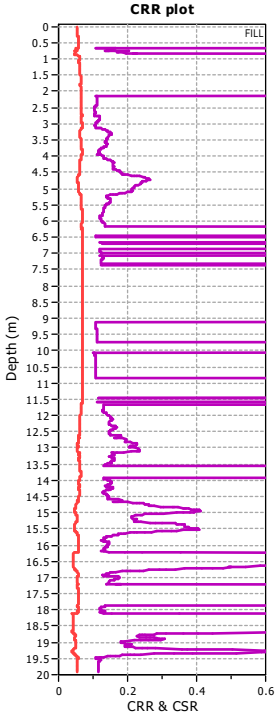
Input parameters and analysis data

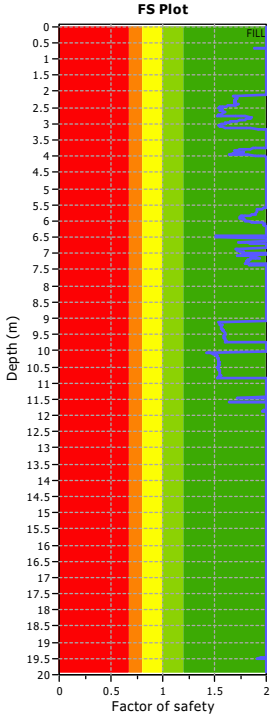
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

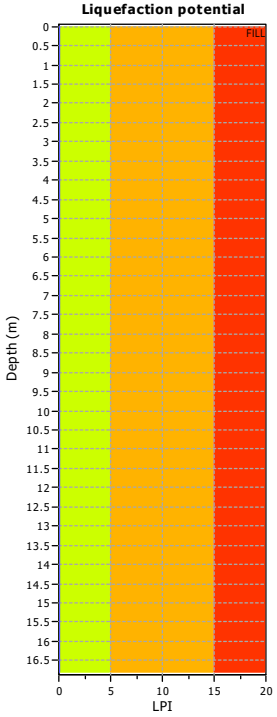
SBT legend

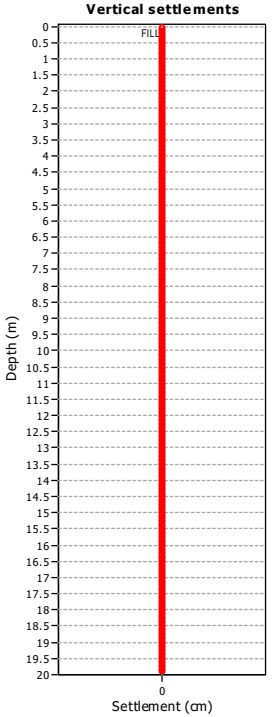
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

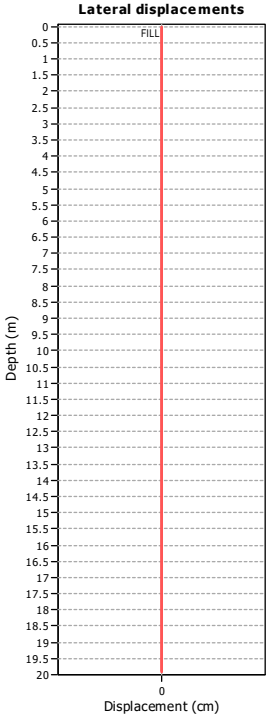
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

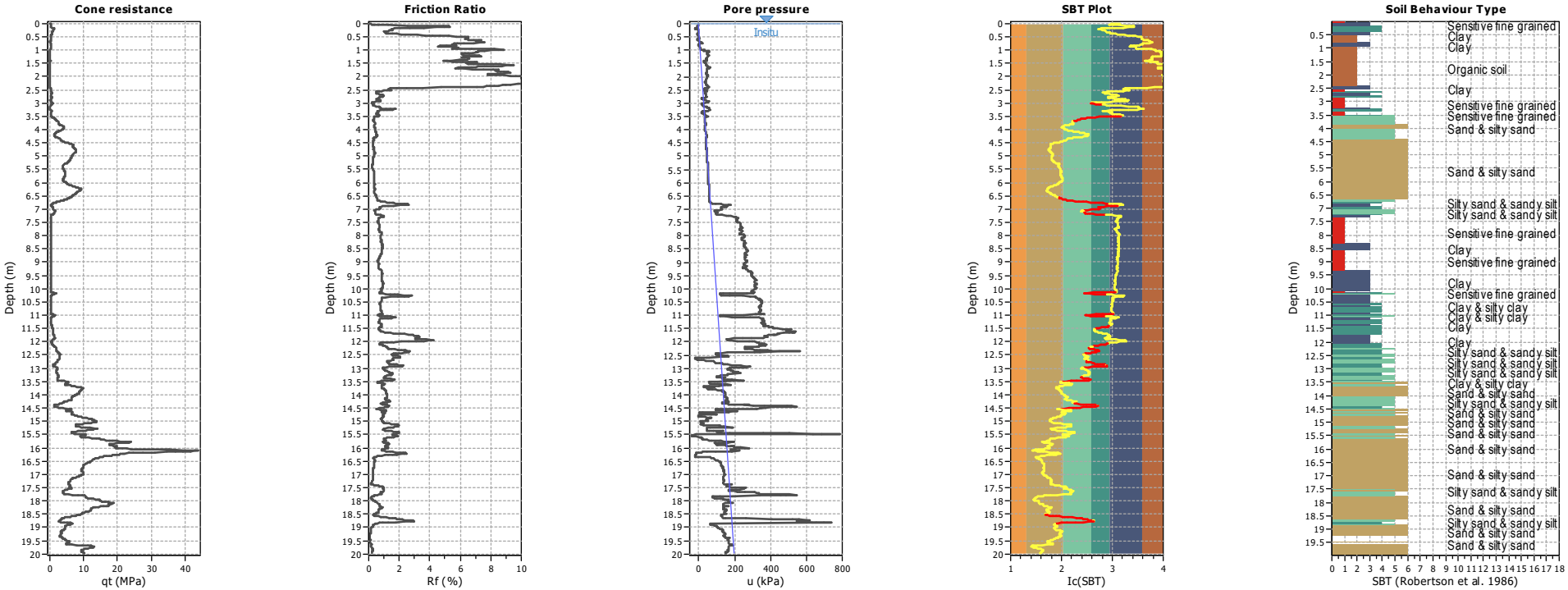
F.S. color scheme

- 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



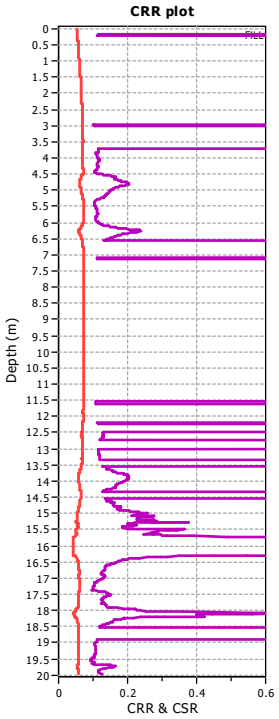
Input parameters and analysis data

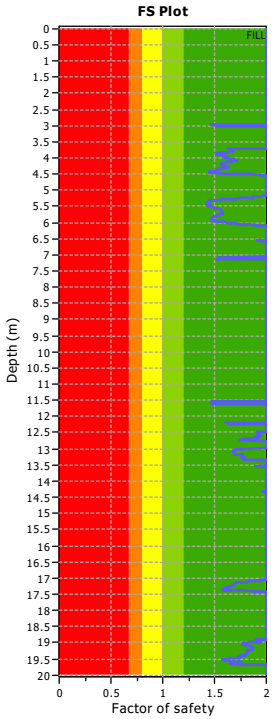
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

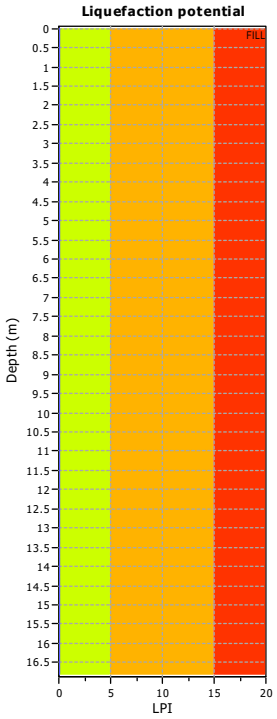
SBT legend

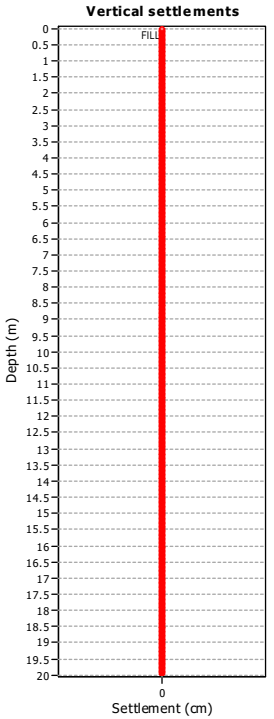
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

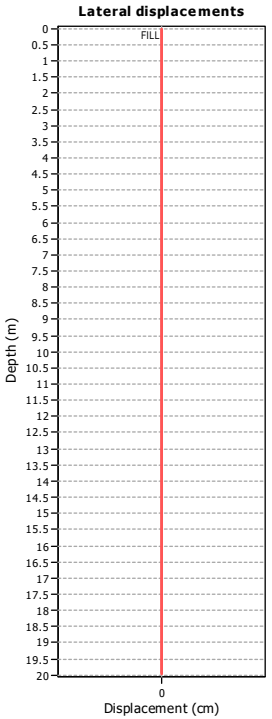
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

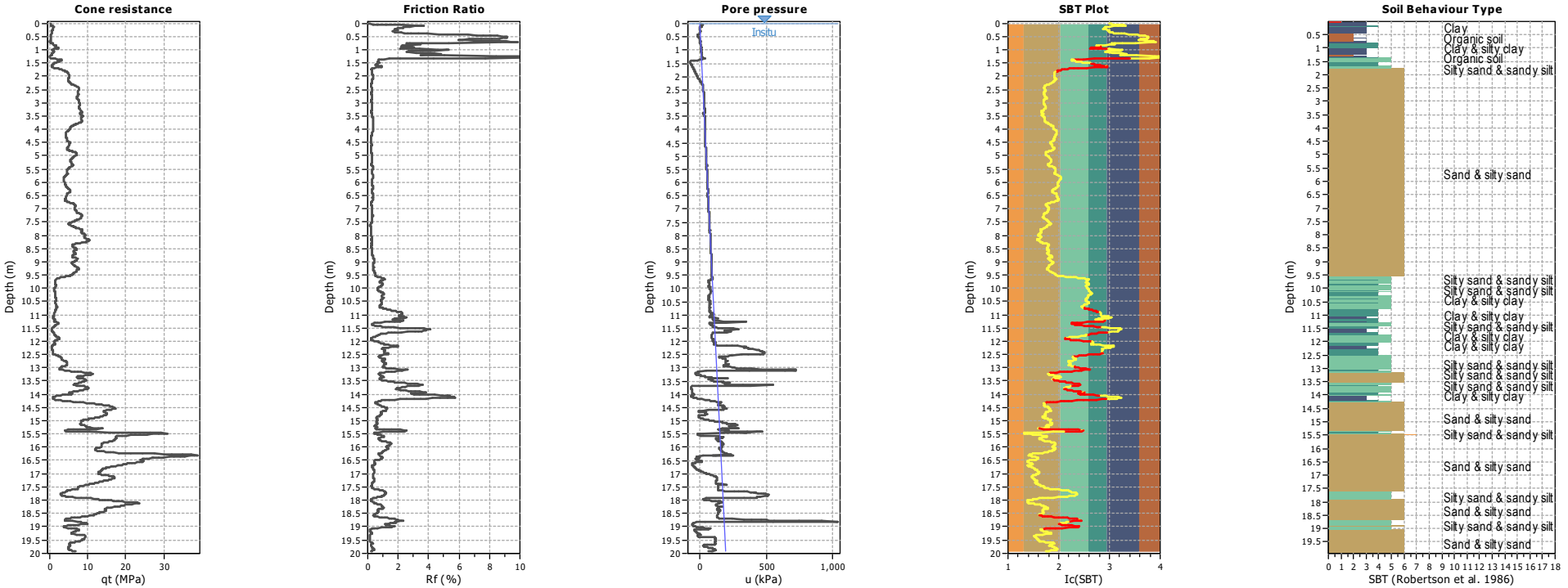
F.S. color scheme

- 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



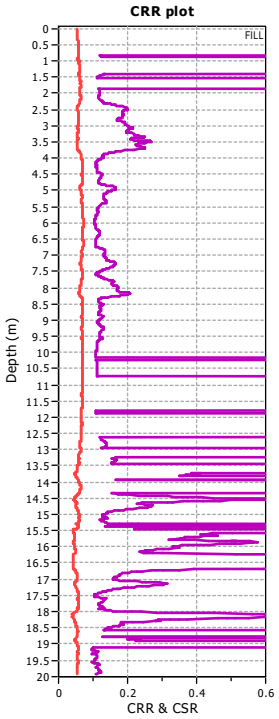
Input parameters and analysis data

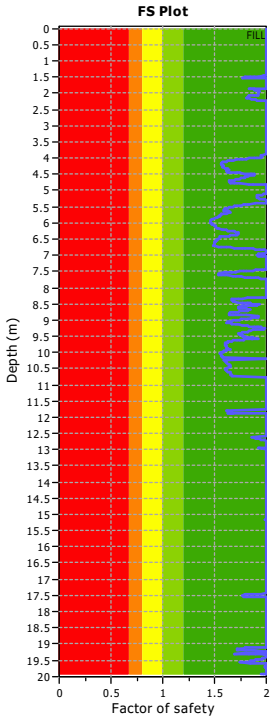
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

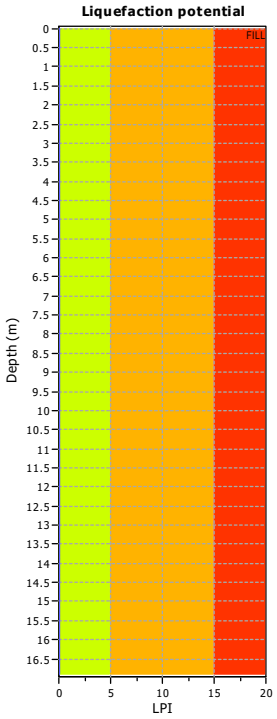
SBT legend

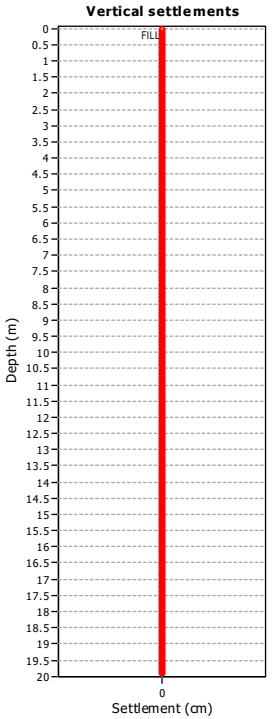
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

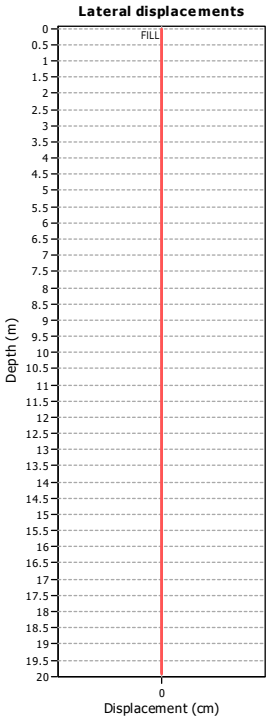
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

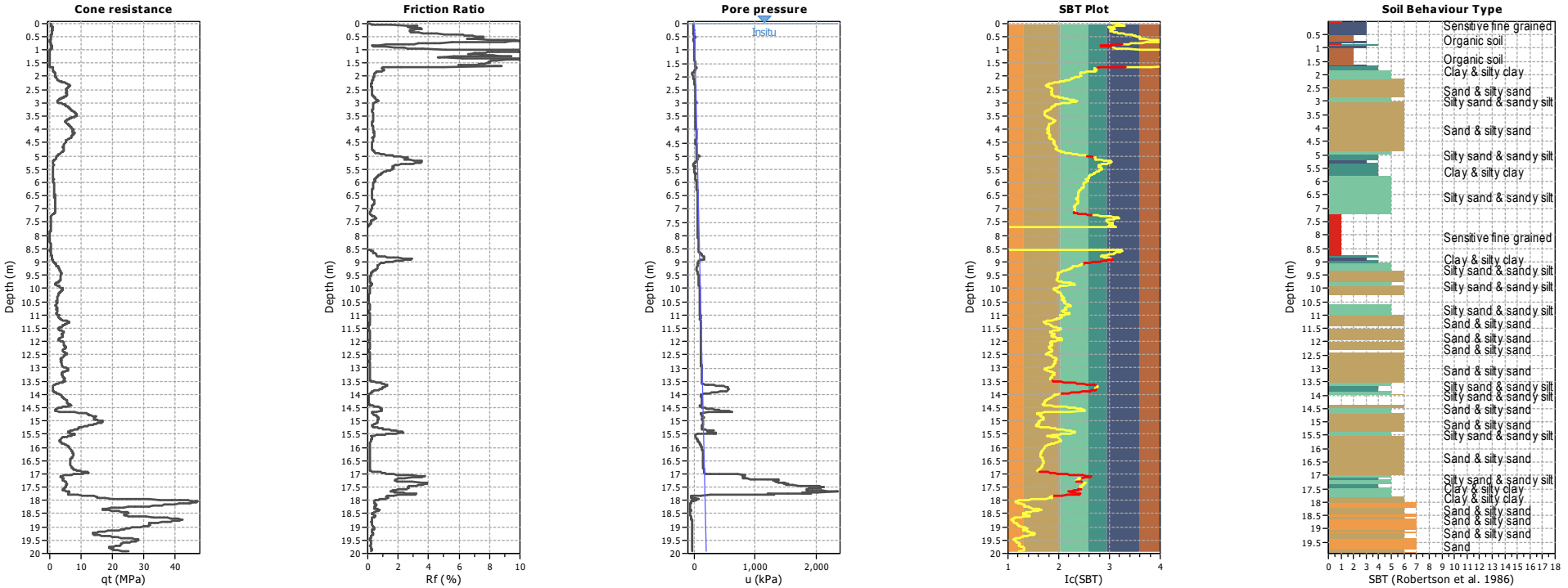
F.S. color scheme

- 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



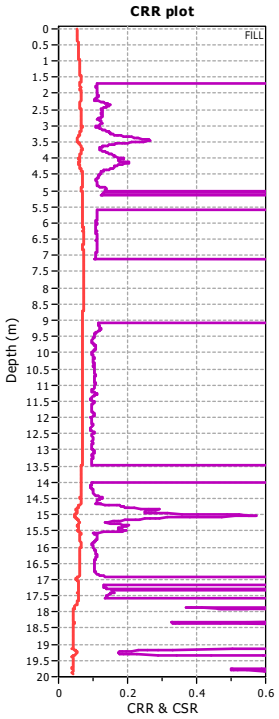
Input parameters and analysis data

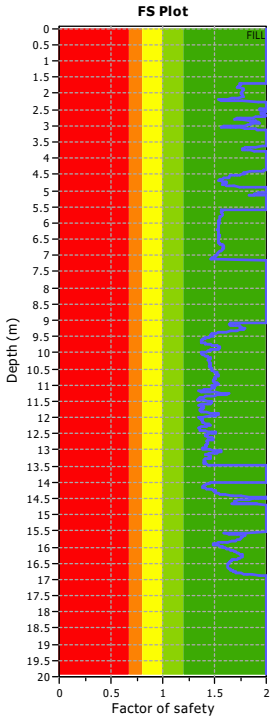
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

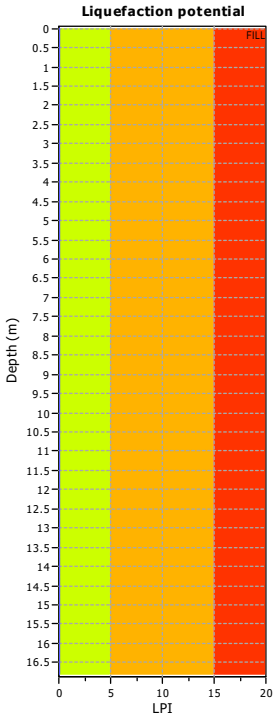
SBT legend

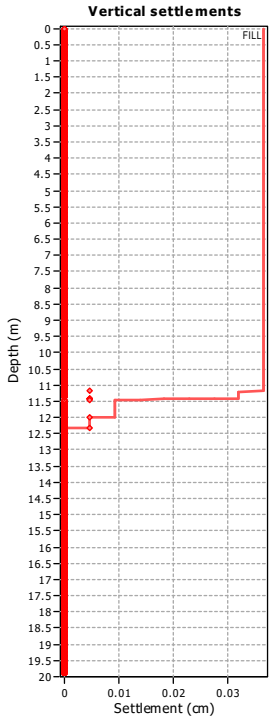
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

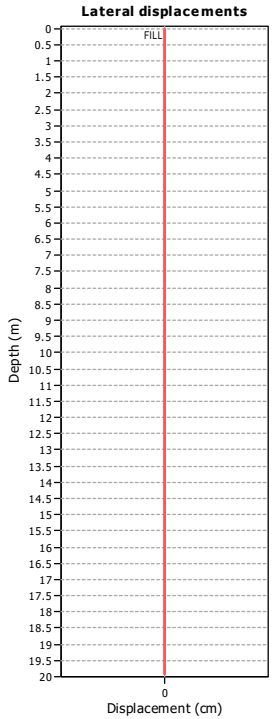
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

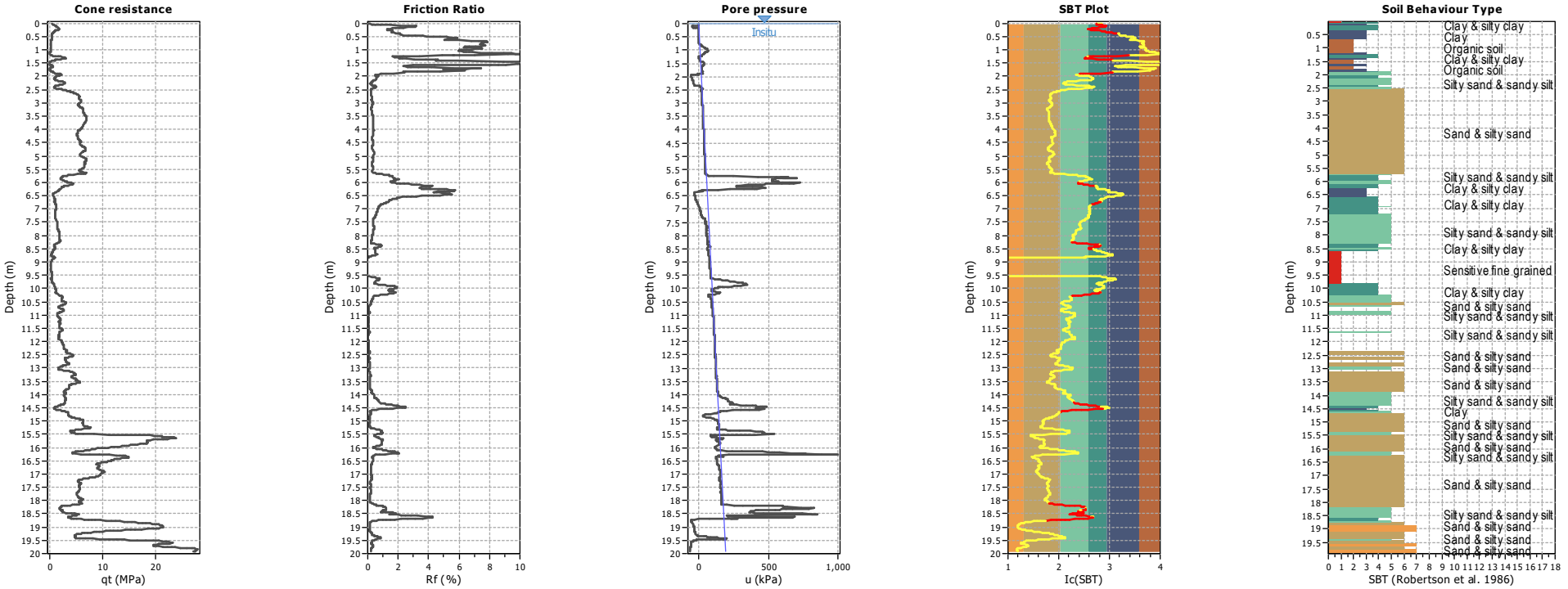
F.S. color scheme

- 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



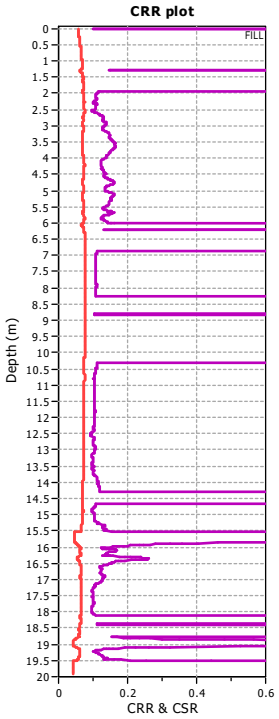
Input parameters and analysis data

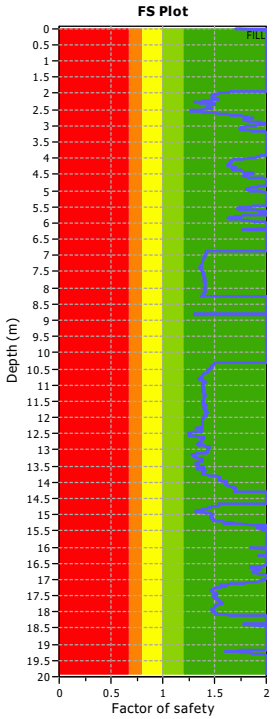
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.30 m	Limit depth:	N/A

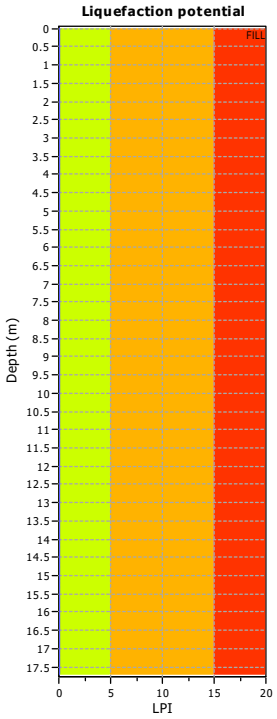
SBT legend

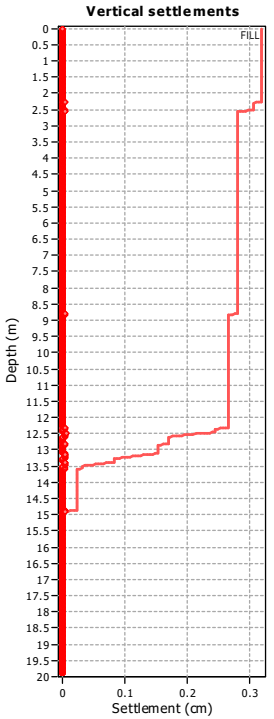
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

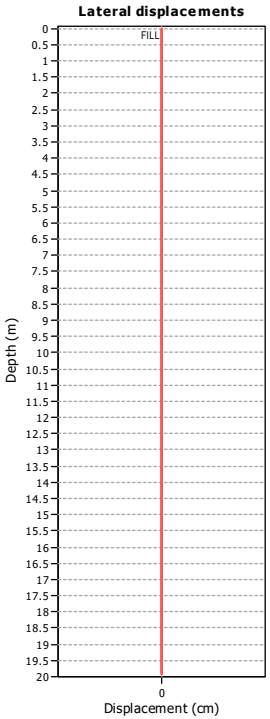
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.30 m	Limit depth:	N/A

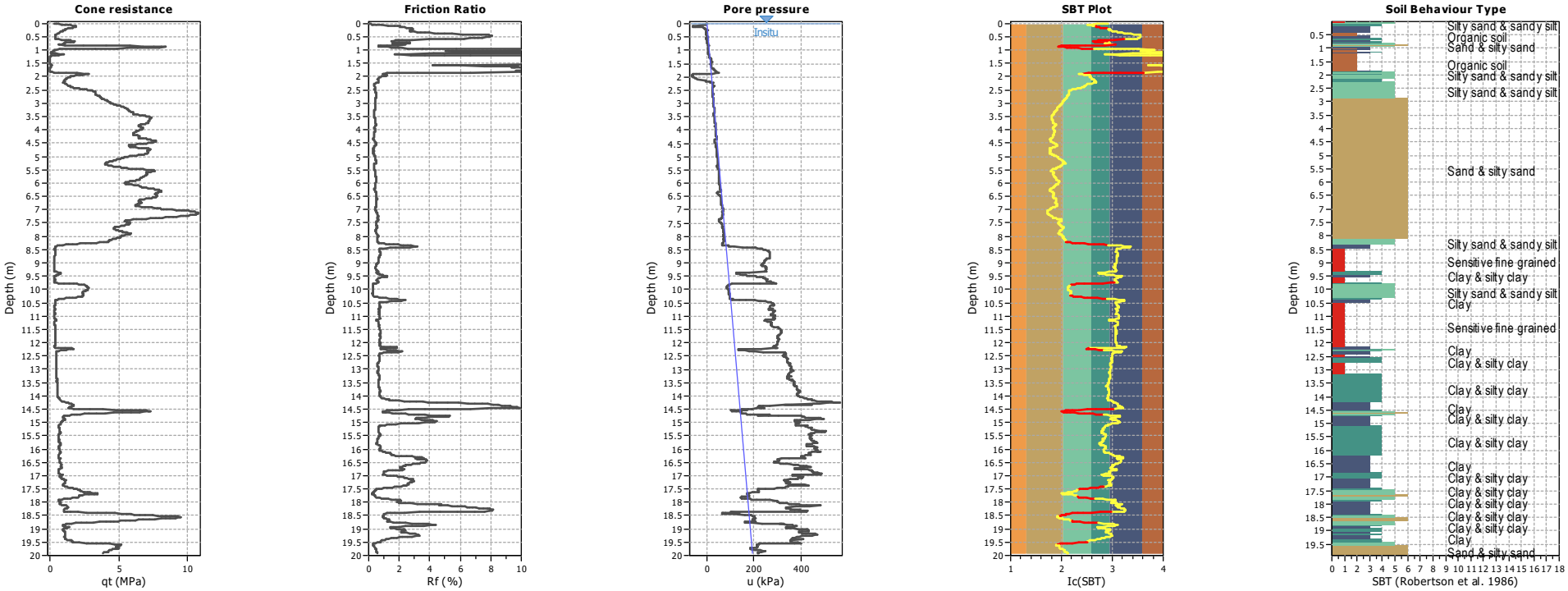
F.S. color scheme

- 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



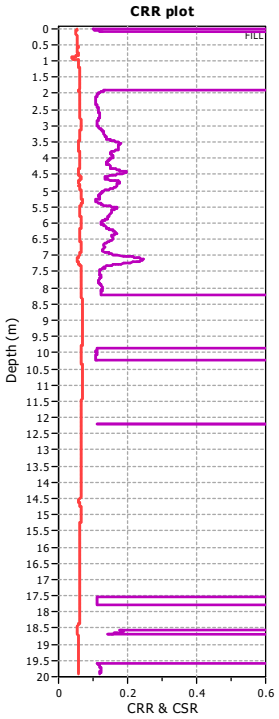
Input parameters and analysis data

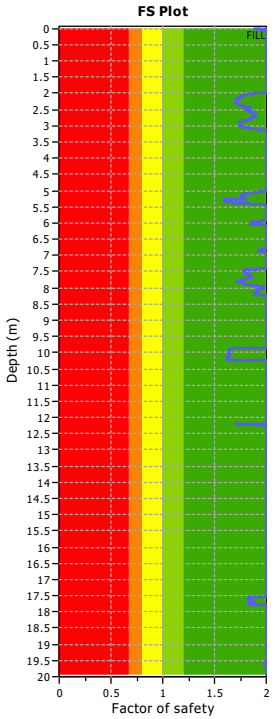
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.50 m	Limit depth:	N/A

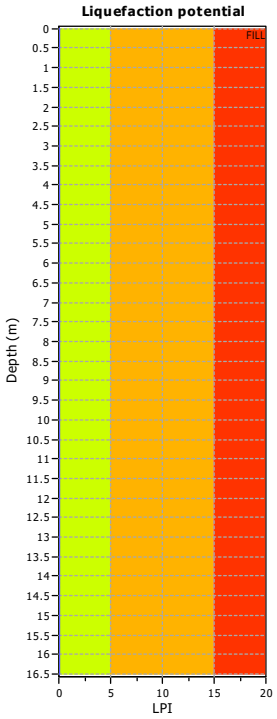
SBT legend

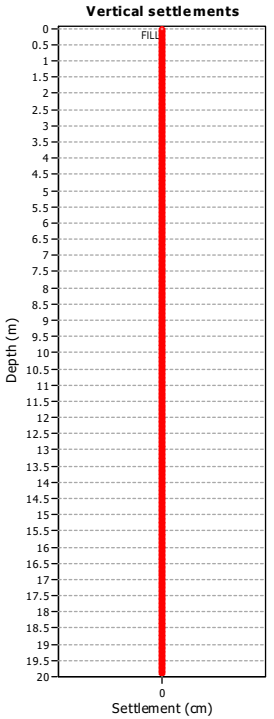
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

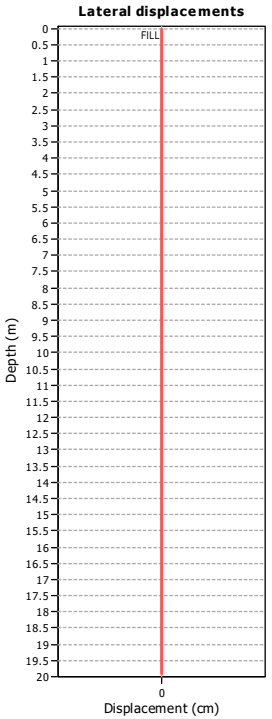
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.50 m	Limit depth:	N/A

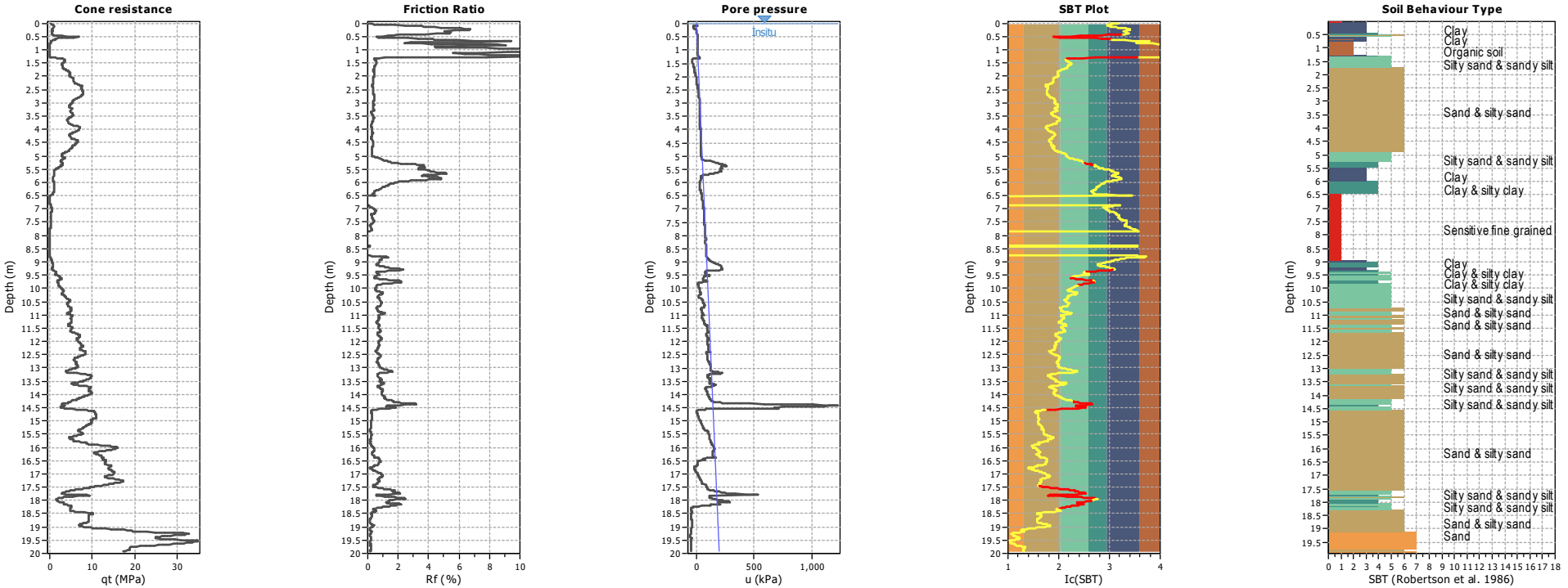
F.S. color scheme

- 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



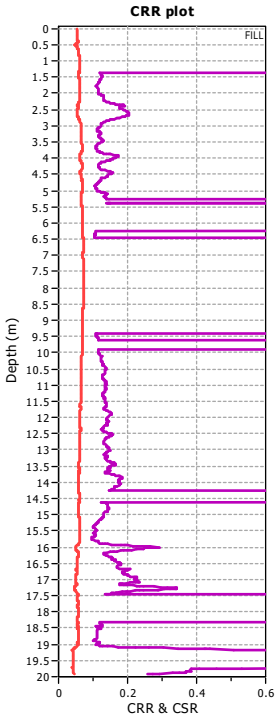
Input parameters and analysis data

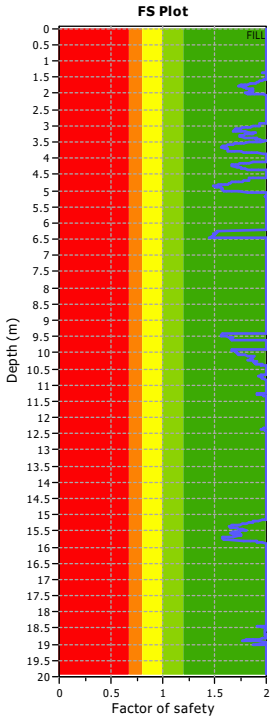
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

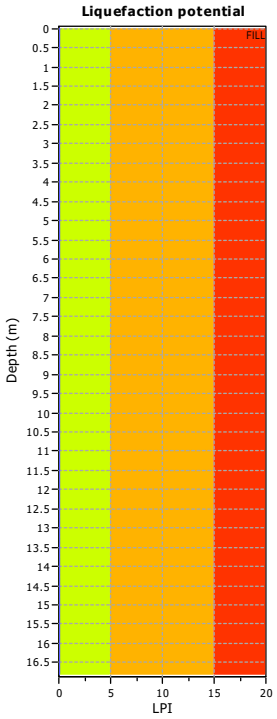
SBT legend

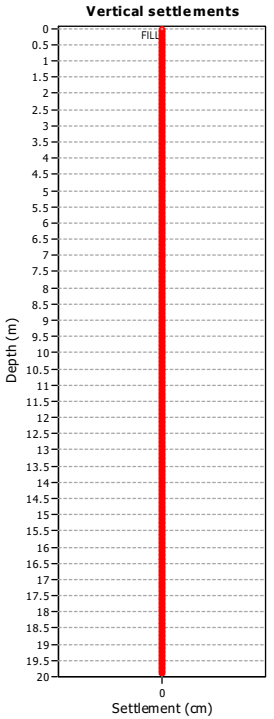
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

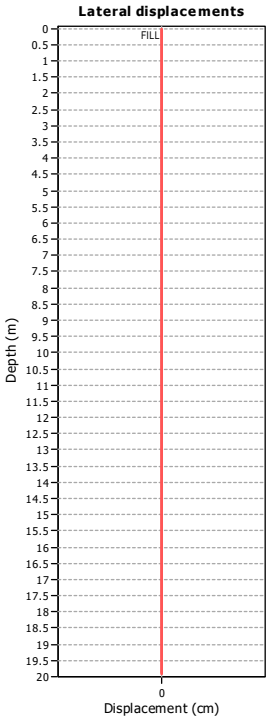
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

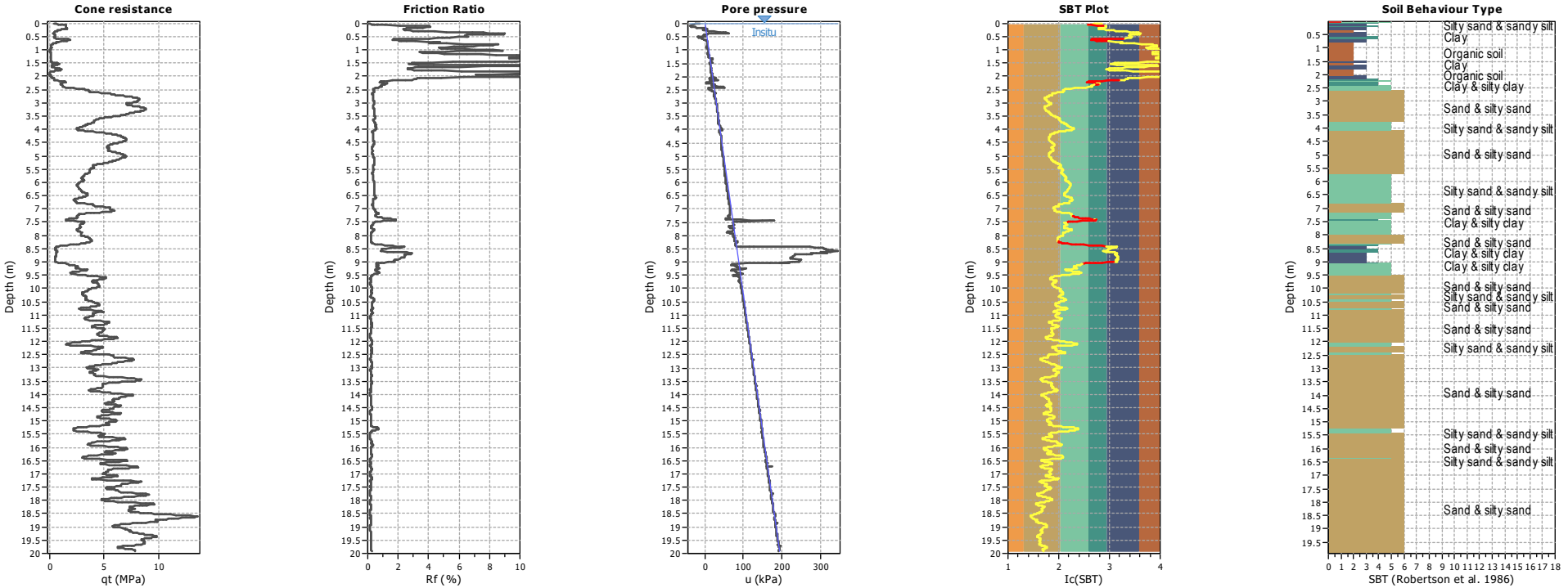
F.S. color scheme

- 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



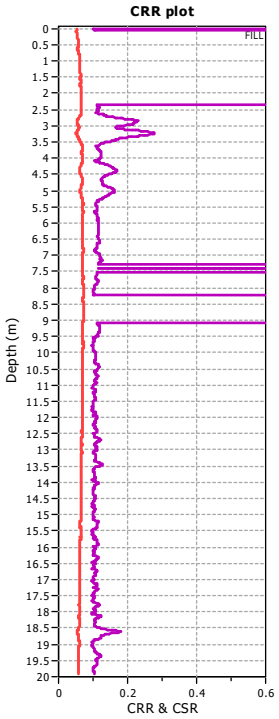
Input parameters and analysis data

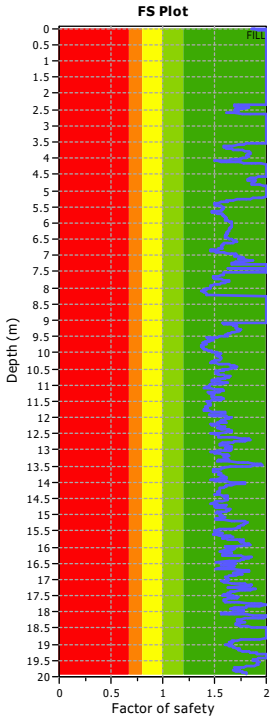
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

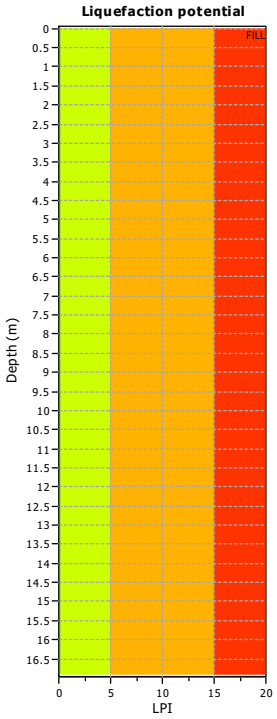
SBT legend

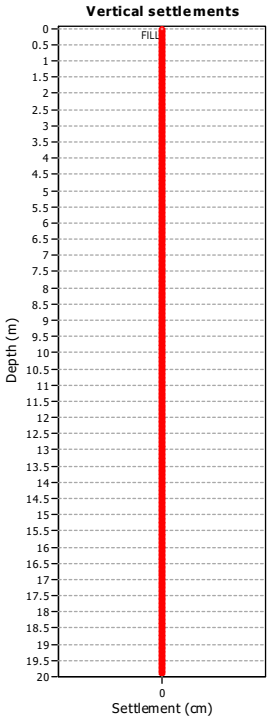
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

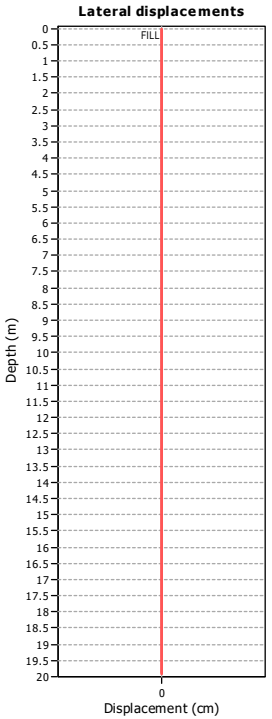
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

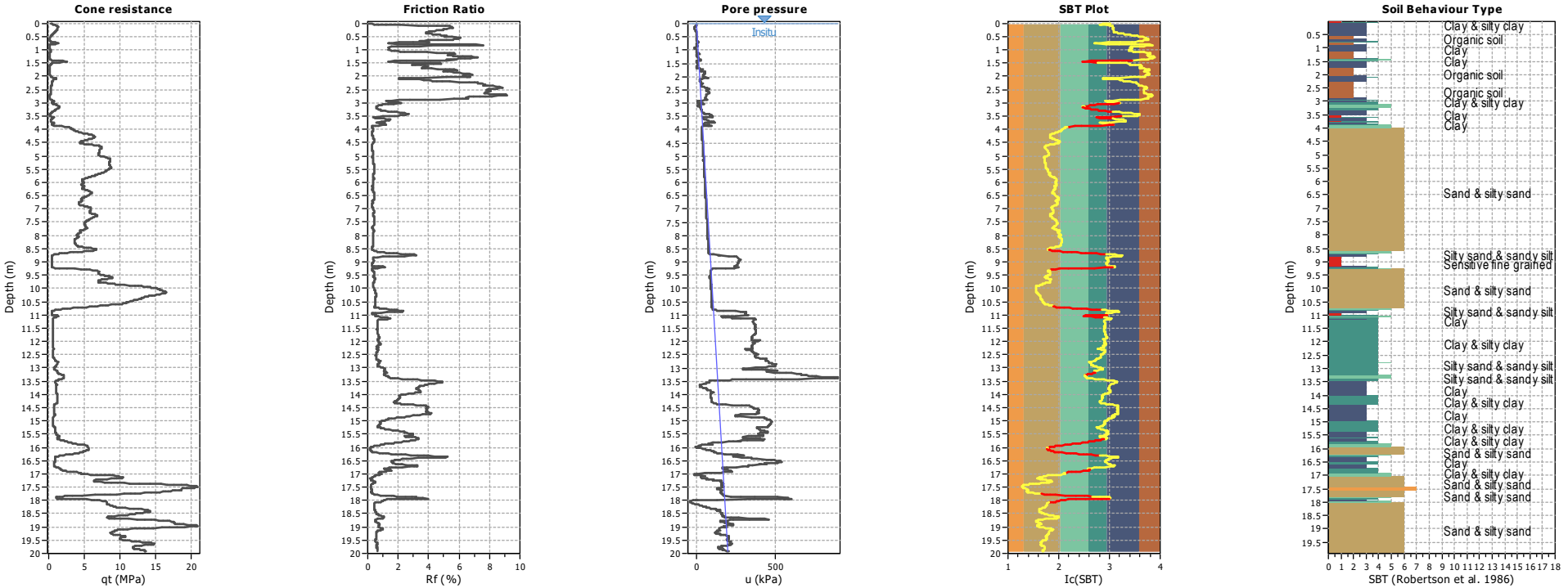
F.S. color scheme

- 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



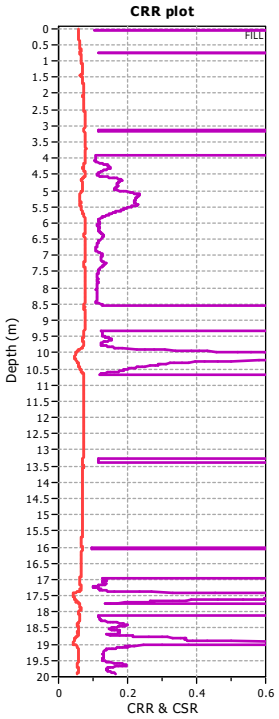
Input parameters and analysis data

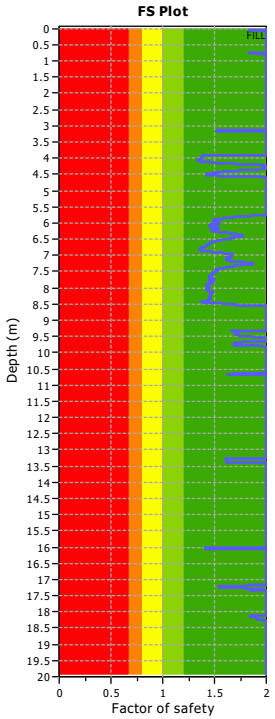
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.40 m	Limit depth:	N/A

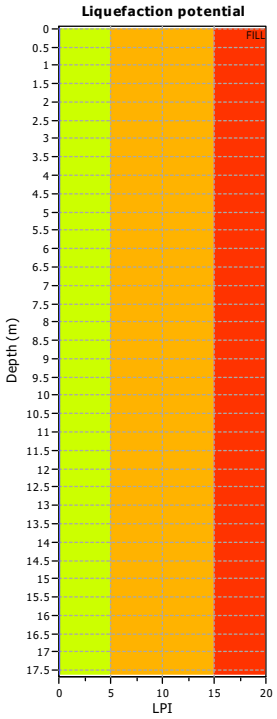
SBT legend

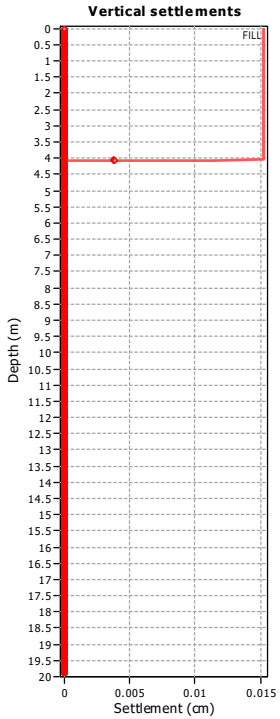
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

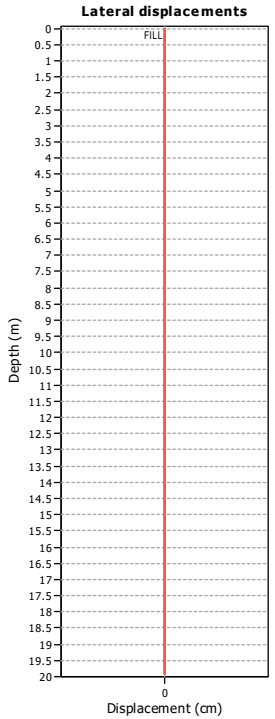
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.40 m	Limit depth:	N/A

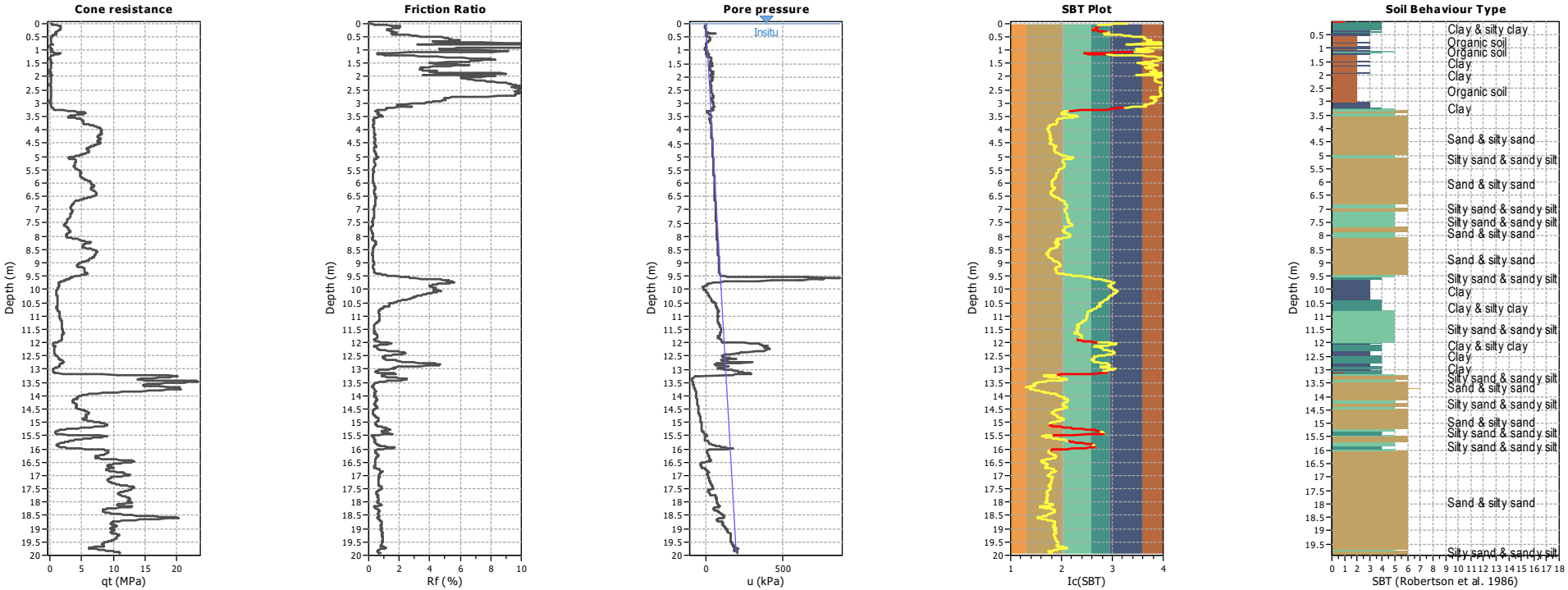
F.S. color scheme

- 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



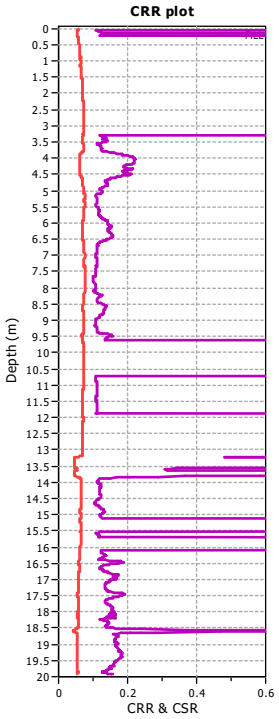
Input parameters and analysis data

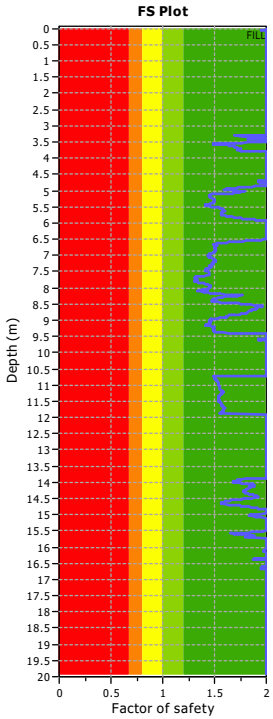
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.70 m	Limit depth:	N/A

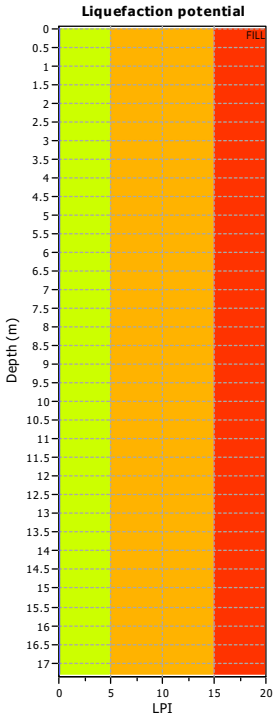
SBT legend

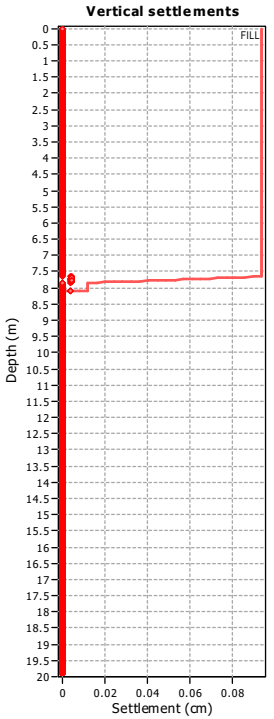
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

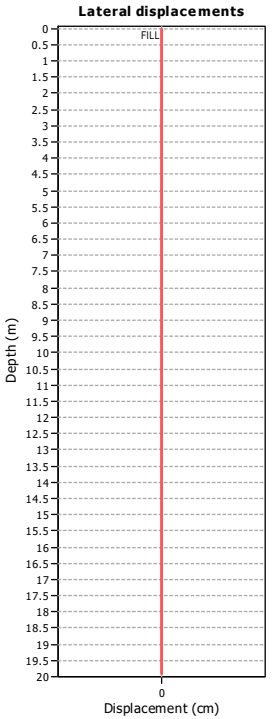
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.70 m	Limit depth:	N/A

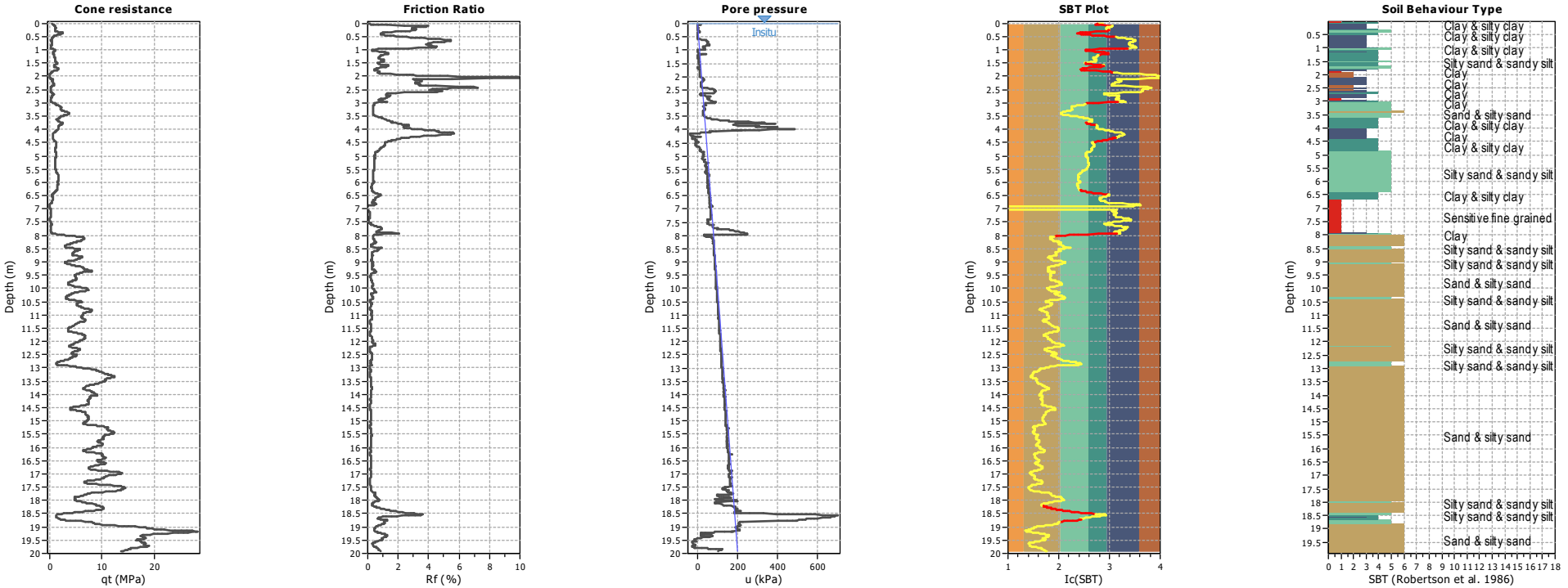
F.S. color scheme

- 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



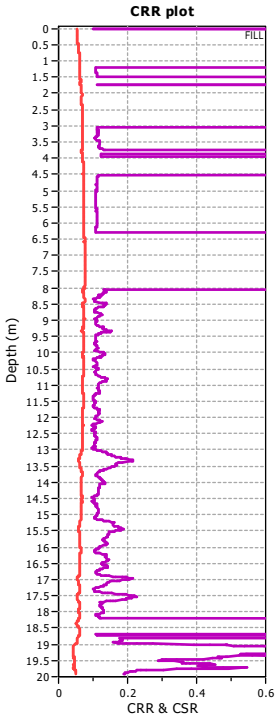
Input parameters and analysis data

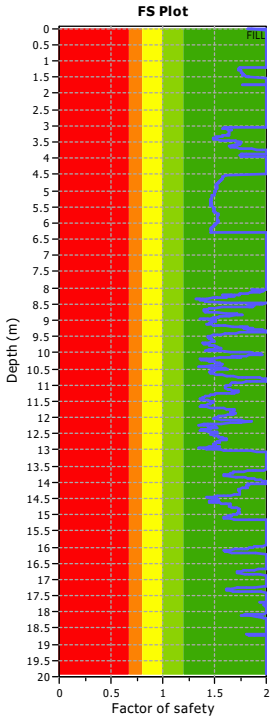
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

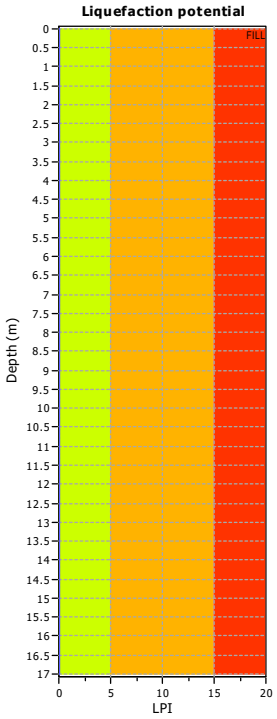
SBT legend

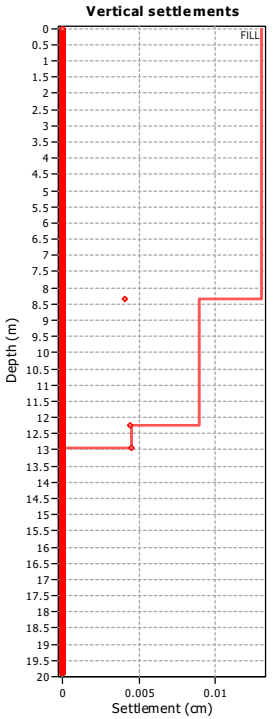
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

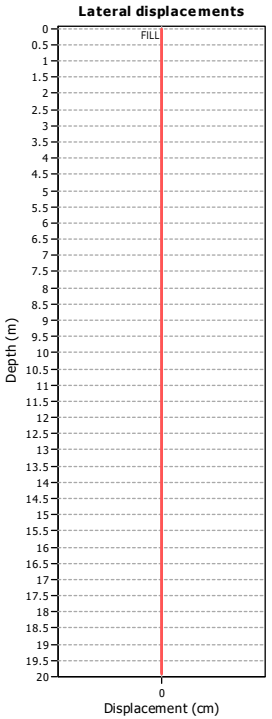
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

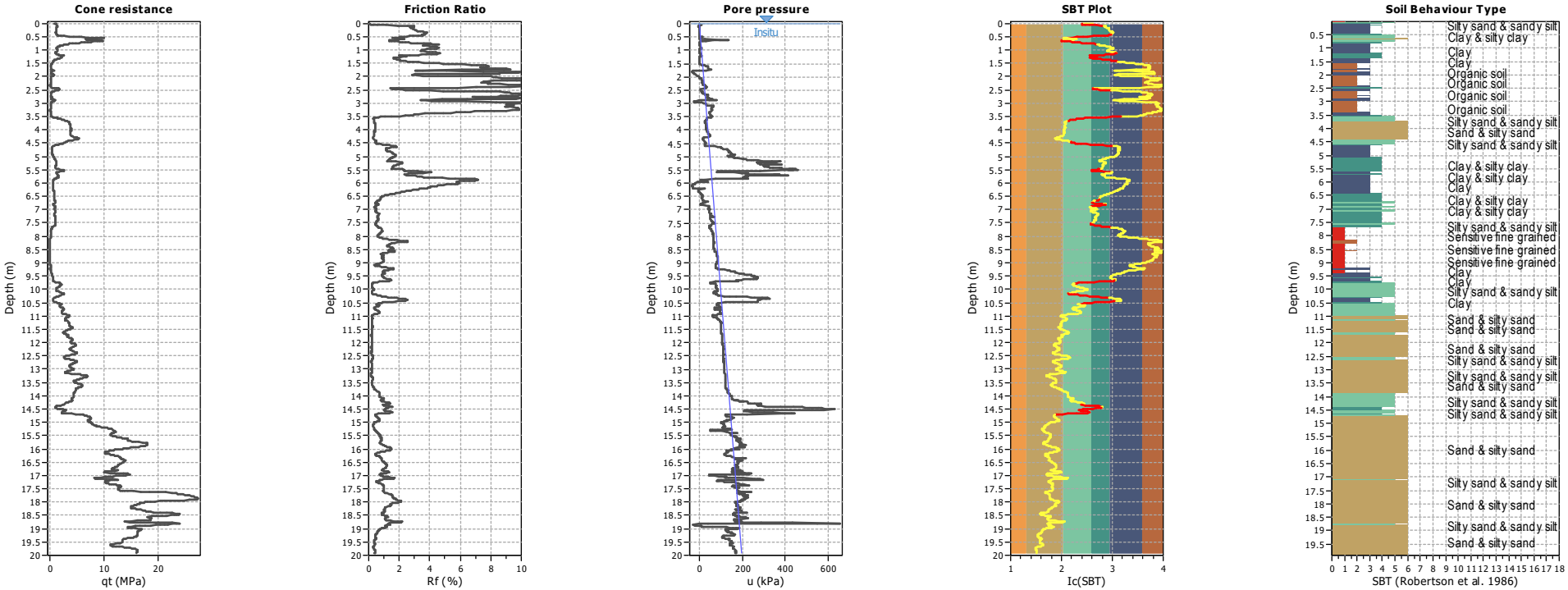
F.S. color scheme

- 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



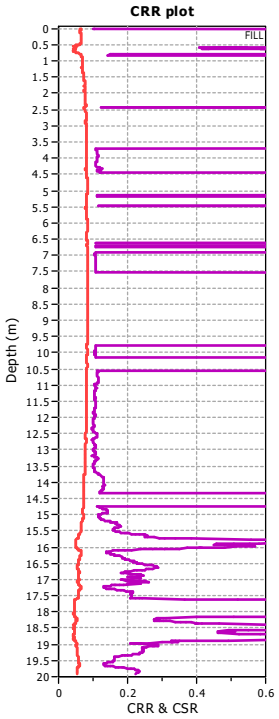
Input parameters and analysis data

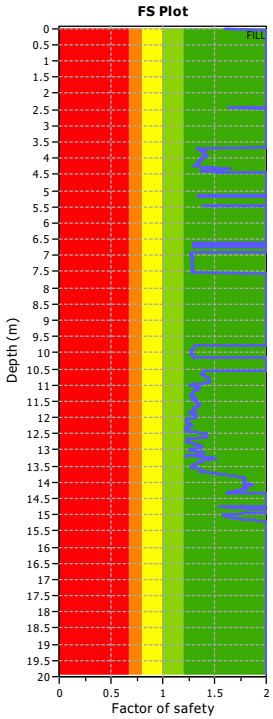
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	0.90 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.90 m	Limit depth:	N/A

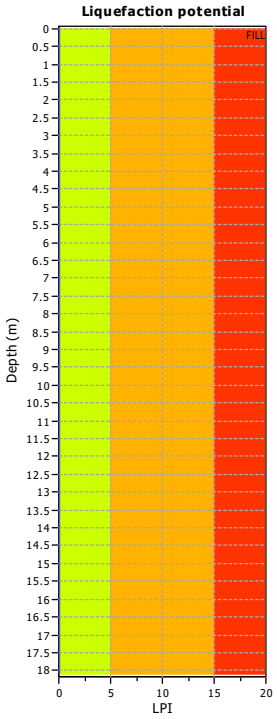
SBT legend

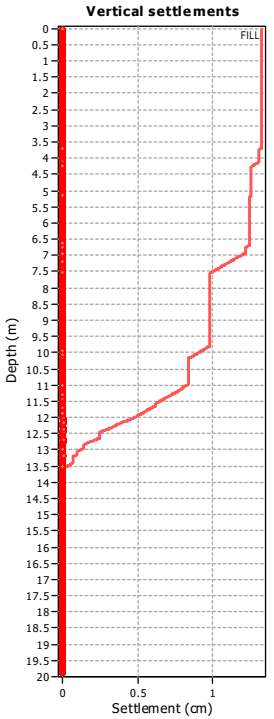
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

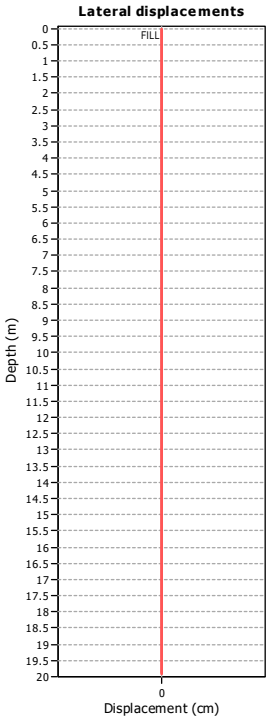
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	0.90 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.90 m	Limit depth:	N/A

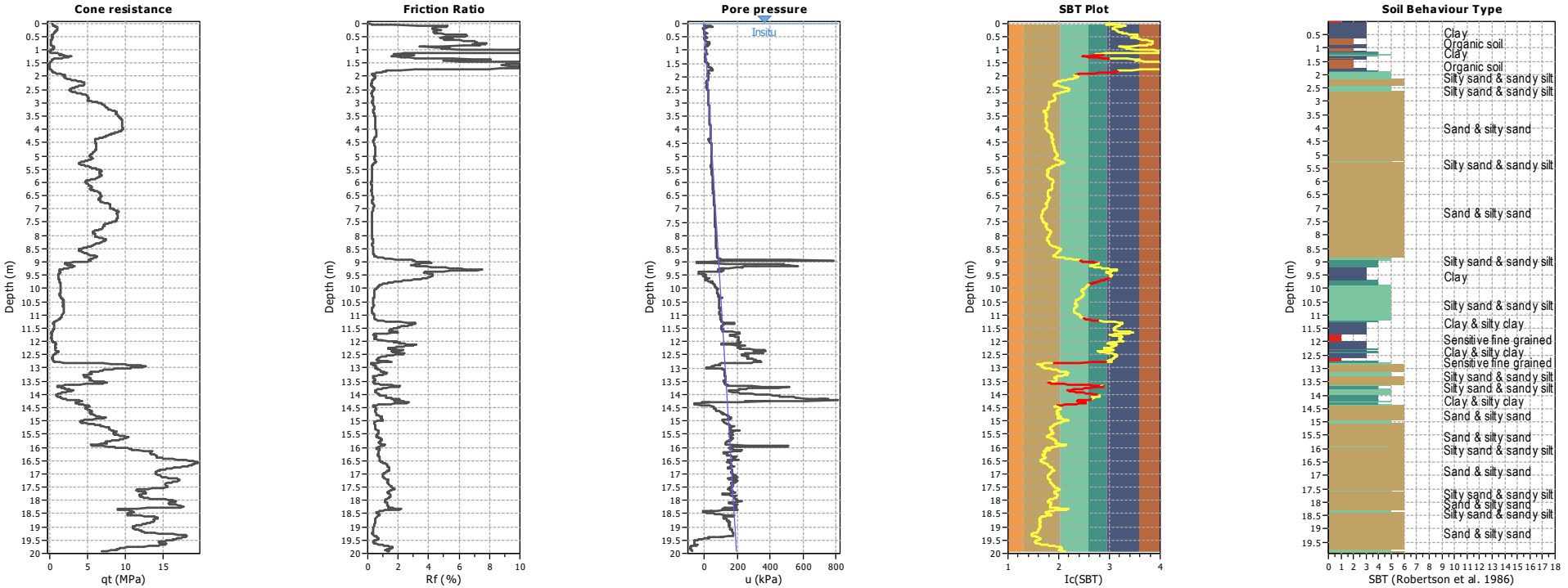
F.S. color scheme

- 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



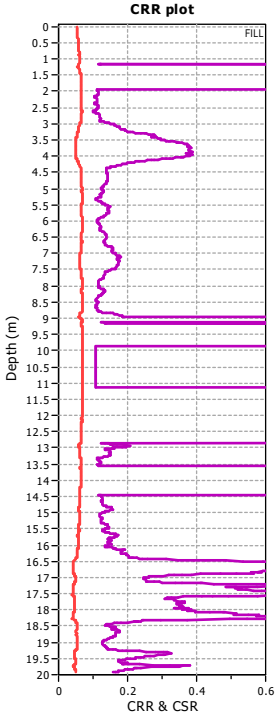
Input parameters and analysis data

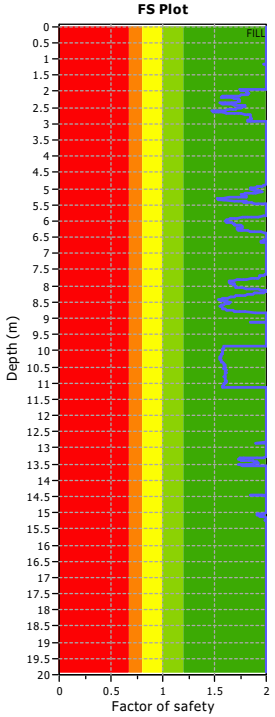
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

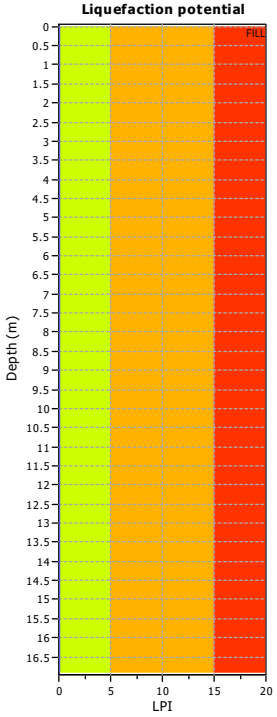
SBT legend

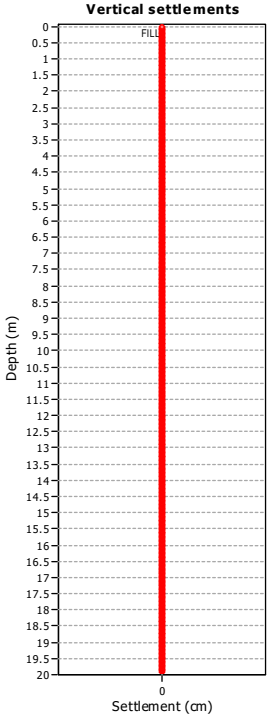
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

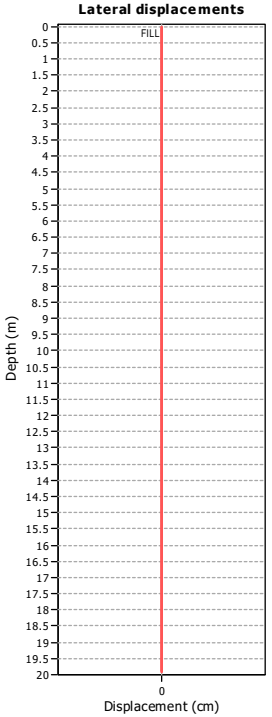
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

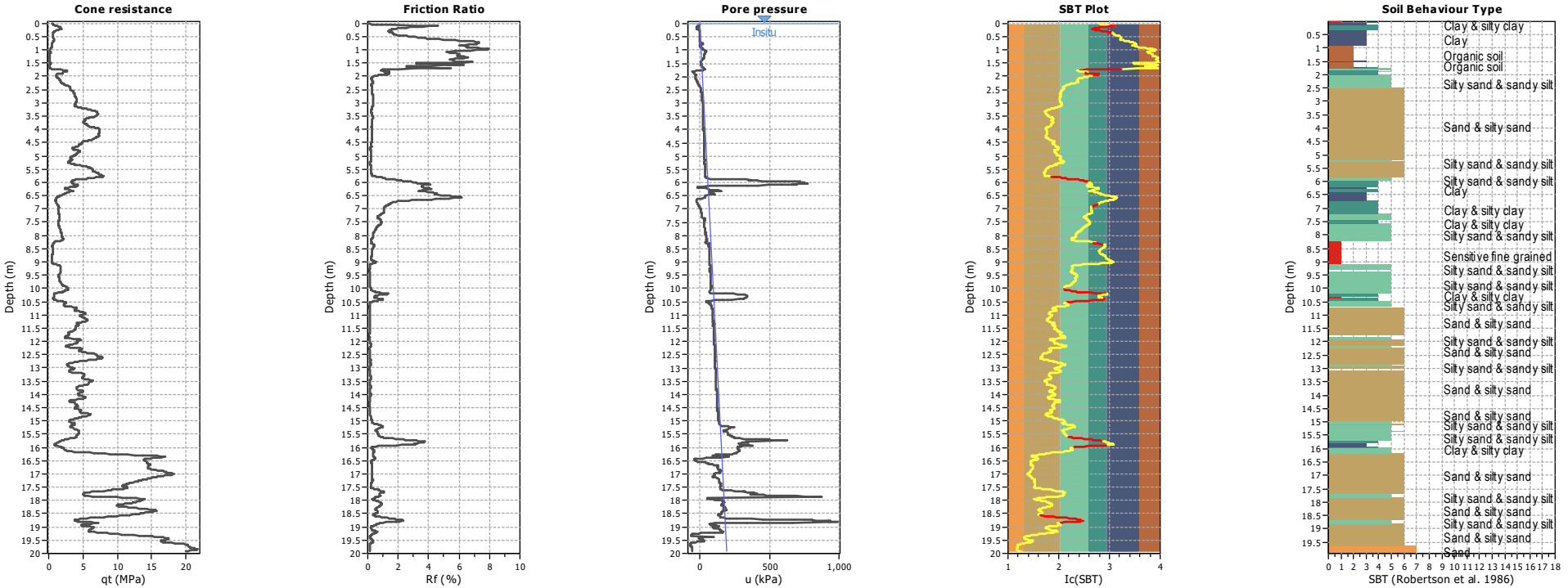
F.S. color scheme

- 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



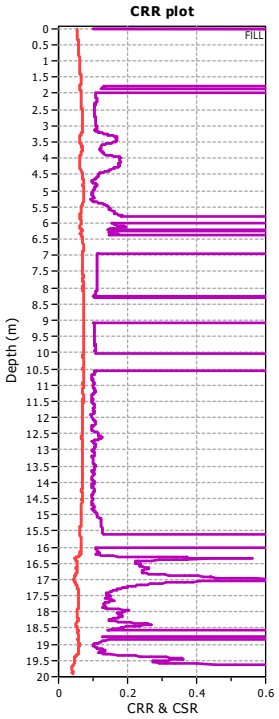
Input parameters and analysis data

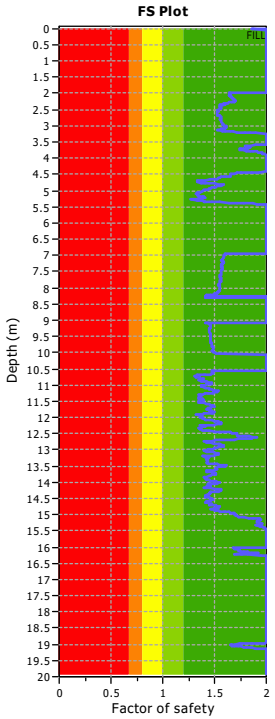
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

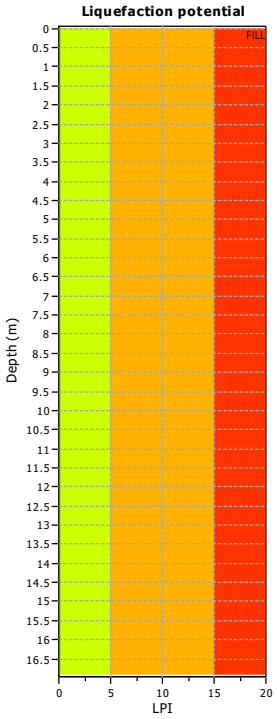
SBT legend

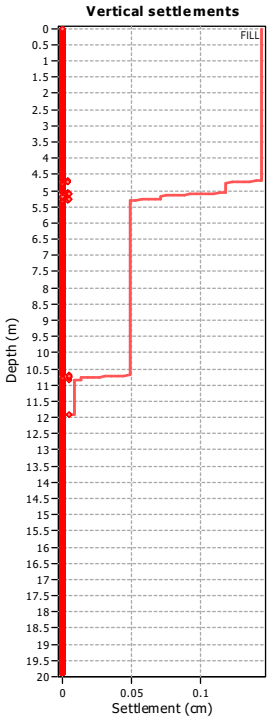
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

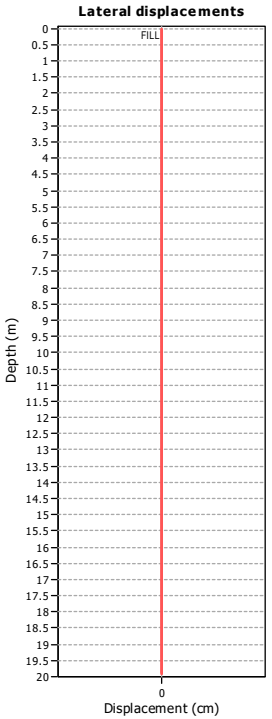
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

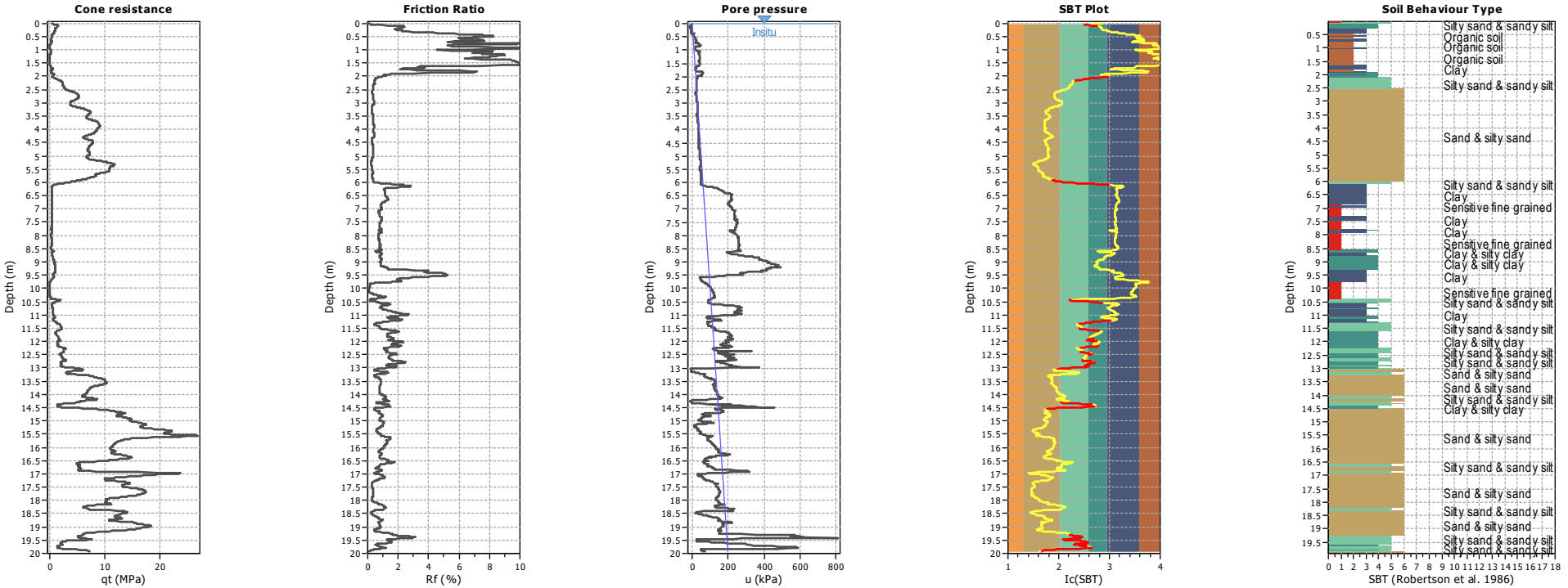
F.S. color scheme

- 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



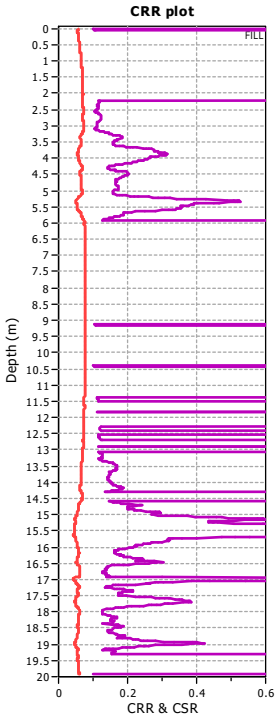
Input parameters and analysis data

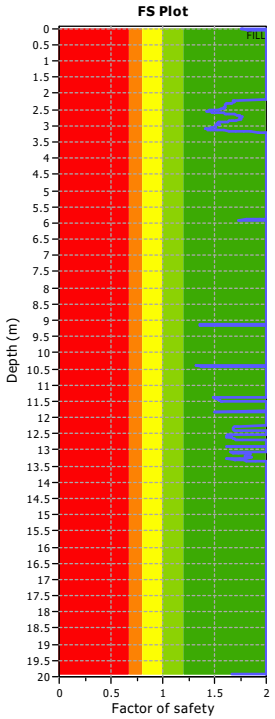
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

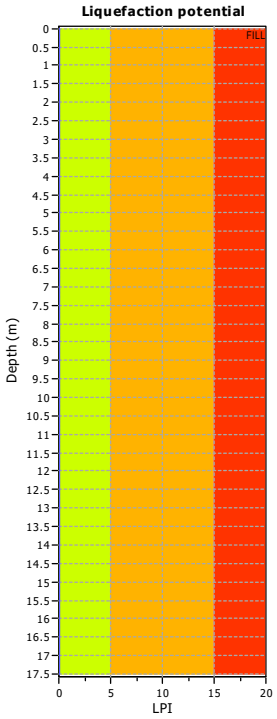
SBT legend

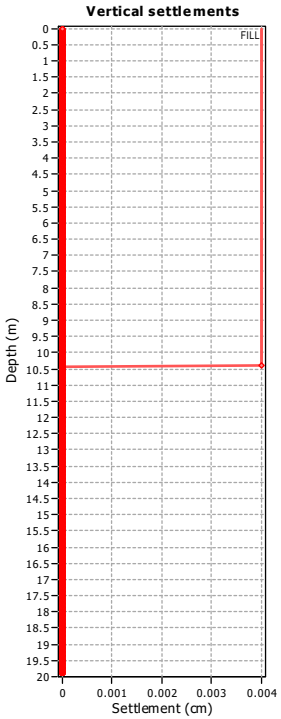
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

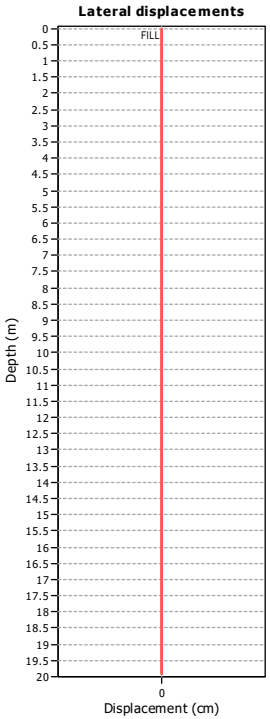
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

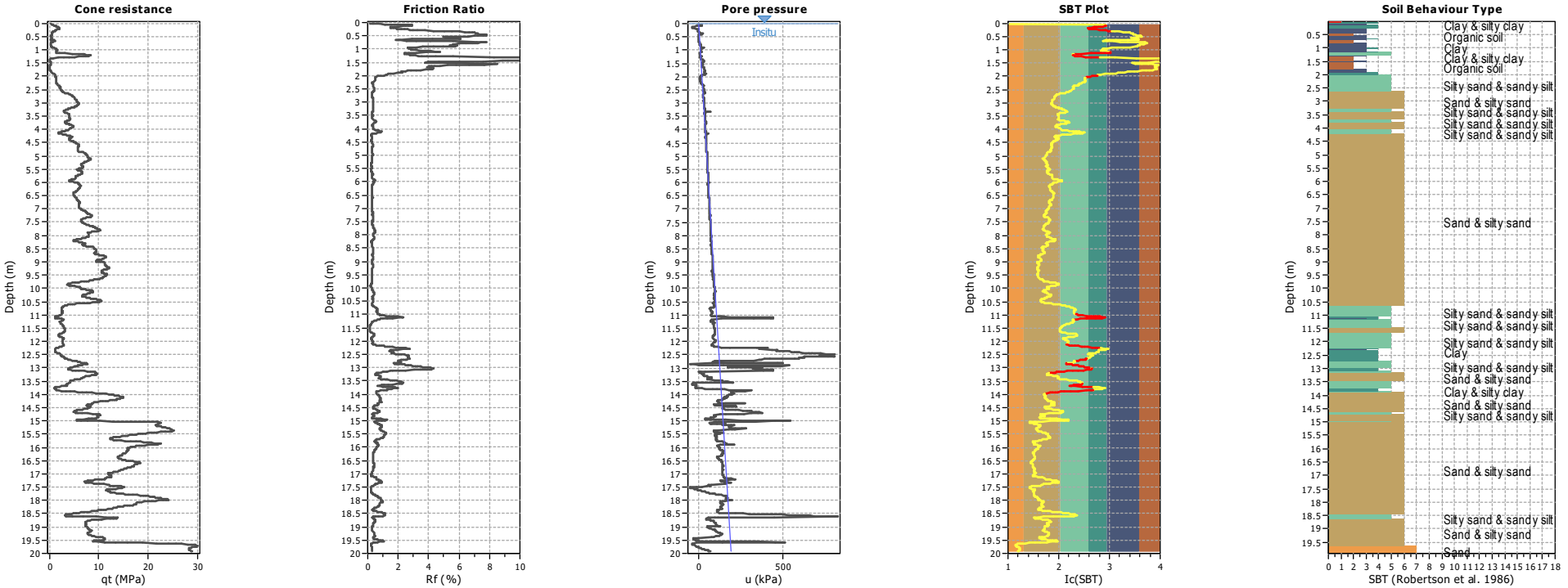
F.S. color scheme

- 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



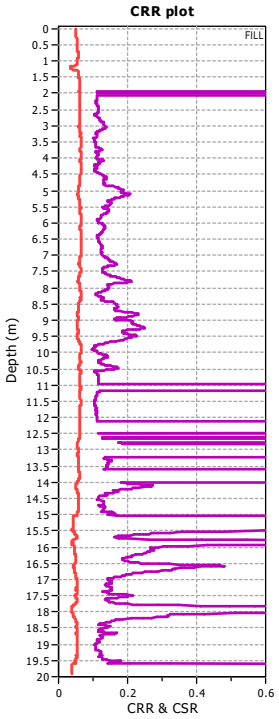
Input parameters and analysis data

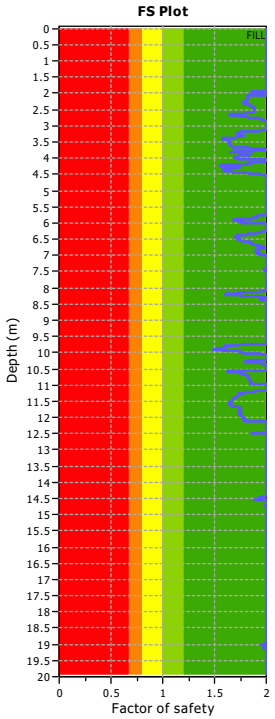
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.80 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.80 m	Limit depth:	N/A

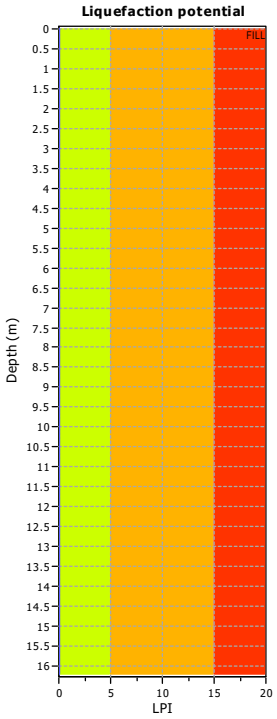
SBT legend

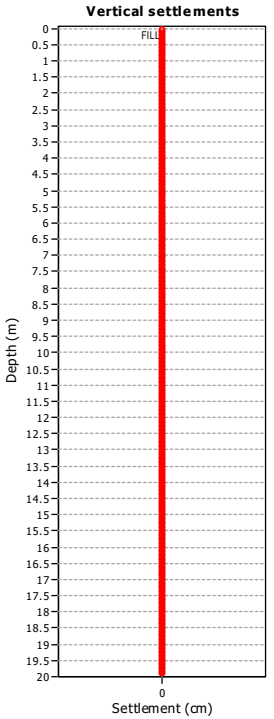
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

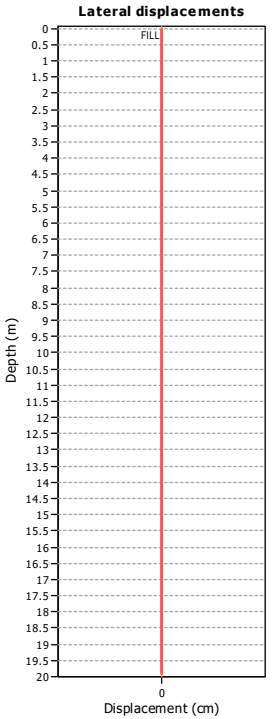
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.80 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.80 m	Limit depth:	N/A

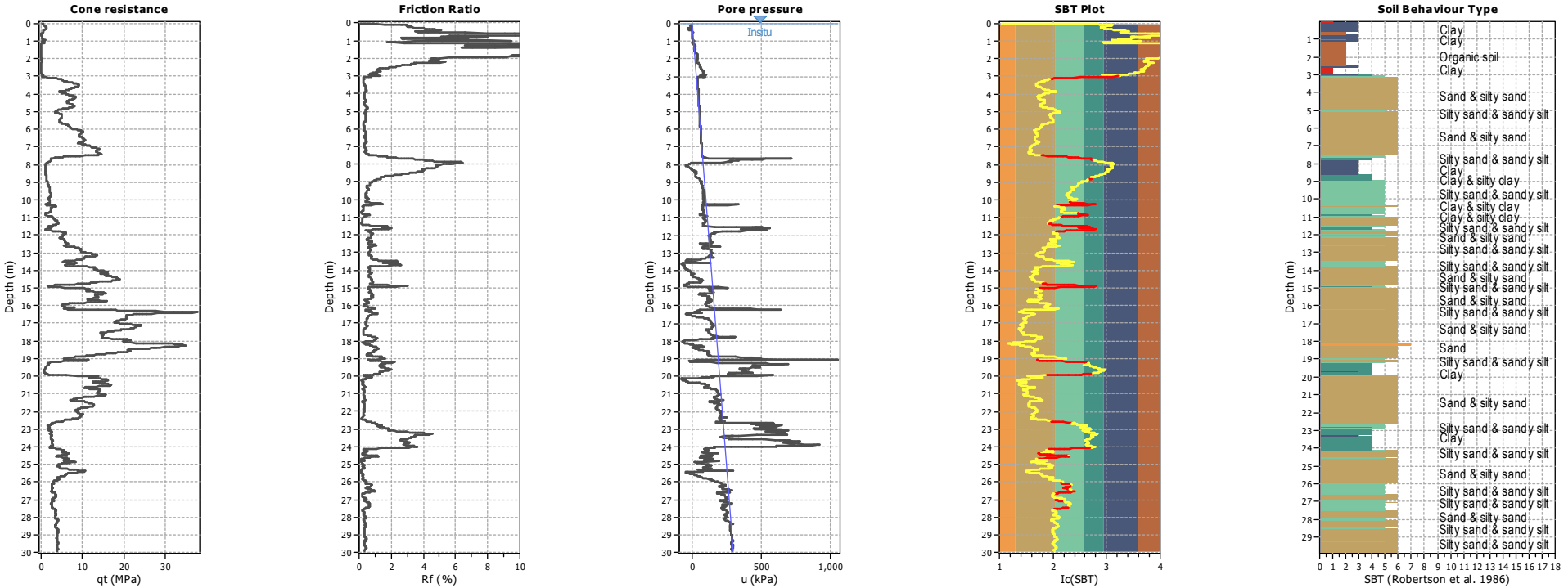
F.S. color scheme

- 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



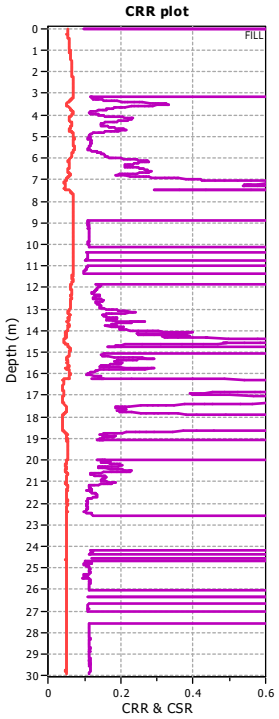
Input parameters and analysis data

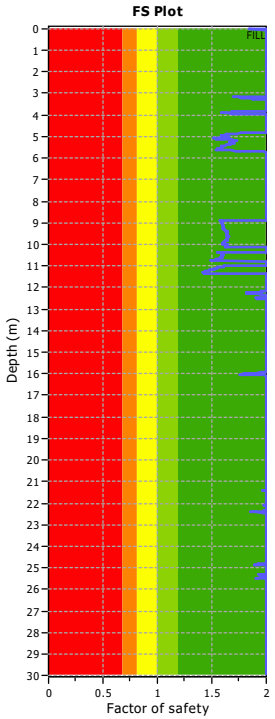
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

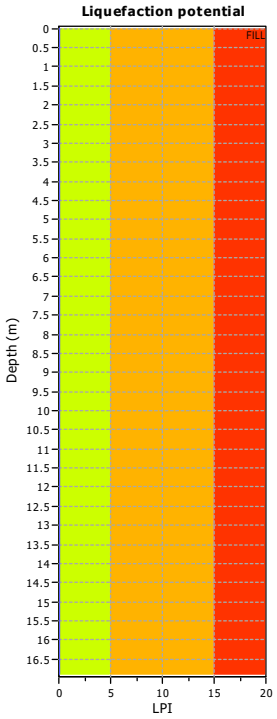
SBT legend

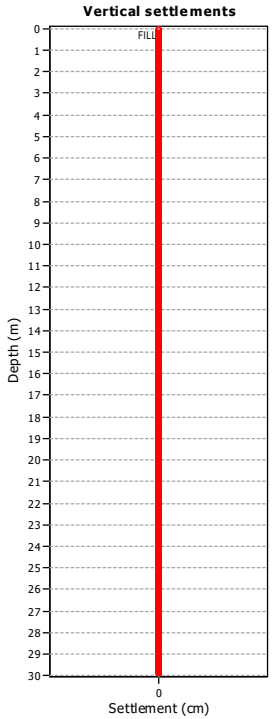
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

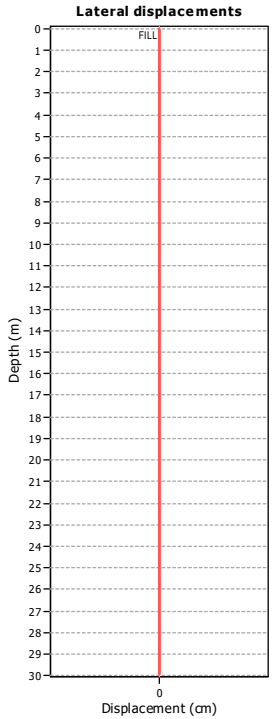
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

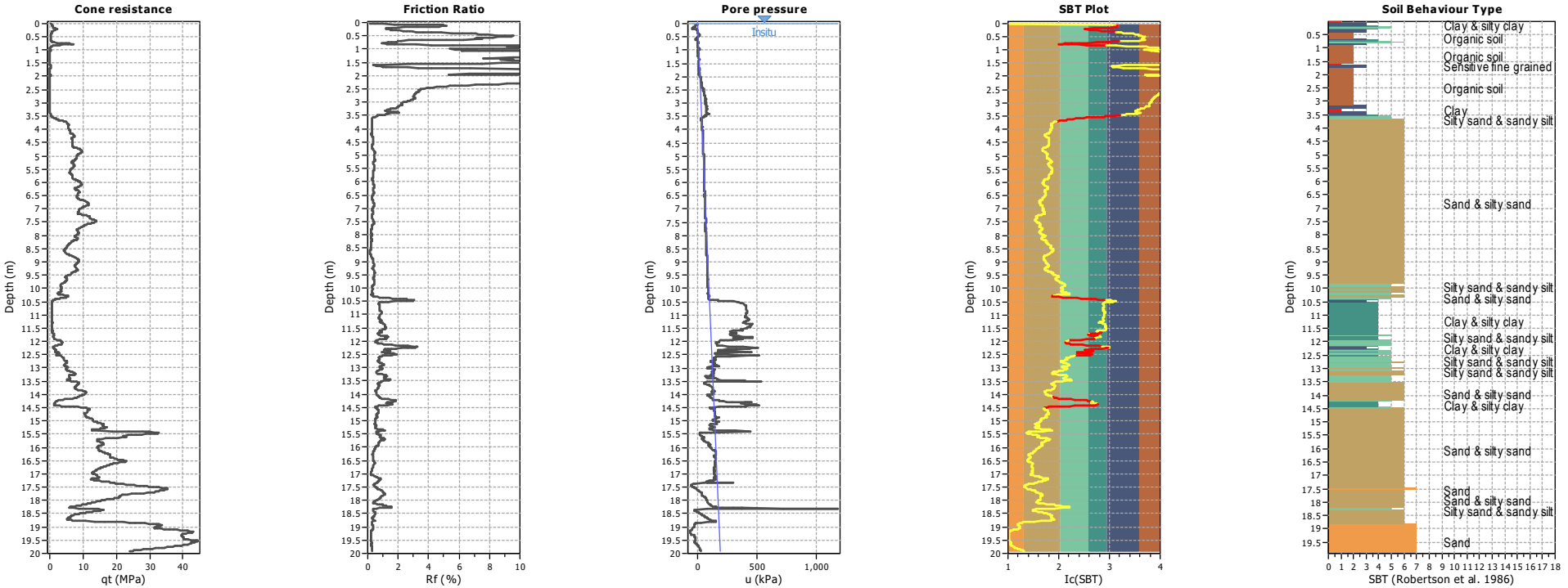
F.S. color scheme

- 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



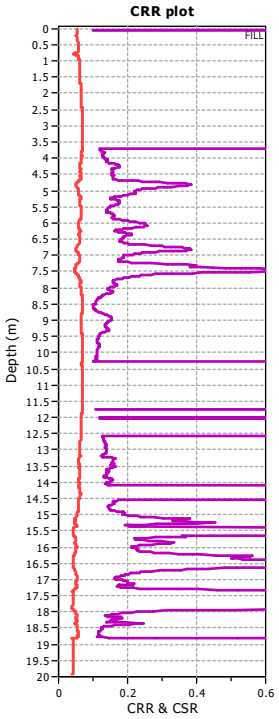
Input parameters and analysis data

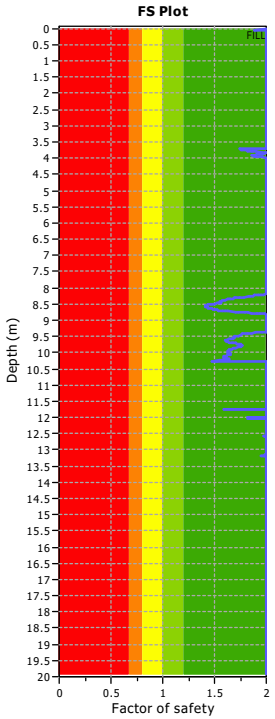
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.30 m	Limit depth:	N/A

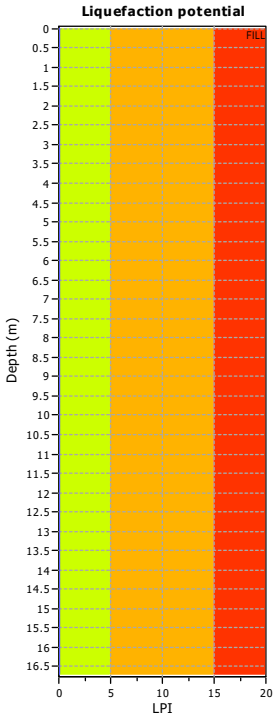
SBT legend

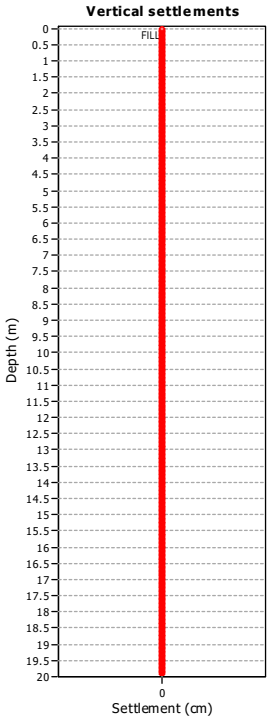
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

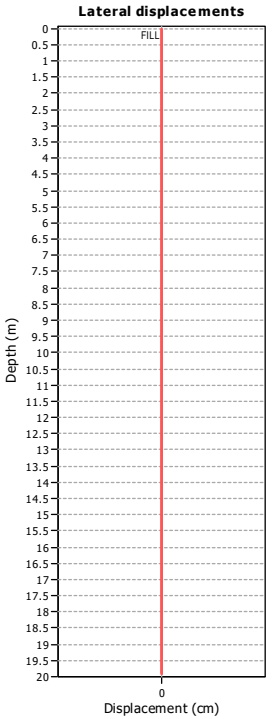
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.30 m	Limit depth:	N/A

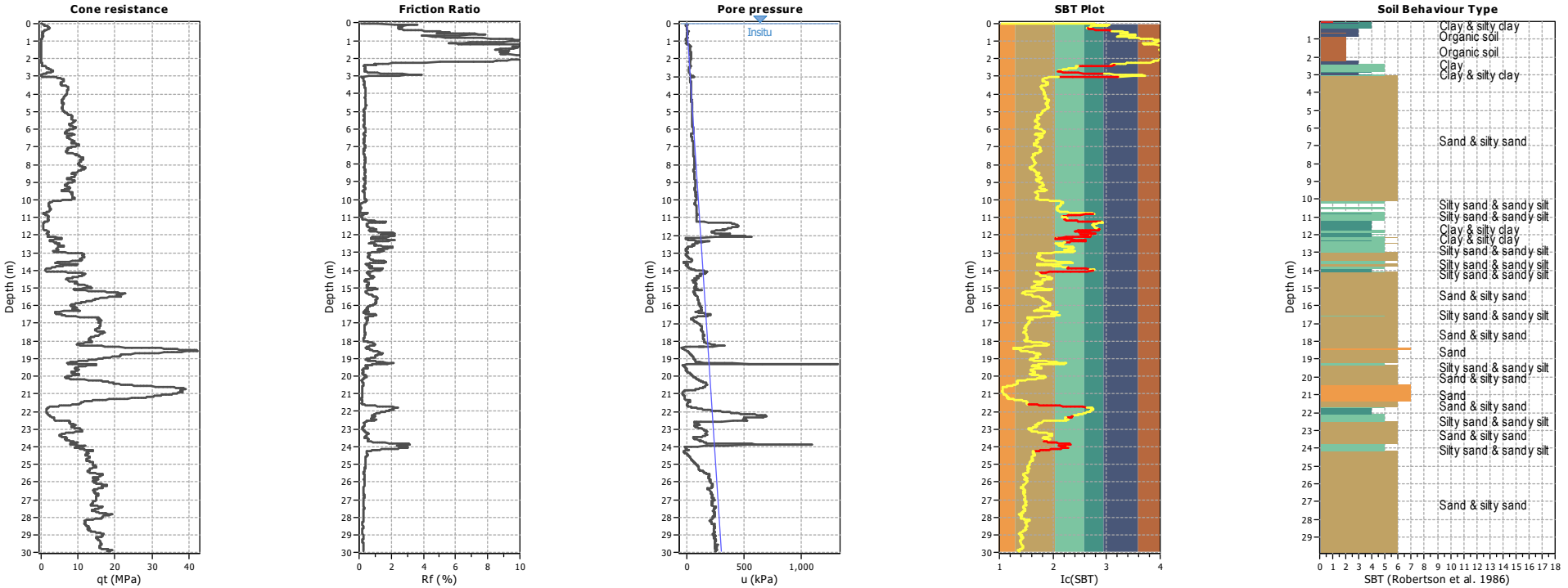
F.S. color scheme

- 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



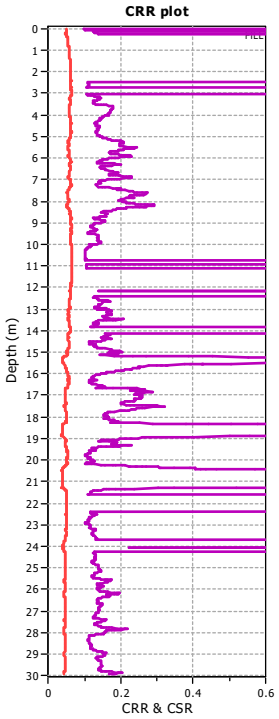
Input parameters and analysis data

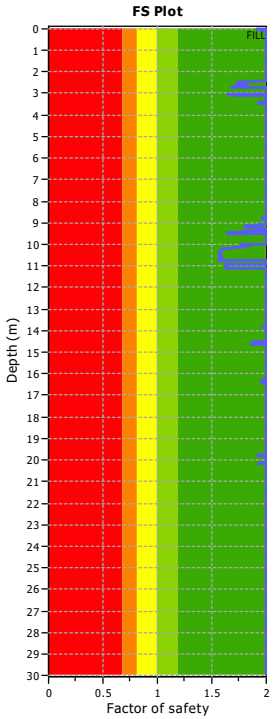
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.60 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.60 m	Limit depth:	N/A

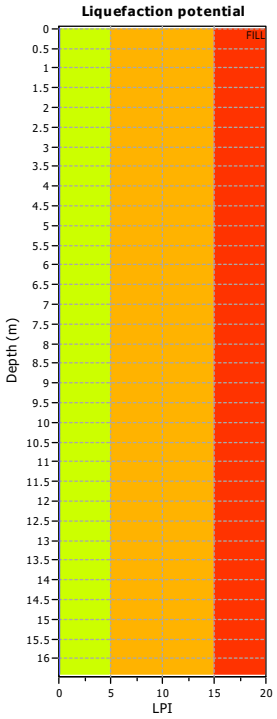
SBT legend

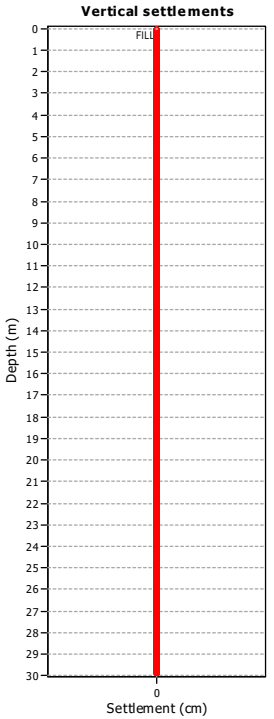
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

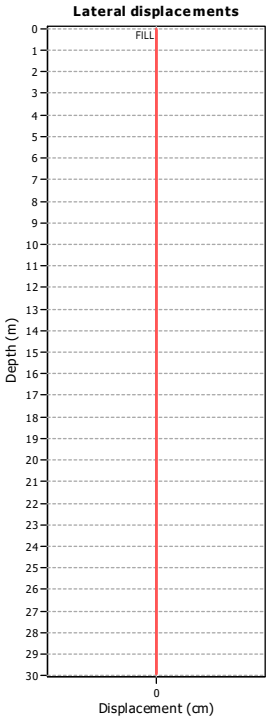
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.60 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.60 m	Limit depth:	N/A

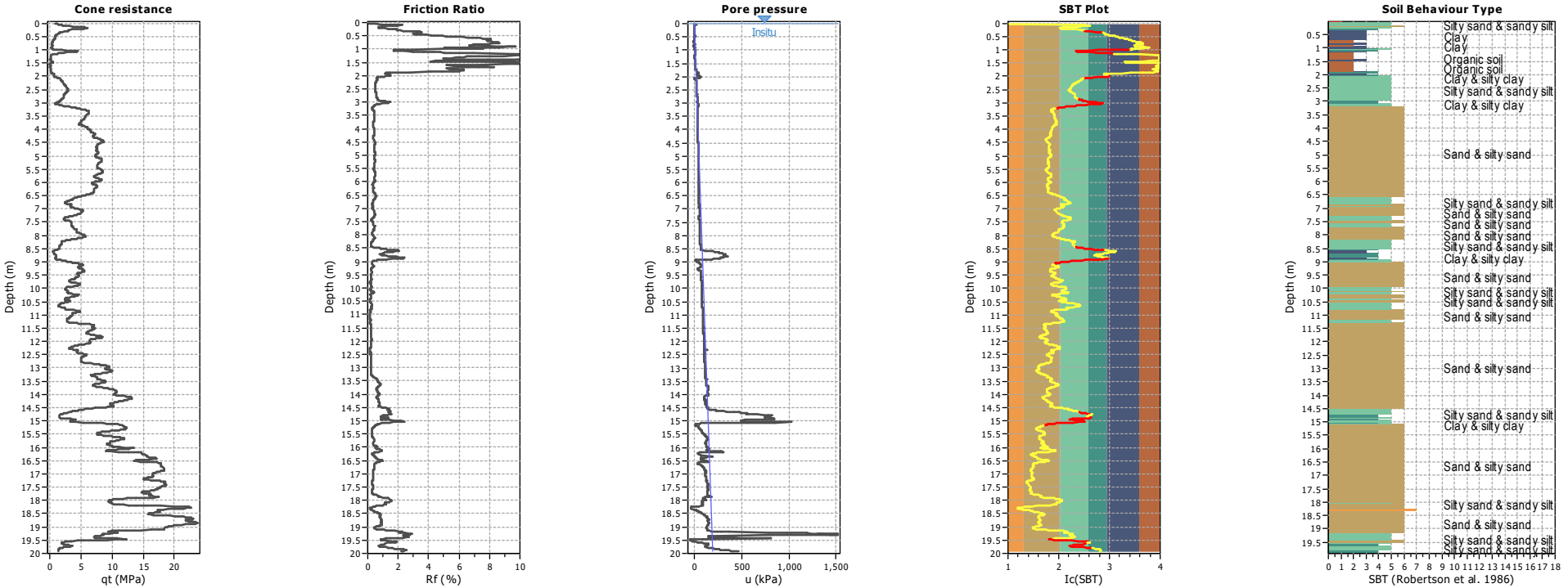
F.S. color scheme

- 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



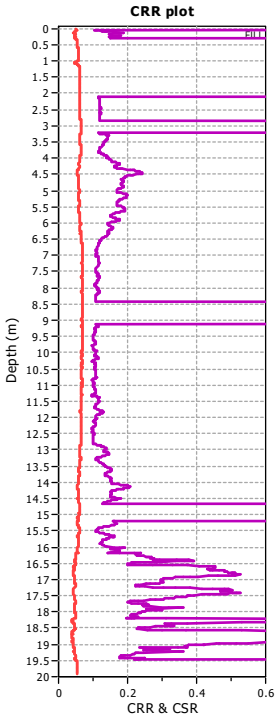
Input parameters and analysis data

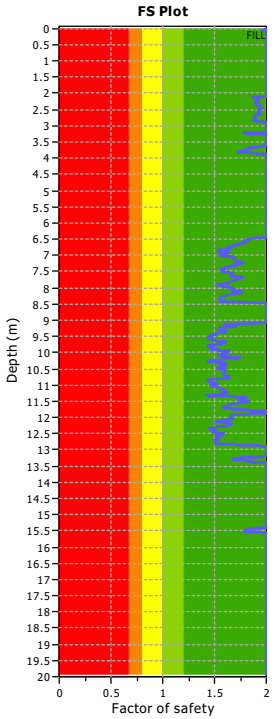
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

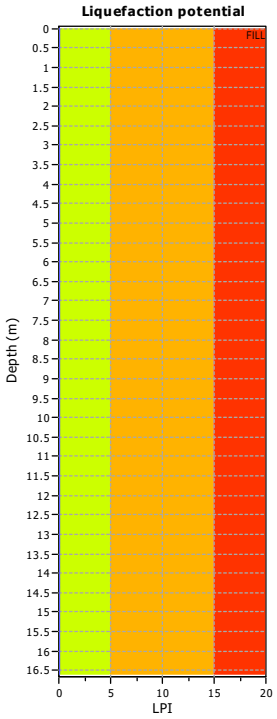
SBT legend

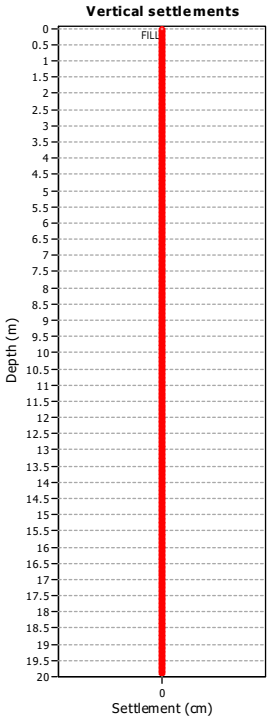
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

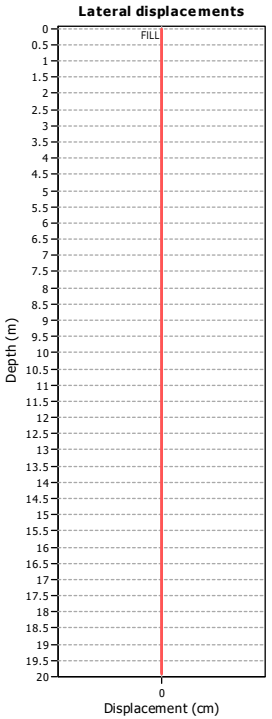
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

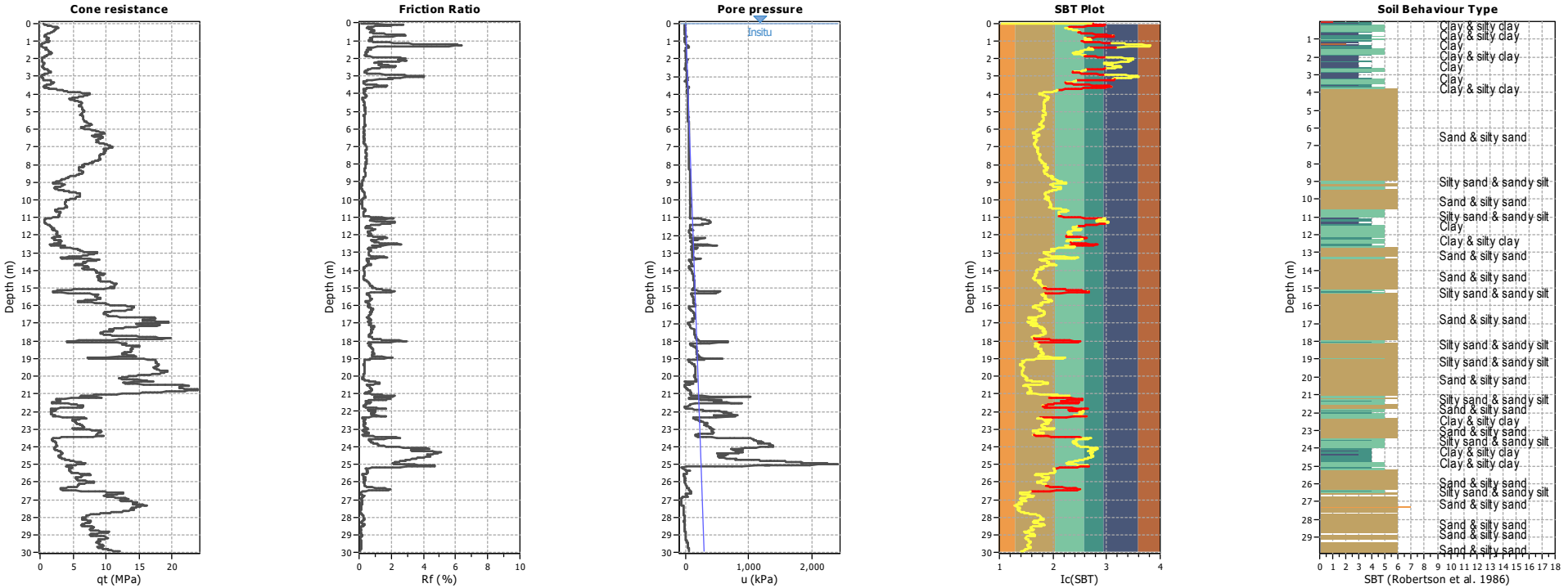
F.S. color scheme

- 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



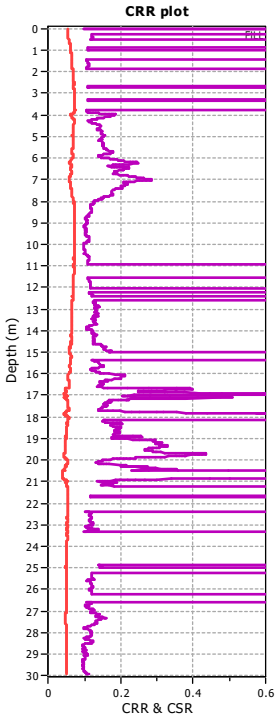
Input parameters and analysis data

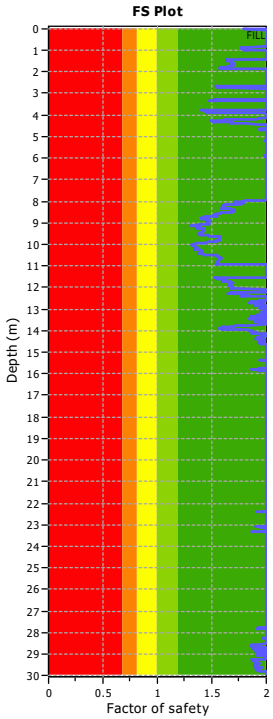
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.70 m	Limit depth:	N/A

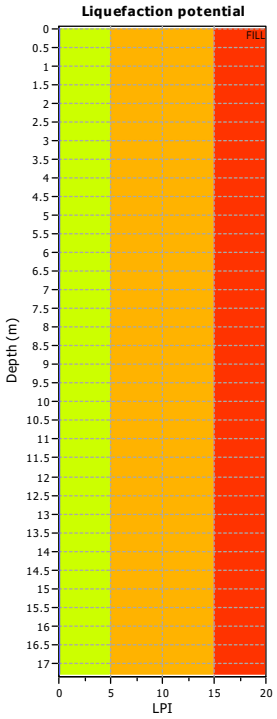
SBT legend

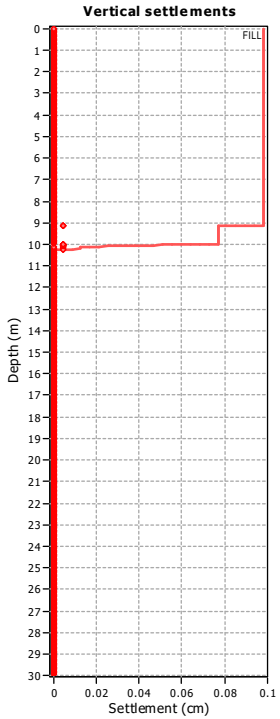
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

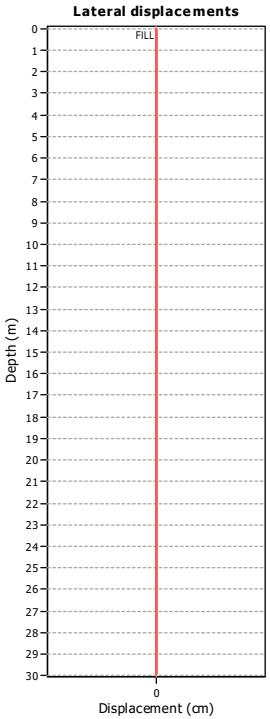
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.70 m	Limit depth:	N/A

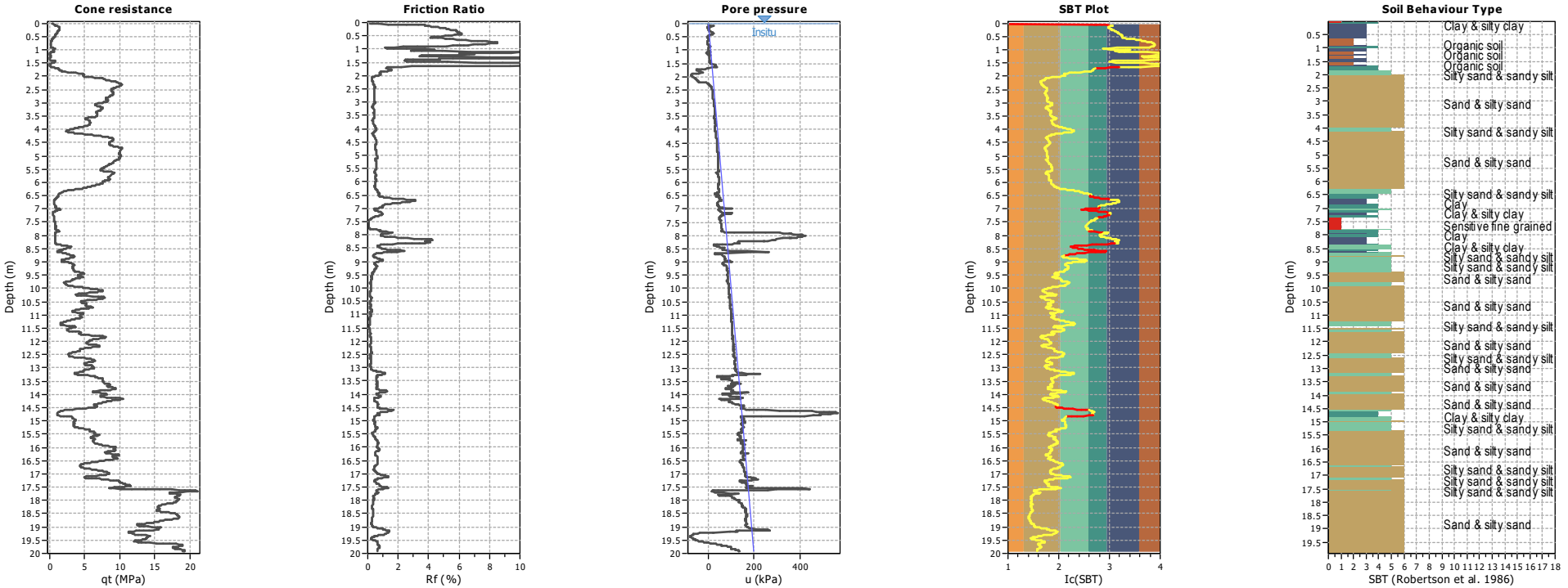
F.S. color scheme

- 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



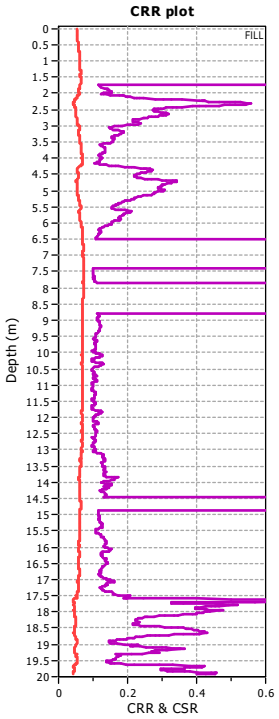
Input parameters and analysis data

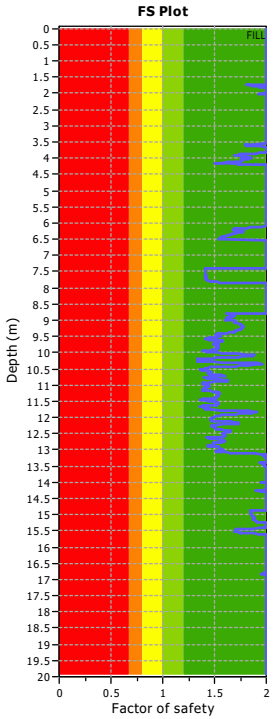
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

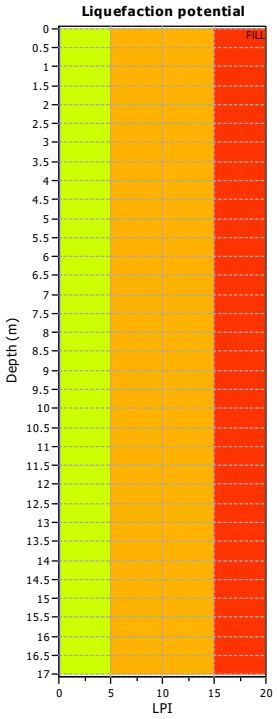
SBT legend

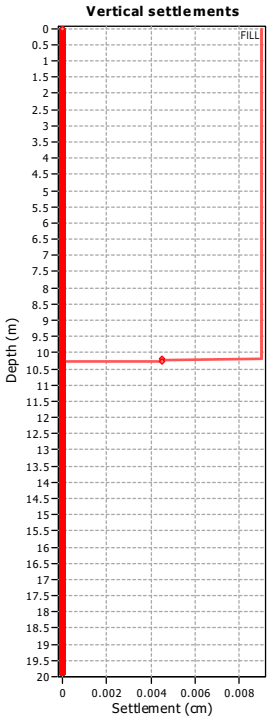
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

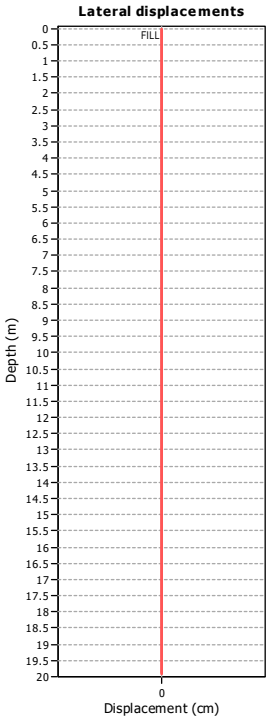
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

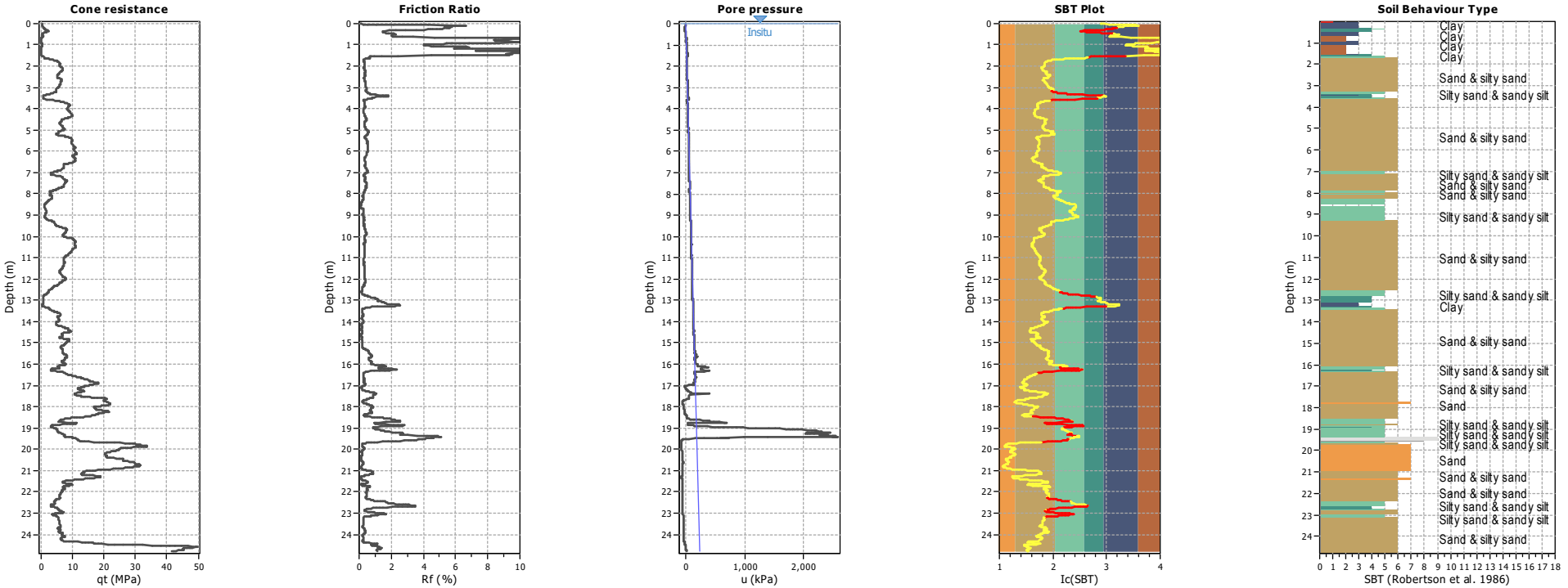
F.S. color scheme

- 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



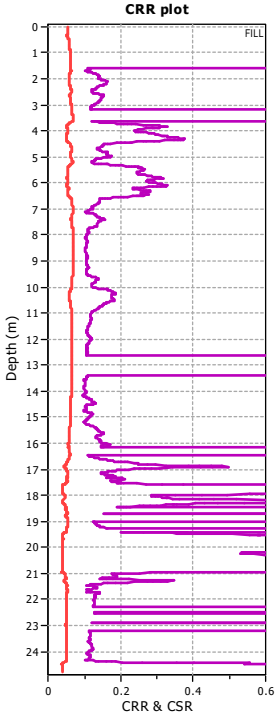
Input parameters and analysis data

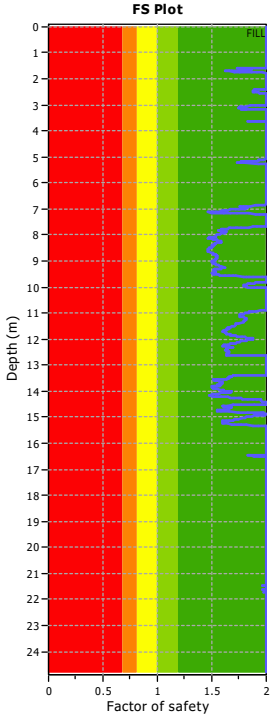
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

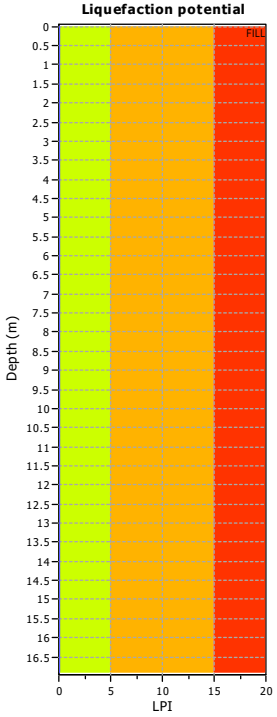
SBT legend

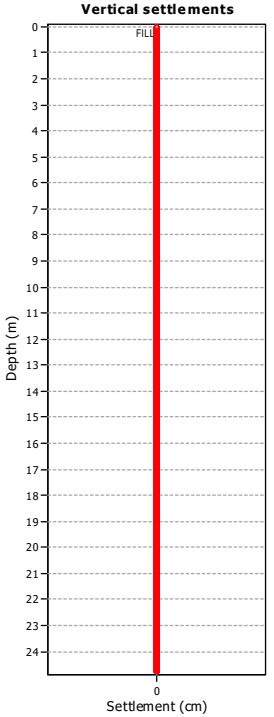
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

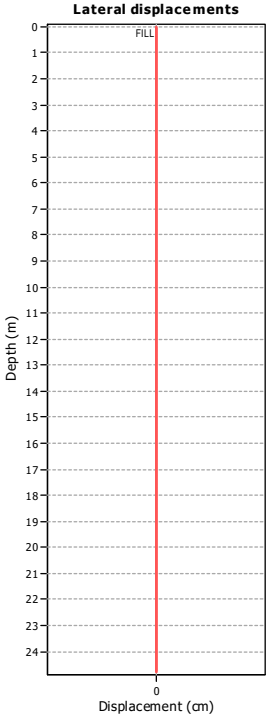
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

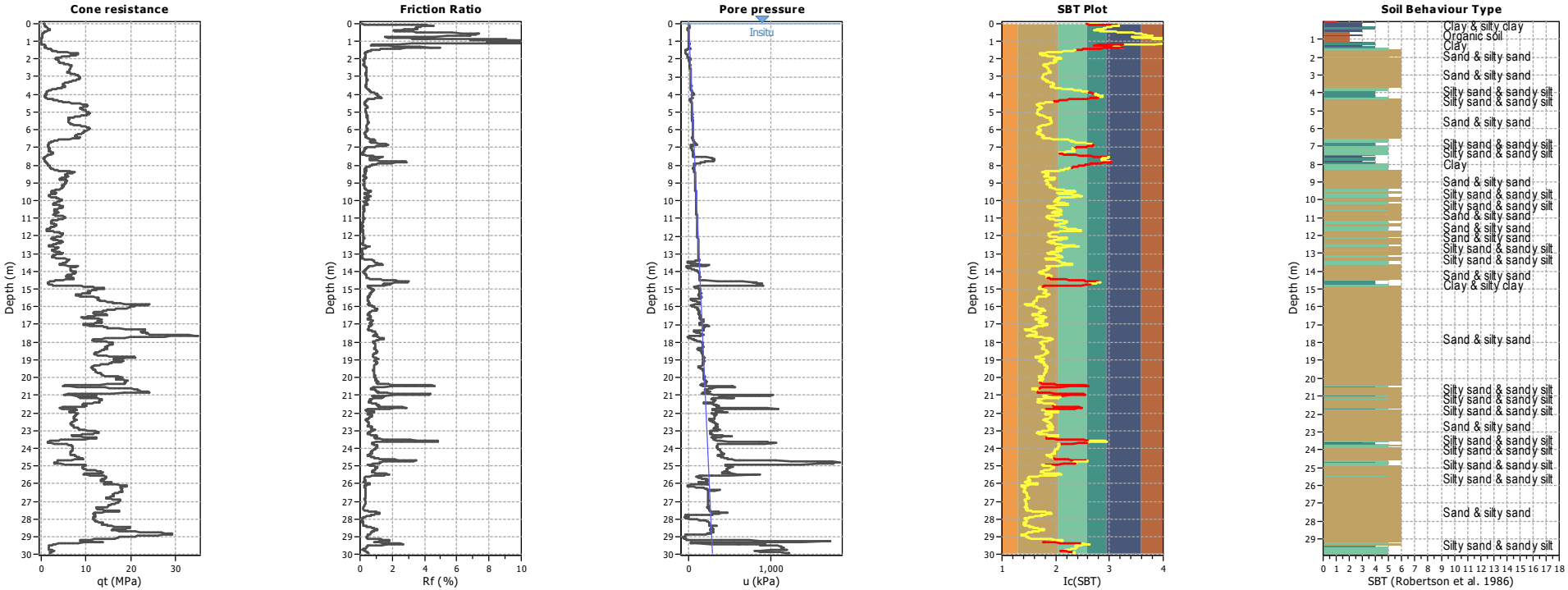
F.S. color scheme

- 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



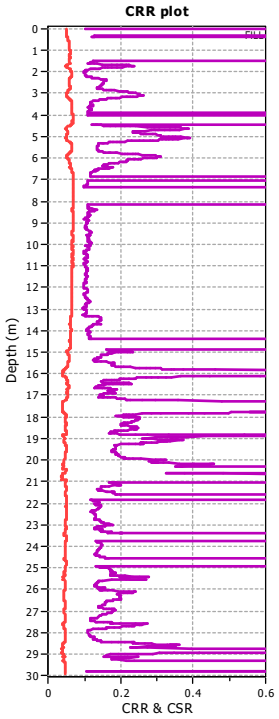
Input parameters and analysis data

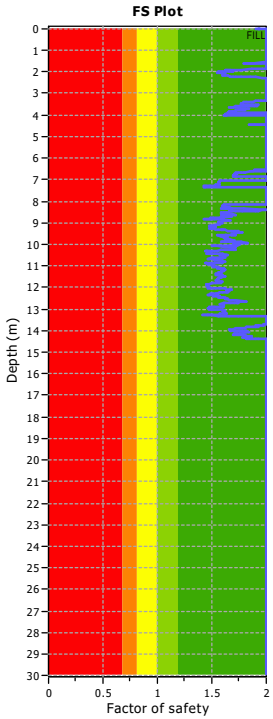
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.30 m	Limit depth:	N/A

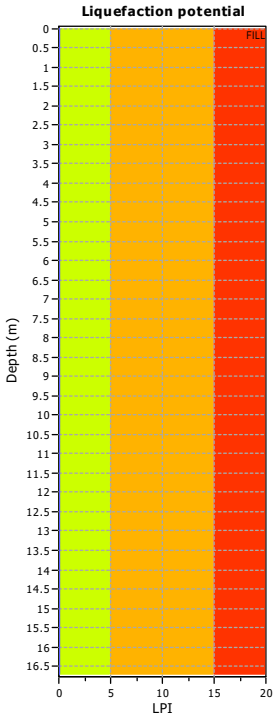
SBT legend

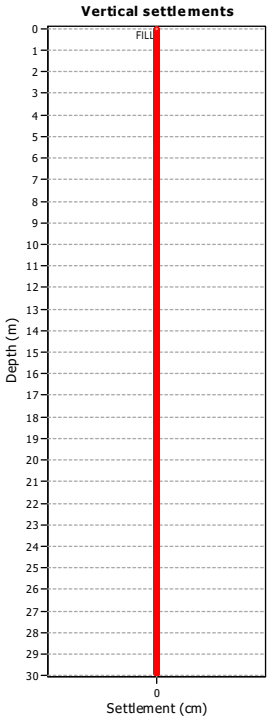
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

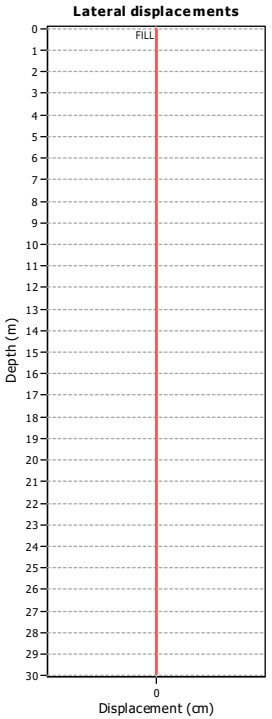
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.30 m	Limit depth:	N/A

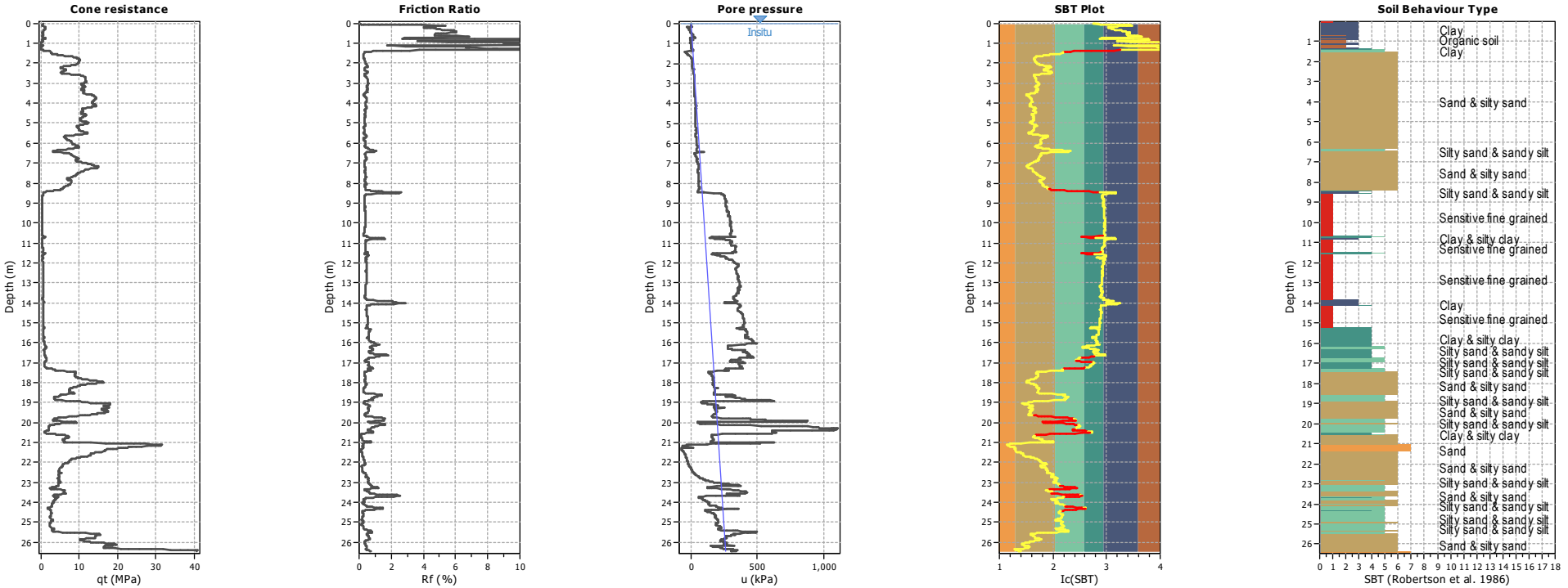
F.S. color scheme

- 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



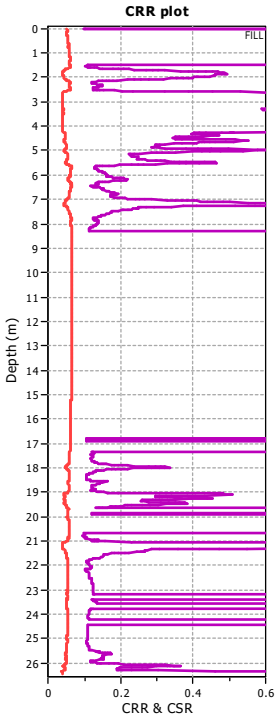
Input parameters and analysis data

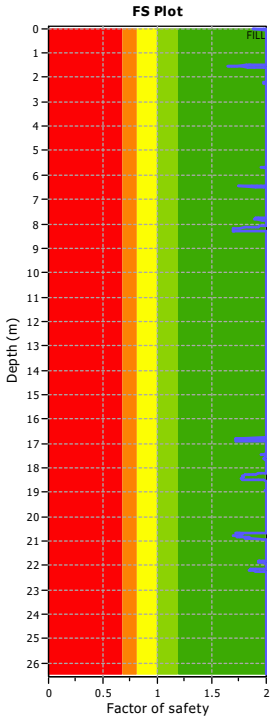
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

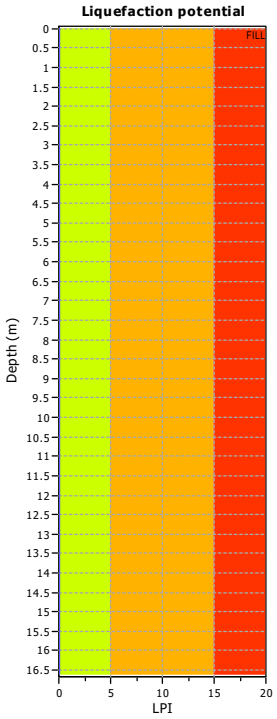
SBT legend

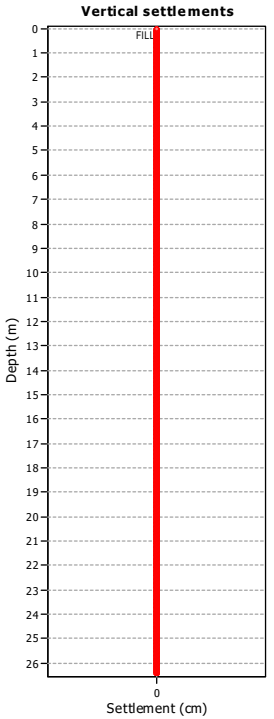
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

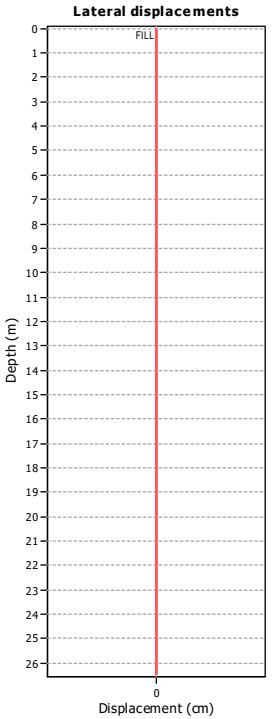
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
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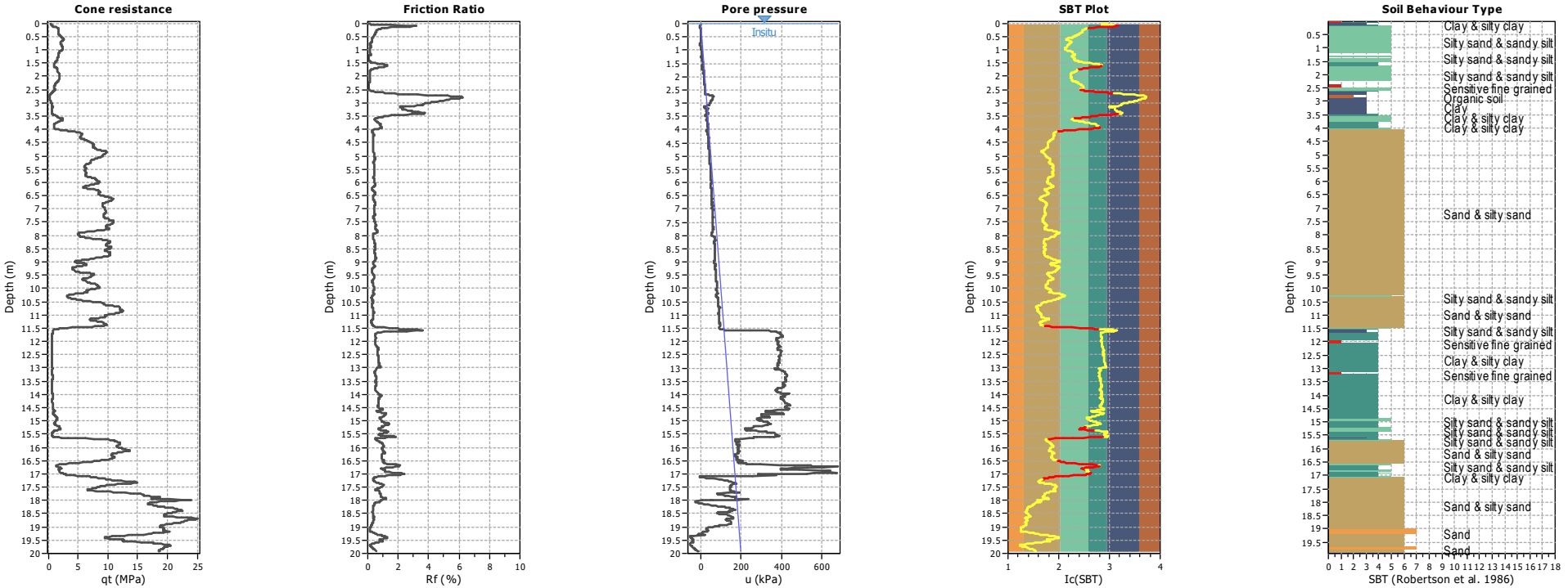
LPI color scheme

- Very high risk
- High risk
- Low risk

CPT basic interpretation plots



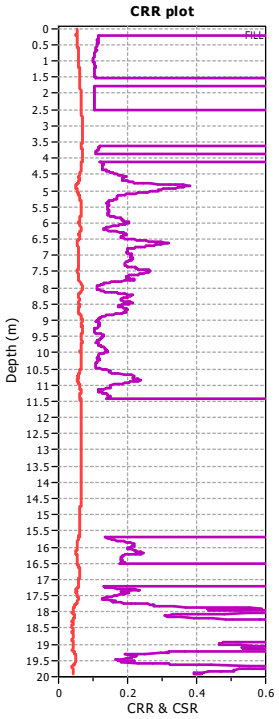
Input parameters and analysis data

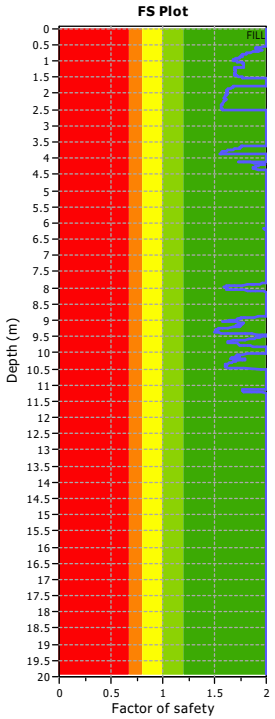
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

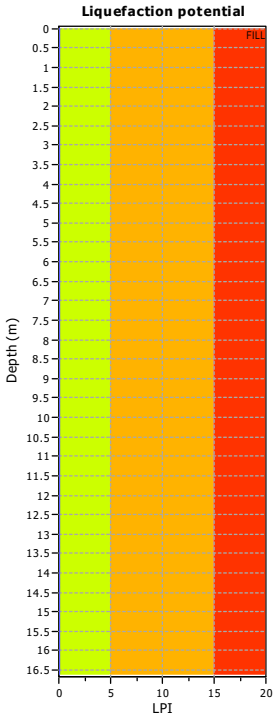
SBT legend

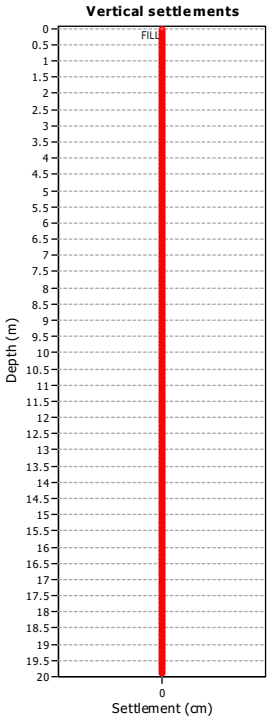
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

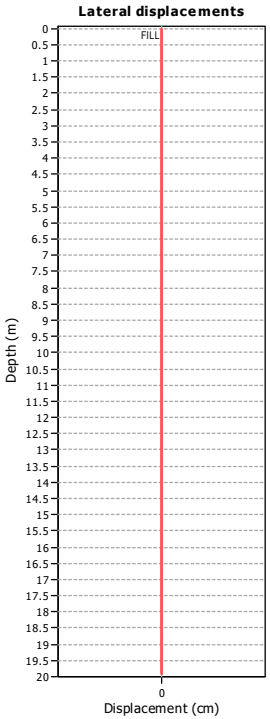
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

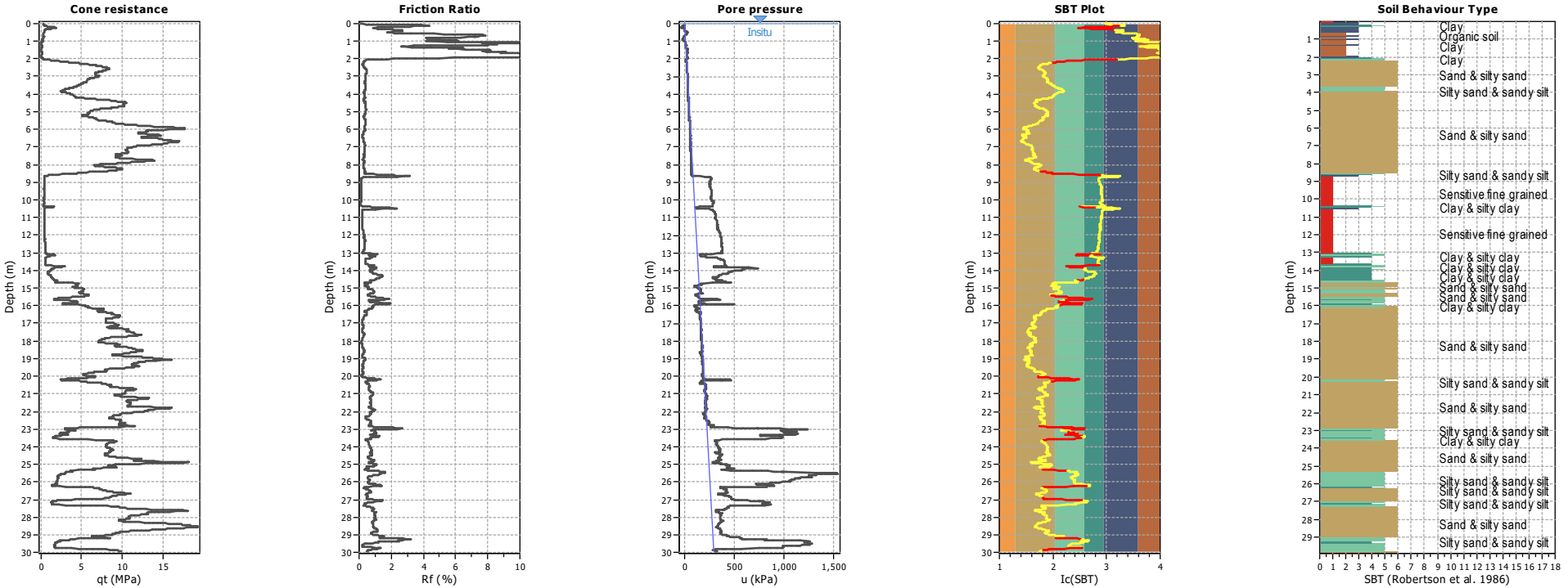
F.S. color scheme

- 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



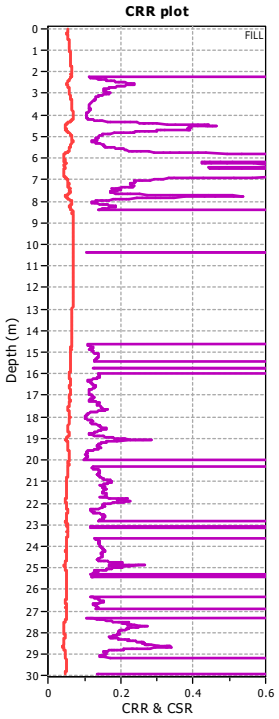
Input parameters and analysis data

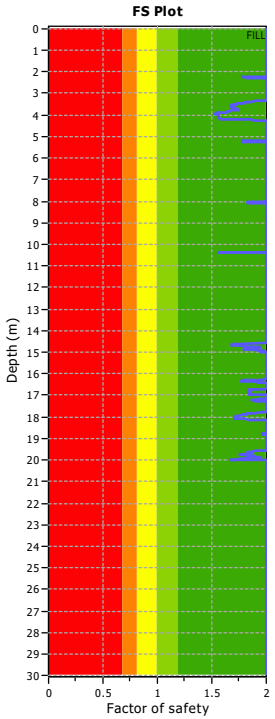
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.30 m	Limit depth:	N/A

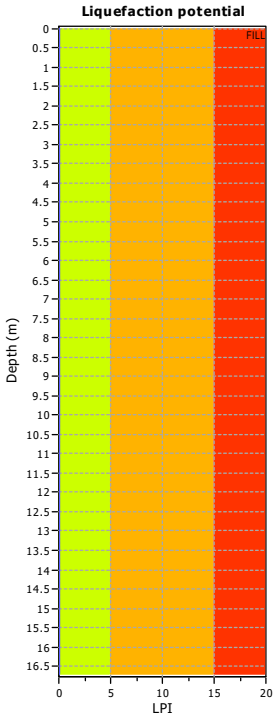
SBT legend

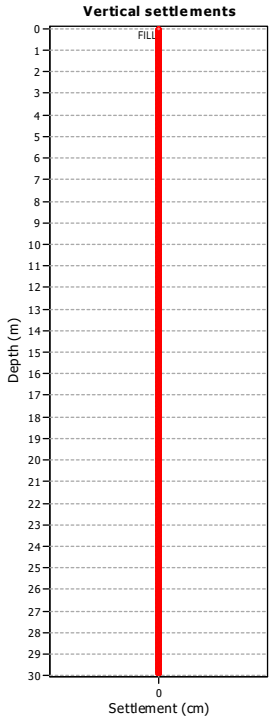
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

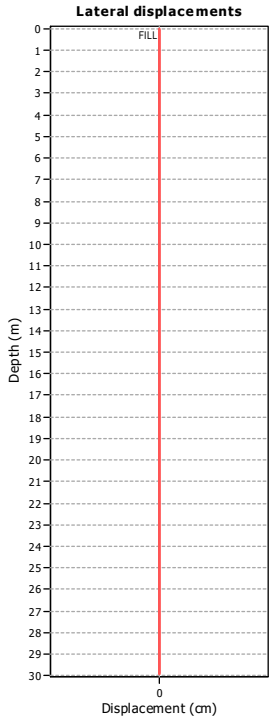
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.30 m	Limit depth:	N/A

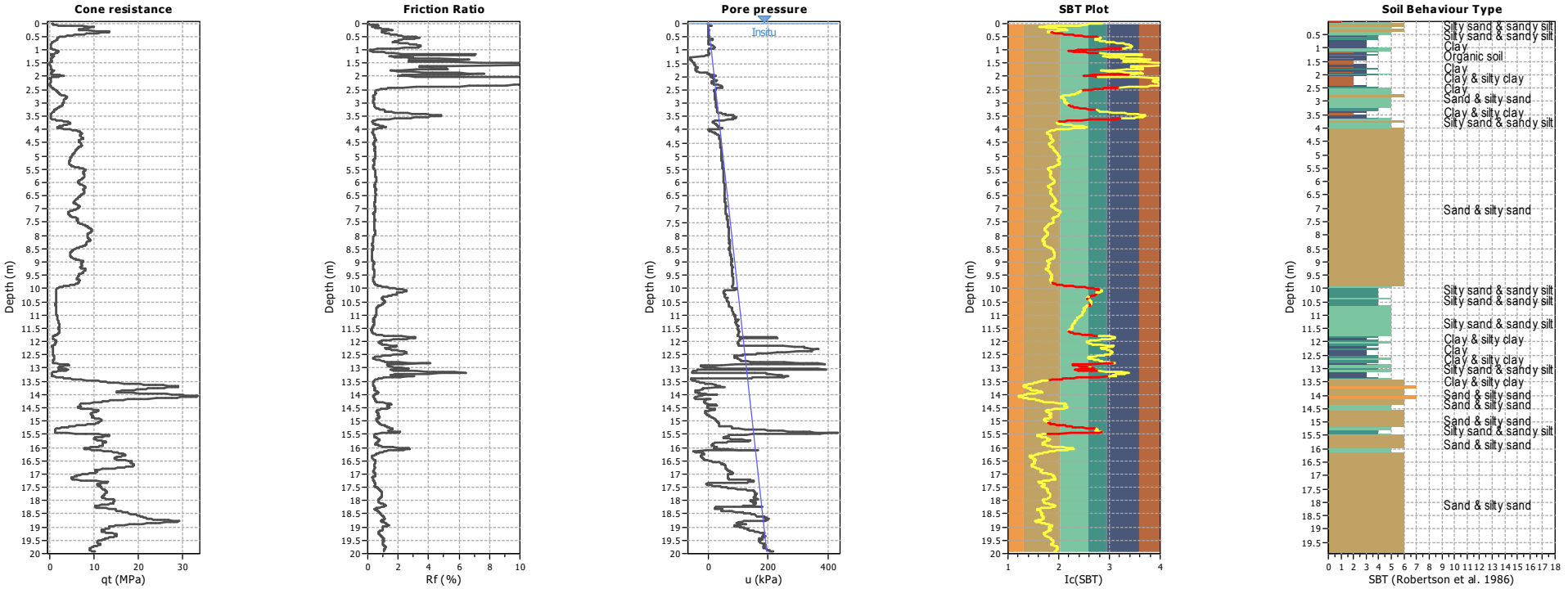
F.S. color scheme

- 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



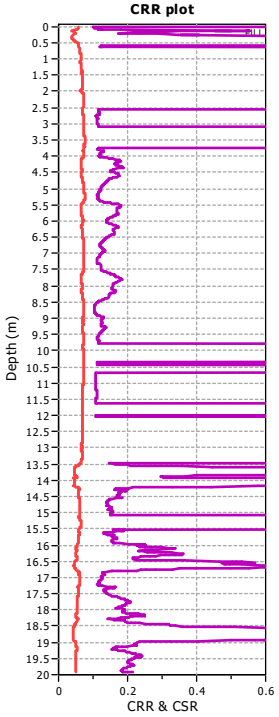
Input parameters and analysis data

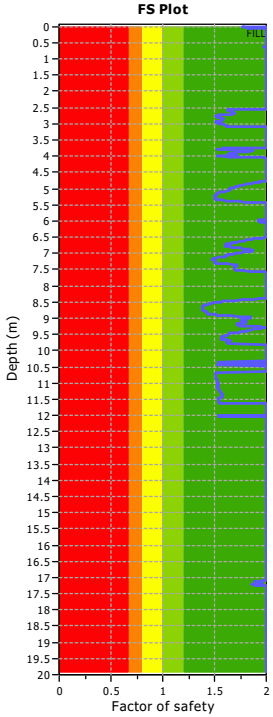
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

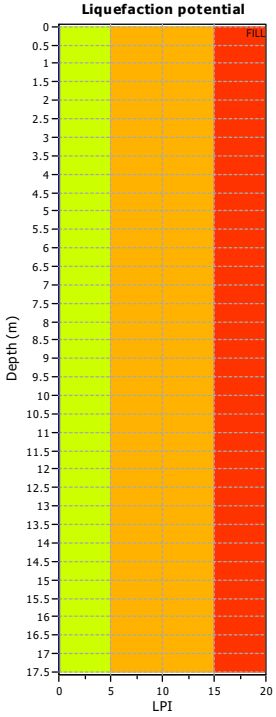
SBT legend

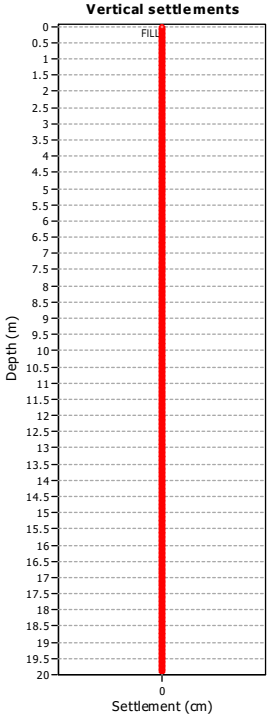
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

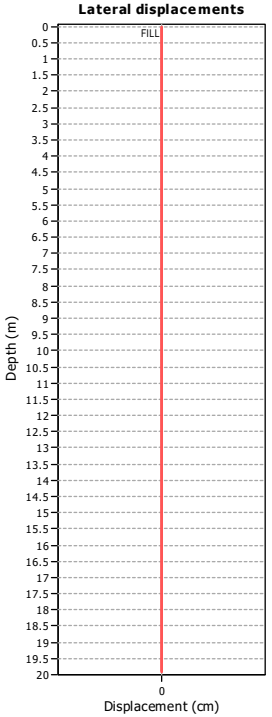
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

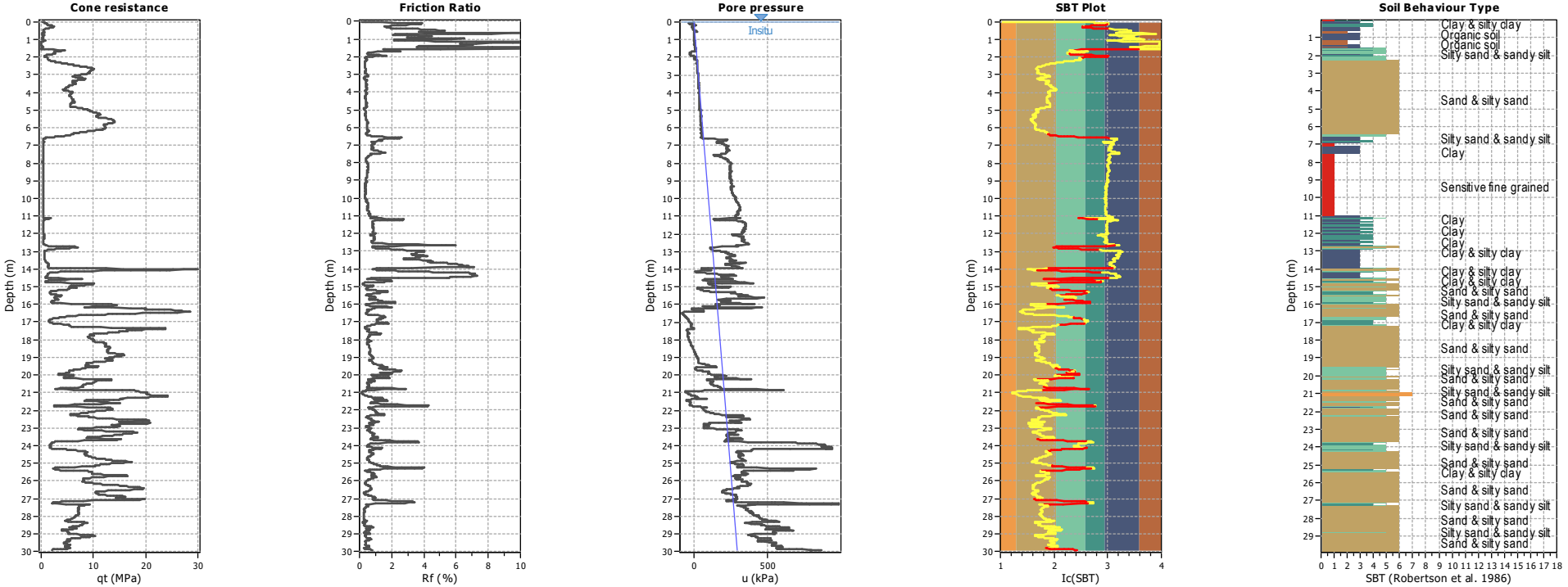
F.S. color scheme

- 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



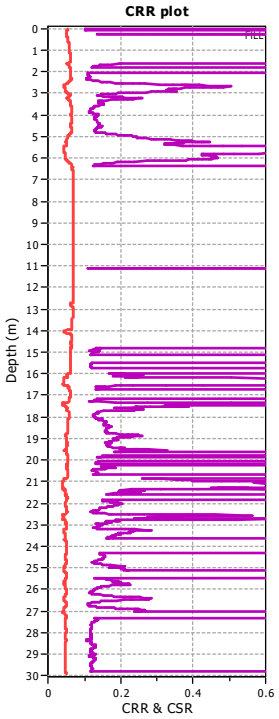
Input parameters and analysis data

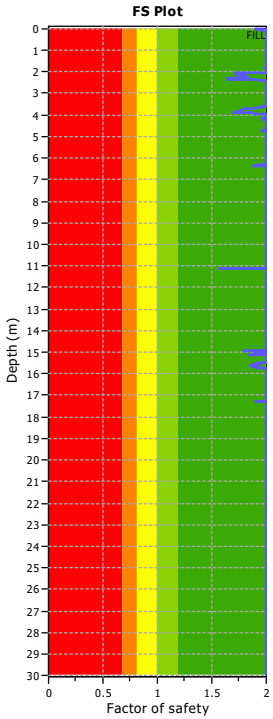
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.90 m	Fill weight:	19.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.90 m	Limit depth:	N/A

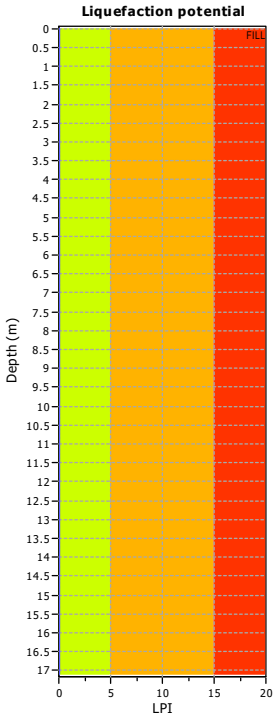
SBT legend

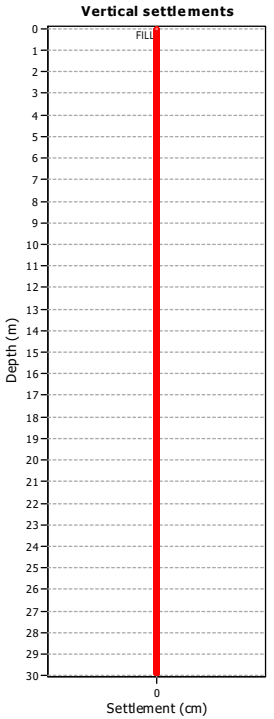
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

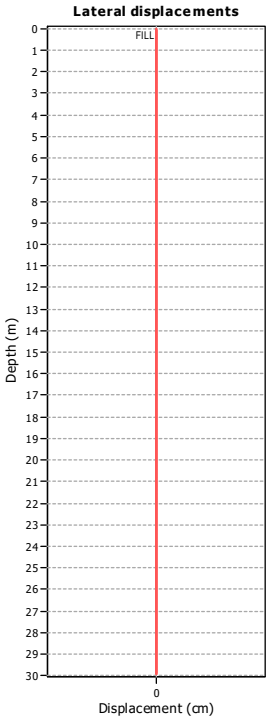
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.90 m	Fill weight:	19.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.90 m	Limit depth:	N/A

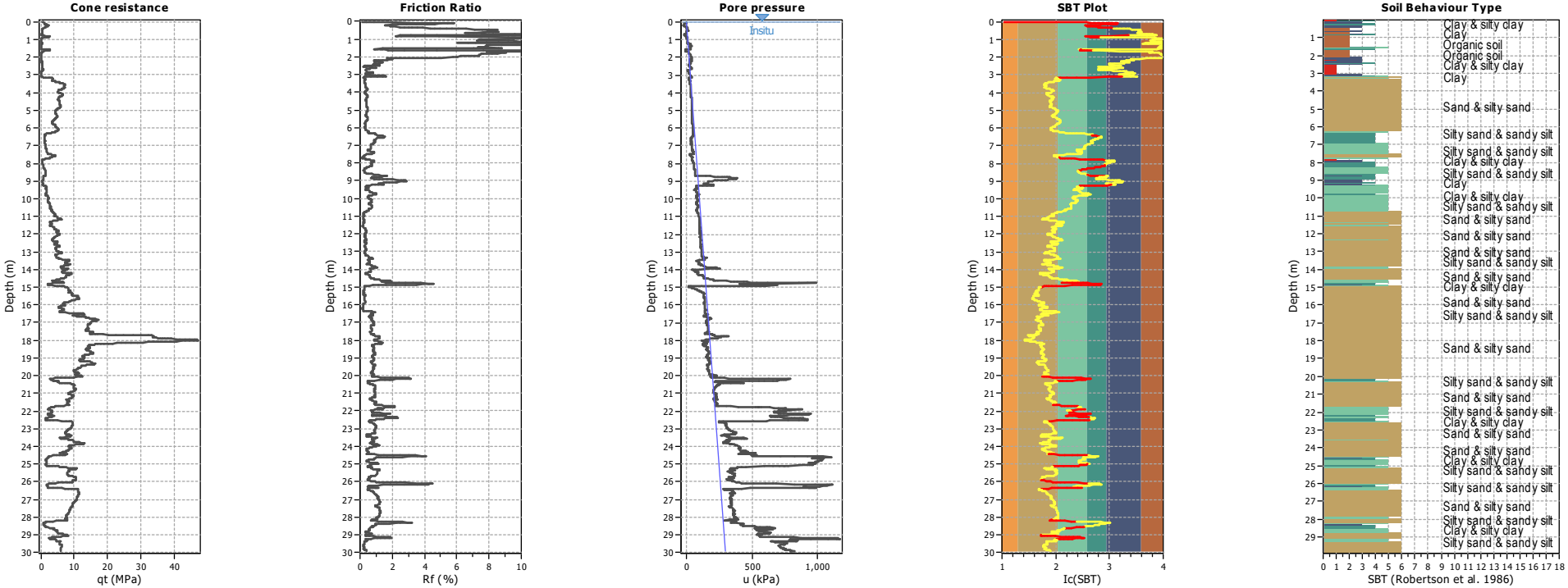
F.S. color scheme

- 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



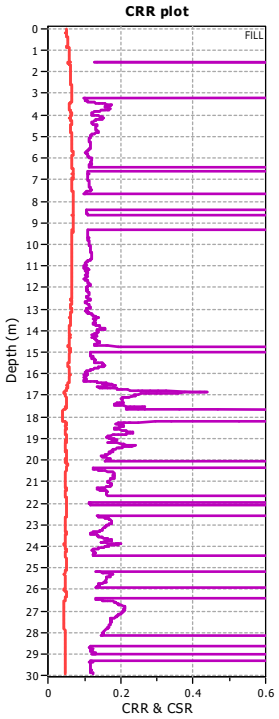
Input parameters and analysis data

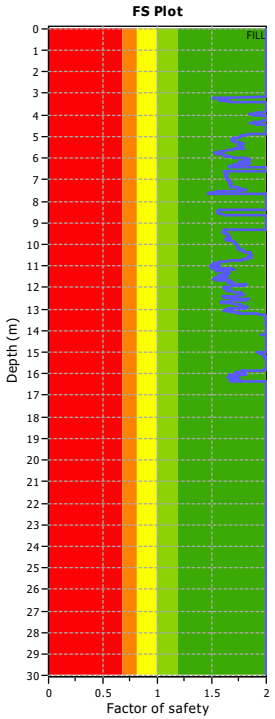
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.70 m	Limit depth:	N/A

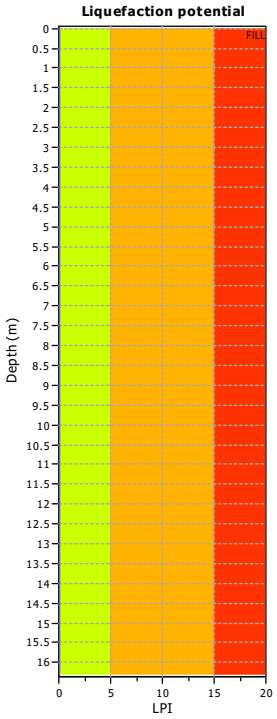
SBT legend

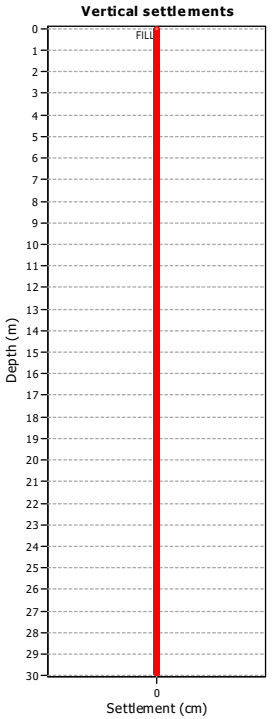
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

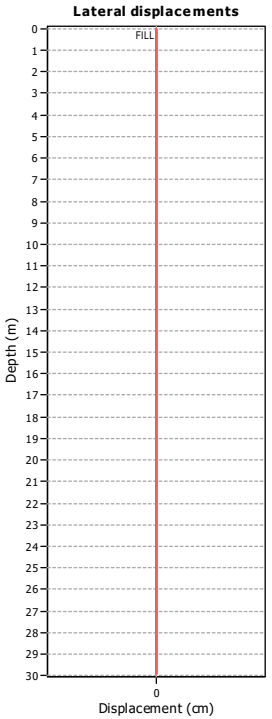
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.70 m	Limit depth:	N/A

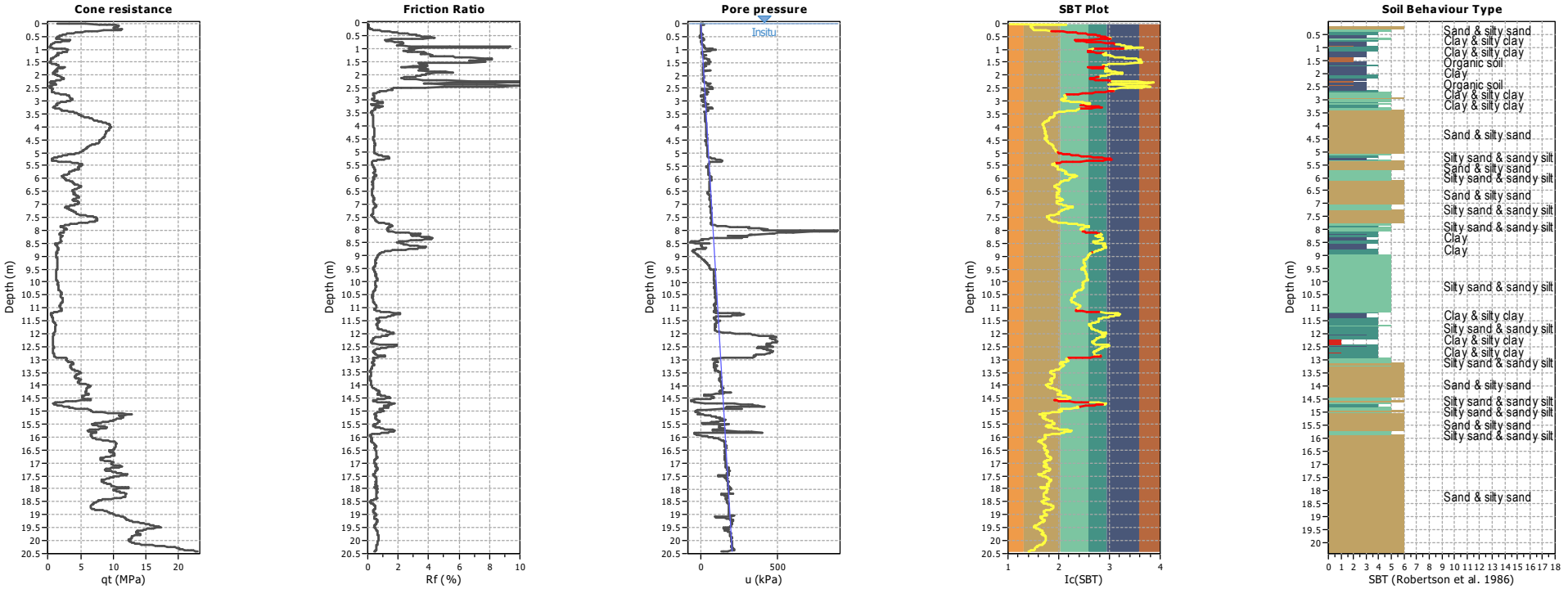
F.S. color scheme

- 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



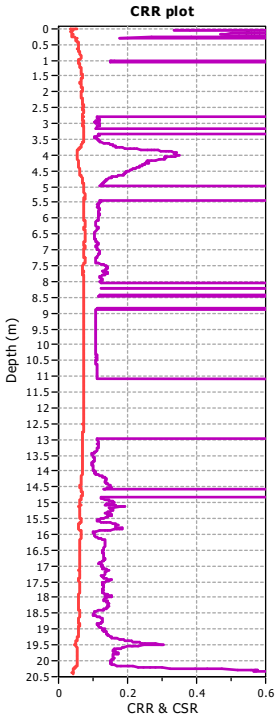
Input parameters and analysis data

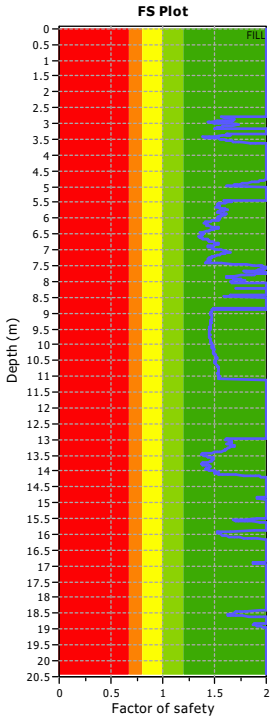
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

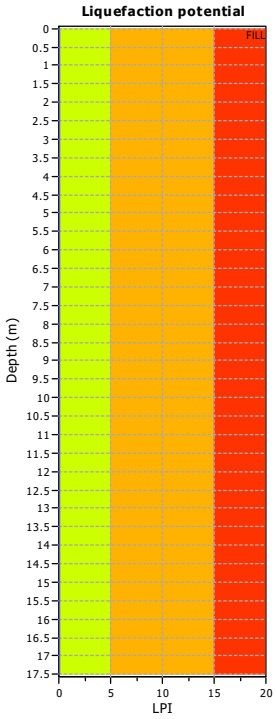
SBT legend

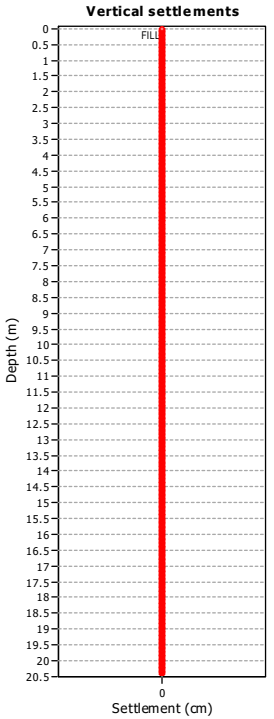
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

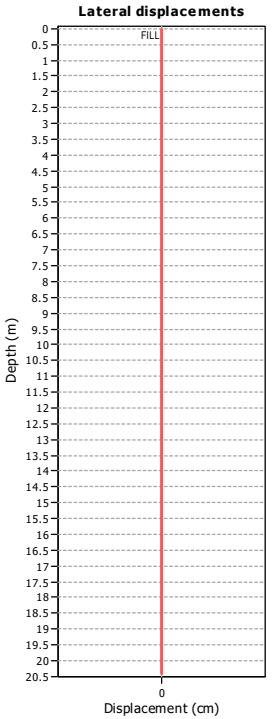
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

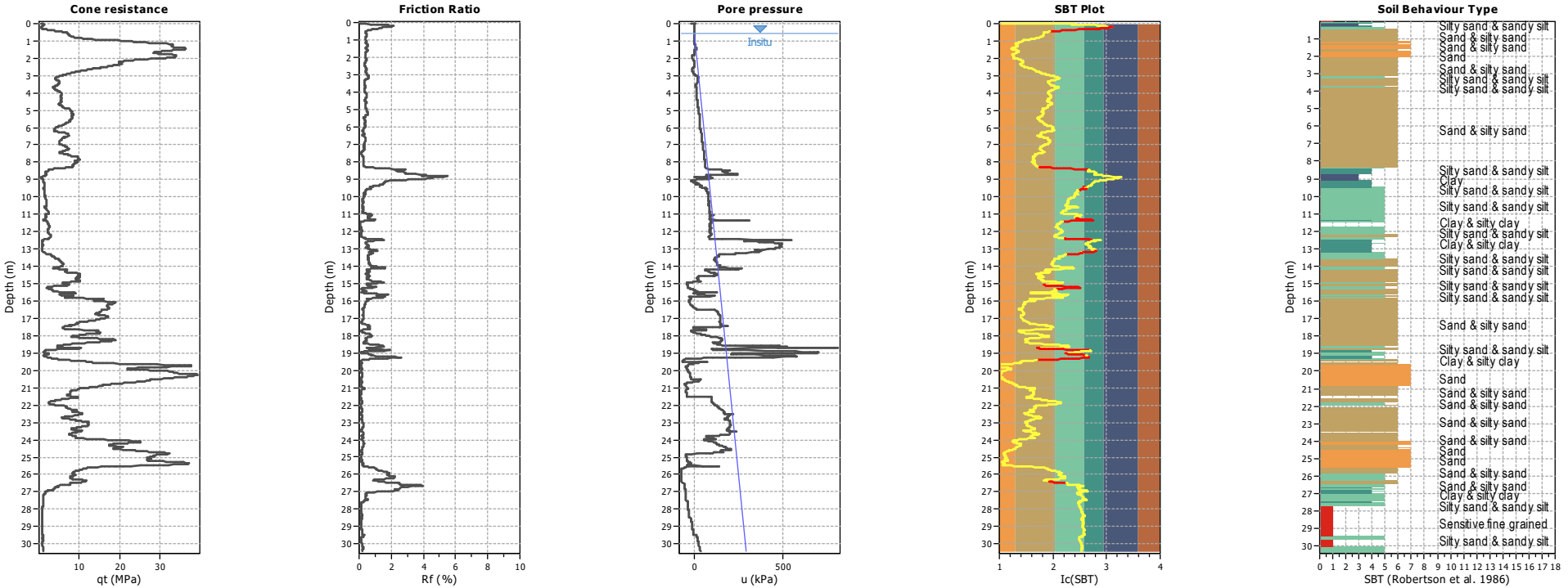
F.S. color scheme

- 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



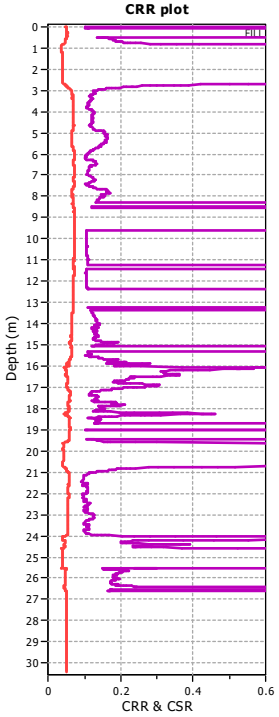
Input parameters and analysis data

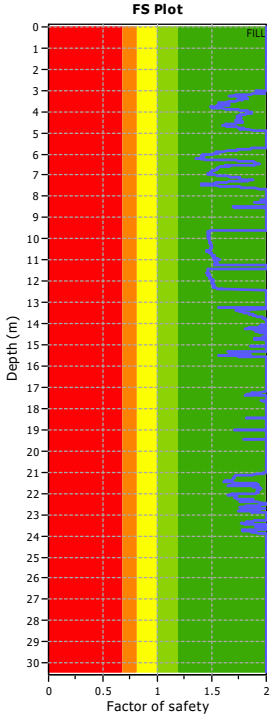
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.60 m	Fill height:	1.80 m	Limit depth:	N/A

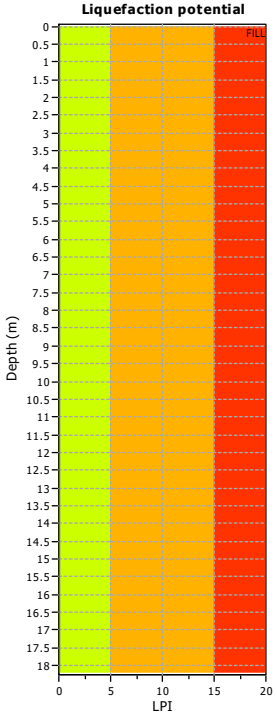
SBT legend

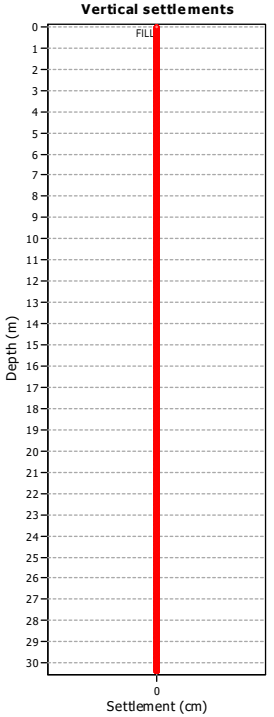
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

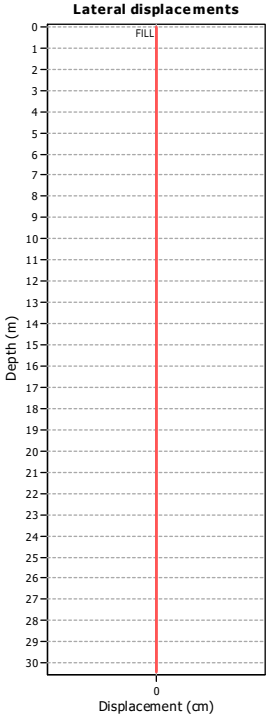
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.08	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.60 m	Fill height:	1.80 m	Limit depth:	N/A

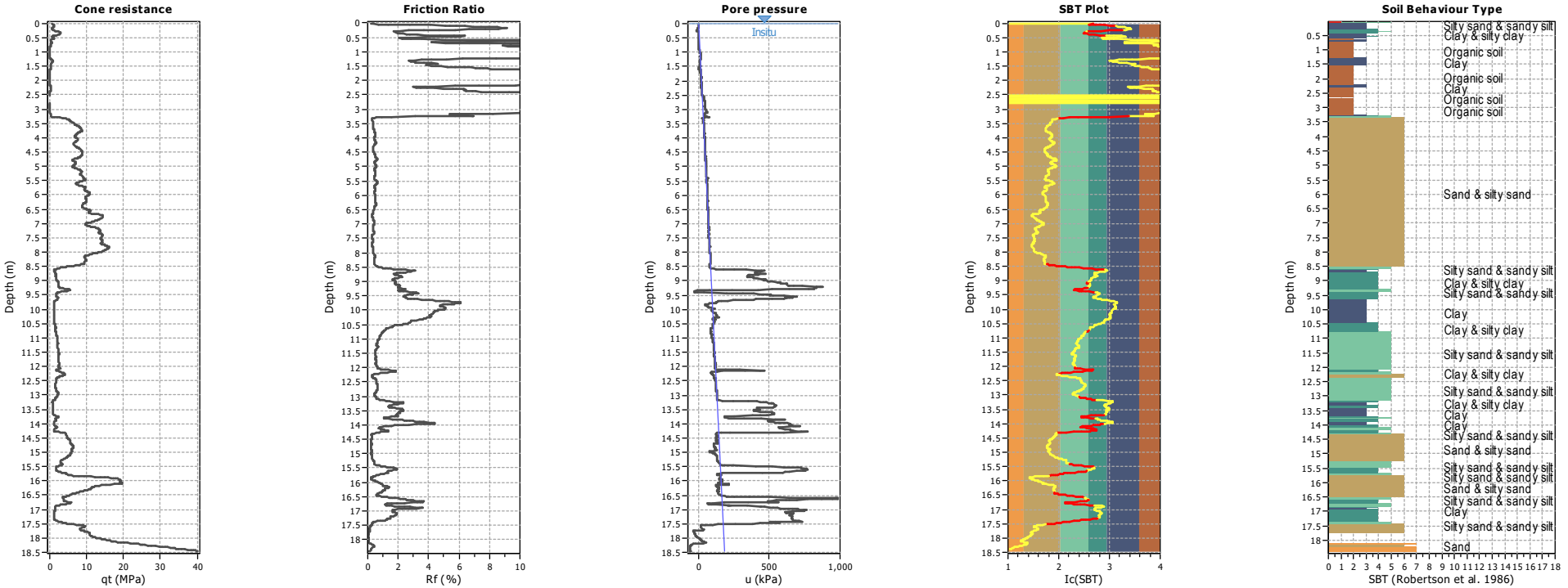
F.S. color scheme

- 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



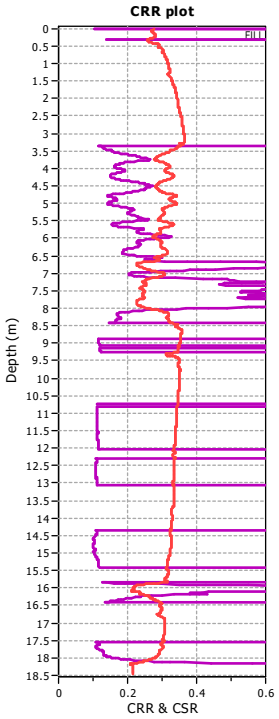
Input parameters and analysis data

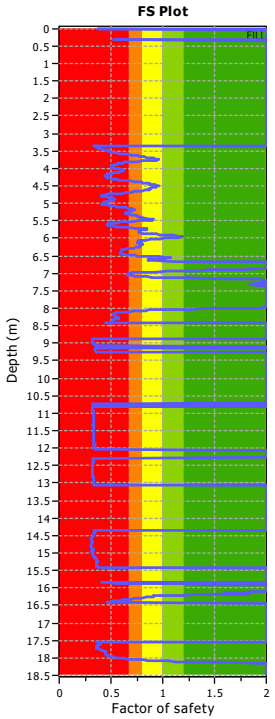
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

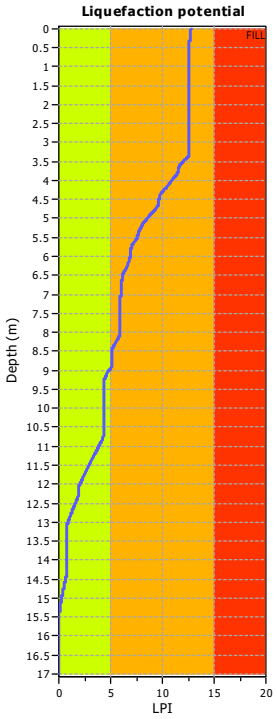
SBT legend

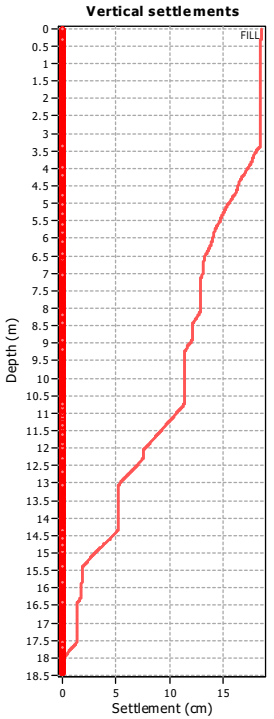
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

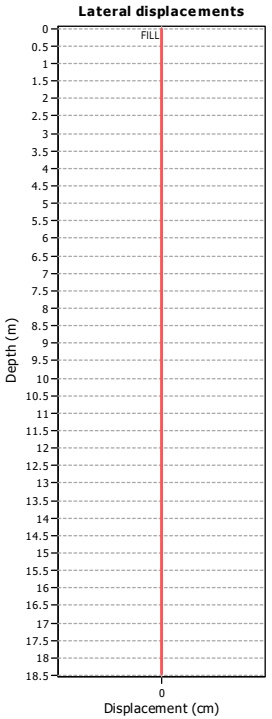
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

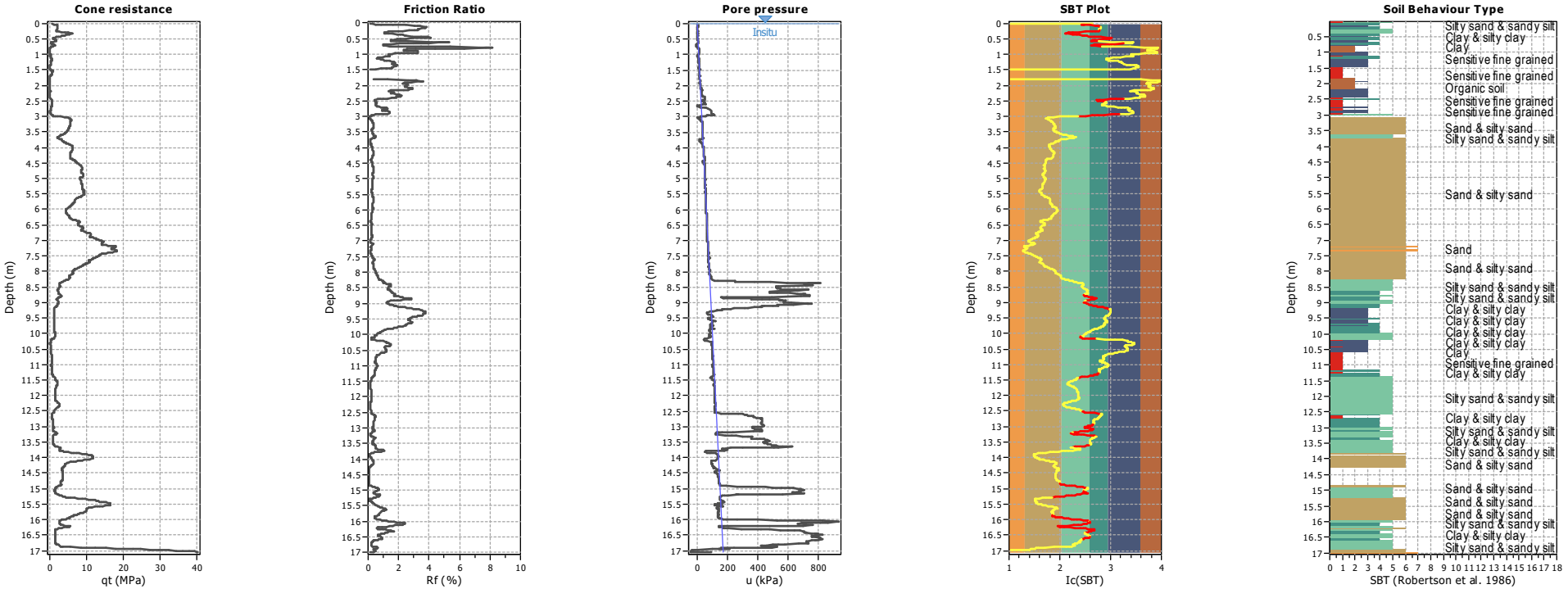
F.S. color scheme

- 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



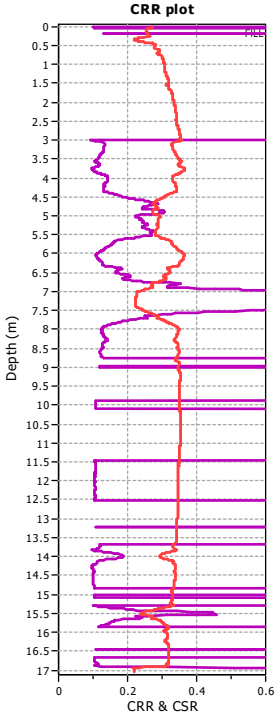
Input parameters and analysis data

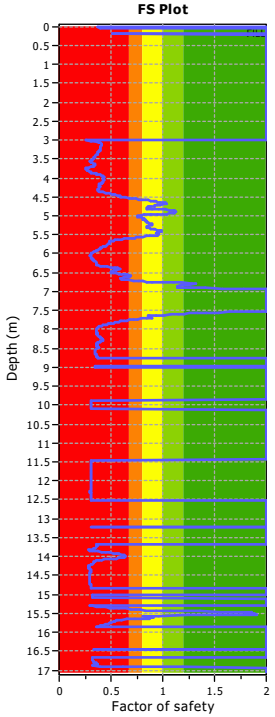
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.30 m	Limit depth:	N/A

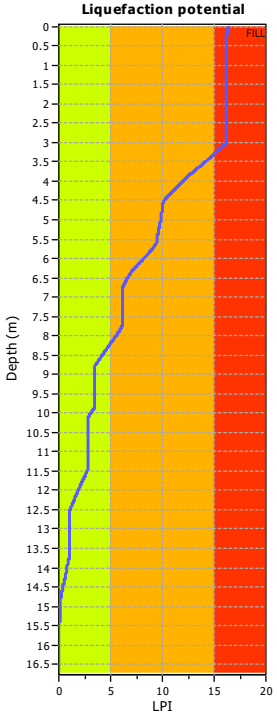
SBT legend

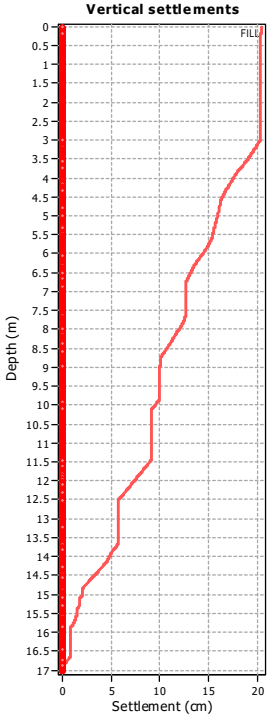
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

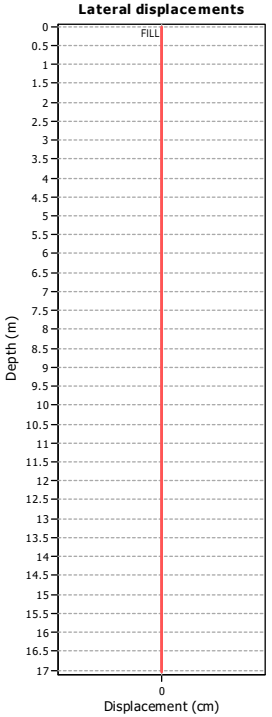
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.30 m	Limit depth:	N/A

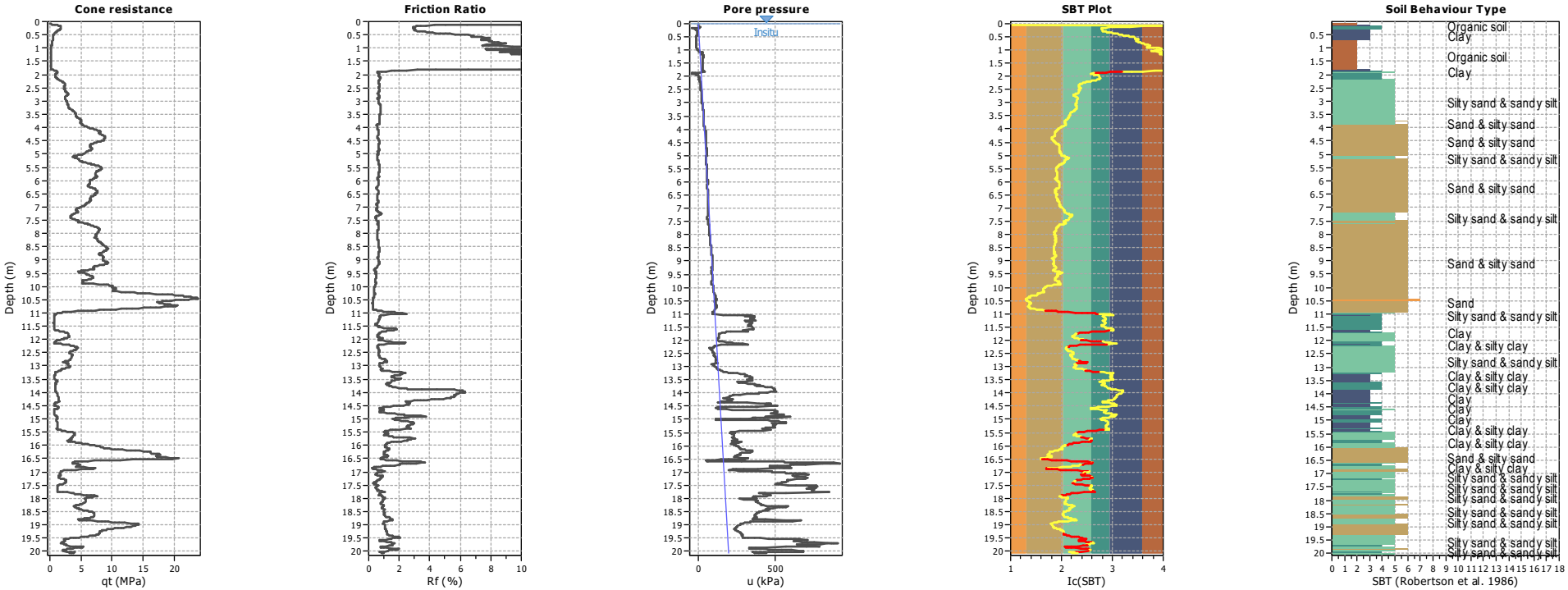
F.S. color scheme

- 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



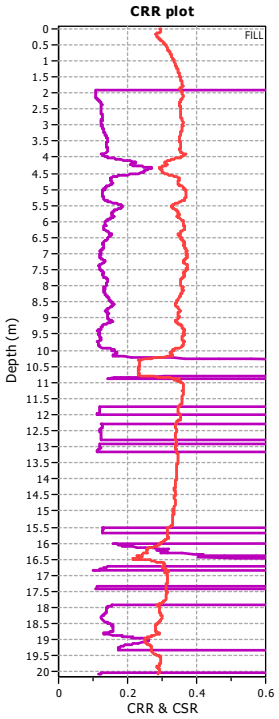
Input parameters and analysis data

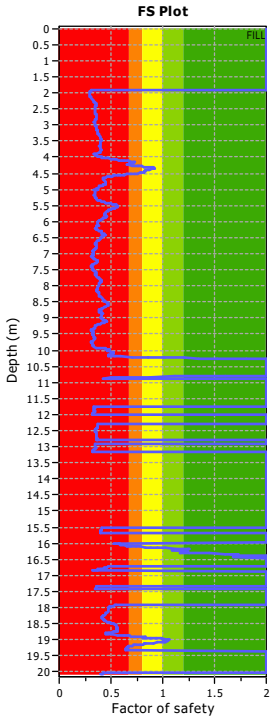
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

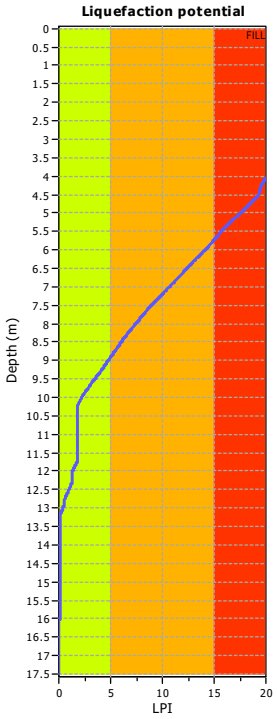
SBT legend

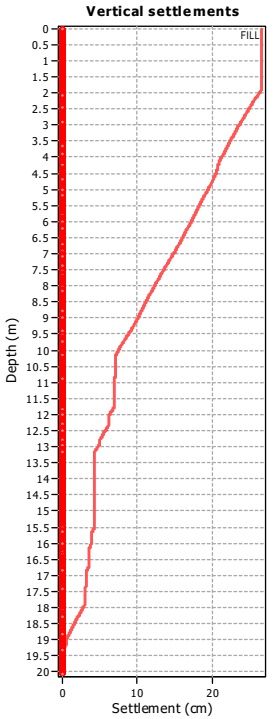
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

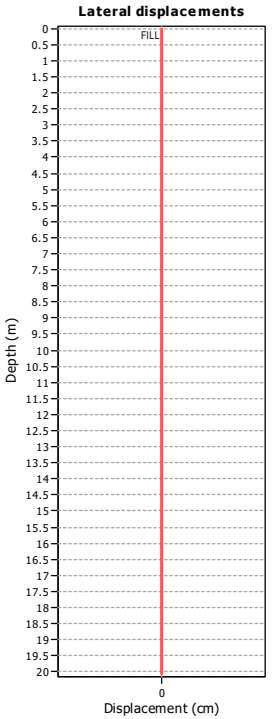
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

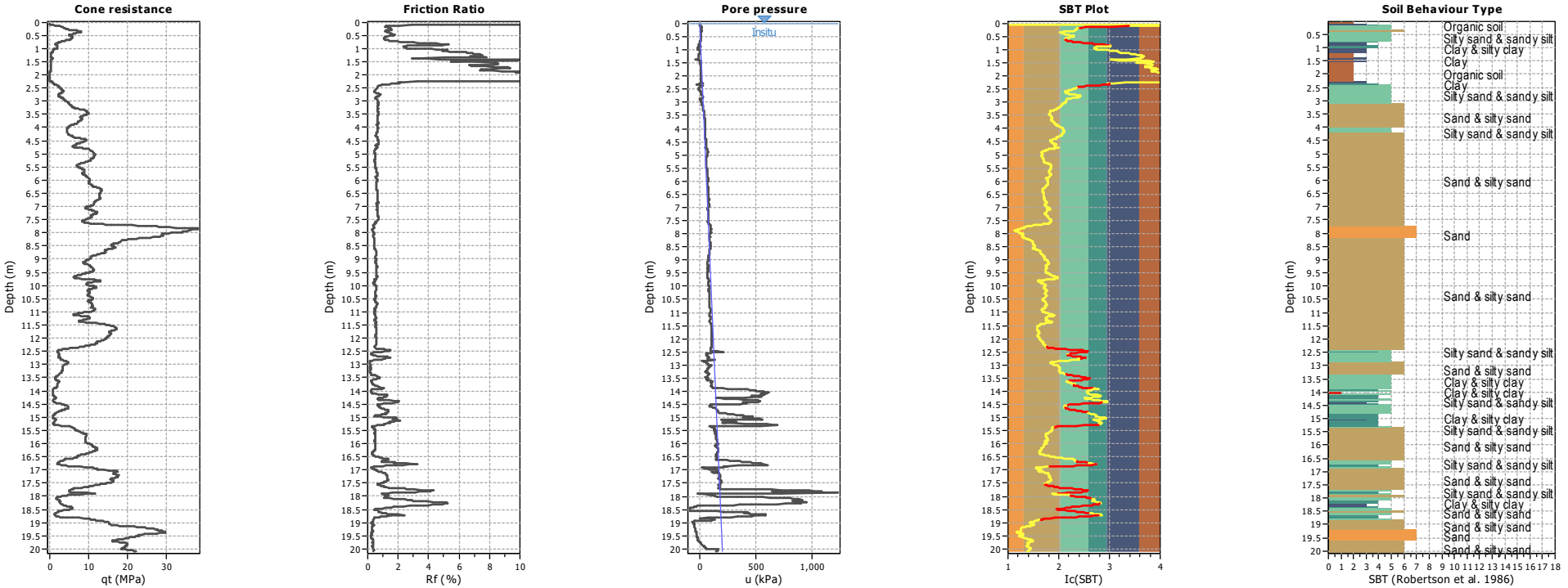
F.S. color scheme

- 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



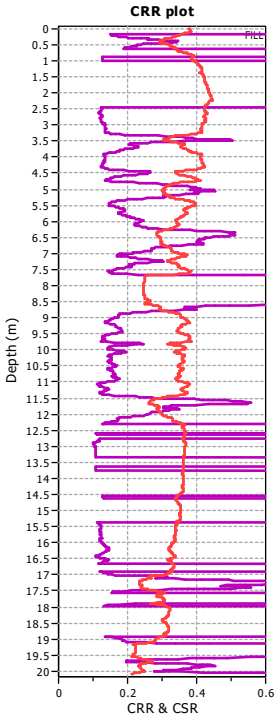
Input parameters and analysis data

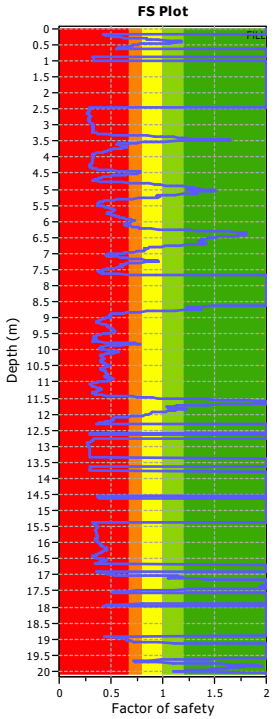
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	0.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.50 m	Limit depth:	N/A

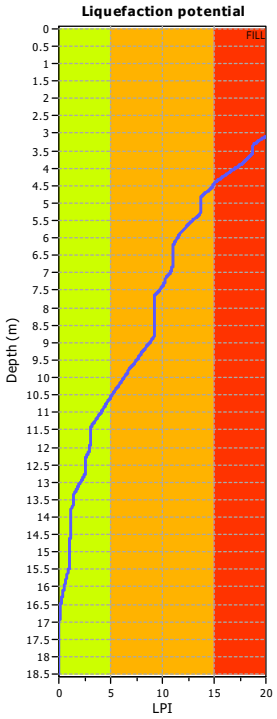
SBT legend

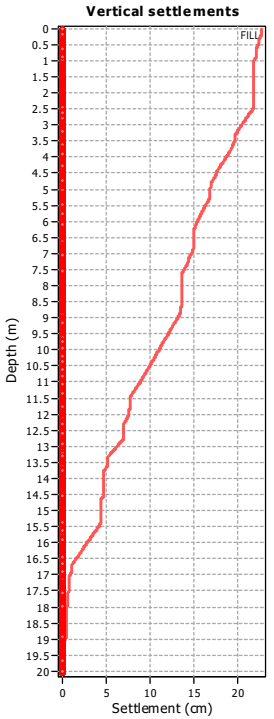
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

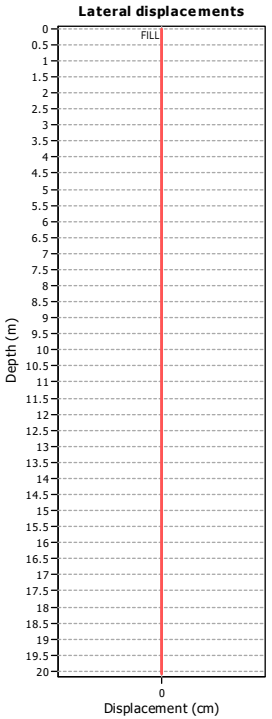
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	0.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.50 m	Limit depth:	N/A

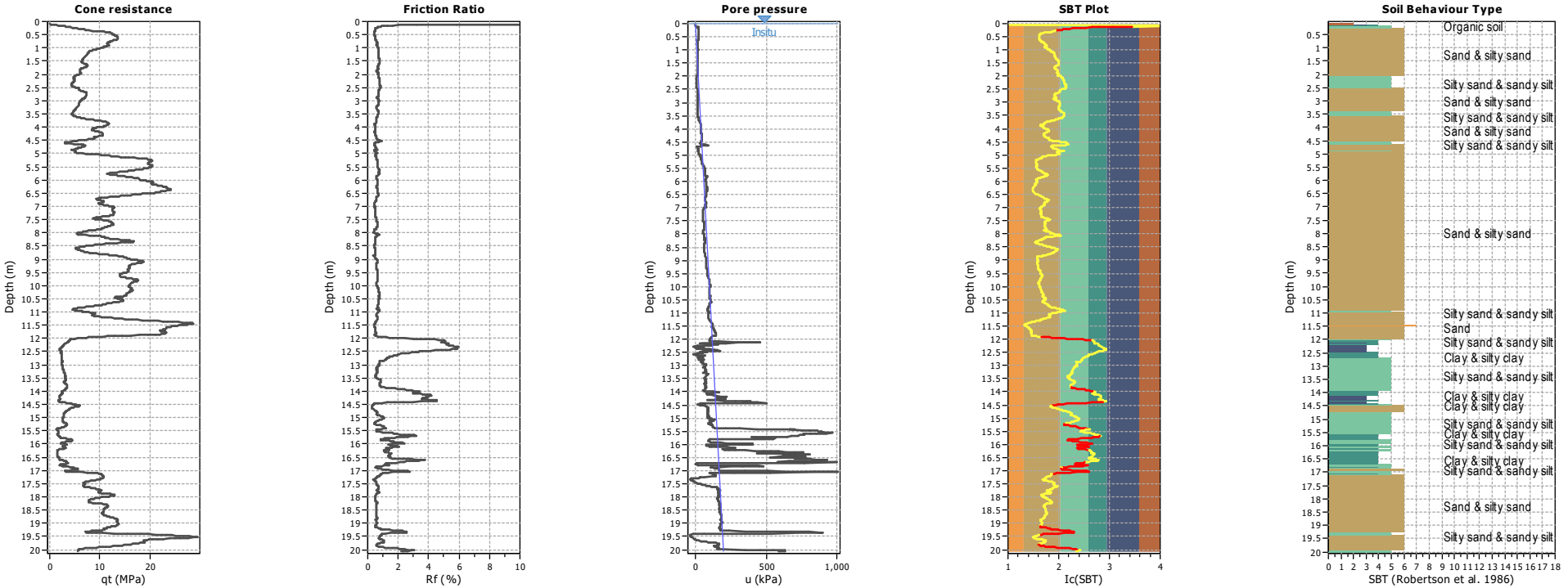
F.S. color scheme

- 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)	Depth to GWT (erthq.):	0.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
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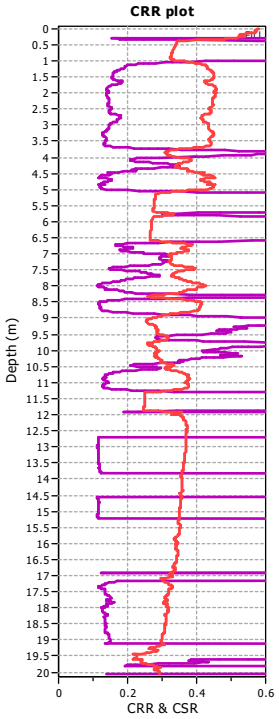
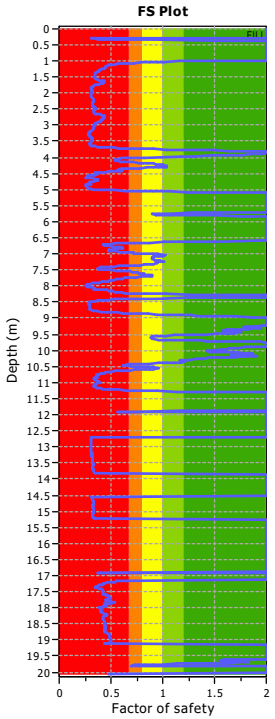
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.00 m	Limit depth:	N/A

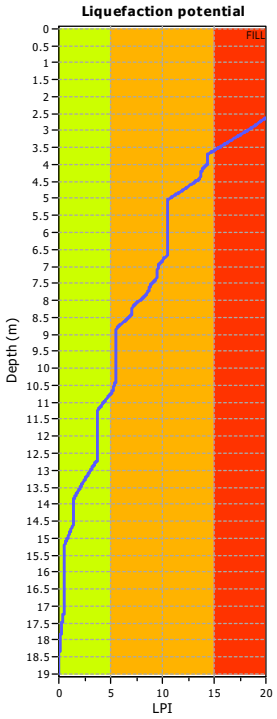
SBT legend

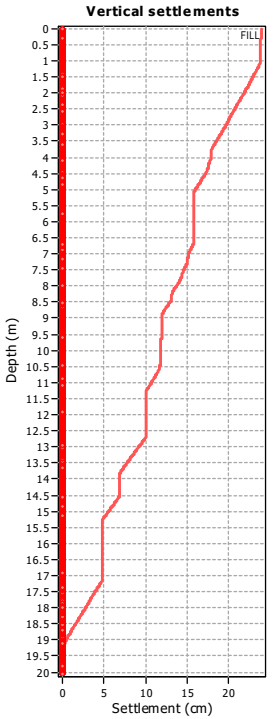
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

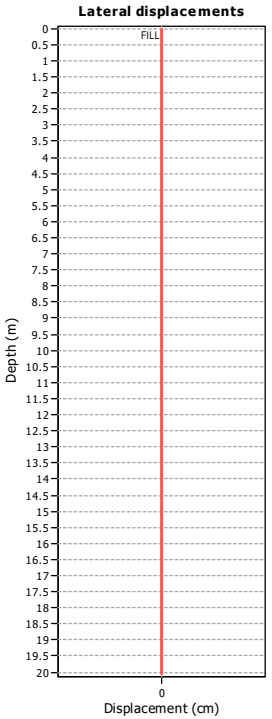
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	0.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.00 m	Limit depth:	N/A

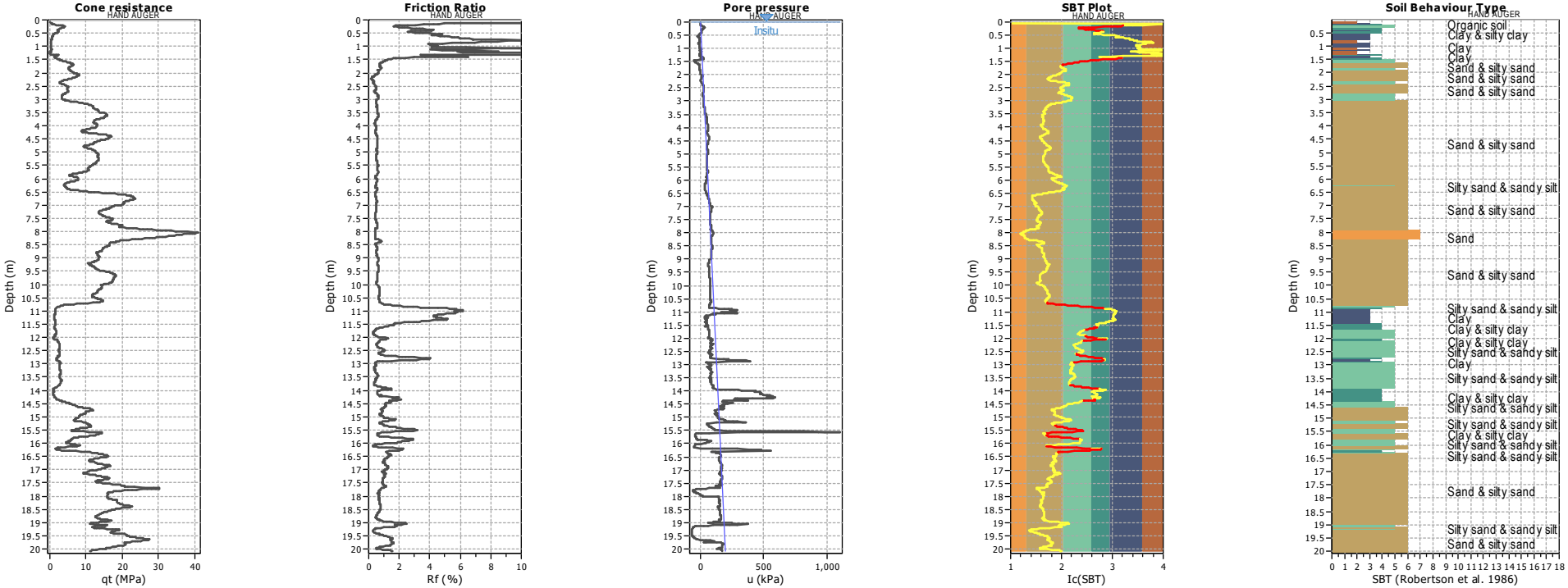
F.S. color scheme

- 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



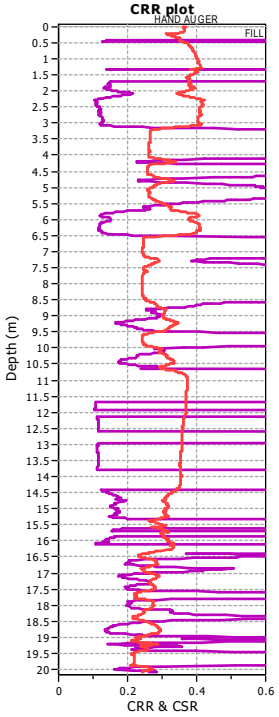
Input parameters and analysis data

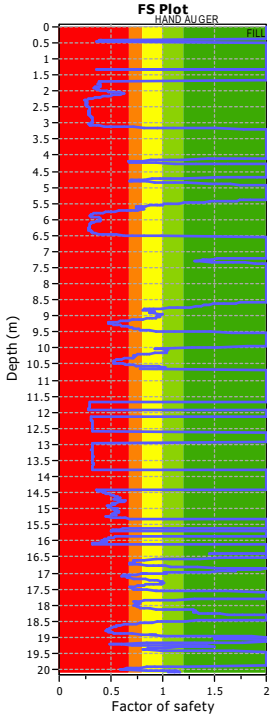
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	0.60 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.60 m	Limit depth:	N/A

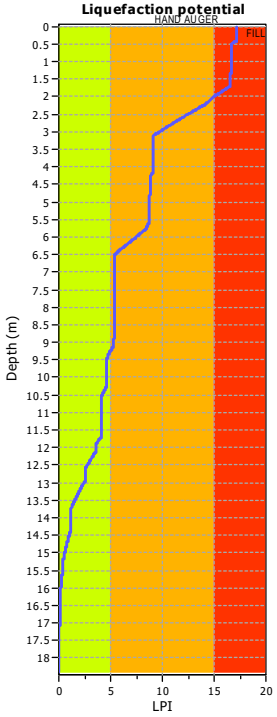
SBT legend

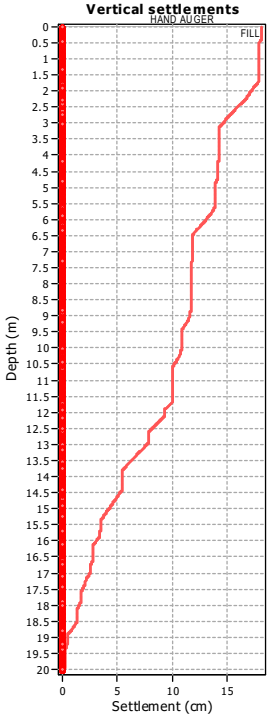
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

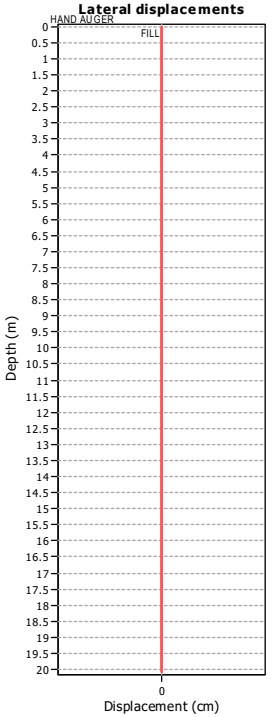
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	0.60 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.60 m	Limit depth:	N/A

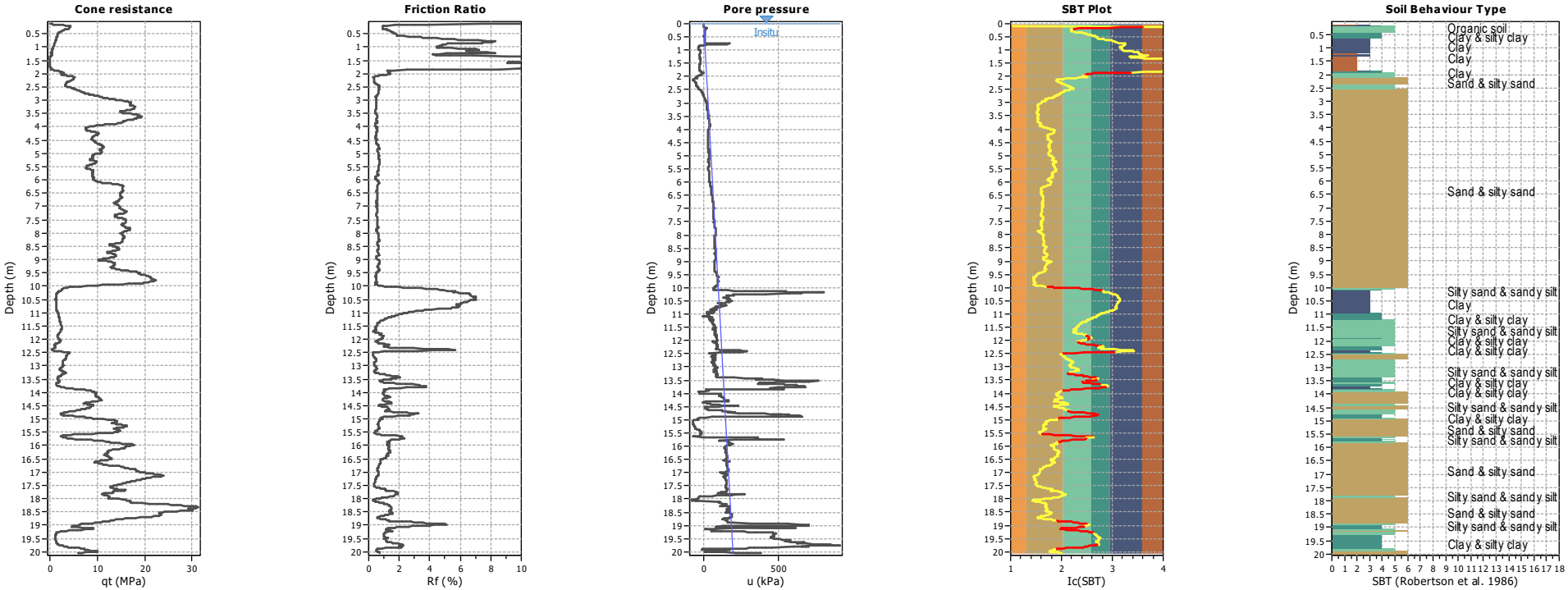
F.S. color scheme

- 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



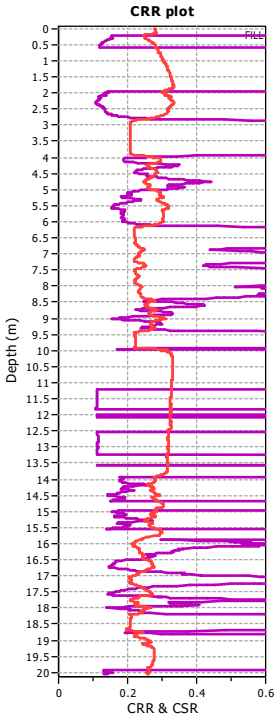
Input parameters and analysis data

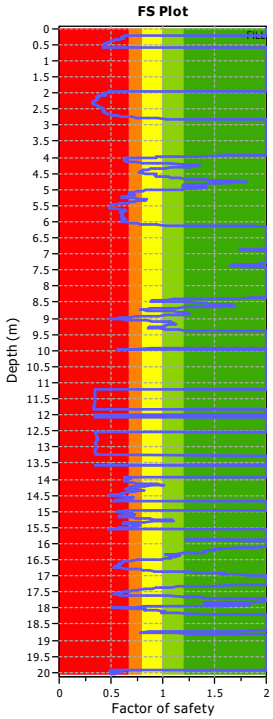
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

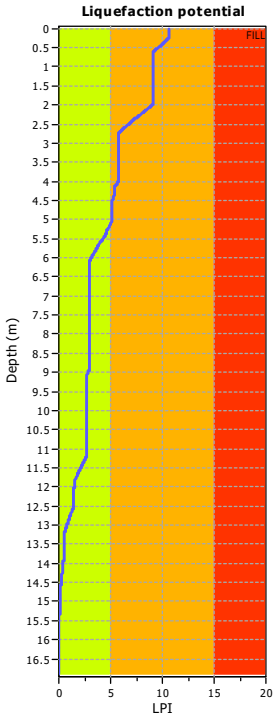
SBT legend

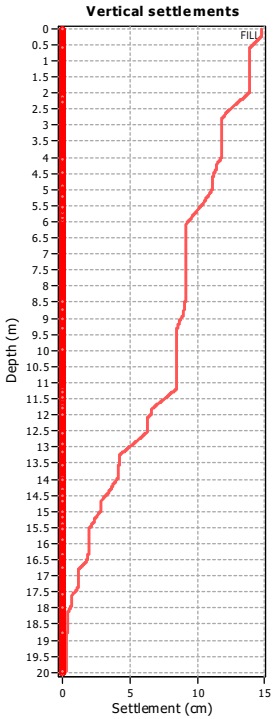
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

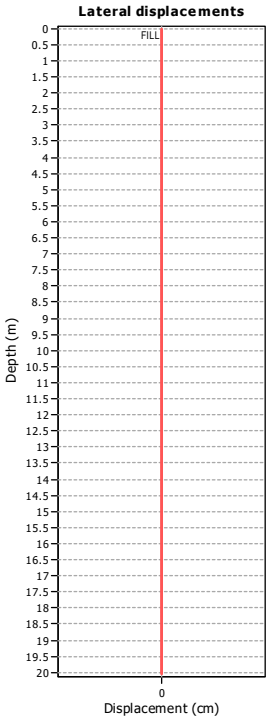
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

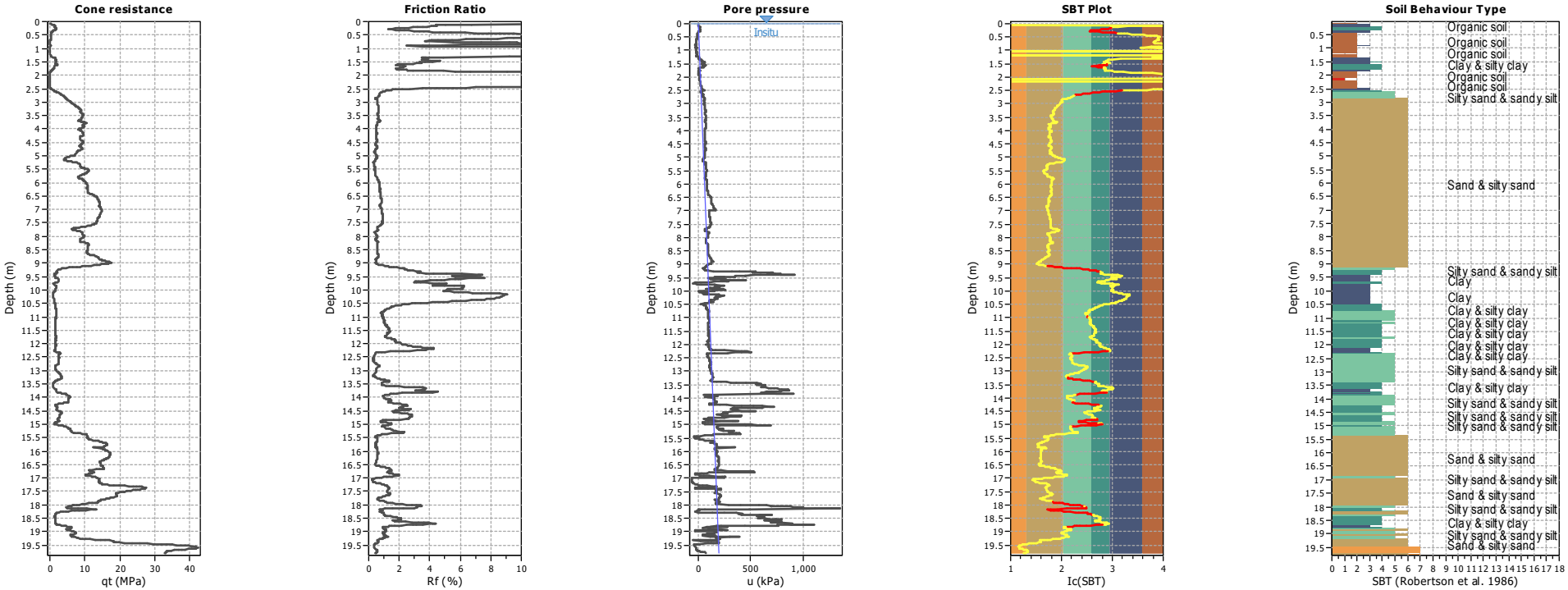
F.S. color scheme

- 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



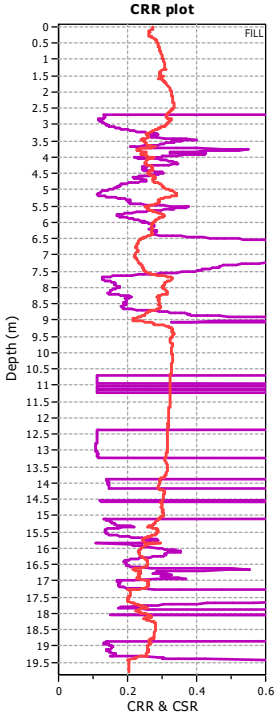
Input parameters and analysis data

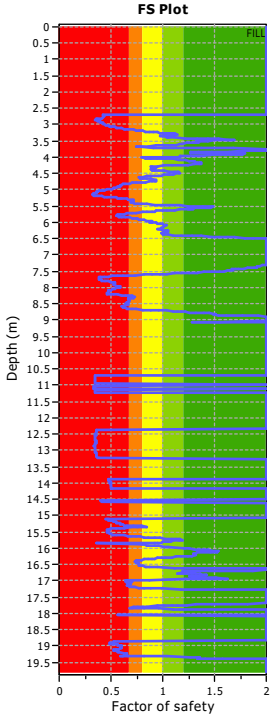
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.50 m	Limit depth:	N/A

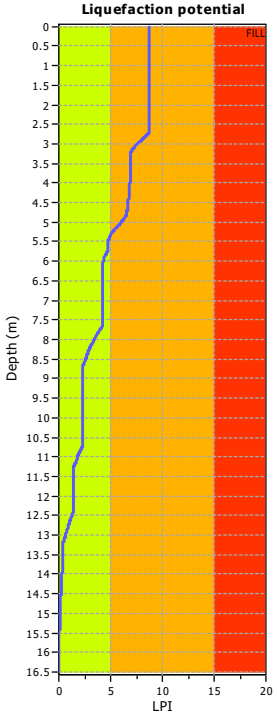
SBT legend

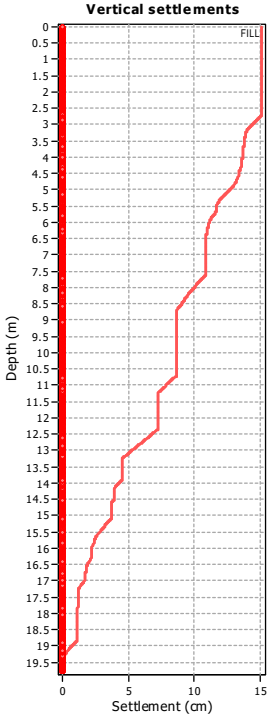
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

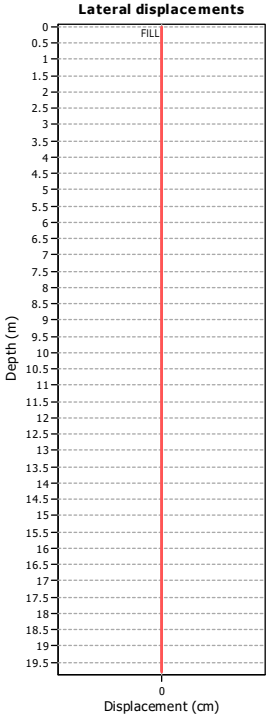
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.50 m	Limit depth:	N/A

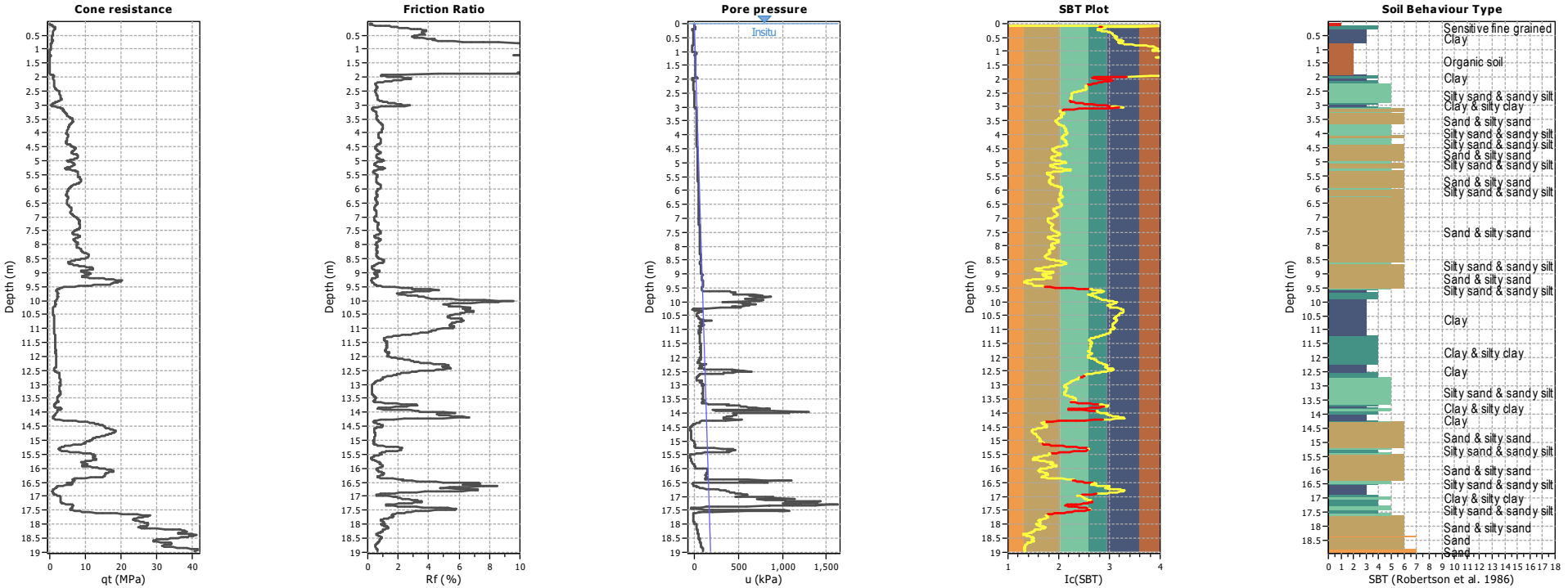
F.S. color scheme

- 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



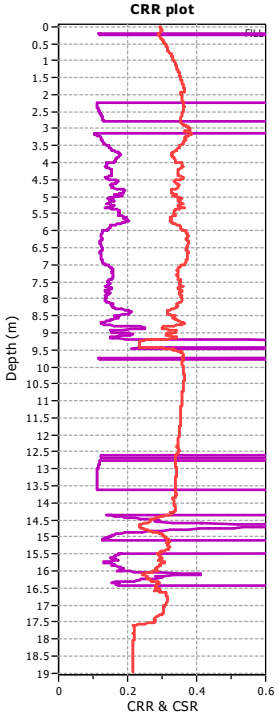
Input parameters and analysis data

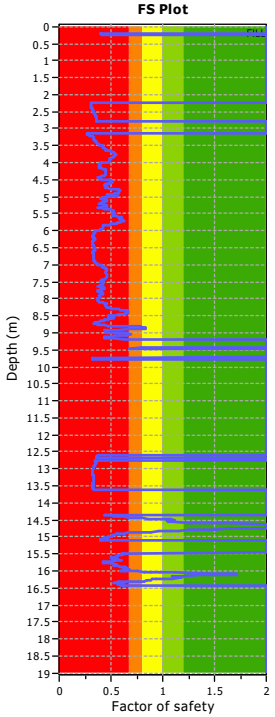
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

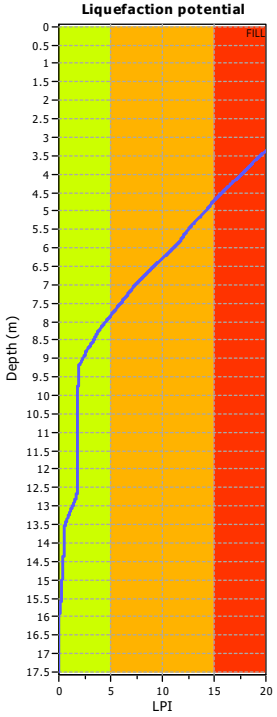
SBT legend

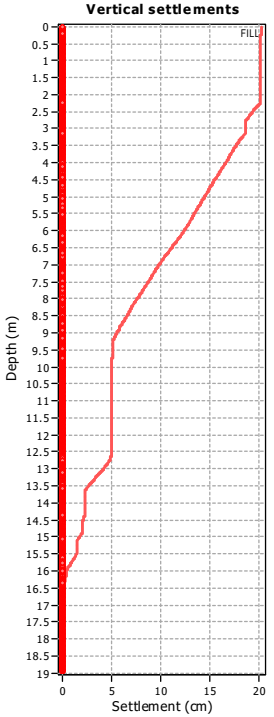
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

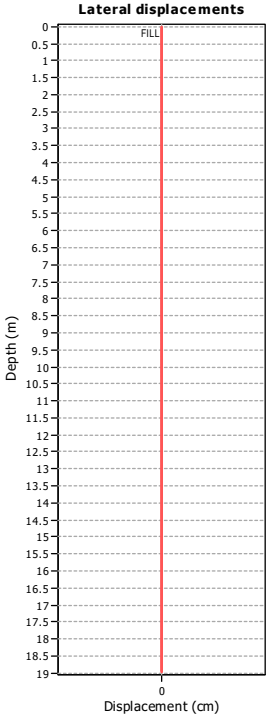
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

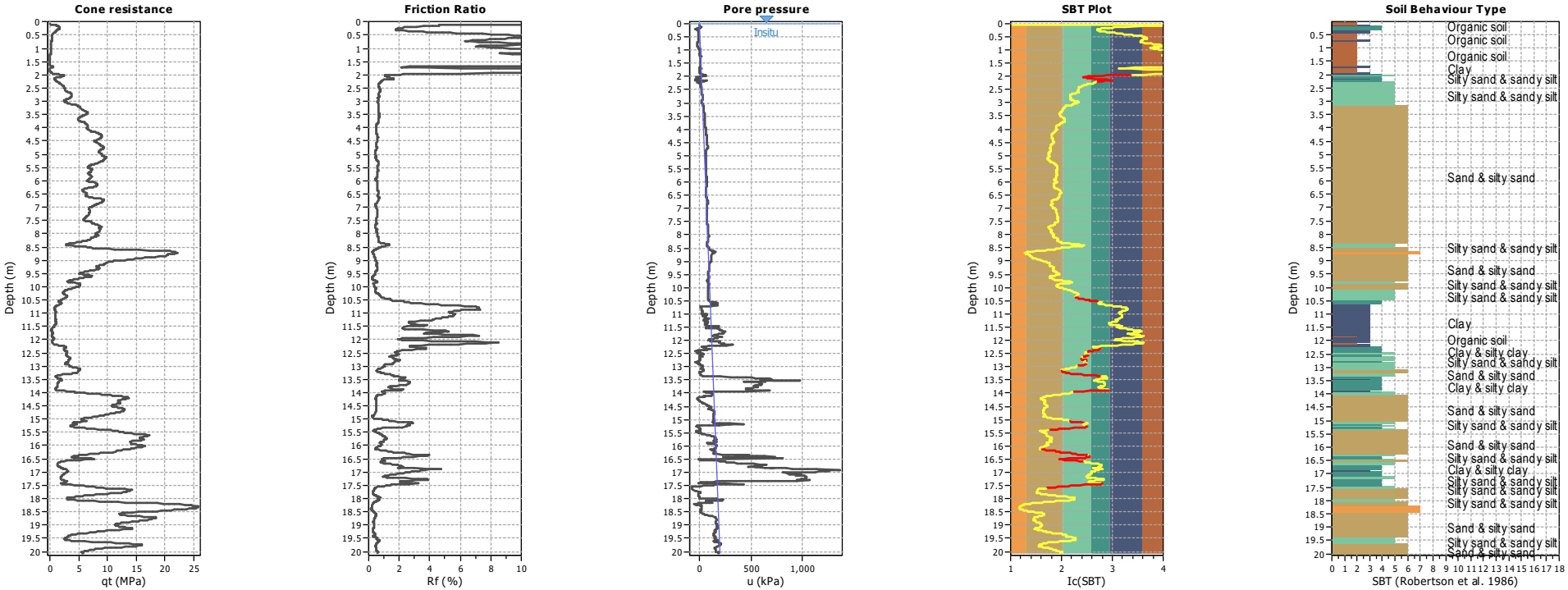
F.S. color scheme

- 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



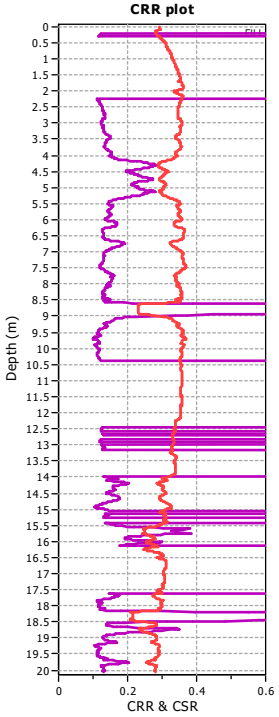
Input parameters and analysis data

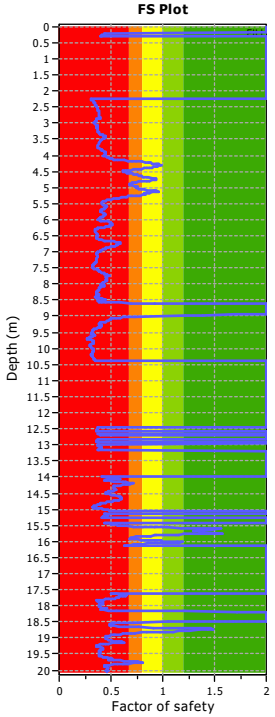
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.60 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.60 m	Limit depth:	N/A

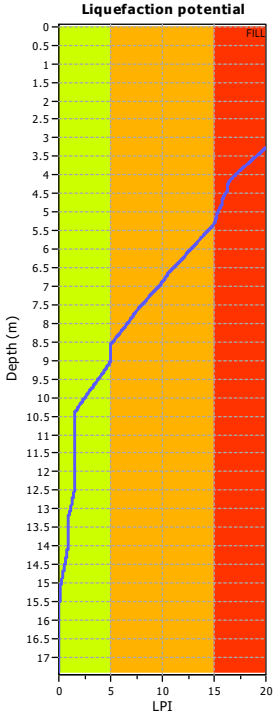
SBT legend

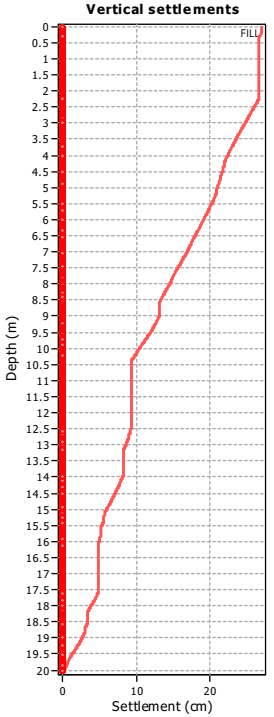
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

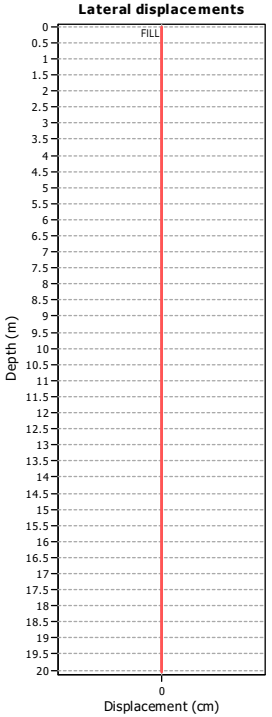
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.60 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.60 m	Limit depth:	N/A

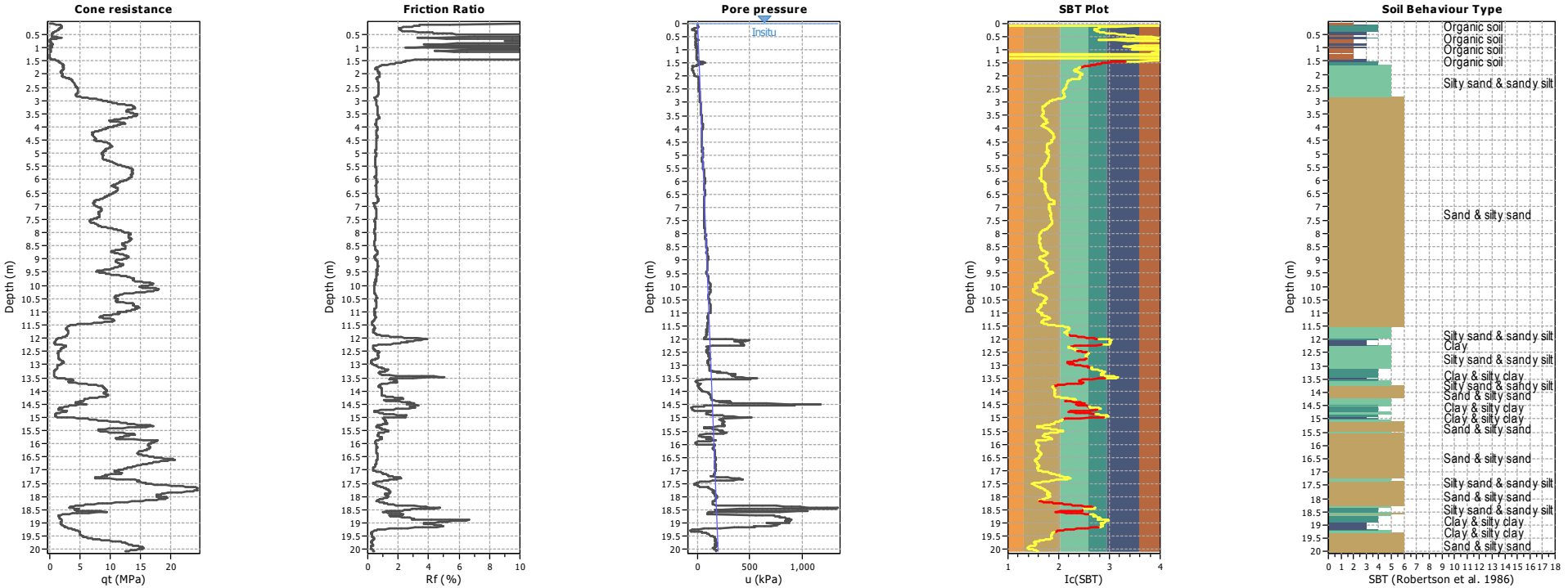
F.S. color scheme

- 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



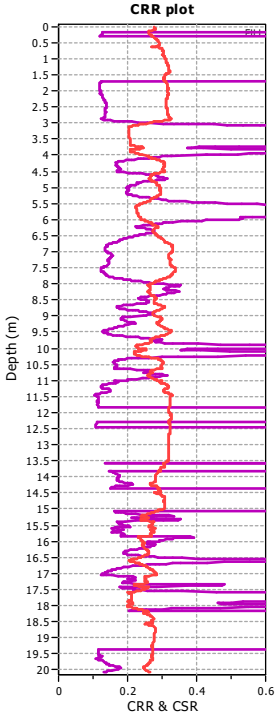
Input parameters and analysis data

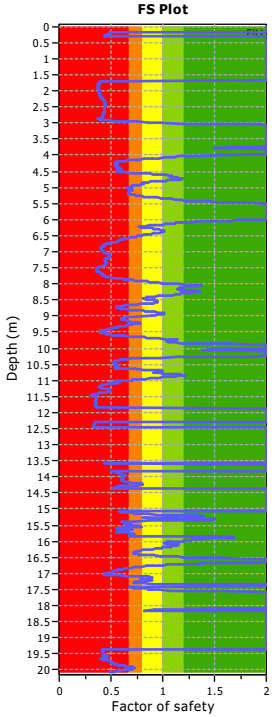
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

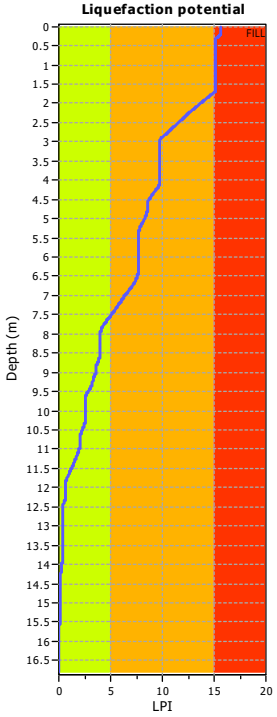
SBT legend

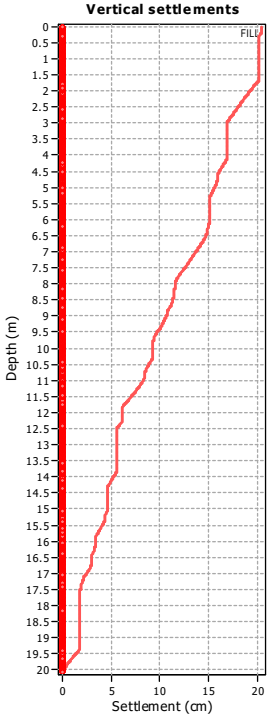
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

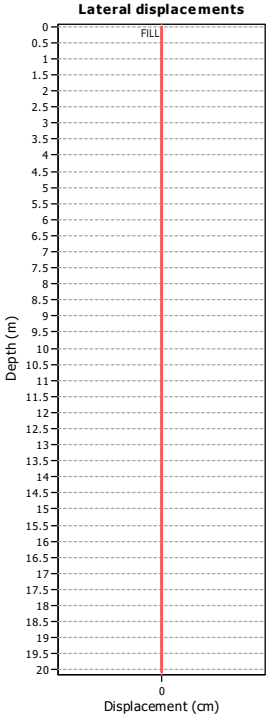
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

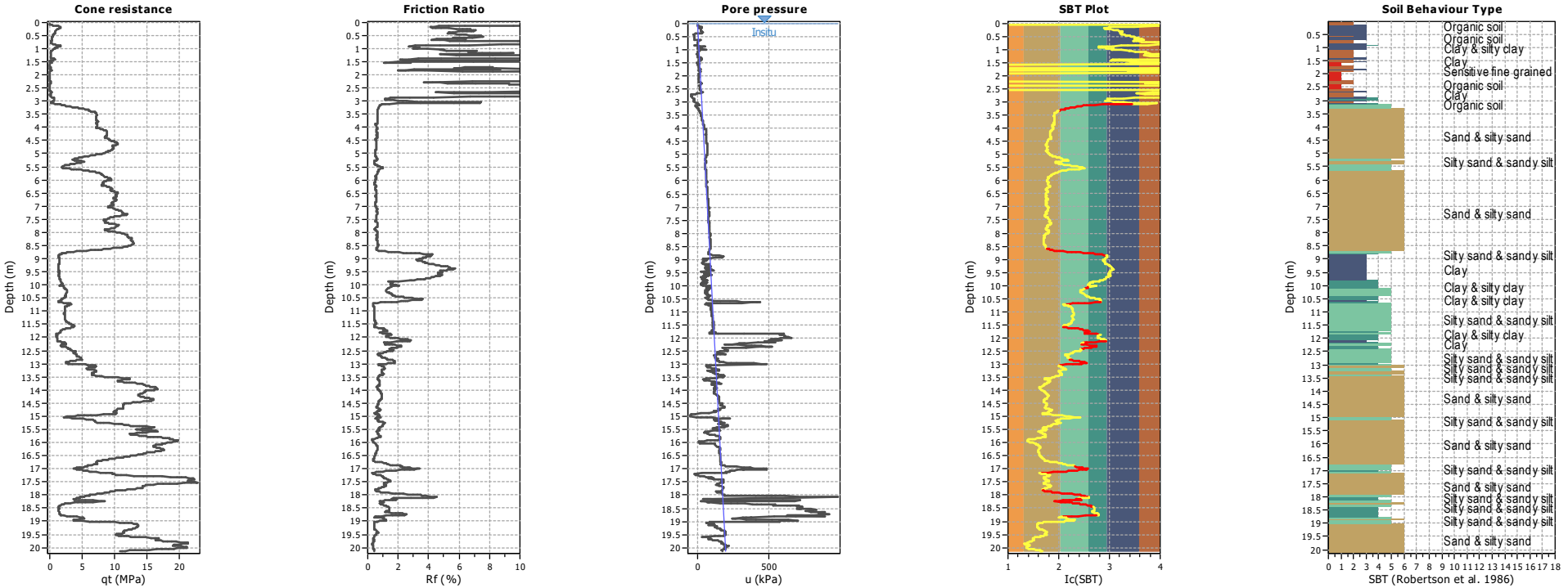
F.S. color scheme

- 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



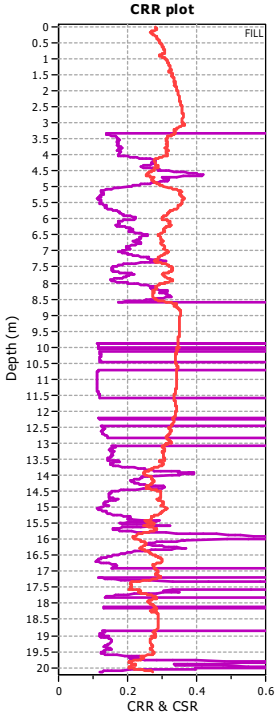
Input parameters and analysis data

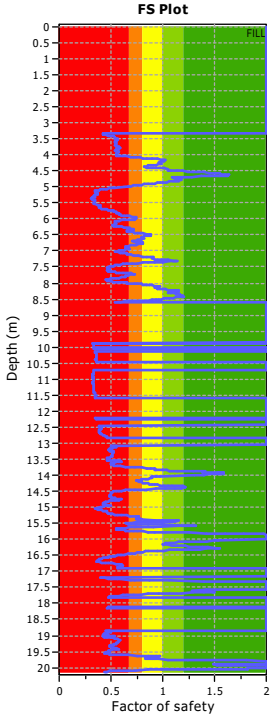
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

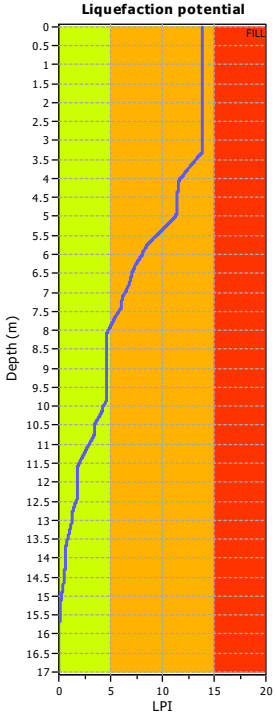
SBT legend

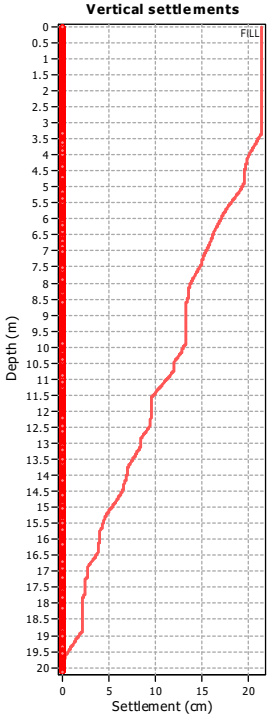
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

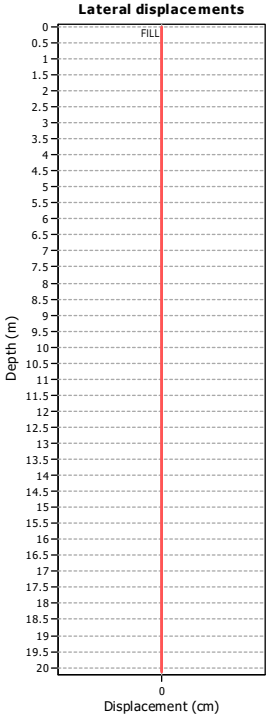
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

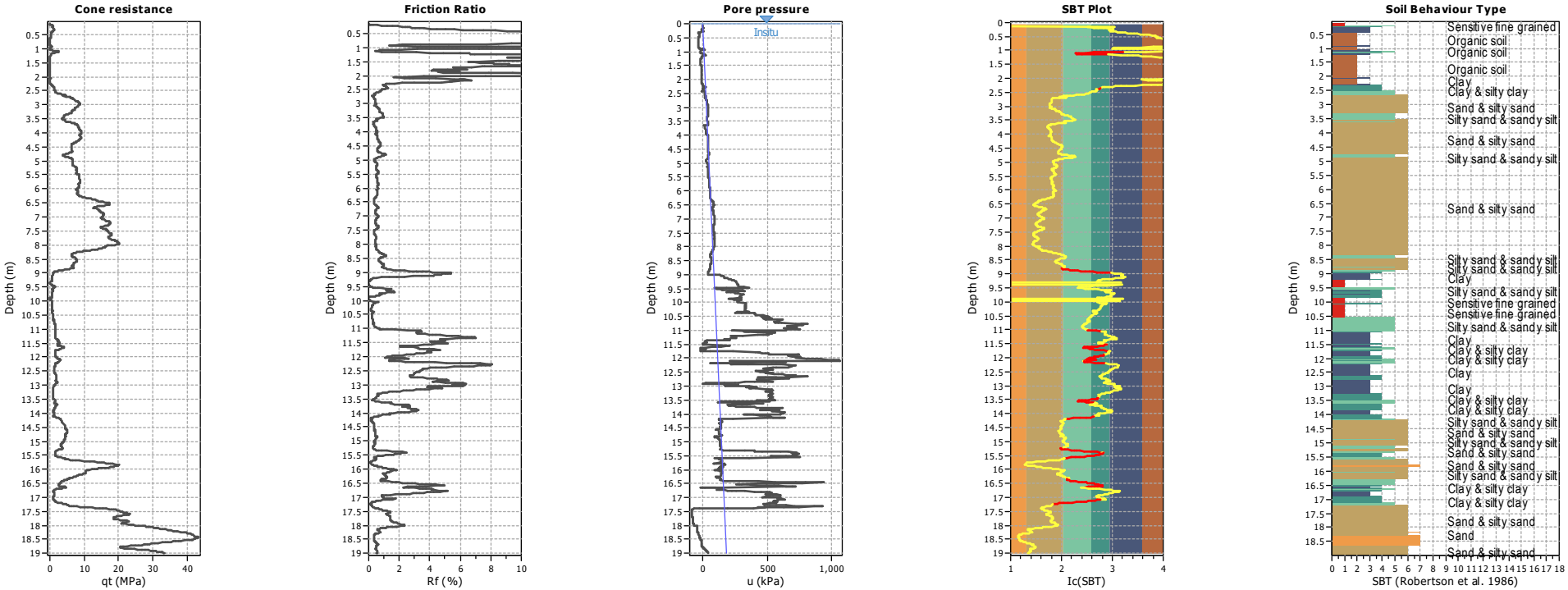
F.S. color scheme

- 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



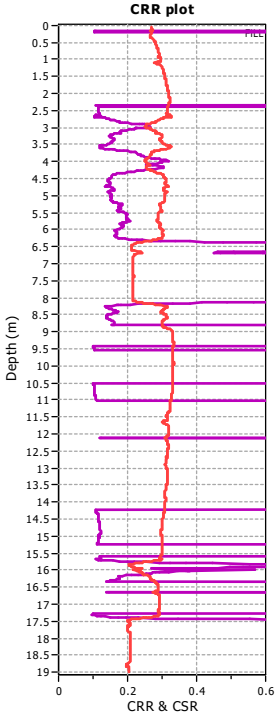
Input parameters and analysis data

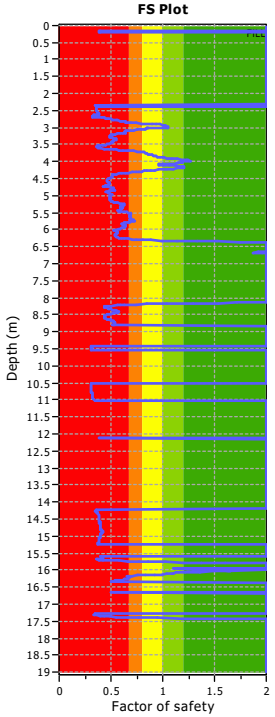
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.80 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.80 m	Limit depth:	N/A

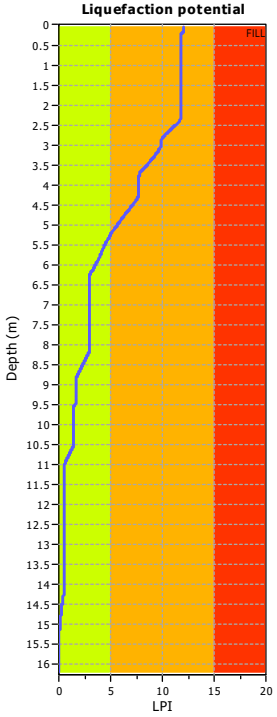
SBT legend

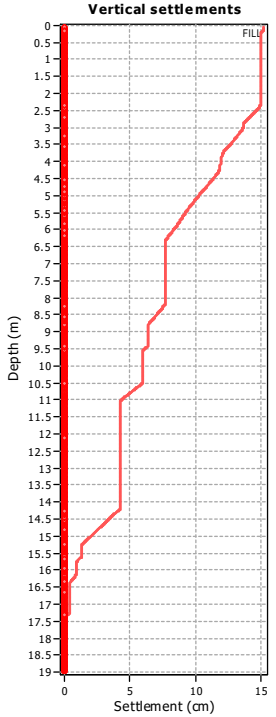
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

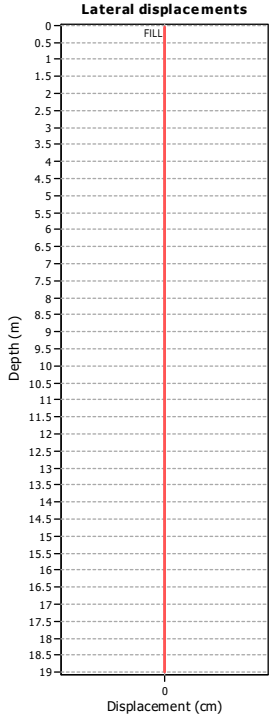
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.80 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.80 m	Limit depth:	N/A

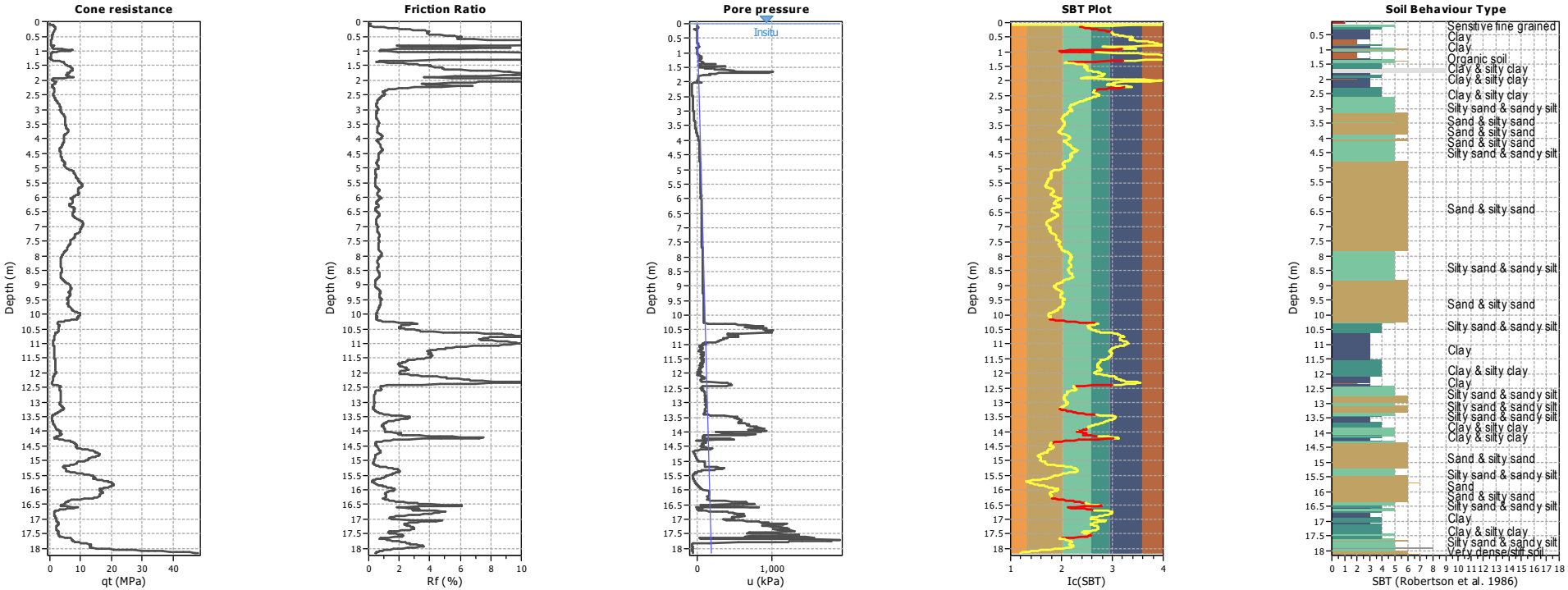
F.S. color scheme

- 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



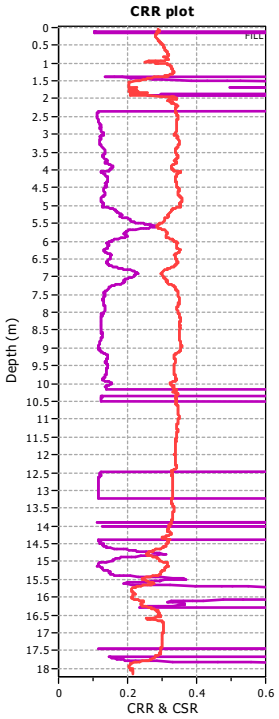
Input parameters and analysis data

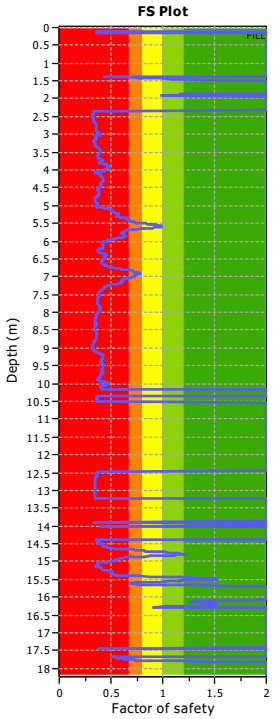
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.70 m	Limit depth:	N/A

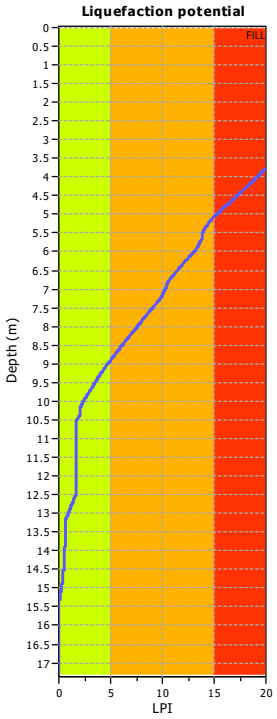
SBT legend

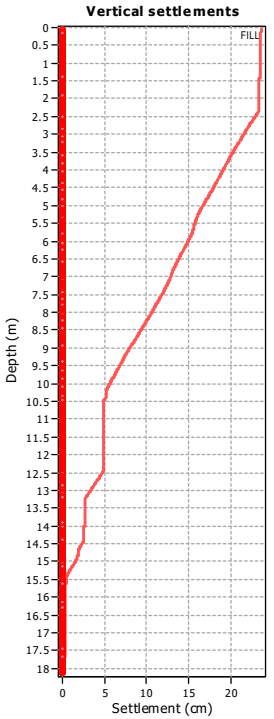
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

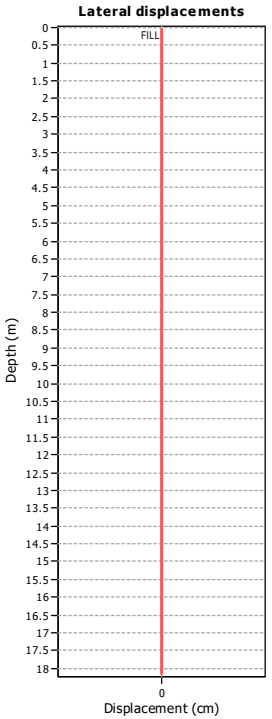
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.70 m	Limit depth:	N/A

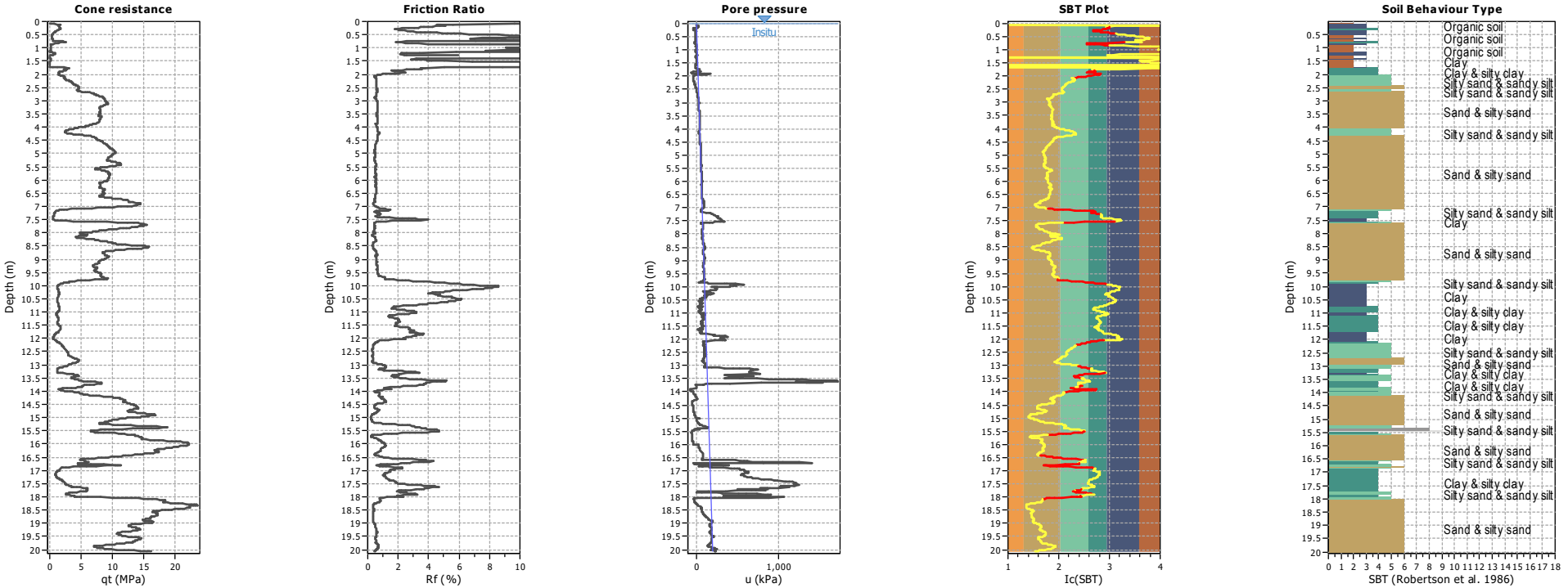
F.S. color scheme

- 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



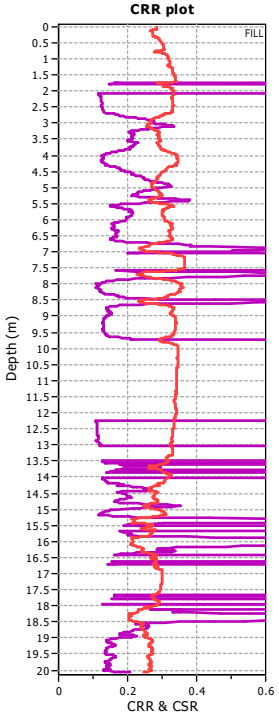
Input parameters and analysis data

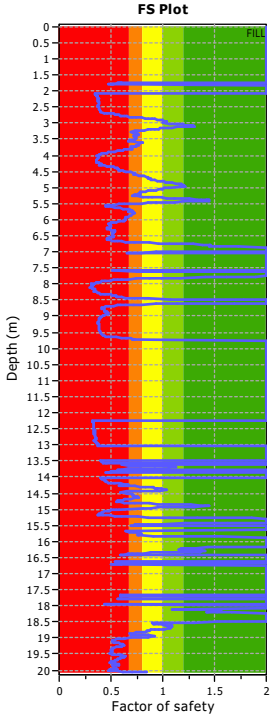
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.90 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.90 m	Limit depth:	N/A

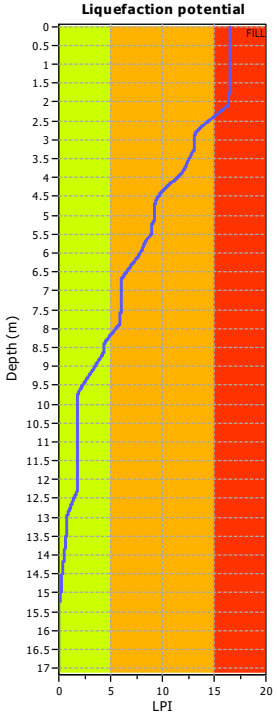
SBT legend

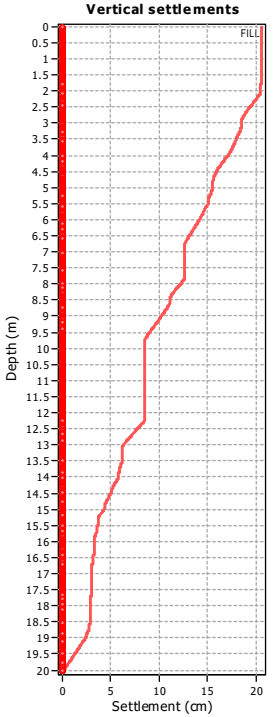
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

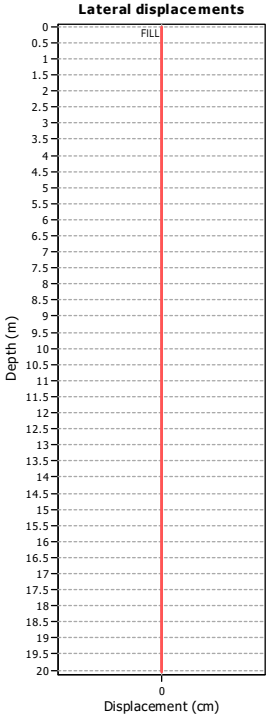
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.90 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.90 m	Limit depth:	N/A

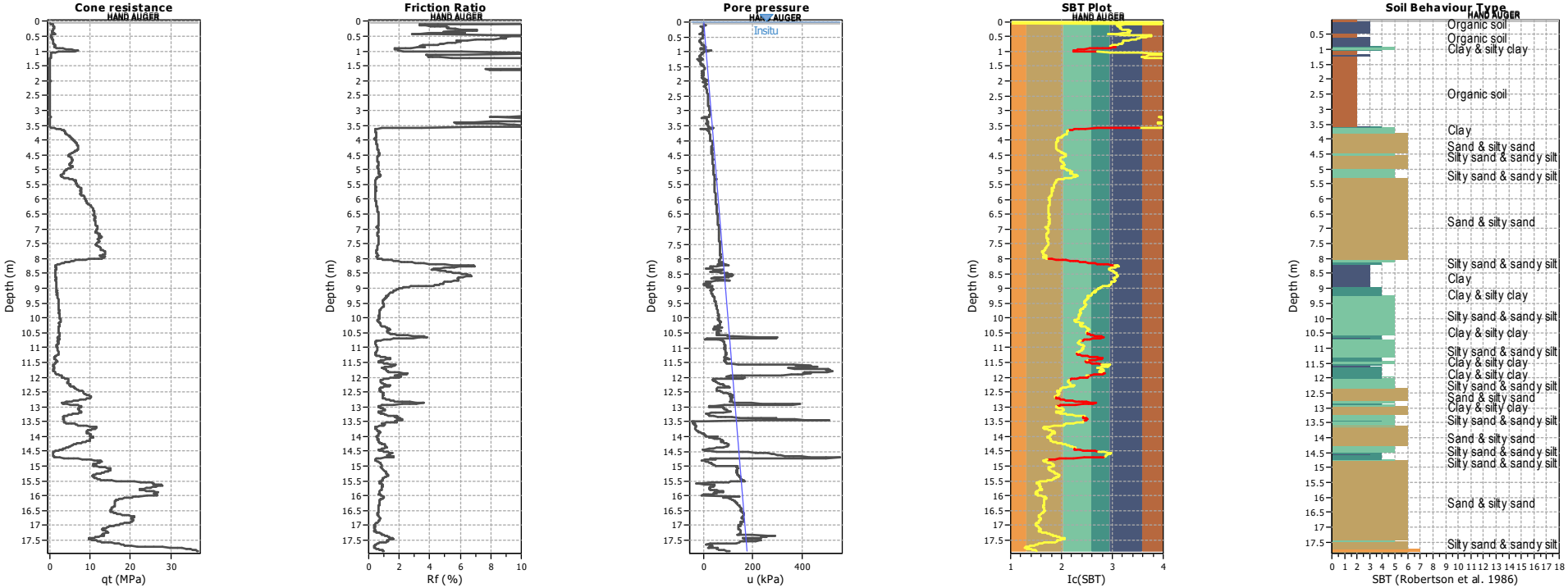
F.S. color scheme

- 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



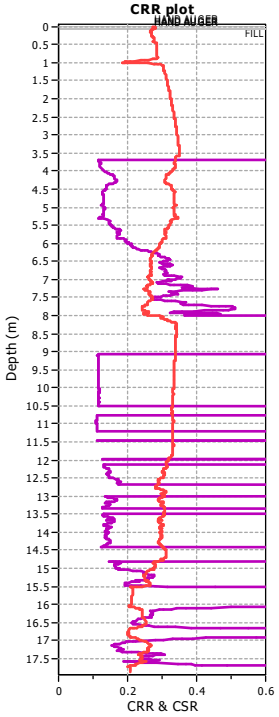
Input parameters and analysis data

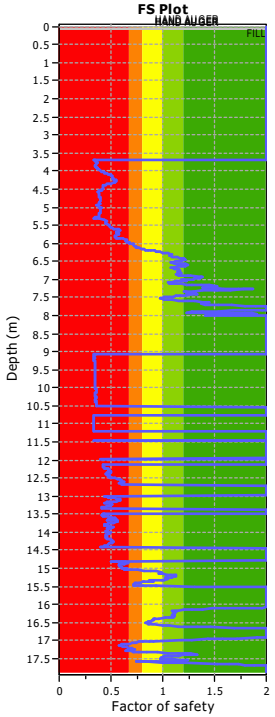
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.50 m	Limit depth:	N/A

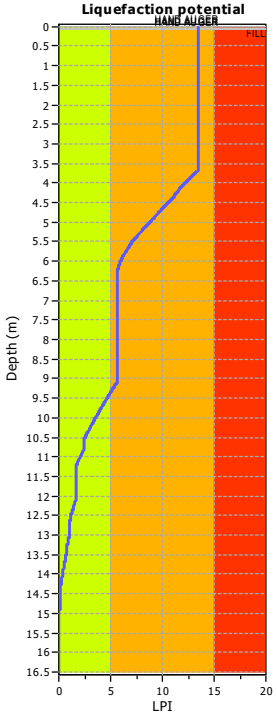
SBT legend

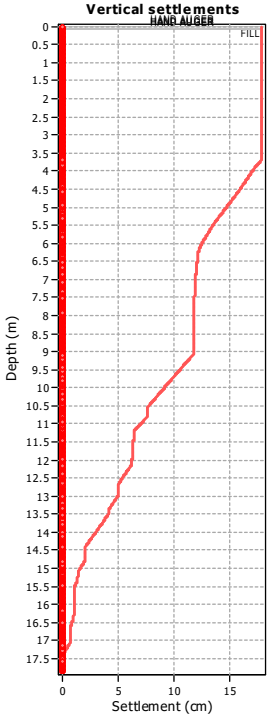
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

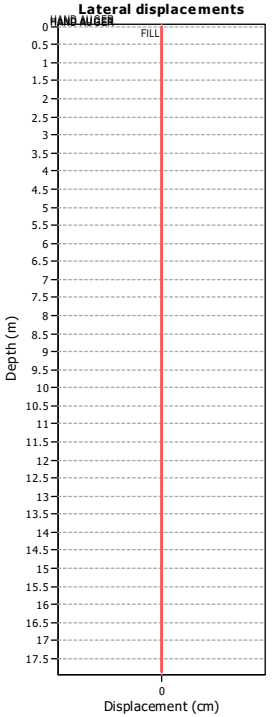
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.50 m	Limit depth:	N/A

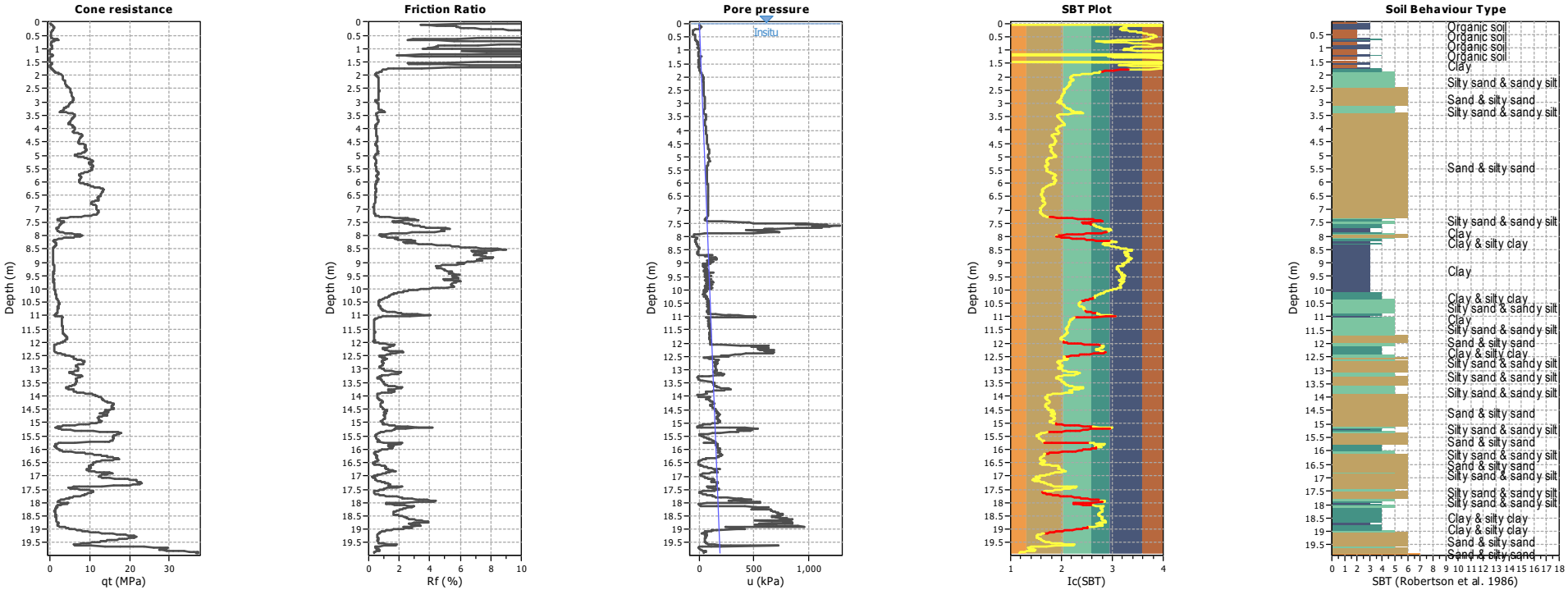
F.S. color scheme

- 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



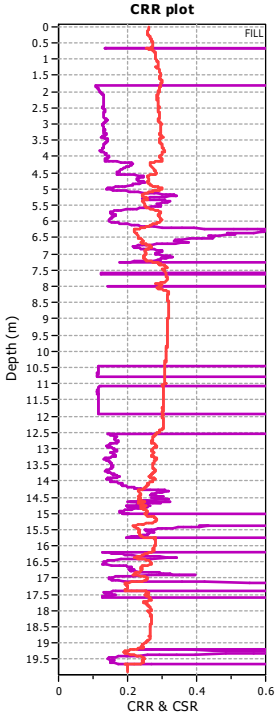
Input parameters and analysis data

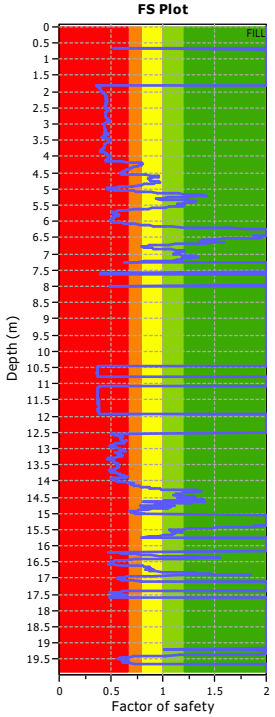
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	3.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	4.30 m	Limit depth:	N/A

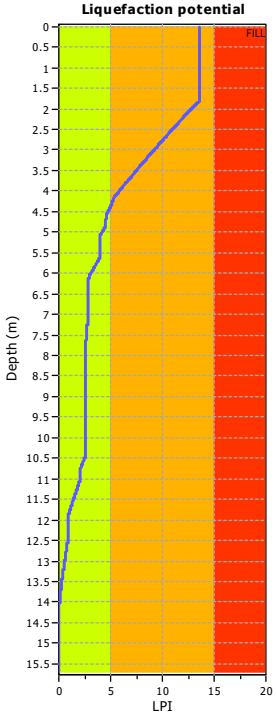
SBT legend

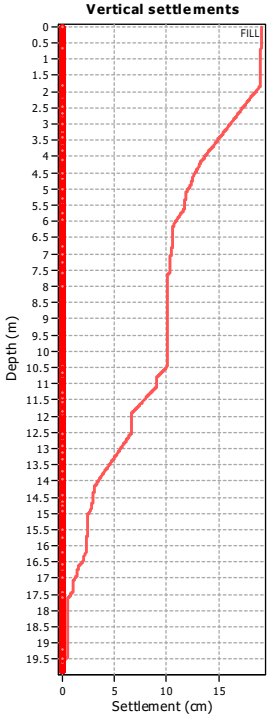
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

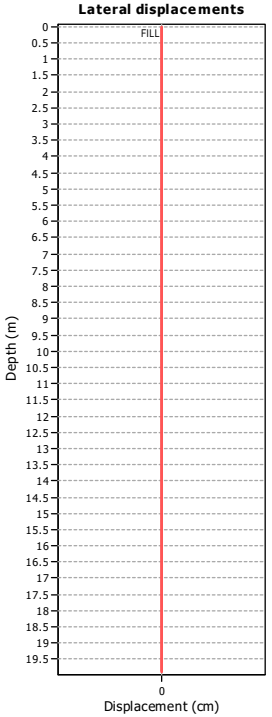
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	3.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	4.30 m	Limit depth:	N/A

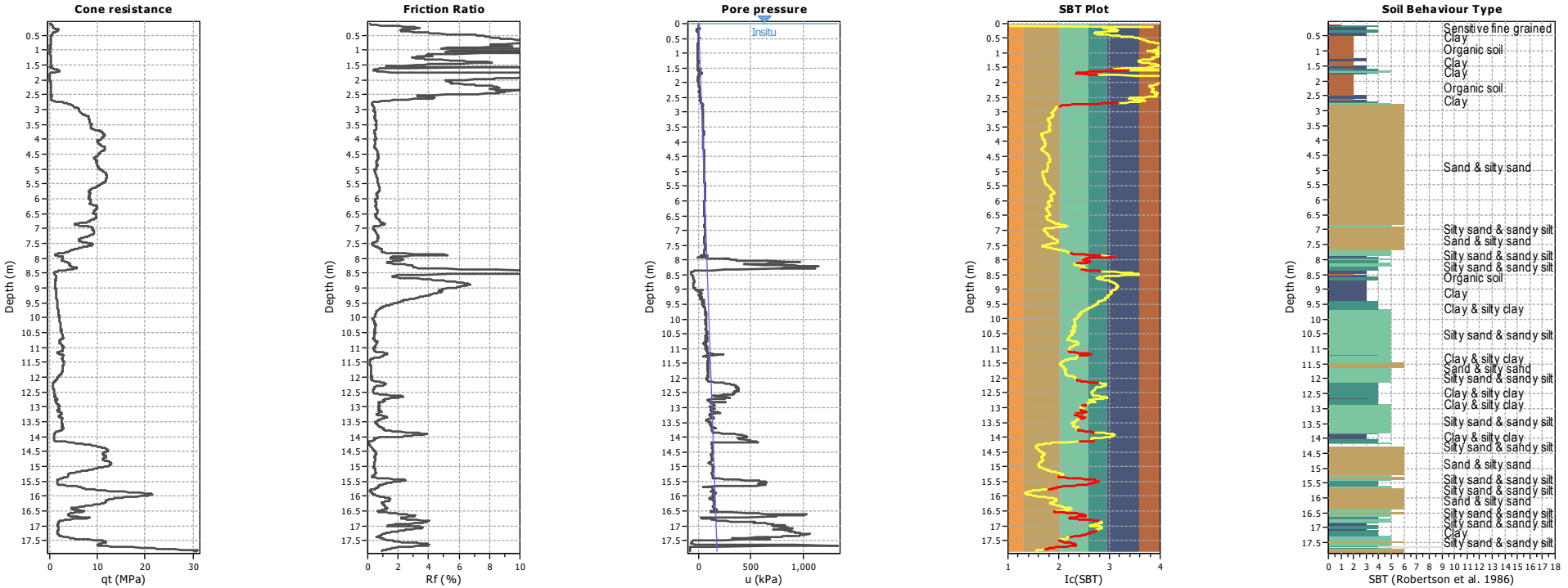
F.S. color scheme

- 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



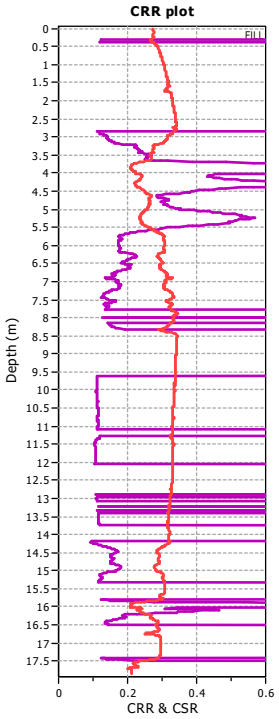
Input parameters and analysis data

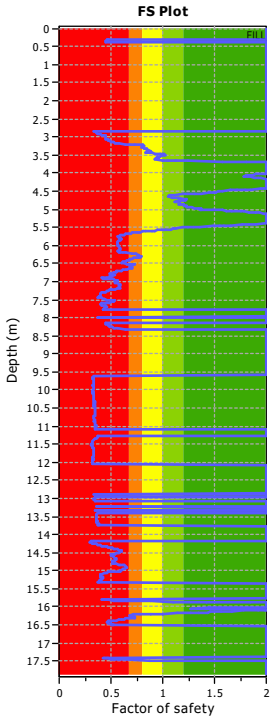
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

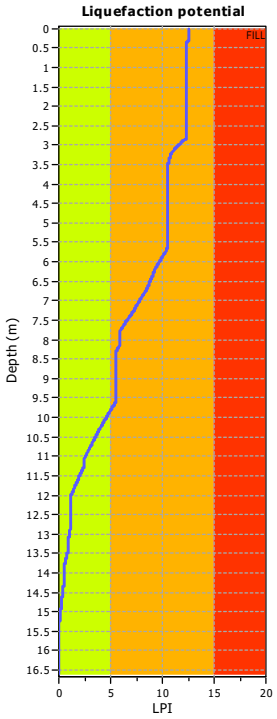
SBT legend

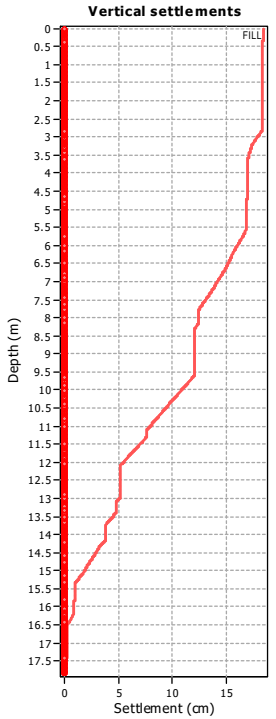
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

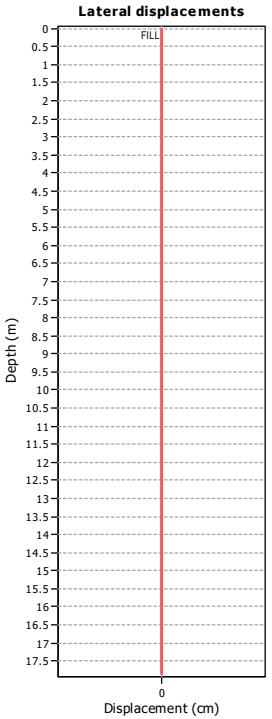
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

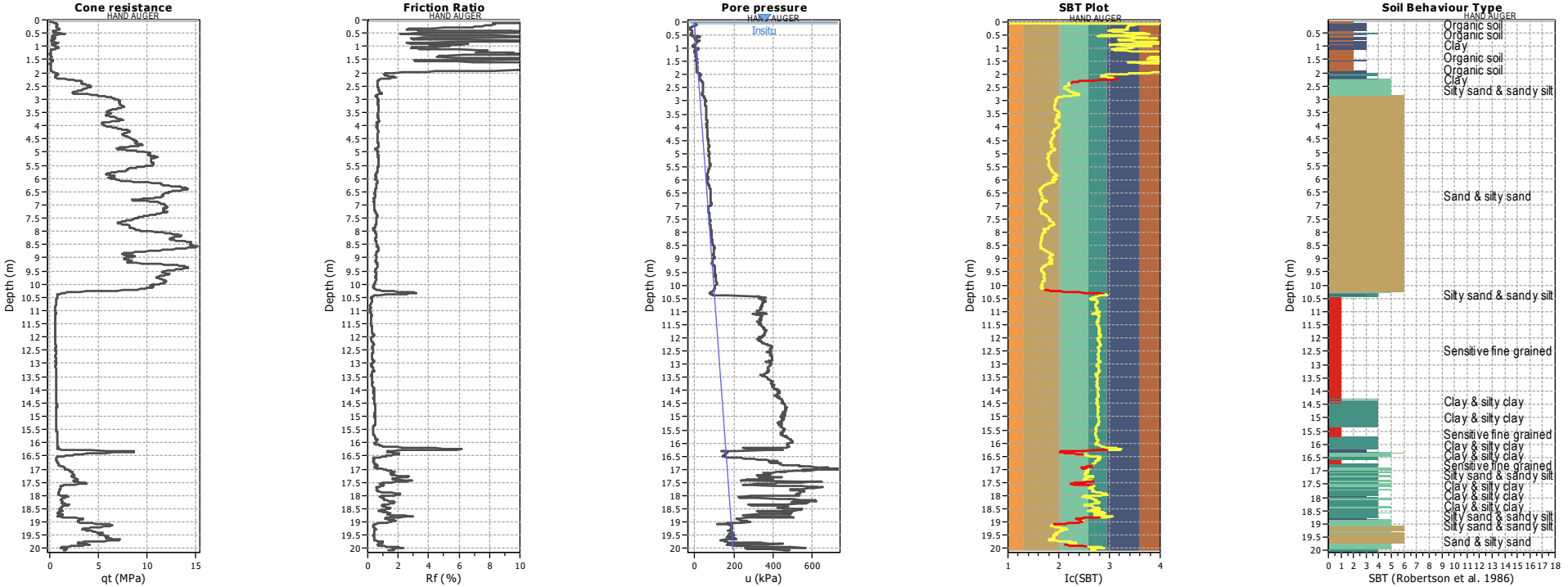
F.S. color scheme

- 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



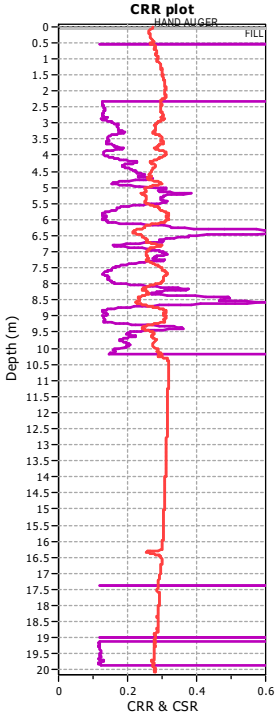
Input parameters and analysis data

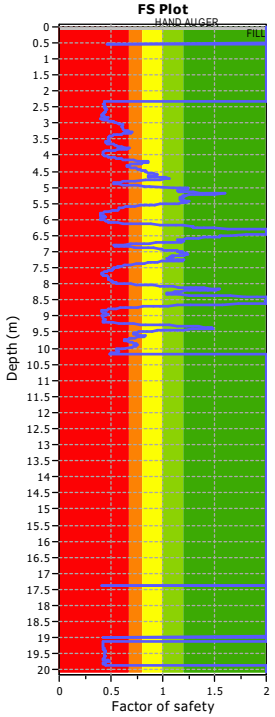
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	3.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	4.00 m	Limit depth:	N/A

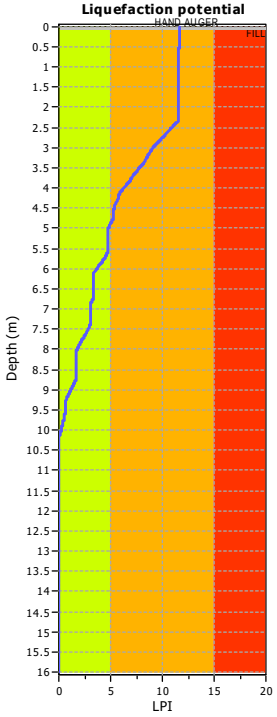
SBT legend

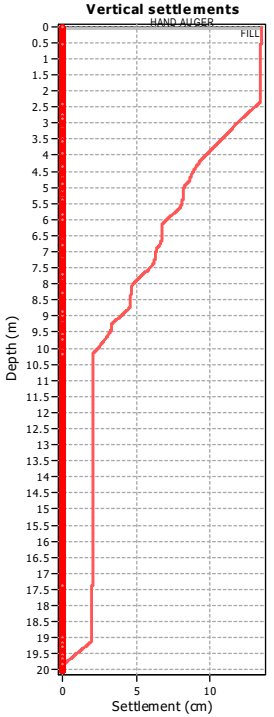
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

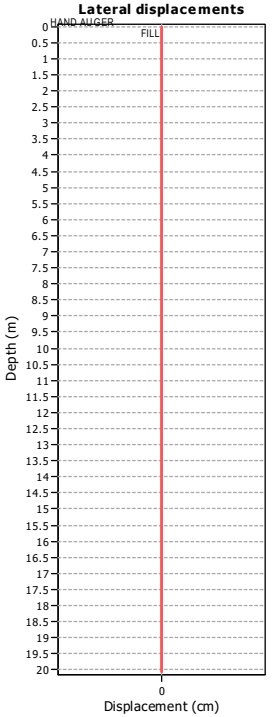
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	3.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	4.00 m	Limit depth:	N/A

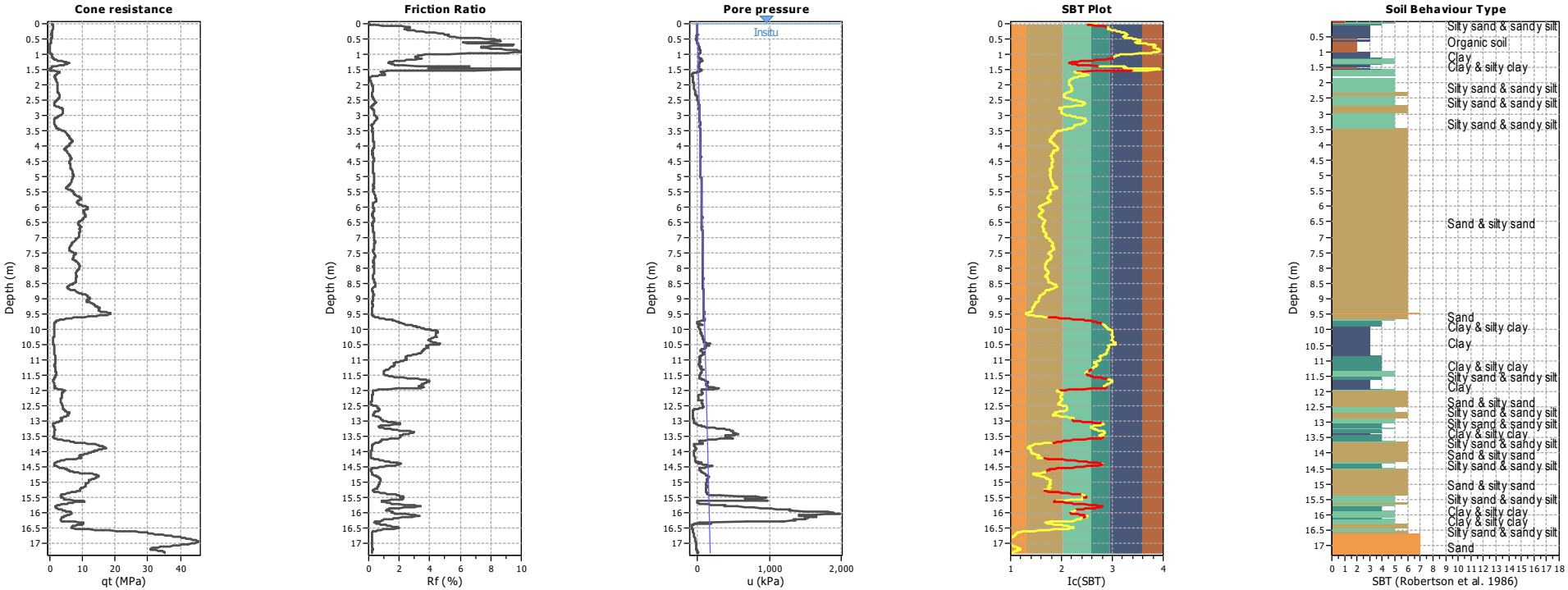
F.S. color scheme

- 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



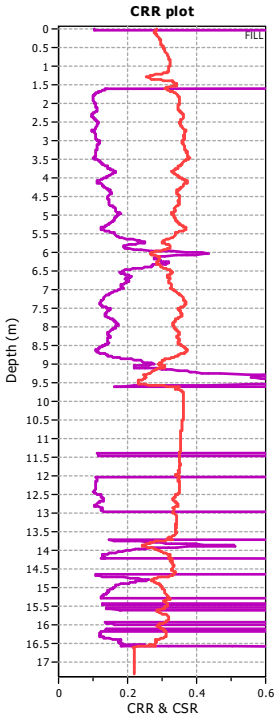
Input parameters and analysis data

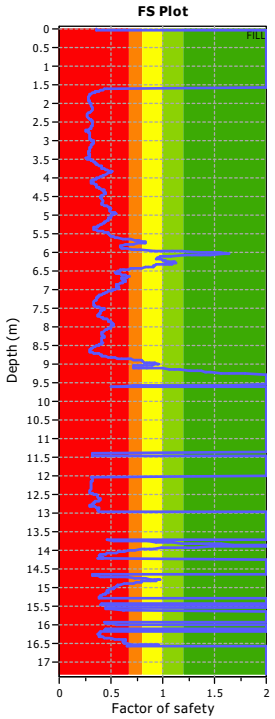
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.70 m	Limit depth:	N/A

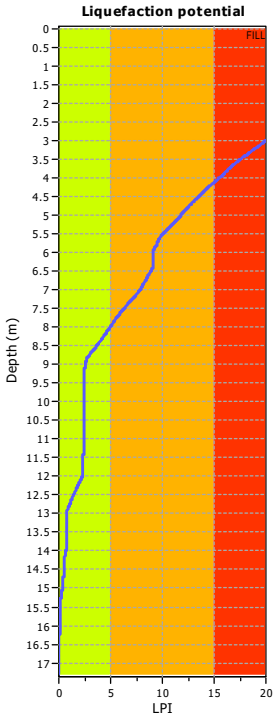
SBT legend

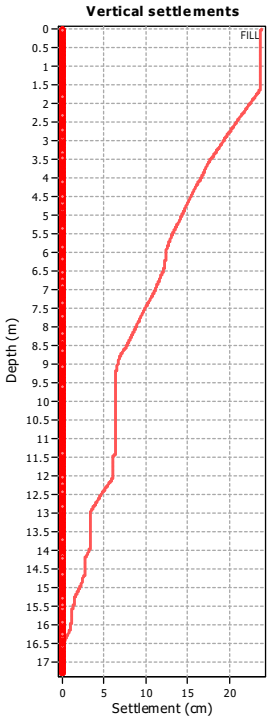
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

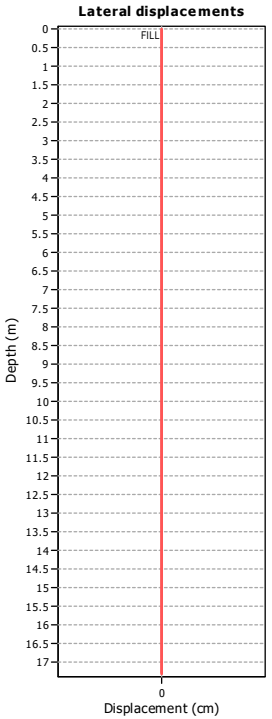
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.70 m	Limit depth:	N/A

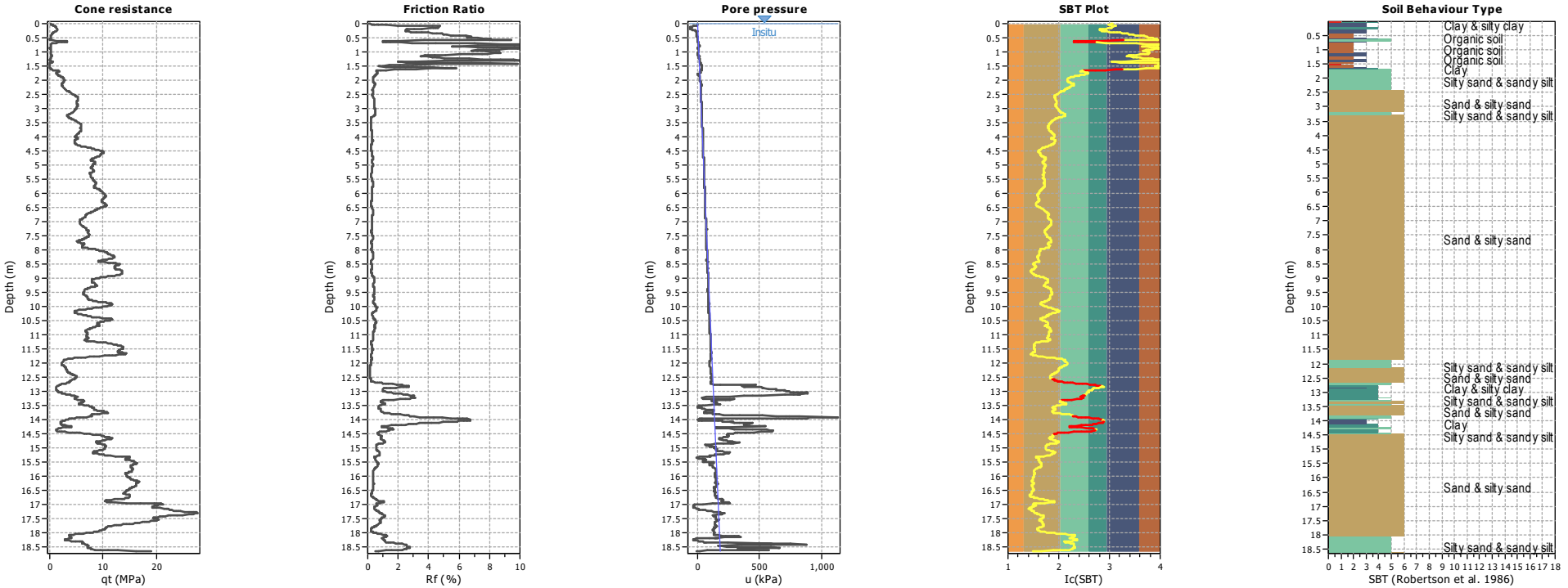
F.S. color scheme

- 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



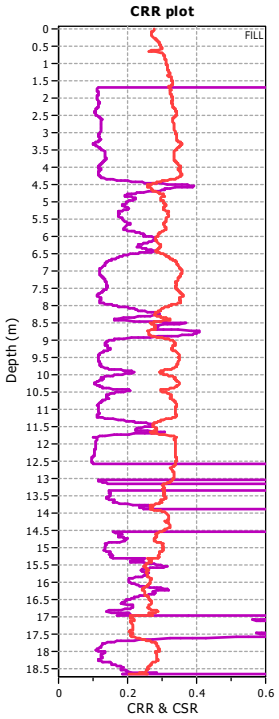
Input parameters and analysis data

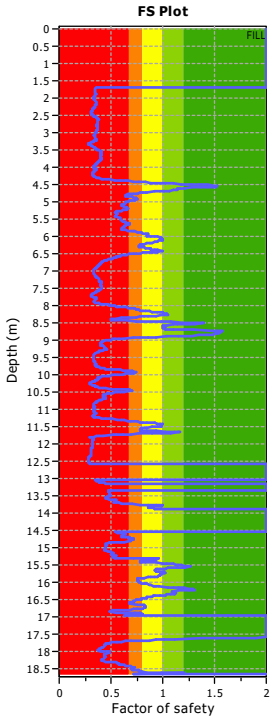
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

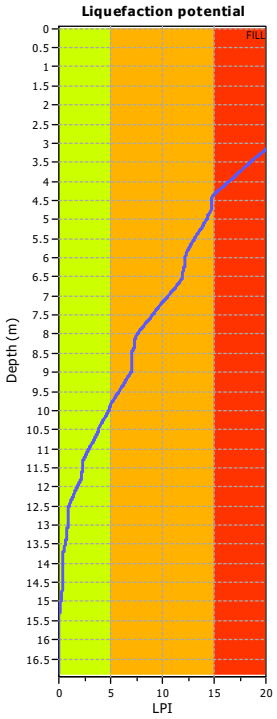
SBT legend

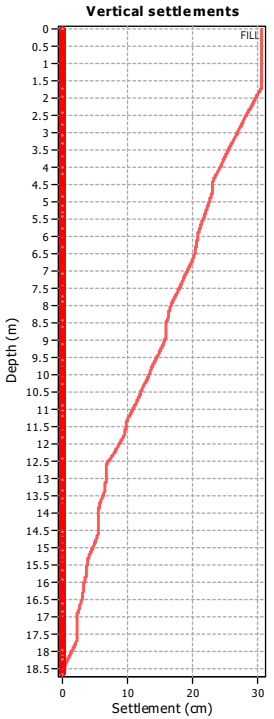
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

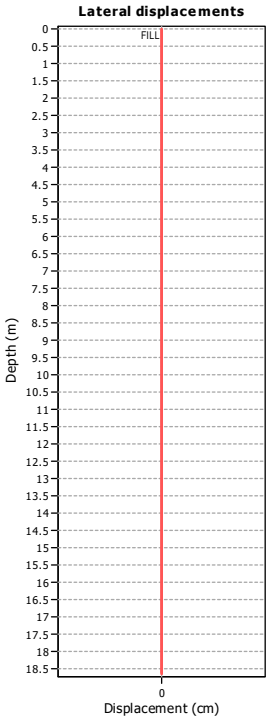
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

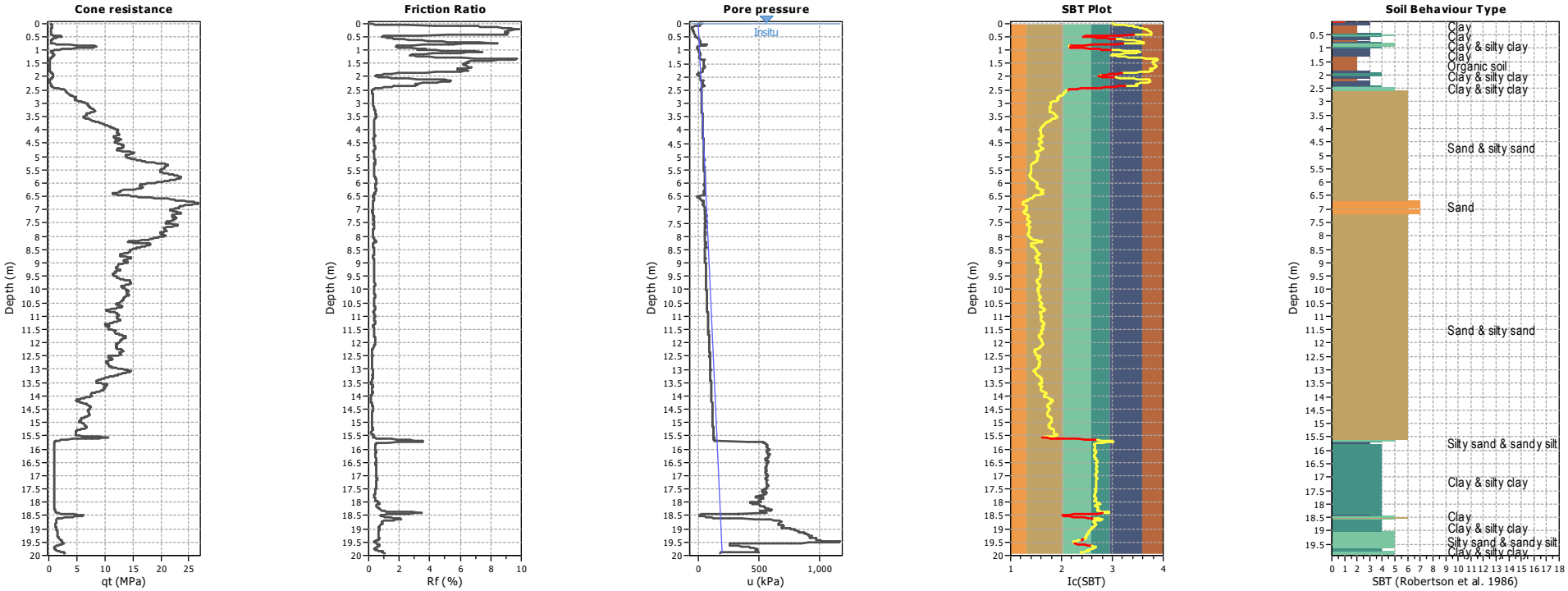
F.S. color scheme

- 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



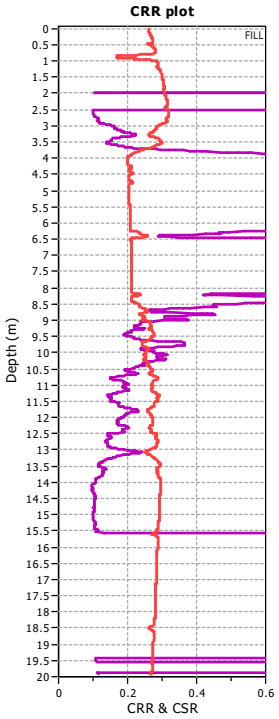
Input parameters and analysis data

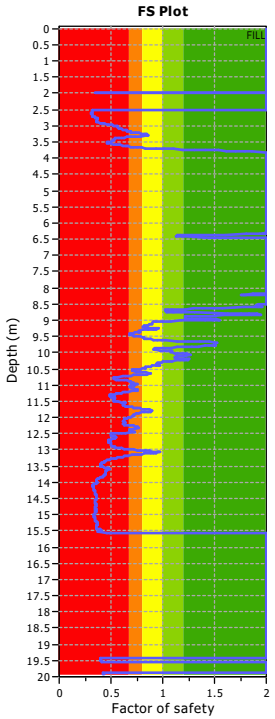
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	3.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	4.00 m	Limit depth:	N/A

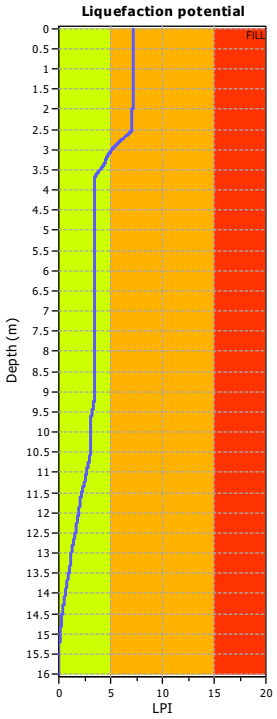
SBT legend

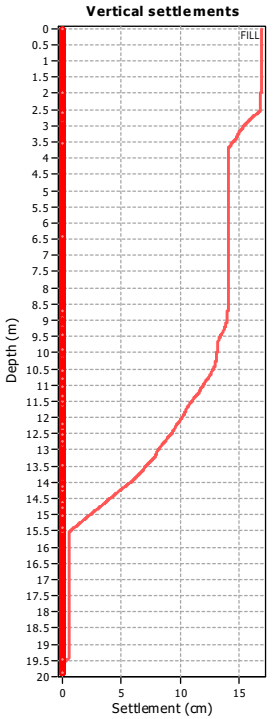
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

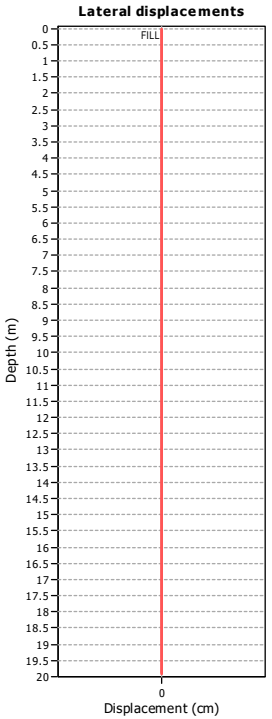
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	3.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	4.00 m	Limit depth:	N/A

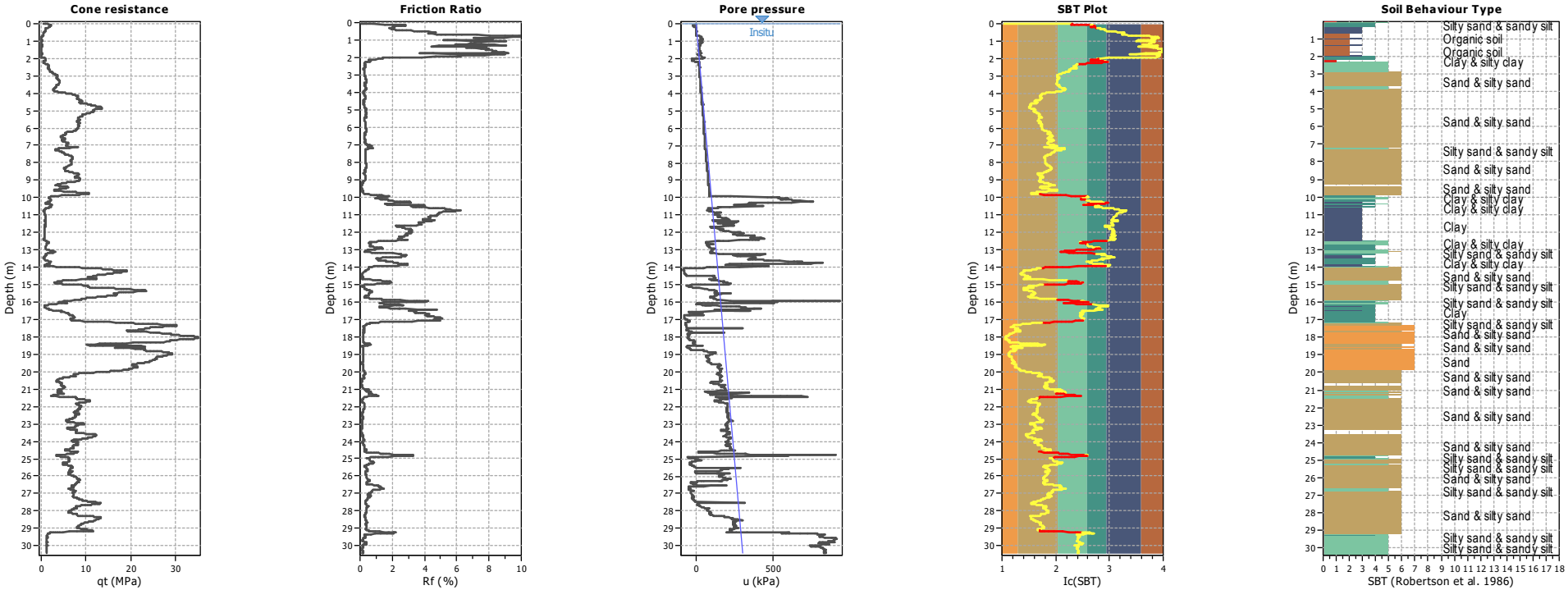
F.S. color scheme

- 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



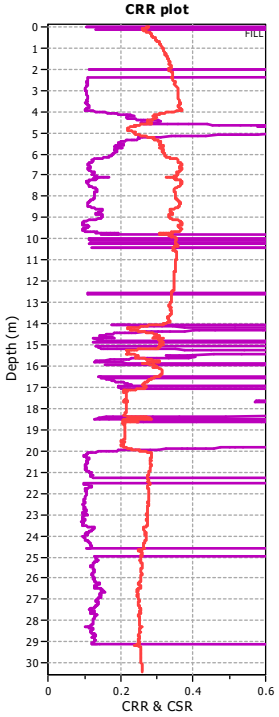
Input parameters and analysis data

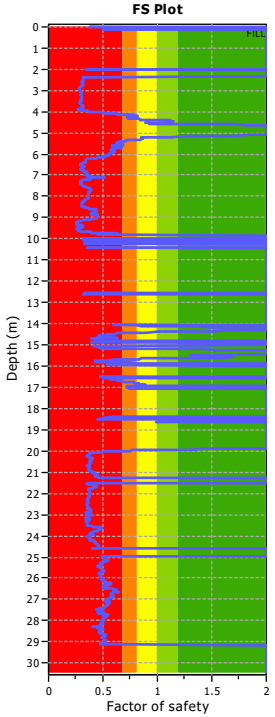
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

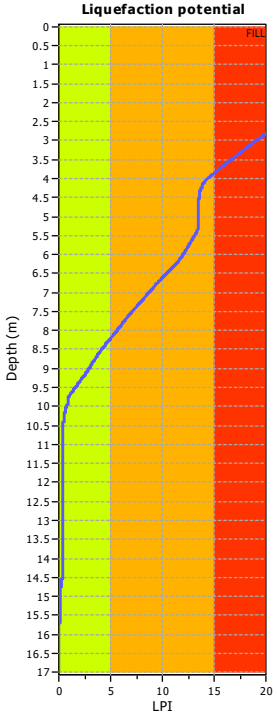
SBT legend

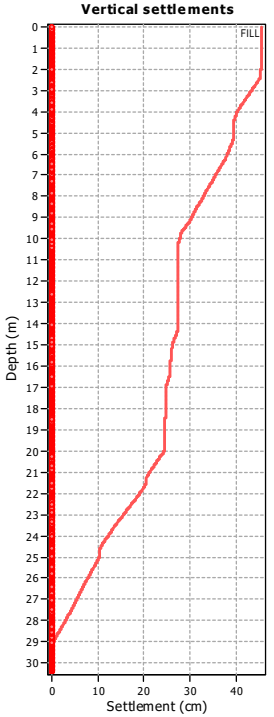
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

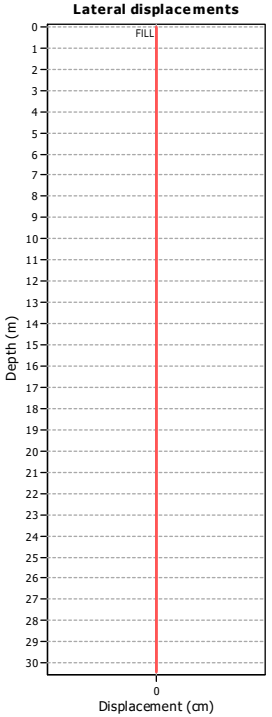
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

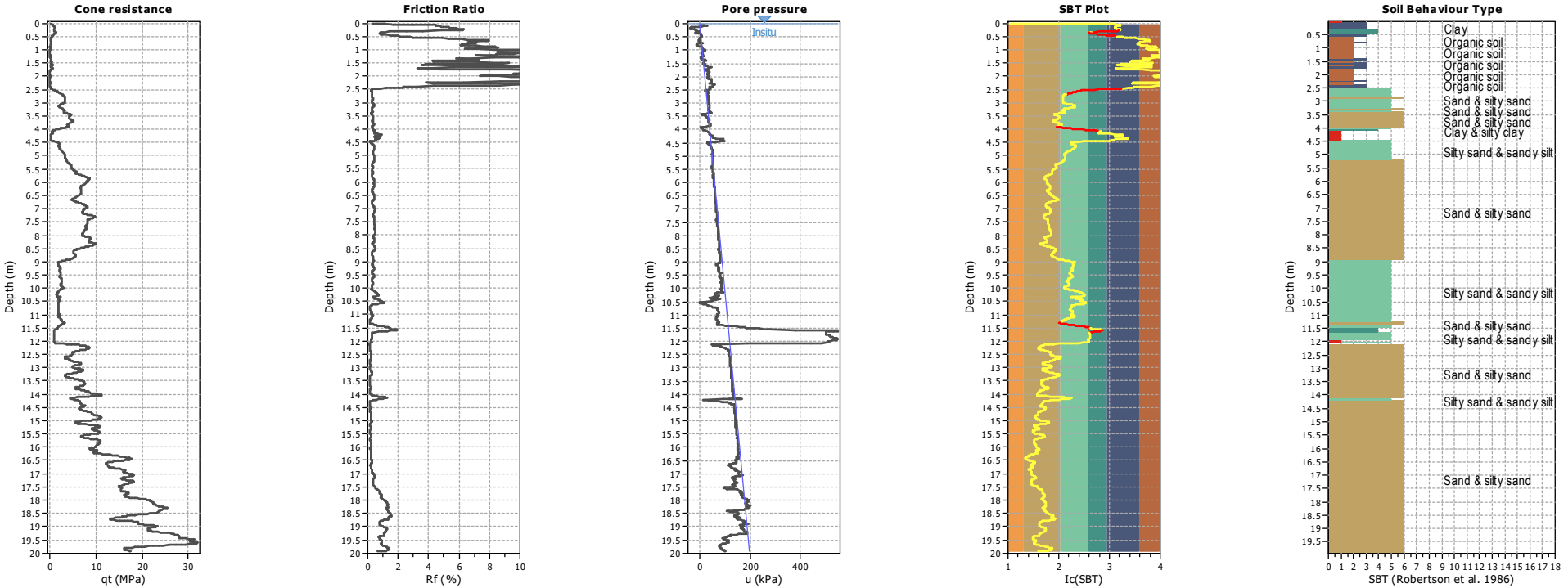
F.S. color scheme

- 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



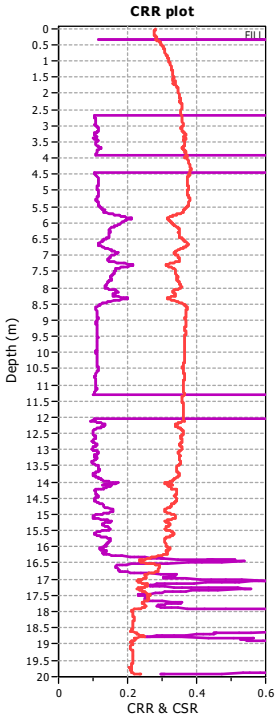
Input parameters and analysis data

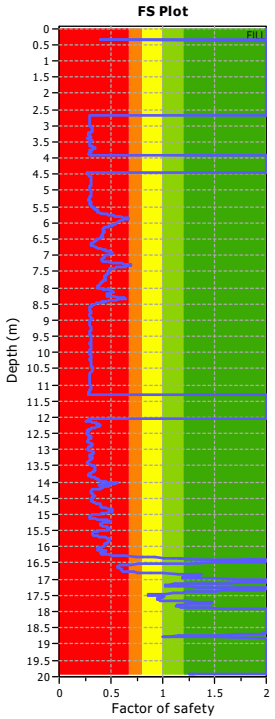
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.90 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.90 m	Limit depth:	N/A

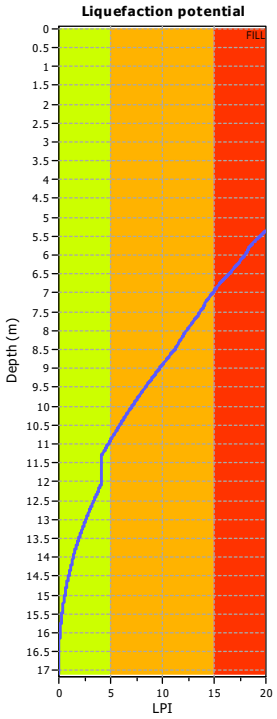
SBT legend

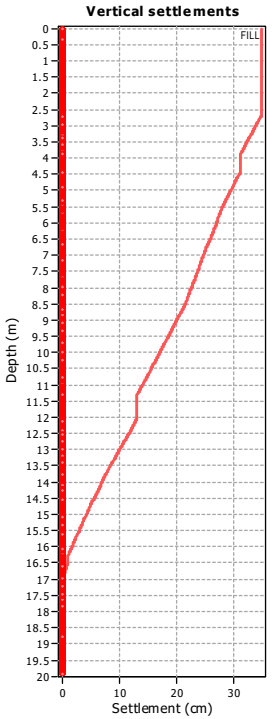
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

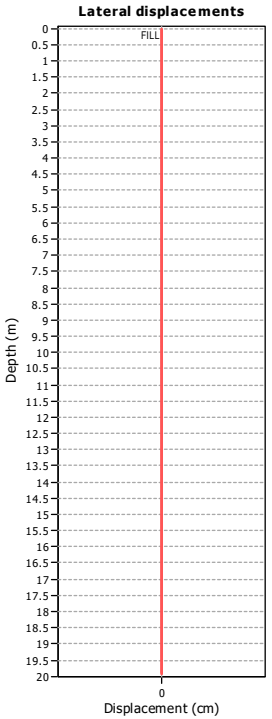
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.90 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.90 m	Limit depth:	N/A

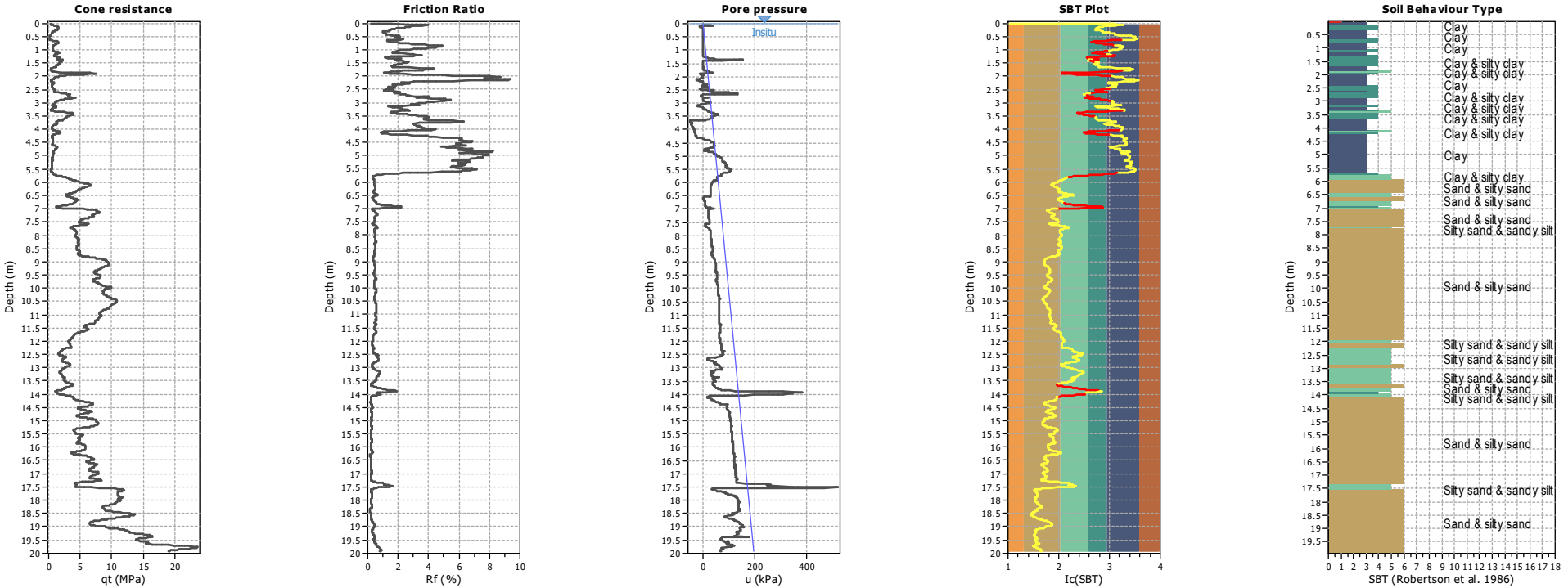
F.S. color scheme

- 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



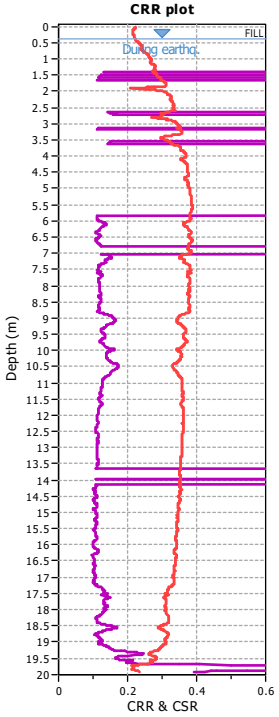
Input parameters and analysis data

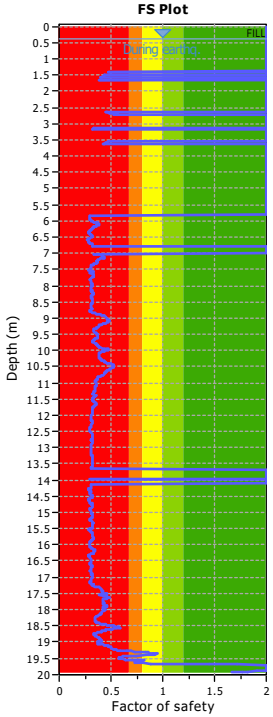
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.00 m	Limit depth:	N/A

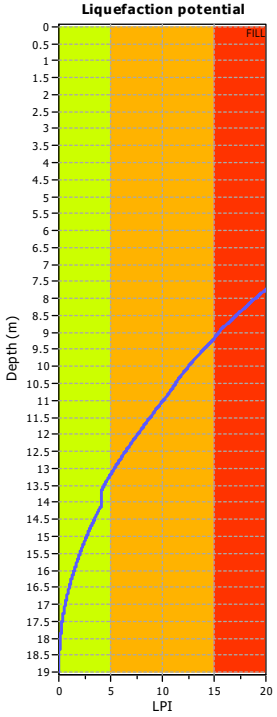
SBT legend

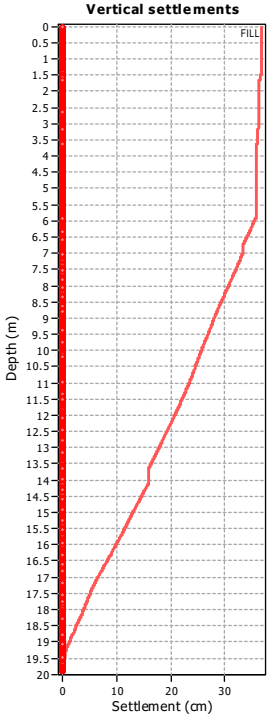
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

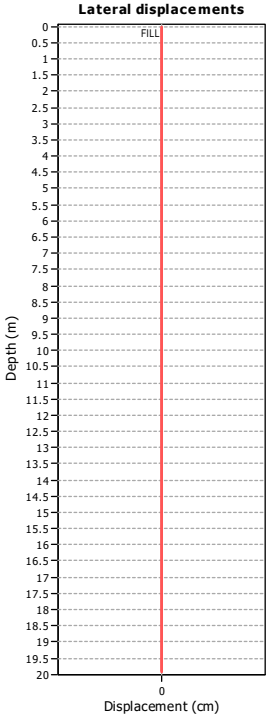
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.00 m	Limit depth:	N/A

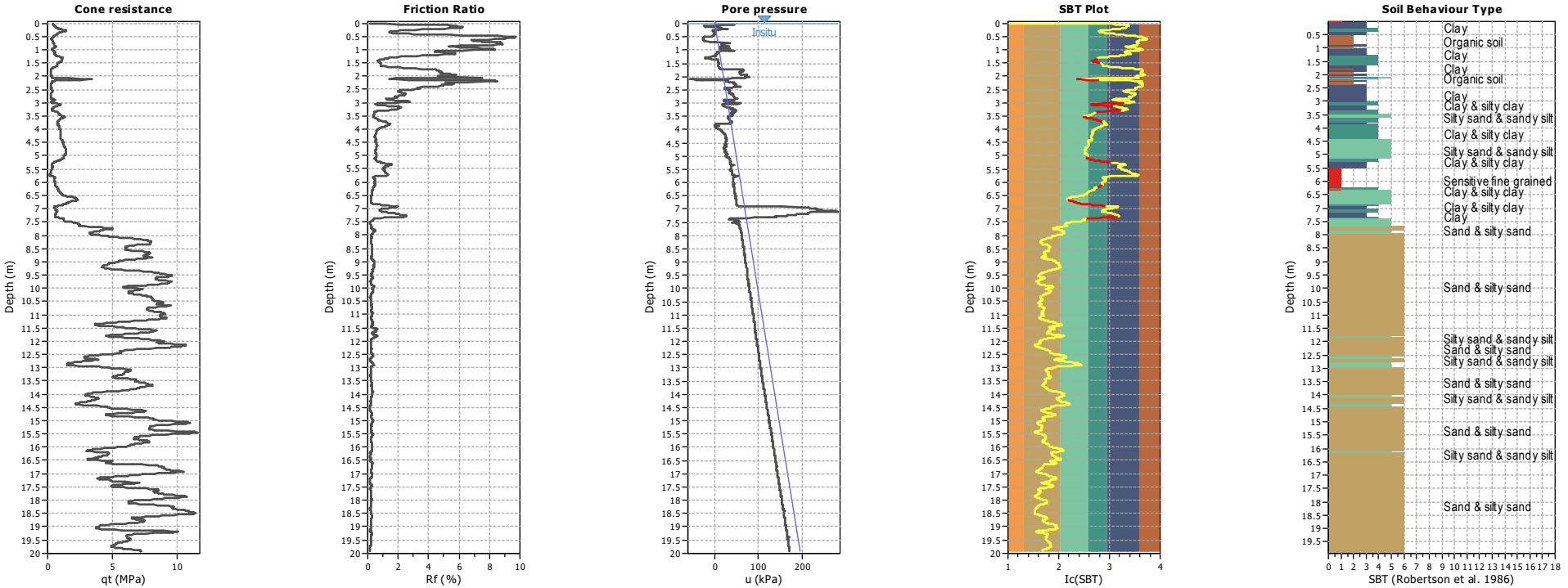
F.S. color scheme

- 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



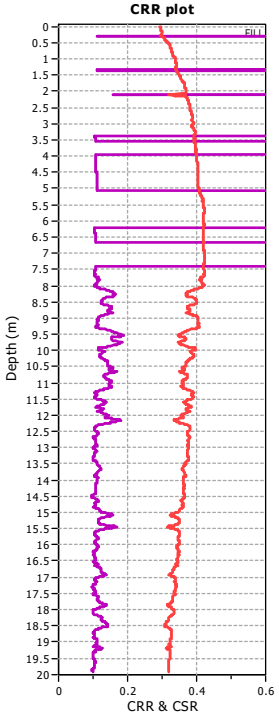
Input parameters and analysis data

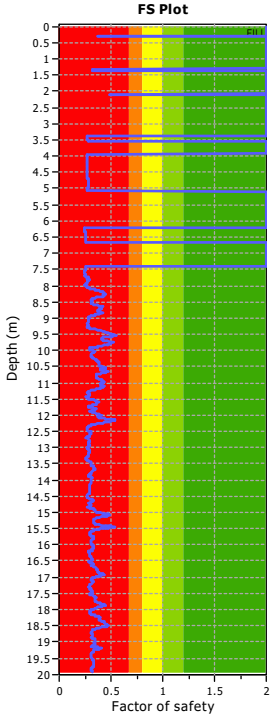
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.40 m	Limit depth:	N/A

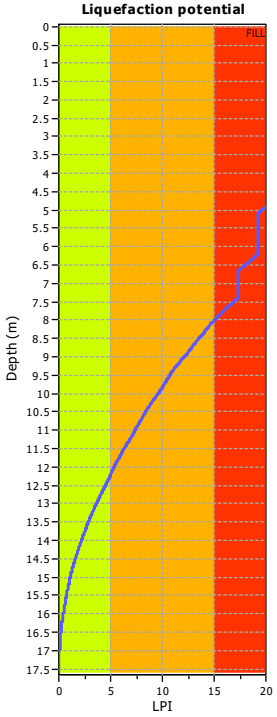
SBT legend

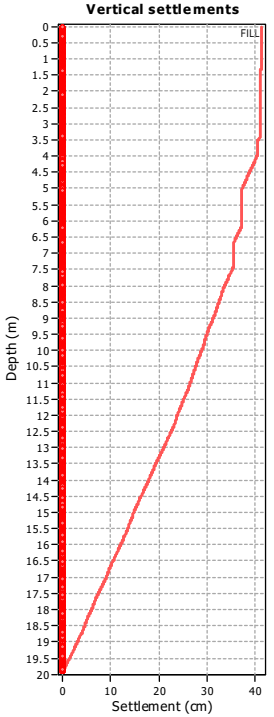
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

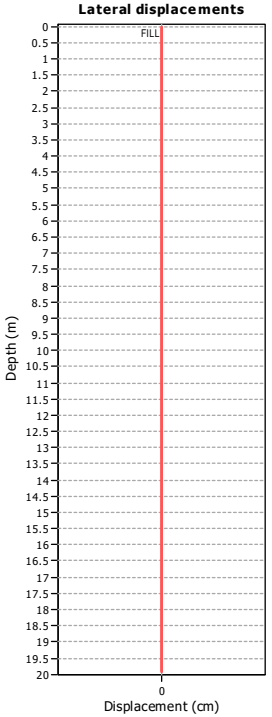
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.40 m	Limit depth:	N/A

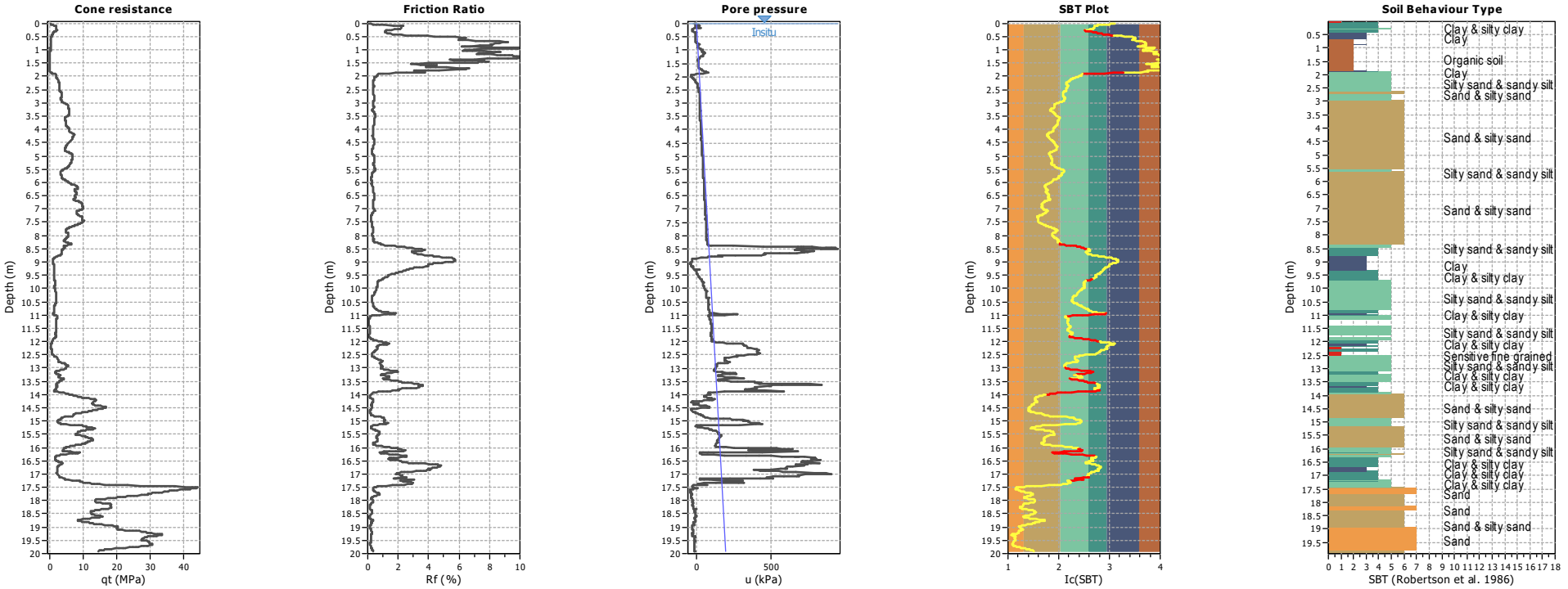
F.S. color scheme

- 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



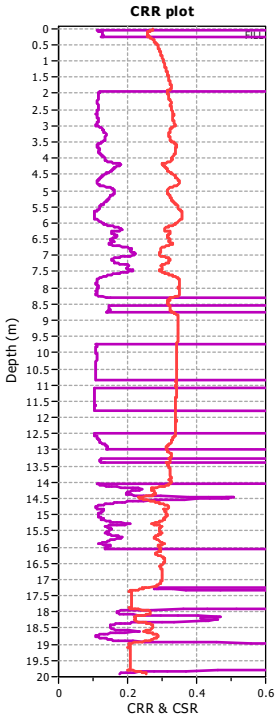
Input parameters and analysis data

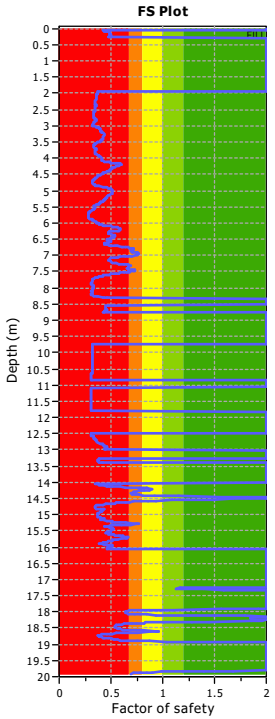
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

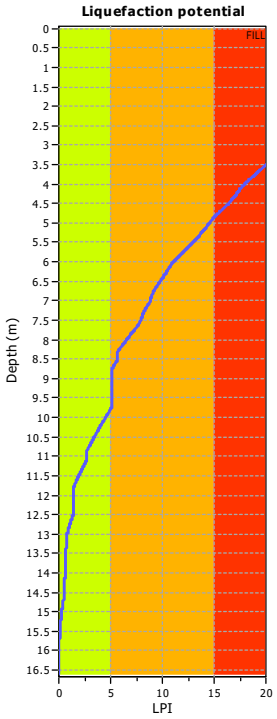
SBT legend

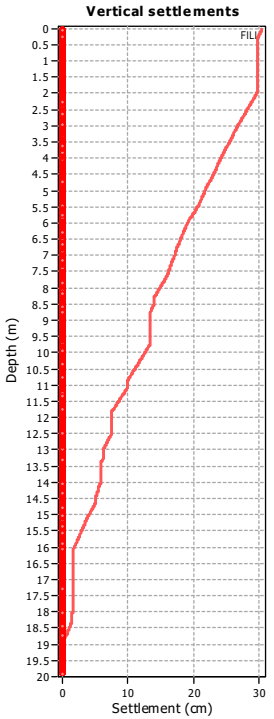
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

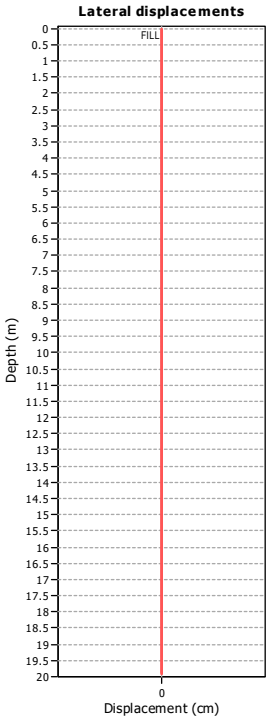
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

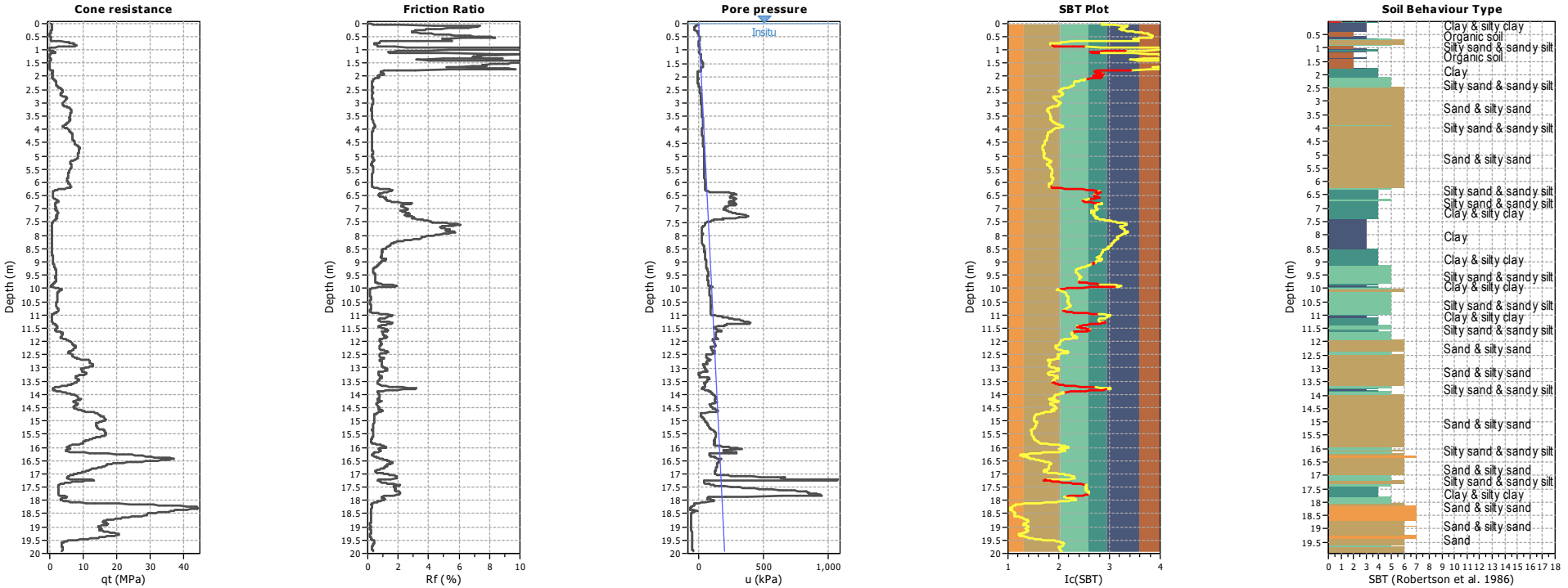
F.S. color scheme

- 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



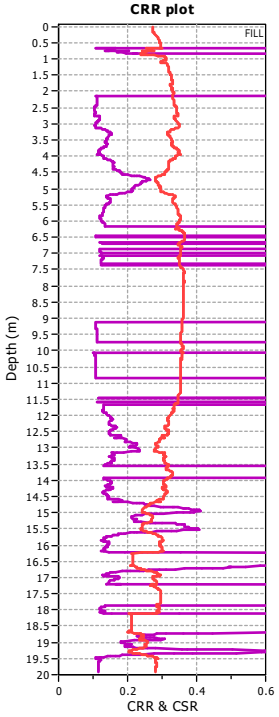
Input parameters and analysis data

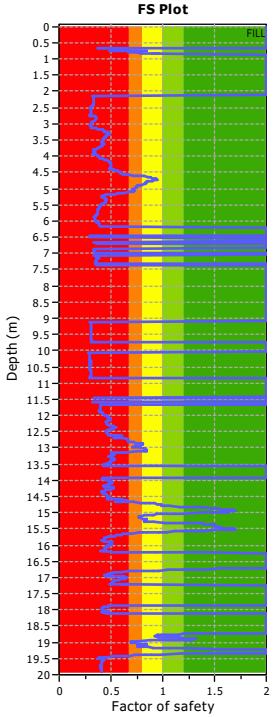
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

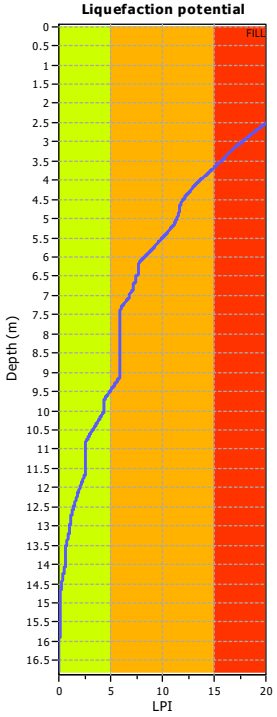
SBT legend

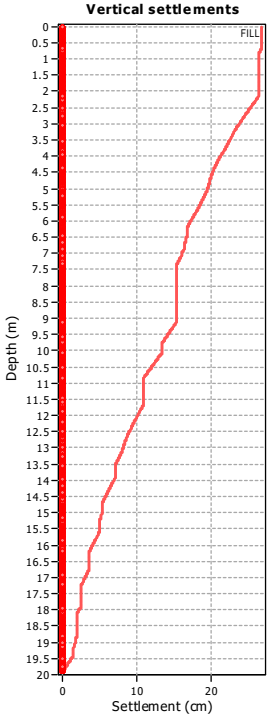
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

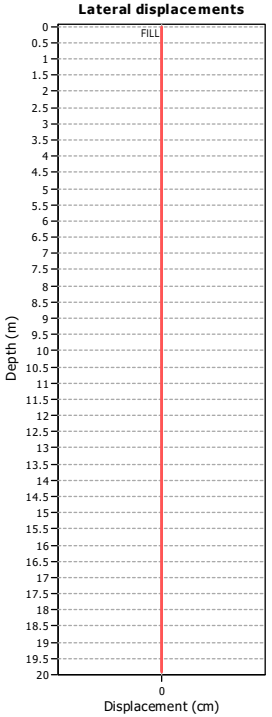
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

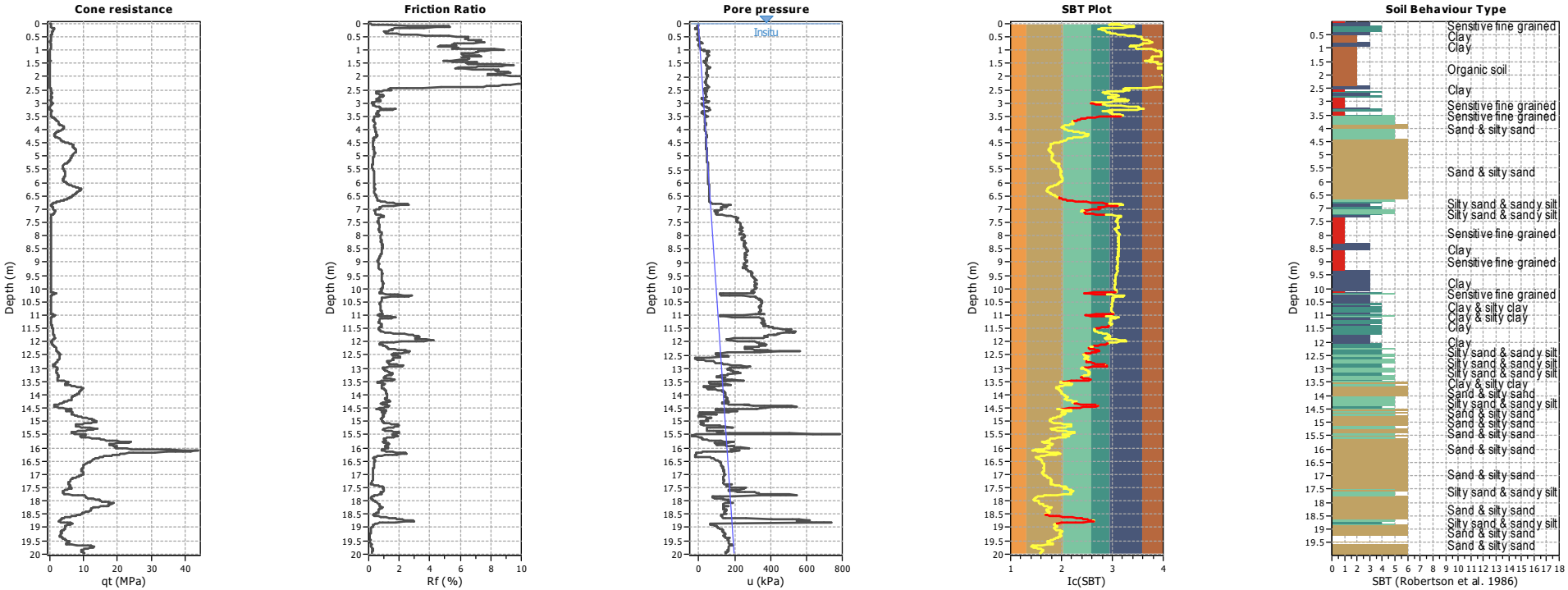
F.S. color scheme

- 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



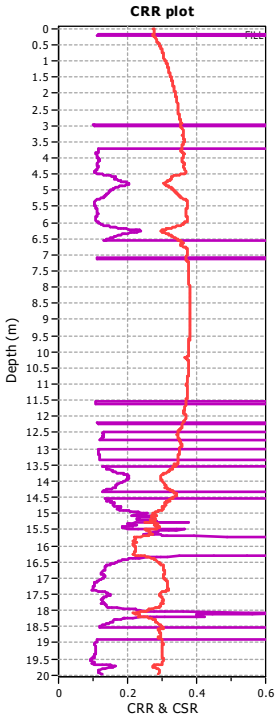
Input parameters and analysis data

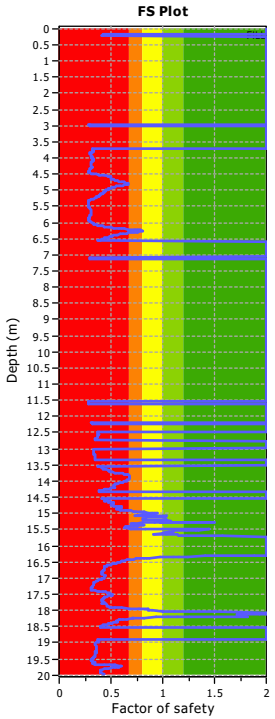
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

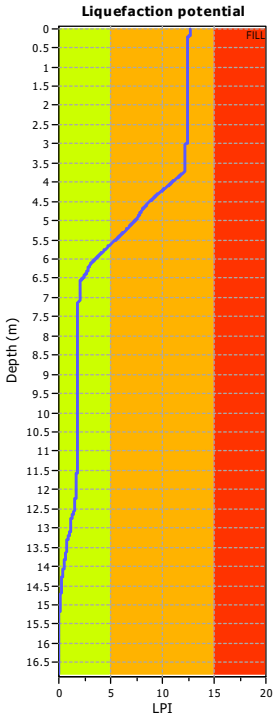
SBT legend

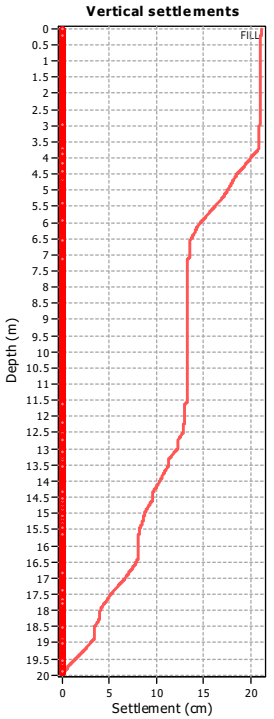
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

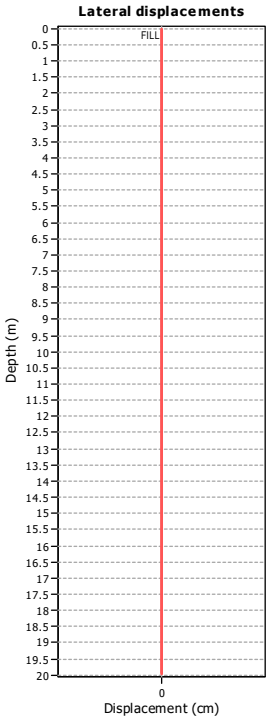
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

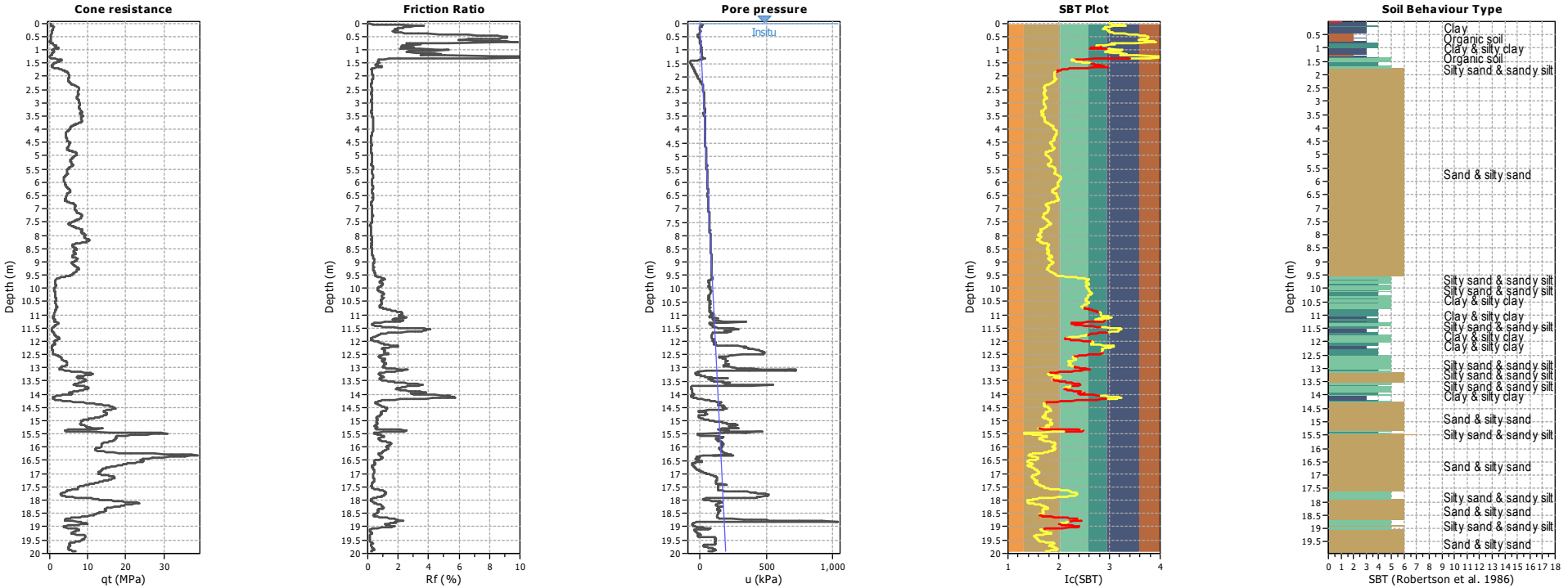
F.S. color scheme

- 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



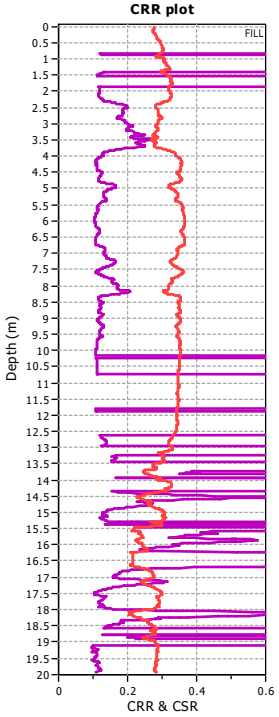
Input parameters and analysis data

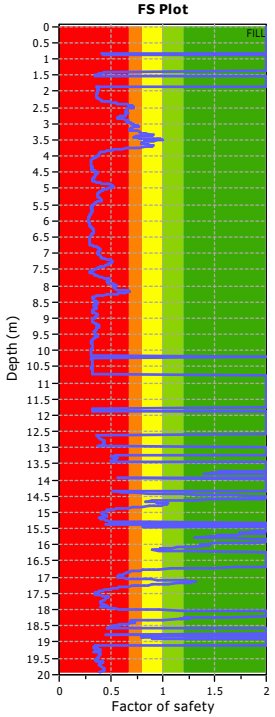
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

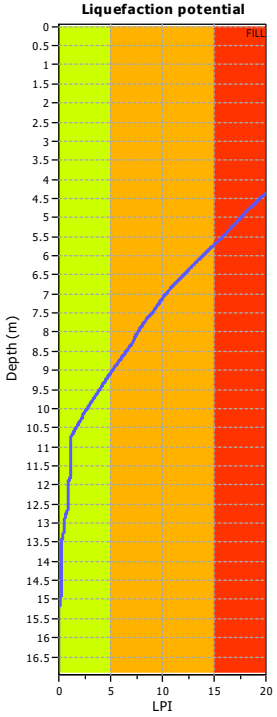
SBT legend

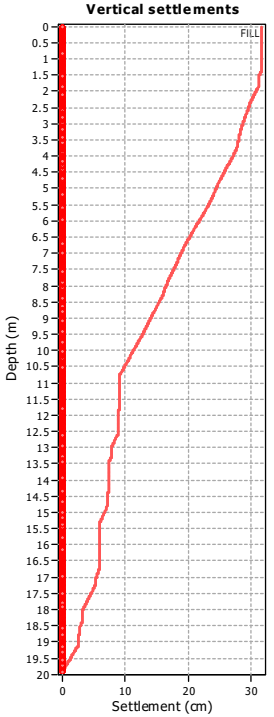
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

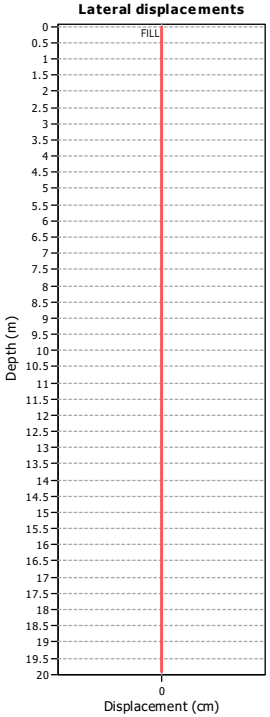
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

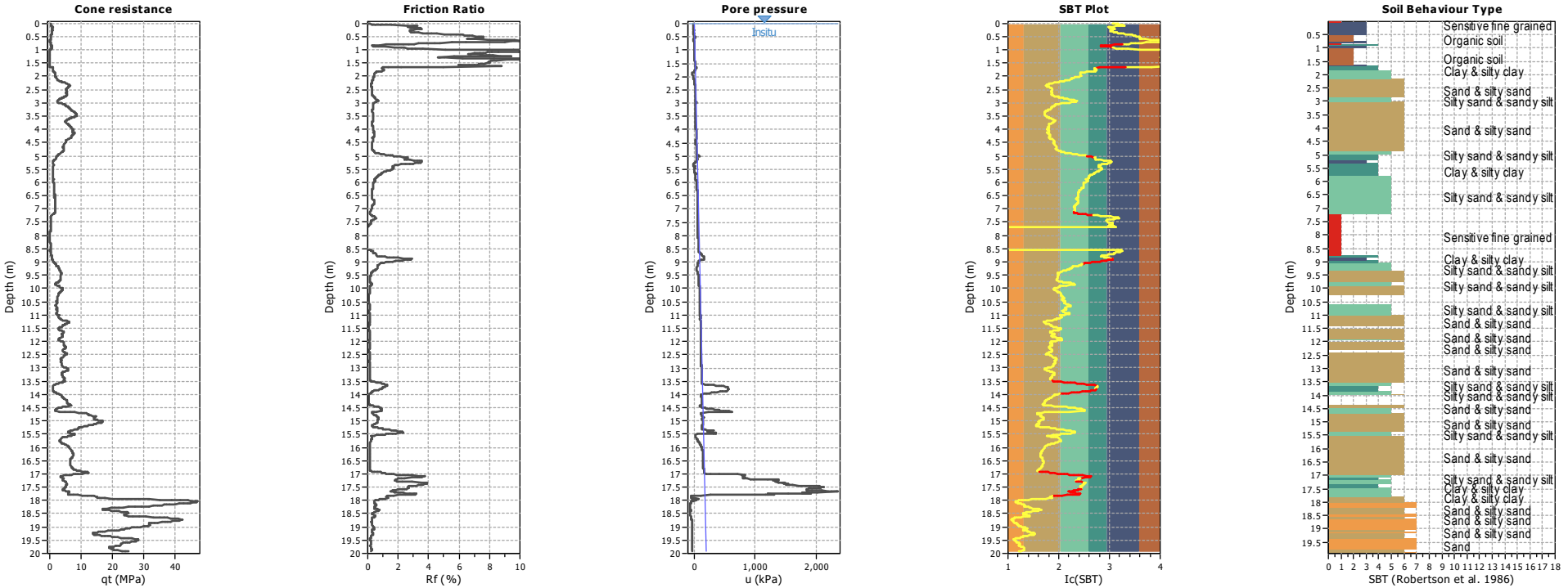
F.S. color scheme

- 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



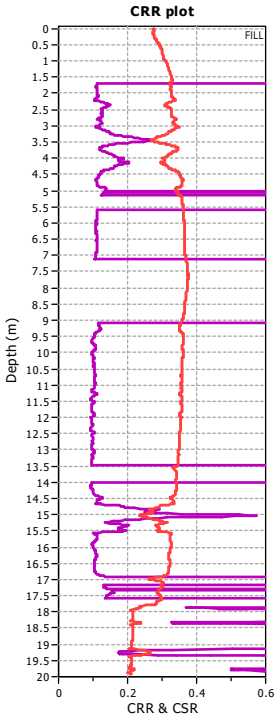
Input parameters and analysis data

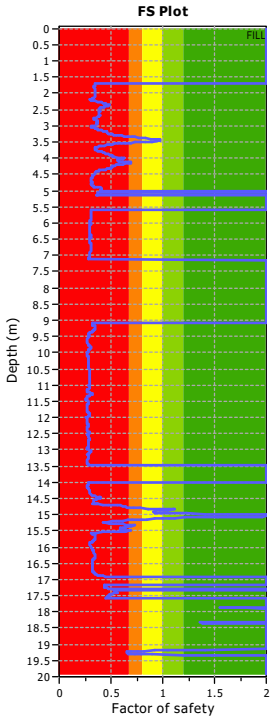
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

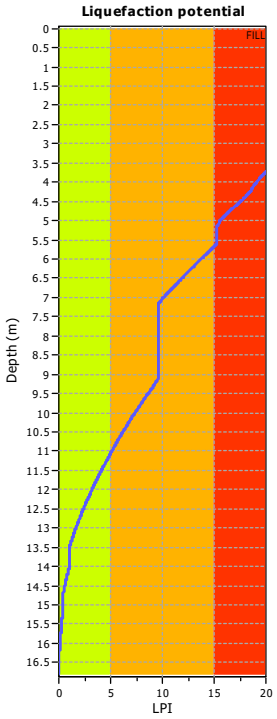
SBT legend

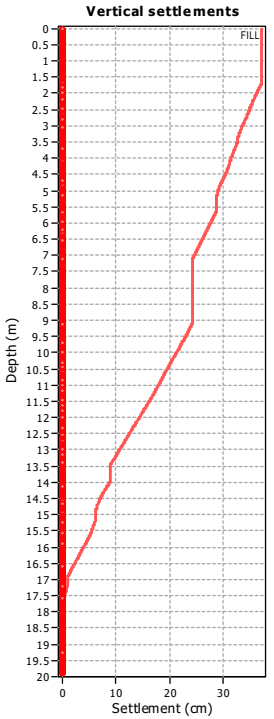
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

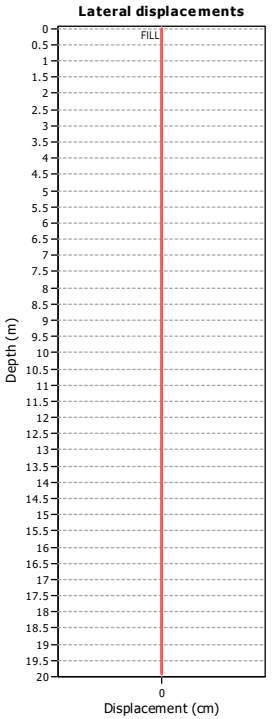
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

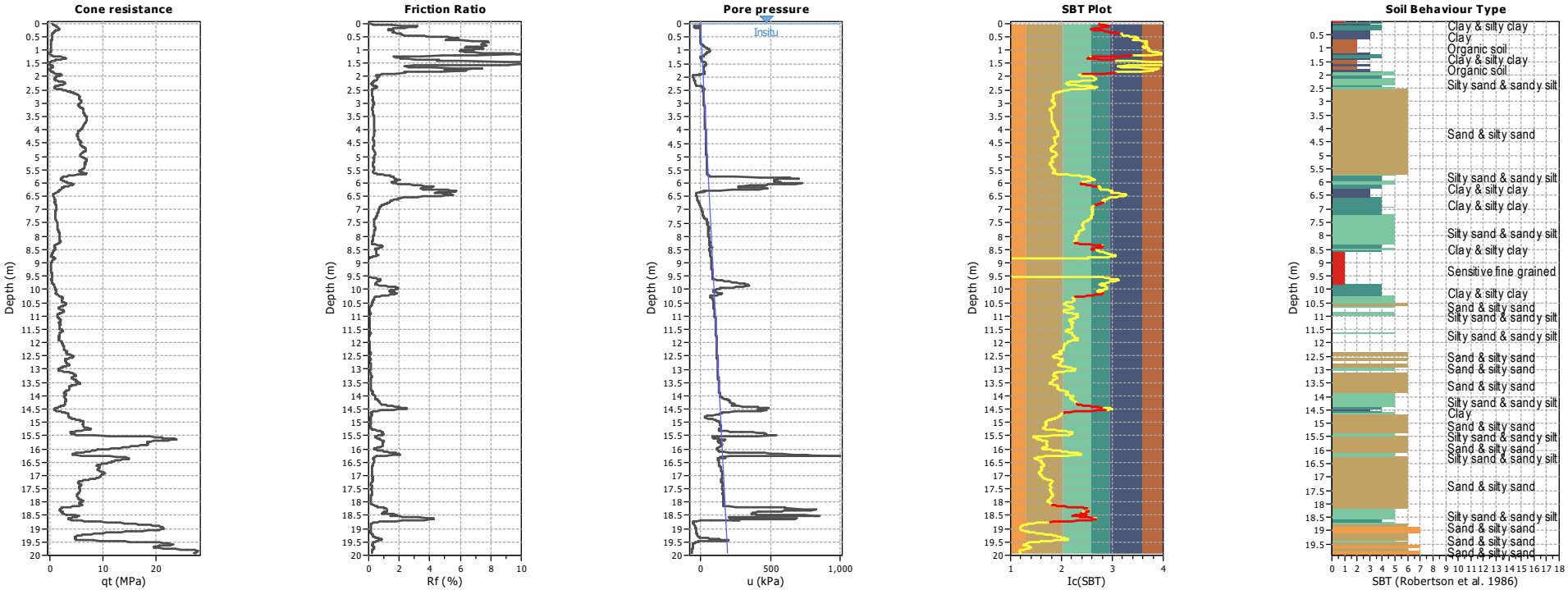
F.S. color scheme

- 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



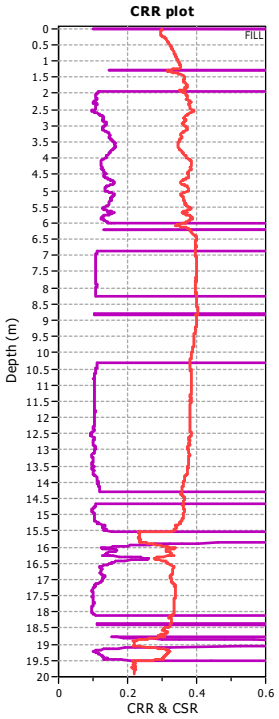
Input parameters and analysis data

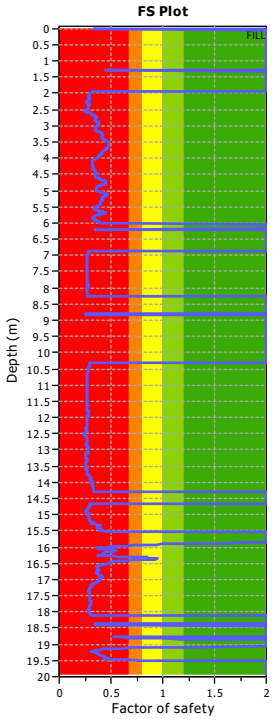
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.30 m	Limit depth:	N/A

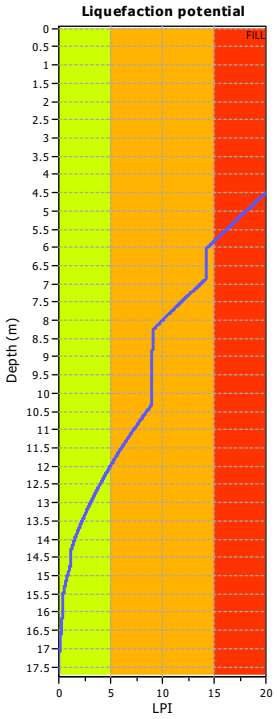
SBT legend

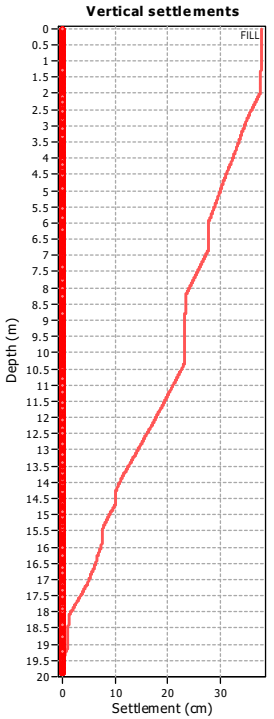
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

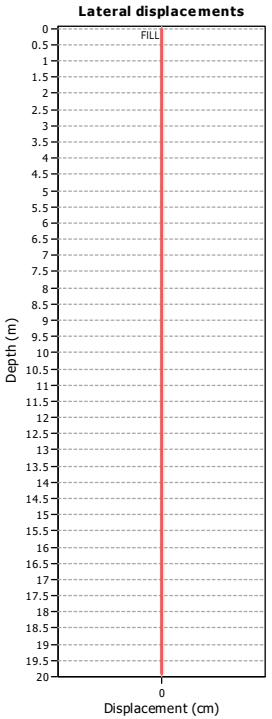
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.30 m	Limit depth:	N/A

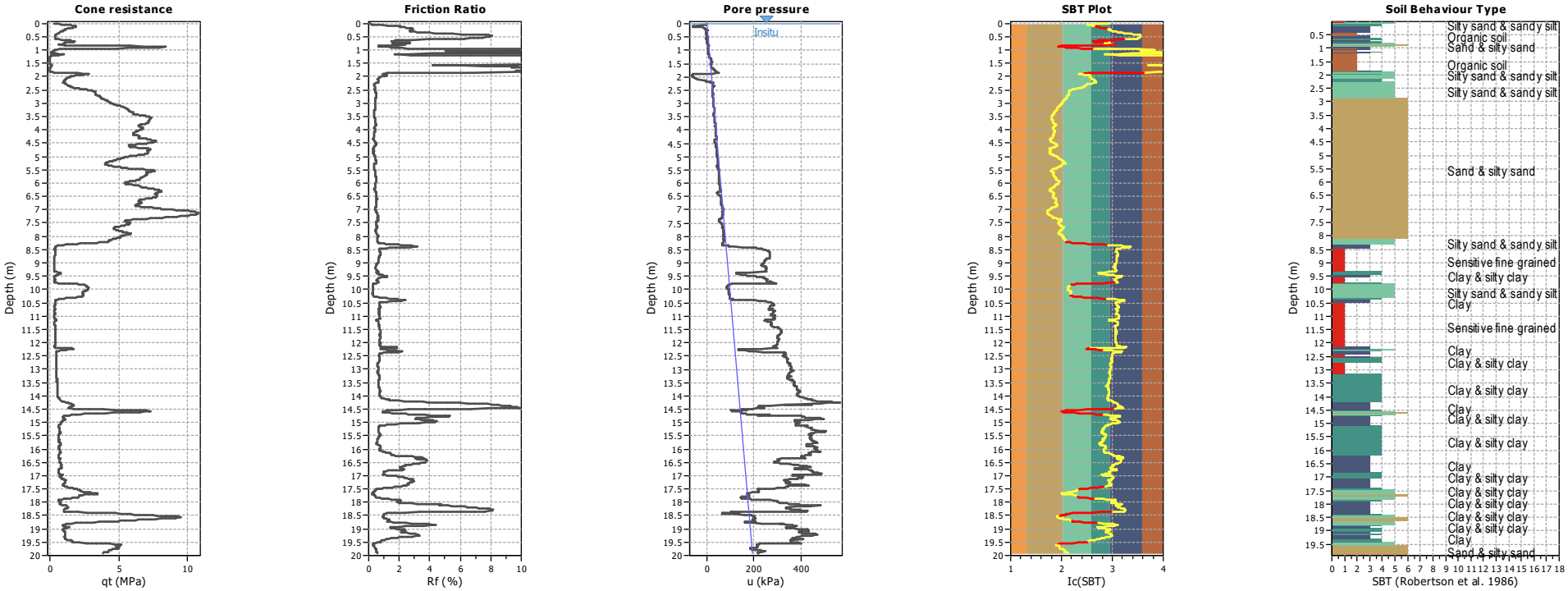
F.S. color scheme

- 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



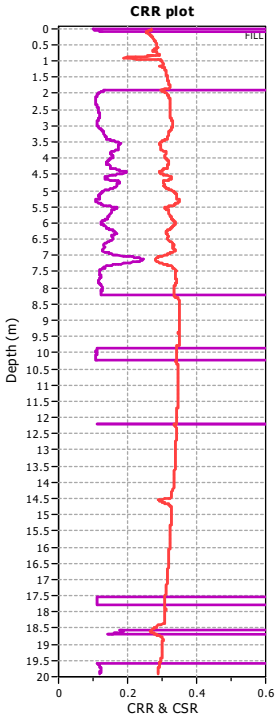
Input parameters and analysis data

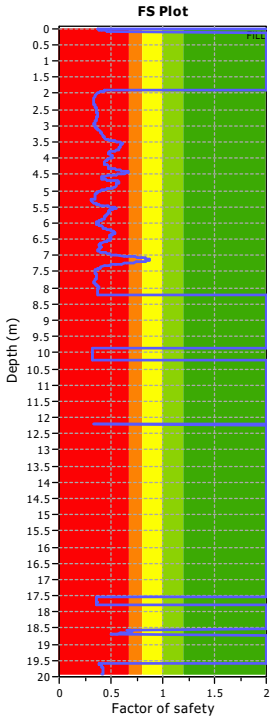
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.50 m	Limit depth:	N/A

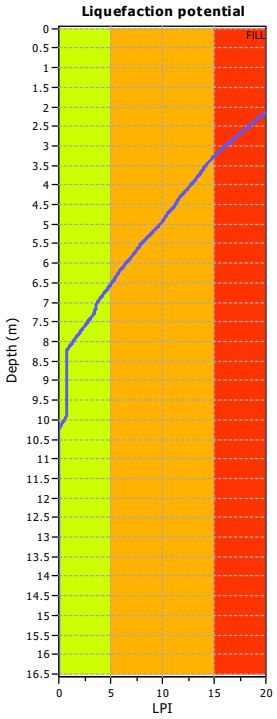
SBT legend

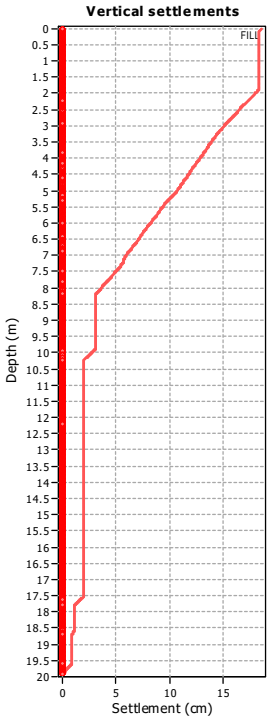
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

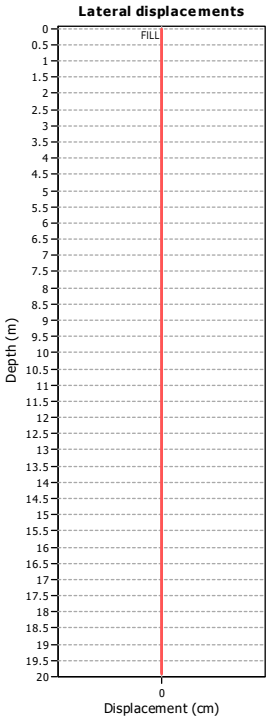
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.50 m	Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
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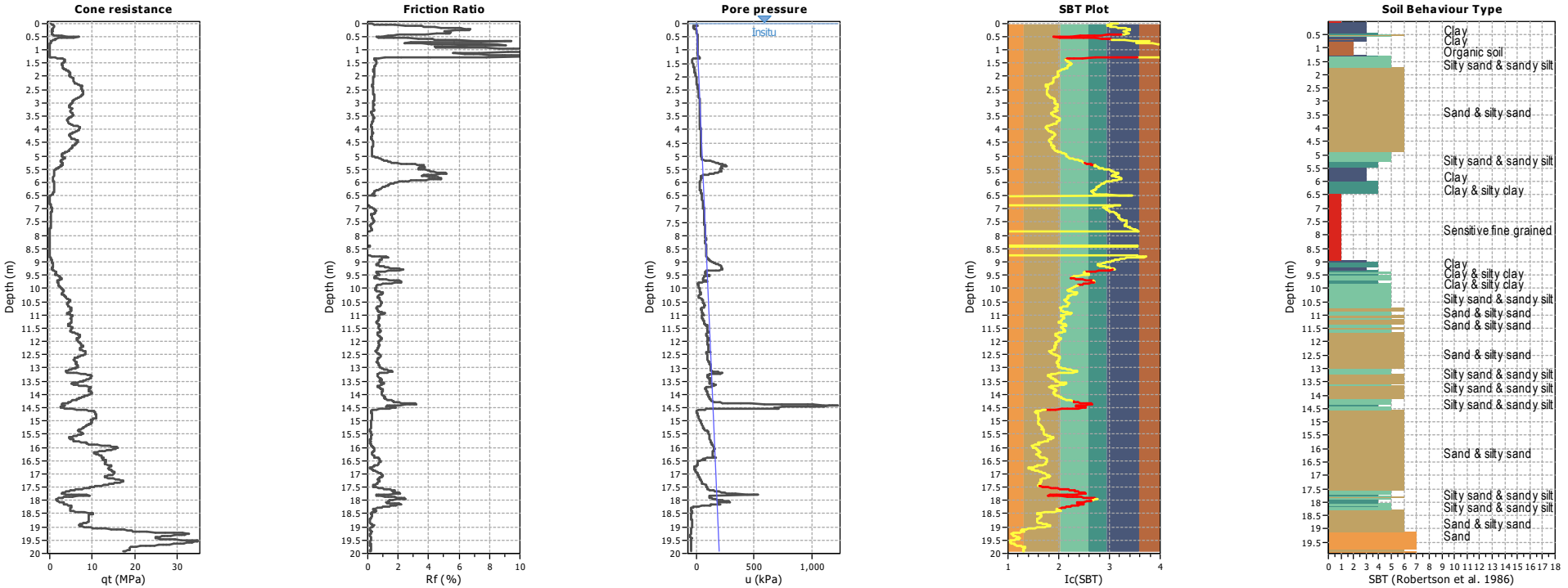
LPI color scheme

- Very high risk
- High risk
- Low risk

CPT basic interpretation plots



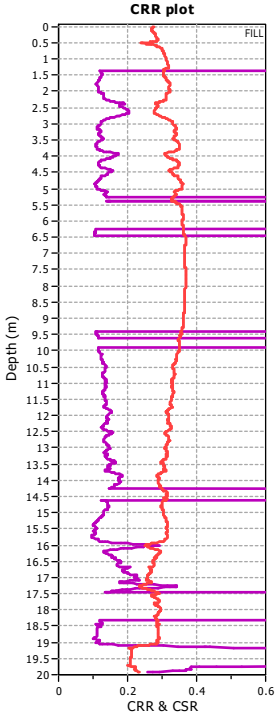
Input parameters and analysis data

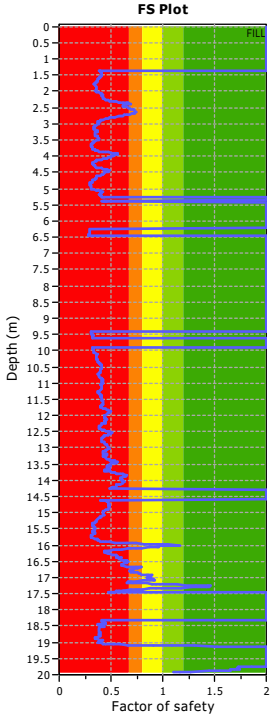
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

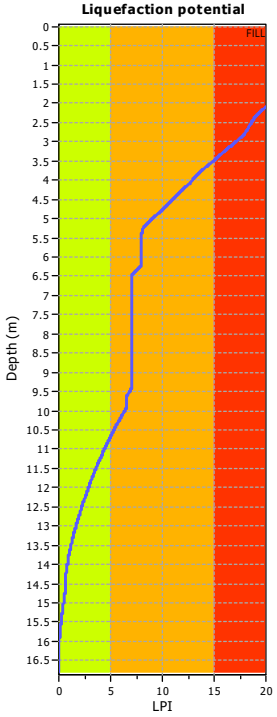
SBT legend

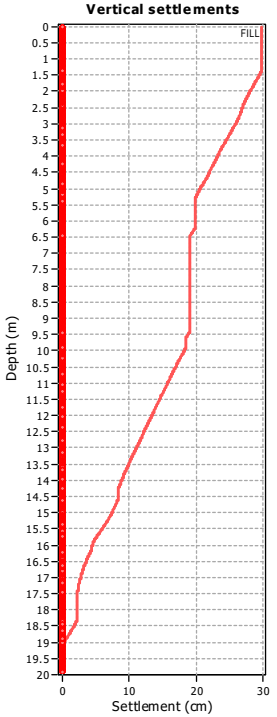
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

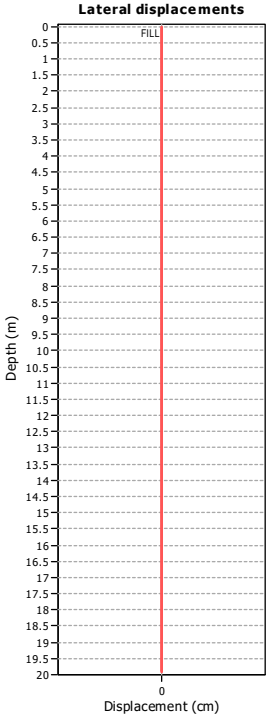
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.20 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.20 m	Limit depth:	N/A

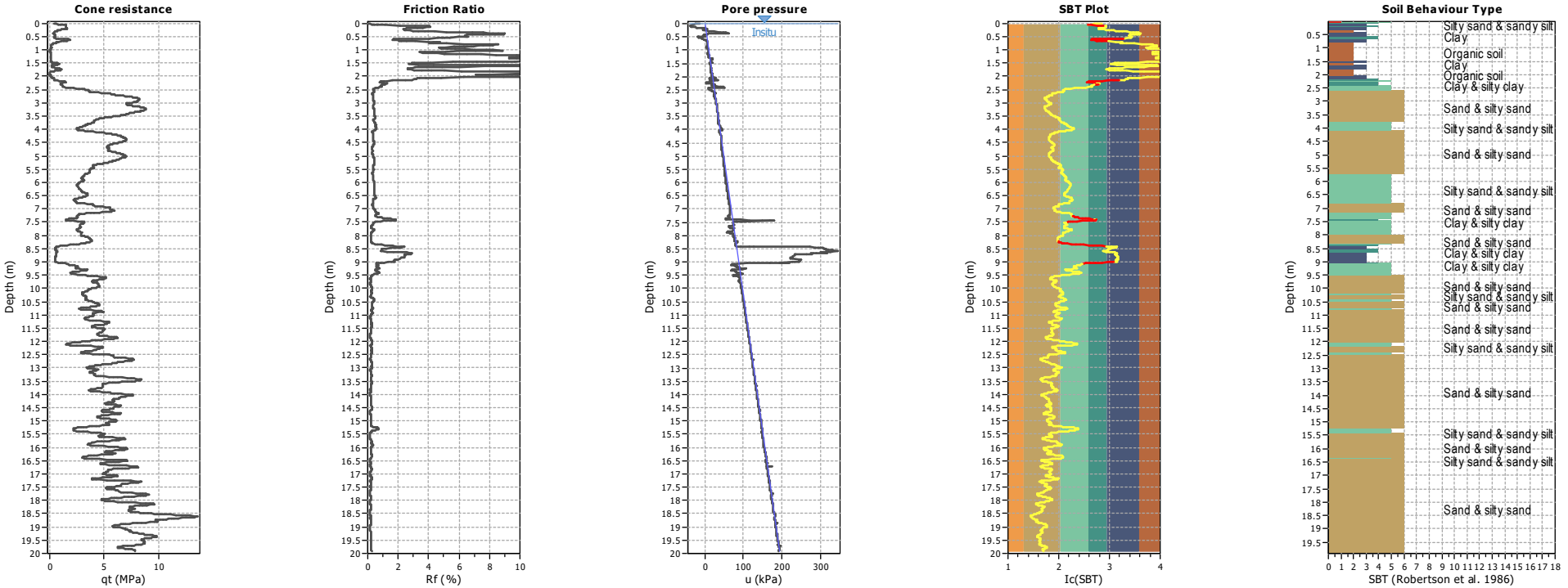
F.S. color scheme

- 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



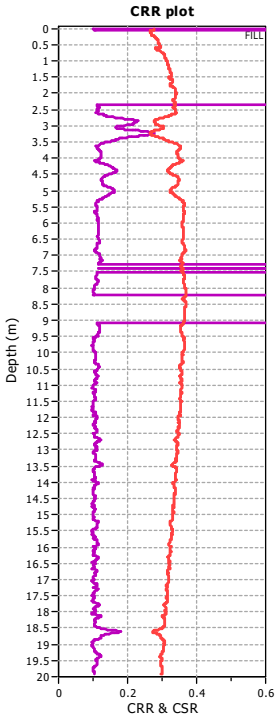
Input parameters and analysis data

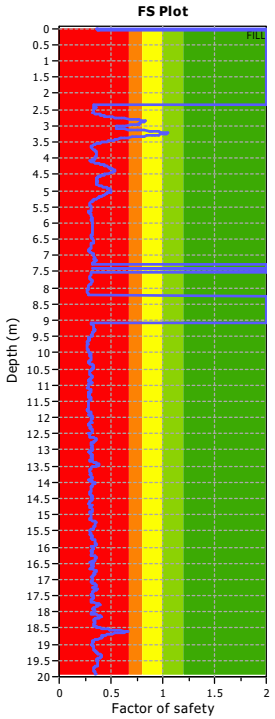
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

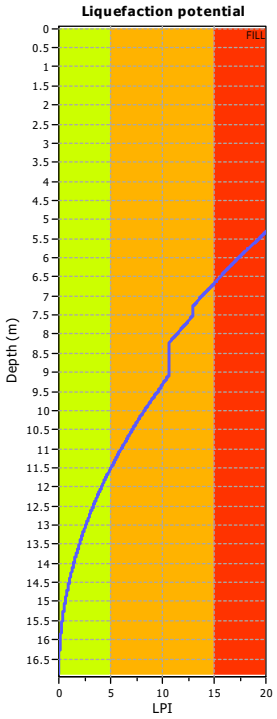
SBT legend

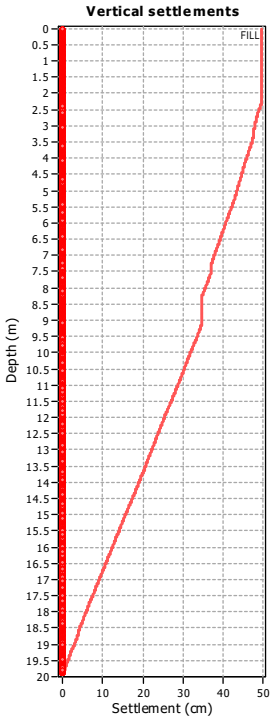
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

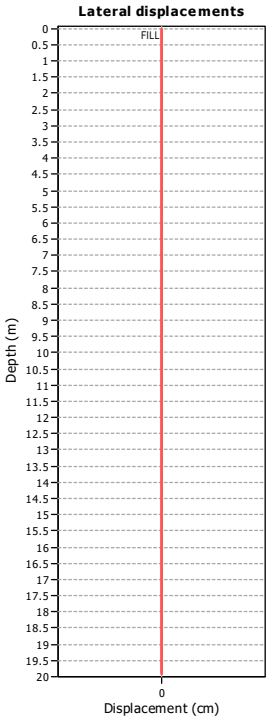
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

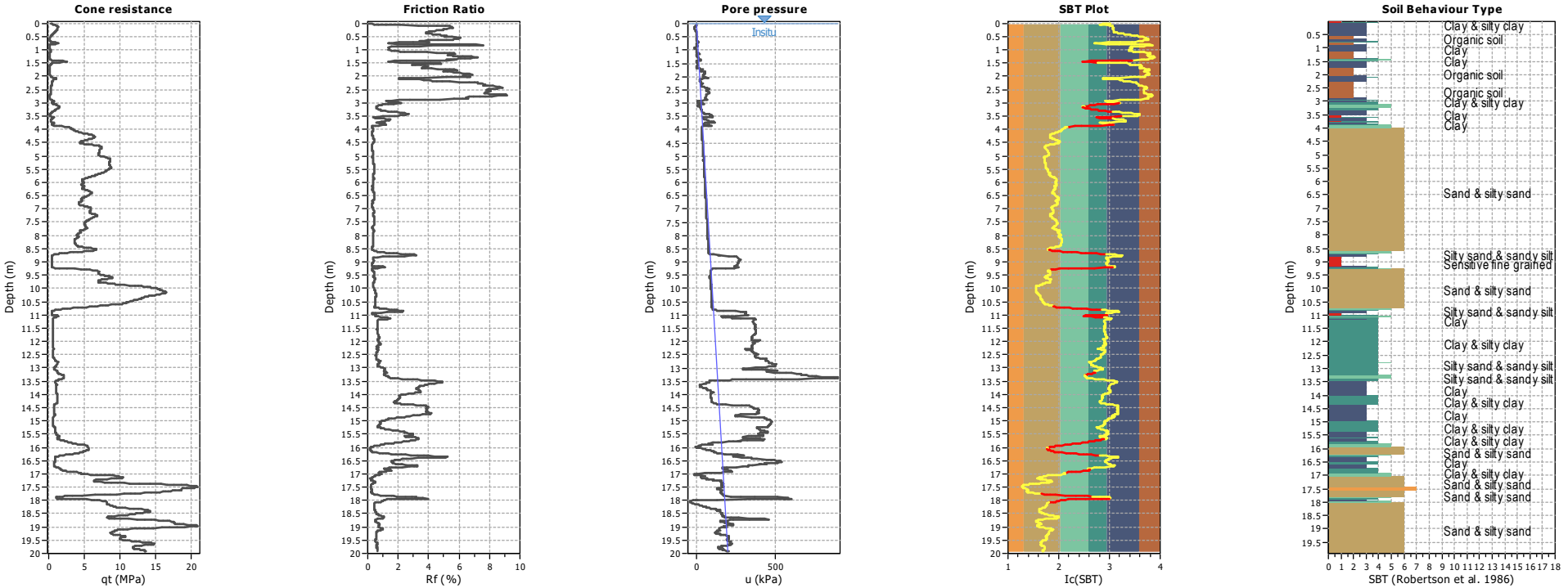
F.S. color scheme

- 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



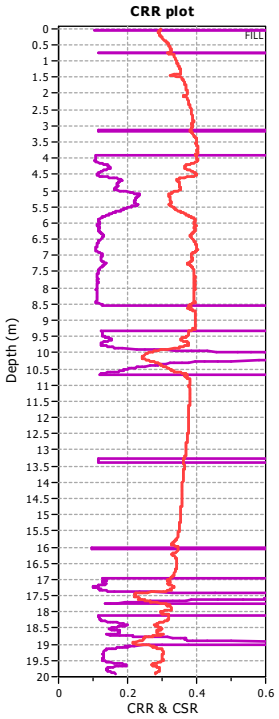
Input parameters and analysis data

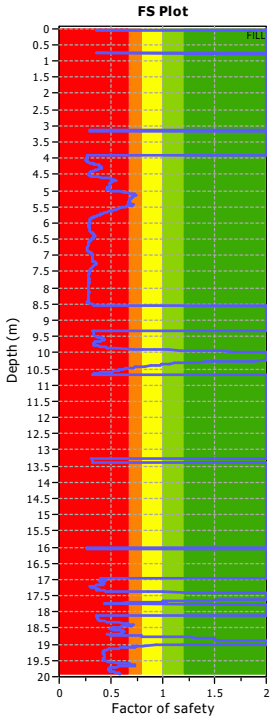
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.40 m	Limit depth:	N/A

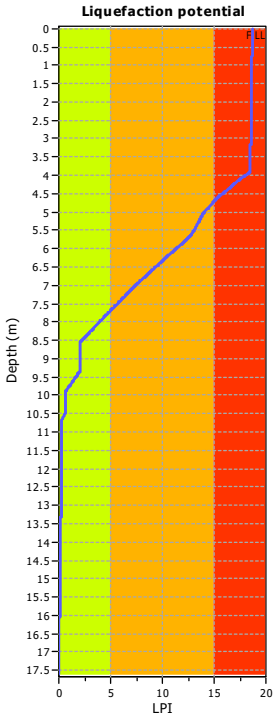
SBT legend

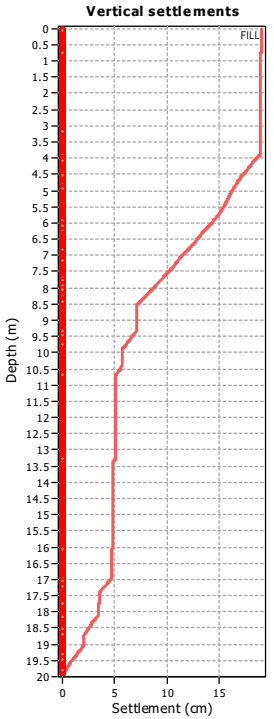
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

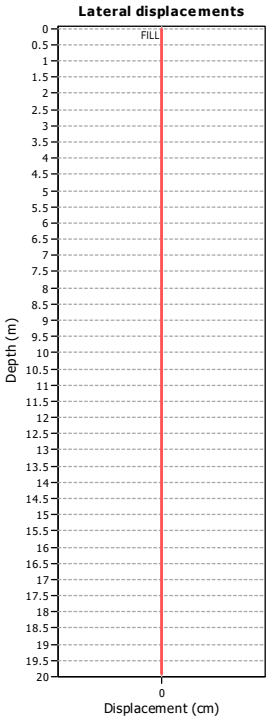
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.40 m	Limit depth:	N/A

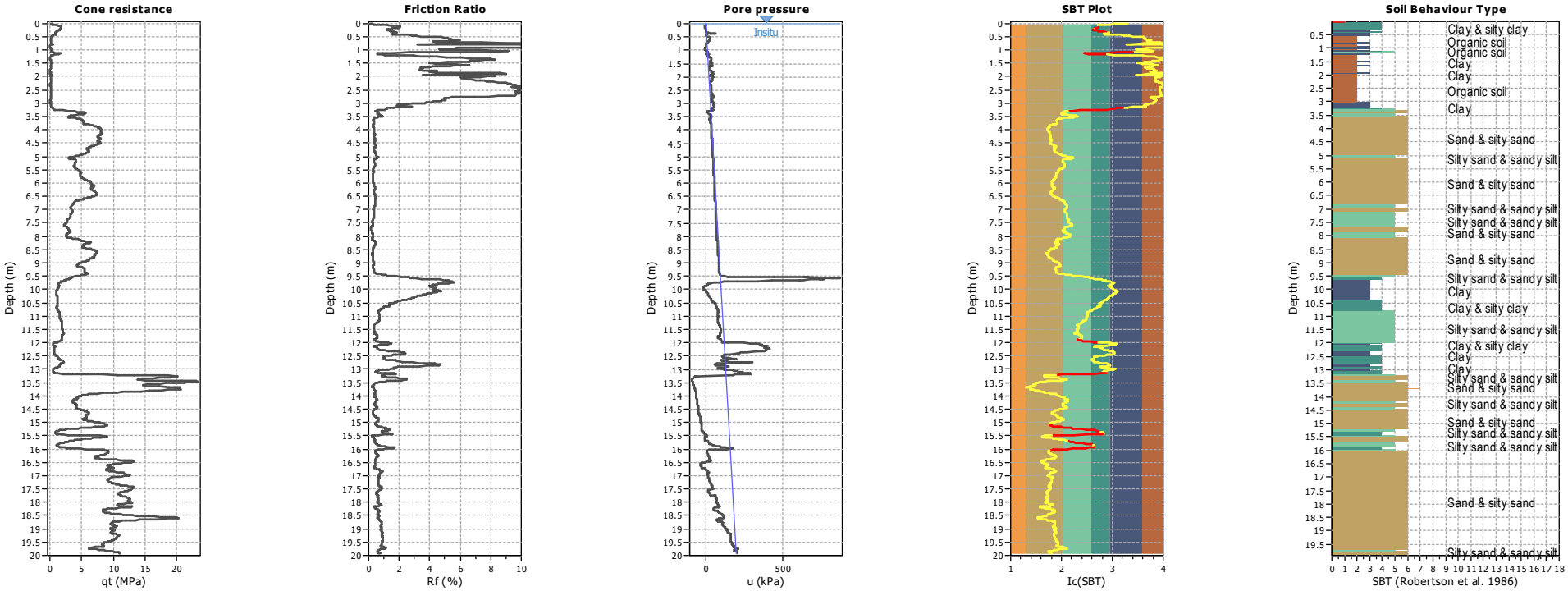
F.S. color scheme

- 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



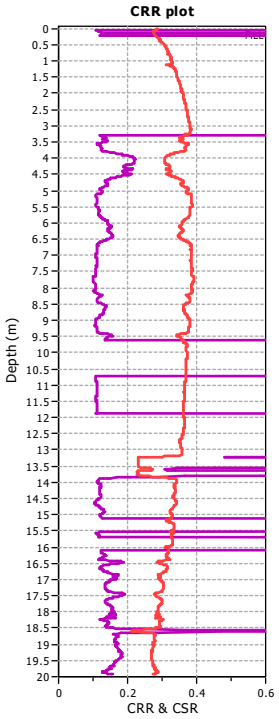
Input parameters and analysis data

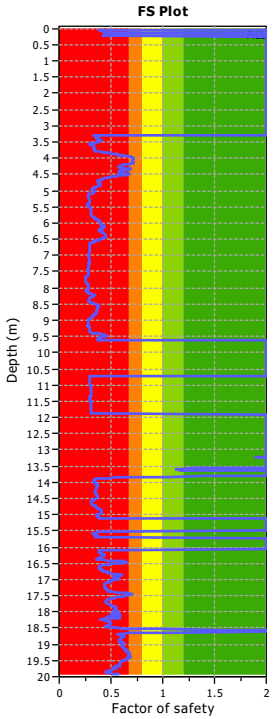
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.70 m	Limit depth:	N/A

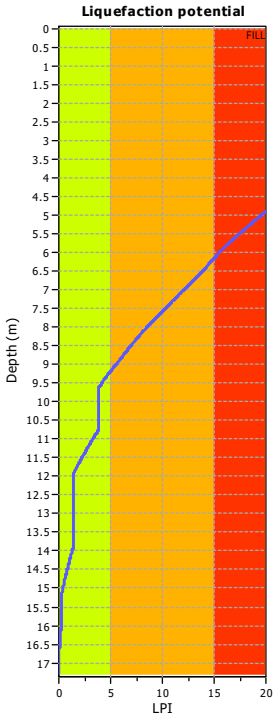
SBT legend

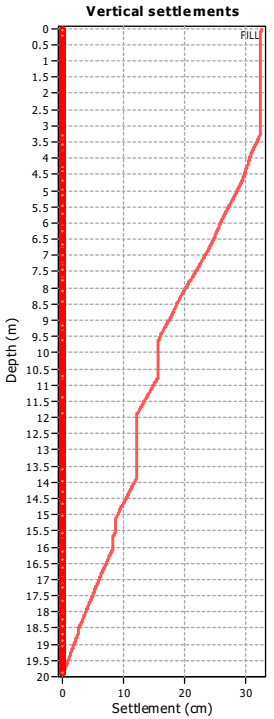
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

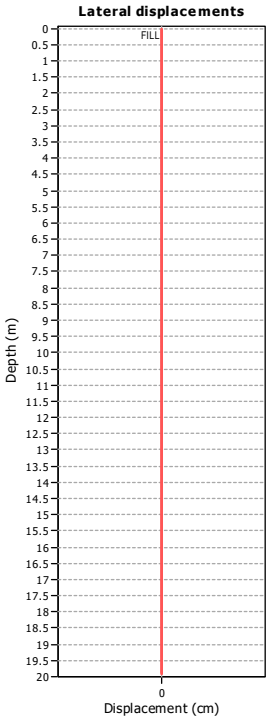
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.70 m	Limit depth:	N/A

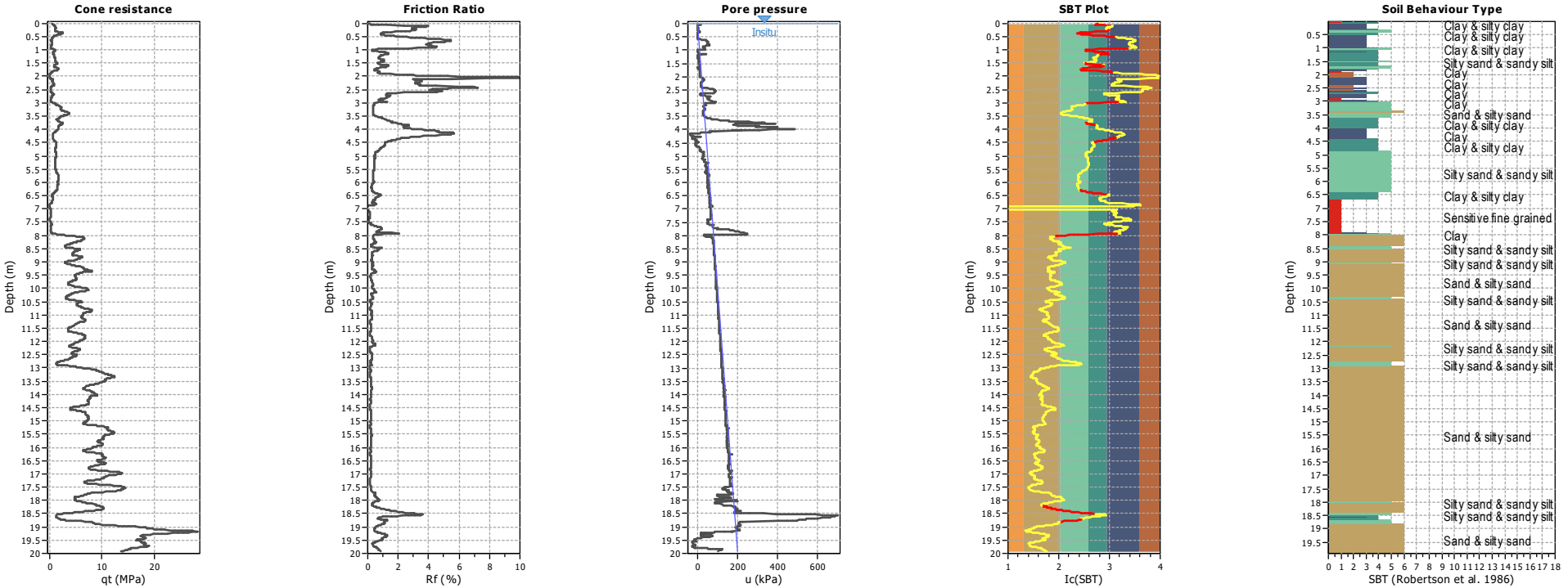
F.S. color scheme

- 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



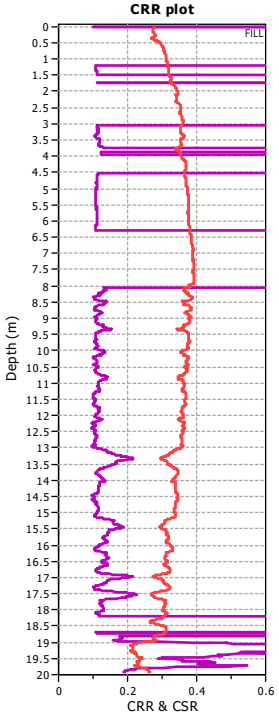
Input parameters and analysis data

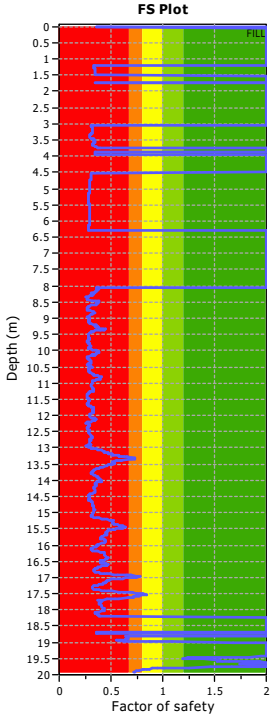
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

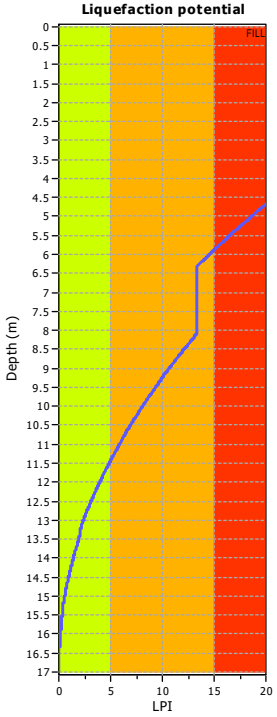
SBT legend

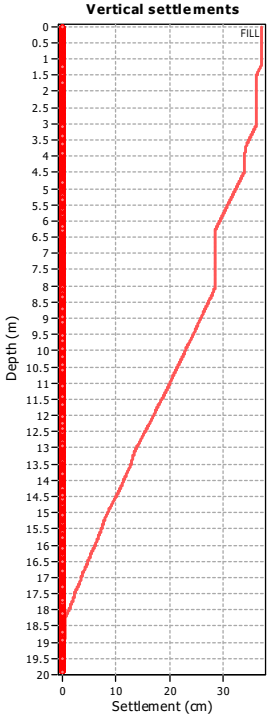
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

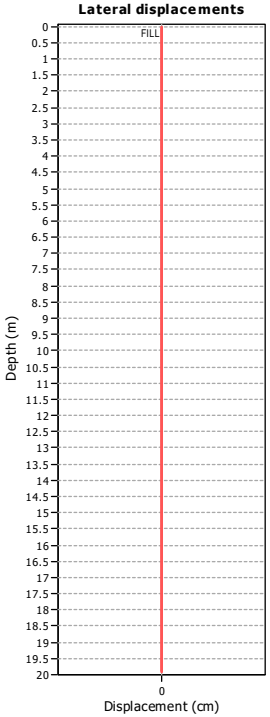
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

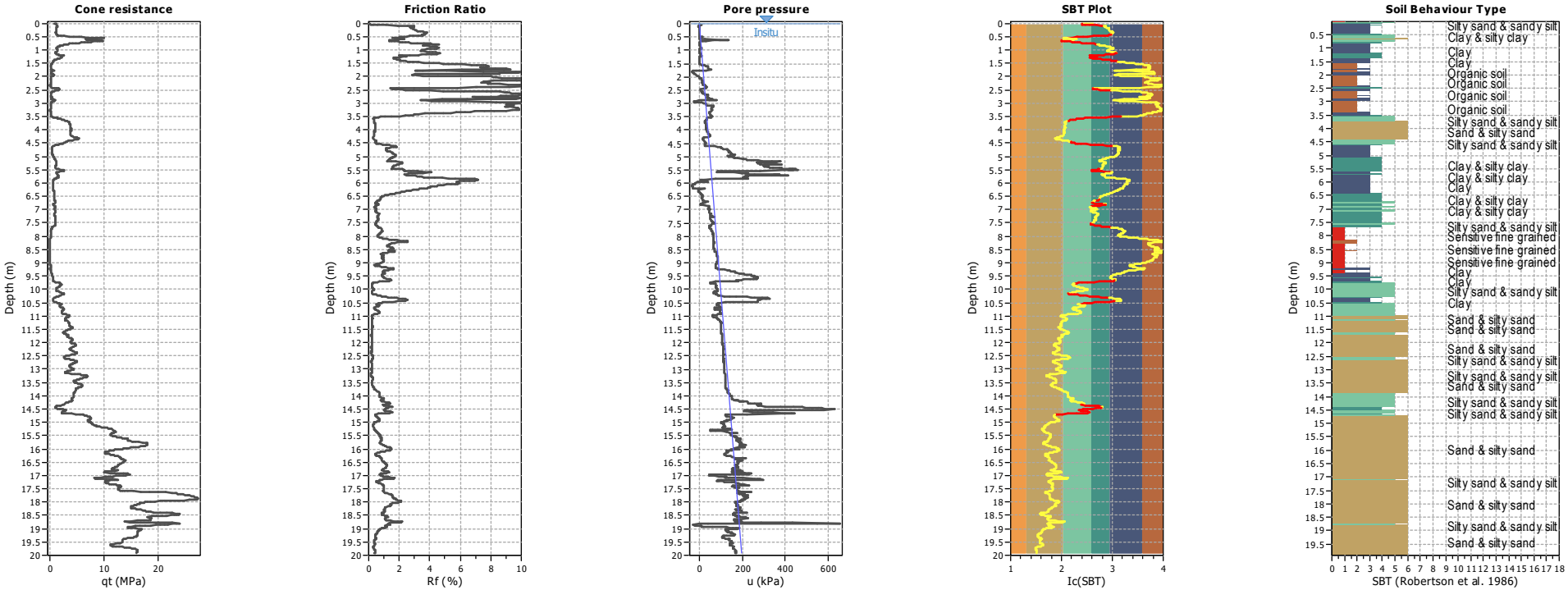
F.S. color scheme

- 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



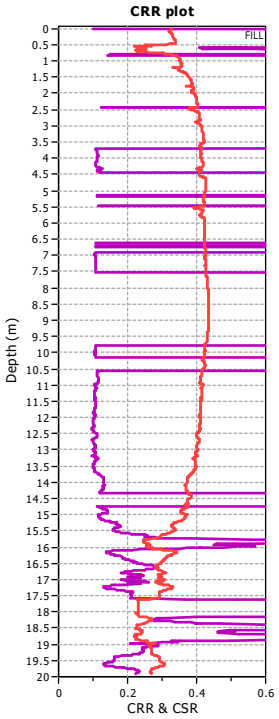
Input parameters and analysis data

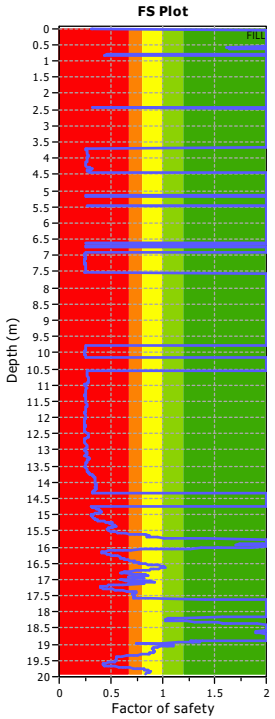
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	0.90 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.90 m	Limit depth:	N/A

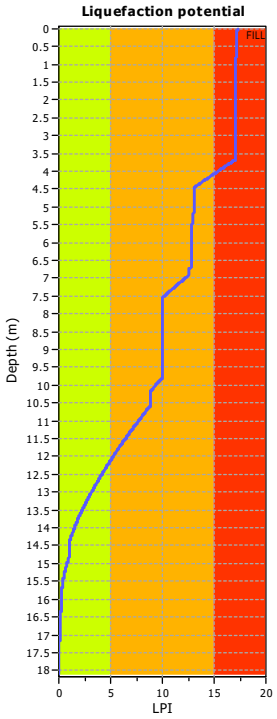
SBT legend

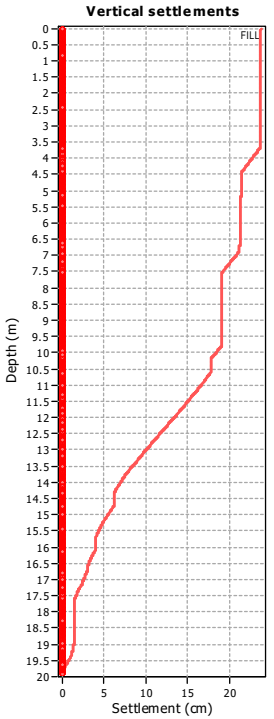
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

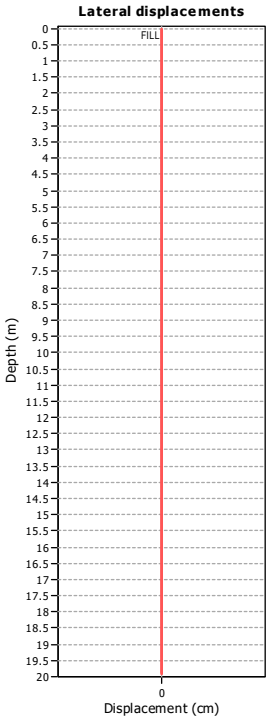
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	0.90 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	1.90 m	Limit depth:	N/A

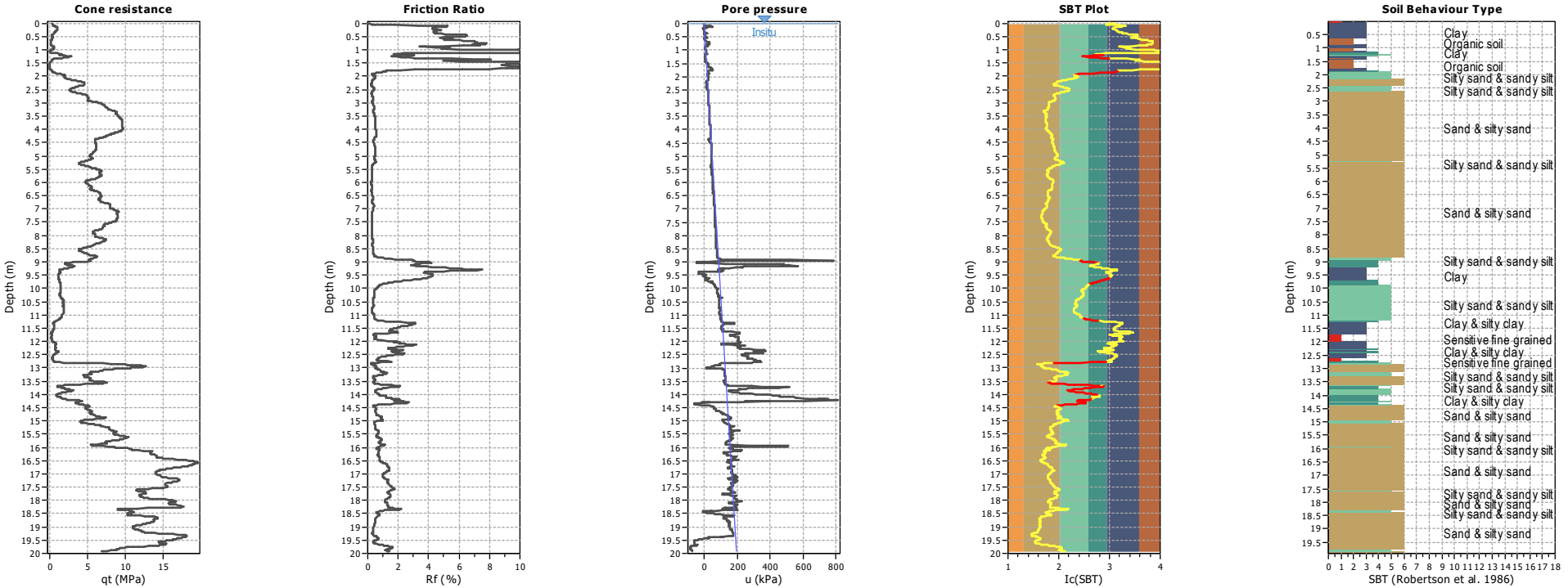
F.S. color scheme

- 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



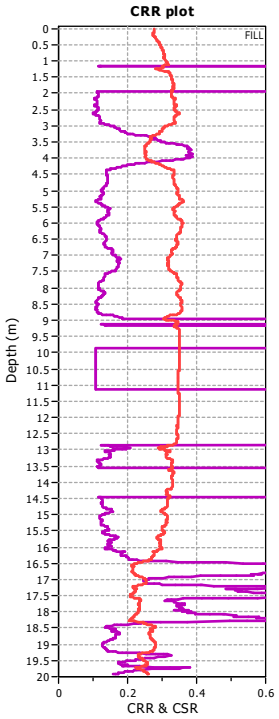
Input parameters and analysis data

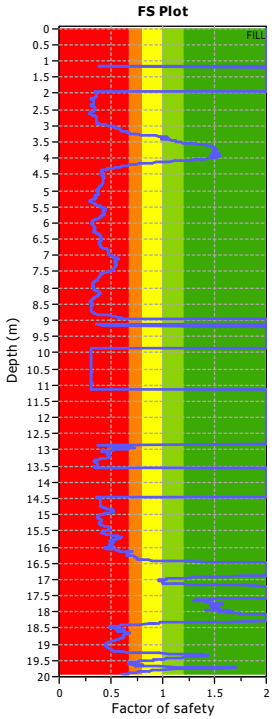
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

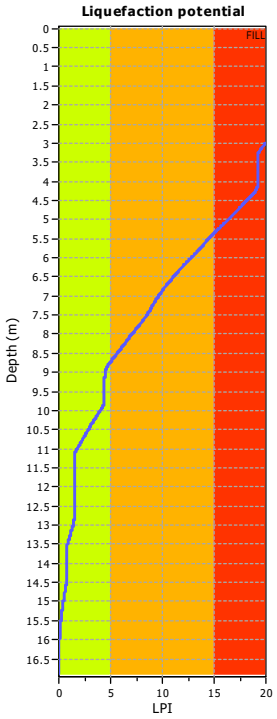
SBT legend

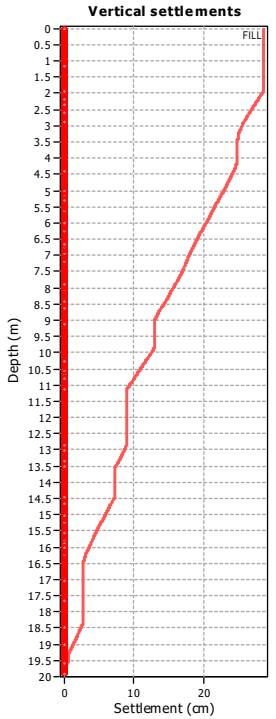
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

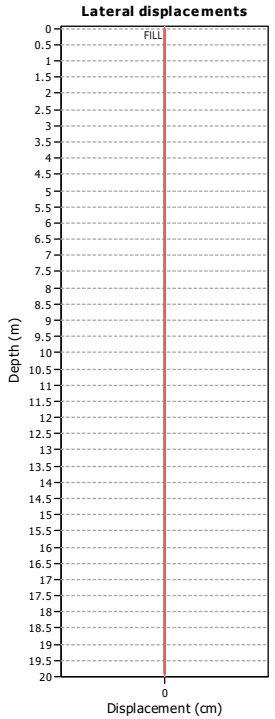
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

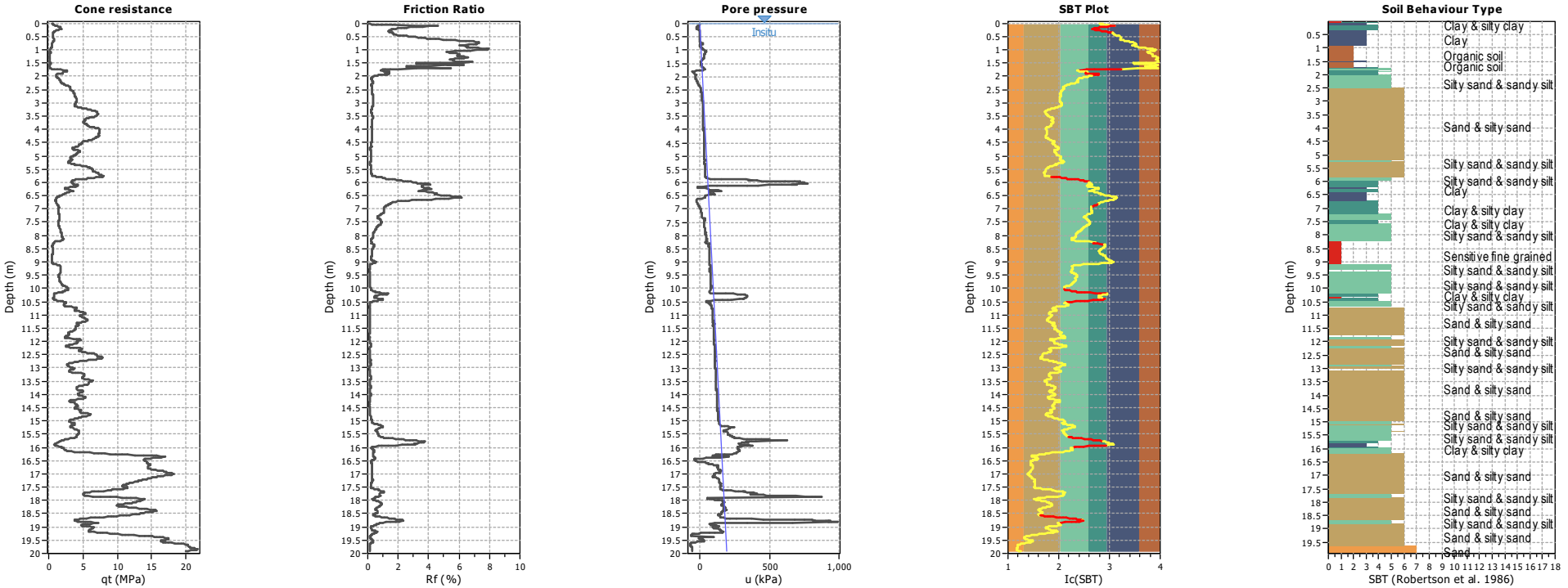
F.S. color scheme

- 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



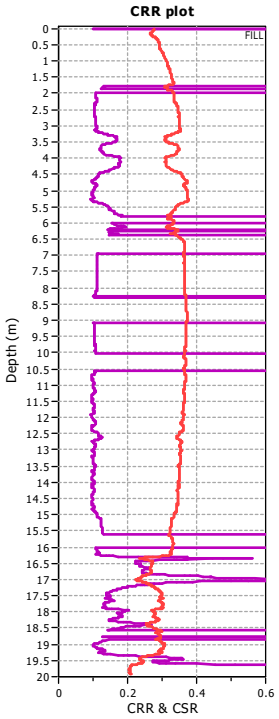
Input parameters and analysis data

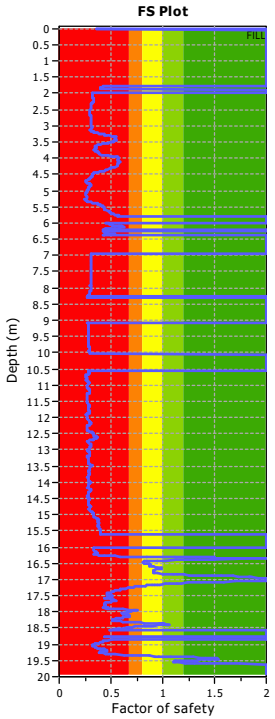
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

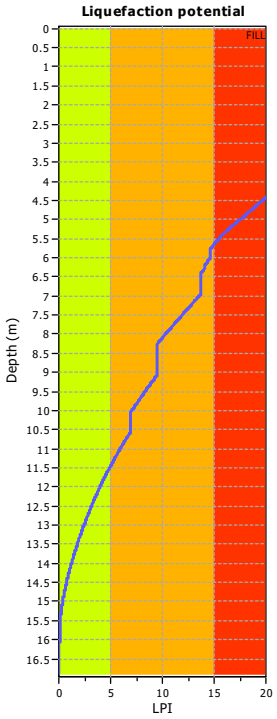
SBT legend

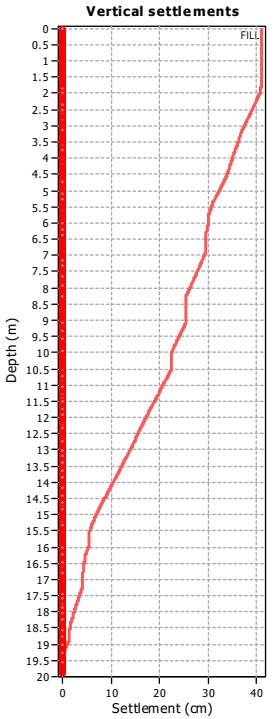
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

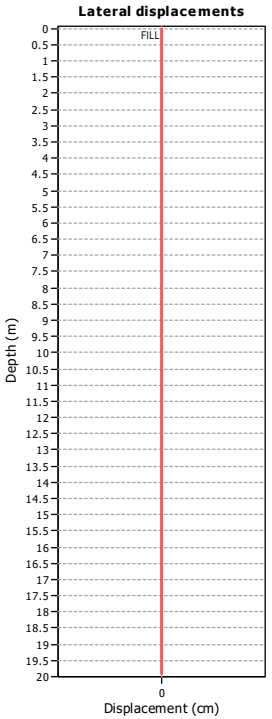
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

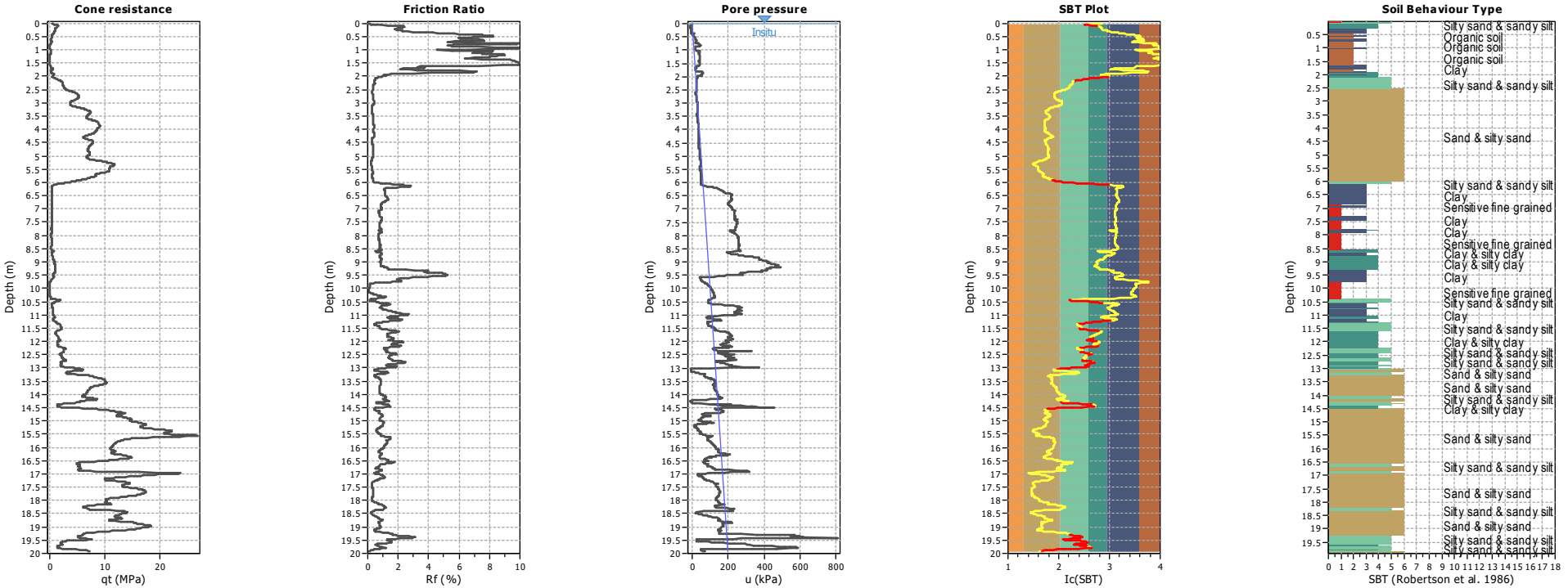
F.S. color scheme

- 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



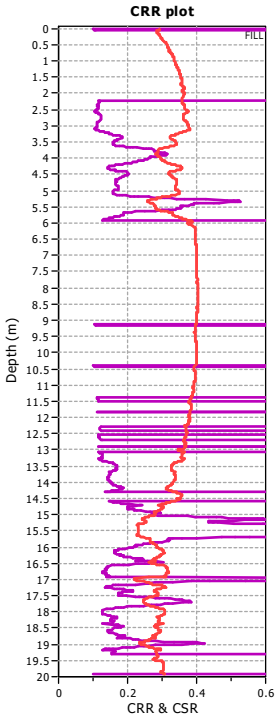
Input parameters and analysis data

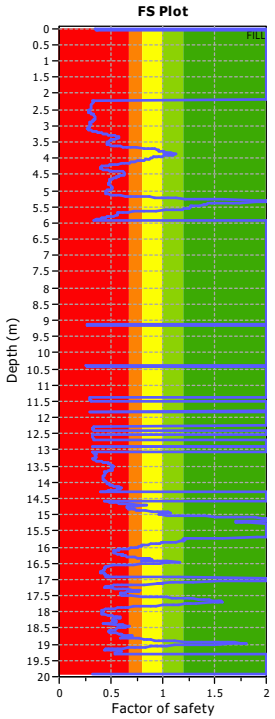
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

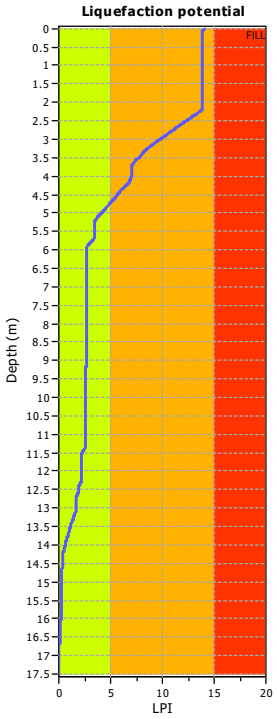
SBT legend

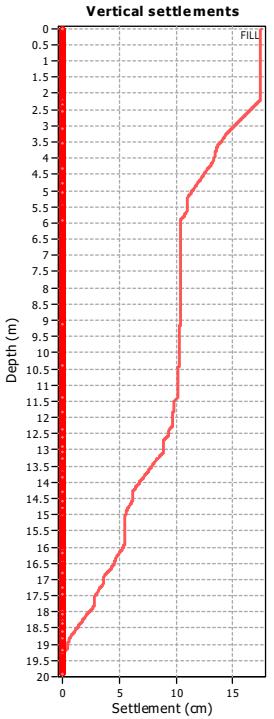
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

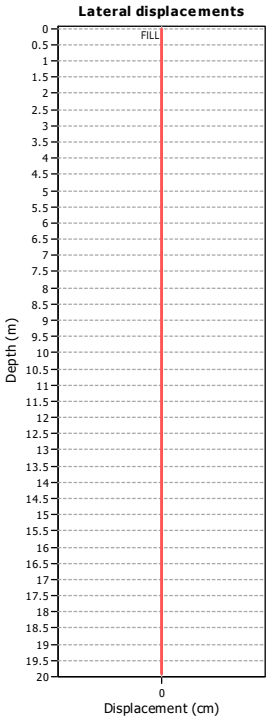
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

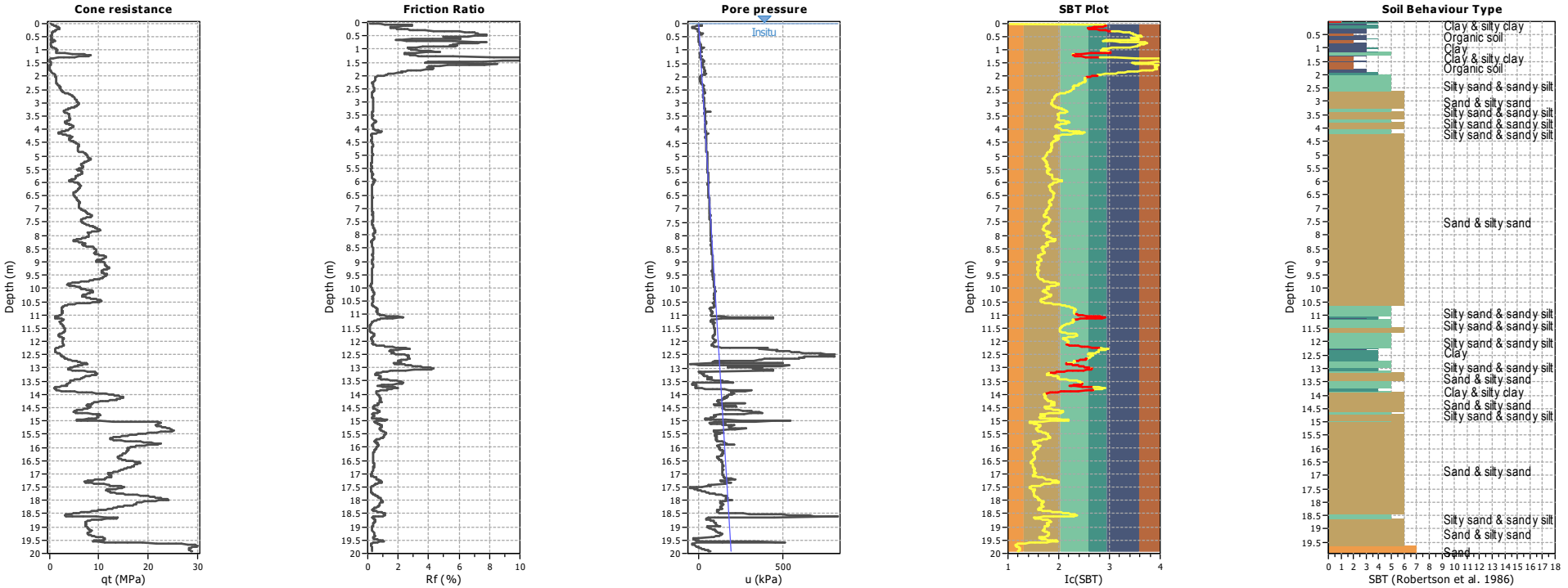
F.S. color scheme

- 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



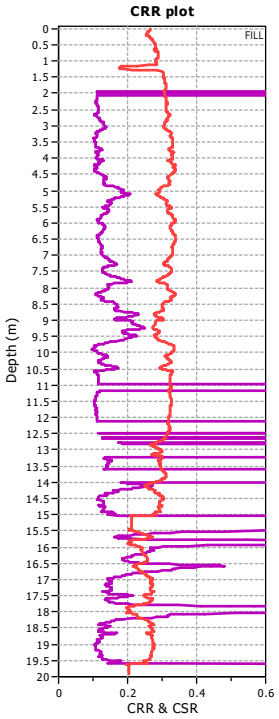
Input parameters and analysis data

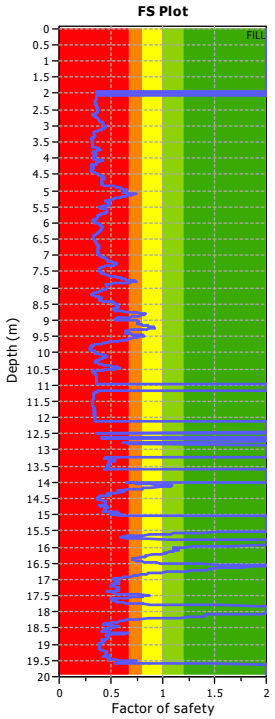
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.80 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.80 m	Limit depth:	N/A

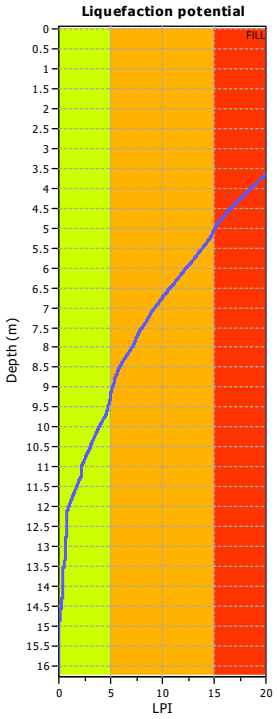
SBT legend

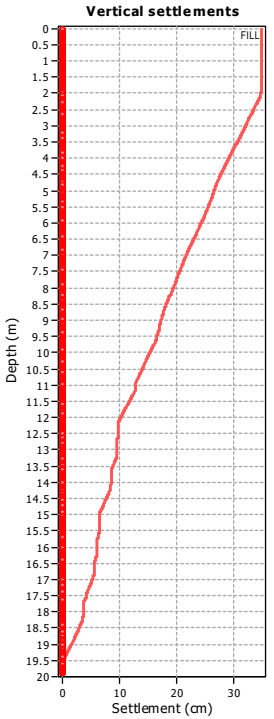
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

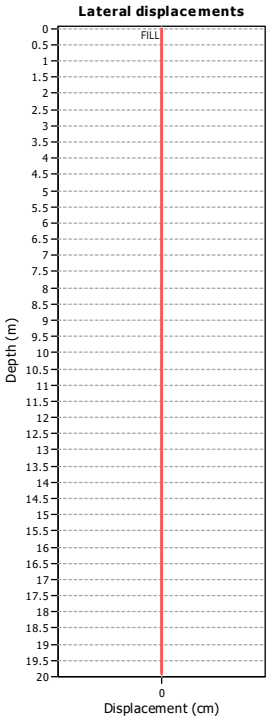
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.80 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.80 m	Limit depth:	N/A

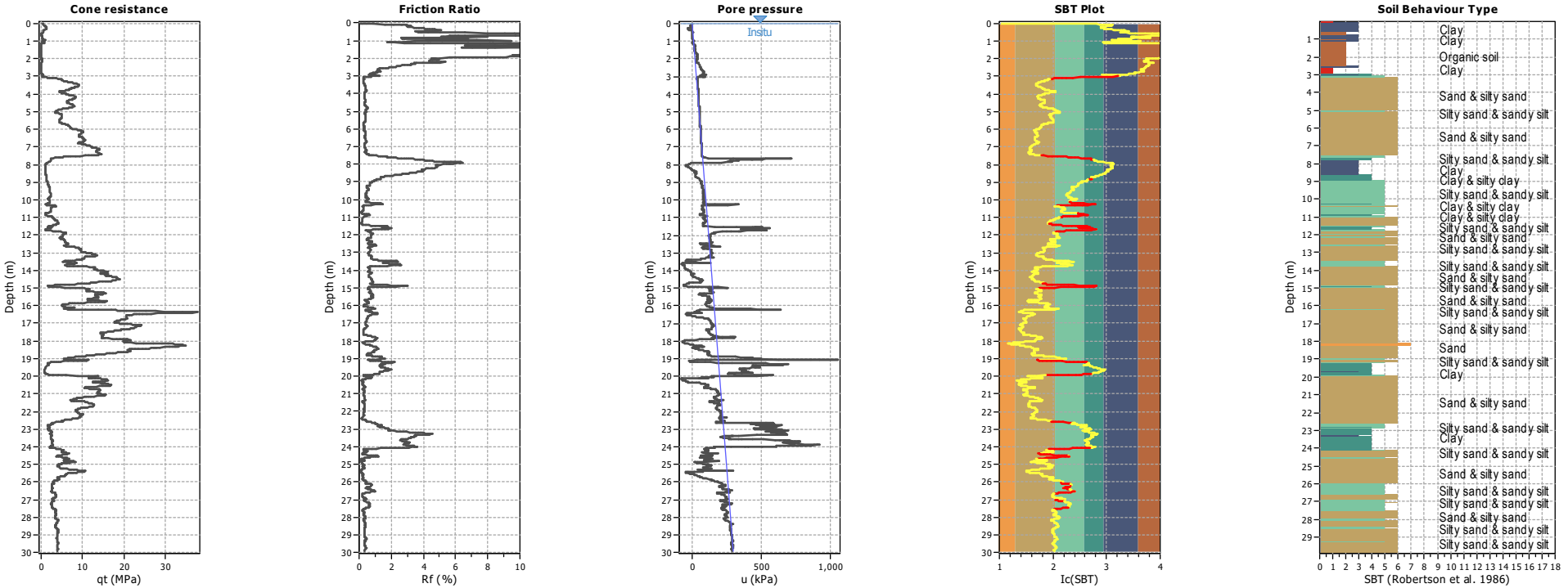
F.S. color scheme

- 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



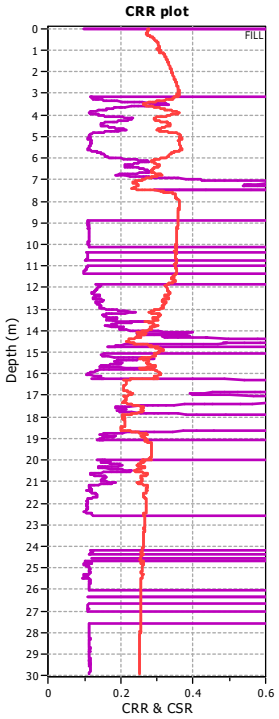
Input parameters and analysis data

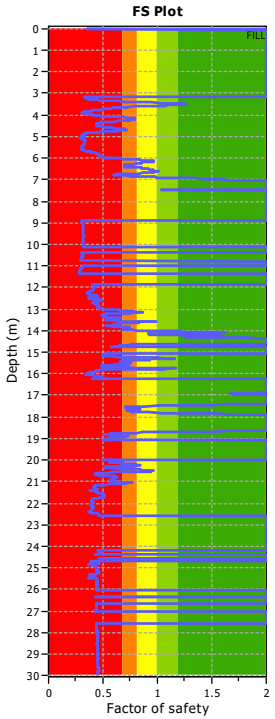
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

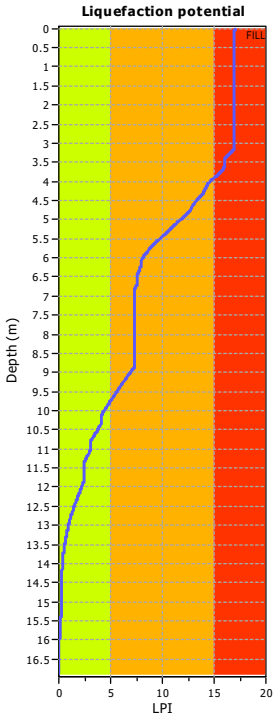
SBT legend

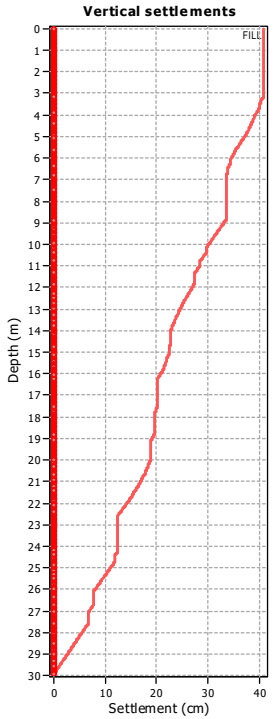
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

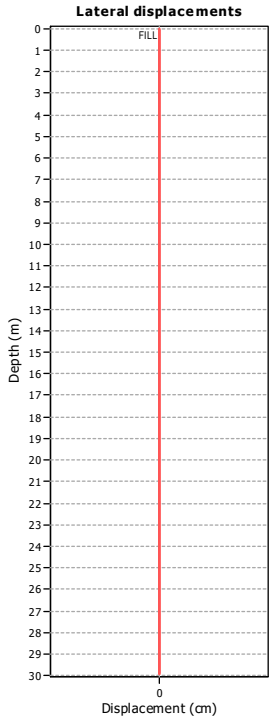
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

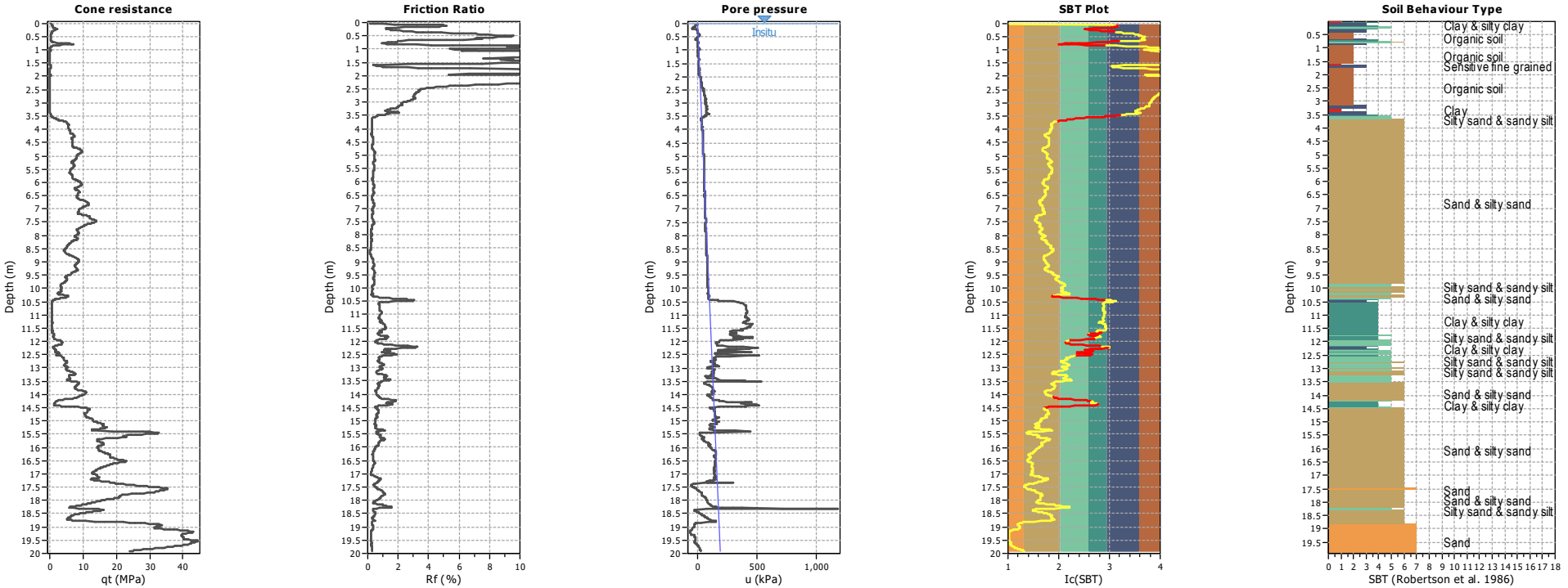
F.S. color scheme

- 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



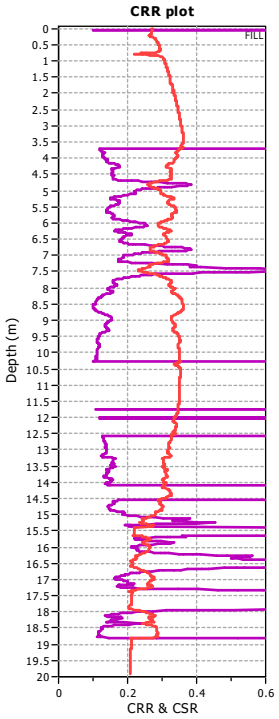
Input parameters and analysis data

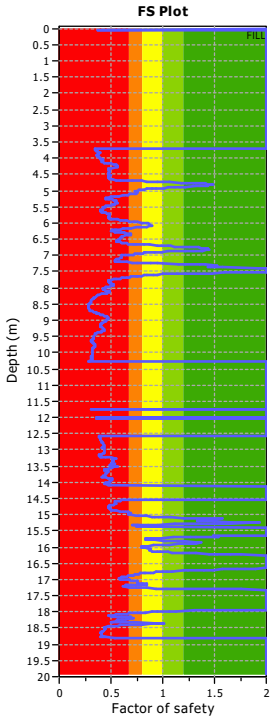
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.30 m	Limit depth:	N/A

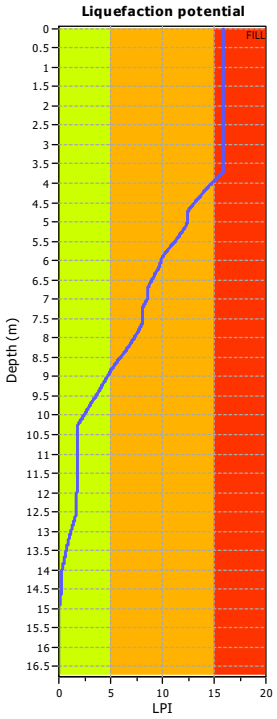
SBT legend

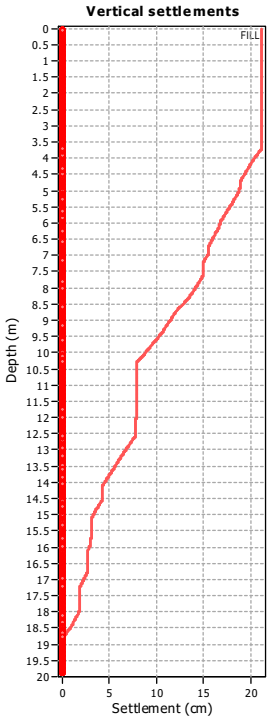
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

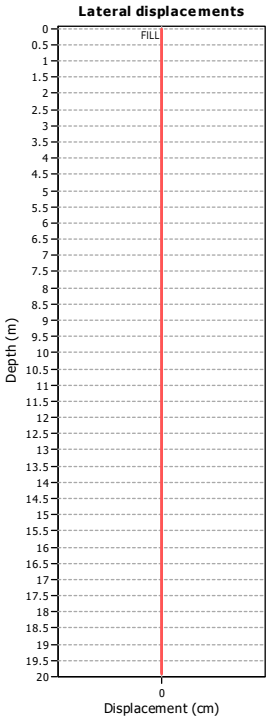
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.30 m	Limit depth:	N/A

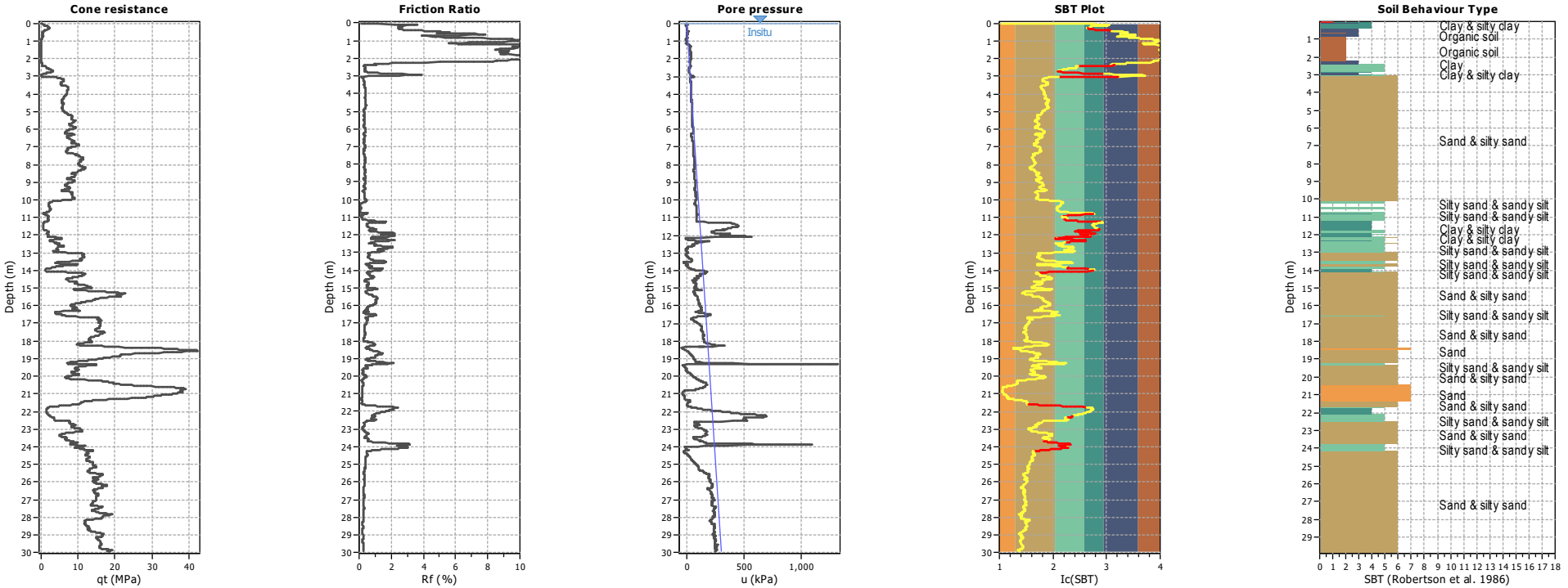
F.S. color scheme

- 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



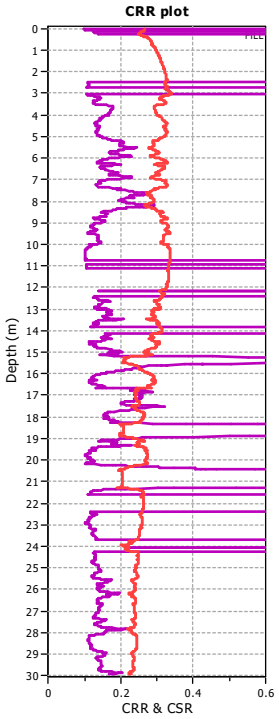
Input parameters and analysis data

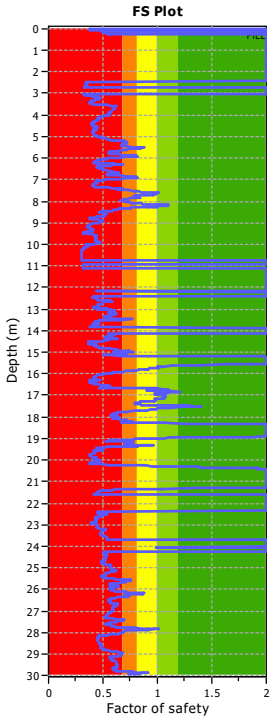
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.60 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.60 m	Limit depth:	N/A

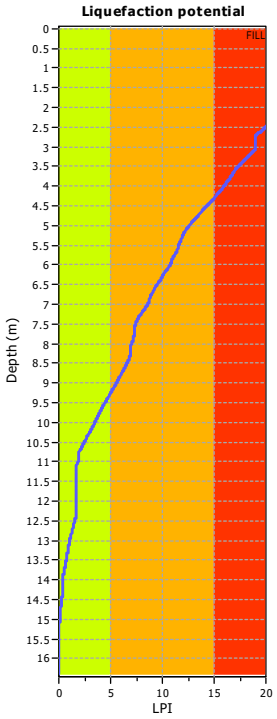
SBT legend

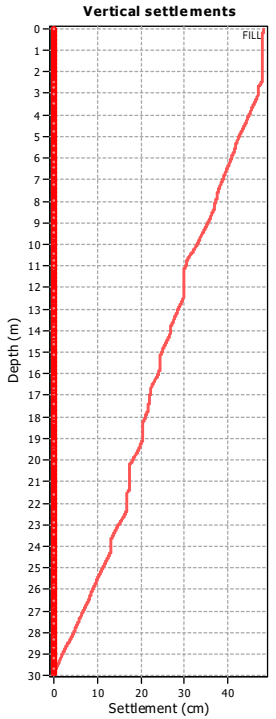
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

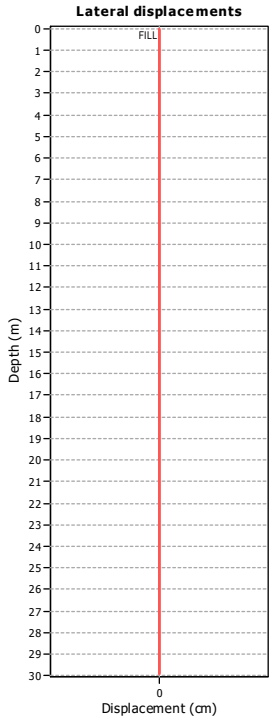
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.60 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.60 m	Limit depth:	N/A

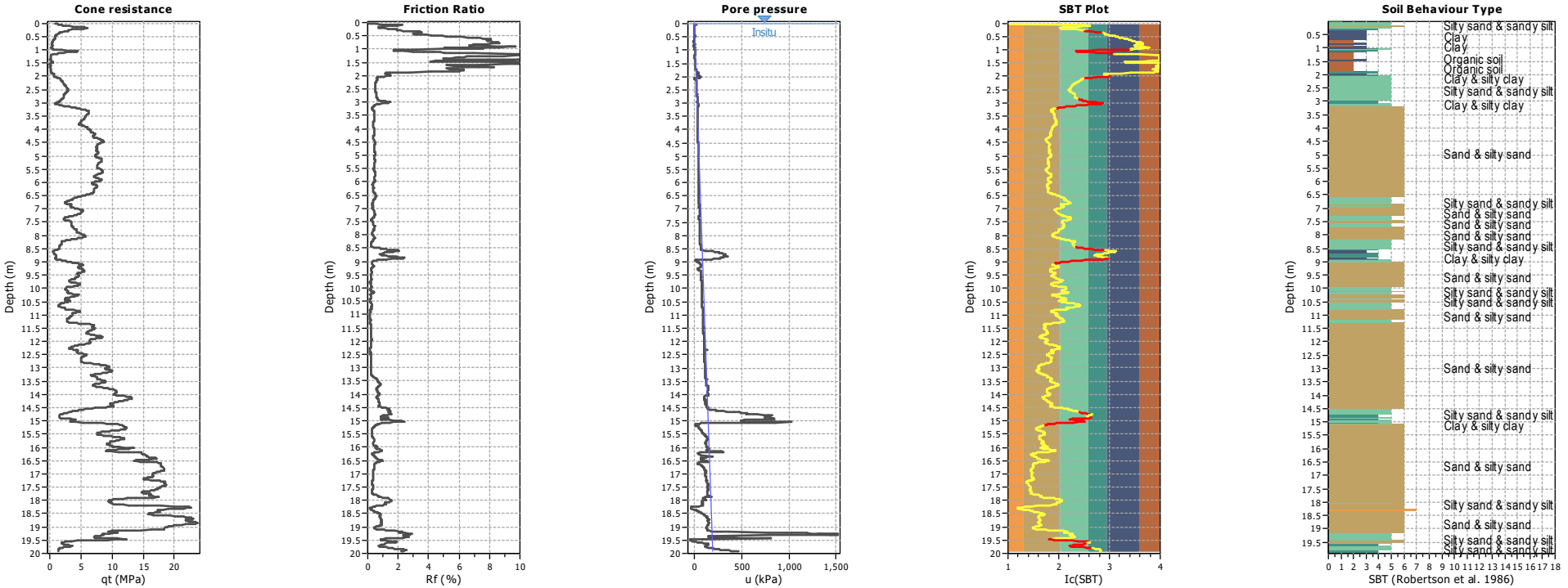
F.S. color scheme

- 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



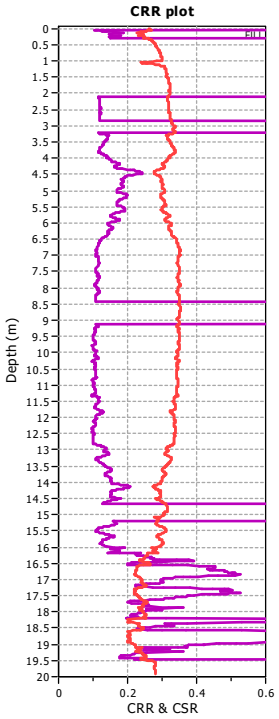
Input parameters and analysis data

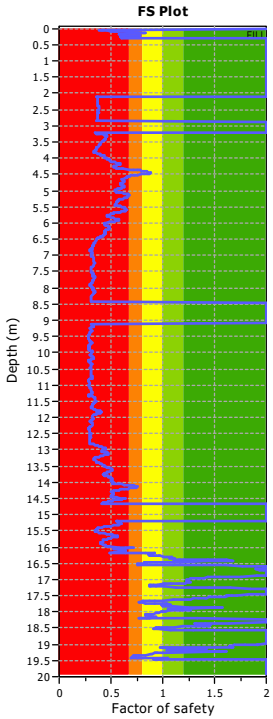
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

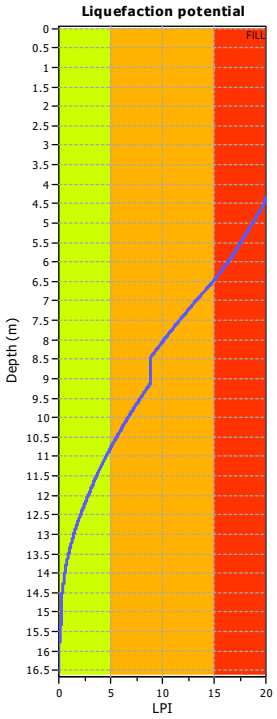
SBT legend

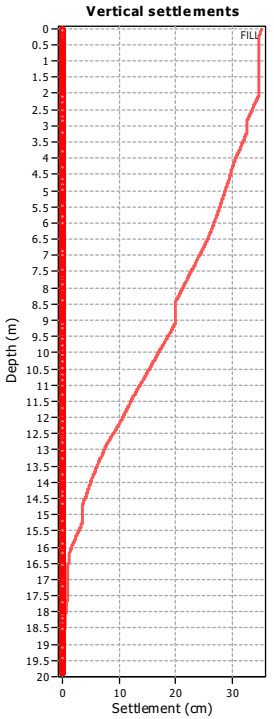
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

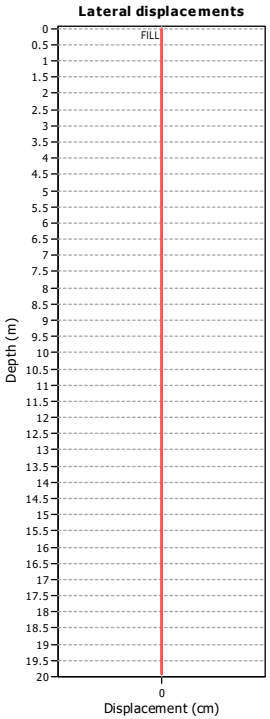
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

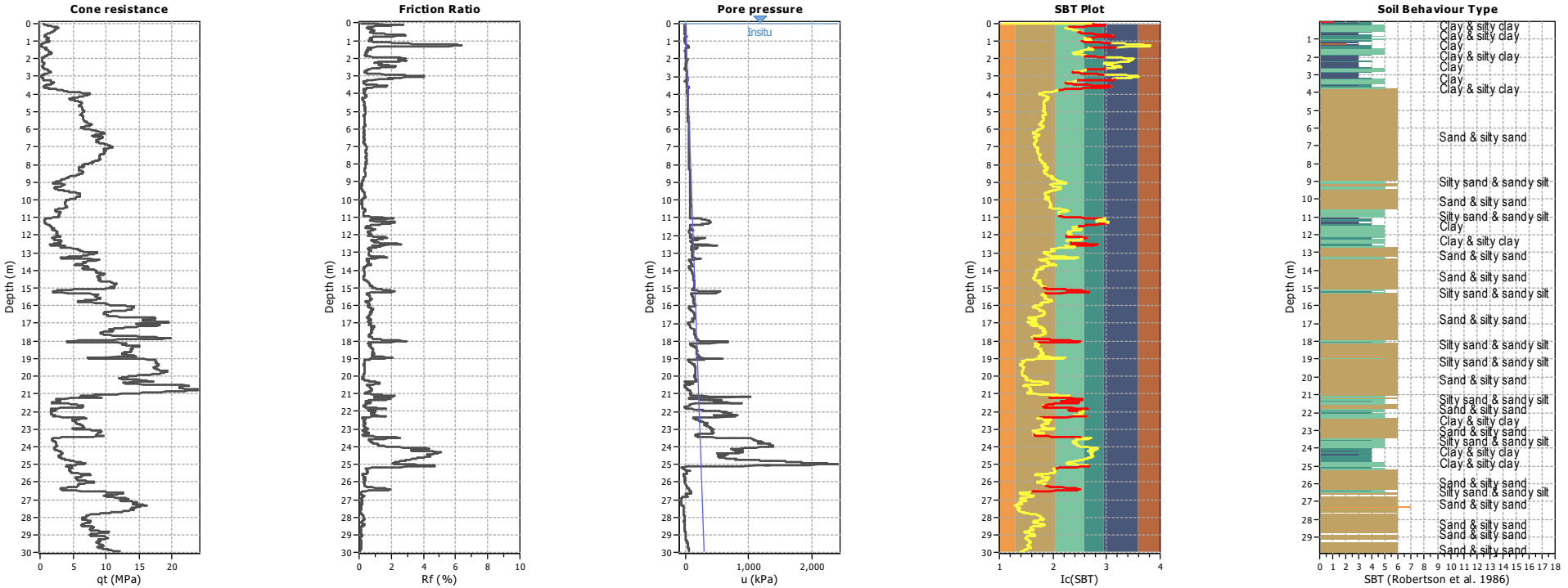
F.S. color scheme

- 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



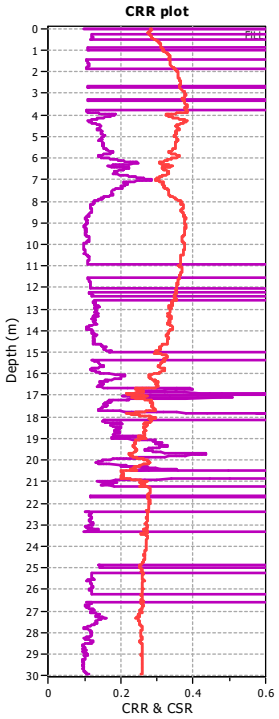
Input parameters and analysis data

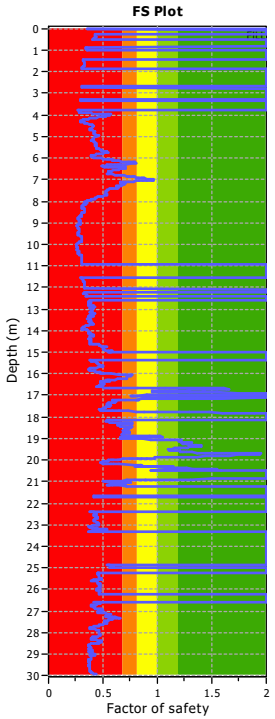
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.70 m	Limit depth:	N/A

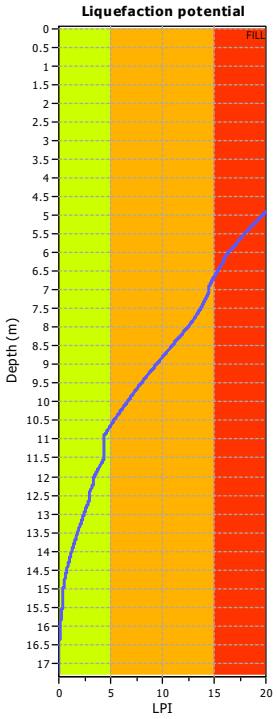
SBT legend

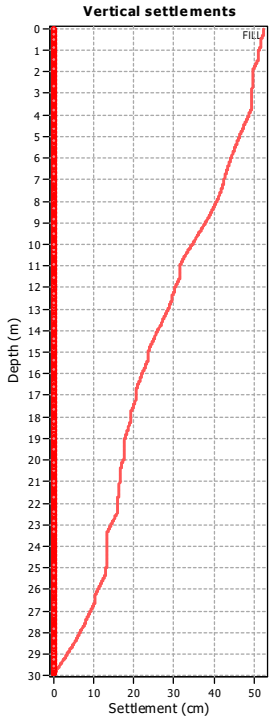
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

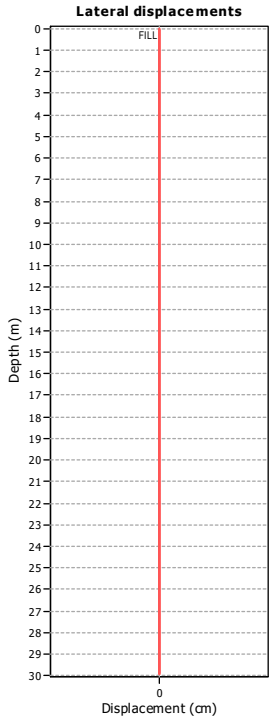
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.70 m	Limit depth:	N/A

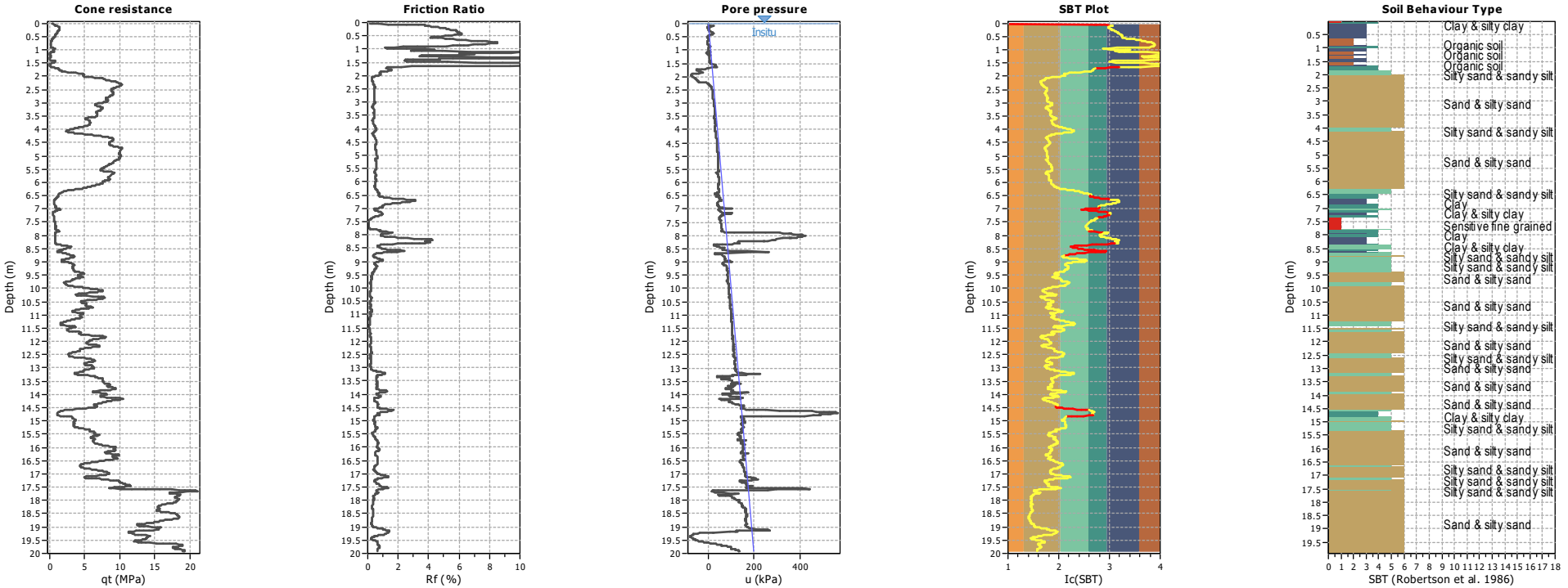
F.S. color scheme

- 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



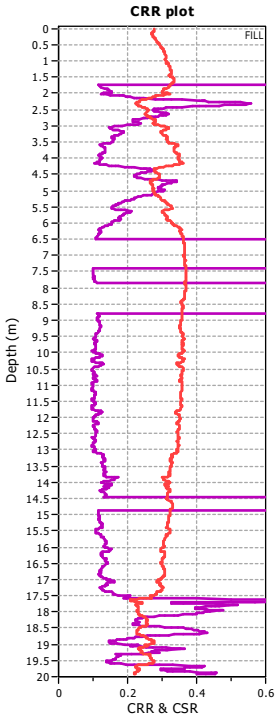
Input parameters and analysis data

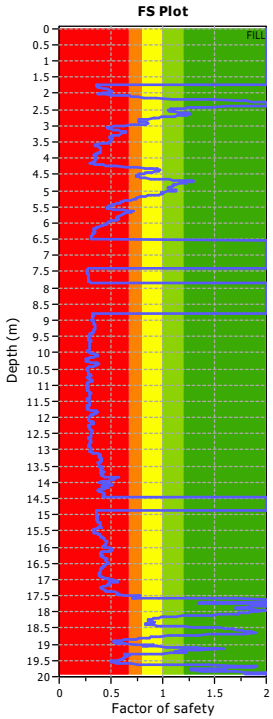
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

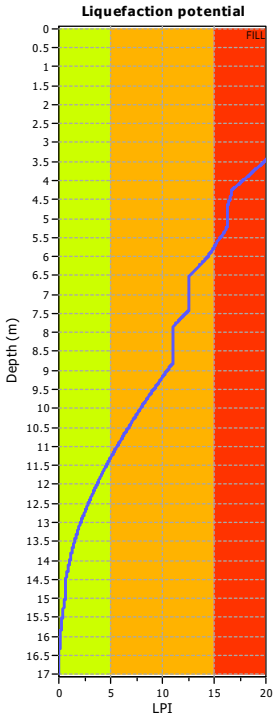
SBT legend

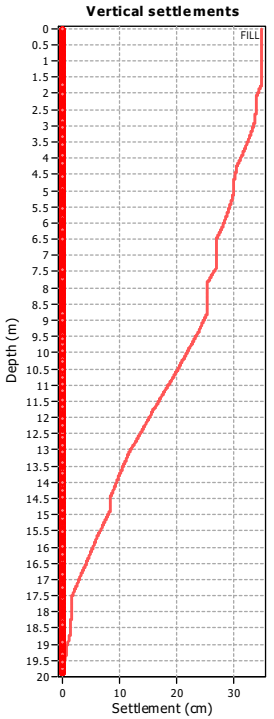
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

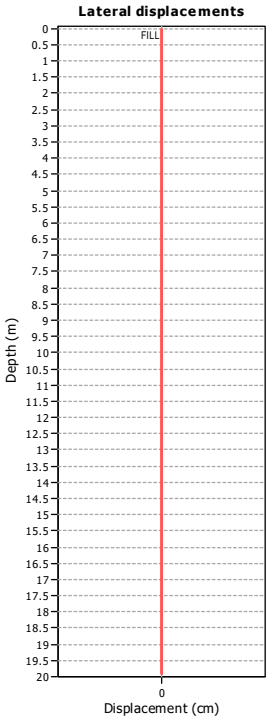
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.00 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.00 m	Limit depth:	N/A

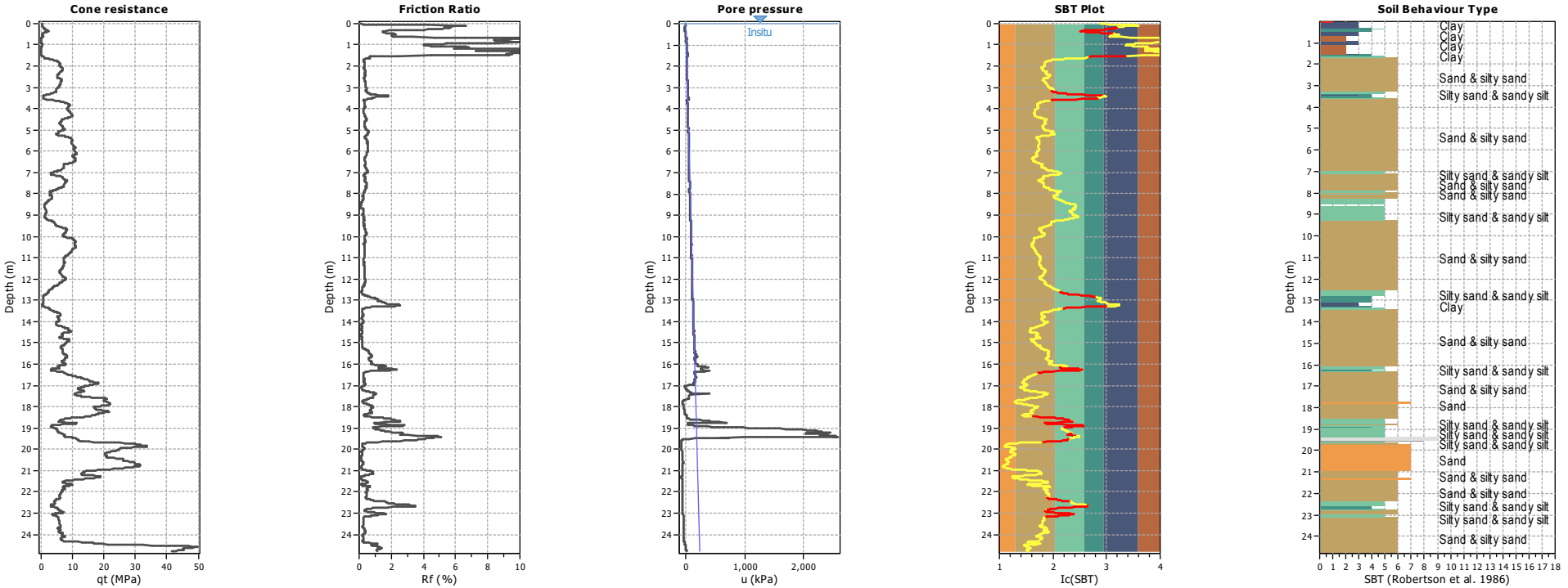
F.S. color scheme

- 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



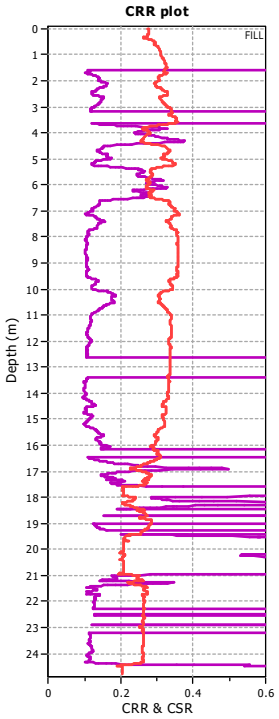
Input parameters and analysis data

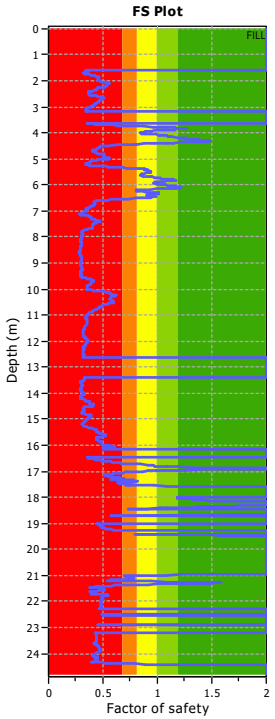
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

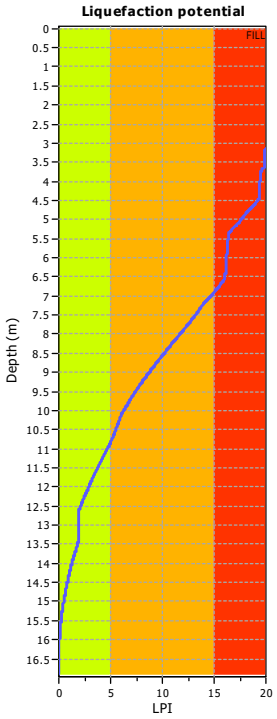
SBT legend

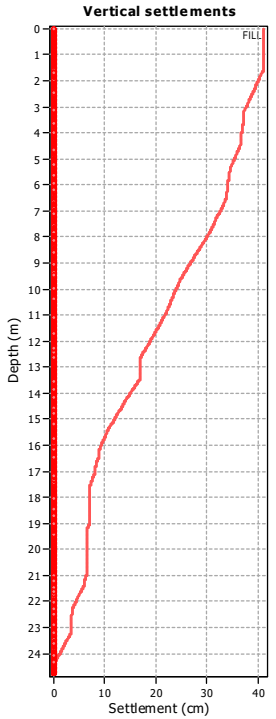
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

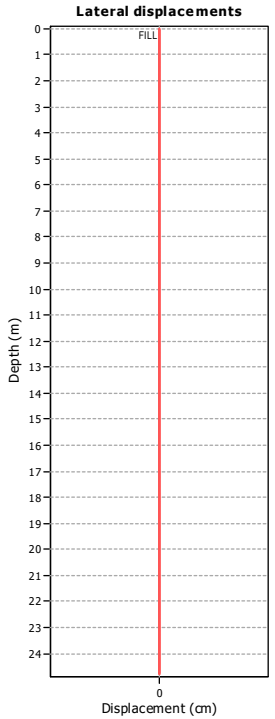
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.10 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.10 m	Limit depth:	N/A

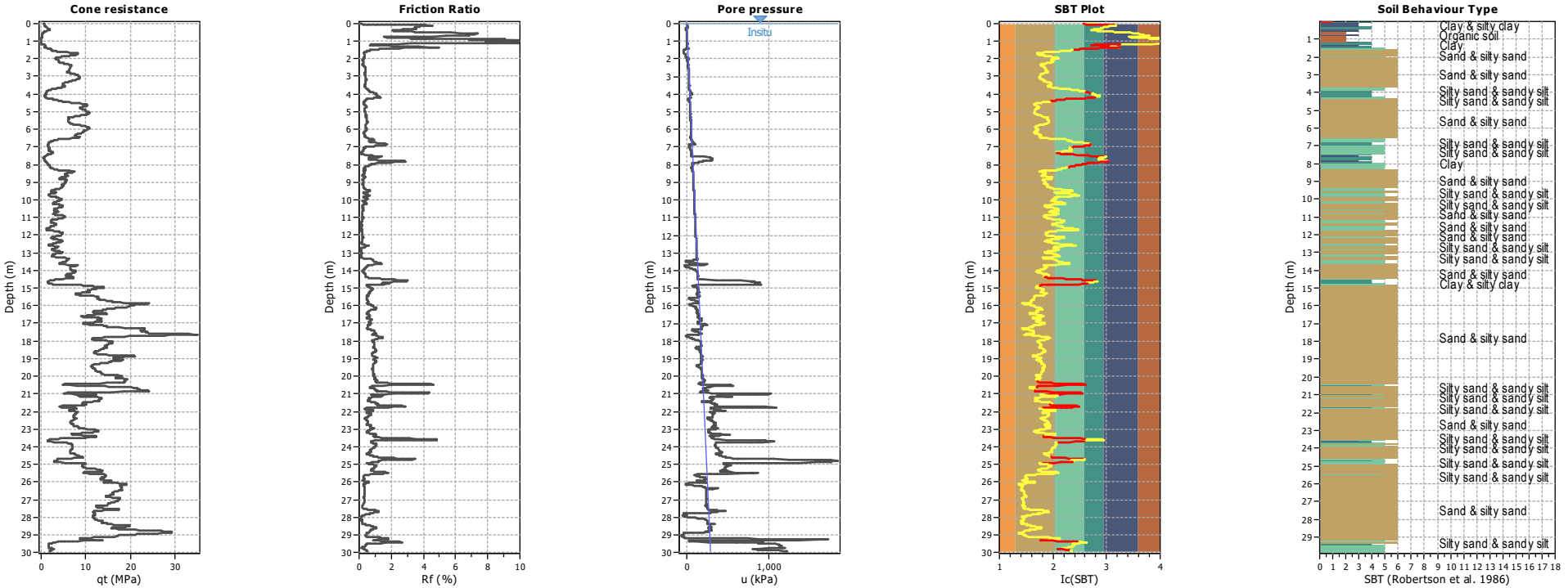
F.S. color scheme

- 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



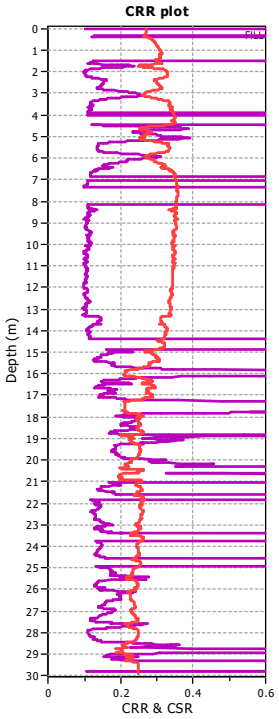
Input parameters and analysis data

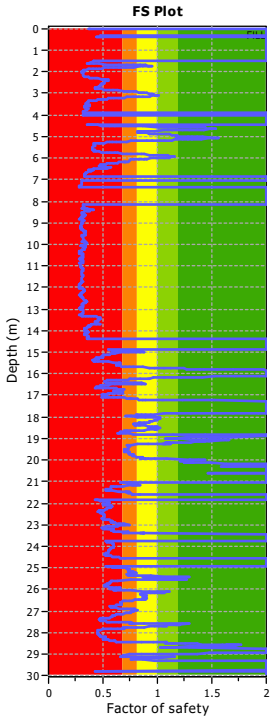
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.30 m	Limit depth:	N/A

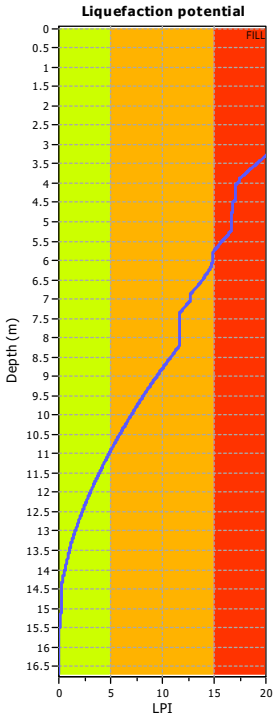
SBT legend

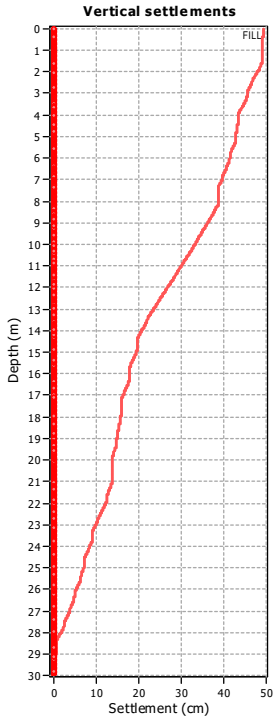
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

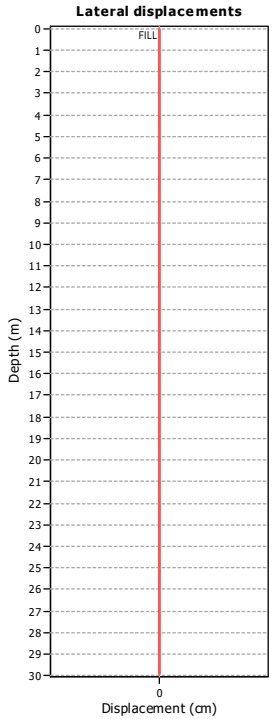
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.30 m	Limit depth:	N/A

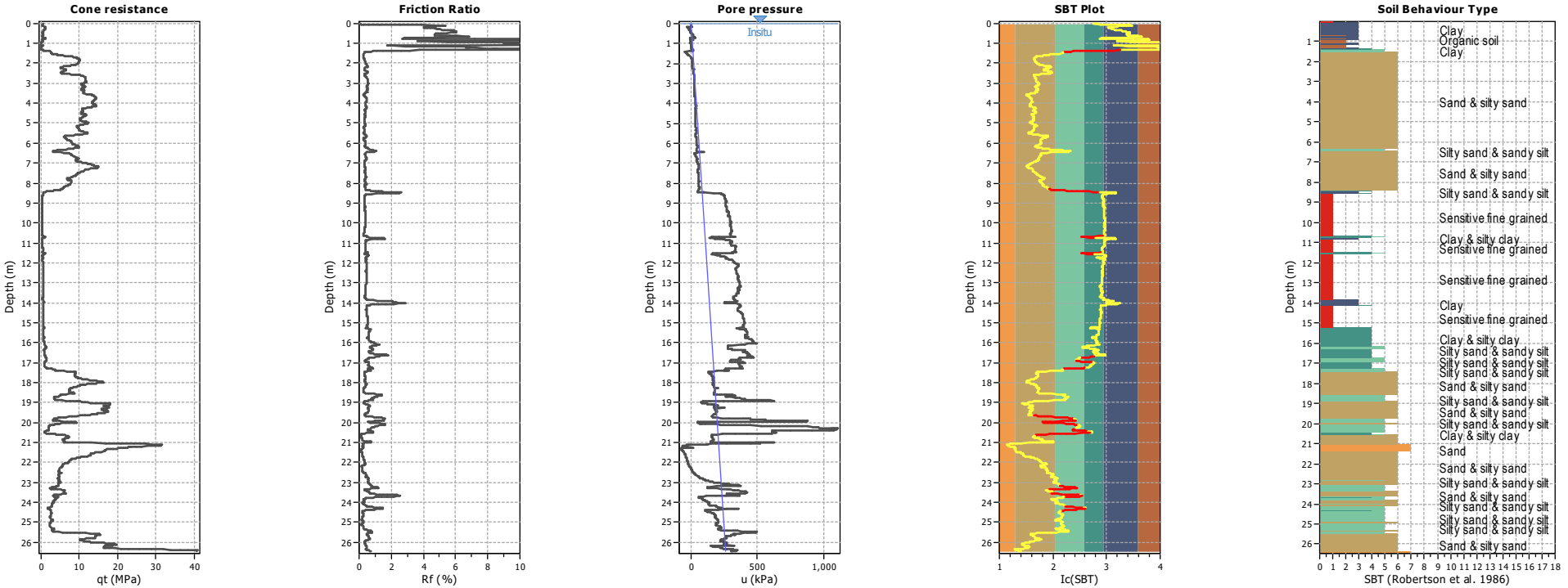
F.S. color scheme

- 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



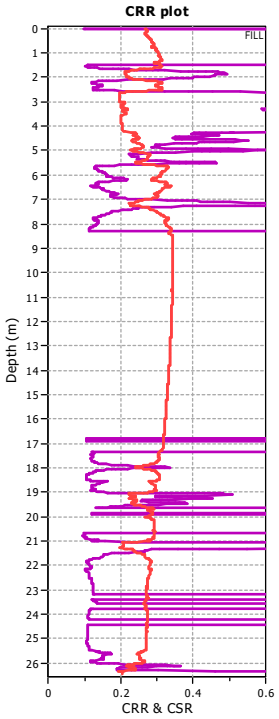
Input parameters and analysis data

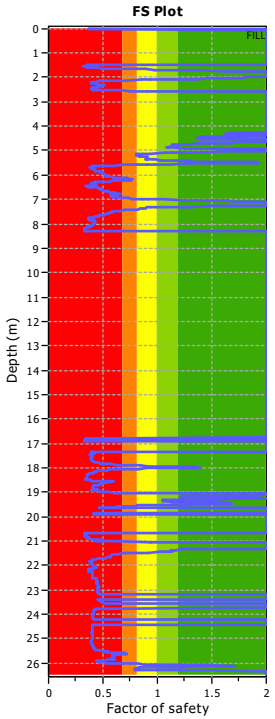
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

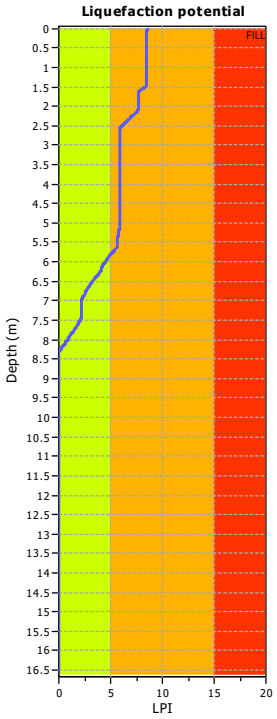
SBT legend

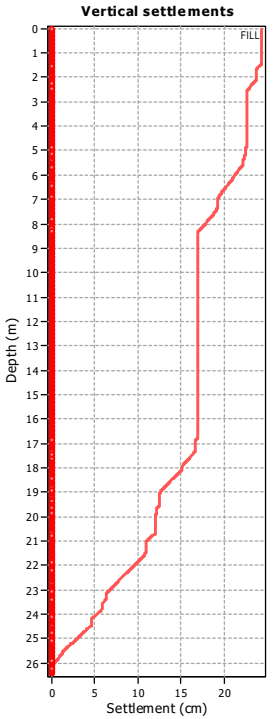
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

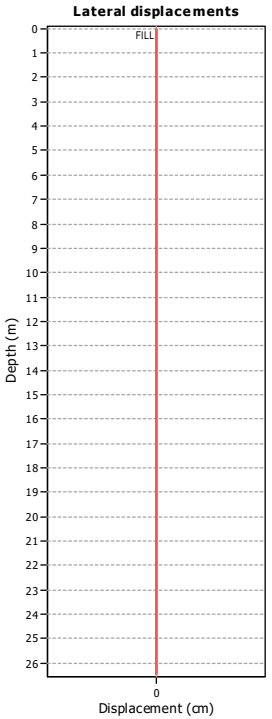
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

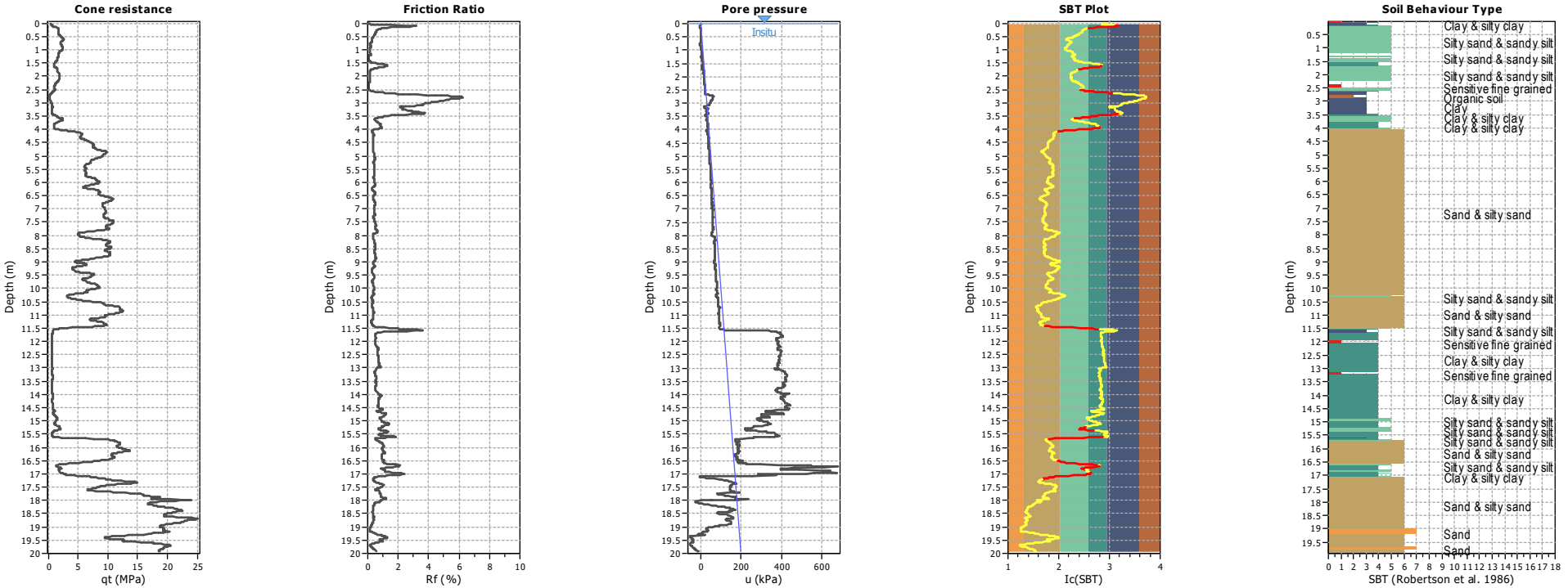
F.S. color scheme

- 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



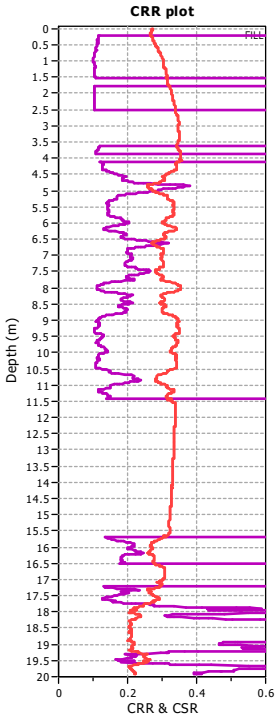
Input parameters and analysis data

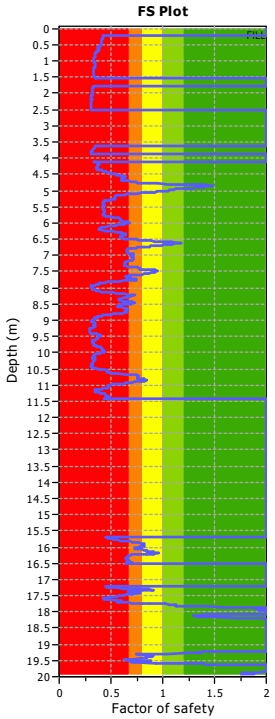
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

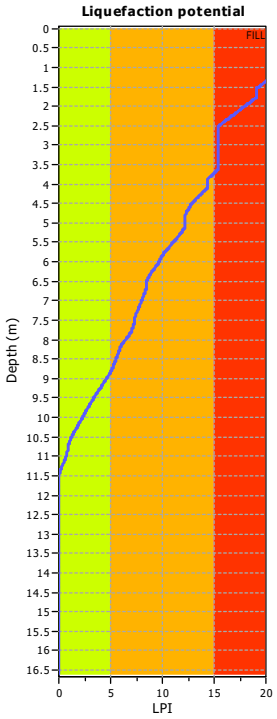
SBT legend

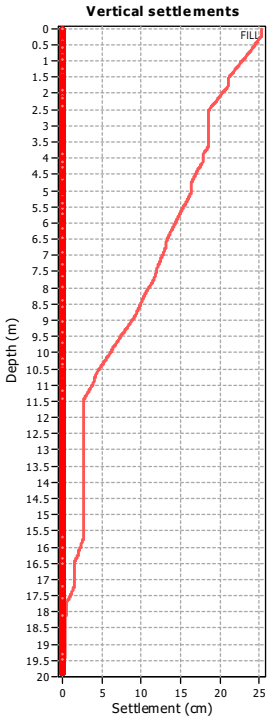
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

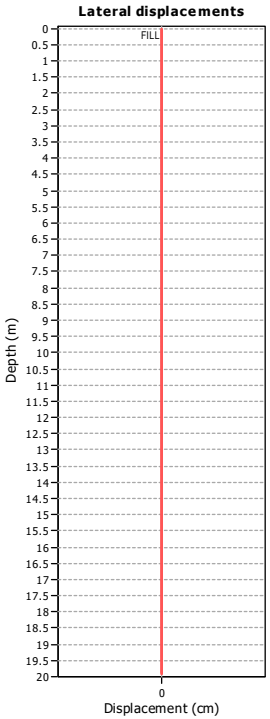
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.40 m	Limit depth:	N/A

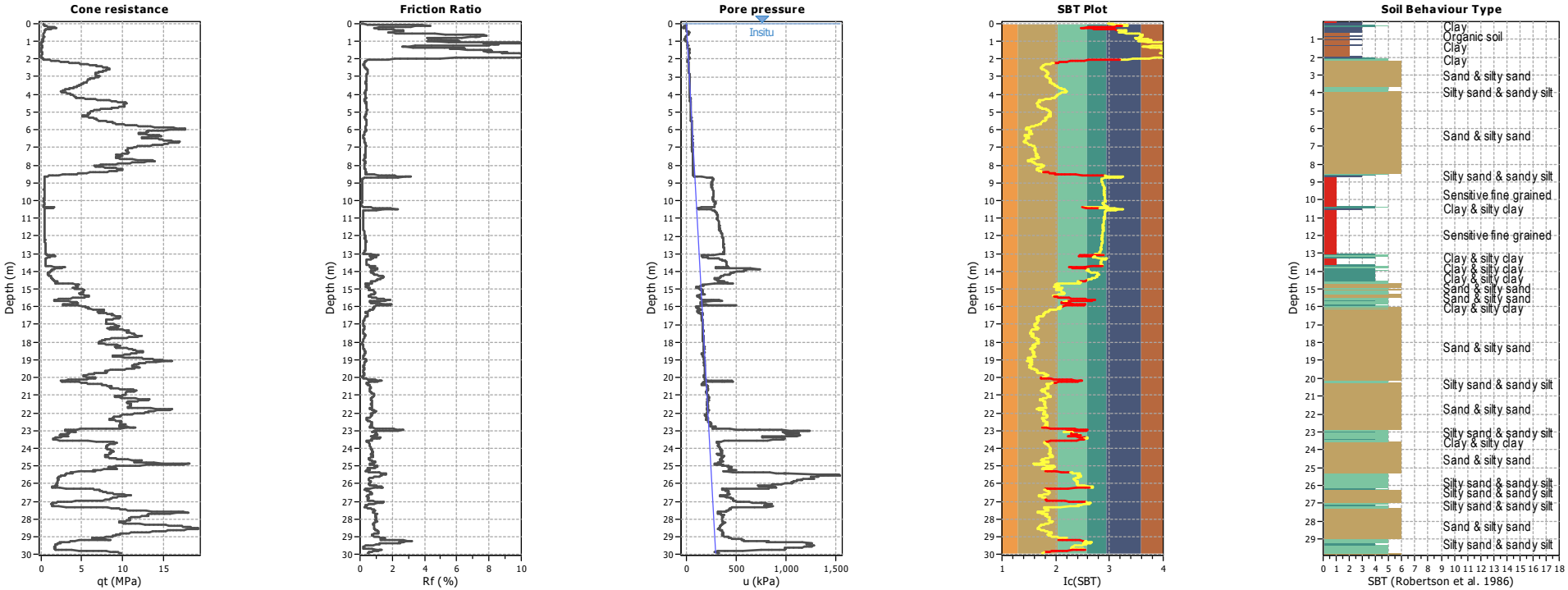
F.S. color scheme

- 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



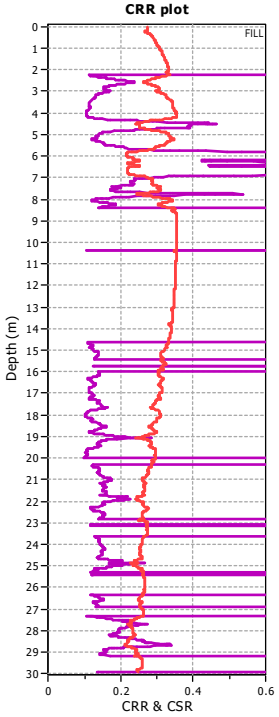
Input parameters and analysis data

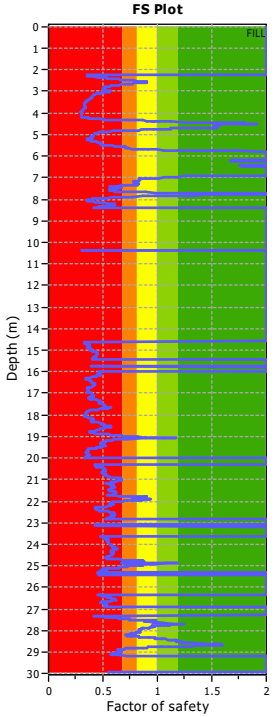
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.30 m	Limit depth:	N/A

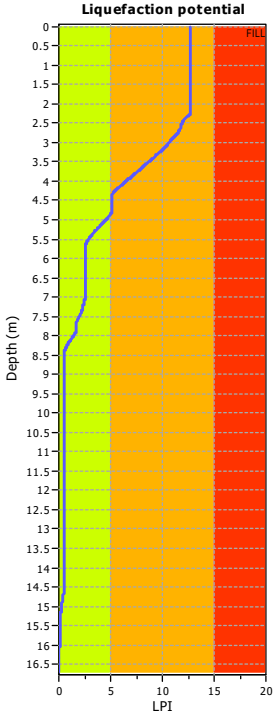
SBT legend

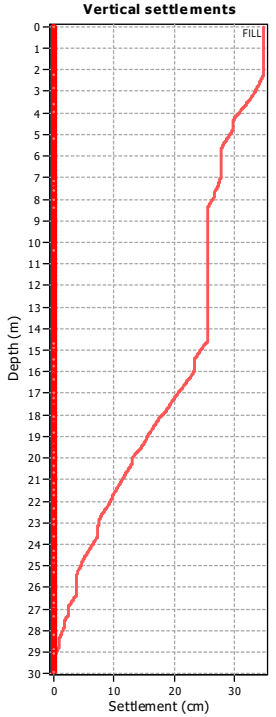
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

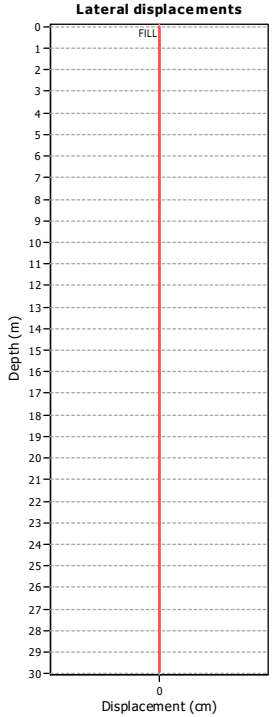
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.30 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.30 m	Limit depth:	N/A

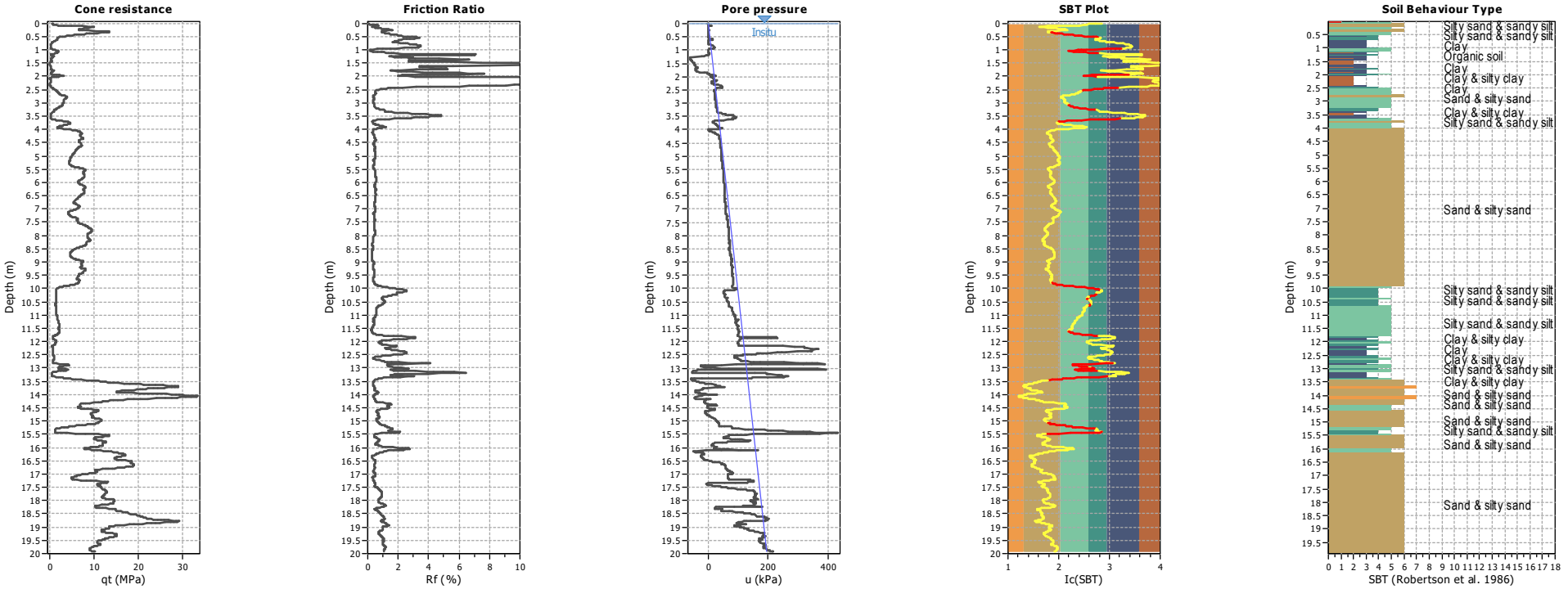
F.S. color scheme

- 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



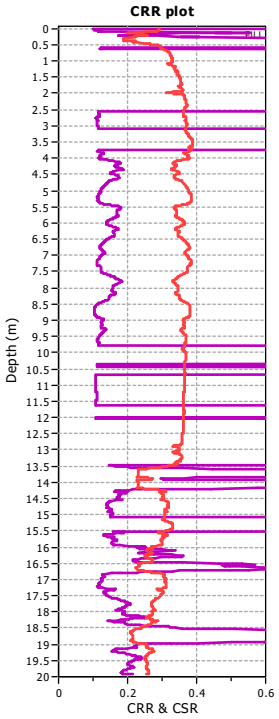
Input parameters and analysis data

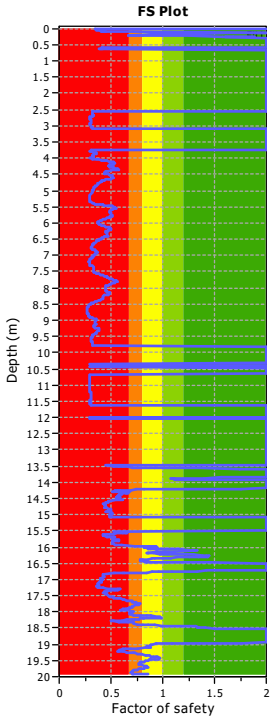
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

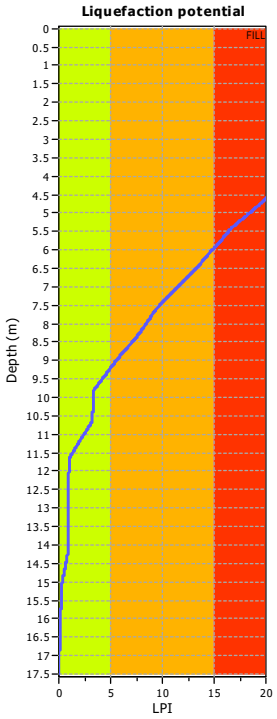
SBT legend

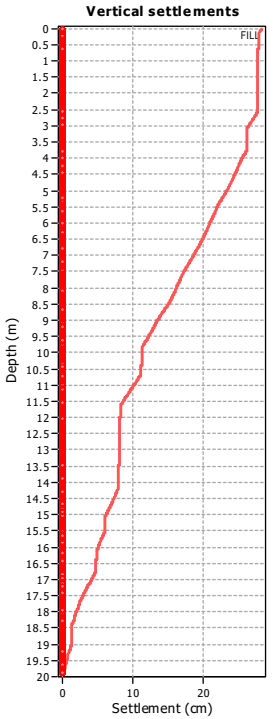
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

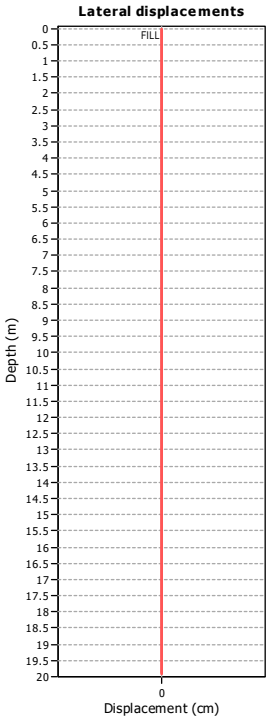
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

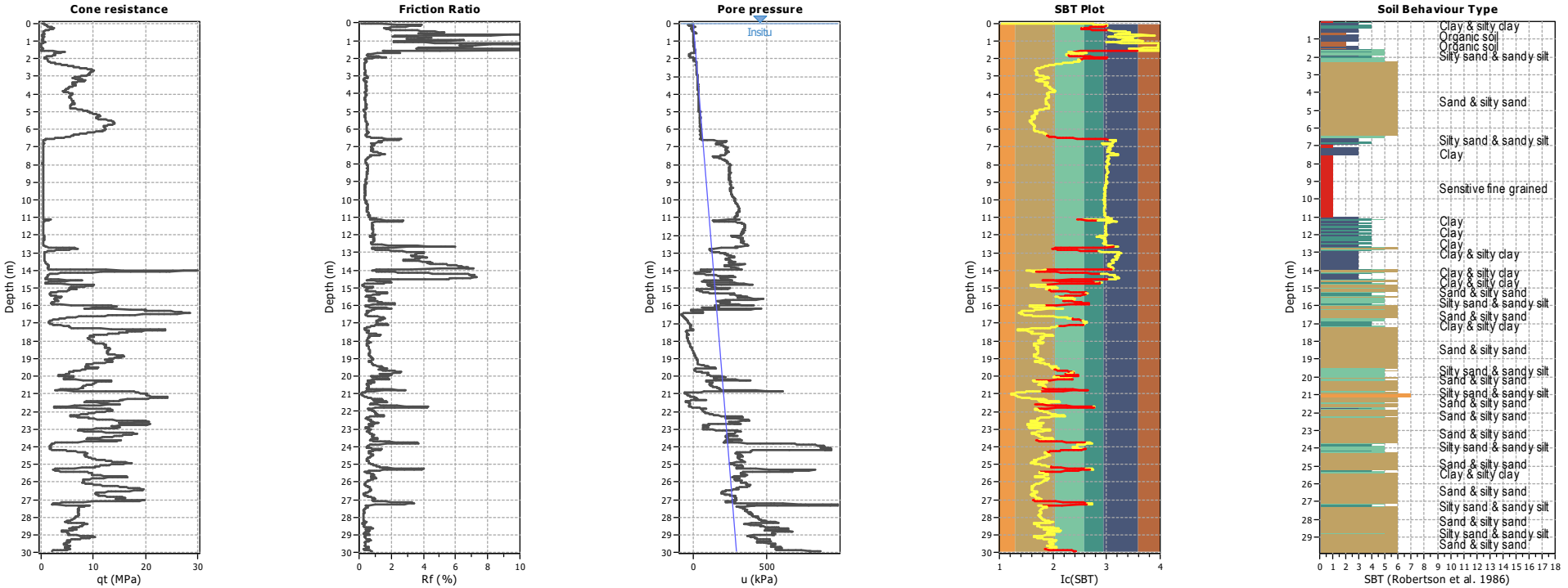
F.S. color scheme

- 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



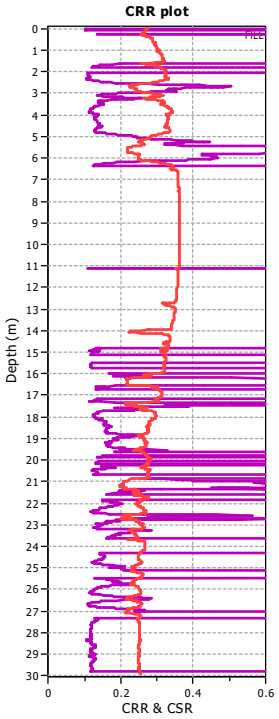
Input parameters and analysis data

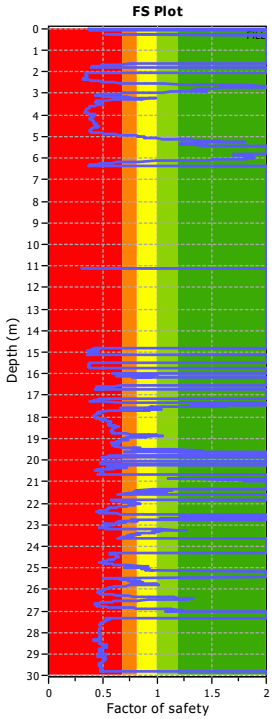
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.90 m	Fill weight:	19.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.90 m	Limit depth:	N/A

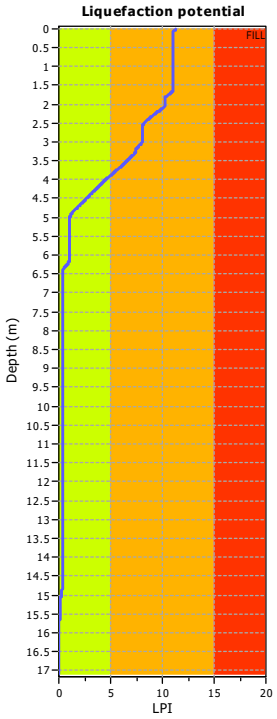
SBT legend

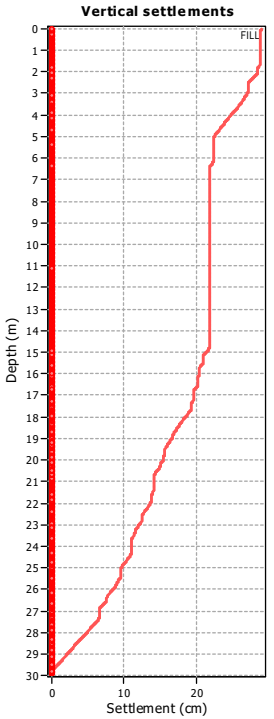
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

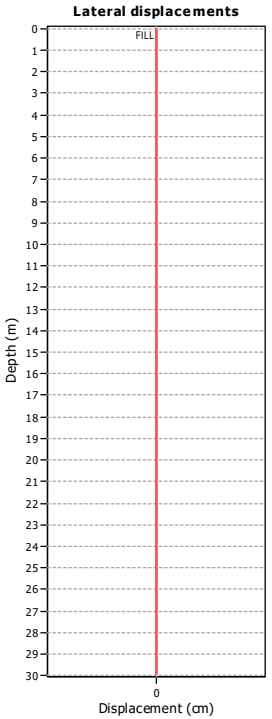
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.90 m	Fill weight:	19.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.90 m	Limit depth:	N/A

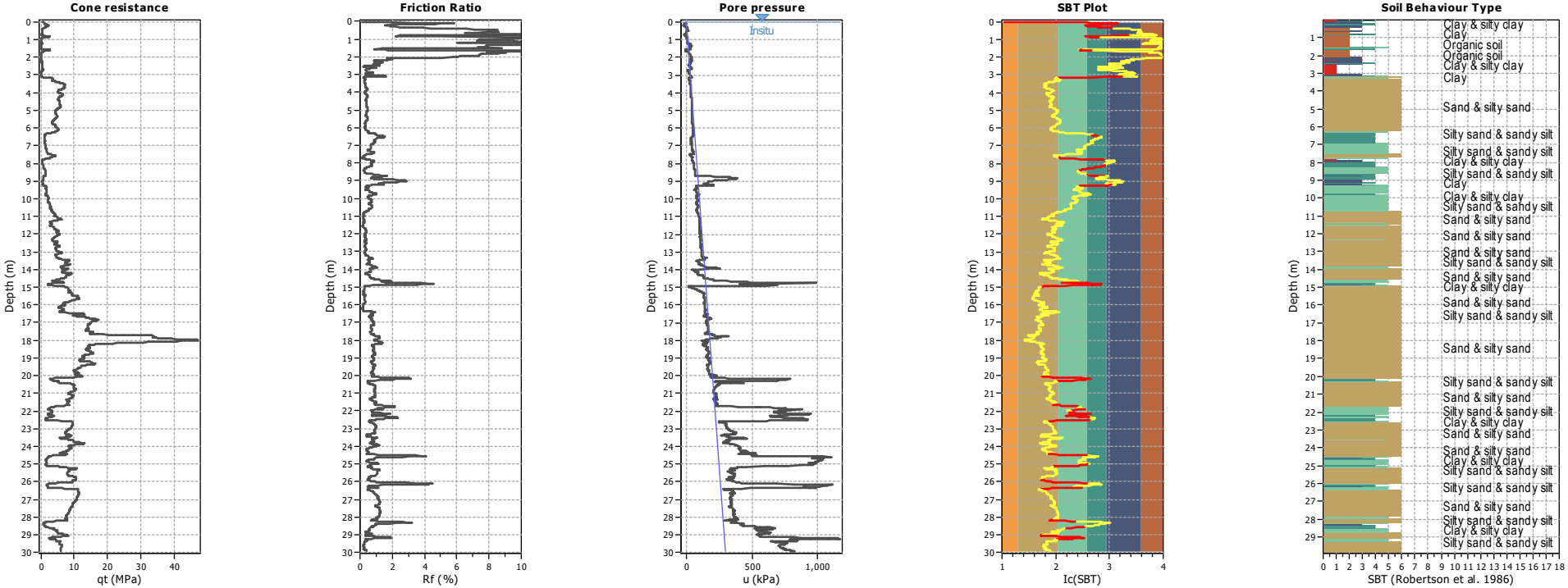
F.S. color scheme

- 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



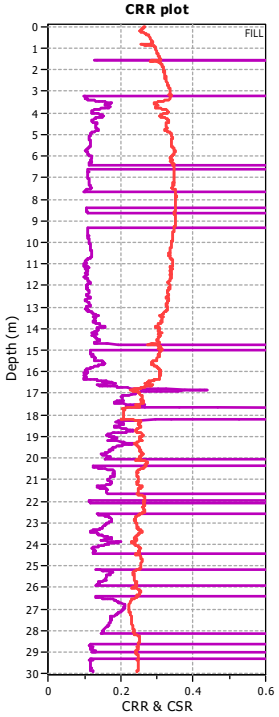
Input parameters and analysis data

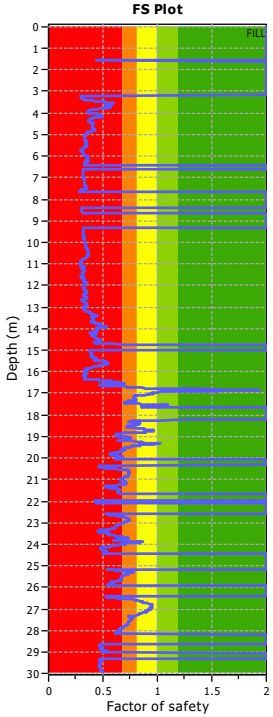
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.70 m	Limit depth:	N/A

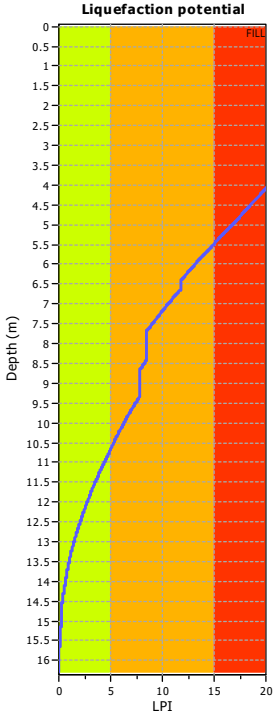
SBT legend

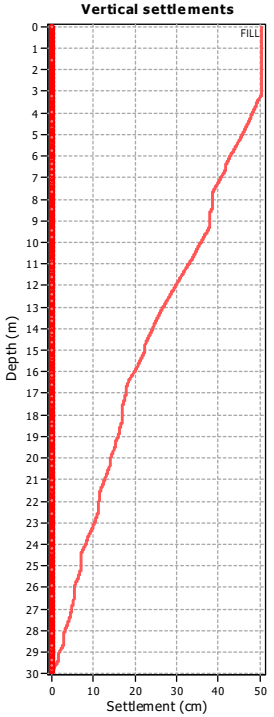
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

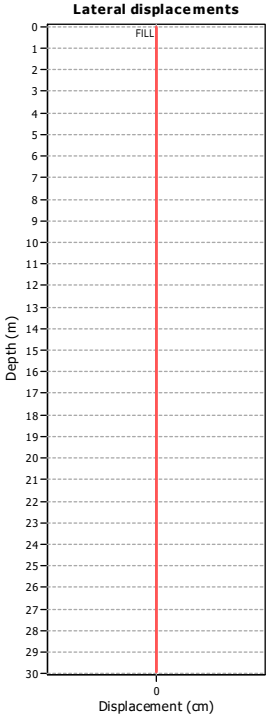
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	2.70 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	3.70 m	Limit depth:	N/A

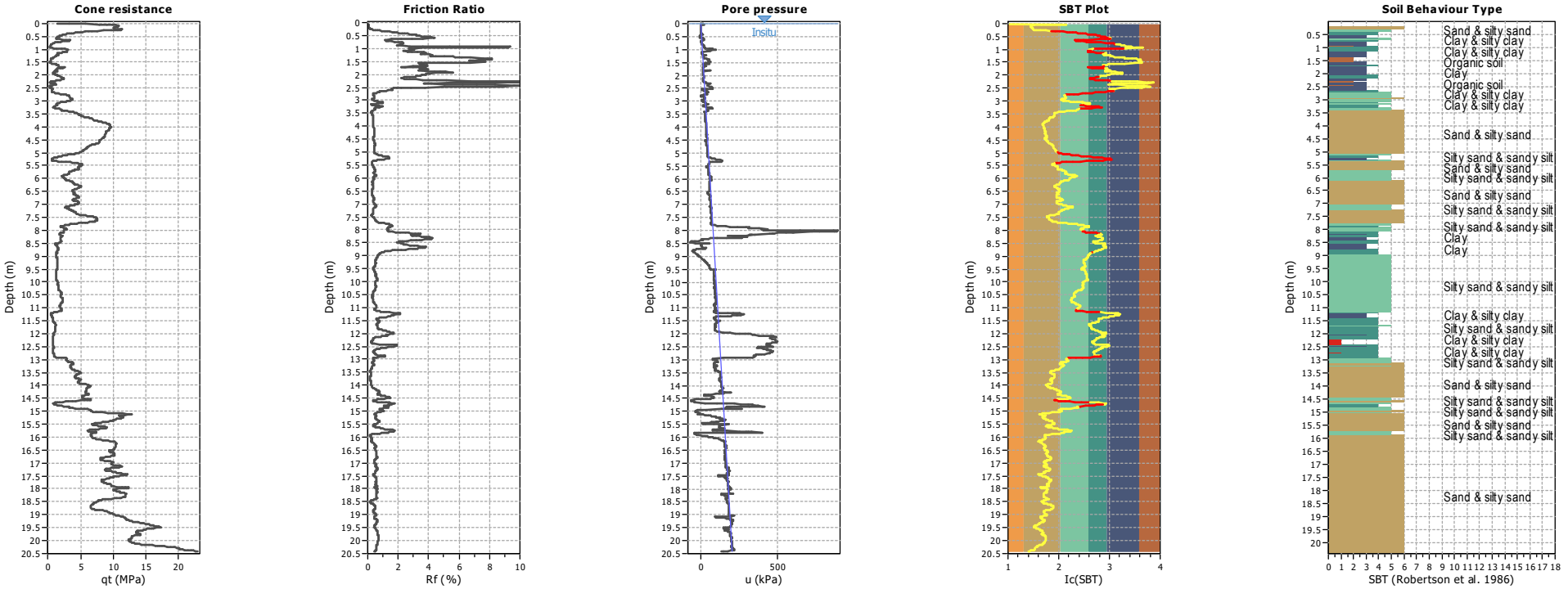
F.S. color scheme

- 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



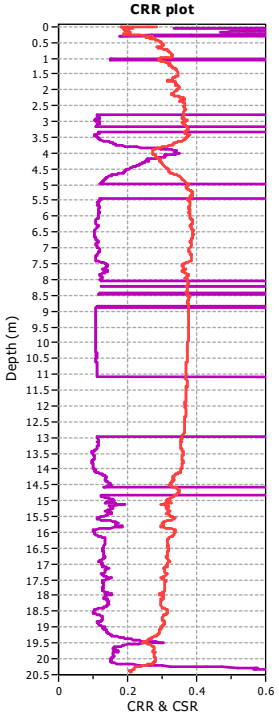
Input parameters and analysis data

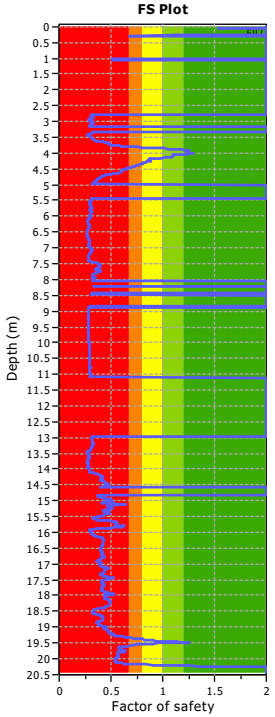
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

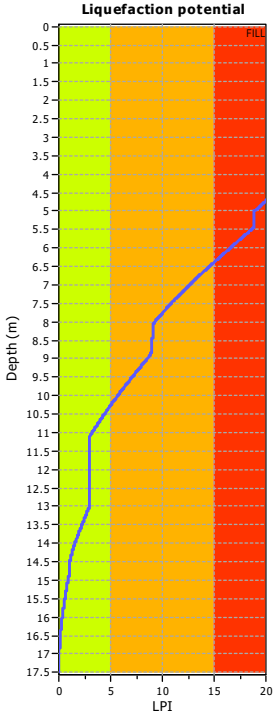
SBT legend

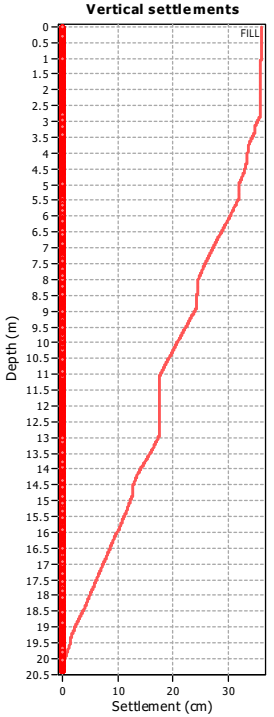
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

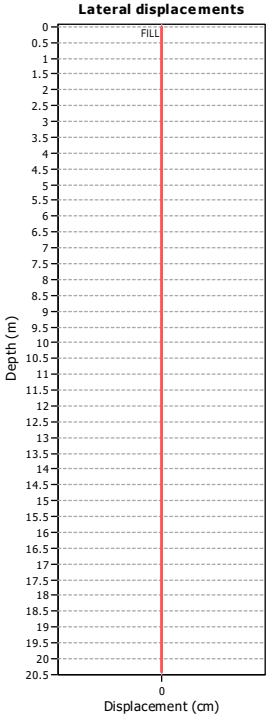
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.50 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.00 m	Fill height:	2.50 m	Limit depth:	N/A

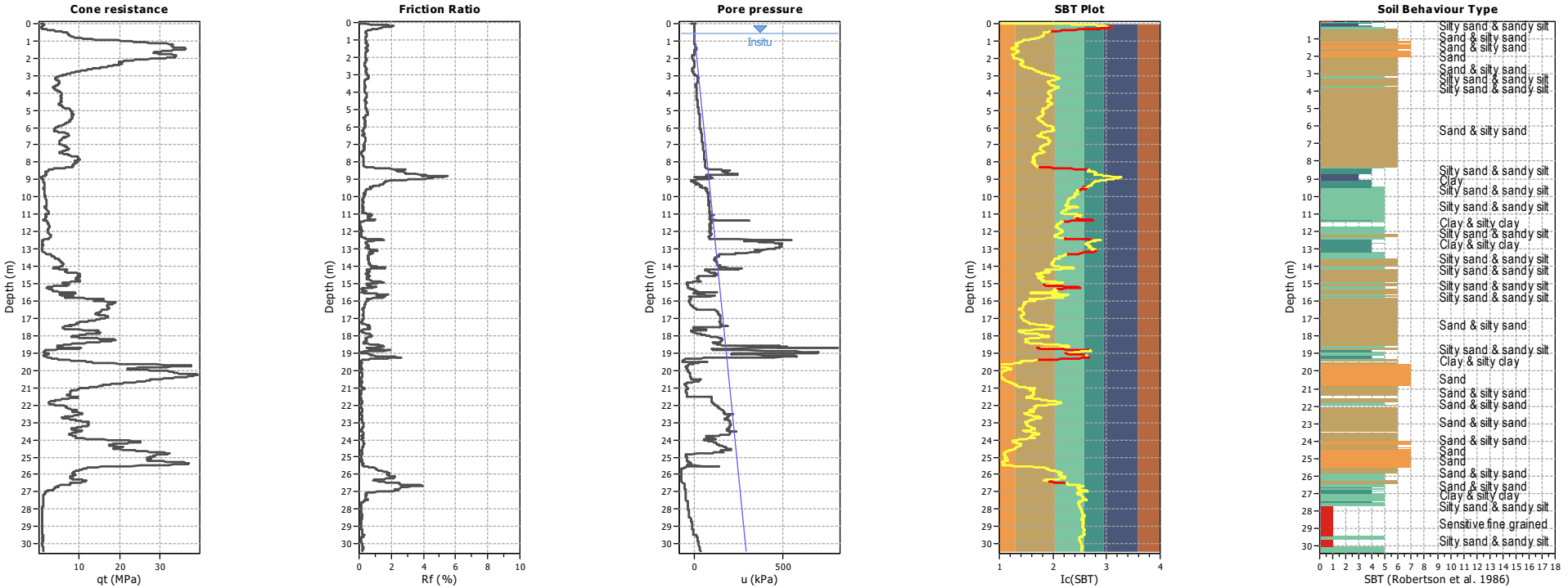
F.S. color scheme

- 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



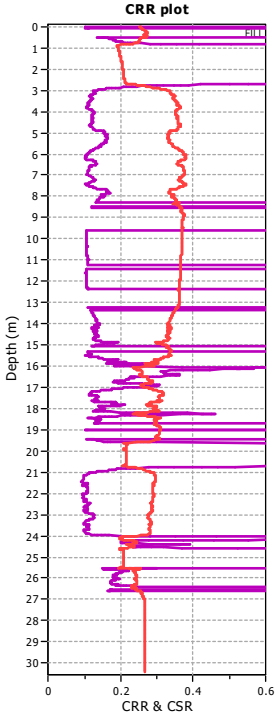
Input parameters and analysis data

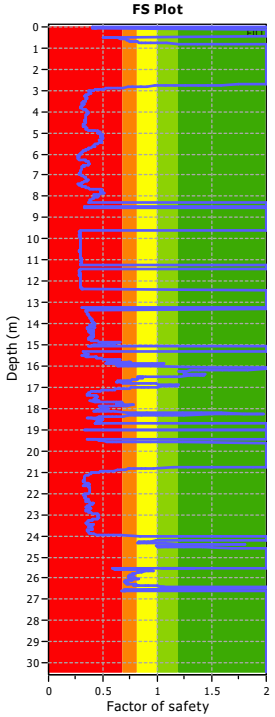
Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.60 m	Fill height:	1.80 m	Limit depth:	N/A

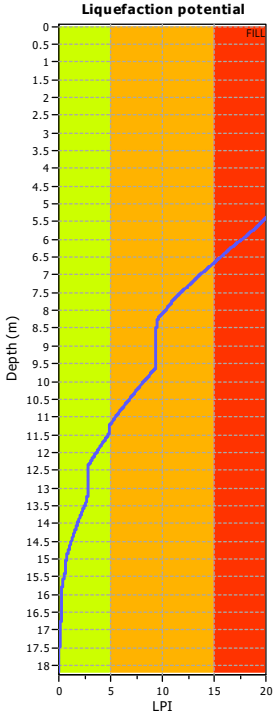
SBT legend

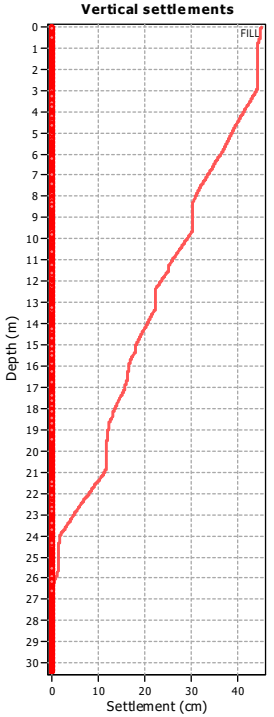
1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

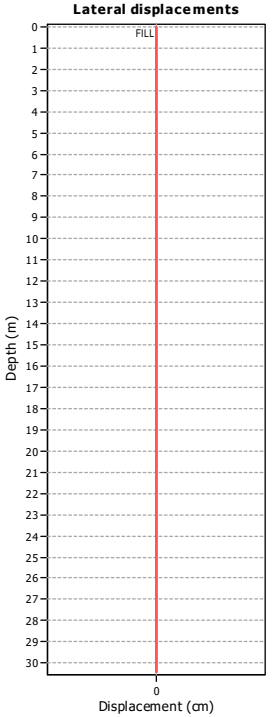
Liquefaction analysis overall plots











Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	1.40 m	Fill weight:	16.00 kN/m³
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.00	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.41	Use fill:	Yes	Limit depth applied:	No
Depth to water table (insitu):	0.60 m	Fill height:	1.80 m	Limit depth:	N/A

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

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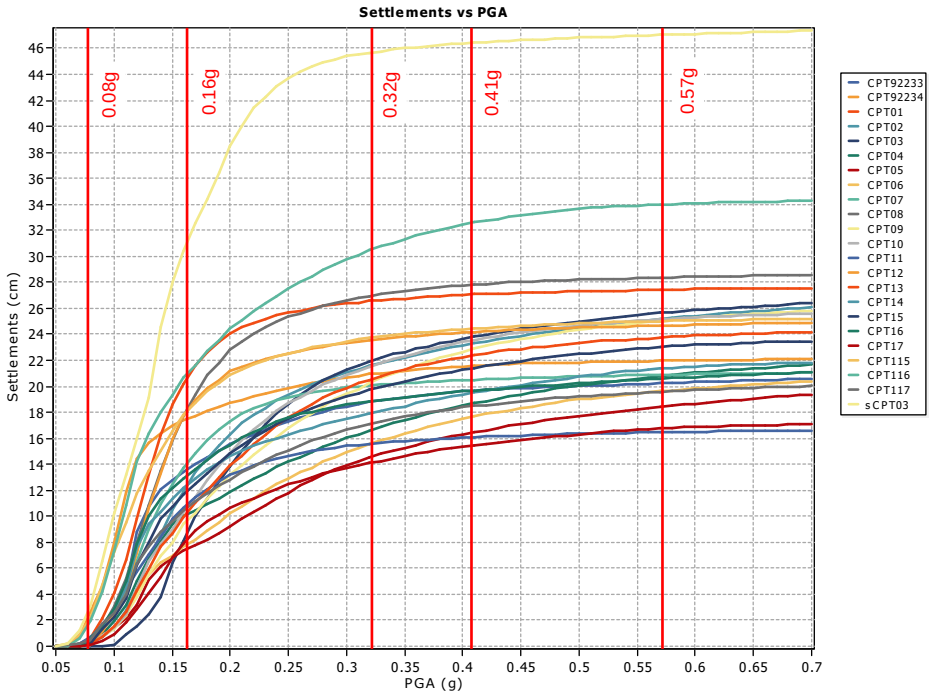

:: CPT main liquefaction parameters details ::

CPT Name	Assesment method	Earthquake Mag.	GWT in situ (m)	GWT earthq. (m)
CPT92233	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT92234	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT01	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT02	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT03	Boulanger & Idriss (2014)	6.00	1.20	1.20
CPT04	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT05	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT06	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT07	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT08	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT09	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT10	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT11	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT12	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT13	Boulanger & Idriss (2014)	6.00	0.10	0.10

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CPT14	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT15	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT16	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT17	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT115	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT116	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT117	Boulanger & Idriss (2014)	6.00	0.10	0.10
sCPT03	Boulanger & Idriss (2014)	6.00	0.10	0.10

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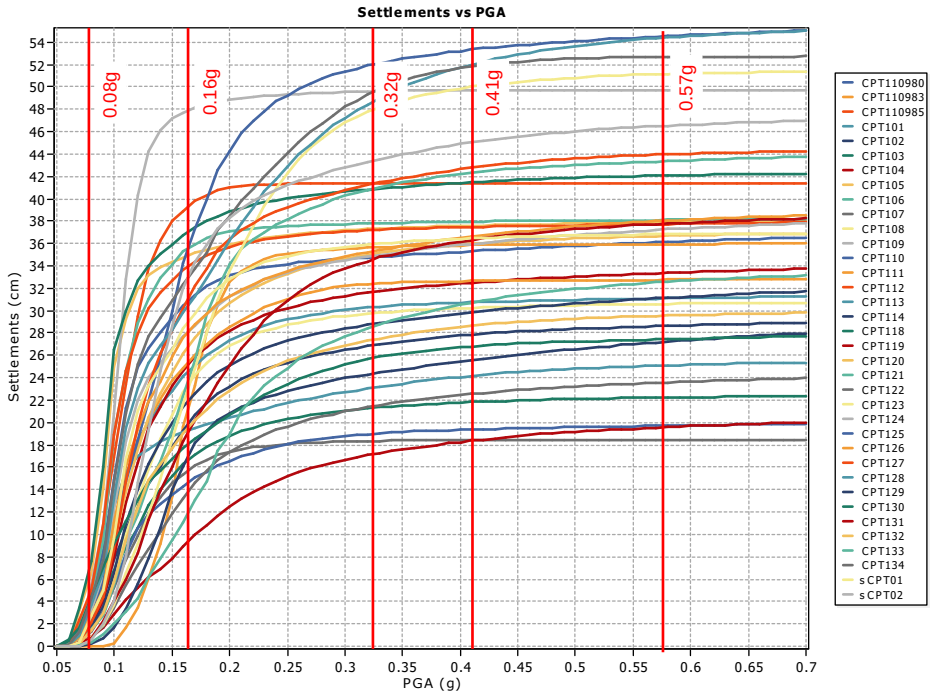

:: CPT main liquefaction parameters details ::

CPT Name	Assesment method	Earthquake Mag.	GWT in situ (m)	GWT earthq. (m)
CPT110980	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT110983	Boulanger & Idriss (2014)	6.00	3.30	3.30
CPT110985	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT101	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT102	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT103	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT104	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT105	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT106	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT107	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT108	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT109	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT110	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT111	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT112	Boulanger & Idriss (2014)	6.00	0.10	0.10

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CPT113	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT114	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT118	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT119	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT120	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT121	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT122	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT123	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT124	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT125	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT126	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT127	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT128	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT129	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT130	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT131	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT132	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT133	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT134	Boulanger & Idriss (2014)	6.00	0.10	0.10
sCPT01	Boulanger & Idriss (2014)	6.00	0.10	0.10
sCPT02	Boulanger & Idriss (2014)	6.00	0.60	0.60

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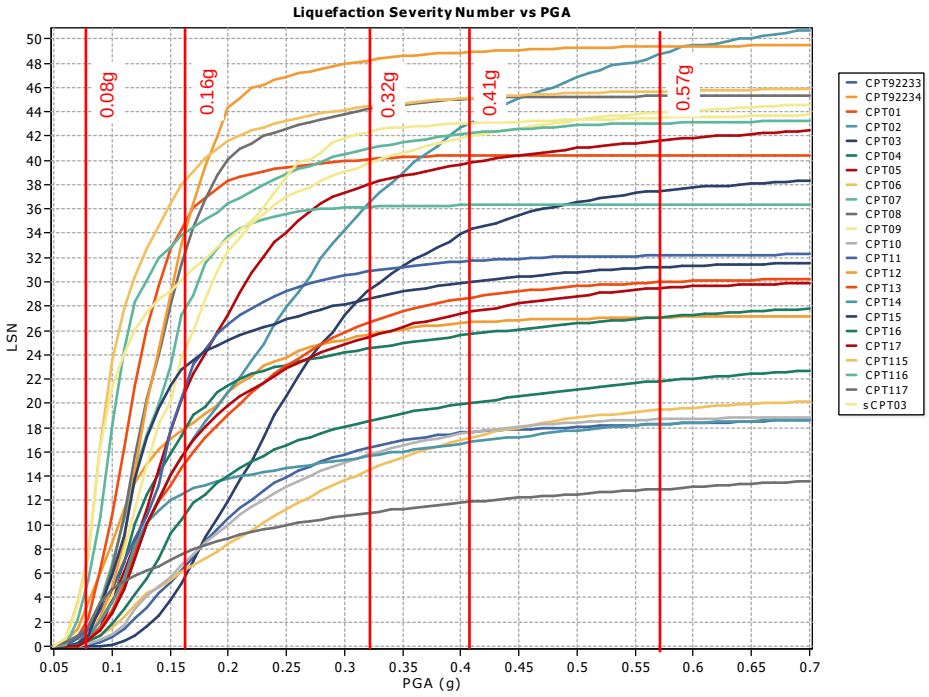

:: CPT main liquefaction parameters details ::

CPT Name	Assesment method	Earthquake Mag.	GWT in situ (m)	GWT earthq. (m)
CPT92233	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT92234	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT01	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT02	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT03	Boulanger & Idriss (2014)	6.00	1.20	1.20
CPT04	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT05	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT06	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT07	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT08	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT09	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT10	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT11	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT12	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT13	Boulanger & Idriss (2014)	6.00	0.10	0.10

PGA Based Parametric Analysis

CPT14	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT15	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT16	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT17	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT115	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT116	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT117	Boulanger & Idriss (2014)	6.00	0.10	0.10
sCPT03	Boulanger & Idriss (2014)	6.00	0.10	0.10

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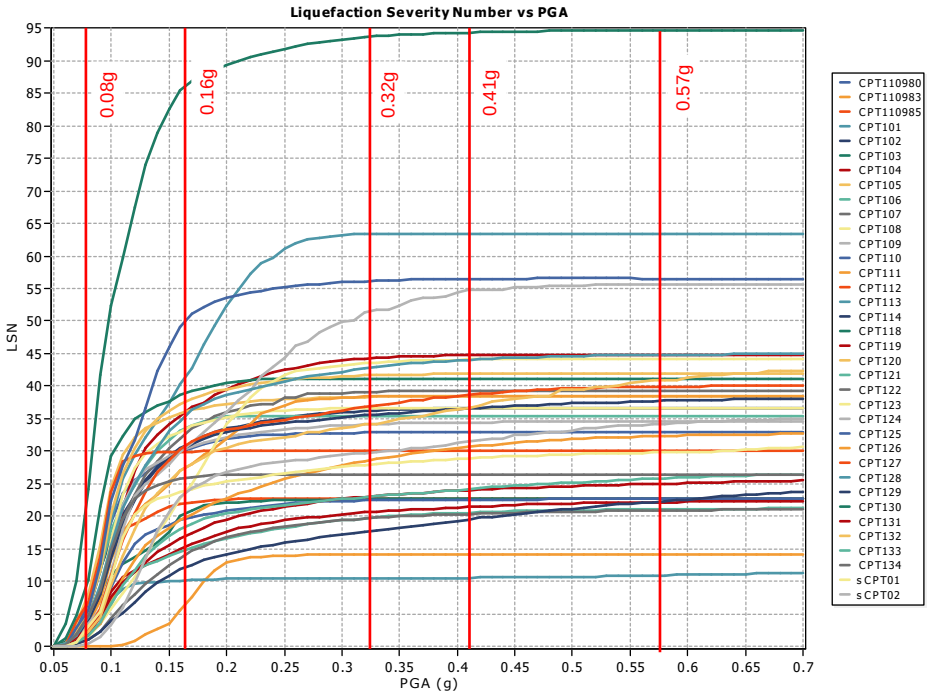
PGA Based Parametric Analysis



:: CPT main liquefaction parameters details ::

CPT Name	Assesment method	Earthquake Mag.	GWT in situ (m)	GWT earthq. (m)
CPT110980	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT110983	Boulanger & Idriss (2014)	6.00	3.30	3.30
CPT110985	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT101	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT102	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT103	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT104	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT105	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT106	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT107	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT108	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT109	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT110	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT111	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT112	Boulanger & Idriss (2014)	6.00	0.10	0.10

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CPT113	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT114	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT118	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT119	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT120	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT121	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT122	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT123	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT124	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT125	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT126	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT127	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT128	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT129	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT130	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT131	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT132	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT133	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT134	Boulanger & Idriss (2014)	6.00	0.10	0.10
sCPT01	Boulanger & Idriss (2014)	6.00	0.10	0.10
sCPT02	Boulanger & Idriss (2014)	6.00	0.60	0.60

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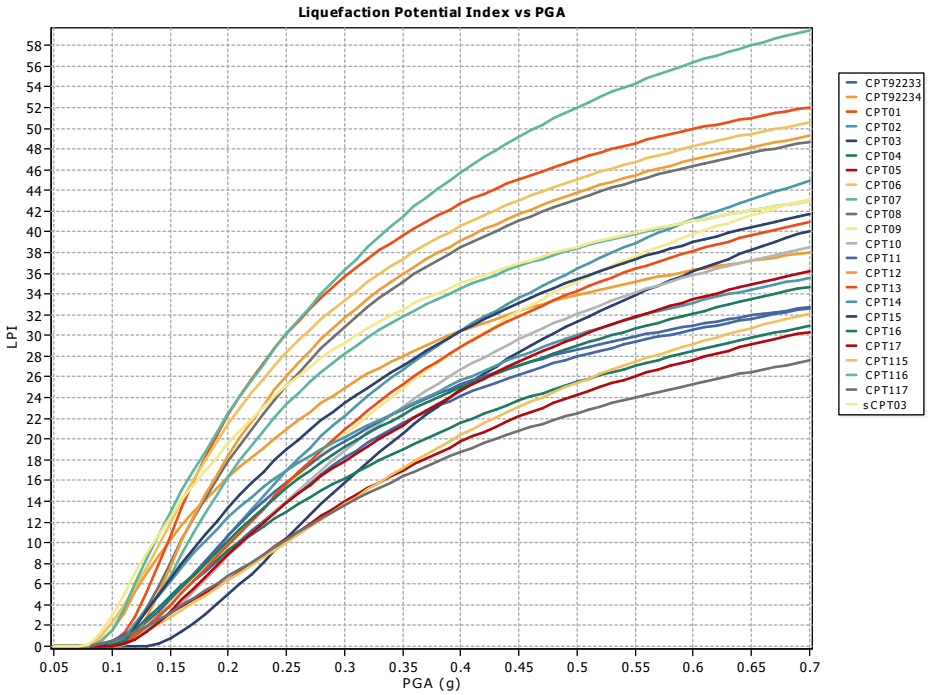

:: CPT main liquefaction parameters details ::

CPT Name	Assesment method	Earthquake Mag.	GWT in situ (m)	GWT earthq. (m)
CPT92233	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT92234	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT01	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT02	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT03	Boulanger & Idriss (2014)	6.00	1.20	1.20
CPT04	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT05	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT06	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT07	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT08	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT09	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT10	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT11	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT12	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT13	Boulanger & Idriss (2014)	6.00	0.10	0.10

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CPT14	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT15	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT16	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT17	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT115	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT116	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT117	Boulanger & Idriss (2014)	6.00	0.10	0.10
sCPT03	Boulanger & Idriss (2014)	6.00	0.10	0.10

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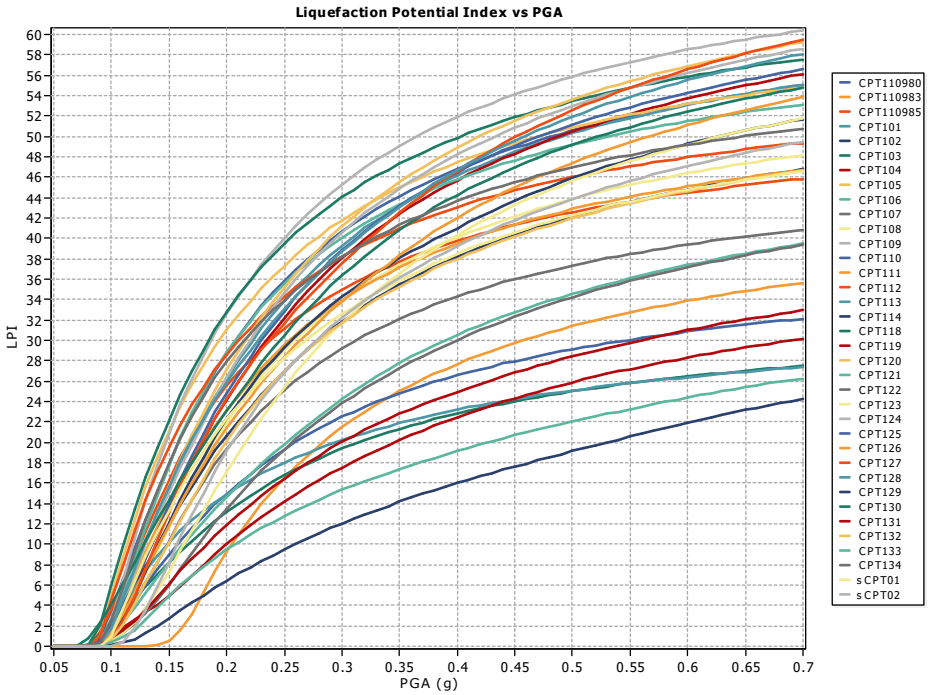


:: CPT main liquefaction parameters details ::

CPT Name	Assesment method	Earthquake Mag.	GWT in situ (m)	GWT earthq. (m)
CPT110980	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT110983	Boulanger & Idriss (2014)	6.00	3.30	3.30
CPT110985	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT101	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT102	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT103	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT104	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT105	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT106	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT107	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT108	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT109	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT110	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT111	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT112	Boulanger & Idriss (2014)	6.00	0.10	0.10

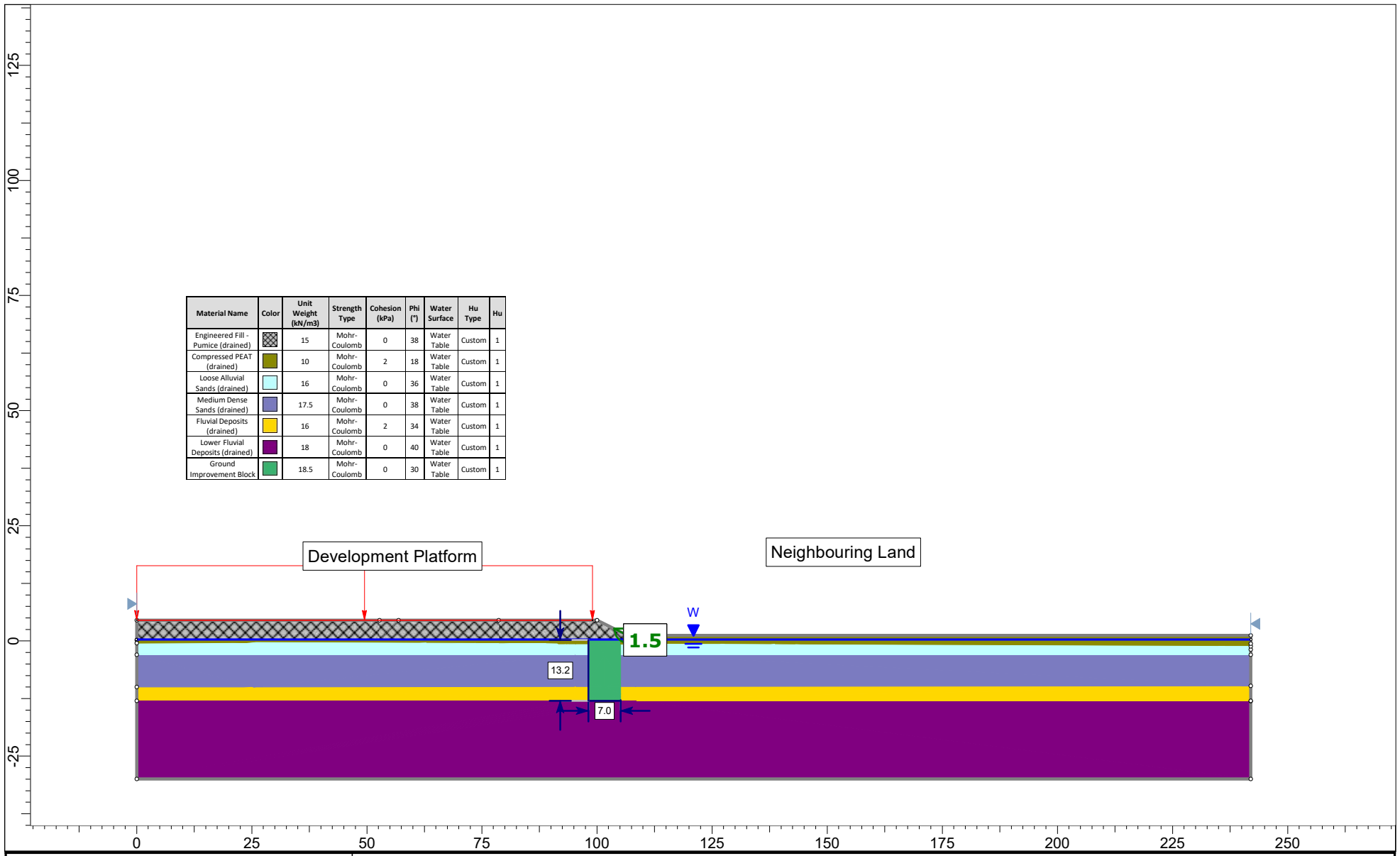
PGA Based Parametric Analysis

CPT113	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT114	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT118	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT119	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT120	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT121	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT122	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT123	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT124	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT125	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT126	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT127	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT128	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT129	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT130	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT131	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT132	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT133	Boulanger & Idriss (2014)	6.00	0.10	0.10
CPT134	Boulanger & Idriss (2014)	6.00	0.10	0.10
sCPT01	Boulanger & Idriss (2014)	6.00	0.10	0.10
sCPT02	Boulanger & Idriss (2014)	6.00	0.60	0.60

APPENDIX 4:

Edge Stability Analysis Outputs

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38	Water Table	Custom	1
Compressed PEAT (drained)		10	Mohr-Coulomb	2	18	Water Table	Custom	1
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36	Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38	Water Table	Custom	1
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40	Water Table	Custom	1
Ground Improvement Block		18.5	Mohr-Coulomb	0	30	Water Table	Custom	1



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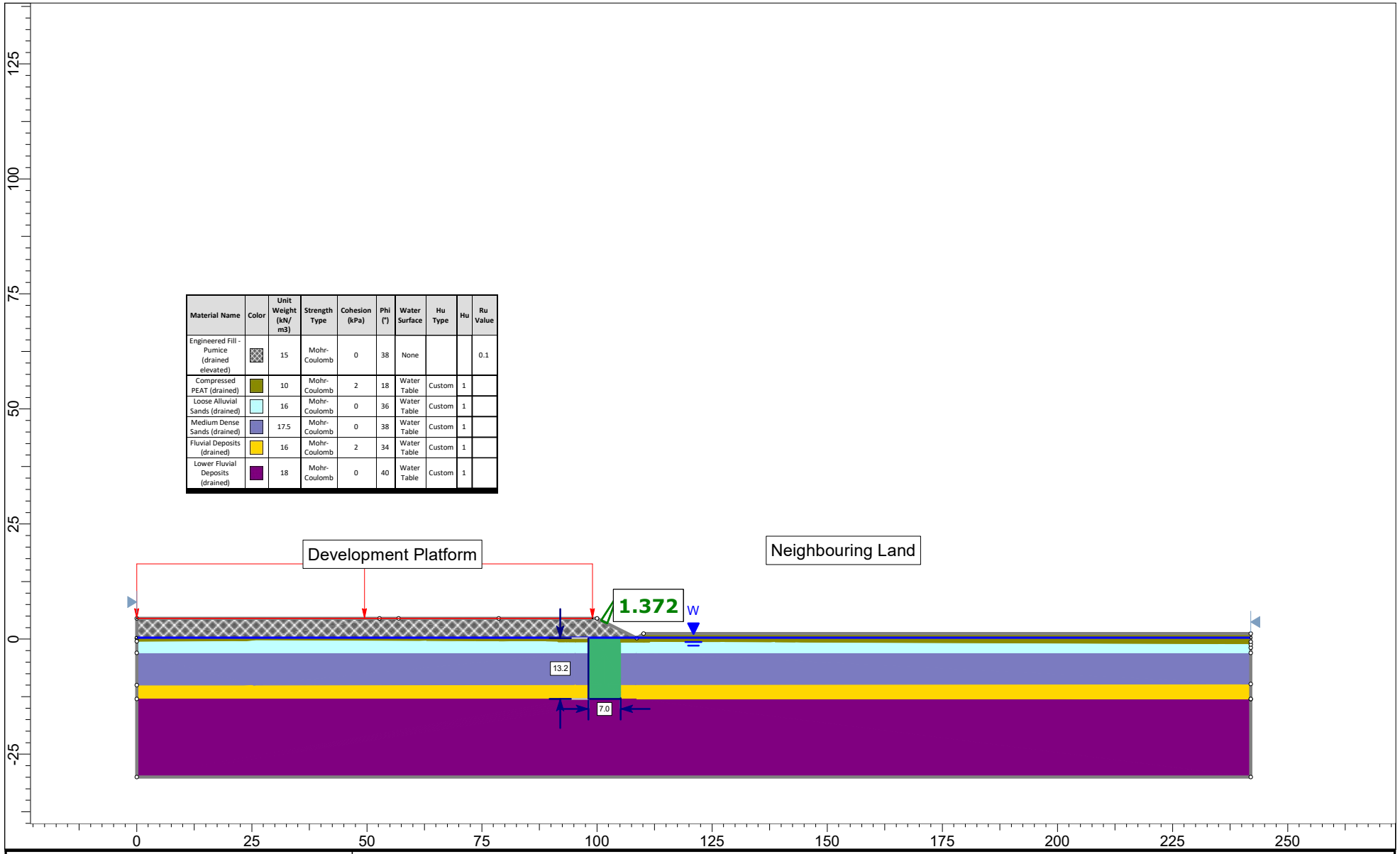
Project	Bell Road Development - Edge Stability		
Analysis Description	Option 1 Deep Ground Improvement, Static - Prevailing GW, Drained		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Edge Stability - Option 1 Deep Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu	Ru Value
Engineered Fill - Pumice (drained elevated)		15	Mohr-Coulomb	0	38	None			0.1
Compressed PEAT (drained)		10	Mohr-Coulomb	2	18	Water Table	Custom	1	
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36	Water Table	Custom	1	
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38	Water Table	Custom	1	
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34	Water Table	Custom	1	
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40	Water Table	Custom	1	



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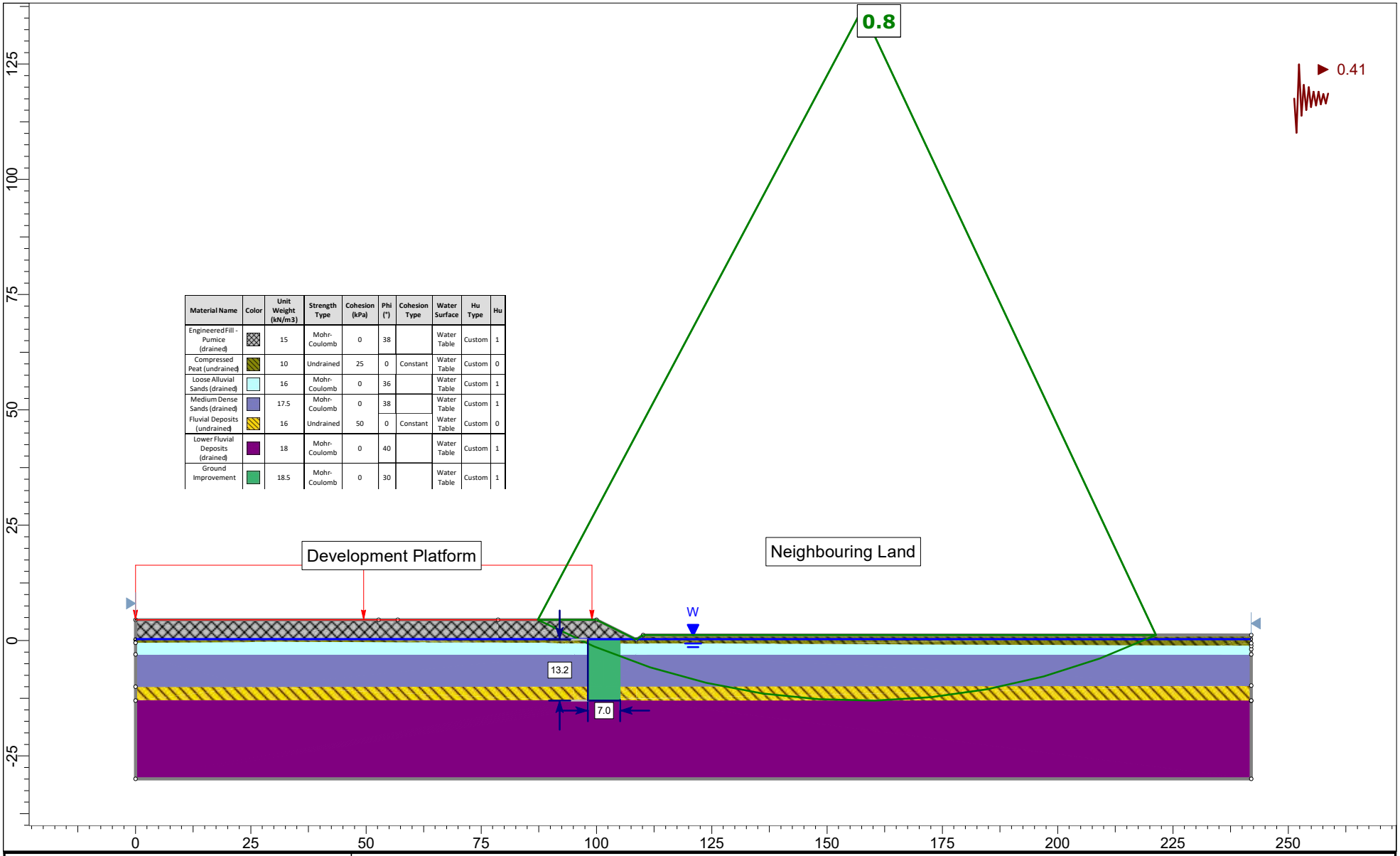
Project	Bell Road Development - Edge Stability
Analysis Description	Option 1 Deep Ground Improvement, Static - Elevated GW, Drained
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Edge Stability - Option 1 Deep Ground Improvement.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (undrained)		16	Undrained	50	0	Constant	Water Table	Custom	0
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1
Ground Improvement		18.5	Mohr-Coulomb	0	30		Water Table	Custom	1

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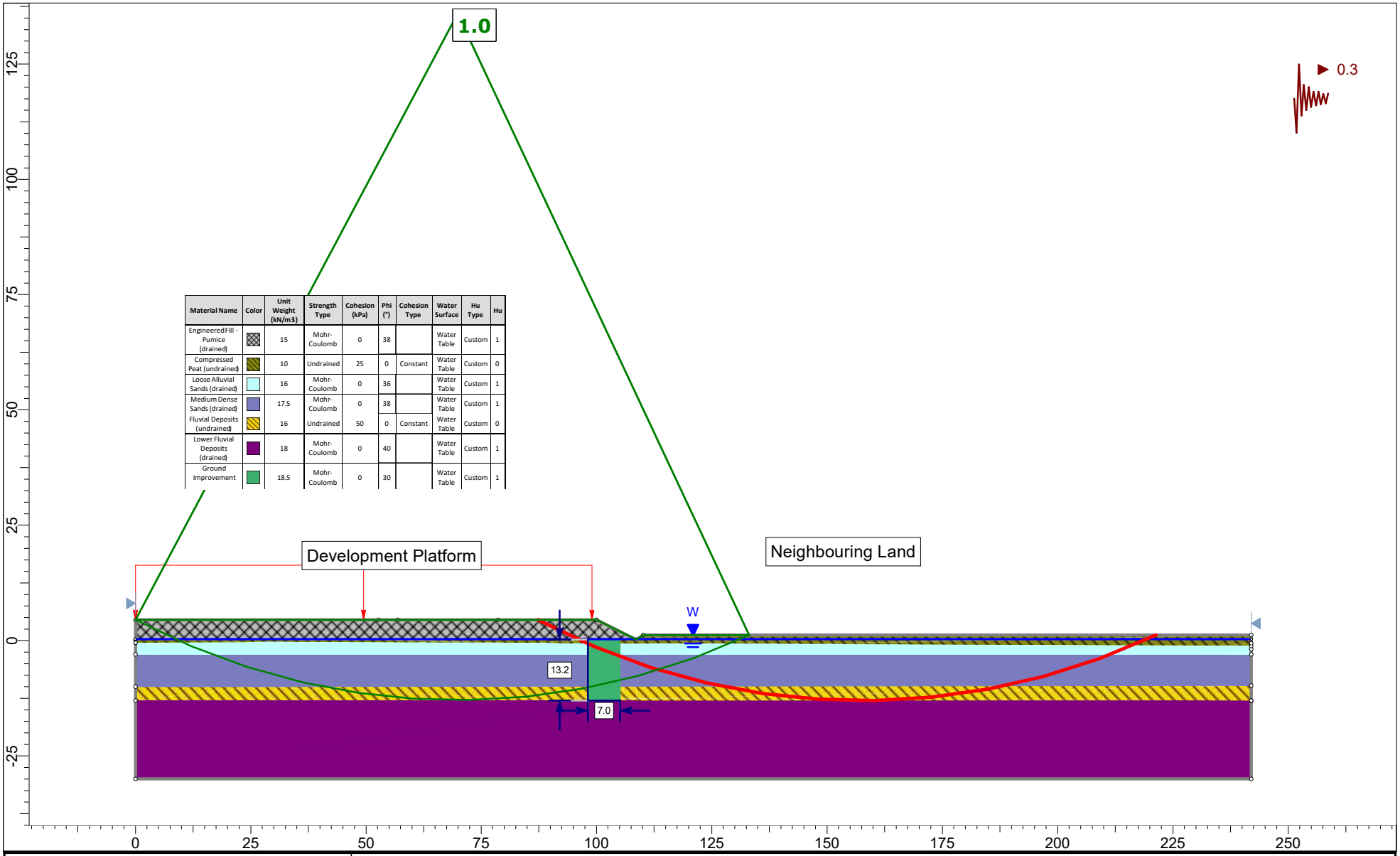
SLIDEINTERPRET 9.040

Project	Bell Road Development - Edge Stability
Analysis Description	Option 1 Deep Ground Improvement, Seismic - ULS, Undrained
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Edge Stability - Option 1 Deep Ground Improvement.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (undrained)		16	Undrained	50	0	Constant	Water Table	Custom	0
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1
Ground Improvement		18.5	Mohr-Coulomb	0	30		Water Table	Custom	1

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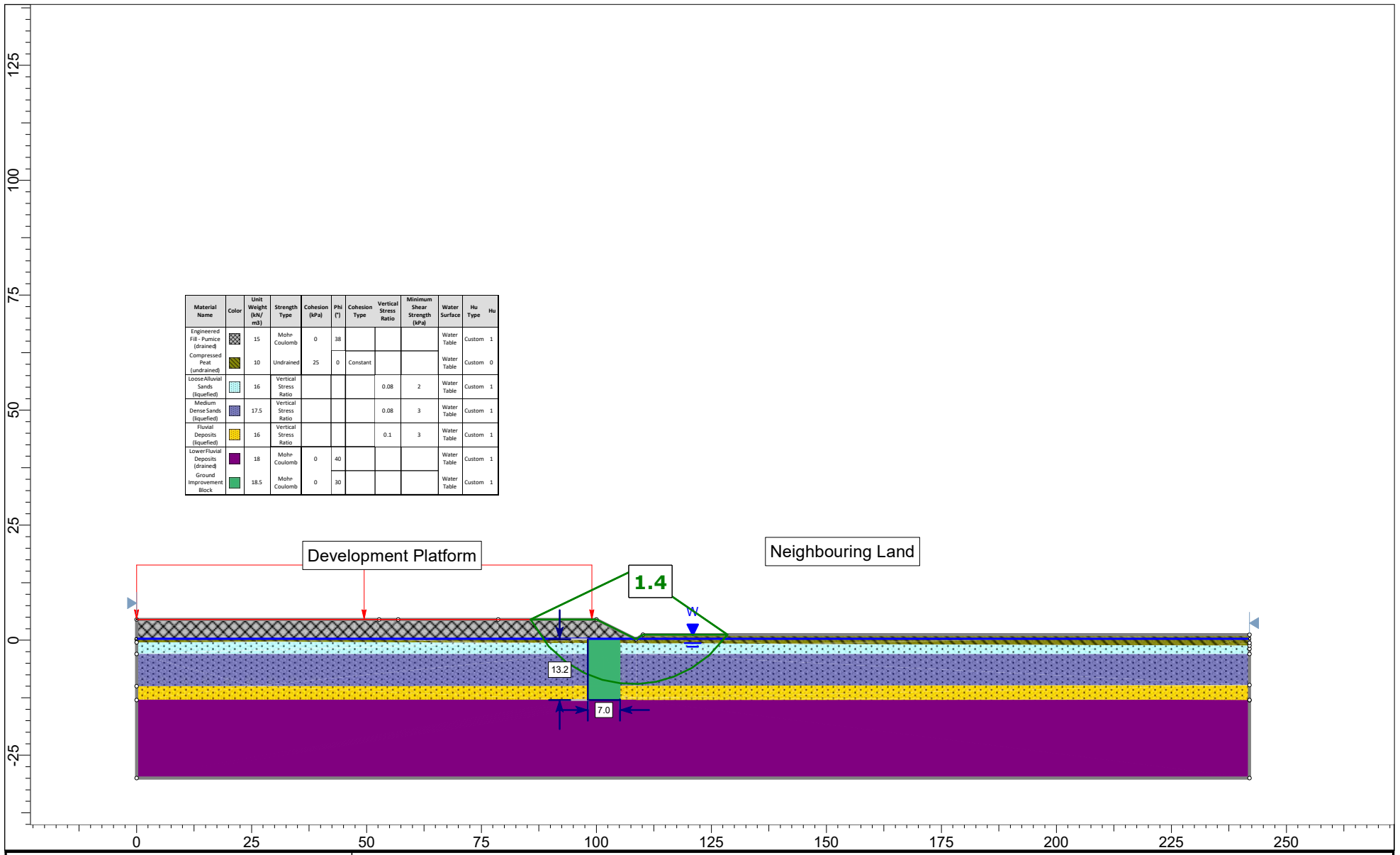
Project	Bell Road Development - Edge Stability
Analysis Description	Option 1 Deep Ground Improvement, Seismic - Yield Acceleration, Undrained
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Edge Stability - Option 1 Deep Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Loose Alluvial Sands (liquefied)		16	Vertical Stress Ratio				0.08	2	Water Table	Custom	1
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	3	Water Table	Custom	1
Fluvial Deposits (liquefied)		16	Vertical Stress Ratio				0.1	3	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40				Water Table	Custom	1
Ground Improvement Block		18.5	Mohr-Coulomb	0	30				Water Table	Custom	1



ENGEO	*Project*	Bell Road Development - Edge Stability	
	Analysis Description	Option 1 Deep Ground Improvement, Post Earthquake Liquefied Conditions	
	Drawn By	GMS	*Client* ENGEO
	Date	10/2025	*File Name* Edge Stability - Option 1 Deep Ground Improvement.slmd

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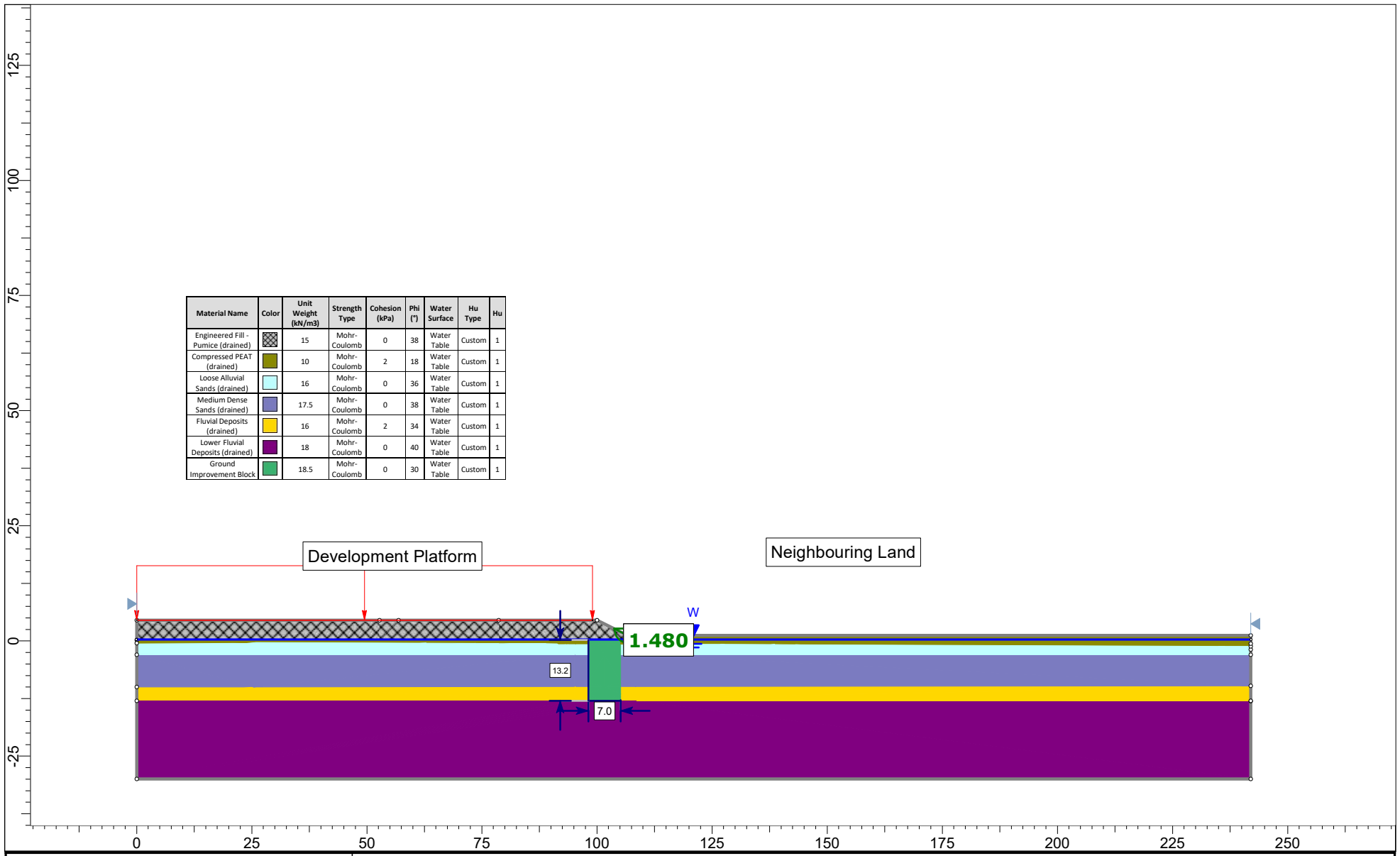
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38	Water Table	Custom	1
Compressed PEAT (drained)		10	Mohr-Coulomb	2	18	Water Table	Custom	1
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36	Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38	Water Table	Custom	1
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40	Water Table	Custom	1
Ground Improvement Block		18.5	Mohr-Coulomb	0	30	Water Table	Custom	1



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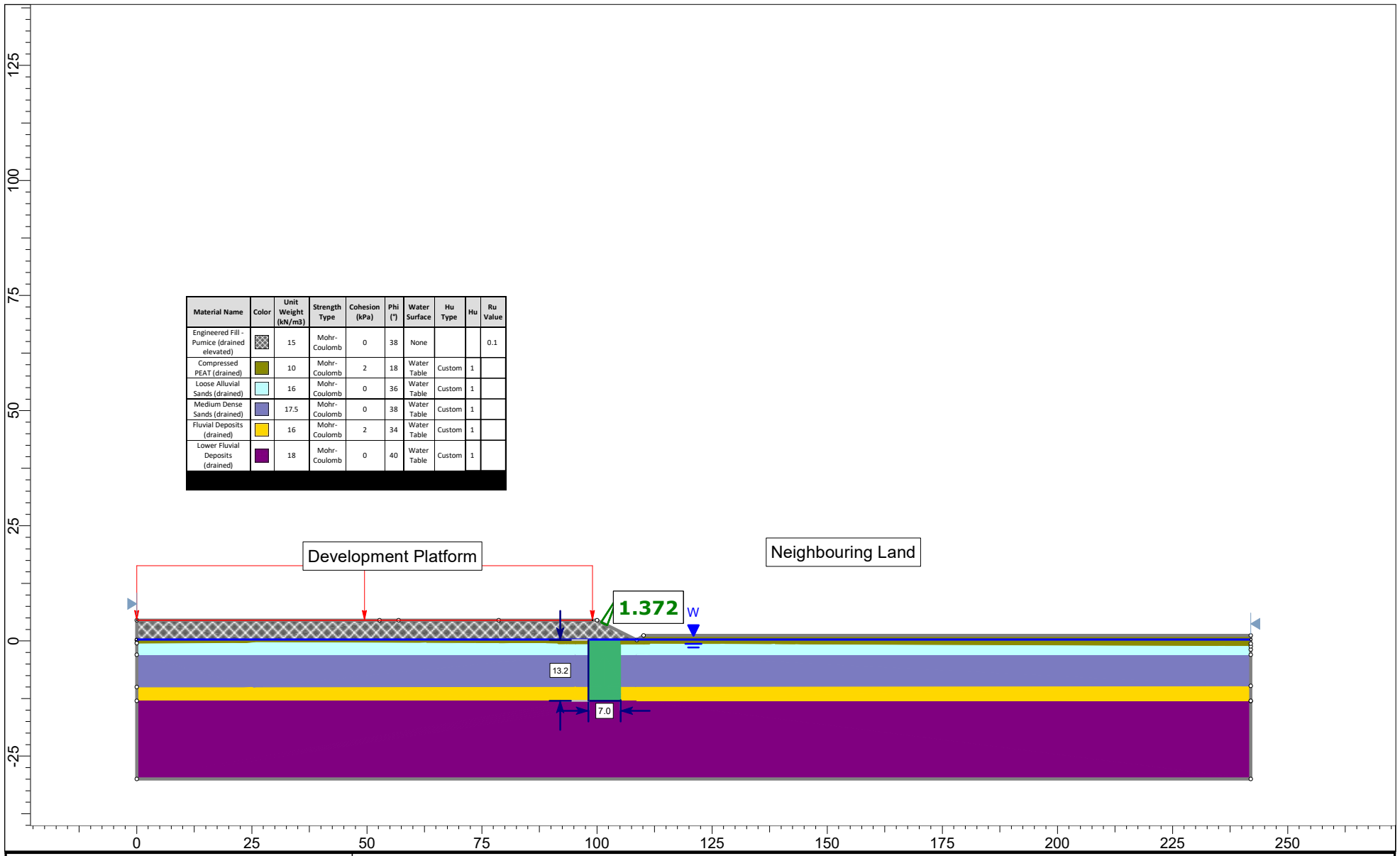
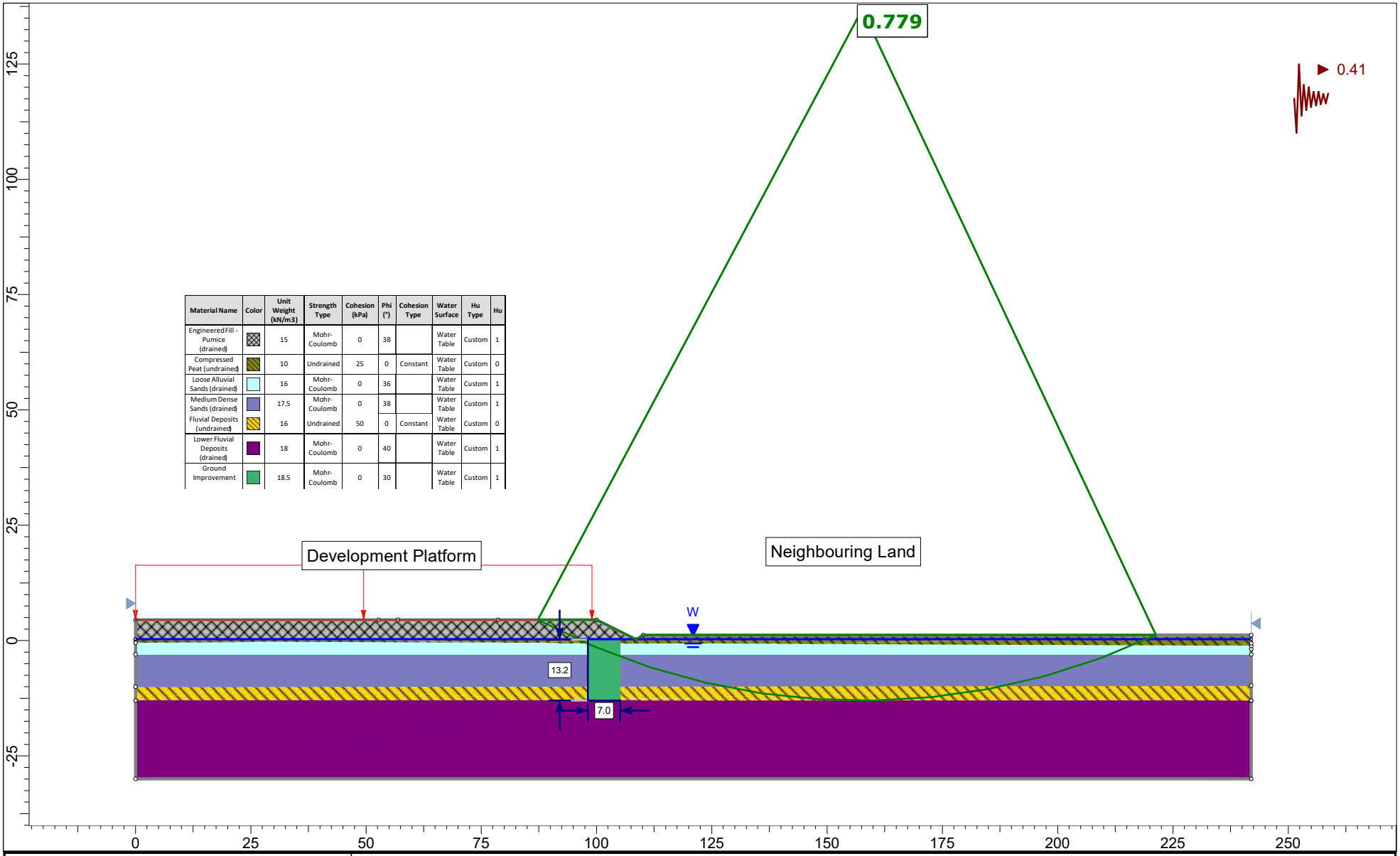
Project	Bell Road Development - Edge Stability		
Analysis Description	Option 1 Deep Ground Improvement, Static - Prevailing GW, Drained		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Edge Stability - Option 1 Deep Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu	Ru Value
Engineered Fill - Pumice (drained elevated)		15	Mohr-Coulomb	0	38	None			0.1
Compressed PEAT (drained)		10	Mohr-Coulomb	2	18	Water Table	Custom	1	
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36	Water Table	Custom	1	
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38	Water Table	Custom	1	
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34	Water Table	Custom	1	
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40	Water Table	Custom	1	



ENGEO	*Project* Bell Road Development - Edge Stability	
	Analysis Description Option 1 Deep Ground Improvement, Static - Elevated GW, Drained	
	Drawn By GMS	*Client* ENGEO
SLIDEINTERPRET 9.040	*Date* 10/2025	*File Name* Edge Stability - Option 1 Deep Ground Improvement.slmd

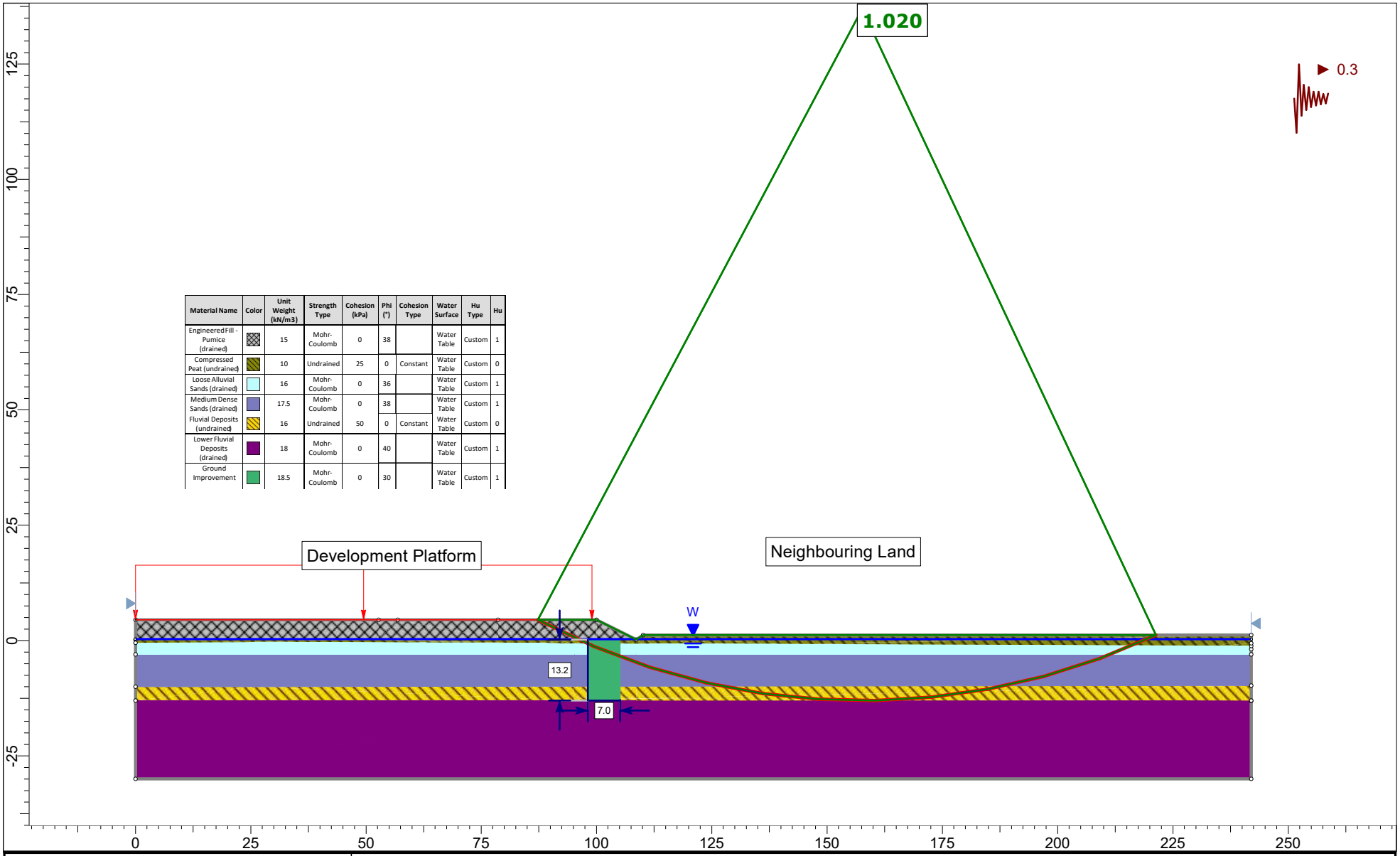


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (undrained)		16	Undrained	50	0	Constant	Water Table	Custom	0
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1
Ground Improvement		18.5	Mohr-Coulomb	0	30		Water Table	Custom	1

ENGEO

SLIDEINTERPRET 9.040

Project	Bell Road Development - Edge Stability
Analysis Description	Option 1 Deep Ground Improvement, Seismic - ULS, Undrained
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Edge Stability - Option 1 Deep Ground Improvement.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (undrained)		16	Undrained	50	0	Constant	Water Table	Custom	0
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1
Ground Improvement		18.5	Mohr-Coulomb	0	30		Water Table	Custom	1

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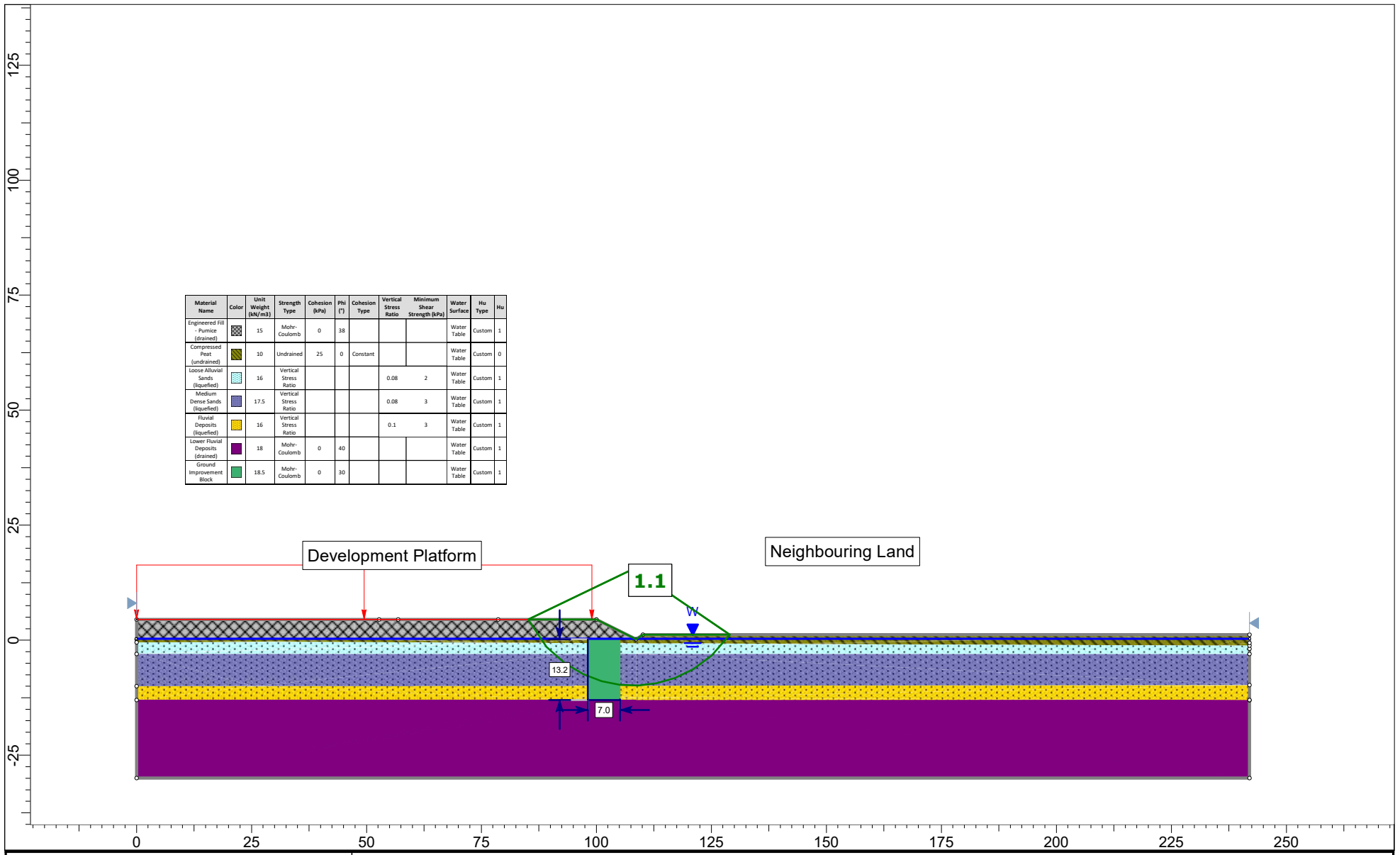
Project	Bell Road Development - Edge Stability		
Analysis Description	Option 1 Deep Ground Improvement, Seismic - Yield Acceleration, Undrained		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Edge Stability - Option 1 Deep Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Loose Alluvial Sands (liquefied)		16	Vertical Stress Ratio				0.08	2	Water Table	Custom	1
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	3	Water Table	Custom	1
Fluvial Deposits (liquefied)		16	Vertical Stress Ratio				0.1	3	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40				Water Table	Custom	1
Ground Improvement Block		18.5	Mohr-Coulomb	0	30				Water Table	Custom	1



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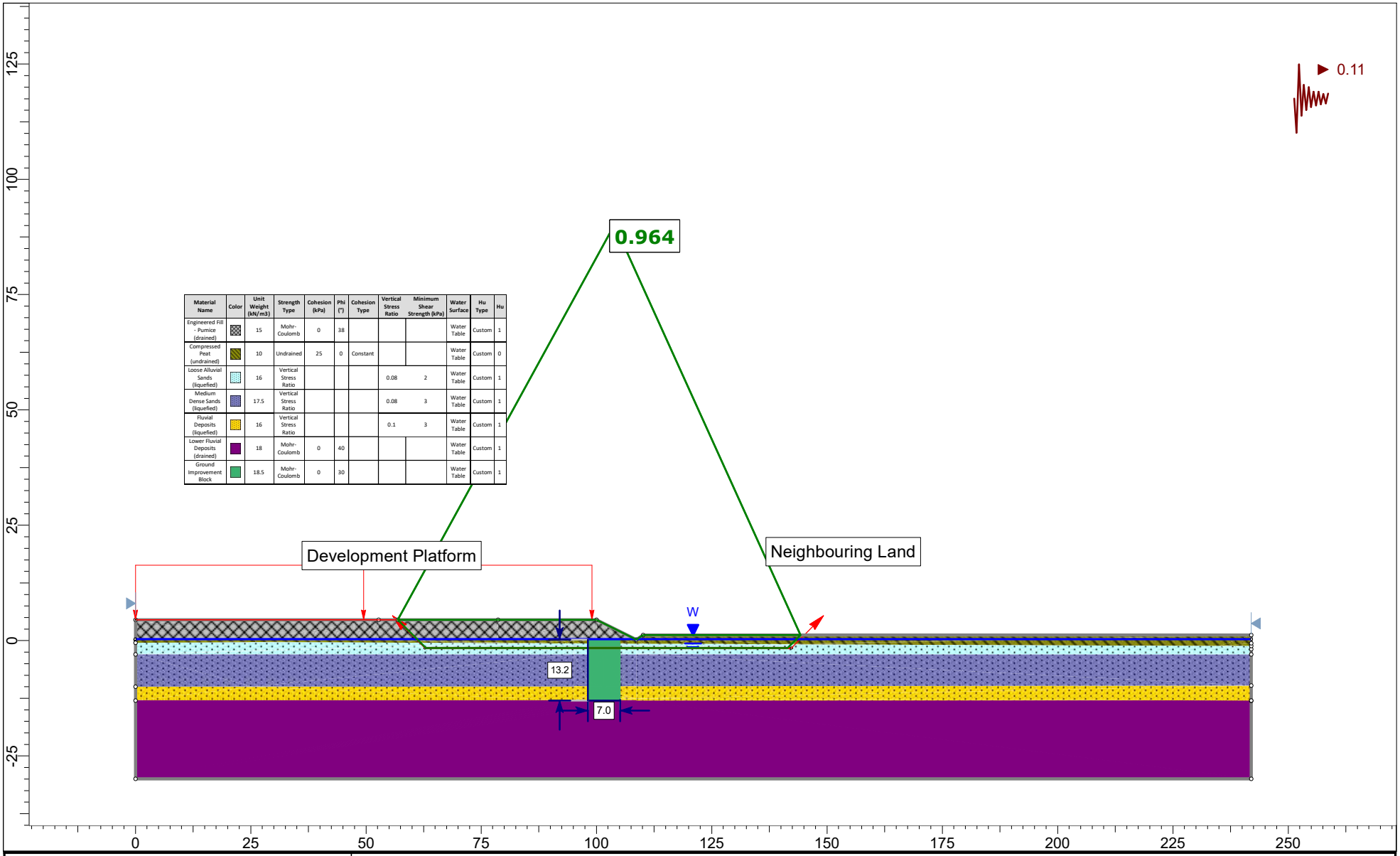
SLIDEINTERPRET 9.040

Project	Bell Road Development - Edge Stability		
Analysis Description	Option 1 Deep Ground Improvement, Post Earthquake Liquefied Conditions		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Edge Stability - Option 1 Deep Ground Improvement.slmd



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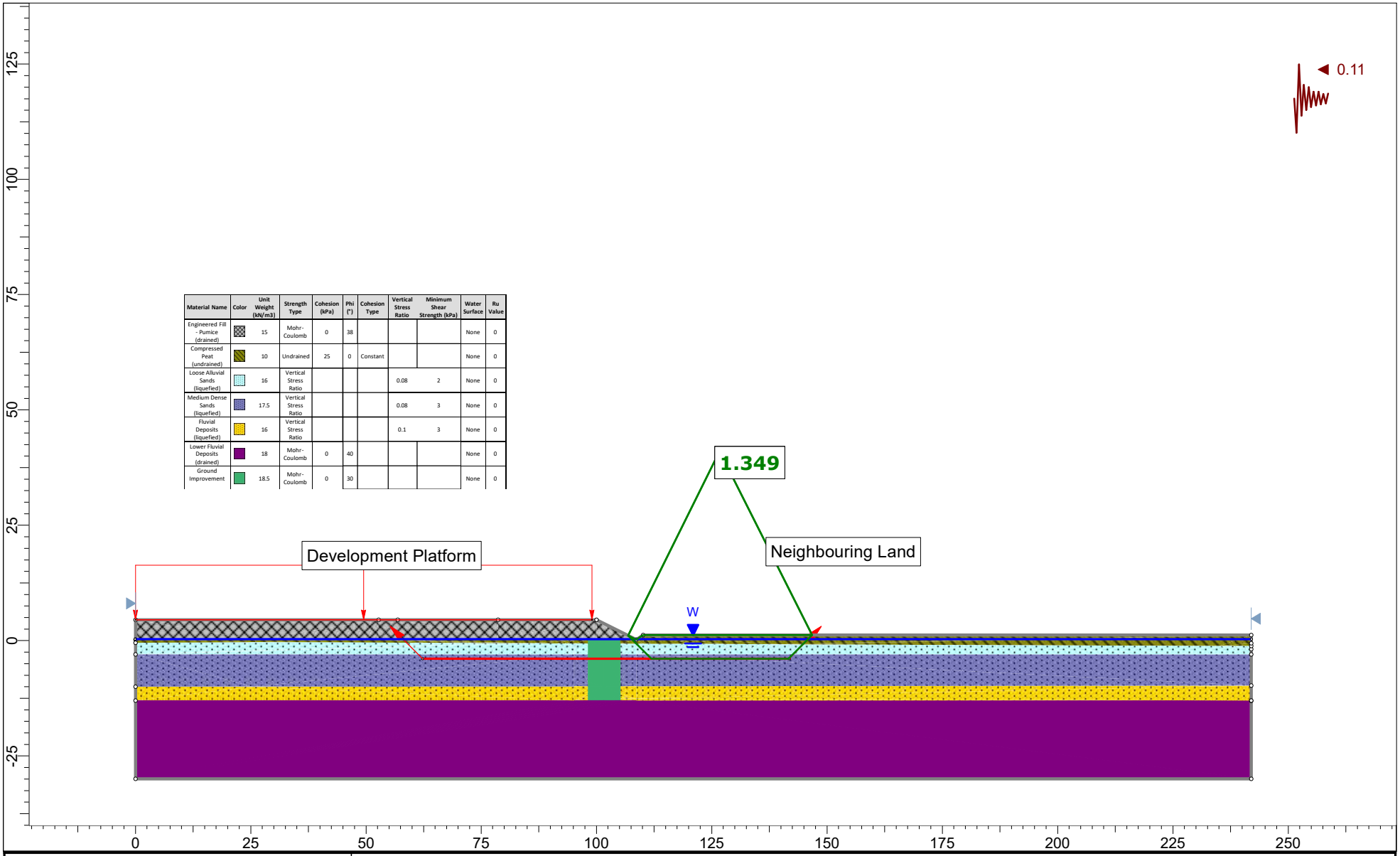
SLIDEINTERPRET 9.040

Project	Bell Road Development - Edge Stability
Analysis Description	Option 1 Deep Ground Improvement, Post Earthquake Liquefied Conditions (2m deep lateral movement)
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Edge Stability - Option 1 Deep Ground Improvement.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Ru Value
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				None	0
Compressed Peat (undrained)		10	Undrained	25	0	Constant			None	0
Loose Alluvial Sands (liquefied)		16	Vertical Stress Ratio				0.08	2	None	0
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	3	None	0
Fluvial Deposits (liquefied)		16	Vertical Stress Ratio				0.1	3	None	0
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40				None	0
Ground Improvement		18.5	Mohr-Coulomb	0	30				None	0

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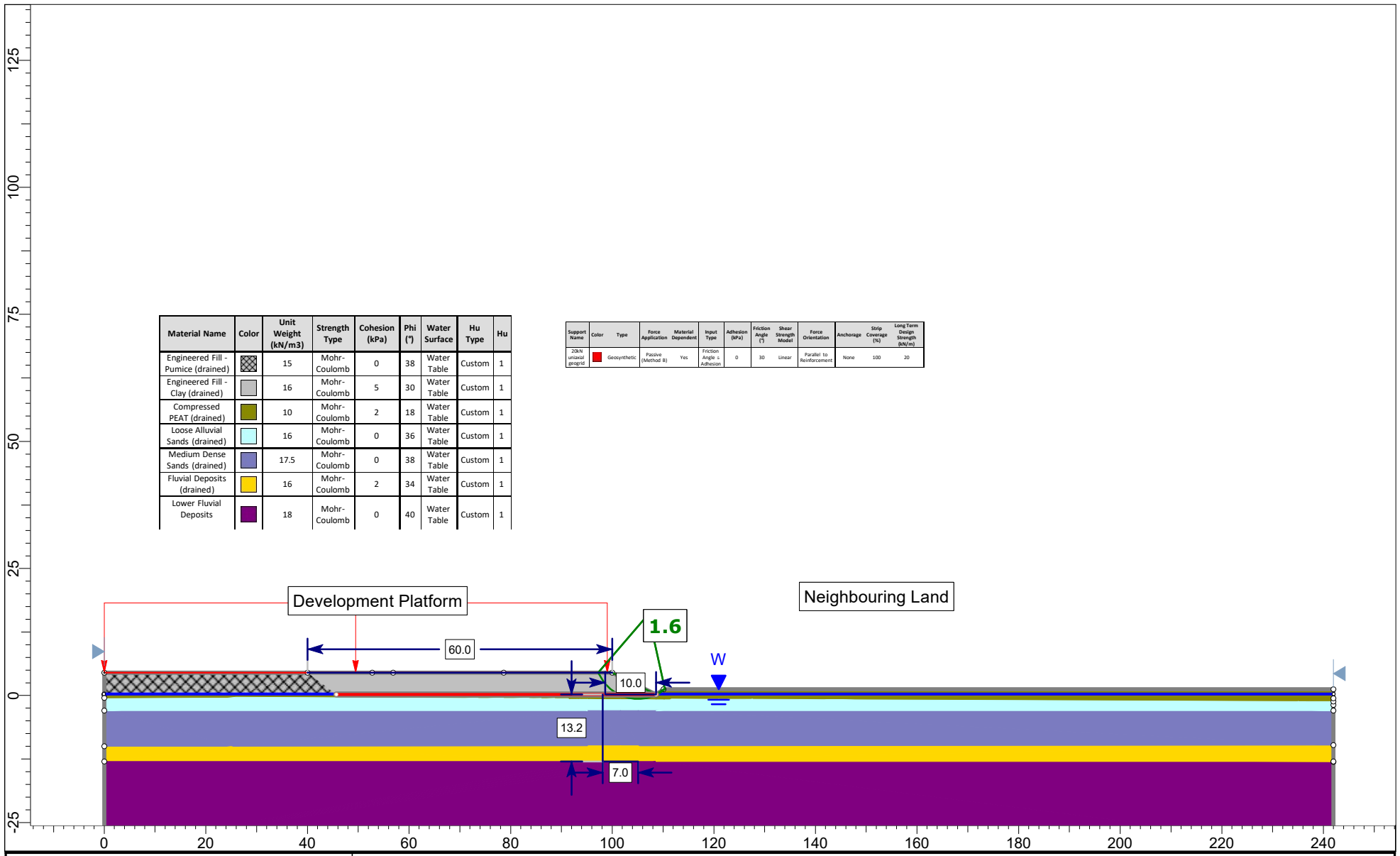
SLIDEINTERPRET 9.040

Project	Slide2 - An Interactive Slope Stability Program
Analysis Description	, Post Earthquake Liquefied Conditions (4m deep lateral movement)
Drawn By	*Client*
Date 19/02/2026, 6:00:08 pm	*File Name* Edge Stability - Option 1 Deep Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38	Water Table	Custom	1
Engineered Fill - Clay (drained)		16	Mohr-Coulomb	5	30	Water Table	Custom	1
Compressed PEAT (drained)		10	Mohr-Coulomb	2	18	Water Table	Custom	1
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36	Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38	Water Table	Custom	1
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34	Water Table	Custom	1
Lower Fluvial Deposits		18	Mohr-Coulomb	0	40	Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
20kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	30	Linear	Parallel to Reinforcement	None	100	20



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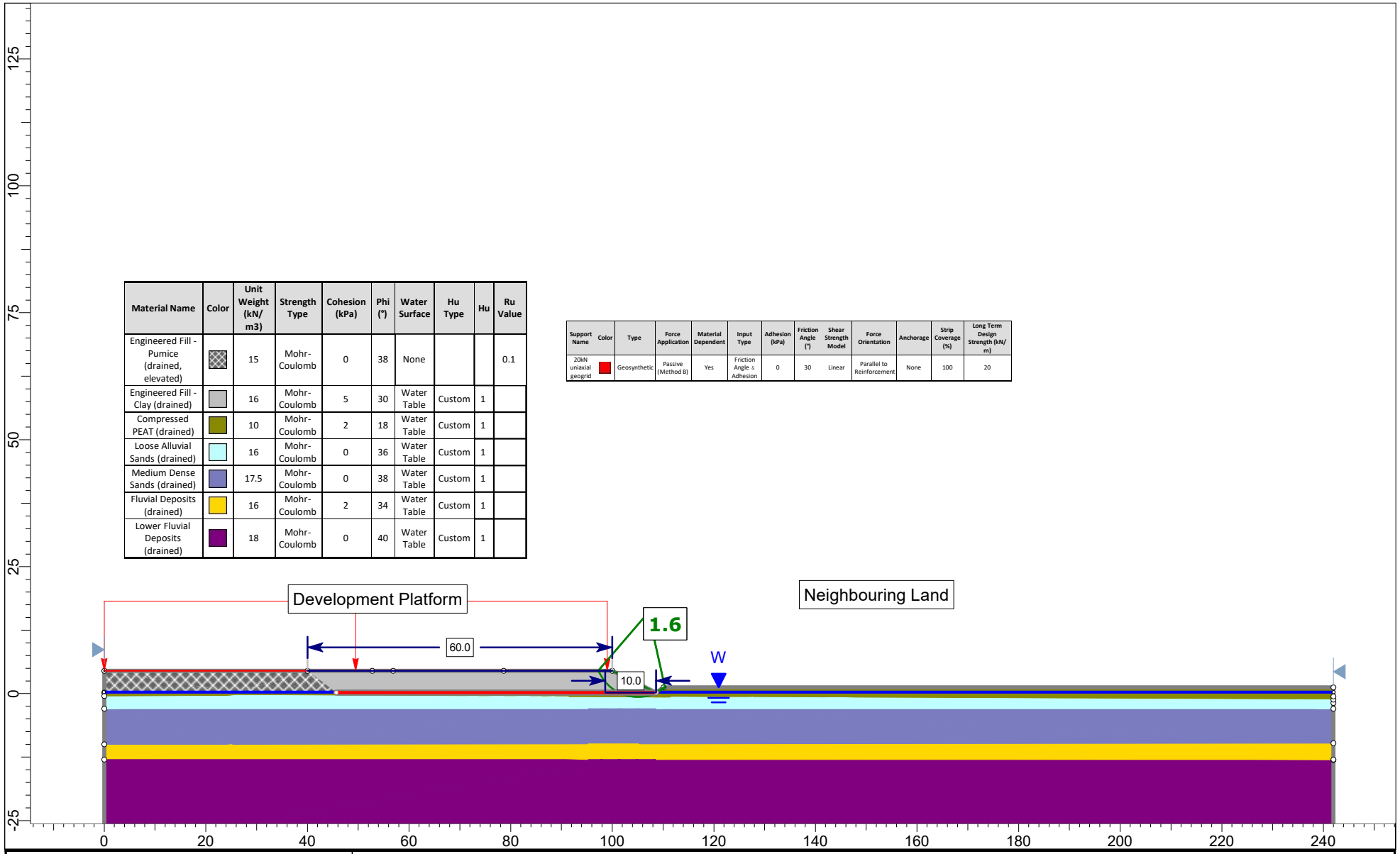
SLIDEINTERPRET 9.040

Project	Bell Road Development - Edge Stability
Analysis Description	Option 2 Cohesive Fill Embankment, Static - Prevailing GW, Drained
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Edge Stability - Option 2 Cohesive Fill Embankment.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu	Ru Value
Engineered Fill - Pumice (drained, elevated)		15	Mohr-Coulomb	0	38	None			0.1
Engineered Fill - Clay (drained)		16	Mohr-Coulomb	5	30	Water Table	Custom	1	
Compressed PEAT (drained)		10	Mohr-Coulomb	2	18	Water Table	Custom	1	
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36	Water Table	Custom	1	
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38	Water Table	Custom	1	
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34	Water Table	Custom	1	
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40	Water Table	Custom	1	

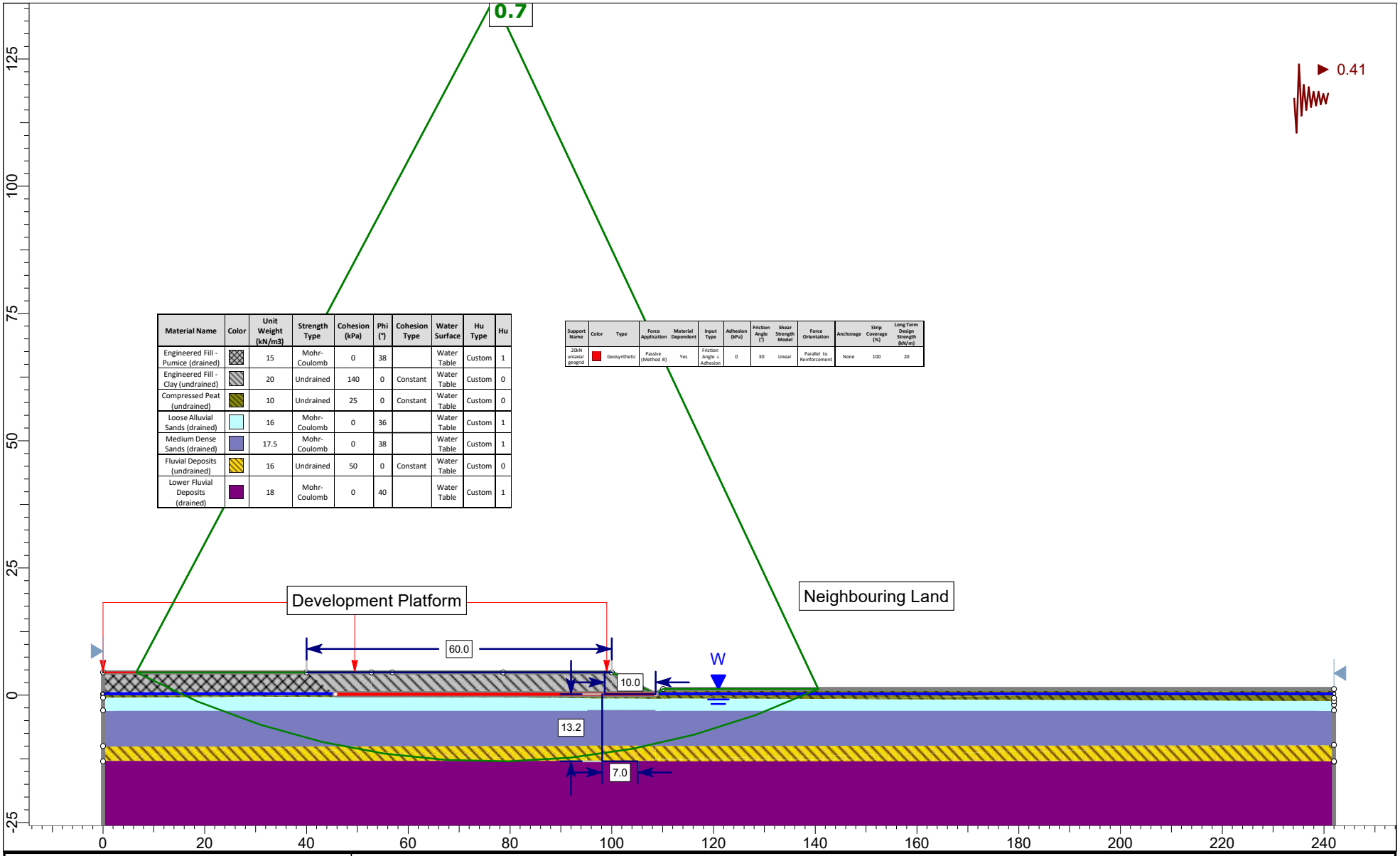
Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
20kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	30	Linear	Parallel to Reinforcement	None	100	20



ENGEO

SLIDEINTERPRET 9.040

Project	Bell Road Development - Edge Stability	
Analysis Description	Option 2 Cohesive Fill Embankment, Static - Elevated GW, Drained	
Drawn By	GMS	*Client* ENGEO
Date	10/2025	*File Name* Edge Stability - Option 2 Cohesive Fill Embankment.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - Clay (undrained)		20	Undrained	140	0	Constant	Water Table	Custom	0
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (undrained)		16	Undrained	50	0	Constant	Water Table	Custom	0
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
20kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	30	Linear	Parallel to Reinforcement	None	100	20

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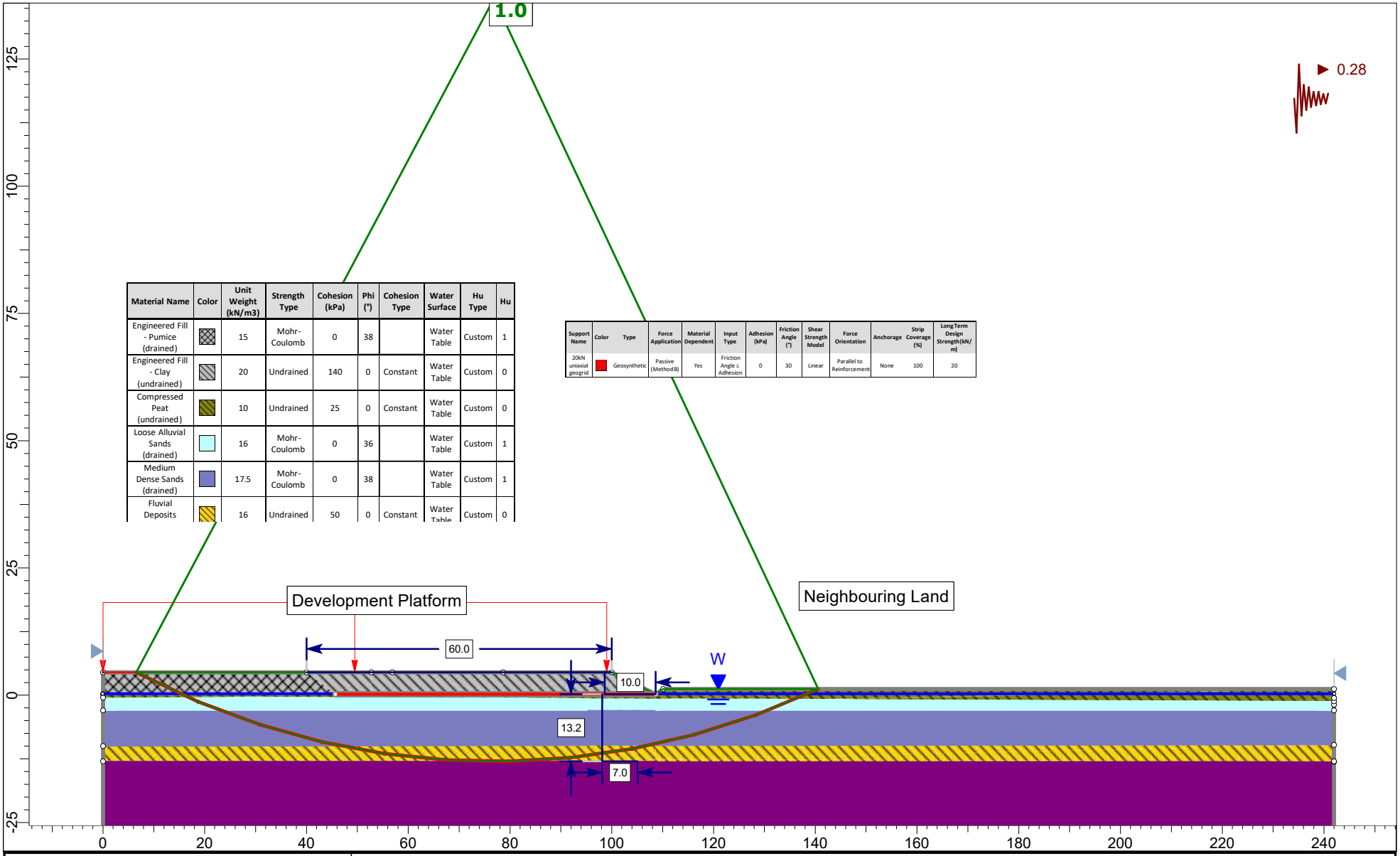
SLIDEINTERPRET 9.040

Project	Bell Road Development - Edge Stability		
Analysis Description	Option 2 Cohesive Fill Embankment, Seismic - ULS, Undrained		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Edge Stability - Option 2 Cohesive Fill Embankment.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - Clay (undrained)		20	Undrained	140	0	Constant	Water Table	Custom	0
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits		16	Undrained	50	0	Constant	Water Table	Custom	0

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	LongTerm Design Strength(kN/m)
20kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	30	Linear	Parallel to Reinforcement	None	100	20

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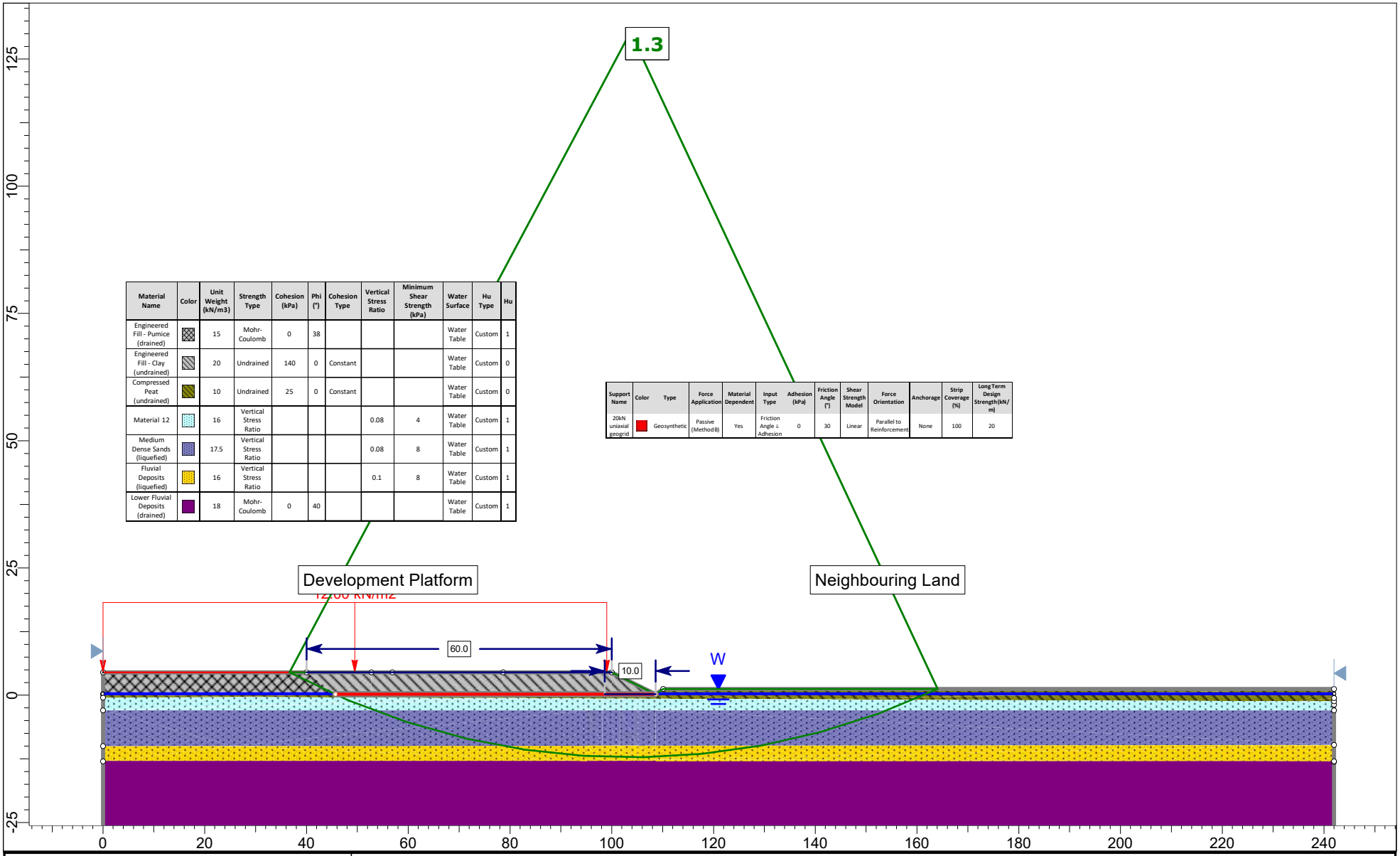
SLIDEINTERPRET 9.040

Project	Bell Road Development - Edge Stability		
Analysis Description	Option 2 Cohesive Fill Embankment, Seismic - Yield Acceleration, Undrained		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Edge Stability - Option 2 Cohesive Fill Embankment.slmd

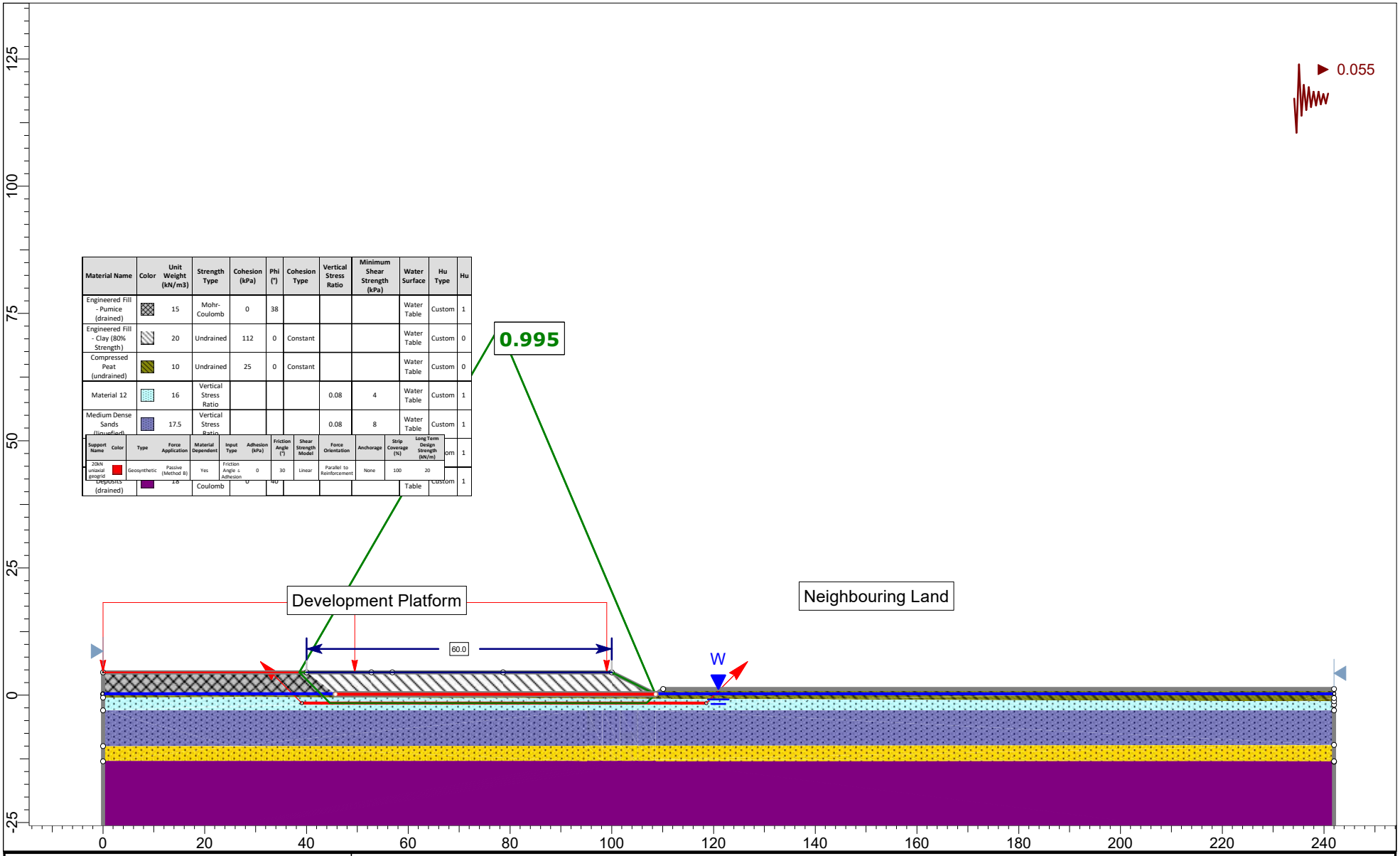


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Engineered Fill - Clay (undrained)		20	Undrained	140	0	Constant			Water Table	Custom	0
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Material 12		16	Vertical Stress Ratio				0.08	4	Water Table	Custom	1
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	8	Water Table	Custom	1
Fluvial Deposits (liquefied)		16	Vertical Stress Ratio				0.1	8	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40				Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
20kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	30	Linear	Parallel to Reinforcement	None	100	20

ENGEO	*Project*	Bell Road Development - Edge Stability
	Analysis Description	Option 2 Cohesive Fill Embankment, Post Earthquake Liquefied Conditions
	Drawn By GMS	*Client* ENGEO
	Date 10/2025	*File Name* Edge Stability - Option 2 Cohesive Fill Embankment.slmd

SLIDEINTERPRET 9.040

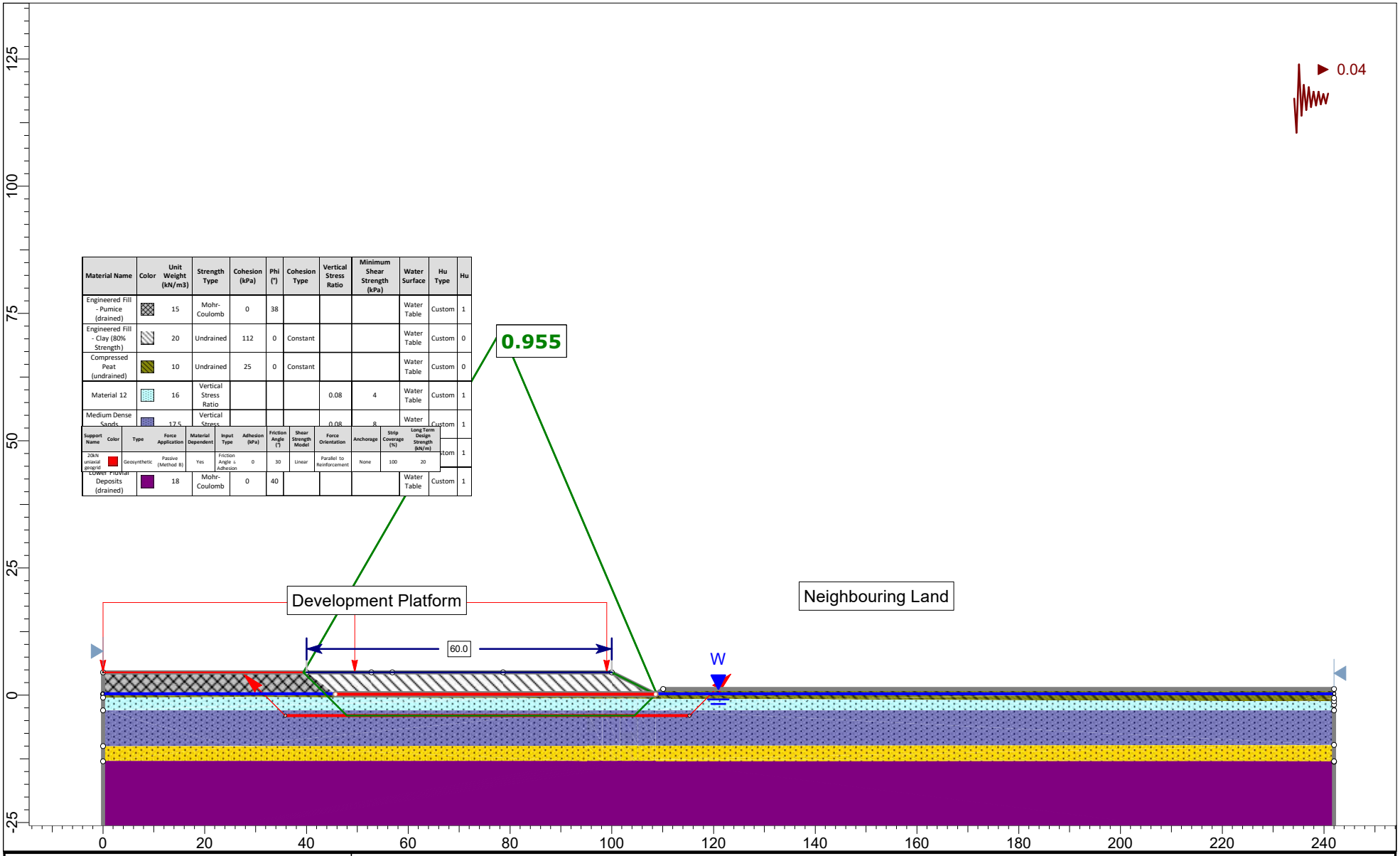


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Engineered Fill - Clay (80% Strength)		20	Undrained	112	0	Constant			Water Table	Custom	0
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Material 12		16	Vertical Stress Ratio				0.08	4	Water Table	Custom	1
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	8	Water Table	Custom	1
Deposits (drained)		18	Coulomb	0	40				Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
20kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	30	Linear	Parallel to Reinforcement	None	100	20

ENGEO	*Project*	Bell Road Development - Edge Stability	
	Analysis Description	Option 2 Cohesive Fill Embankment, Post Earthquake Liquefied Conditions (2m deep lateral movement)	
	Drawn By	GMS	*Client* ENGEO
	Date	10/2025	*File Name* Edge Stability - Option 2 Cohesive Fill Embankment.slmd

SLIDEINTERPRET 9.040



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Engineered Fill - Clay (80% Strength)		20	Undrained	112	0	Constant			Water Table	Custom	0
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Material 12		16	Vertical Stress Ratio				0.08	4	Water Table	Custom	1
Medium Dense Sands		17.5	Vertical Stress				0.08	8	Water	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40				Water Table	Custom	1

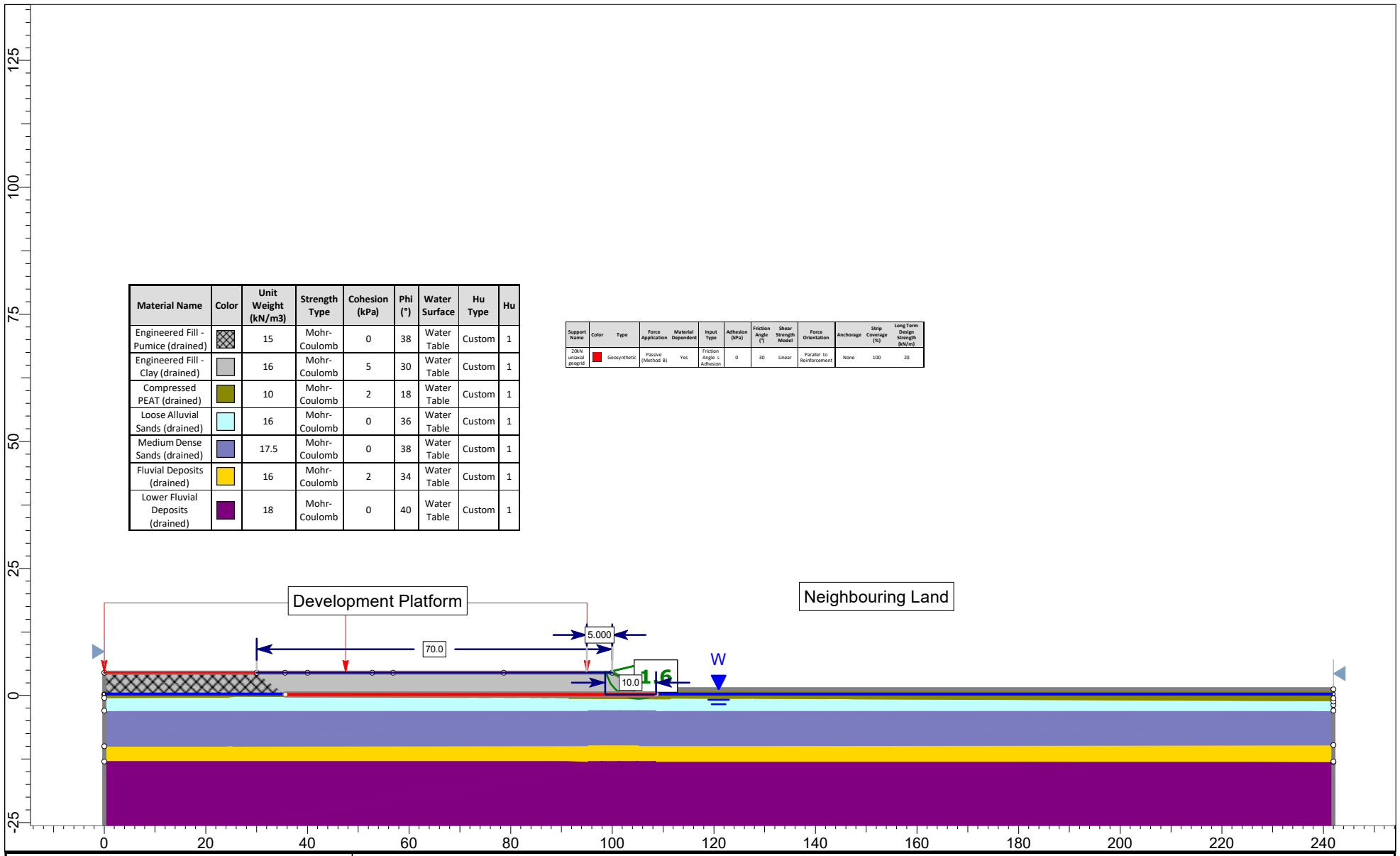
Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
20kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	30	Linear	Parallel to Reinforcement	None	100	20

ENGEO	*Project*	Bell Road Development - Edge Stability	
	Analysis Description	Option 2 Cohesive Fill Embankment, Post Earthquake Liquefied Conditions (4m deep lateral movement)	
	Drawn By	GMS	*Client* ENGEO
	Date	10/2025	*File Name* Edge Stability - Option 2 Cohesive Fill Embankment.slmd

SLIDEINTERPRET 9.040

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38	Water Table	Custom	1
Engineered Fill - Clay (drained)		16	Mohr-Coulomb	5	30	Water Table	Custom	1
Compressed PEAT (drained)		10	Mohr-Coulomb	2	18	Water Table	Custom	1
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36	Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38	Water Table	Custom	1
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40	Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
20kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	30	Linear	Parallel to Reinforcement	None	100	20



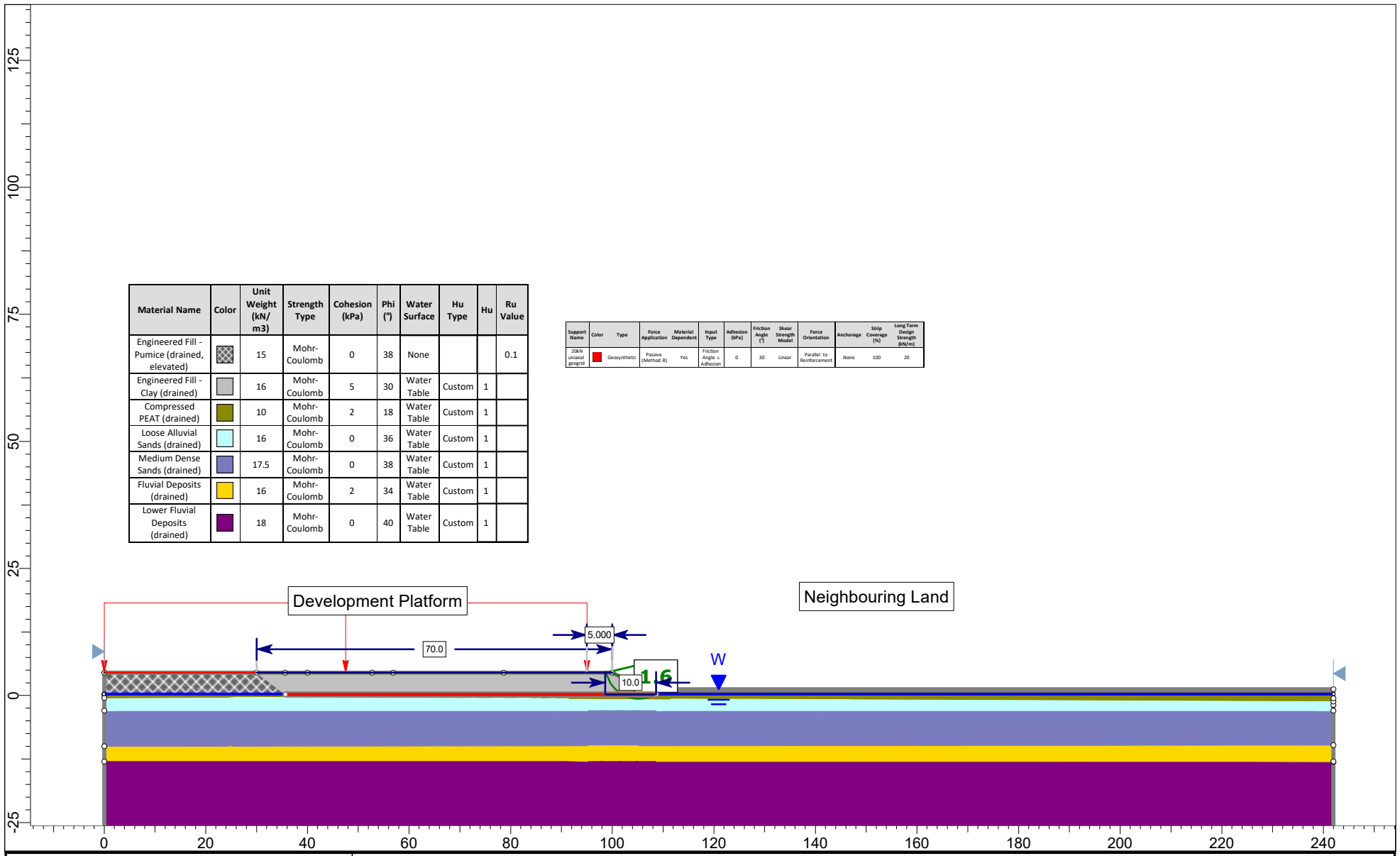
ENGEO

SLIDEINTERPRET 9.040

Project	Bell Road Development - Edge Stability
Analysis Description	Option 2 Cohesive Fill Embankment, Static - Prevailing GW, Drained
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Edge Stability - Option 2 Cohesive Fill Embankment.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu	Ru Value
Engineered Fill - Pumice (drained, elevated)		15	Mohr-Coulomb	0	38	None			0.1
Engineered Fill - Clay (drained)		16	Mohr-Coulomb	5	30	Water Table	Custom	1	
Compressed PEAT (drained)		10	Mohr-Coulomb	2	18	Water Table	Custom	1	
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36	Water Table	Custom	1	
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38	Water Table	Custom	1	
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34	Water Table	Custom	1	
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40	Water Table	Custom	1	

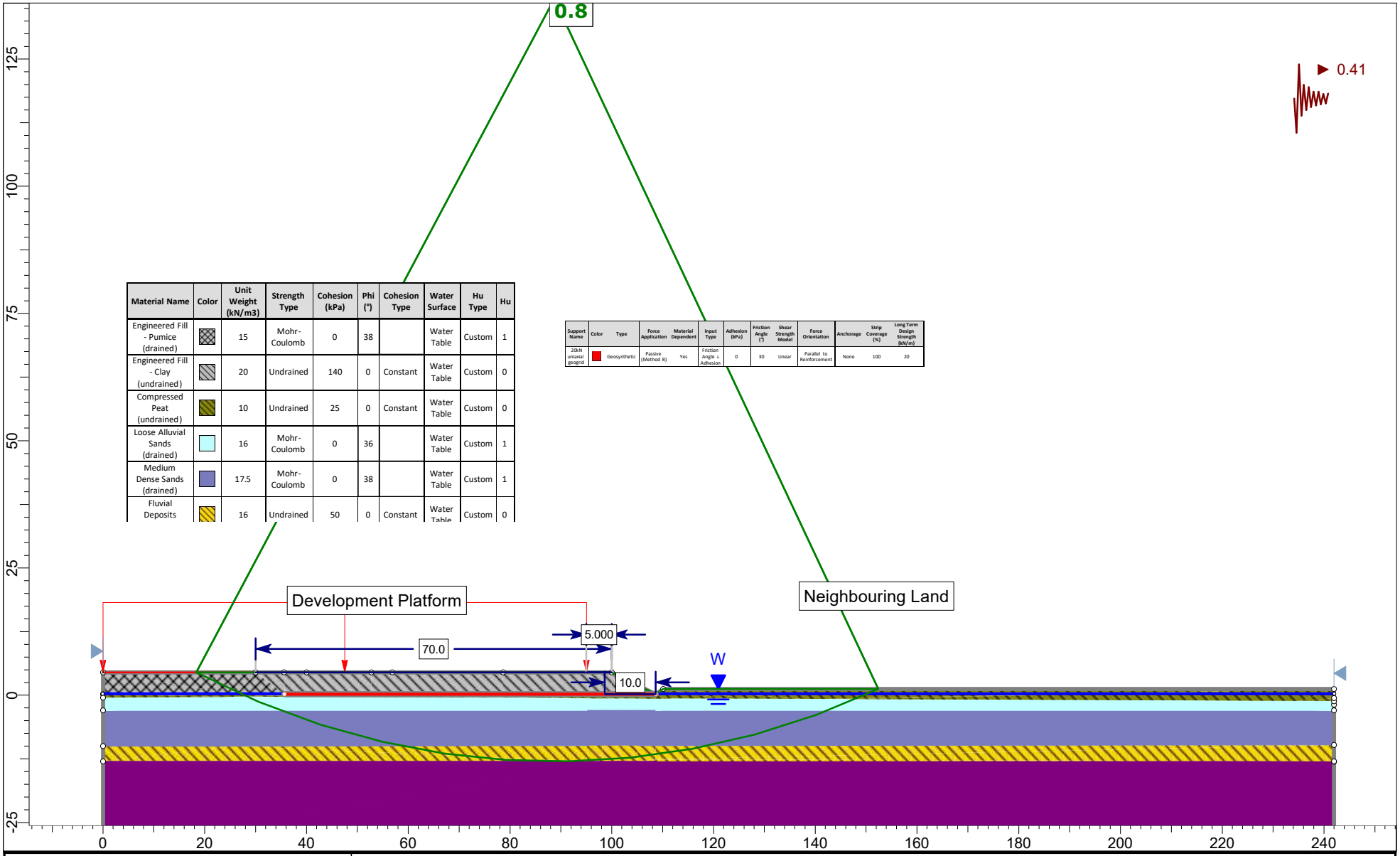
Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
20kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	30	Linear	Parallel to Reinforcement	None	100	20



ENGEO

SLIDEINTERPRET 9.040

Project	Bell Road Development - Edge Stability
Analysis Description	Option 2 Cohesive Fill Embankment, Static - Elevated GW, Drained
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Edge Stability - Option 2 Cohesive Fill Embankment.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - Clay (undrained)		20	Undrained	140	0	Constant	Water Table	Custom	0
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits		16	Undrained	50	0	Constant	Water Table	Custom	0

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
20kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ± Adhesion	0	30	Linear	Parallel to Reinforcement	None	100	20

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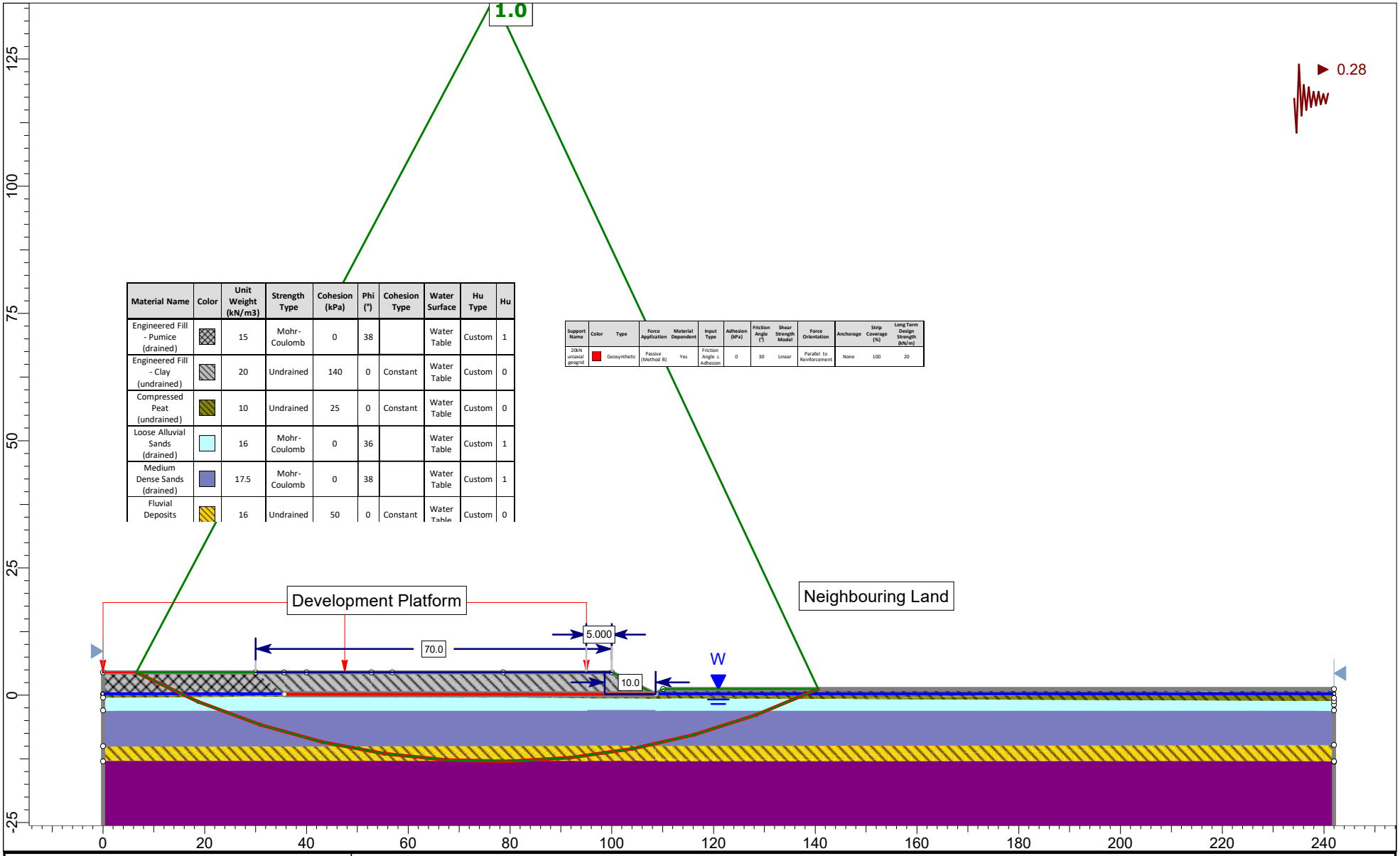
SLIDEINTERPRET 9.040

Project	Bell Road Development - Edge Stability		
Analysis Description	Option 2 Cohesive Fill Embankment, Seismic - ULS, Undrained		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Edge Stability - Option 2 Cohesive Fill Embankment.slmd

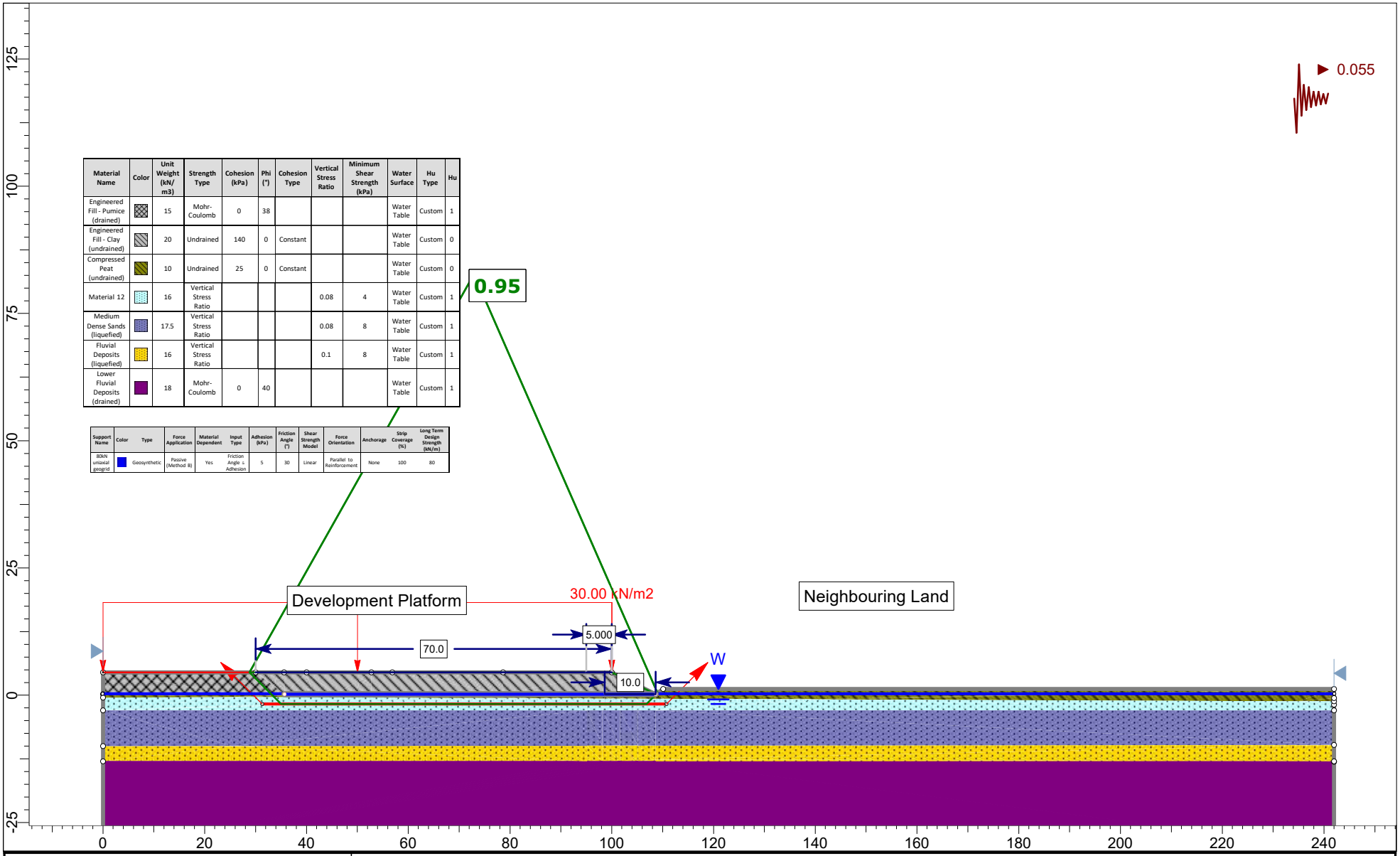


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - Clay (undrained)		20	Undrained	140	0	Constant	Water Table	Custom	0
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits		16	Undrained	50	0	Constant	Water Table	Custom	0

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
20kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	30	Linear	Parallel to Reinforcement	None	100	20

ENGEO	*Project*	Bell Road Development - Edge Stability	
	Analysis Description	Option 2 Cohesive Fill Embankment, Seismic - Yield Acceleration, Undrained	
	Drawn By	GMS	*Client* ENGEO
	Date	10/2025	*File Name* Edge Stability - Option 2 Cohesive Fill Embankment.slmd

SLIDEINTERPRET 9.040

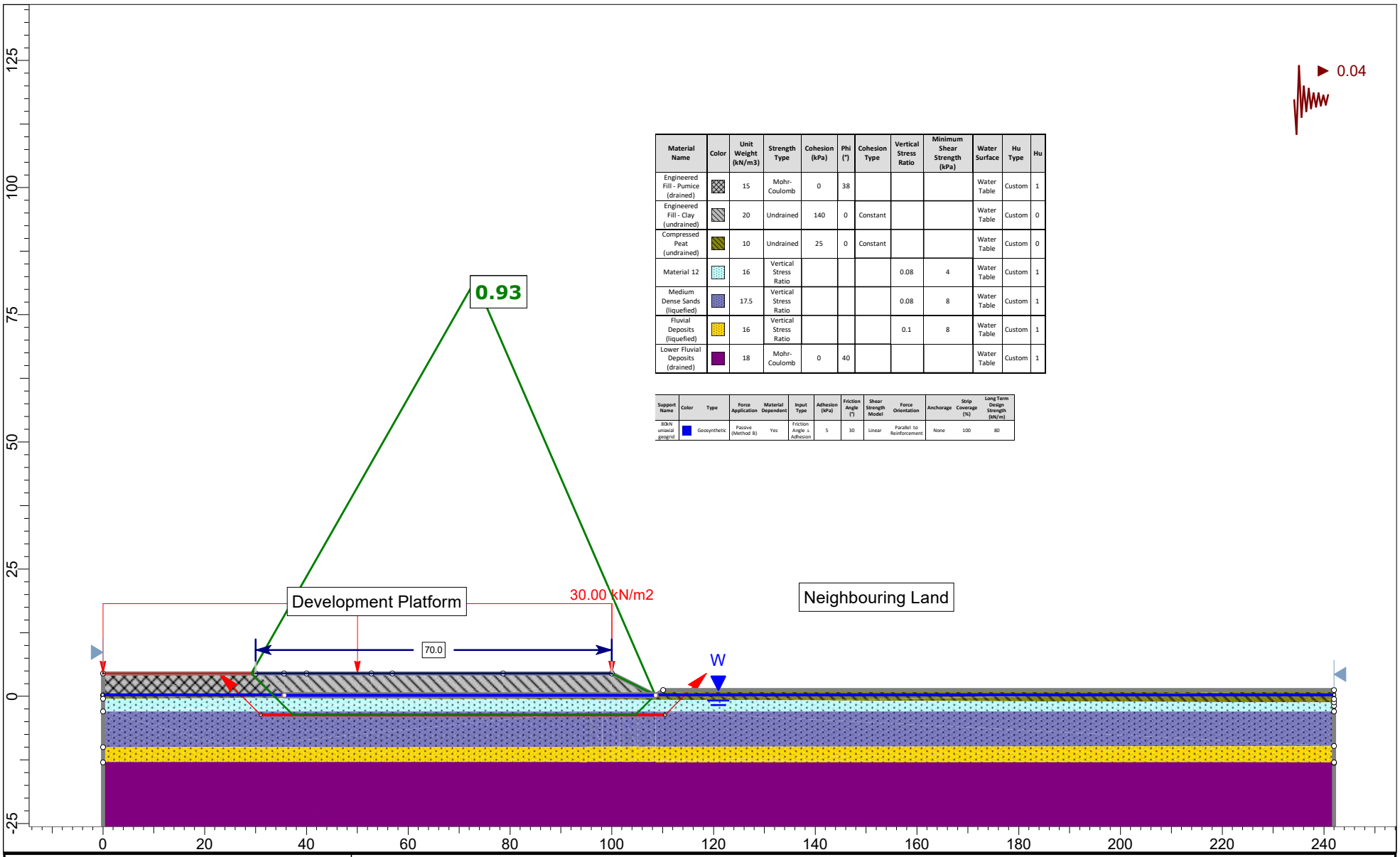


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Engineered Fill - Clay (undrained)		20	Undrained	140	0	Constant			Water Table	Custom	0
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Material 12		16	Vertical Stress Ratio				0.08	4	Water Table	Custom	1
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	8	Water Table	Custom	1
Fluvial Deposits (liquefied)		16	Vertical Stress Ratio				0.1	8	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40				Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
80kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	5	30	Linear	Parallel to Reinforcement	None	100	80

ENGEO	*Project*	Bell Road Development - Edge Stability	
	Analysis Description	Option 2 Cohesive Fill Embankment, Post Earthquake Liquefied Conditions (2m deep lateral movement)	
	Drawn By	GMS	*Client* ENGEO
	Date	10/2025	*File Name* Edge Stability - Option 2 Cohesive Fill Embankment.slmd

SLIDEINTERPRET 9.040

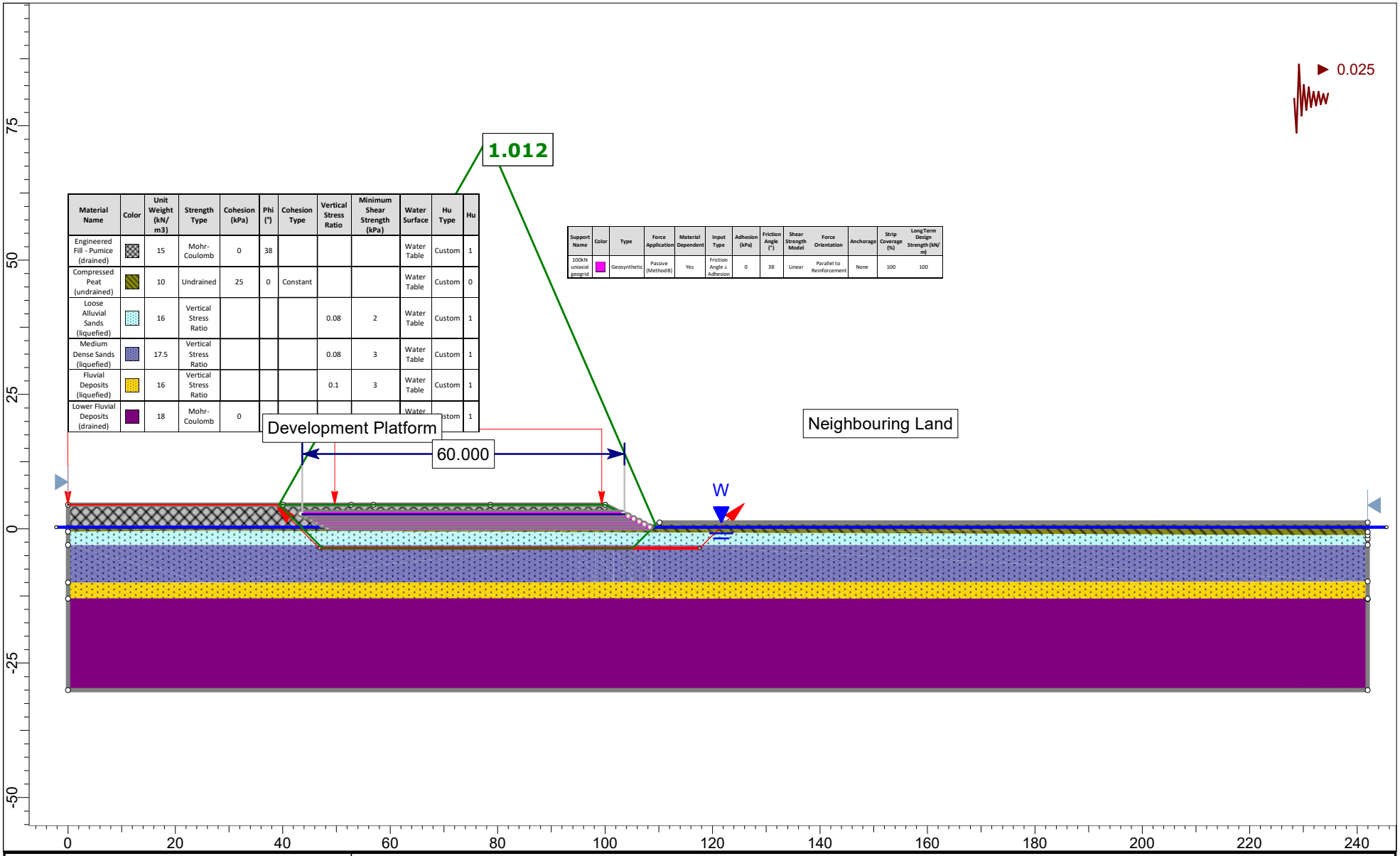


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Engineered Fill - Clay (undrained)		20	Undrained	140	0	Constant			Water Table	Custom	0
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Material 12		16	Vertical Stress Ratio				0.08	4	Water Table	Custom	1
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	8	Water Table	Custom	1
Fluvial Deposits (liquefied)		16	Vertical Stress Ratio				0.1	8	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40				Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
80kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle + Adhesion	5	30	Linear	Parallel to Reinforcement	None	100	80

ENGEO	*Project*	Bell Road Development - Edge Stability	
	Analysis Description	Option 2 Cohesive Fill Embankment, Post Earthquake Liquefied Conditions (4m deep lateral movement)	
	Drawn By	GMS	*Client* ENGEO
	Date	10/2025	*File Name* Edge Stability - Option 2 Cohesive Fill Embankment.slmd

SLIDEINTERPRET 9.040



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Loose Alluvial Sands (liquefied)		16	Vertical Stress Ratio				0.08	2	Water Table	Custom	1
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	3	Water Table	Custom	1
Fluvial Deposits (liquefied)		16	Vertical Stress Ratio				0.1	3	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0					Water	stom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	LongTerm Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ± Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100

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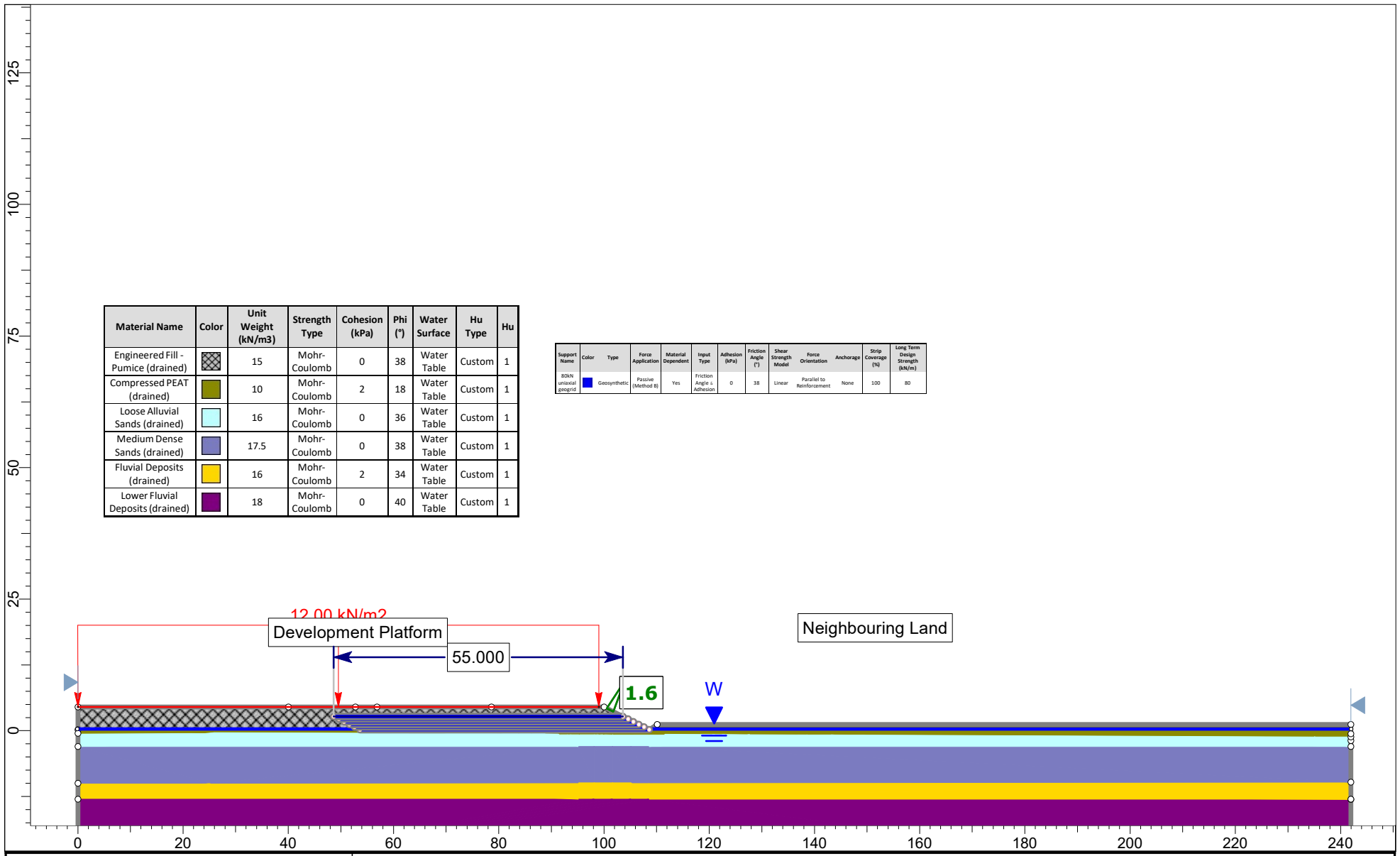
Project	Bell Road Development - Edge Stability
Analysis Description	Option 3 Reinforced Fill Embankment, Post Liq Displacement Assessment (4m deep lateral movement)
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Edge Stability - Option 3 Reinforced Fill Embankment.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38	Water Table	Custom	1
Compressed PEAT (drained)		10	Mohr-Coulomb	2	18	Water Table	Custom	1
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36	Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38	Water Table	Custom	1
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40	Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
80kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	80



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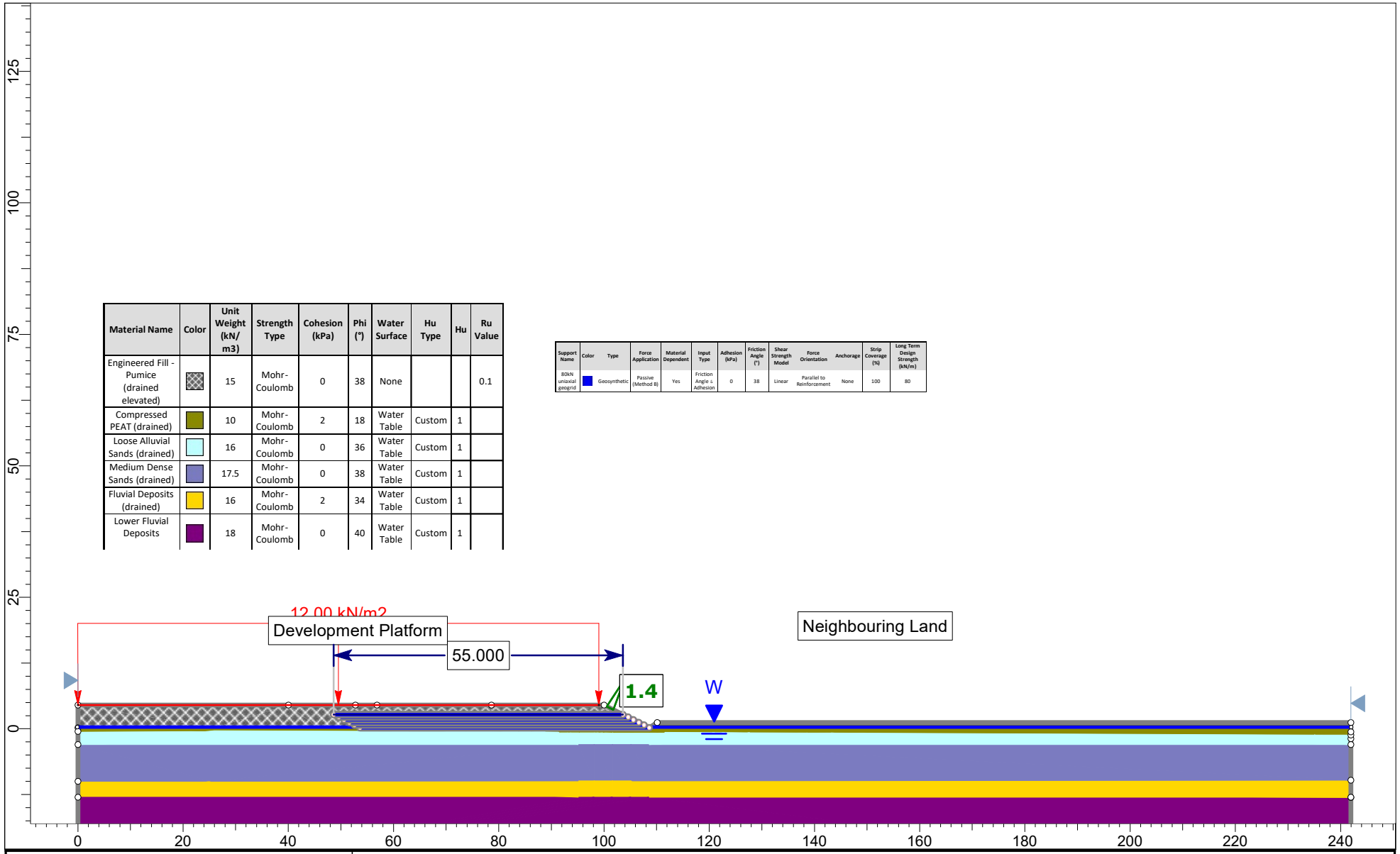
Project	Bell Road Development - Edge Stability		
Analysis Description	Option 3 Reinforced Fill Embankment, Static - Prevailing GW, Drained		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Edge Stability - Option 3 Reinforced Fill Embankment.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu	Ru Value
Engineered Fill - Pumice (drained elevated)		15	Mohr-Coulomb	0	38	None			0.1
Compressed PEAT (drained)		10	Mohr-Coulomb	2	18	Water Table	Custom	1	
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36	Water Table	Custom	1	
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38	Water Table	Custom	1	
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34	Water Table	Custom	1	
Lower Fluvial Deposits		18	Mohr-Coulomb	0	40	Water Table	Custom	1	

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
80kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	80



ENGEO

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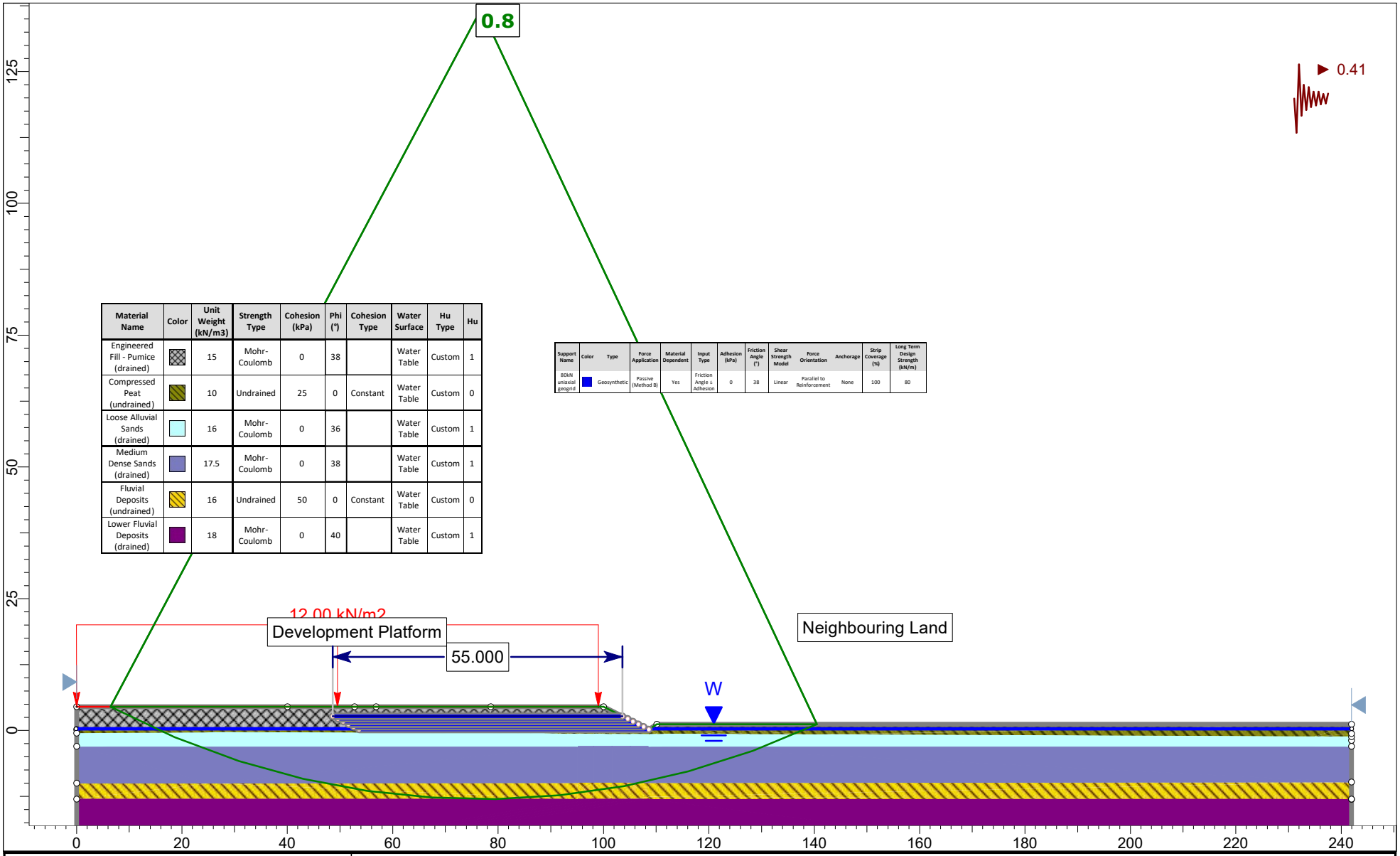
Project	Bell Road Development - Edge Stability	
Analysis Description	Option 3 Reinforced Fill Embankment, Static - Elevated GW, Drained	
Drawn By	GMS	*Client* ENGEO
Date	10/2025	*File Name* Edge Stability - Option 3 Reinforced Fill Embankment.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (undrained)		16	Undrained	50	0	Constant	Water Table	Custom	0
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
80kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	80

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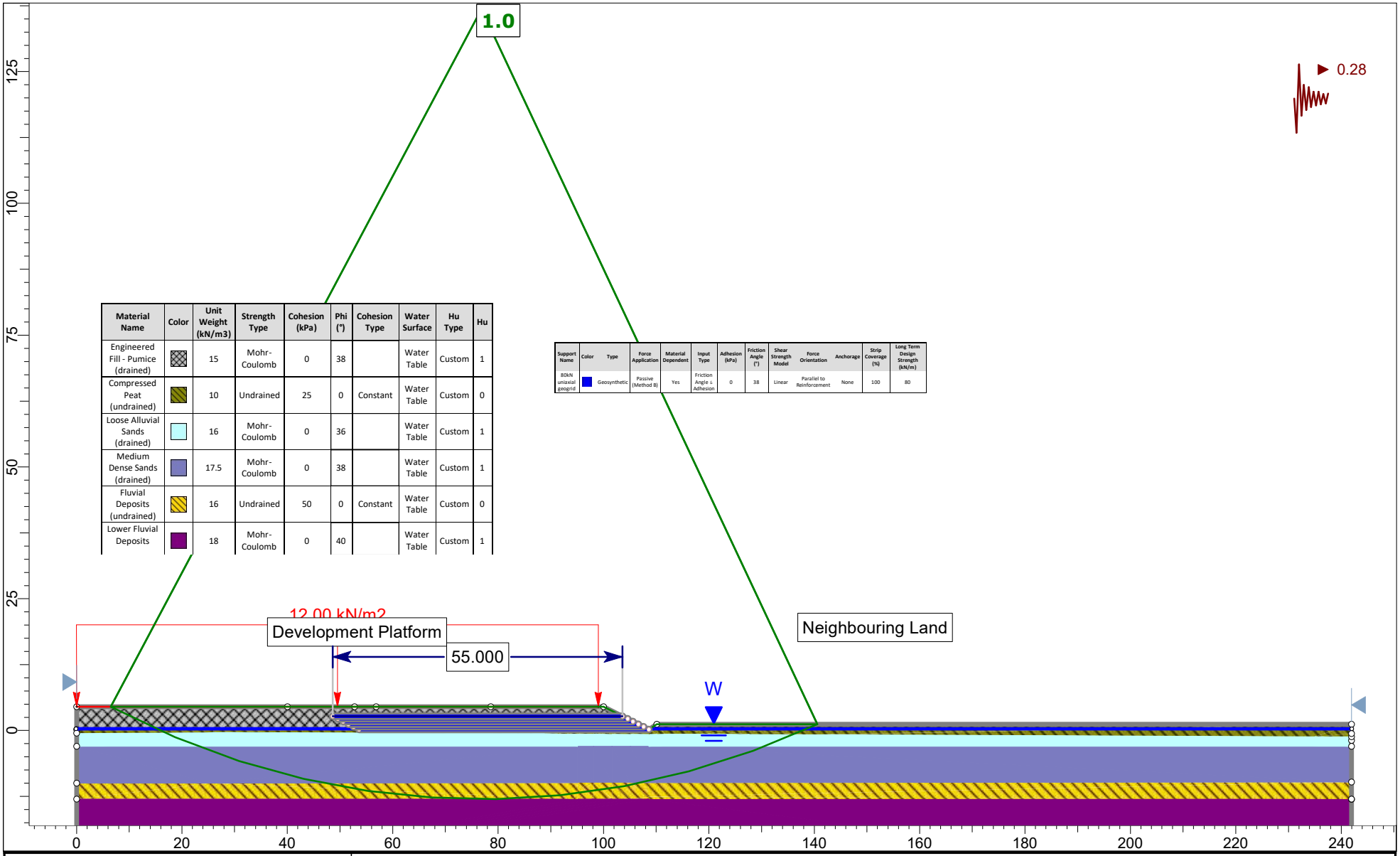
Project	Bell Road Development - Edge Stability		
Analysis Description	Option 3 Reinforced Fill Embankment, Seismic - ULS, Undrained		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Edge Stability - Option 3 Reinforced Fill Embankment.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (undrained)		16	Undrained	50	0	Constant	Water Table	Custom	0
Lower Fluvial Deposits		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
80kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	80

ENGEO	*Project*	Bell Road Development - Edge Stability	
	Analysis Description	Option 3 Reinforced Fill Embankment, Seismic - Yield Acceleration, Undrained	
	Drawn By	GMS	*Client* ENGEO
	Date	10/2025	*File Name* Edge Stability - Option 3 Reinforced Fill Embankment.slmd

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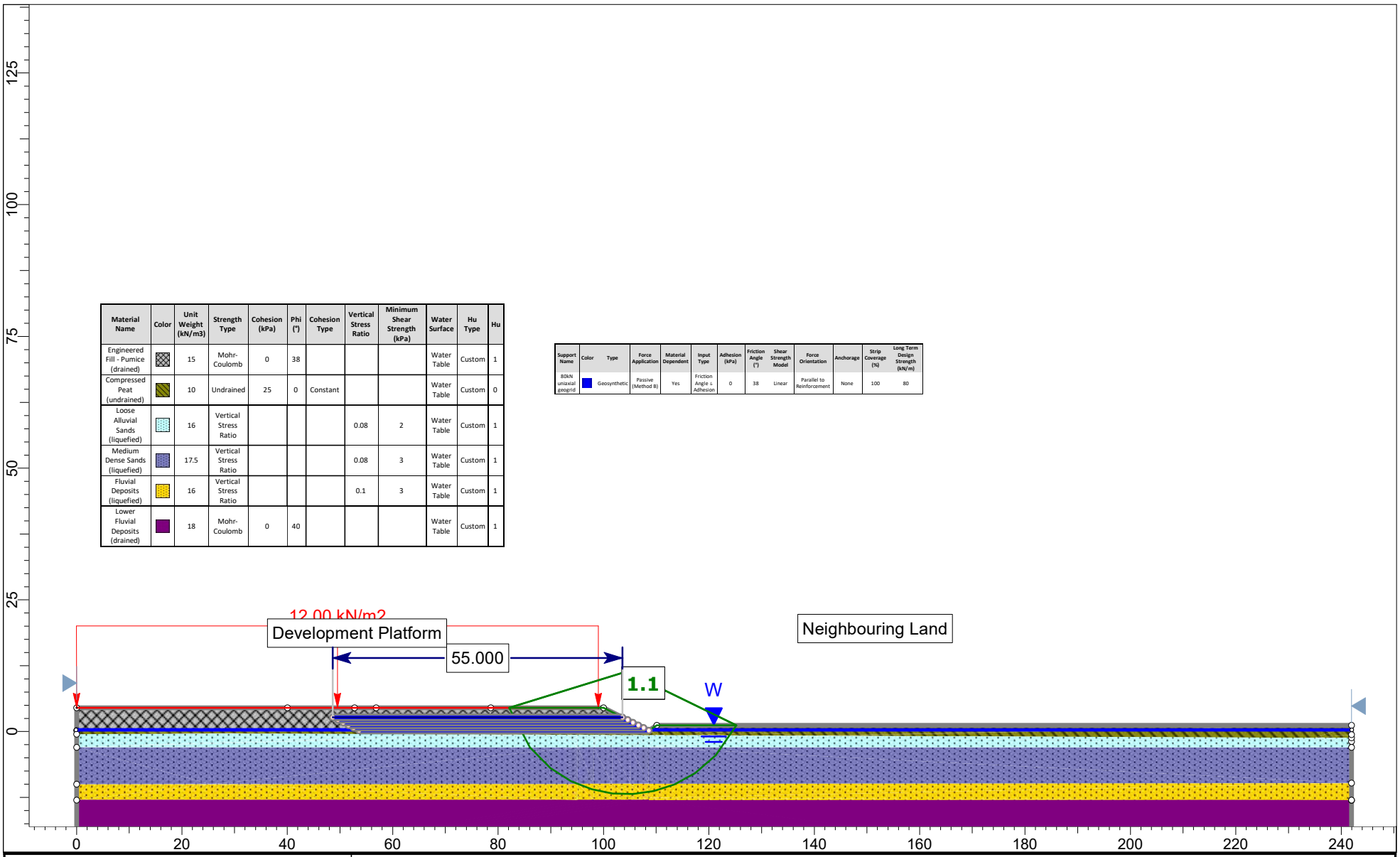
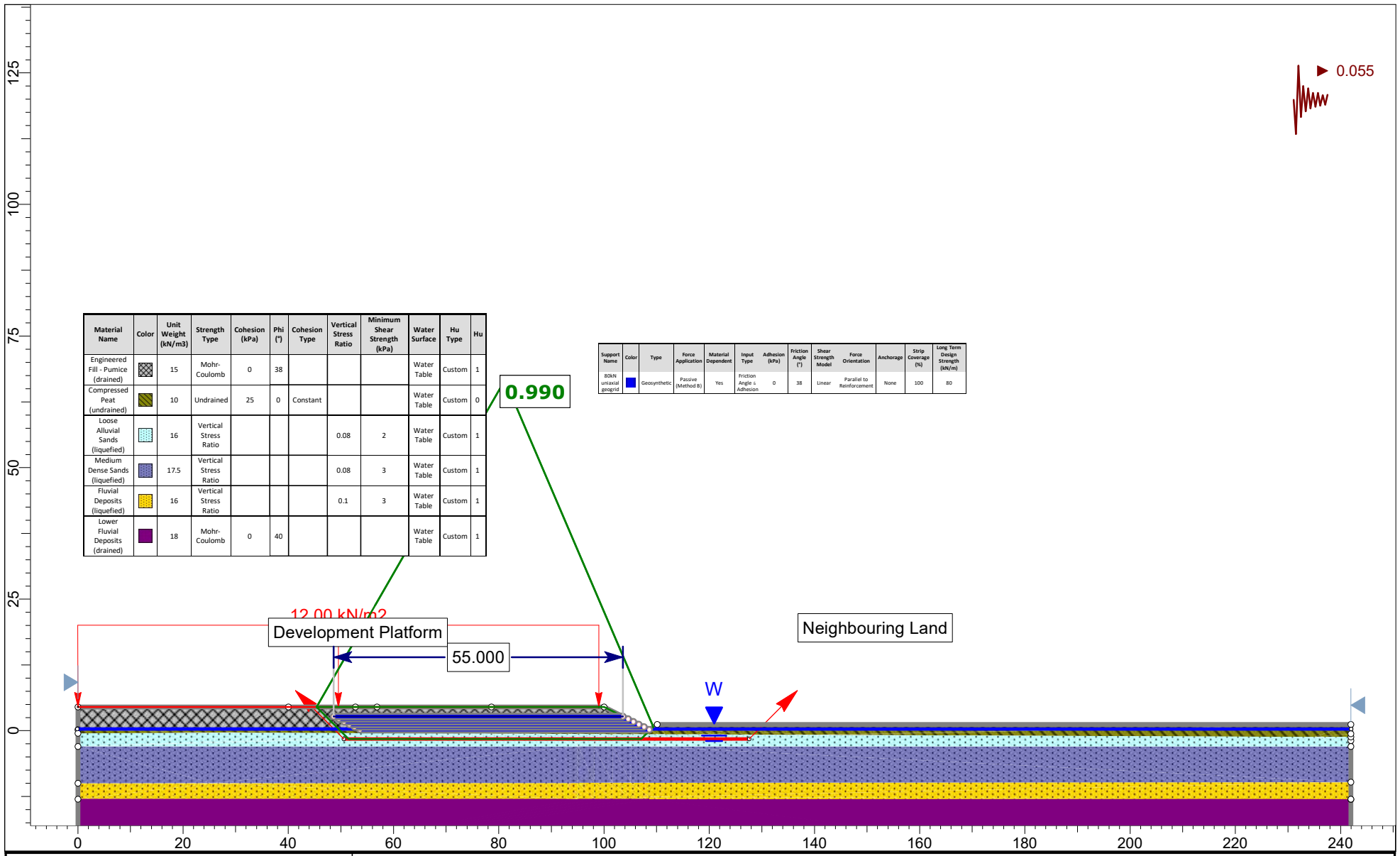
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Loose Alluvial Sands (liquefied)		16	Vertical Stress Ratio				0.08	2	Water Table	Custom	1
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	3	Water Table	Custom	1
Fluvial Deposits (liquefied)		16	Vertical Stress Ratio				0.1	3	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40				Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
80kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ± Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	80



ENGEO	*Project* Bell Road Development - Edge Stability	
	Analysis Description Option 3 Reinforced Fill Embankment, Post Earthquake Liquefied Conditions	
	Drawn By GMS	*Client* ENGEO
SLIDEINTERPRET 9.040	*Date* 10/2025	*File Name* Edge Stability - Option 3 Reinforced Fill Embankment.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Loose Alluvial Sands (liquefied)		16	Vertical Stress Ratio				0.08	2	Water Table	Custom	1
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	3	Water Table	Custom	1
Fluvial Deposits (liquefied)		16	Vertical Stress Ratio				0.1	3	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40				Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
80kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	80

ENGEO

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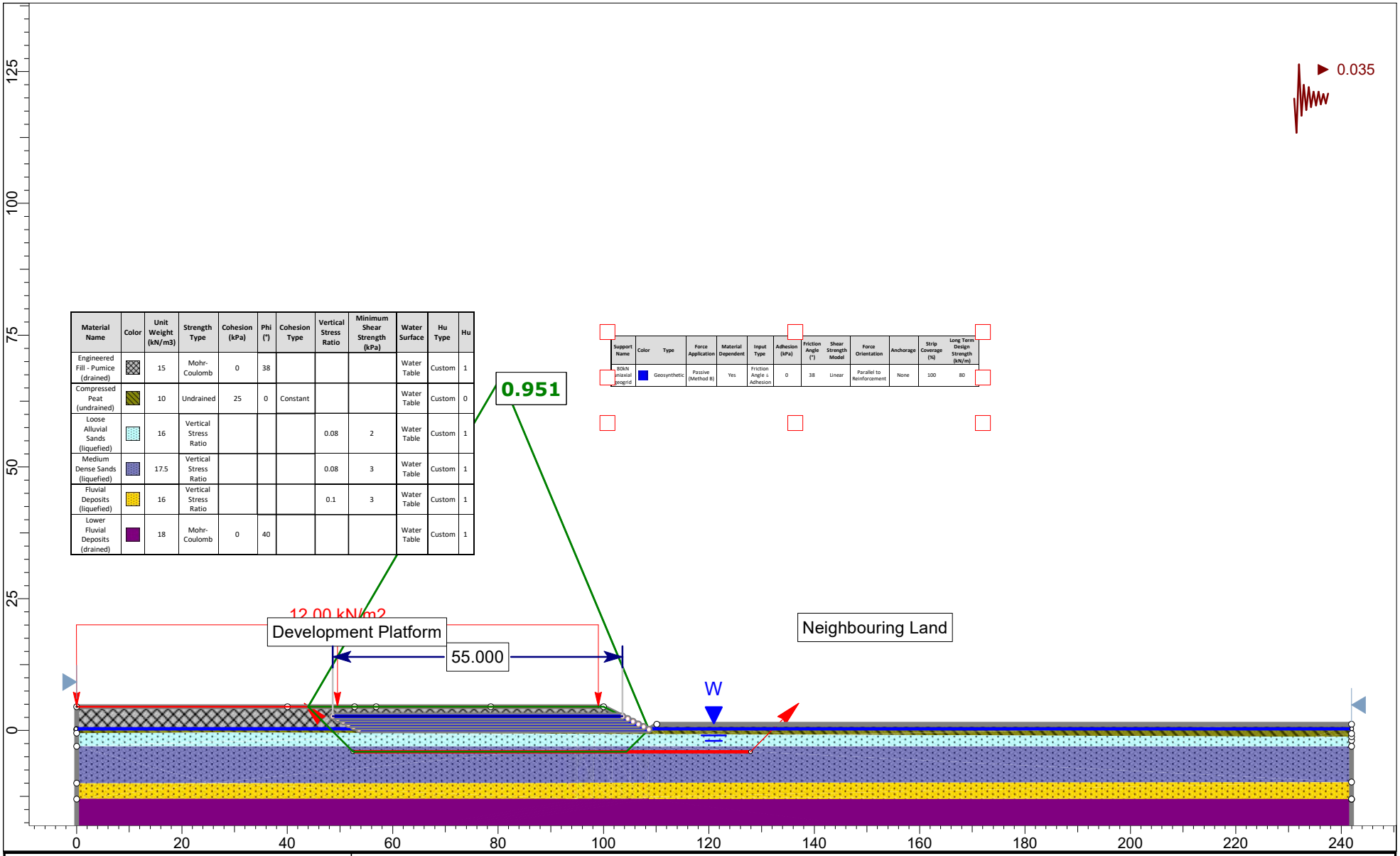
Project	Bell Road Development - Edge Stability		
Analysis Description	Option 2 Cohesive Fill Embankment, Post Liq Displacement Assessment (2m deep lateral movement)		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Edge Stability - Option 3 Reinforced Fill Embankment.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Loose Alluvial Sands (liquefied)		16	Vertical Stress Ratio				0.08	2	Water Table	Custom	1
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	3	Water Table	Custom	1
Fluvial Deposits (liquefied)		16	Vertical Stress Ratio				0.1	3	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40				Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
80kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	80

ENGEO	*Project*	Bell Road Development - Edge Stability	
	Analysis Description	Option 2 Cohesive Fill Embankment, Post Liq Displacement Assessment (4m deep lateral movement)	
	Drawn By	GMS	*Client* ENGEO
	Date	10/2025	*File Name* Edge Stability - Option 3 Reinforced Fill Embankment.slmd

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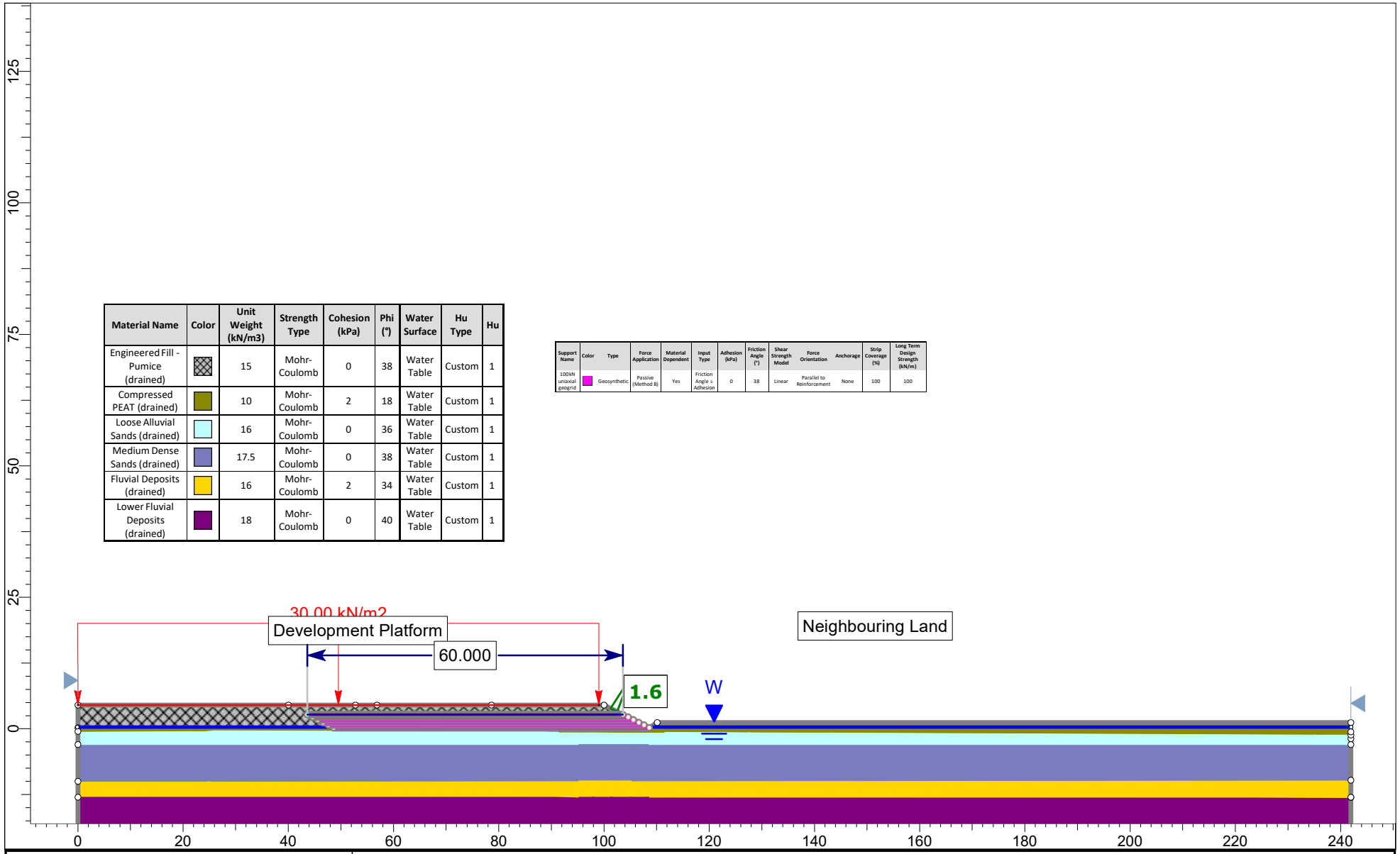
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38	Water Table	Custom	1
Compressed PEAT (drained)		10	Mohr-Coulomb	2	18	Water Table	Custom	1
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36	Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38	Water Table	Custom	1
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40	Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



ENGEO	*Project*	Bell Road Development - Edge Stability	
	Analysis Description	Option 3 Reinforced Fill Embankment, Static - Prevailing GW, Drained	
	Drawn By	GMS	*Client* ENGEO
	Date	10/2025	*File Name* Edge Stability - Option 3 Reinforced Fill Embankment.slmd

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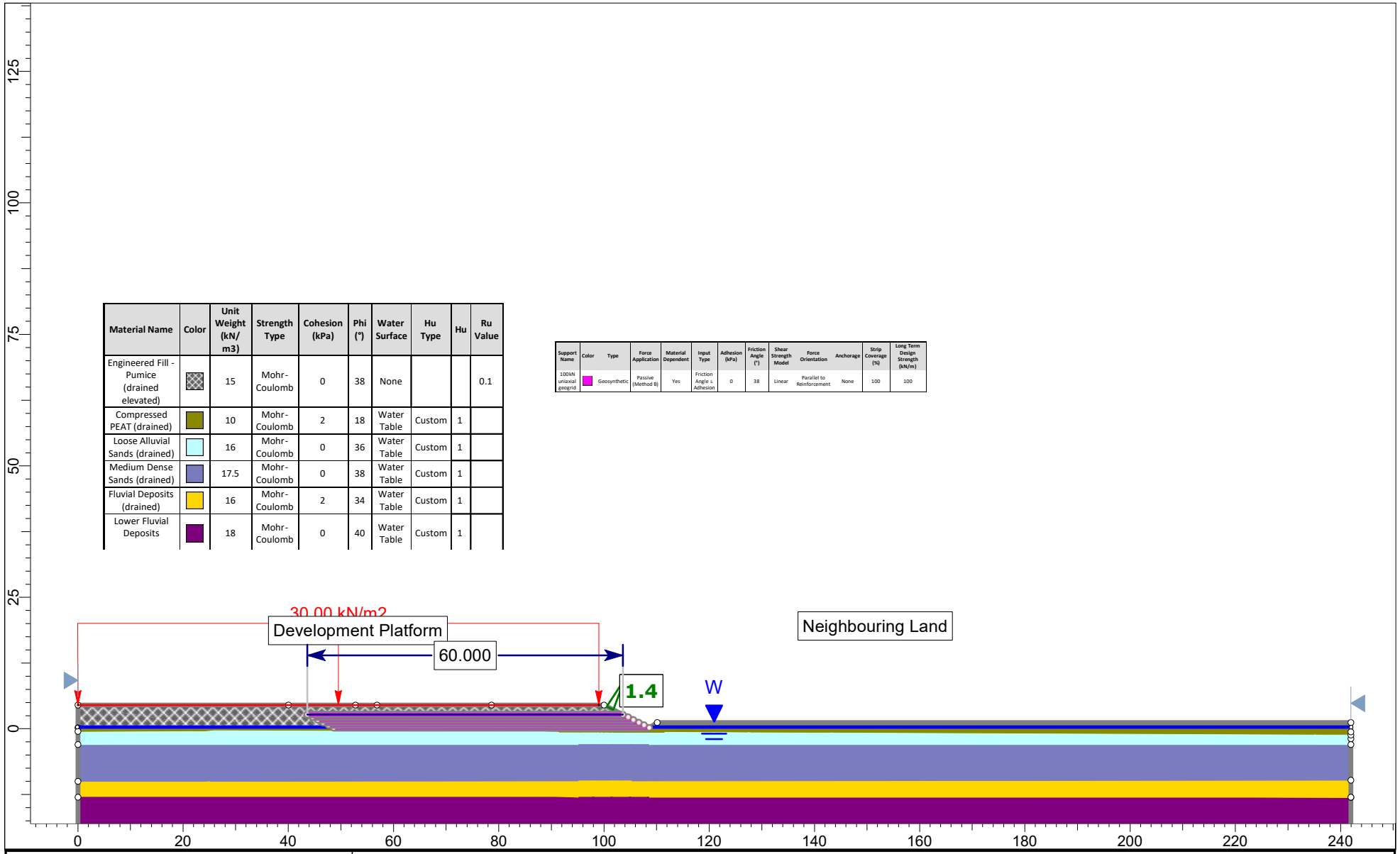
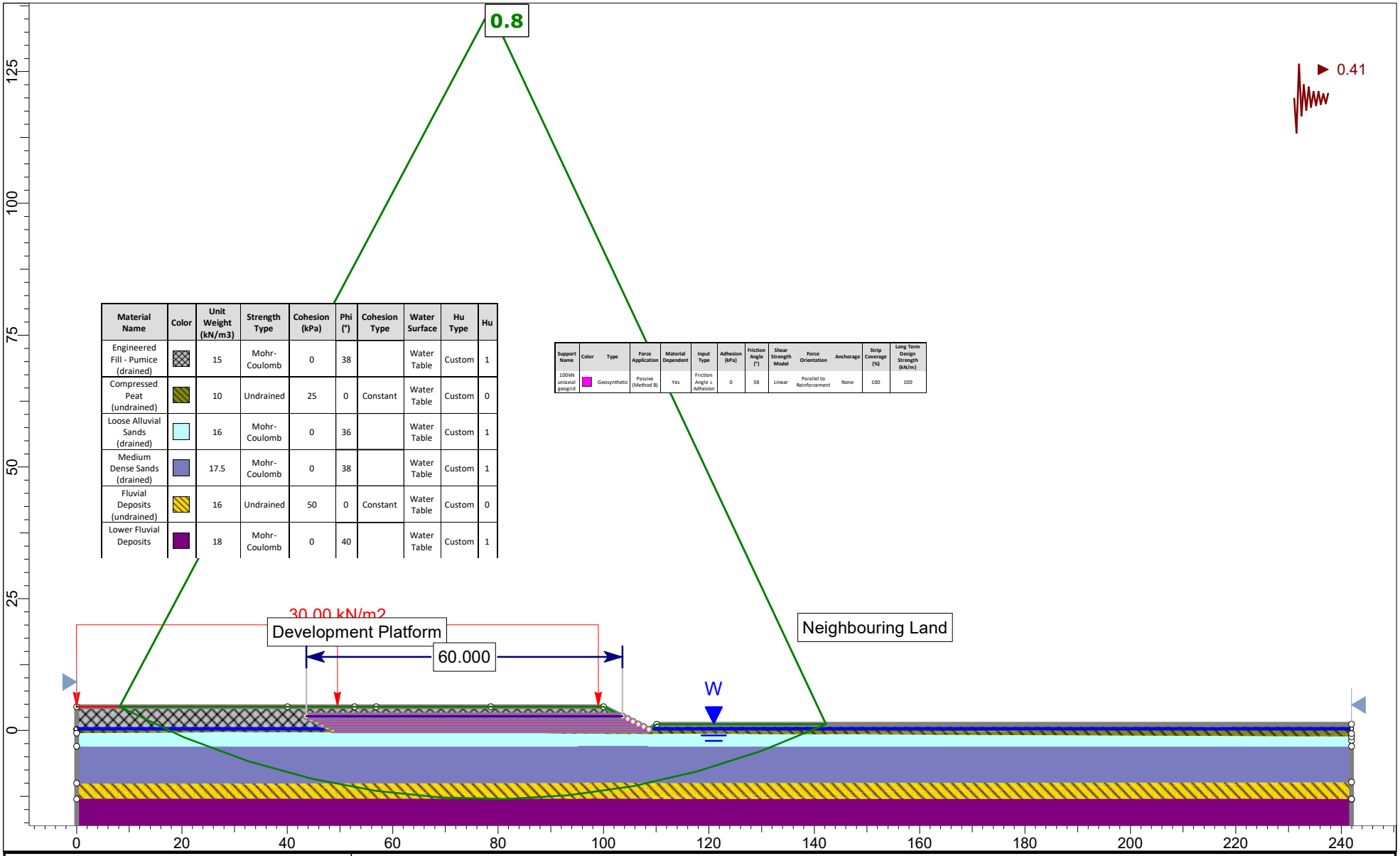
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Water Surface	Hu Type	Hu	Ru Value
Engineered Fill - Pumice (drained elevated)		15	Mohr-Coulomb	0	38	None			0.1
Compressed PEAT (drained)		10	Mohr-Coulomb	2	18	Water Table	Custom	1	
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36	Water Table	Custom	1	
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38	Water Table	Custom	1	
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34	Water Table	Custom	1	
Lower Fluvial Deposits		18	Mohr-Coulomb	0	40	Water Table	Custom	1	

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



ENGEO	*Project* Bell Road Development - Edge Stability	
	Analysis Description Option 3 Reinforced Fill Embankment, Static - Elevated GW, Drained	
	Drawn By GMS	*Client* ENGEO
SLIDEINTERPRET 9.040	*Date* 10/2025	*File Name* Edge Stability - Option 3 Reinforced Fill Embankment.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (undrained)		16	Undrained	50	0	Constant	Water Table	Custom	0
Lower Fluvial Deposits		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100

ENGEO

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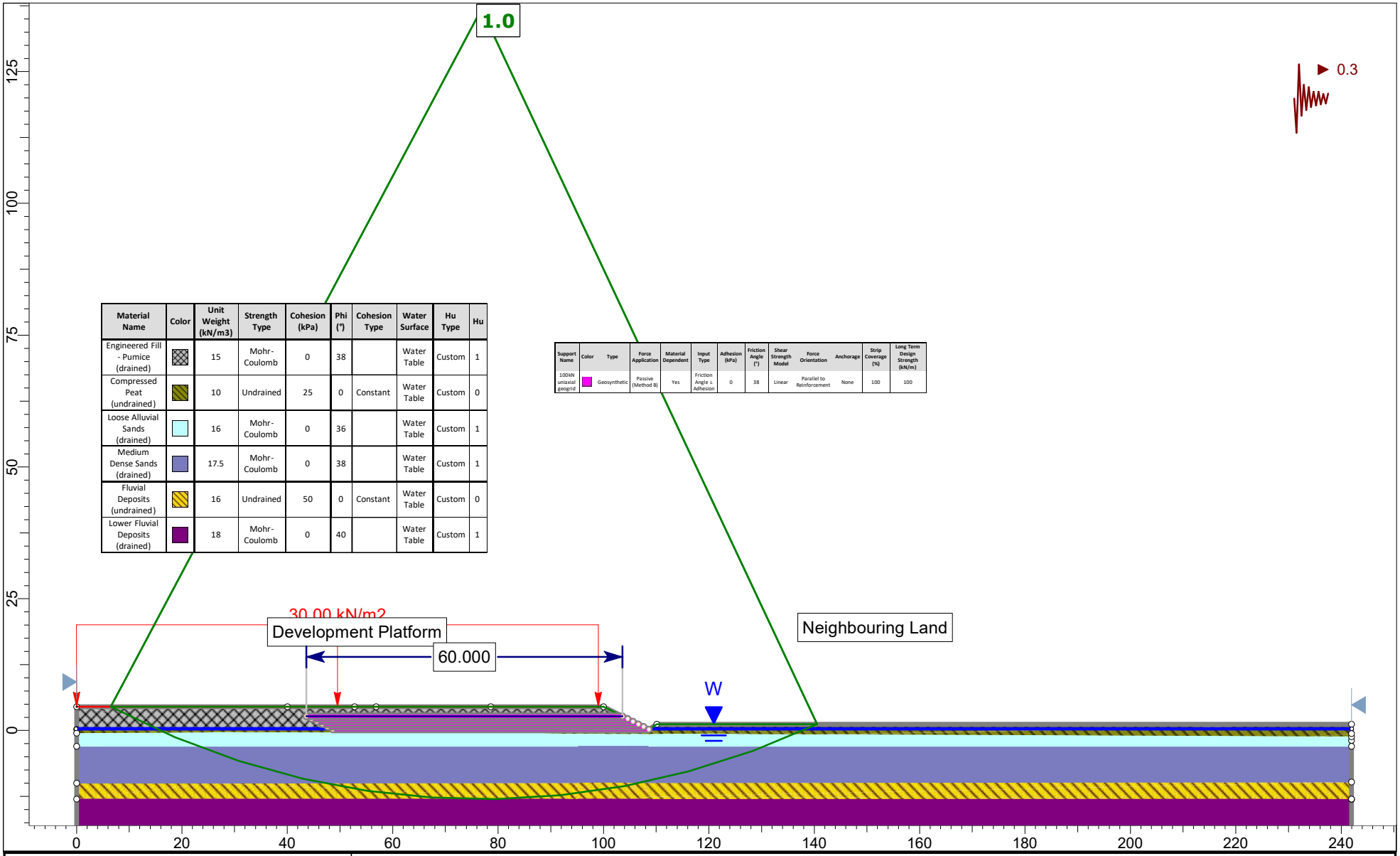
Project	Bell Road Development - Edge Stability		
Analysis Description	Option 3 Reinforced Fill Embankment, Seismic - ULS, Undrained		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Edge Stability - Option 3 Reinforced Fill Embankment.slmd



Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (undrained)		16	Undrained	50	0	Constant	Water Table	Custom	0
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100

ENGEO

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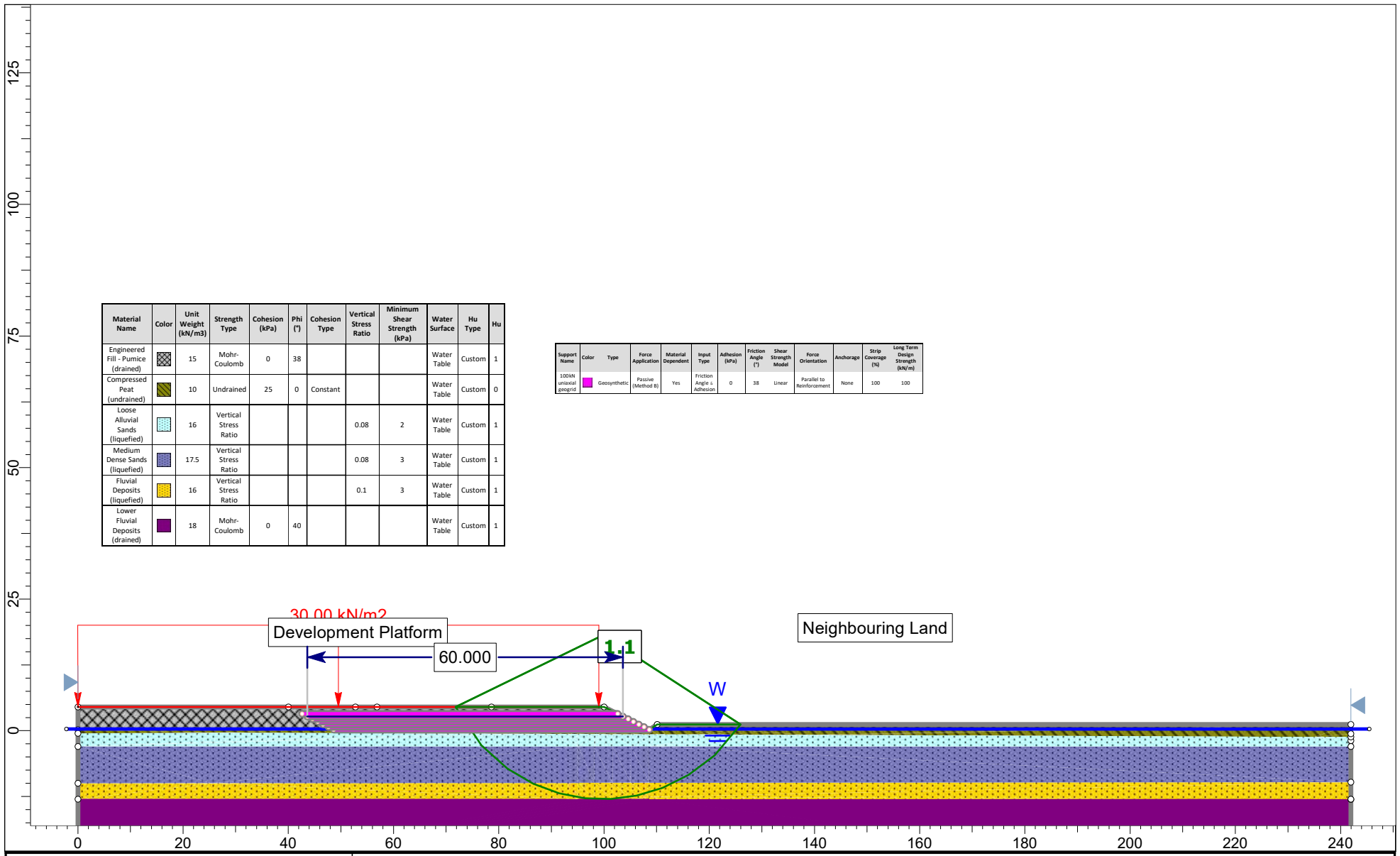
Project	Bell Road Development - Edge Stability		
Analysis Description	Option 3 Reinforced Fill Embankment, Seismic - Yield Acceleration, Undrained		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Edge Stability - Option 3 Reinforced Fill Embankment.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Loose Alluvial Sands (liquefied)		16	Vertical Stress Ratio				0.08	2	Water Table	Custom	1
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	3	Water Table	Custom	1
Fluvial Deposits (liquefied)		16	Vertical Stress Ratio				0.1	3	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40				Water Table	Custom	1

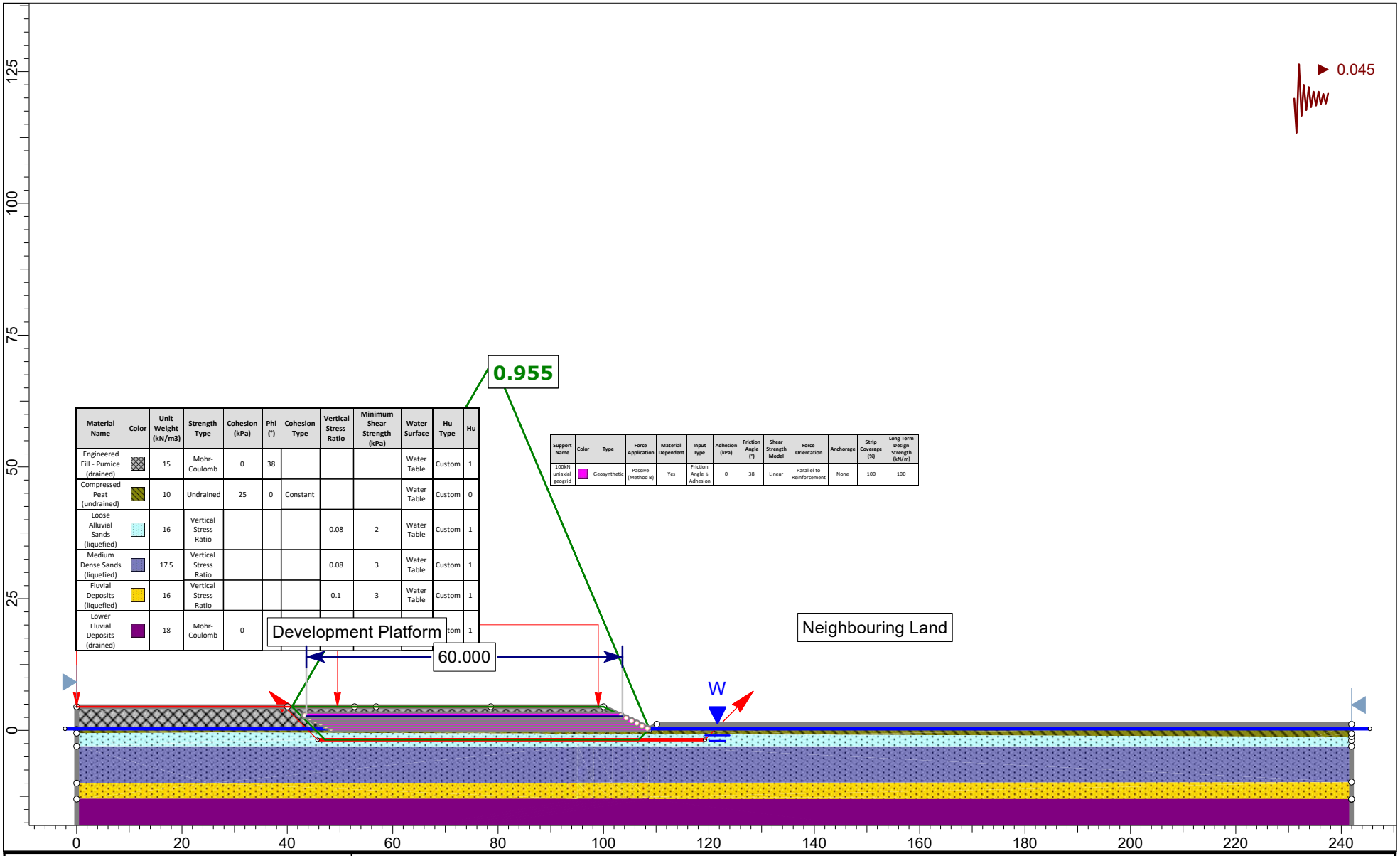
Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ± Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



ENGEO

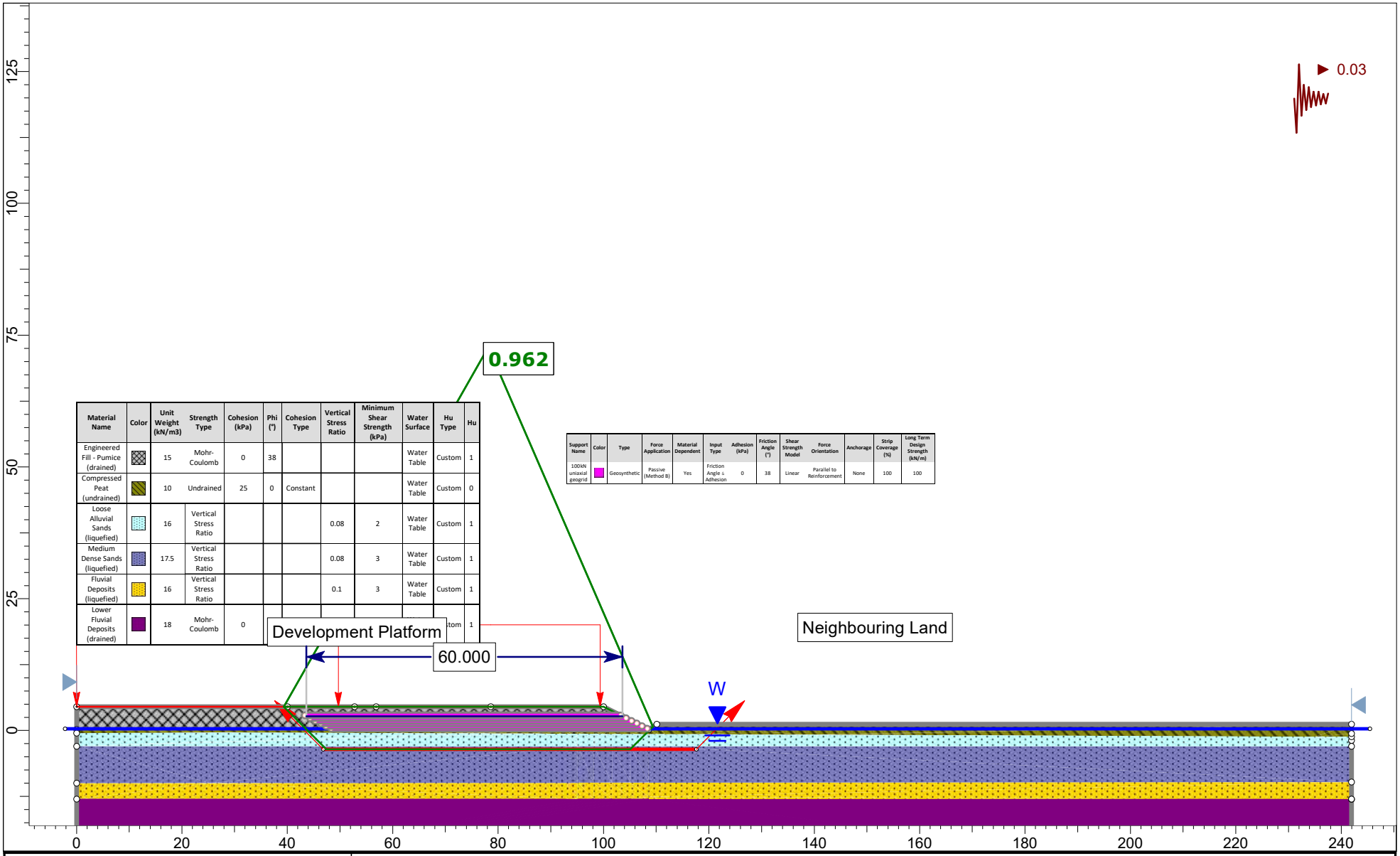
SLIDEINTERPRET 9.040

Project	Bell Road Development - Edge Stability	
Analysis Description	Option 3 Reinforced Fill Embankment, Post Earthquake Liquefied Conditions	
Drawn By	GMS	*Client* ENGEO
Date	10/2025	*File Name* Edge Stability - Option 3 Reinforced Fill Embankment.slmd



ENGEO	*Project*	Bell Road Development - Edge Stability
	Analysis Description	Option 3 Reinforced Fill Embankment, Post Liq Displacement Assessment (2m deep lateral movement)
	Drawn By GMS	*Client* ENGEO
	Date 10/2025	*File Name* Edge Stability - Option 3 Reinforced Fill Embankment.slmd

SLIDEINTERPRET 9.040



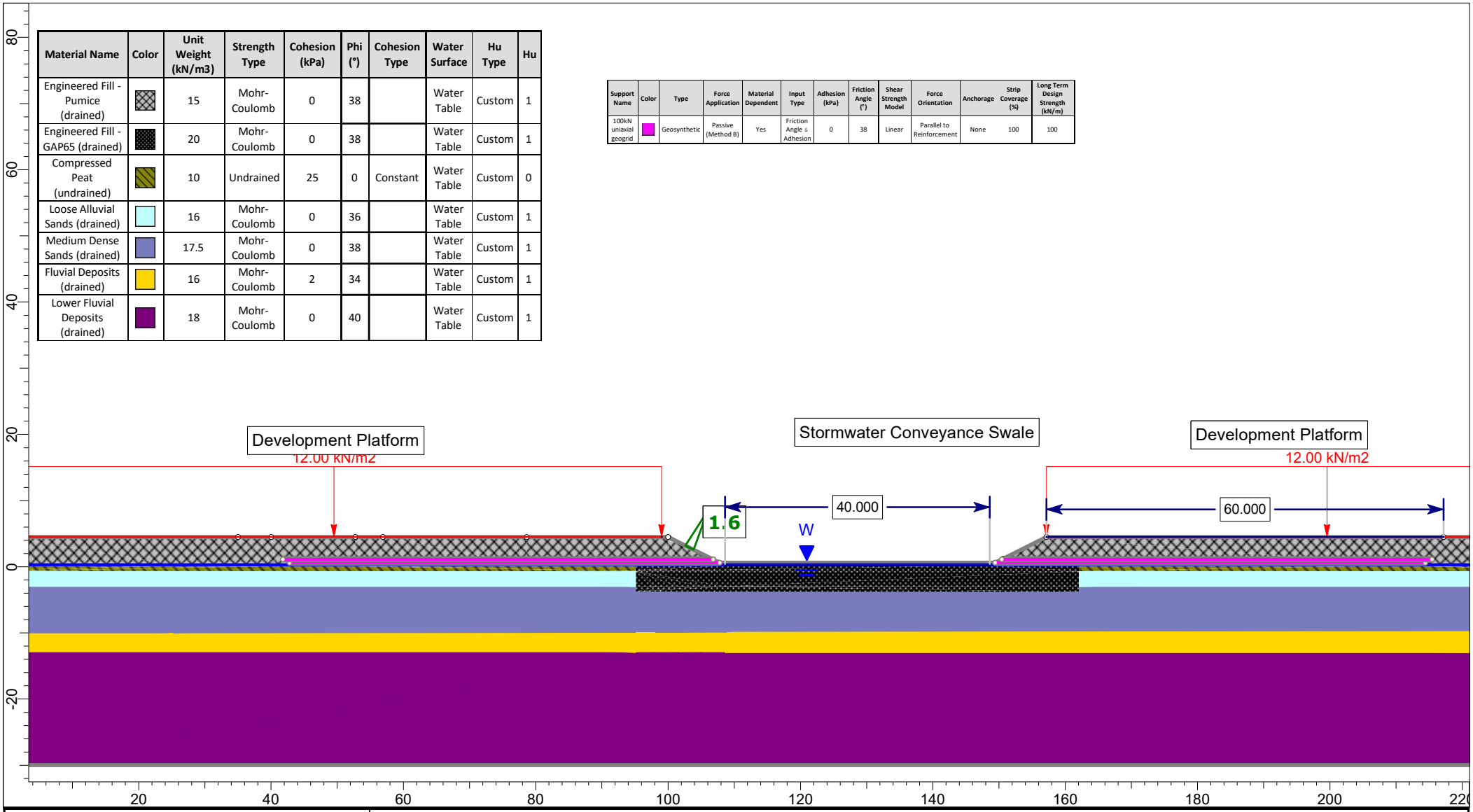
Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Loose Alluvial Sands (liquefied)		16	Vertical Stress Ratio				0.08	2	Water Table	Custom	1
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	3	Water Table	Custom	1
Fluvial Deposits (liquefied)		16	Vertical Stress Ratio				0.1	3	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0						tom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle ≤ Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100

ENGEO	*Project*	Bell Road Development - Edge Stability	
	Analysis Description	Option 3 Reinforced Fill Embankment, Post Liq Displacement Assessment (4m deep lateral movement)	
	Drawn By	GMS	*Client* ENGEO
SLIDEINTERPRET 9.040	*Date*	10/2025	*File Name* Edge Stability - Option 3 Reinforced Fill Embankment.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34		Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



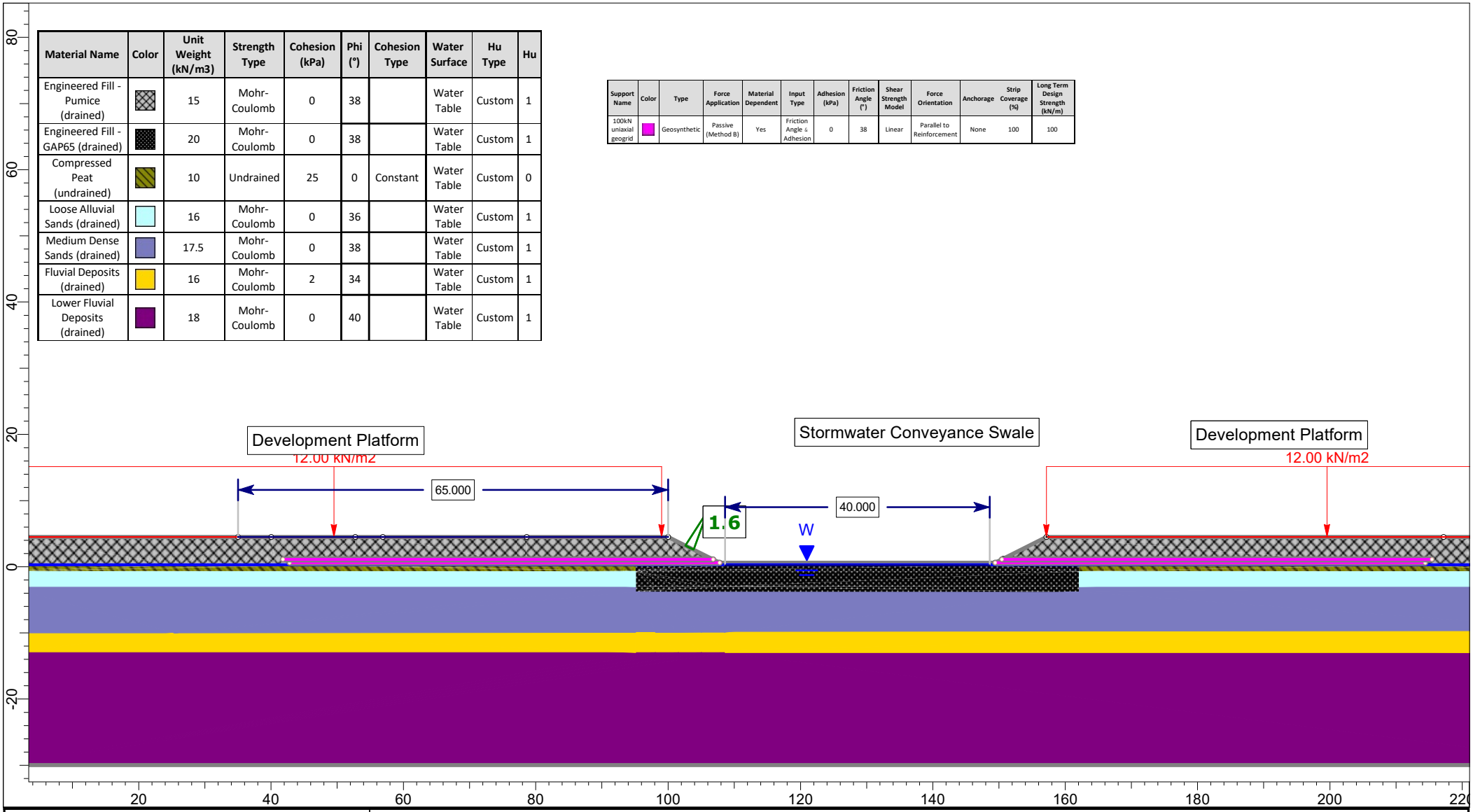
ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability
Analysis Description	Proposed Landform 40m Swale - Residential Loading, Static - Prevailing GW, Drained
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34		Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



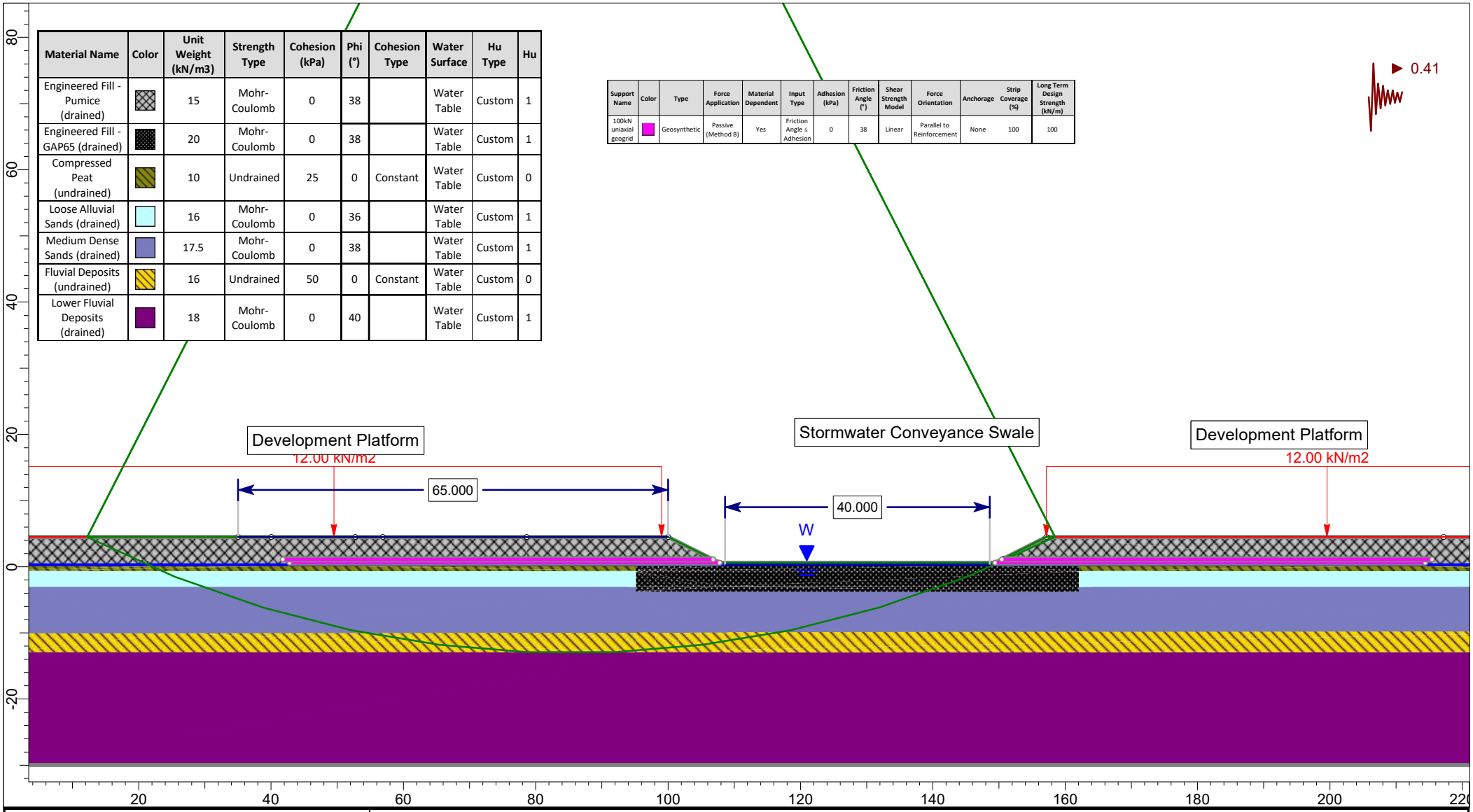
ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability		
Analysis Description	Proposed Landform 40m Swale - Residential Loading, Static - Elevated GW, Drained		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (undrained)		16	Undrained	50	0	Constant	Water Table	Custom	0
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100

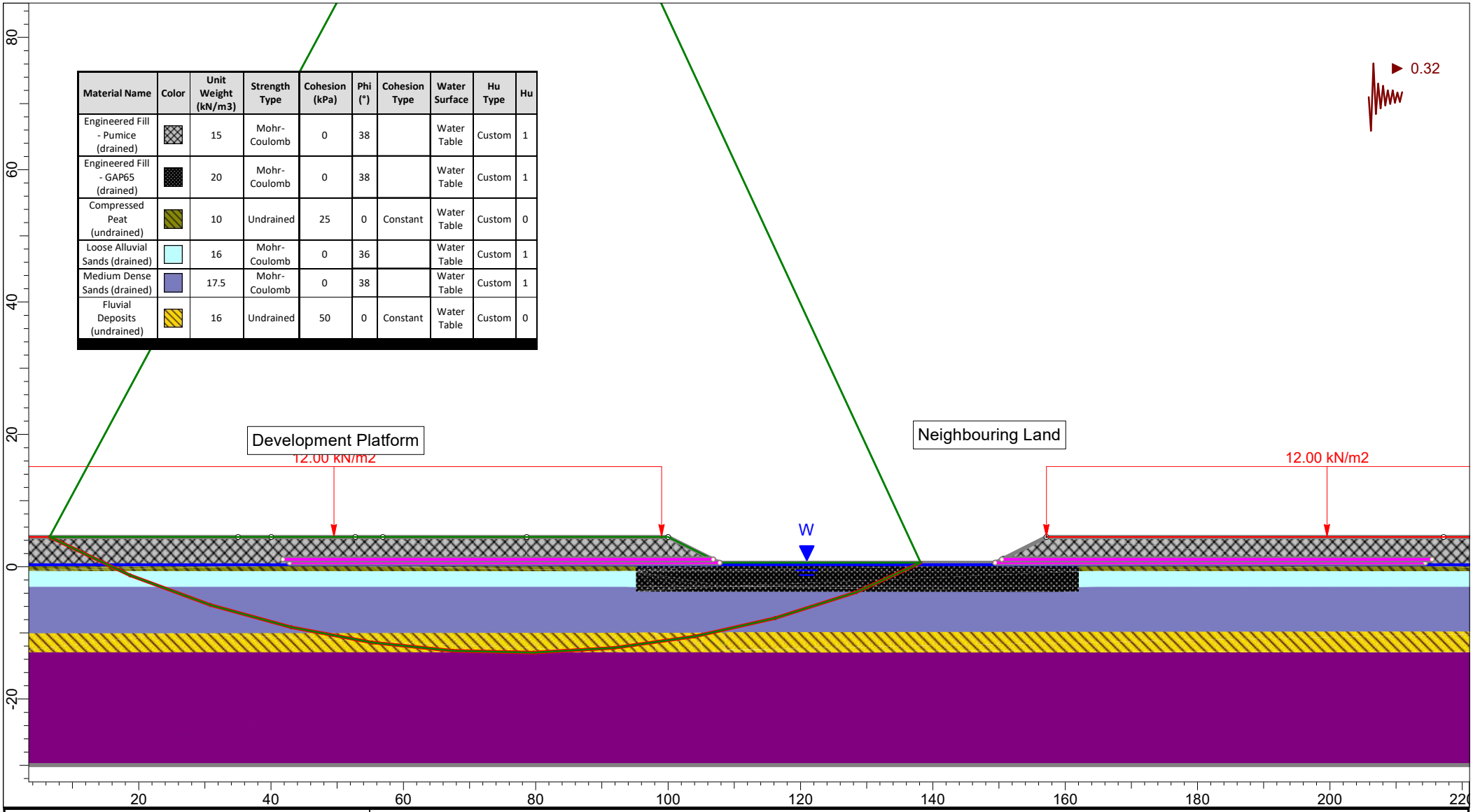


ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability
Analysis Description	Proposed Landform 40m Swale - Residential Loading, Seismic - ULS, Undrained
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (undrained)		16	Undrained	50	0	Constant	Water Table	Custom	0

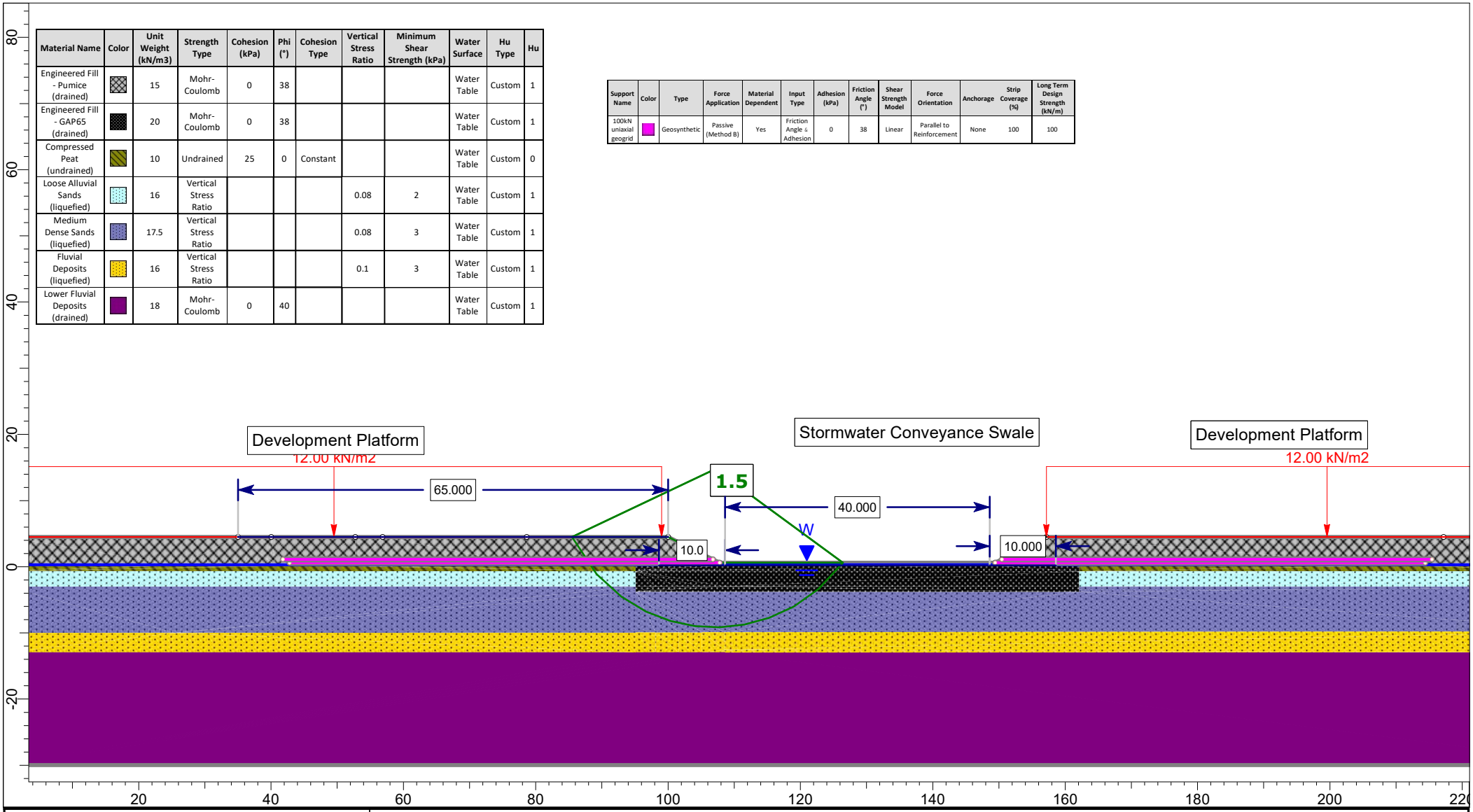


ENGEO	*Project*	Bell Road Development - Swale Edge Stability	
	Analysis Description	Proposed Landform 40m Swale - Residential Loading, Seismic - Yield Acceleration, Undrained	
	Drawn By	GMS	*Client* ENGEO
	Date	10/2025	*File Name* Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

SLIDEINTERPRET 9.034

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38				Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Loose Alluvial Sands (liquefied)		16	Vertical Stress Ratio				0.08	2	Water Table	Custom	1
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	3	Water Table	Custom	1
Fluvial Deposits (liquefied)		16	Vertical Stress Ratio				0.1	3	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40				Water Table	Custom	1

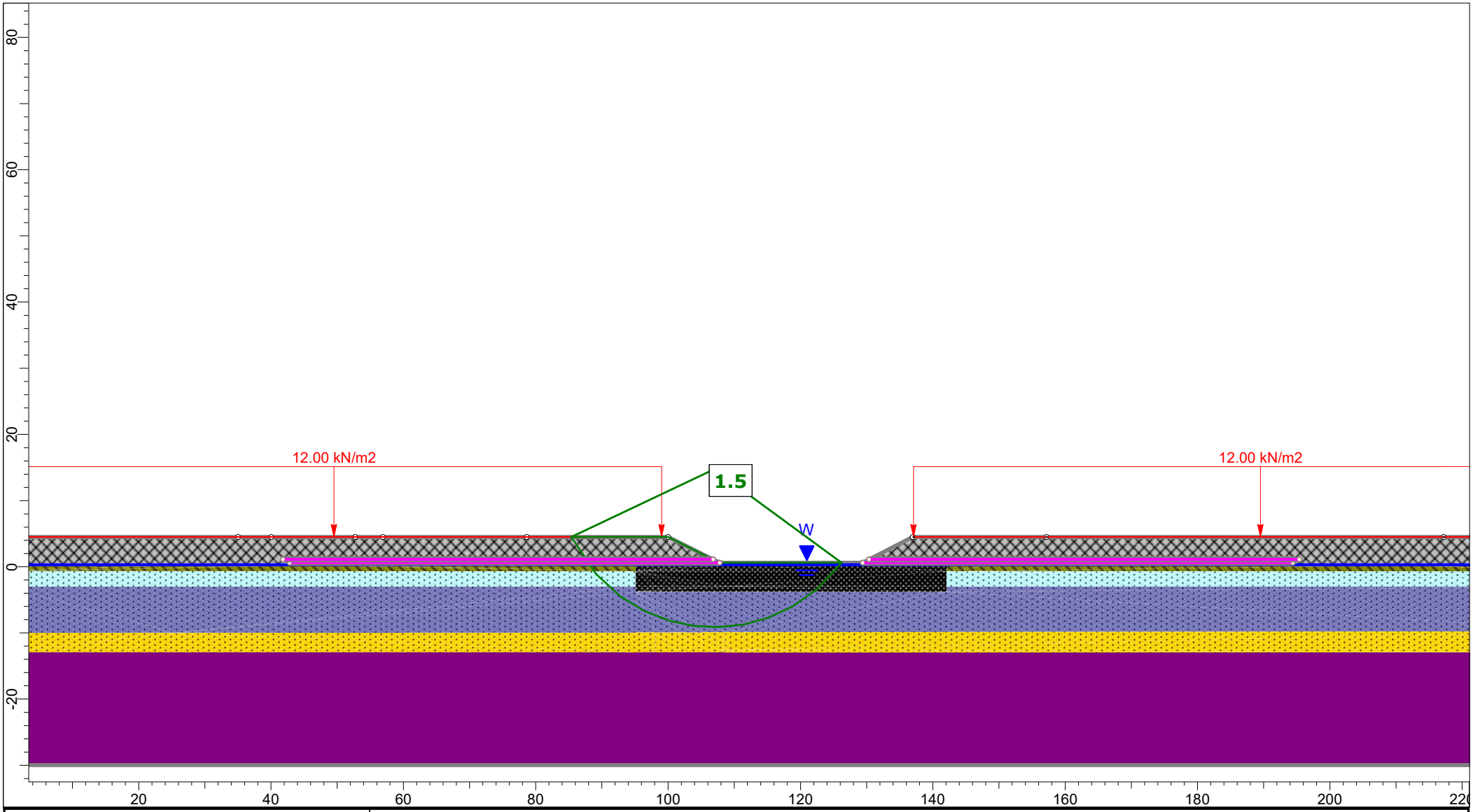
Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Swale Edge Stability
Analysis Description	Proposed Landform 40m Swale - Residential Loading, Post Earthquake Liquefied Conditions
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

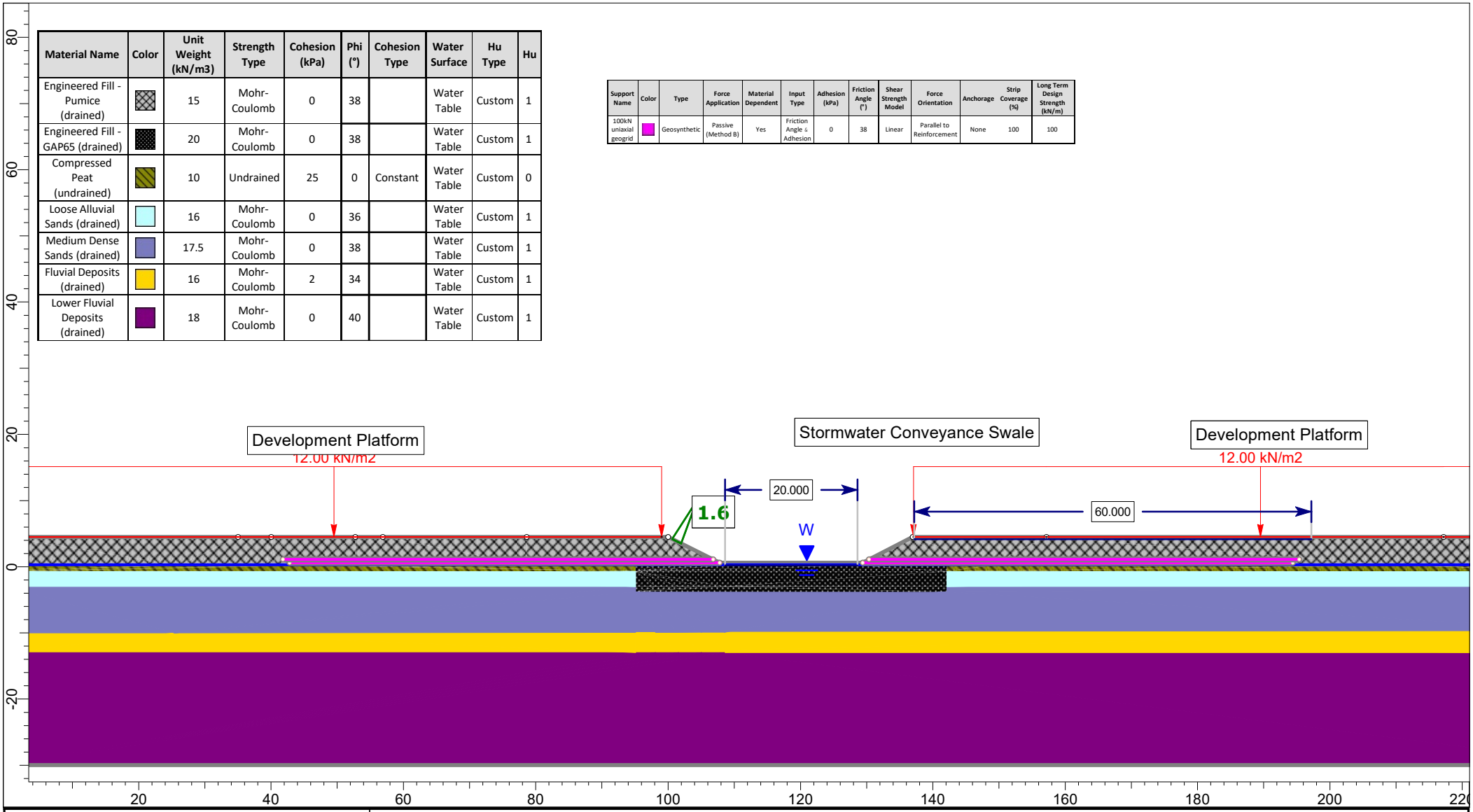


ENGEO	*Project*	Bell Road Development - Swale Edge Stability	
	Analysis Description	Proposed Landform 20m Swale - Residential Loading, Master Scenario	
	Drawn By	GMS	*Client* ENGEO
	Date	10/2025	*File Name* Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

SLIDEINTERPRET 9.034

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34		Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



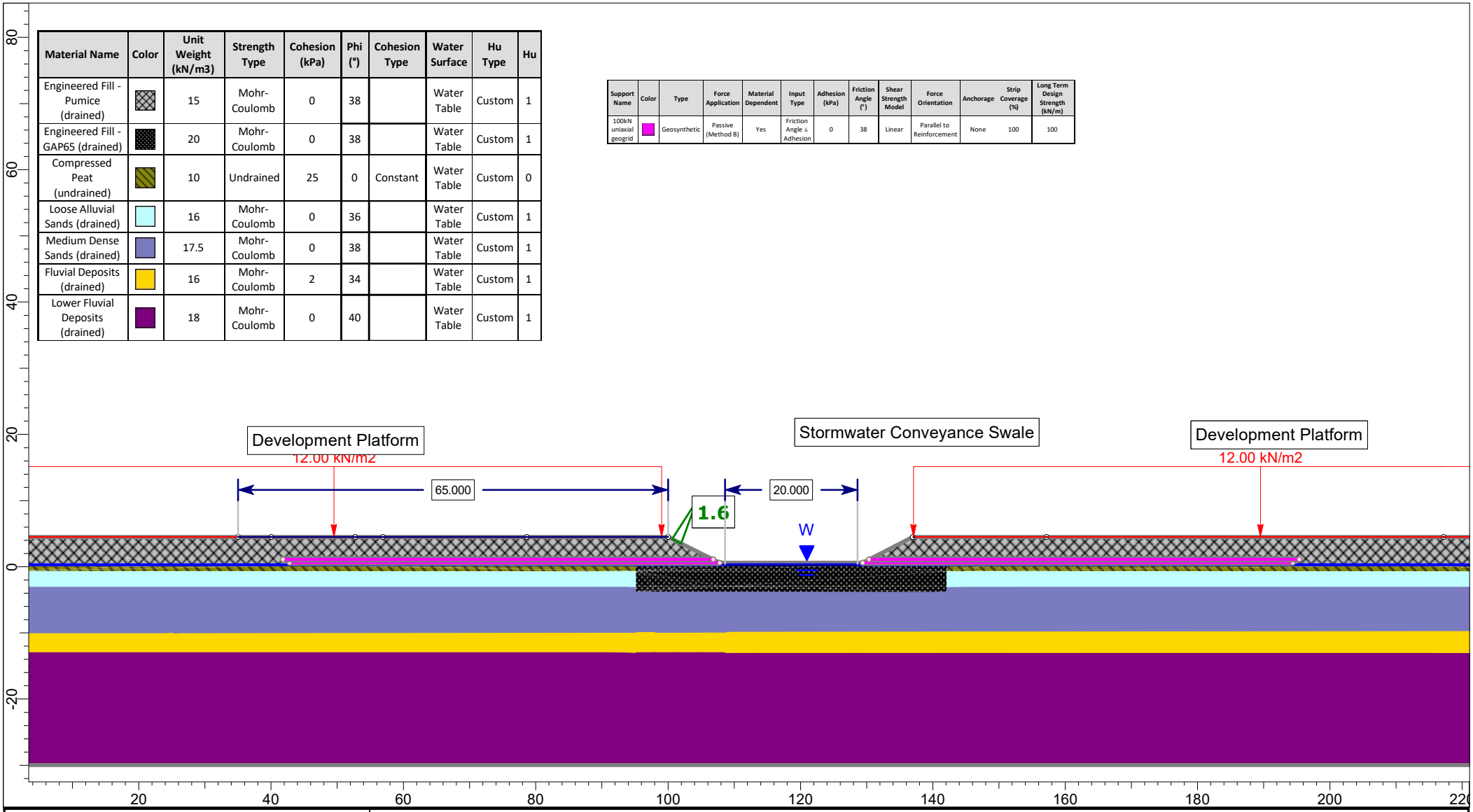
ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability
Analysis Description	Proposed Landform 20m Swale - Residential Loading, Static - Prevailing GW, Drained
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34		Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

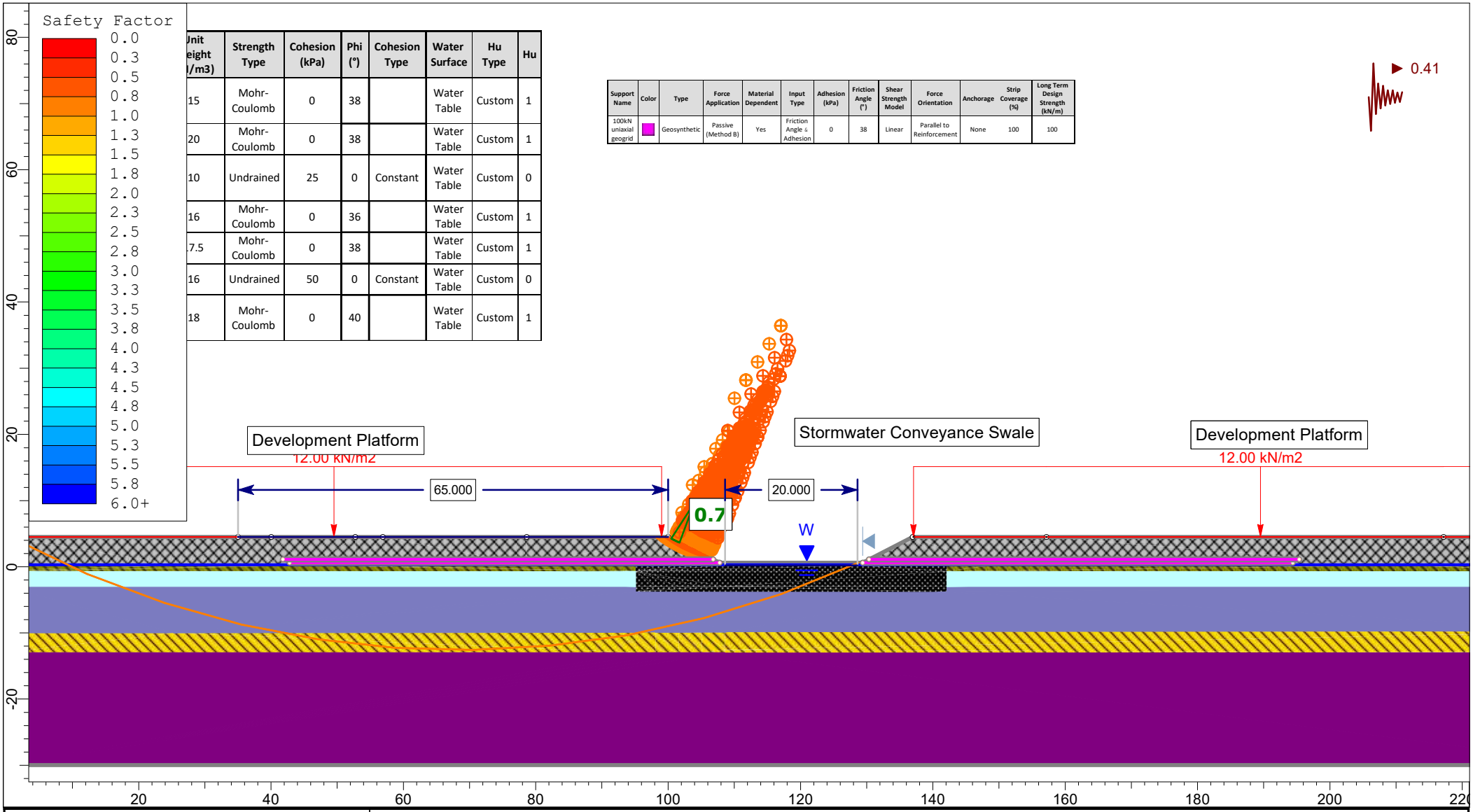
Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability
Analysis Description	Proposed Landform 20m Swale - Residential Loading, Static - Elevated GW, Drained
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd



Unit Weight (/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
15	Mohr-Coulomb	0	38		Water Table	Custom	1
20	Mohr-Coulomb	0	38		Water Table	Custom	1
10	Undrained	25	0	Constant	Water Table	Custom	0
16	Mohr-Coulomb	0	36		Water Table	Custom	1
7.5	Mohr-Coulomb	0	38		Water Table	Custom	1
16	Undrained	50	0	Constant	Water Table	Custom	0
18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100

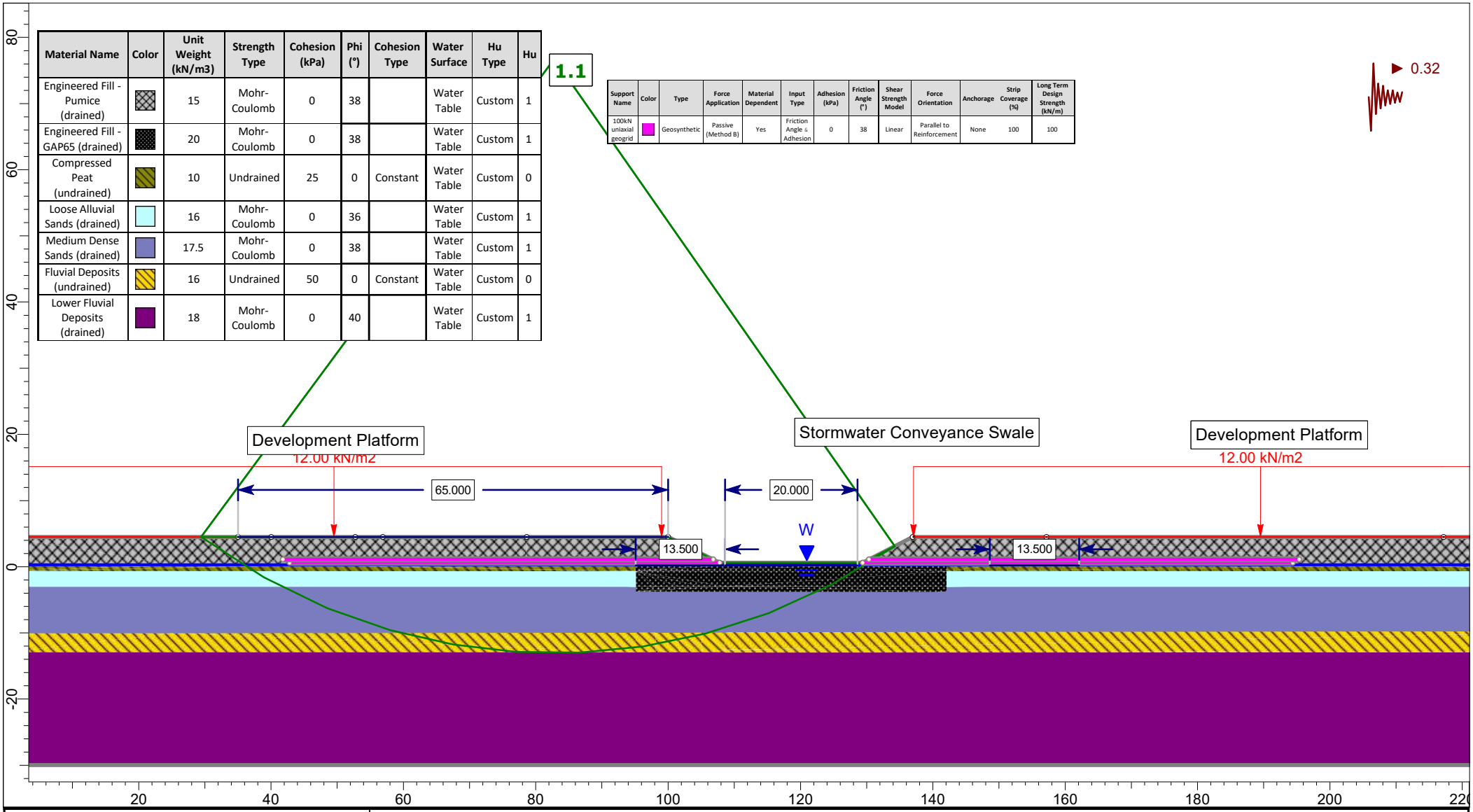
ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability		
Analysis Description	Proposed Landform 20m Swale - Residential Loading, Seismic - ULS, Undrained		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (undrained)		16	Undrained	50	0	Constant	Water Table	Custom	0
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100

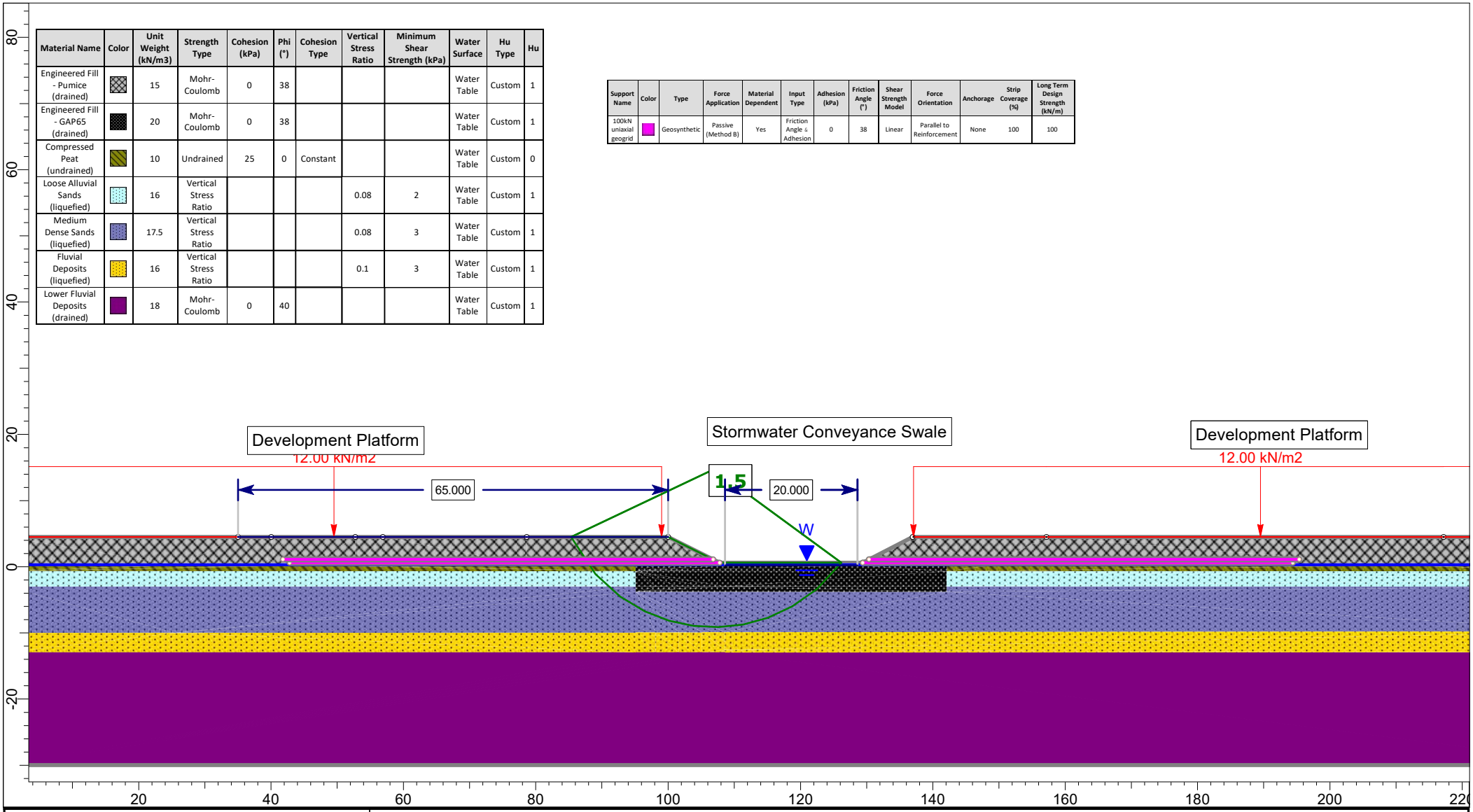


ENGEO	*Project*	Bell Road Development - Edge Stability	
	Analysis Description	Proposed Landform 20m Swale - Residential Loading, Seismic - Yield Acceleration, Undrained	
	Drawn By	GMS	*Client* ENGEO
	Date	10/2025	*File Name* Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

SLIDEINTERPRET 9.034

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38				Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Loose Alluvial Sands (liquefied)		16	Vertical Stress Ratio				0.08	2	Water Table	Custom	1
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	3	Water Table	Custom	1
Fluvial Deposits (liquefied)		16	Vertical Stress Ratio				0.1	3	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40				Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



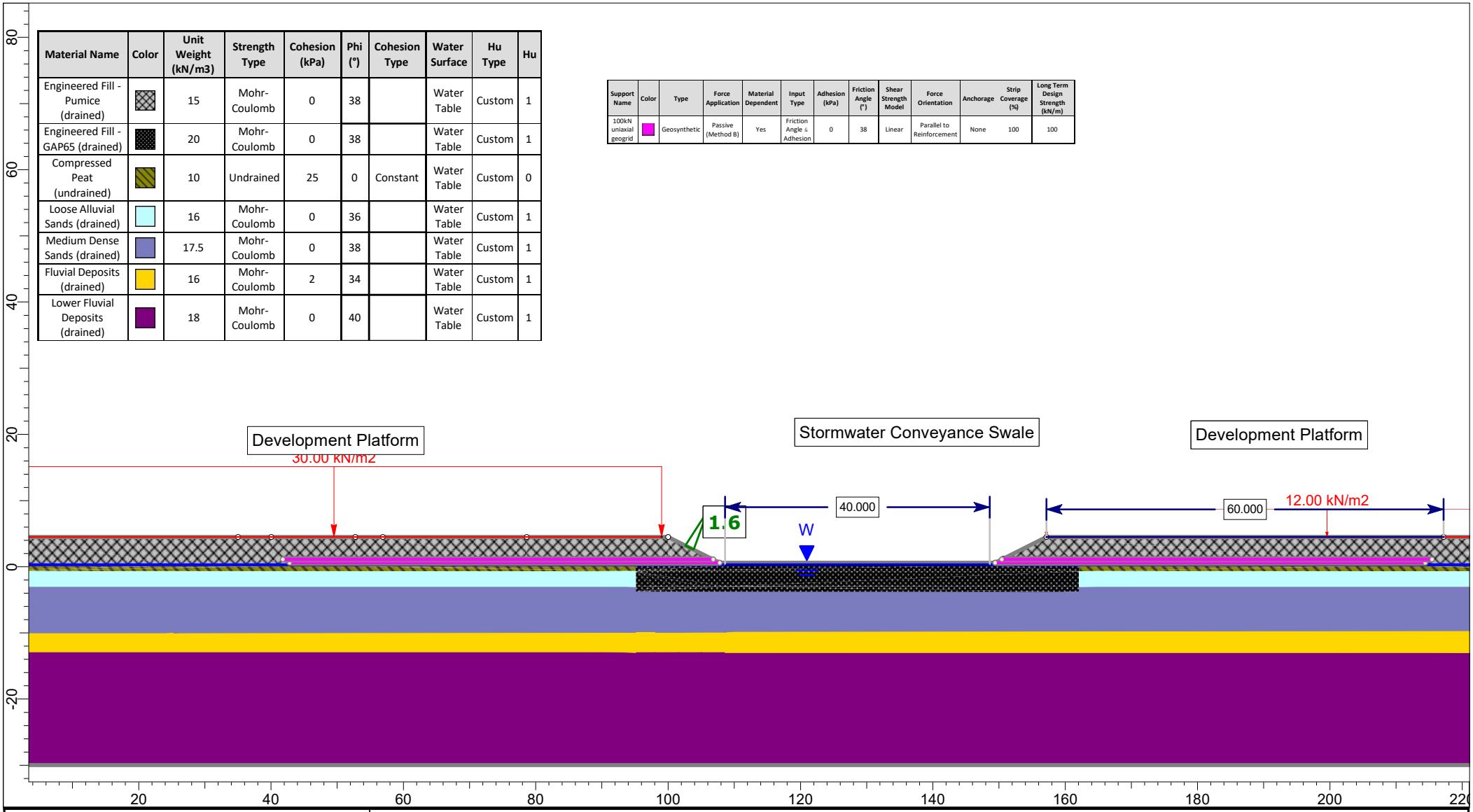
ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability		
Analysis Description	Proposed Landform 20m Swale - Residential Loading, Post Earthquake Liquefied Conditions		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34		Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



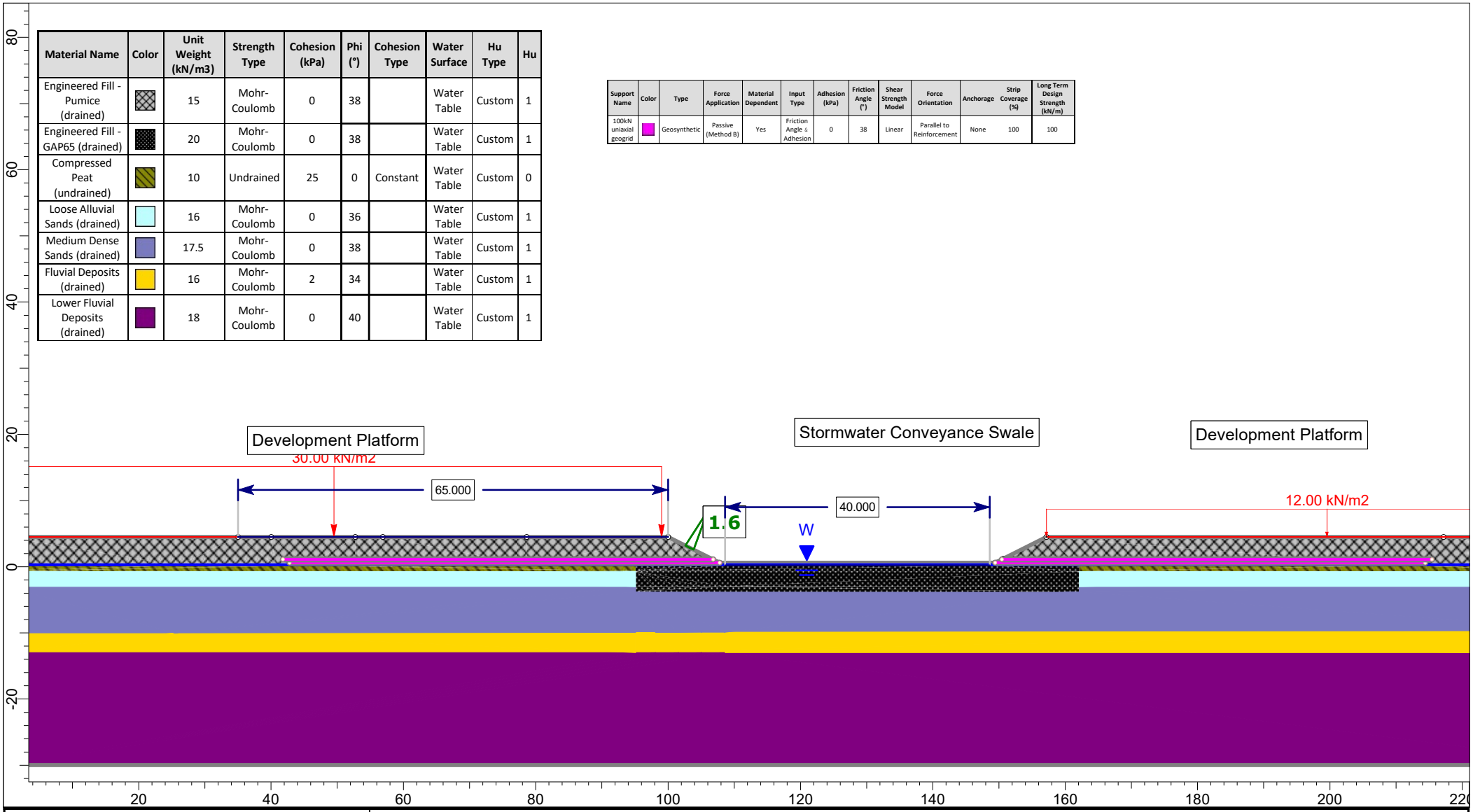
ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability
Analysis Description	Proposed Landform 40m Swale - Commercial Loading, Static - Prevailing GW, Drained
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34		Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



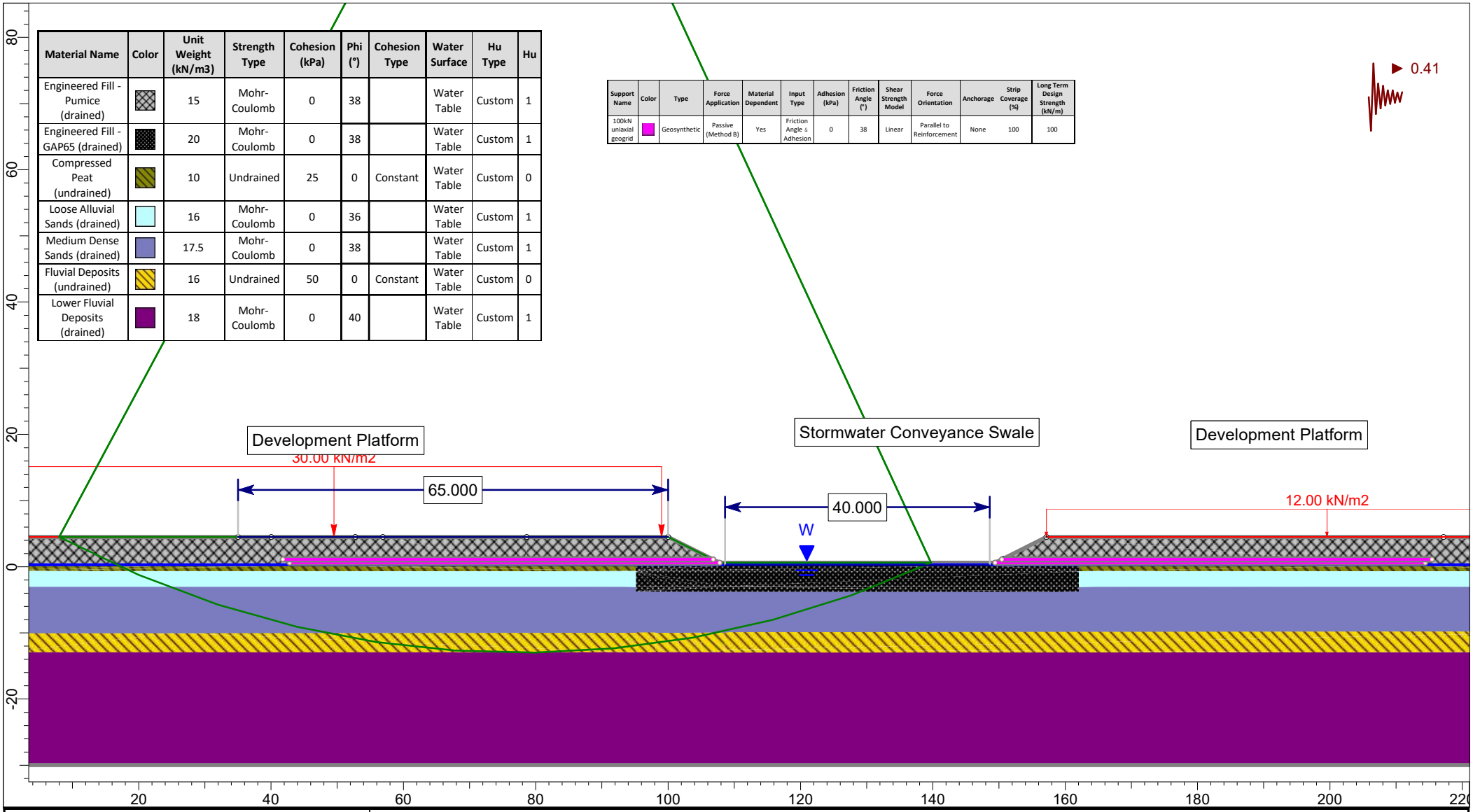
ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability
Analysis Description	Proposed Landform 40m Swale - Commercial Loading, Static - Elevated GW, Drained
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (undrained)		16	Undrained	50	0	Constant	Water Table	Custom	0
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



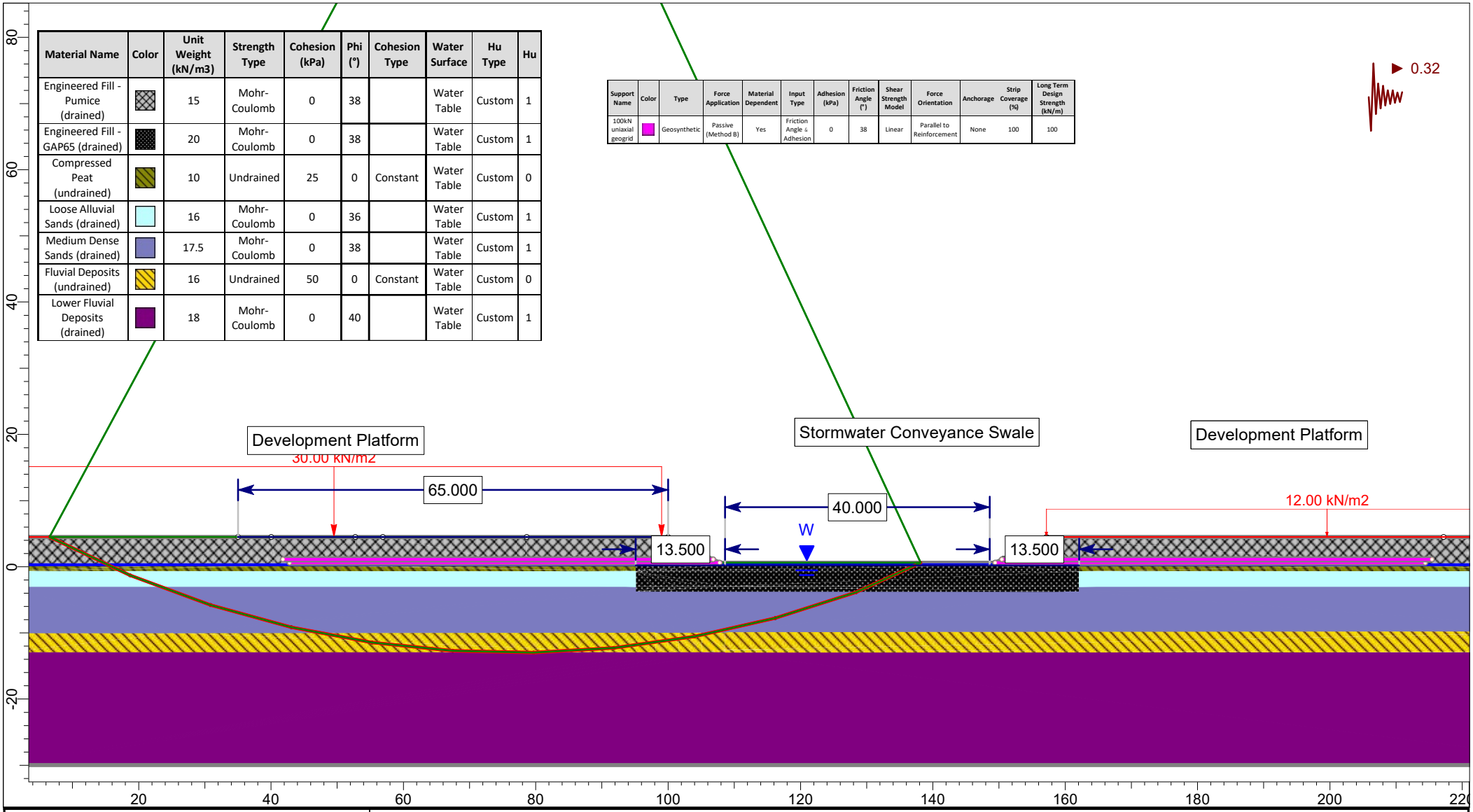
ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability		
Analysis Description	Proposed Landform 40m Swale - Commercial Loading, Seismic - ULS, Undrained		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (undrained)		16	Undrained	50	0	Constant	Water Table	Custom	0
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



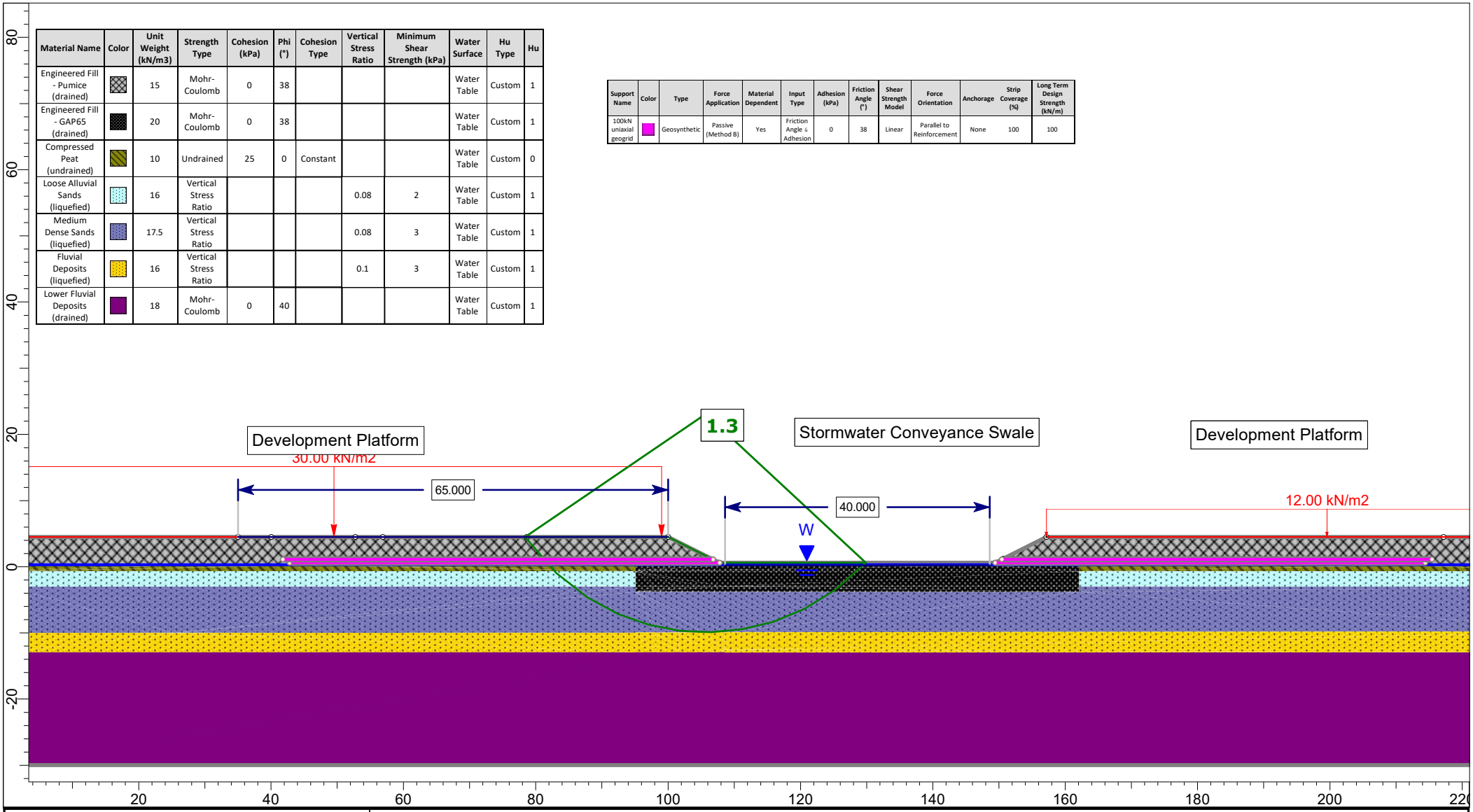
ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability		
Analysis Description	Proposed Landform 40m Swale - Commercial Loading, Seismic - Yield Acceleration, Undrained		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38				Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Loose Alluvial Sands (liquefied)		16	Vertical Stress Ratio				0.08	2	Water Table	Custom	1
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	3	Water Table	Custom	1
Fluvial Deposits (liquefied)		16	Vertical Stress Ratio				0.1	3	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40				Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



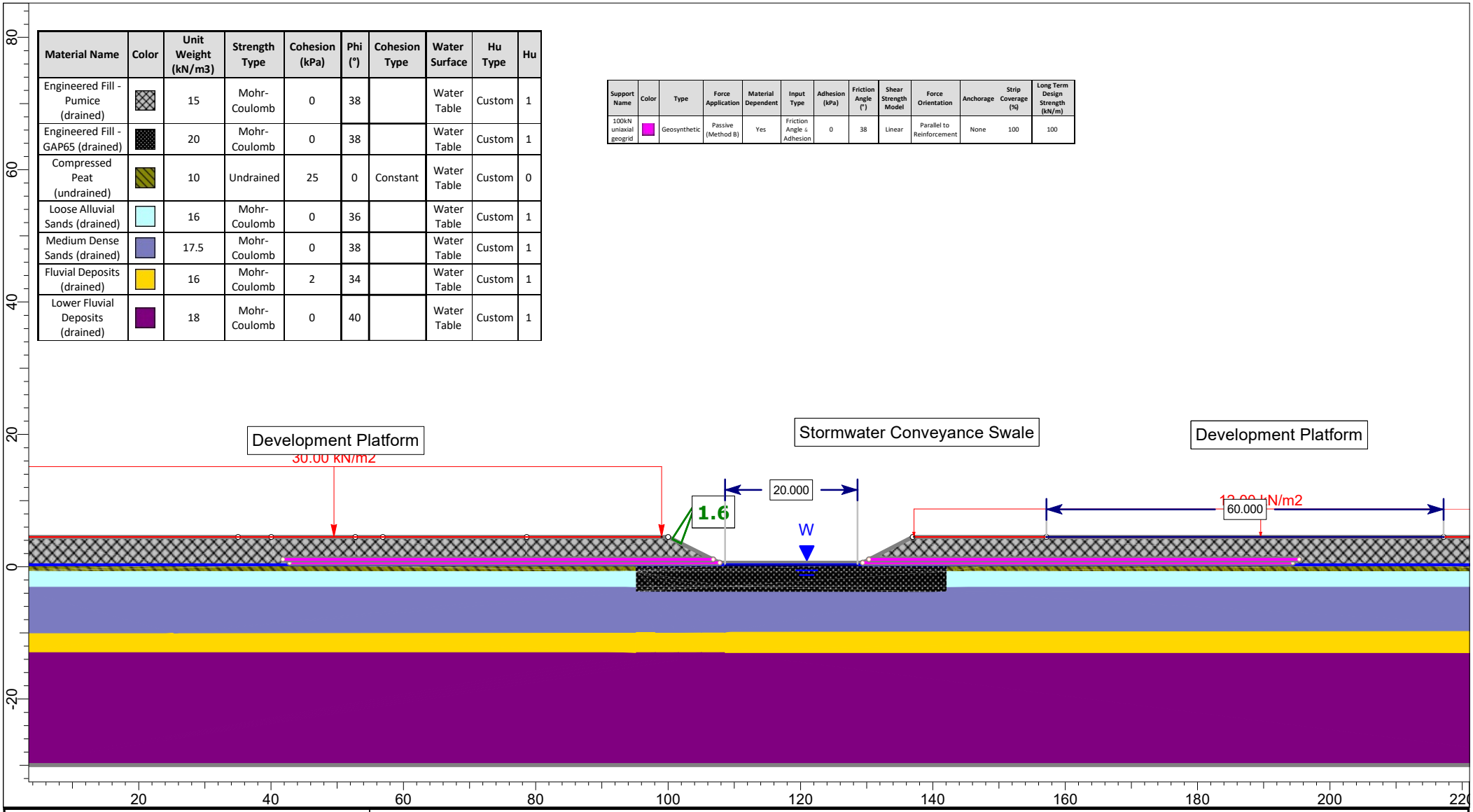
ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability
Analysis Description	Proposed Landform 40m Swale - Commercial Loading, Post Earthquake Liquefied Conditions
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34		Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



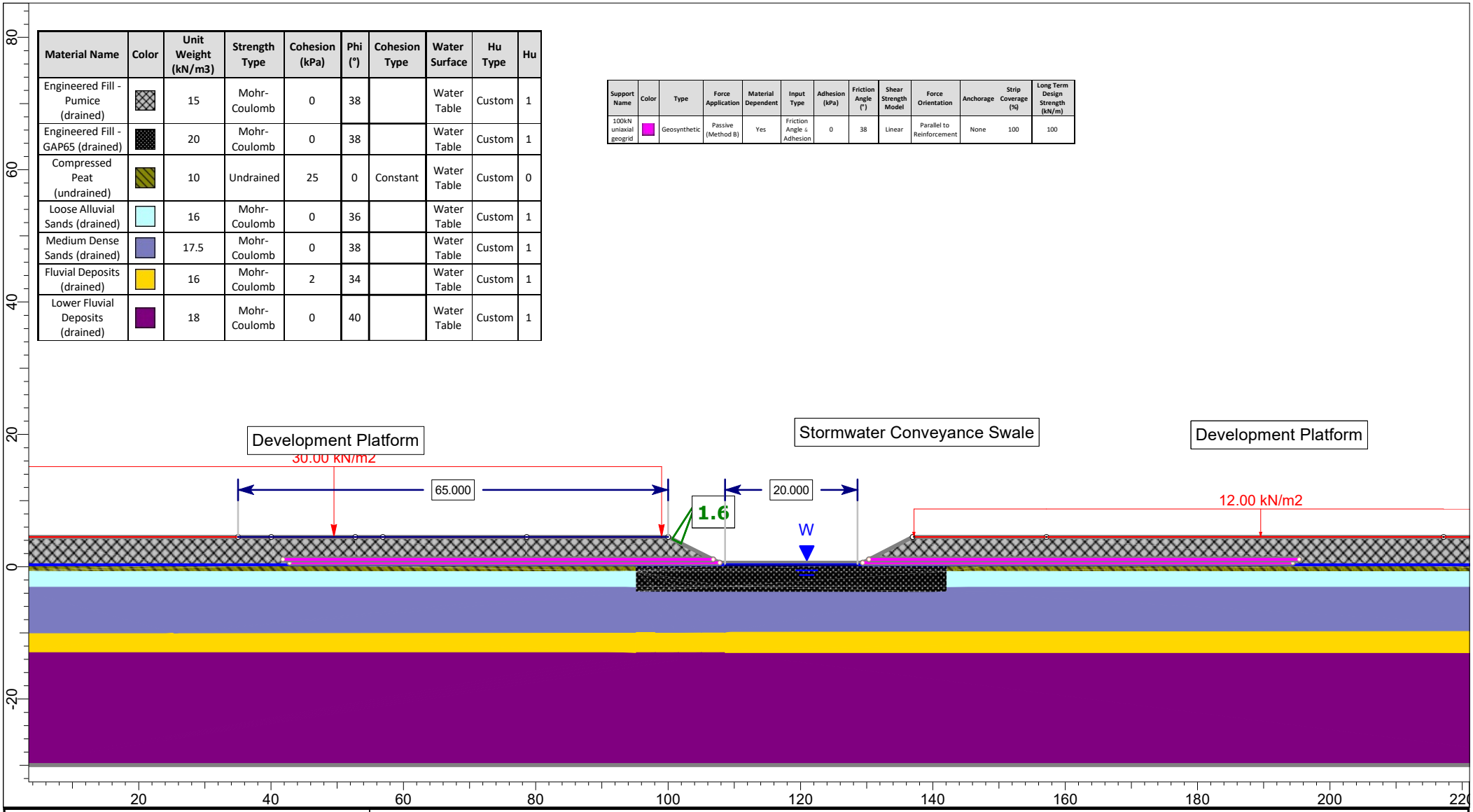
ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability
Analysis Description	Proposed Landform 20m Swale - Commercial Loading, Static - Prevailing GW, Drained
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (drained)		16	Mohr-Coulomb	2	34		Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



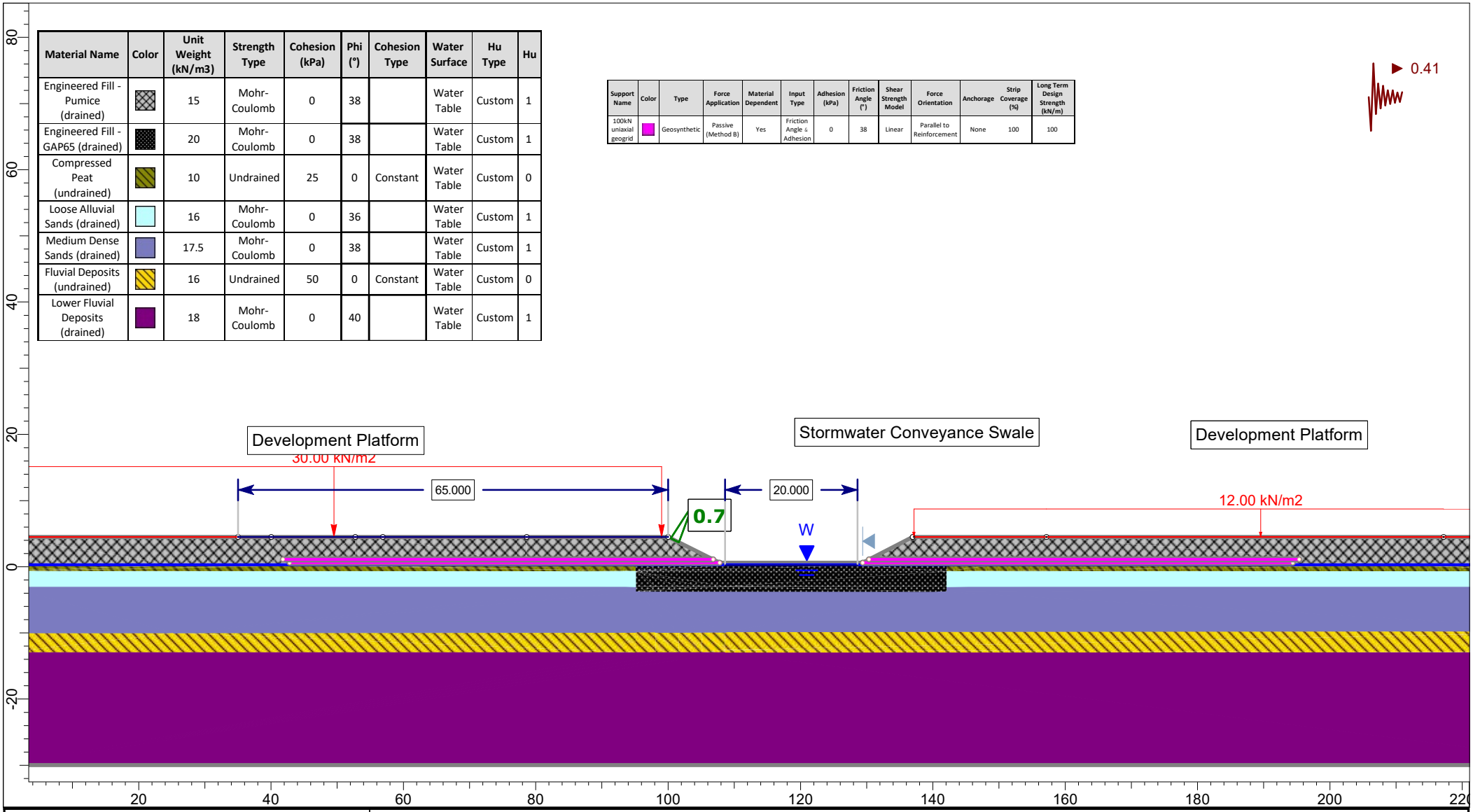
ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability
Analysis Description	Proposed Landform 20m Swale - Commercial Loading, Static - Elevated GW, Drained
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (undrained)		16	Undrained	50	0	Constant	Water Table	Custom	0
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability
Analysis Description	Proposed Landform 20m Swale - Commercial Loading, Seismic - ULS, Undrained
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38		Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38		Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant	Water Table	Custom	0
Loose Alluvial Sands (drained)		16	Mohr-Coulomb	0	36		Water Table	Custom	1
Medium Dense Sands (drained)		17.5	Mohr-Coulomb	0	38		Water Table	Custom	1
Fluvial Deposits (undrained)		16	Undrained	50	0	Constant	Water Table	Custom	0
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40		Water Table	Custom	1

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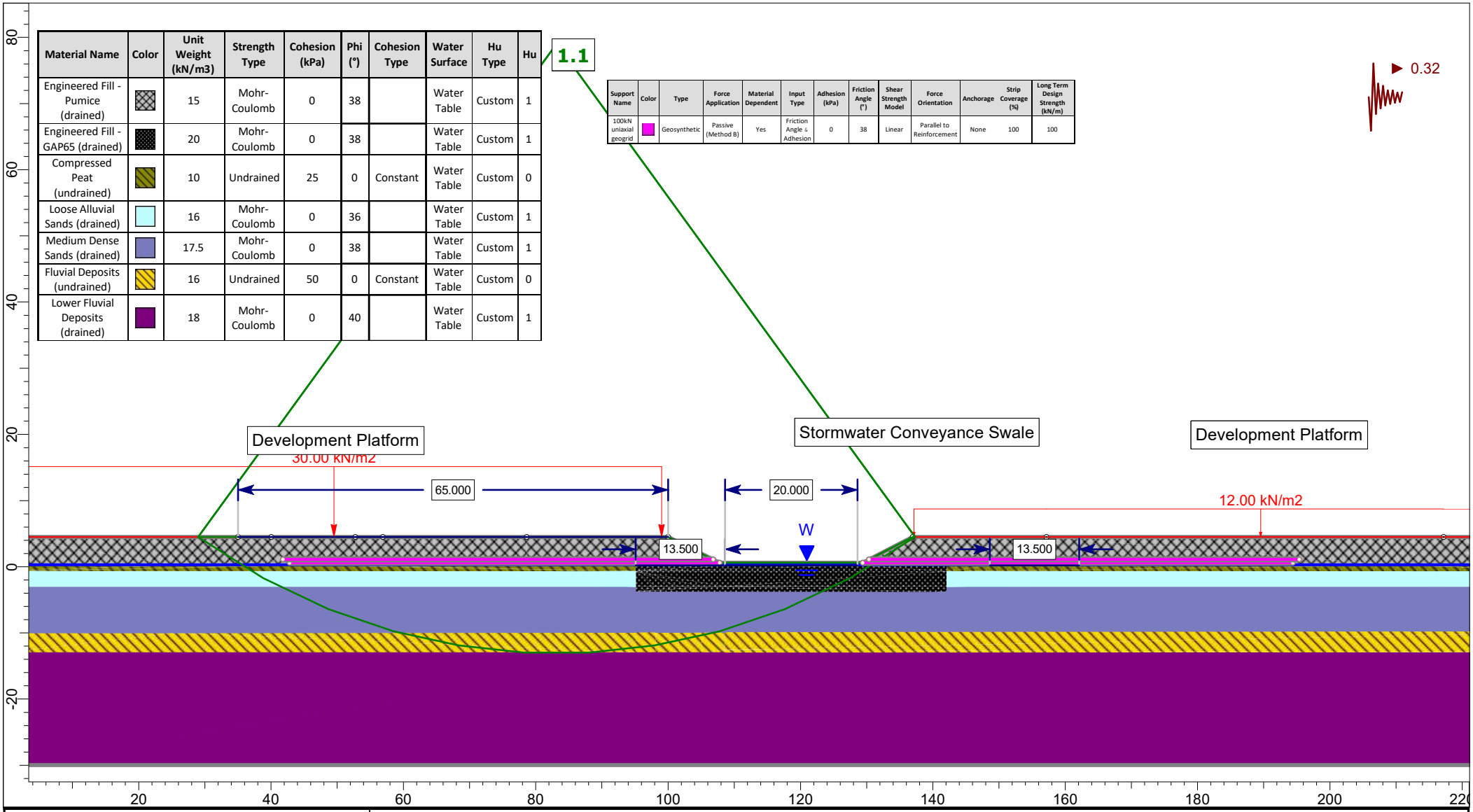
Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



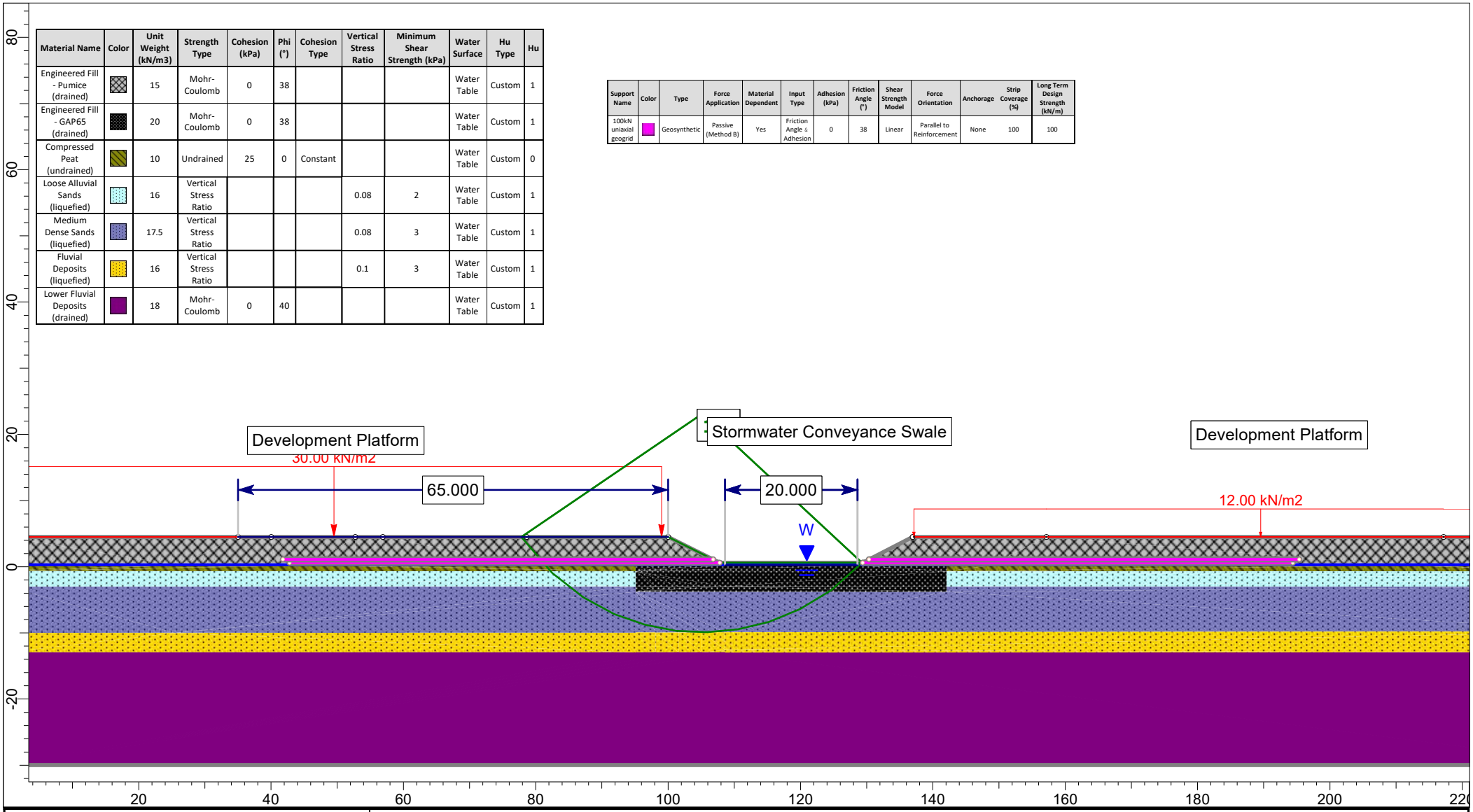
ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability		
Analysis Description	Proposed Landform 20m Swale - Commercial Loading, Seismic - Yield Acceleration, Undrained		
Drawn By	GMS	*Client*	ENGEO
Date	10/2025	*File Name*	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (°)	Cohesion Type	Vertical Stress Ratio	Minimum Shear Strength (kPa)	Water Surface	Hu Type	Hu
Engineered Fill - Pumice (drained)		15	Mohr-Coulomb	0	38				Water Table	Custom	1
Engineered Fill - GAP65 (drained)		20	Mohr-Coulomb	0	38				Water Table	Custom	1
Compressed Peat (undrained)		10	Undrained	25	0	Constant			Water Table	Custom	0
Loose Alluvial Sands (liquefied)		16	Vertical Stress Ratio				0.08	2	Water Table	Custom	1
Medium Dense Sands (liquefied)		17.5	Vertical Stress Ratio				0.08	3	Water Table	Custom	1
Fluvial Deposits (liquefied)		16	Vertical Stress Ratio				0.1	3	Water Table	Custom	1
Lower Fluvial Deposits (drained)		18	Mohr-Coulomb	0	40				Water Table	Custom	1

Support Name	Color	Type	Force Application	Material Dependent	Input Type	Adhesion (kPa)	Friction Angle (°)	Shear Strength Model	Force Orientation	Anchorage	Strip Coverage (%)	Long Term Design Strength (kN/m)
100kN uniaxial geogrid		Geosynthetic	Passive (Method B)	Yes	Friction Angle & Adhesion	0	38	Linear	Parallel to Reinforcement	None	100	100



ENGEO

SLIDEINTERPRET 9.034

Project	Bell Road Development - Edge Stability
Analysis Description	Proposed Landform 20m Swale - Commercial Loading, Post Earthquake Liquefied Conditions
Drawn By	GMS
Client	ENGEO
Date	10/2025
File Name	Swale Edge Stability - Option 4 Shallow Ground Improvement.slmd

APPENDIX 5:

Flood Modelling Analysis Outputs (Maven)

Please refer to ***Appendix H - Flood Modelling Report (Maven)*** in the appendices to the Wairakei South FastTrack Application