Resource Consent Applications for subdivision and land use for a rural lifestyle development at Horahora Road, Lake Karapiro

K & L Tylee

Applicant

South Waikato District Council

Consent Authority

STATEMENT OF EVIDENCE OF DAVE MOULE
PLANNING

Dated: 7 October 2026

Counsel Acting:
Phil Lang
Barrister
PO Box 19 539
Hamilton
Phone: 021 870 660
Email: phil@plang.co.nz

1. Witness Introduction, qualifications, experience

1.1 My full name is David James Moule. I am a planner and partner at Boffa Miskell Limited. I have more than 20 years' experience preparing and processing resource consent applications, plan changes and assessments of environmental effects for public and private sector clients.

1.2 I have the following qualifications and experience relevant to the subject matter of this evidence:

(a) Bachelor of Resource and Environmental Planning (Hons), Massey University, 2000;
(b) I am a Full Member of the New Zealand Planning Institute;
(c) I am an accredited hearings commissioner and have participated in Environment Court mediation and resource consent appeals;
(d) I have extensive experience preparing resource consent applications for large-scale residential housing developments, most recently Kaiapo Bay in Taupo, and Greenhill Park in Ruakura, Hamilton.

1.3 I was engaged by the Applicant to assist Cogswell Surveys (who prepared the original application) in providing post-notification planning advice and to prepare this evidence for the hearing. In doing so, I have reviewed the original application material, the post-notification addendum and supplementary information, the submissions and subsequent submitter responses, Council's responses to further information, and Council's s42A report, including recommended conditions.

2. Code of Conduct for expert witnesses

2.1 I have read the Code of Conduct for expert witnesses in the Environment Court Practice Note 2023. In preparation of this evidence I have complied with, and in the course of these hearing proceedings I will comply with, that Code of Conduct. My evidence is within my area of expertise except where I am relying on the evidence of another witness, as stated in my evidence. I have not omitted to consider any material fact known to me that might alter or detract from any opinion expressed.

3. Scope of evidence

3.1 My evidence addresses the following matters:

(a) Description and summaries of reports/other supporting documents that were prepared;
(b) Amendments to the Applicant's proposal since those earlier reports were prepared;
(c) Assessment of effects relating to the current proposal;
(d) Statutory assessment;
(e) Responses to submission points relevant to this evidence;
(f) Responses to s42A report issues relevant to this evidence;
(g) Conclusions

4. Description and summaries of reports/other supporting documents that have been prepared

The following report(s) relating to this application for resource consents have been previously prepared on behalf of the Applicant:

4.1 Subdivision Land Use Consent Application, prepared by Cogswell Surveys, dated 20 December 2024, including all supporting appendices;

4.2 General s92 response, prepared by Cogswell Surveys, dated 29 May 2025, and supporting technical assessments / responses;

4.3 Application addendum, prepared by Cogswell Surveys, dated 19 June 2026, including updated South Waikato District Plan Rule Assessment, updated Scheme Plans Rev I, revised Earthworks Cut and Fill Plans, Updated Assessment of Landscape Effects, Stormwater Management Plan Addendum, Ecological Effects Assessment Addendum, and revised Ecological Management Plan;

4.4 Updated Ecological Management Plan, prepared by Bluewattle Ecology, dated 17 September 2026.

5. Addendum to the Applicant's proposal

5.1 A substantive addendum to the proposal was prepared by Cogswell Surveys on behalf of the applicant, dated 19 June 2026. This followed notification of the application, receipt of submissions, further review of the proposal, and consultation with a number of submitters and technical

specialists, whereby the applicant has made a number of amendments to the scheme plan and supporting technical information.

5.2 The amendments are intended to respond constructively to matters raised through the process, particularly in relation to density, public access, earthworks, landform modification, ecological enhancement and landscape response.

5.3 The revised proposal is shown on the updated Rev I scheme plans and is supported by updated or additional technical material, including the revised Landscape and Visual Assessment prepared by Boffa Miskell, the Ecological Effects Addendum and updated Ecological Management Plan prepared by Bluewattle Ecology, and the revised earthworks cut and fill plans.

5.4 The key changes to the notified proposal are as follows:

i. The overall number of residential lots has been reduced to 73 lots.
ii. The layout and boundaries of a number of lots have been amended to achieve compliance with the average lot size requirements under SUB-R5(4)(a)(iii) and (iv).
iii. The revised proposal has an increased average lot size of approximately 5,668m².
iv. There are now 37 lots over 5,000m² and 36 lots under 5,000m², meaning that for every lot below 5,000m² there is a corresponding lot above 5,000m².
v. A 10m wide esplanade strip is now proposed along the Waikato River frontage, consistent with PA-R2 and PA-R3.
vi. Earthworks have been reduced and rationalised. Stage 1 remains generally as originally proposed. Stage 2 has been rationalised to approximately 20,000m³ cut to fill, and Stage 3 has been significantly reduced to approximately 12,000m³ cut to fill.
vii. No fill material is proposed to be imported to the site or transferred between stages. Each stage is now intended to be earthworks self-sufficient.

viii. The Stage 3 layout has been amended to retain the gully and existing landform, including natural terracing, as far as practicable.

ix. Additional land within Stage 3 is proposed to be protected, restored and managed as planted gully habitat.

5.5 The following table provides a comparison of the notified proposal versus the current proposal as amended for ease of reference:

Matter	Notified proposal	Current proposal	Planning consequence
Residential lots	81 lots	73 lots	Reduced intensity and increased capacity for open space, planting and habitat restoration.
Average lot size	Approximately 5,096 m²	Approximately 5,668 m²	Greater consistency with the Rural Lifestyle Zone density framework.
Lot averaging distribution	28 lots above 5,000 m² and 53 below	37 lots above 5,000 m² and 36 below	Now complies with SUB-R5(4)(a)(iv); removes the SUB-R4 non-complying trigger.
Overall subdivision status	Non-complying	Discretionary under SUB-R3(4)	Section 104D gateway no longer applies.
Stage 3	More intensive layout with extensive recontouring	Eight lots removed; layout substantially revised	Greater retention of gully, terraces and natural landform.
Earthworks	Higher cut and fill volumes, particularly Stage 3	Substantially reduced; stages intended to be earthworks self-sufficient	Reduced construction traffic, dust, noise, sediment risk and permanent landform modification.
Ecology	Restoration and management proposed	Additional approximately 1.437 ha gully restoration and wider habitat linkage; updated EMP	Improved habitat connectivity and indigenous vegetation outcomes, subject to legal protection and maintenance.
Public access	No complying esplanade strip	10 m esplanade strip along Waikato River frontage	Complies with PA-R2 and PA-R3 and strengthens public access outcomes.
Landscape mitigation	Landscape Masterplan and design controls	Revised planting, setbacks, lower built-form controls and landform response	Reduces effects, provided the full package is secured and independently enforceable.
Stormwater	Integrated on-lot and shared devices	Stage 3 design revised, including Swale 13 and a culvert beneath Road 1	Maintains drainage function but ownership and long-term maintenance require clear conditions and legal instruments.
Wastewater	Individual secondary treatment and land disposal	Unchanged	Each lot must demonstrate sufficient primary and reserve disposal area and relevant setbacks.

5.6 For clarity, the application does not seek consent for secondary dwellings or “granny flats”. Any future secondary dwelling would require separate consideration under the relevant District Plan provisions at the time it is proposed. The application is based on rural-residential subdivision, with future development anticipated to comprise no more than one residential unit per residential lot, together with any associated accessory building where provided for by the District Plan or by any conditions of consent.

5.7 The Applicant has also made further revisions to the Scheme Plans to address matters raised by submitters and in Council’s s42A report and also ensure alignment with the technical evidence. The updated Scheme Plans, prepared by Cogswell Survey, dated 6 October 2026, Revision J, are attached to this evidence as **Appendix A**. The primary changes include:

- Sight line consent notice areas for all entrances and intersections
- Changes the easements in gross for stormwater to consent notice areas
- Introduces a viewshaft/no build area on Lot 16 as a result of consultation with Ngati Koroki Kahukura
- Removes reference to covenants for the protected ecological areas and instead they are consent notices only.

6. Effects Assessment of the current proposal.

6.1 As outlined above, the current proposal has been amended from the scheme that was publicly notified.

6.2 The key change to the District Plan rule assessment (as identified in Appendix A of the Addendum dated 19 June 2026) is that the proposal now complies with the average lot size requirements under SUB-R5(4)(a)(iii) and (iv). The proposal provides 73 residential lots with an average lot size of approximately 5,668m². There are 37 lots above 5,000m² and 36 lots below 5,000m². Accordingly, the proposal now satisfies the averaging standard, as each lot below 5,000m² is balanced by a lot above 5,000m². As a result, the proposal no longer triggers non-complying activity status under SUB-R4 in relation to the average lot size standard.

6.3 The proposal also now includes a 10m wide esplanade strip along the Waikato River frontage. This addresses the requirements of PA-R2 and PA-R3, which require an esplanade strip for public access where land being subdivided adjoins the Waikato River, with a standard width of 10m.

6.4 The overall subdivision is therefore now assessed as a Discretionary Activity under the South Waikato District Plan, including because the site adjoins the Waikato River and hydro-electric power operating easements.

Density and subdivision layout

6.5 The reduction in the number of residential lots, together with the corresponding increase in average lot size, directly and substantively addresses the concerns previously identified regarding density and the intensity of rural-residential development within this Outstanding Natural Landscape.

6.6 I acknowledge that the site is specifically zoned to provide for rural-lifestyle development. The proposal is consistent with that anticipated land use. Further, the reduced development yield and reconfiguration of Stage 3 provide a more conservative response to the characteristics and sensitivities of the site. In my opinion, the layout achieves an appropriate balance between enabling rural-lifestyle development, retaining the underlying landform, providing for ecological restoration, and integrating the development within the surrounding landscape.

6.7 The proposed layout does not, in my opinion, exhibit an unduly linear pattern of development along Horahora Road. Rather, it provides a generally clustered and consolidated rural-residential form, while retaining a degree of separation and dispersal between individual lots. The grouping of lots around internal access and roading arrangements limits the development's visual and functional relationship with Horahora Road and avoids a proliferation of individual vehicle crossings. The layout also retains more of the underlying landform and provides greater opportunities for ecological restoration and landscape mitigation. Collectively, these features provide for an integrated, legible and coherent subdivision pattern that

responds appropriately to the existing landscape character and limits the development's influence on the wider Outstanding Natural Landscape.

6.8 Overall, I consider that the proposal responds directly to the principal concerns regarding development density, landscape integration and subdivision form. The material reduction in lot numbers, increased average lot size and reconfiguration of Stage 3 significantly reduce the overall scale, intensity and visual presence of development within the Outstanding Natural Landscape.

6.9 I consider that the proposal will adequately mitigate the potential adverse landscape effects arising from the subdivision and subsequent residential development. While the development will result in an evident change to the site, that change must be considered in the context of the site's zoning, which specifically anticipates rural-lifestyle development. In my opinion, the proposal represents an appropriate landscape and planning response to that zoning and will not detract materially from the values and characteristics that contribute to the identification of the wider landscape as outstanding.

Landscape, natural character and visual effects

6.10 Having reviewed the Applicant's updated Landscape and Visual Assessment, Council's peer review and the section 42A report, I acknowledge that the proposal will result in a substantial and permanent change from an open pastoral landscape to rural-residential development within the Horahora Outstanding Natural Landscape. However, the Rural Lifestyle Zone anticipates rural-residential development, and the proposal responds to the site's landscape and natural character values through a generally clustered and consolidated development pattern, limited earthworks, retention of the principal gullies and natural terraces, setbacks from the Waikato River, indigenous restoration planting, an esplanade strip, and controls over future buildings and external appearance. These measures will moderate the scale and visual presence of development and assist its integration with the landform, River margin and wider rural landscape.

6.11 Guided by the landscape evidence, I consider that the proposal achieves an appropriate balance between enabling the development anticipated by the underlying zoning and protecting the Outstanding Natural Landscape and natural character values of the receiving environment. While the proposal will result in a discernible change, the proposed lot sizes and layout, landscape mitigation, ecological restoration, building setbacks and design controls provide a comprehensive framework for managing its landscape, natural character and visual effects. Subject to these measures being secured, implemented and maintained through appropriate consent conditions and appropriate legal instruments, I consider that the proposal will not materially compromise the values and characteristics that contribute to the identification of the wider landscape as outstanding, and that these effects are acceptable within the applicable planning context and the receiving environment.

Ecological effects

6.12 The site is predominantly modified pasture of low ecological value. Its principal ecological values comprise long-tailed bat habitat associated with the Waikato River margin and stream-link gully, the natural wetland within Lot 37, the tributary stream, and associated river-margin habitat. The proposal retains and protects these features and provides approximately 3.07 hectares of indigenous restoration, including approximately 1.44 hectares of additional gully linkage planting within Areas BA–BC.

6.13 The restoration planting will strengthen ecological connectivity between Horahora Road, the gully system and the Waikato River margin. It will also increase indigenous vegetation cover, buffer the wetland and waterways, and improve habitat for indigenous fauna. Of particular significance, the restored gullies and retained river-margin vegetation will provide connected commuting and foraging habitat for long-tailed bats, which are the ecological value most sensitive to the proposal.

6.14 No natural inland wetland will be lost or drained. Earthworks and vegetation clearance will be located more than 10 metres from the wetland, stormwater will not discharge to it, and approximately 0.71 hectares of restoration planting is proposed within the adjoining recreation reserve. Minimal mature vegetation, and virtually no indigenous vegetation, will be removed. The ecology evidence assesses the resulting vegetation and wetland effects as very low, with a likely net ecological gain following restoration.

6.15 The Ecological Management Plan provides the principal framework for managing construction and operational effects. It includes protection of retained and restored habitats, bat-sensitive lighting standards and roost-tree protocols, vegetation-clearance controls, a lizard accidental discovery protocol, indigenous planting, perpetual pest plant and animal control, and a prohibition on domestic cats. Subject to these measures being secured through consent conditions and enduring legal instruments, the ecology evidence assesses residual effects on bats, freshwater habitat and lizards as low or negligible, and effects on birds and vegetation as very low.

6.16 Overall, guided by the ecology evidence, I consider that the proposal will appropriately avoid or manage adverse ecological effects while providing enduring improvements to habitat extent, condition and connectivity. Subject to implementation of the Ecological Management Plan and the recommended consent conditions, the proposal is expected to result in a net gain for indigenous biodiversity along this reach of the Waikato River, with adverse ecological effects reduced to a low or negligible residual level

Public access and Waikato River frontage

6.17 The revised proposal includes a 10-metre-wide esplanade strip along the Waikato River frontage. In my opinion, this represents a positive and material amendment to the proposal. It responds directly to the relevant public access provisions of the District Plan and establishes an appropriate legal mechanism to enable improved public access along the river margin in the future.

6.18 The proposed esplanade strip also provides greater alignment with the objectives and policies of the District Plan that seek to maintain and enhance public access to and along the Waikato River. Importantly, it secures the opportunity for future access as part of the subdivision, while allowing the detailed design, timing, maintenance and management of that access to be addressed through the esplanade instrument and, where appropriate, conditions of consent.

6.19 Overall, I consider that the inclusion of the esplanade strip appropriately recognises the public access and recreational values associated with the Waikato River margin. It represents a clear improvement over the earlier proposal and provides an appropriate framework for securing and managing future public access in a manner that responds to the characteristics and operational requirements of the site.

Stormwater

6.20 The proposal adopts a low-impact stormwater management approach incorporating rainwater tanks, on-site soakage and grassed swales. Within Stage 3, the existing gully will be retained as a planted reserve and secondary flow path, supported by a 750 mm culvert beneath Road 1 and the realignment of Swale 13.

6.21 The updated modelling confirms that the proposed system can accommodate the relevant design events. Residual flood risk will be managed through the identification of suitable building platforms, minimum floor levels and the protection of overland flow paths. Final swale geometry, road crossings and erosion protection will be confirmed through detailed engineering design.

6.22 Stormwater infrastructure located on private lots will remain the responsibility of the relevant landowners, with consent notices securing ongoing maintenance obligations and protecting overland flow paths from buildings and earthworks. The Road 1 culvert will be managed by Council.

6.23 Having reviewed and been guided by the stormwater evidence, I consider that the proposed approach provides an appropriate and technically supported framework for managing stormwater quality, quantity, erosion and flood risk. Subject to certification of the final design and these requirements being secured through appropriate consent conditions, I consider the resulting stormwater effects to be acceptable.

Wastewater

6.24 A wastewater assessment has been prepared by GWE Consulting Engineers and is attached to this evidence as **Appendix B**. It confirms that each of the 73 residential lots can accommodate an on-site secondary wastewater treatment system, together with primary and reserve land-disposal areas. The assessment adopts conservative assumptions based on a five-bedroom dwelling, a design discharge of 1,440 litres per day and Category 3 soils. The available disposal area on each lot exceeds the maximum indicative requirement of 540 m².

6.25 The assessment identifies appropriate setbacks from Lake Karapiro, the unnamed stream, property boundaries, groundwater and the top of bank. Disposal fields must also be located outside unsuitable fill and upgradient or cross-gradient of stormwater infrastructure. The Panel should be satisfied that these spatial requirements, together with primary and reserve disposal areas can be designed and verified through lot-specific wastewater design before residential development occurs at the time of building consent.

6.26 Subject to secondary treatment systems meeting the required effluent standards, site-specific design and certification, and ongoing monitoring and maintenance, the assessment concludes that discharges can comply with Rule 3.5.7.6 of the Waikato Regional Plan as permitted activities. Effects on surface water, groundwater, soils, public health and amenity are assessed as less than minor and confined to the relevant lots.

6.27 Having reviewed and been guided by the wastewater assessment, I consider that the proposal provides a technically feasible and appropriately

conservative framework for on-site wastewater servicing. Subject to the identified design parameters being captured in a consent notice, I consider the resulting wastewater effects to be acceptable.

Earthworks and temporary construction effects

6.28 The proposed earthworks are limited to those necessary to construct the roading and stormwater infrastructure, together with localised works required to address existing ponding. Within Stage 3, the earthworks footprint retains a substantial proportion of the existing gully, natural terraces and broader landform. In my opinion, this constitutes an appropriately site-responsive approach that avoids unnecessary modification of the existing landform.

6.29 The proposed methodology does not require imported fill or the transfer of excavated material between stages. Any temporary stockpiles will be located within the stage from which the material is excavated. This approach will limit heavy vehicle movements, material handling, exposed soil, dust and noise, while also reducing the potential for sediment generation and discharge.

6.30 Overall, I consider that the scale, duration and extent of the proposed earthworks are appropriate in the context of the subdivision and can be effectively managed within each stage. Subject to the implementation of the proposed construction management, erosion and sediment control, dust and noise measures, I consider the resulting earthworks and temporary construction effects to be acceptable and not significant.

Traffic effects

6.31 The transportation evidence confirms that the proposal is expected to generate approximately 621 vehicle movements per day and 80 movements during the peak hour. Horahora Road will continue to operate well within its available capacity, and the proposal will not alter its function or classification. The operational effects on Horahora Road are assessed as less than minor.

6.32 The evidence identifies existing road-safety concerns, particularly the crash history associated with the out-of-context bend and increased operating speeds. However, the additional traffic generated by the proposal is not expected to result in a significant increase in road-safety risk. The proposed delineation and warning improvements, compliant sight distances, access gradients and right-turn treatments provide an appropriate mitigation response.

6.33 The modelling also indicates that the proposal will have a negligible effect on the operation of the State Highway 1 intersection and the single-lane Pokaiwhenua Bridge. The proposed widening and re-alignment of the Waikato River Trail, together with visibility splays and controls on planting and fencing at crossings, will appropriately manage interactions between vehicles and trail users. Construction traffic associated with subdivision works and relocation of the Trail can be managed through a Construction Traffic Management Plan as part of the wider Construction Management Plan.

6.34 Having reviewed and been guided by the transportation evidence, I consider that the road network has sufficient capacity to accommodate the proposal and that safe access can be provided. Subject to the recommended road-safety works, access standards, Trail improvements and construction traffic controls being secured through appropriate conditions, I consider the transportation effects to be no more than minor.

7. Statutory Assessment against the relevant objectives and policies

7.1 The original application assessed the proposal against the relevant national, regional and district planning provisions identified in the AEE. I have reviewed that assessment, together with Council's section 42A report. I do not seek to duplicate those assessments. Rather, the following section summarises the higher-order provisions and considerations that I consider most material to the Panel's determination of the proposal, including relevant national instruments introduced or amended since the application was lodged.

7.2 The principal higher-order instruments are Te Ture Whaimana o Te Awa o Waikato, the relevant national policy statements and national environmental standards, and the Waikato Regional Policy Statement.

Te Ture Whaimana o Te Awa o Waikato

7.3 Te Ture Whaimana o Te Awa o Waikato is the primary direction-setting document for the Waikato River and activities within its catchment that affect the Waikato and Waipā Rivers. It requires the restoration and protection of the River's health and wellbeing, together with the relationships of Waikato River iwi with the River according to their tikanga and kawa. The Panel's assessment must therefore consider whether the proposal, viewed as a whole, supports or undermines those outcomes.

7.4 In my opinion, the revised proposal is not contrary to Te Ture Whaimana. In particular, it:

- reduces the scale and intensity of development, earthworks and landform modification;
- retains a greater proportion of the gully system and natural terraces;
- provides approximately 1.437 hectares of protected indigenous restoration;
- strengthens ecological connectivity between the gullies and the Waikato River margin;
- manages stormwater, sediment and construction-related effects;
- increases the separation between development and the River; and
- establishes a 10-metre-wide esplanade strip along the River frontage.

7.5 Collectively, these measures provide an integrated response to the River and its margins. They will reduce the potential for environmental degradation, improve indigenous habitat and ecological connectivity, and establish an enduring framework for restoration and management.

7.6 Te Ture Whaimana also requires particular consideration of the cultural and spiritual relationships of mana whenua with the Waikato River, including whakapapa, tikanga, kawa, kaitiakitanga and mauri. In my opinion, the proposal will not prevent or materially diminish those relationships or the

exercise of kaitiakitanga. However, ecological restoration and public access are not substitutes for continued engagement with mana whenua.

7.7 The applicant will continue to engage with mana whenua to inform detailed implementation, including the management of the esplanade strip, restoration planting, ecological measures, accidental discovery protocols and relevant consent conditions. This is also consistent with the District Plan provisions requiring the relationships of Raukawa and Te Arawa River Iwi with the district's landscapes to be recognised and provided for.

7.8 Overall, subject to the proposed mitigation and management measures being secured through consent conditions, I consider that the proposal will not undermine the mauri of the Waikato River, inhibit the exercise of kaitiakitanga, or impede the restoration and protection outcomes sought by Te Ture Whaimana. It is therefore not contrary to Te Ture Whaimana or the related District Plan provisions, including RLZ-O3, NFL-O4, NFL-O5, NFL-P5, NFL-P6 and SUB-P13.

National Policy Statement for Freshwater Management and National Environmental Standard for Freshwater

7.9 The National Policy Statement for Freshwater Management 2020 and the National Environmental Standards for Freshwater are relevant because the site contains a natural inland wetland, gullies and waterways and forms part of the Waikato River catchment. The proposal retains these features and does not involve the loss or drainage of the identified wetland. The proposed setbacks, stormwater treatment, erosion and sediment controls, and ecological restoration will assist in maintaining freshwater values. I understand that no additional resource consent is required under the National Environmental Standards for Freshwater.

National Policy Statement for Indigenous Biodiversity 2023

7.10 The National Policy Statement for Indigenous Biodiversity 2023 is relevant to the indigenous vegetation and habitats used by indigenous fauna, including long-tailed bats. The proposal retains existing habitat and

provides indigenous planting, improved ecological connectivity, pest management, lighting controls and vegetation-clearance protocols. Subject to these measures being secured through the Ecological Management Plan, consent conditions and appropriate legal instruments, I consider the proposal to be consistent with the relevant direction of that National Policy Statement.

National Policy Statement for Natural Hazards 2025

7.11 The National Policy Statement for Natural Hazards 2025 requires a risk-based approach proportionate to the nature and severity of the relevant natural hazard risks. The technical assessments identify a low residual risk, subject to restrictions on development adjacent to the riverbank and steep slopes, together with site-specific geotechnical investigation and design. On that basis, I consider the proposal to be consistent with the relevant objective and policies of that instrument.

National Policy Statement for Infrastructure 2025

7.12 The National Policy Statement for Infrastructure 2025 is relevant to the provision of infrastructure required to service the subdivision and to the adjoining hydro-electric power operating easements. The proposal provides for the progressive delivery of roads, access and servicing infrastructure through each stage. Subject to enduring ownership and maintenance arrangements for private stormwater infrastructure and continued access to the adjoining hydro-electric infrastructure, I consider the proposal to be consistent with the relevant direction of that National Policy Statement.

Waikato Regional Policy Statement

7.13 The provisions of the Waikato Regional Policy Statement that I consider most relevant are:

- **SRMR-I4, UFD-O1 and UFD-P1**, relating to the built environment and planned and coordinated development;
- **IM-O9 and IM-P5**, relating to amenity values;
- **NATC-O1 and NATC-P1**, relating to natural character;

- **NFL-O1 and NFL-P1**, relating to outstanding natural features and landscapes;
- **ECO-O1, ECO-P1 and ECO-P2**, relating to ecological integrity and indigenous biodiversity;
- **IM-O4 and LF-P5**, relating to the health and wellbeing of the Waikato River and its catchment; and
- **IM-O7, IM-P3 and HCV-P2**, relating to the relationship of tangata whenua with the environment and taonga.

7.14 The proposal provides for rural-residential development on land zoned for that purpose. It complies with the applicable density provisions and integrates staged infrastructure delivery with ecological restoration, landscape mitigation and the management of freshwater effects. I therefore consider the proposal to be consistent with SRMR-I4, UFD-O1 and UFD-P1.

7.15 The proposal will result in a permanent change to the rural character of the site. However, its clustered form, lot sizes, retention of natural landform, internal roading, planting and controls over future buildings will assist in integrating development with the receiving environment and maintaining rural amenity. In my opinion, the proposal is consistent with IM-O9 and IM-P5.

7.16 The proposal avoids works within the Waikato River and retains the principal terraces, gullies and river-margin landform. The proposed setbacks, restoration planting and esplanade strip will provide further protection for the River margin. I consider that these measures provide an appropriate response to NATC-O1 and NATC-P1.

7.17 The proposal will alter part of the Horahora Outstanding Natural Landscape. However, the generally clustered development pattern, limited landform modification, setbacks, indigenous planting and controls over the location, scale and appearance of future buildings will assist in integrating the development with the landscape. Council's landscape reviewer has identified no landscape basis for declining consent, provided the complete

mitigation package is implemented. On that basis, I consider the proposal to be consistent with NFL-O1 and NFL-P1.

7.18 The retention of existing habitat, approximately 1.437 hectares of protected indigenous restoration, and the proposed habitat, pest-management and lighting controls will improve ecological condition and connectivity. Subject to these measures being legally secured and maintained, I consider the proposal to be consistent with ECO-O1, ECO-P1 and ECO-P2.

7.19 The management of earthworks, treatment of stormwater, secondary wastewater treatment, setbacks from the River and ecological restoration will assist in protecting the physical and ecological health of the Waikato River. The proposed esplanade strip will also provide an enduring mechanism for public access along the River frontage. I therefore consider that the proposal responds positively to IM-O4 and LF-P5.

7.20 The proposal recognises tangata whenua interests through the retention of natural landform, ecological restoration, protection of the River margin and measures intended to maintain the River's physical and ecological health. In my opinion, the proposal is generally consistent with IM-O7, IM-P3 and HCV-P2 subject to on-going engagement with tangata whenua.

South Waikato District Plan

Rural Lifestyle Zone

7.21 The site is specifically zoned for rural-lifestyle development. The proposal is therefore consistent in principle with RLZ-P3, which provides for the subdivision, use and development of land for rural-lifestyle activities in specifically zoned locations, and SUB-P7, which similarly provides for rural-lifestyle subdivision in specifically zoned areas.

7.22 The Rural Lifestyle Zone policy framework does not, however, contemplate rural-lifestyle development without qualification. RLZ-P5 seeks rural-residential development in zoned locations that:

- achieves a clustered form and avoids a linear pattern of lots along roads;
- effectively separates access and through-traffic functions;
- provides adequate separation from the Waikato River and hydroelectric power operating easements;
- safeguards the landscape character, visual amenity and biodiversity values of the Waikato River valley;
- ensures that development is sympathetic to the existing landform, landscape and vegetation; and
- avoids, remedies or mitigates reverse-sensitivity effects.

7.23 The proposal responds appropriately to RLZ-P5, in particular the reduction in lot yield and corresponding increase in average lot size provide a less intensive development outcome. The layout maintains a clustered rural-residential form rather than establishing a linear pattern of lots along Horahora Road. Access will continue to be provided primarily through the internal road network, thereby limiting the number of direct vehicle crossings and maintaining a more integrated subdivision pattern.

7.24 The proposed building setbacks, landscape controls, restoration planting and consent notice mechanisms will also provide an appropriate and enforceable framework for managing the external appearance and landscape integration of future buildings. These measures respond directly to RLZ-P5(c), (e) and (f) by providing separation from the Waikato River, safeguarding the landscape and biodiversity values of the Waikato River valley, and managing potential reverse-sensitivity and amenity effects.

7.25 The revised proposal also provides a more appropriate interface with the Waikato River, the Outstanding Natural Landscape and adjoining rural land. In that respect, I consider that the proposal is consistent with RLZ-P4 and SUB-P8, which seek to minimise the potential adverse effects of rural-lifestyle subdivision, use and development at zone interfaces.

7.26 The proposal is also relevant to RLZ-O3, which requires potential effects from activities within the Waikato River catchment, including effects on the health and wellbeing of the Waikato River and its catchment, to be identified

and addressed through decision-making. In my opinion, the additional restoration planting, esplanade provision, stormwater management, river setbacks and earthworks reductions demonstrate an appropriate response to that objective.

Outstanding Natural Landscape

7.27 The Rural Lifestyle zoning must be considered alongside the site's location within an Outstanding Natural Landscape. In particular:

- NFL-O1 seeks to protect outstanding landscape values while enabling primary production and other activities requiring a rural location;
- NFL-O2 seeks to protect the values of Outstanding Natural Features and Landscapes from inappropriate subdivision, use and development;
- NFL-O3 seeks to maintain and enhance amenity values within Outstanding Natural Landscapes and Features;
- NFL-O4 requires recognition of, and provision for, the relationship of Raukawa and Te Arawa River Iwi as tangata whenua with the landscapes of the district; and
- NFL-O5 seeks to safeguard the significant landscape and natural values of the Waikato River and its margins.

7.28 The proposal continues to provide for rural-lifestyle development anticipated by the zoning but incorporates an appropriate package of measures to protect the landscape and natural values of the site and the Waikato River margin.

7.29 NFL-P3 requires active management to ensure that Outstanding Natural Landscape values are recognised and protected from the adverse effects of inappropriate subdivision, use and development. NFL-P4 requires subdivision, use and development to avoid, remedy or mitigate adverse effects on the values that contribute to an area being outstanding. The policy identifies indigenous vegetation clearance, wetland drainage, large-scale landform modification, and visually prominent buildings, structures and earthworks as matters requiring particular attention.

7.30 The proposal responds positively to NFL-P3 and NFL-P4 through:

- the material reduction in the number of residential lots;
- the increase in average lot size;
- the reduction in the extent and volume of earthworks, particularly within Stage 3;
- the retention of a greater proportion of the existing gully and natural terracing;
- the creation and protection of additional indigenous restoration areas;
- the establishment of building setbacks and controls over future building location and appearance; and
- the implementation of the Landscape Masterplan and Ecological Management Plan.

7.31 These measures will reduce the scale and visual presence of development, limit permanent modification of the existing landform, and improve the integration of future buildings and infrastructure with the site's landform, vegetation, river margin and wider rural landscape.

7.32 The proposal is also consistent with the matters identified in NFL-R2(1) for activities within an Outstanding Natural Landscape. Those matters include the extent to which:

- the activity affects the qualities, values and characteristics that support the Outstanding Natural Landscape classification;
- building siting, orientation, design, bulk and materials integrate with the surrounding natural environment;
- road, access and building-platform earthworks detract from landscape values and character;
- cut and fill are minimised and final contours can be revegetated; and
- earthworks maintain the existing landform profile and align with natural contours.

7.33 The reduction in Stage 3 earthworks and retention of the existing gully and natural terraces are particularly relevant to these matters. In my opinion, the amended earthworks methodology is substantially more responsive to the site's existing landform and avoids unnecessary modification. Further,

suitable contours for development would be difficult to achieve with less landform modification than is now proposed.

7.34 NFL-P6 seeks to implement the Vision and Strategy for the Waikato River by managing subdivision and land use within areas of natural value in a manner that restores and protects the health and wellbeing of the Waikato River. The revised proposal responds to this policy through the provision of an esplanade strip, increased indigenous restoration planting, protection of gully habitat, improved ecological connectivity, reduced earthworks and landform modification, and the proposed stormwater and ecological management measures.

7.35 I also recognise the relevance of NFL-P5, which requires the cultural and spiritual relationships of Raukawa and Te Arawa River Iwi with Outstanding Natural Features and Landscapes to be recognised and provided for when considering resource consent applications. That policy direction should continue to inform the conditions, ecological restoration, river-margin management and any ongoing engagement with tangata whenua.

Waikato River and public access

7.36 The revised proposal includes a 10-metre-wide esplanade strip along the Waikato River frontage. In my opinion, this represents a significant positive amendment that supports the District Plan's public access and subdivision policy framework.

7.37 SUB-P16 seeks to improve public access to and along the Waikato River and other waterways by requiring esplanade reserves or esplanade strips at the time of subdivision and by preserving opportunities for future public use of river margins through building setbacks.

7.38 The proposed esplanade strip responds directly to SUB-P16 by securing an enduring legal mechanism through which future public access along the Waikato River margin can be provided. Detailed matters relating to the timing, design, use, maintenance and management of that access can be

addressed through the esplanade instrument and, where appropriate, conditions of consent.

7.39 The esplanade strip also contributes to the implementation of SUB-P13, which seeks to achieve the objectives of the Vision and Strategy for the Waikato River by managing subdivision within the river catchment in a manner that restores and protects the river's health and wellbeing. The methods expressly identified in SUB-P13 include:

- limiting rural-residential development to specifically zoned areas;
- requiring setbacks from waterways;
- controlling vegetation disturbance, earthworks, sediment and stormwater;
- managing the effects of large-scale land-use change;
- maintaining significant indigenous biodiversity associated with the river; and
- creating new esplanade reserves or esplanade strips.

7.40 In my opinion, the revised proposal responds comprehensively to SUB-P13. The development is confined to a specifically zoned Rural Lifestyle location, provides setbacks from the Waikato River, materially reduces earthworks, incorporates stormwater and sediment controls, increases indigenous restoration, protects gully habitat and provides a new esplanade strip.

7.41 The esplanade strip should not be viewed solely as a potential recreational benefit. Together with the proposed setbacks, indigenous restoration planting and ecological management measures, it forms part of an integrated response to the public access, natural character, ecological and landscape values of the Waikato River margin.

<u>Natural character and subdivision</u>

7.42 SUB-O4 seeks to recognise the district's Outstanding Natural Features and Landscapes and protect their landscape values from inappropriate subdivision. SUB-O5 seeks to preserve the natural character of rivers,

lakes, wetlands and their margins and protect them from inappropriate subdivision.

7.43 These objectives require consideration of both the immediate physical works associated with the subdivision and the longer-term pattern of development that it will enable.

7.44 In my opinion, the proposal responds appropriately to SUB-O4 and SUB-O5 because it:

- proposes an appropriate form of land use in the applicable zone;
- limits the overall development yield and intensity;
- minimizes the extent and volume of earthworks, particularly in Stage 3;
- retains much of the existing gully and natural terracing;
- increases the extent of protected and restored indigenous vegetation;
- creates a strong ecological connection between the gully and the Waikato River riparian margin;
- provides an esplanade strip along the river frontage; and
- applies setbacks and controls to the location, scale and appearance of future buildings.

7.45 Collectively, these measures will preserve the natural character of the river margin and minimize the extent to which subdivision works and subsequent development modify or detract from the site's existing landform, vegetation patterns and relationship with the Waikato River.

7.46 The proposal also responds to SUB-P12, which requires consideration of the implications of subdivision for the future management of indigenous vegetation and Significant Natural Areas. While the application of that policy will depend on the status of the affected vegetation, the revised layout provides a stronger framework for the integrated and enduring management of indigenous vegetation and habitat.

<u>Indigenous biodiversity and ecological connectivity</u>

7.47 The additional restoration area enabled by the reconfiguration of Stage 3 is directly relevant to SUB-P13(e), which identifies the maintenance of significant indigenous biodiversity associated with the Waikato River as an important component of restoring and protecting the river's health and wellbeing.

7.48 The revised proposal provides approximately 1.437 hectares of additional protected and planted gully habitat. The restoration area will increase indigenous vegetation cover and establish a stronger ecological connection between the stream gully and riparian vegetation adjoining the Waikato Awa. In my assessment, that represents a significant positive ecological outcome.

7.49 SUB-P14 encourages subdivision outcomes that use covenants to provide statutory protection for land containing significant indigenous vegetation and habitats. To the extent that the proposed restoration and protection mechanisms provide enduring legal protection for the gully habitat and associated planting, the proposal is consistent with the outcome sought by SUB-P14.

7.50 This legal protection will include that all ecological protection and restoration areas located within stage one (Area D only) must be legally protected in perpetuity through either a registered private covenant, consent notice, a covenant in gross, or a consent notice under section 221 of the Resource Management Act 1991.

7.51 The legal protection will require the indigenous vegetation, restoration planting and habitat values to be retained and protected and require the pest-plant and animal-pest control programme to be implemented on an ongoing basis.

7.52 The proposal also avoids the concern identified in SUB-P15, which seeks to avoid the legal fragmentation of indigenous vegetation where that fragmentation may inhibit its active and comprehensive management. The restoration areas and Ecological Management Plan will provide for the integrated management of habitat across the site rather than leaving

ecologically important areas divided among individual residential lots without an overarching management framework.

7.53 The additional restoration area, together with pest plant and animal control, bat habitat setbacks, lighting controls and vegetation clearance protocols, will improve habitat connectivity and provide enhanced commuting, shelter and foraging opportunities for indigenous fauna, including long-tailed bats. These measures will also contribute positively to the ecological integrity and natural character of the wider Waikato River valley.

Conclusion

7.54 Having considered the relevant objectives and policies in combination, I consider that the revised proposal is consistent with the overall direction of the South Waikato District Plan.

7.55 The proposal provides for rural-lifestyle subdivision in a location specifically zoned for that purpose, consistent with RLZ-P3 and SUB-P7. It does so through a clustered layout that avoids a linear pattern of development along Horahora Road, relies primarily on internal access, provides separation from the Waikato River, and incorporates measures to manage effects on adjoining rural land. These outcomes respond directly to RLZ-P4, RLZ-P5 and SUB-P8.

7.56 The proposal also responds appropriately to the site's location within an Outstanding Natural Landscape. The reduced density and earthworks, increased retention of the existing gully and natural terracing, additional indigenous restoration, protected planting areas, building setbacks and landscape design controls will materially reduce landform modification and improve the integration of future development with the surrounding landscape. These measures are consistent with the direction of NFL-O1, NFL-O2, NFL-O3, NFL-O5, NFL-P3, NFL-P4 and NFL-P6.

7.57 The inclusion of the 10-metre-wide esplanade strip, together with the increased ecological restoration and protection of the gully system, provides an effective response to the District Plan provisions concerning

public access, natural character, indigenous biodiversity and the health and wellbeing of the Waikato River, particularly RLZ-O3, SUB-O5, SUB-P13, SUB-P14 and SUB-P16.

7.58 Overall, I consider that the revised proposal appropriately reconciles the enabling and protective directions of the District Plan. It provides for the rural-lifestyle development anticipated by the zoning while incorporating a robust and enforceable package of avoidance, mitigation, restoration and ongoing management measures. In my opinion, the subdivision will not materially compromise the landscape, natural character or ecological values that contribute to the identification of the wider Waikato River landscape as outstanding. Rather, the revised proposal represents an appropriate environmental and planning outcome.

8. Responses to submission points relevant to this evidence

8.1 I address below the principal matters raised in the submissions and the further comments received following the applicant's addendum. My responses should be read together with the effects and policy assessments above and the evidence of the relevant technical witnesses.

Submission 12: Peter Martin and Others

8.2 The submitters oppose the proposal due to its scale and suburban form within the Waikato River valley and an Outstanding Natural Landscape. Their concerns include effects on landscape and rural character, modification of natural landforms, construction effects, wastewater and stormwater risks, public access to the river, and traffic safety on Horahora Road. They seek that consent be declined or, alternatively, that the proposal be substantially redesigned to reduce those effects, improve public access along the river margin, and avoid direct lot access to Horahora Road.

<u>Response</u>

8.3 Guided by the landscape evidence, it is considered that the proposal achieves an appropriate balance between enabling the rural-residential development anticipated by the underlying zoning and protecting the

Outstanding Natural Landscape and natural character values of the receiving environment. Although the proposal will result in a discernible change, it will not establish a suburban form of development. Rather, the generally clustered and consolidated layout, substantial lot sizes, retention of natural landform, degree of separation between dwellings, internal roading, landscape mitigation, ecological restoration, building setbacks and design controls will maintain a clear rural-residential character. Collectively, these measures provide a comprehensive framework for integrating development with the site and managing its landscape, natural character and visual effects.

8.4 The proposal provides for 73 residential lots of a size and configuration consistent with a rural-residential form of development. It adopts a generally clustered layout served primarily by internal roads, limits the extent of earthworks, retains the principal Stage 3 gully and natural terraces, and provides a 10-metre-wide esplanade strip. Subject to the proposed consent conditions, I consider that the resulting landscape, construction, infrastructure and access effects can be appropriately managed.

Submission 23: Bates Family Trust

8.5 The Bates Family Trust opposes the proposal due to potential effects on the Outstanding Natural Landscape, rural amenity, ecological values and the operation of its dairy farm opposite Stage 3. Its original concerns include ribbon development, extensive earthworks, uncertainty regarding future buildings and intensification, wastewater management, public access, bat habitat, traffic effects and reverse sensitivity.

8.6 Following the addendum, the Trust acknowledges the reduced lot yield and earthworks, additional planting and proposed esplanade provision. However, it considers that the proposal remains substantially linear and relies on planting rather than a fundamental redesign around the landscape values of the site. It seeks greater clustering and open breaks between development areas, reconsideration or amalgamation of specified lots, defined controls over building platforms and associated structures, and enforceable arrangements for the establishment and long-term

management of planting and common areas. It also supports relocating the Waikato River Trail to the river margin before subdivision works commence and seeks clearer staging and construction controls. The Trust maintains that consent should be declined unless the proposal is further redesigned to better retain the landscape values, open spaces and visual connections to the river.

Response

8.7 I acknowledge the Trust's continued concerns. In my opinion, the proposal exhibits a generally clustered and consolidated development pattern, while retaining a degree of separation and dispersal between individual lots. The landscape masterplan, building setbacks and design controls, Ecological Management Plan, staging controls and enduring legal mechanisms for planting and management provide a robust package of controls to ensure that the landscape values, open spaces and visual connections to the river are appropriately protected and retained.

8.8 Guided by the landscape evidence, I consider that the proposal appropriately provides for the rural-residential development anticipated by the zoning while protecting the Outstanding Natural Landscape and natural character values of the receiving environment. Although it will result in a discernible change, the generally clustered layout, substantial lot sizes, separation between dwellings, retention of natural landform, landscape mitigation and design controls will maintain a rural-residential, rather than suburban, character. I therefore consider that the resulting landscape, natural character and visual effects are acceptable.

8.9 In my opinion, neither the removal of further lots nor a fundamental redesign of the proposal is necessary. The layout and design have been carefully developed to respond to the identified landscape character and natural landscape values of the site, including its location within the Horahora Outstanding Natural Landscape. Subject to the proposed mitigation and design controls, I consider the proposal will appropriately manage those effects.

8.10 The proposed esplanade strip also provides an enduring legal corridor along the Waikato River frontage, thereby preserving the opportunity for any future realignment of the Waikato River Trail should that be pursued.

Submission 24: C & J Hogg

8.11 The submitters oppose the proposal due to potential effects on water quality, freshwater ecology, productive rural land, rural character, established farming activities, traffic safety, recreation and local infrastructure. They also raise concerns regarding cumulative lighting, noise and development effects within the Waikato River corridor. They seek that consent be declined.

Response

8.12 The site has been zoned for rural-lifestyle development since 2008. The proposal responds appropriately to the receiving environment through its limited earthworks, ecological restoration, stormwater management framework, secondary wastewater treatment and land-disposal requirements, internal access arrangements, building controls and setbacks from the Waikato River. These measures address the principal planning concerns identified and, subject to the implementation of the supporting technical recommendations and consent conditions, I consider the resulting effects can be appropriately managed.

Submission 28: Herenga ā Nuku Aotearoa, Outdoor Access Commission

8.13 Herenga ā Nuku Aotearoa, Outdoor Access Commission initially sought enduring public access to and along the Waikato River and protection of the amenity and safety of Waikato River Trail users. Following the addendum, the Commission acknowledges the reduced earthworks, greater retention of natural landforms, additional indigenous planting and proposed 10-metre esplanade strip as positive changes.

8.14 The Commission considers, however, that practical public access and the future trail alignment should be resolved through the subdivision design rather than retrospectively. It supports early collaboration with the Waikato

River Trails Charitable Trust to relocate the trail closer to the river where practicable, separate trail users from vehicle movements and minimise construction disruption. It also seeks coordination with ecological specialists and mana whenua to address habitat and cultural values. The Commission seeks that consent be granted only if practical and enduring public access is secured and the esplanade area enables an appropriate future trail alignment. Otherwise, it seeks that consent be declined.

Response

8.15 I agree that the esplanade strip is a significant and positive amendment and that detailed access arrangements should be developed collaboratively. In my opinion, the strip provides the appropriate enduring legal framework for future access and potential trail realignment. Detailed design, timing, ecological constraints, maintenance and management can be secured through the esplanade instrument and conditions, without requiring those matters to be fully resolved before consent is granted.

Submission 30: Ngaati Koroki Kahukura Trust

8.16 Ngaati Koroki Kahukura Trust's submission opposes the proposal due to its potential effects on the relationship of tangata whenua with the Waikato River, ancestral whenua, pā, cultural landscapes and sightlines to Maungatautari. It is also concerned about the scale and intensity of development, cumulative effects on the awa, and the absence of a tangata whenua-led Cultural Impact Assessment.

Response

8.17 Following its submission, the applicant has undertaken further engagement with Ngaati Koroki Kahukura Trust representatives regarding the cultural matters raised, including development density, ancillary dwellings, cultural sightlines, riparian and cultural buffers, ongoing iwi involvement, and measures to protect the mauri of the whenua and the awa.

8.18 The applicant has agreed to incorporate a consent notice on the northern portion of Lot 16 to maintain viewshafts across that part of the site and

protect views from the other side of Horahora Road to the Waikato River by ensuring no buildings are constructed in this area.

8.19 The engagement with Ngaati Koroki Kahukura Trust has resulted in a Memorandum of Understanding (MOU) being agreed in principle, which is intended to provide a framework for those matters to be appropriately considered through the detailed implementation of the proposal. On that basis, I understand that a separate Cultural Impact Assessment may no longer be required.

8.20 At the time of preparing this evidence, the MOU had still not been signed, however it is anticipated that it will be signed before the hearing. Representatives of both Ngaati Koroki Kahukura Trust and Ngati Haua are anticipated to be signatories to the MOU. This will be confirmed prior to and/or at the hearing.

Submission 31: Profile Farms Limited

8.21 Profile Farms Limited conditionally supports the proposal, subject to a consent notice being registered against the new titles to manage potential reverse sensitivity effects associated with existing and future activities at Takapoto Estate. These activities include event noise, amplified sound, helicopter and vehicle movements, machinery, signage and spectator facilities.

8.22 Following review of the addendum, Profile Farms Limited confirmed that its original submission and relief remain unchanged. If the requested reverse sensitivity protections are not secured, it seeks that consent be declined

Response

8.23 I agree that future purchasers should be clearly informed of established and reasonably anticipated activities at Takapoto Estate. An appropriately framed consent notice has already been presented and agreed with the submitter as part of a private agreement. This mechanism will provide enduring notice and assist in managing reverse sensitivity effects. Subject to those mechanisms being included in the final conditions and legal

documentation, I consider the matters raised have been appropriately addressed.

Submission 32: The Laxon Family

8.24 The Laxon Family conditionally supports the proposal, subject to a consent notice being registered which is relative to the visual effects identified in the application. This consent notice was already offered as part of the original application. The measures include controls over building locations and colours, together with the establishment, protection and long-term maintenance of landscape planting on the riverside lots.

8.25 Following review of the addendum, the family confirmed that its original submission and relief remain unchanged. If the requested controls are not secured, it seeks that consent be declined

Response

8.26 The proposed building setbacks, controls on external appearance and landscape planting are consistent with the wider landscape mitigation package relied on in my assessment. These measures should be secured through enforceable conditions and consent notices, including clear establishment and maintenance obligations. Subject to those controls, I consider the visual, privacy and amenity concerns can be appropriately managed.

Submission 33: Raukawa Charitable Trust

8.27 Raukawa Charitable Trust opposes the form and intensity of development along the Waikato River due to potential cumulative effects on the health and mauri of the awa, cultural access, the exercise of kaitiakitanga, wastewater and stormwater risks, and the relationship of Raukawa with the river. It also opposes the linear subdivision pattern and seeks meaningful and continuous access along the river margin.

8.28 Raukawa Charitable Trust seeks that consent be declined or that the proposal be substantially redesigned to provide a more clustered layout, a

practical and continuous esplanade reserve or strip, appropriate access to and along the awa, and conditions protecting its mauri and the relationship of Raukawa with the river.

Response

8.29 I acknowledge the significance of Raukawa's relationship with the awa and the requirement to assess the proposal against Te Ture Whaimana o Te Awa o Waikato. The proposal adopts a generally clustered and consolidated layout, limits its development intensity and earthworks, retains the principal natural landform features, provides protected gully restoration and ecological connectivity, and includes a 10-metre-wide esplanade strip. Subject to the proposed management measures and consent conditions, and the continued recognition of mana whenua interests, I consider that the proposal will not undermine the mauri of the Waikato River, inhibit the exercise of kaitiakitanga, or materially diminish cultural and spiritual relationships with the awa. Accordingly, I do not consider that the identified effects require the removal of further lots, fundamental redesign or refusal of consent.

8.30 Notwithstanding the above, the applicant has made concerted and ongoing efforts to engage with Raukawa (along with Ngaati Koroki Kahukura Trust and Ngati Haua) to finalise and execute a proposed Memorandum of Understanding. This has included providing the draft document and undertaking repeated follow-up correspondence. To date, however, the applicant has not received a substantive response or confirmation from Raukawa. The reasons for the lack of response are not known to the applicant. Notwithstanding this, the applicant remains willing to engage constructively and progress towards the execution of a Memorandum of Understanding with Raukawa if that is something they wish to consider.

Bernadette Winter

8.31 Bernadette Winter opposes the amended proposal because she considers that the proposed roads, buildings and earthworks would permanently diminish the natural character, landscape values and scenic experience of Horahora Road, the Waikato River and the Outstanding Natural

Landscape. She considers that building controls and landscape planting would not adequately mitigate the cumulative visibility of dwellings and ancillary buildings.

8.32 She also raises concerns regarding on-site wastewater discharges through free-draining soils, potential nutrient effects on the river, future intensification, and effects on the scenic and recreational experience of Waikato River Trail users. She seeks that the development not proceed and that the landscape remain in its existing rural and natural state

Response

8.33 I acknowledge that the proposal will result in a discernible and permanent change to the site. However, it is consistent with the rural-residential development anticipated by the zoning and incorporates a generally clustered and consolidated layout, limited earthworks, retention of the principal gully and natural terraces, restoration planting, controls over future buildings and landscaping, and a 10-metre-wide esplanade strip. On-site wastewater servicing will comprise secondary treatment and land disposal, subject to the identified technical requirements and setbacks. Any future secondary dwelling would require separate assessment under the planning provisions applying at that time. In my opinion, the resulting effects are appropriate in the context of the Rural Lifestyle Zone and will not materially compromise the values and characteristics of the wider Outstanding Natural Landscape.

Philip Winter

8.34 Mr Winter confirmed after reviewing the addendum that his original submission and relief remain unchanged.

Response

8.35 Mr Winter's confirmation raises no new matters arising from the amended proposal. To the extent his original concerns overlap with landscape, rural character, earthworks, river, infrastructure, access or construction matters, those matters are addressed in my assessment above and in the responses

to the related submissions. They do not alter my overall conclusion, subject to the conditions and enduring legal mechanisms identified in my evidence.

Overall response to submissions

8.36 The submissions identify legitimate matters requiring careful consideration, particularly given the site's location within an Outstanding Natural Landscape and adjoining the Waikato River. In my opinion, the applicant's amendments materially respond to those concerns. My conclusion in favour of consent depends on the final conditions and legal instruments securing the landscape, ecological, public access, infrastructure, reverse sensitivity and cultural outcomes relied upon in this evidence.

9. Responses to s42A report issues relevant to this evidence;

9.1 I have reviewed the section 42A report and Council's associated technical reviews.

9.2 The reporting officer recommends that consent be granted for the amended 73-lot subdivision, subject to conditions. None of Council's technical reviewers identifies an outstanding effect requiring consent to be declined.

9.3 The principal matter remaining in contention concerns tangata whenua values and the wider cultural landscape. The other matters largely relate to the detailed implementation and enduring mitigation. The following assessment focuses on those matters that remain in contention.

9.4 In my opinion, none of the residual matters precludes the grant of consent.

Tangata whenua values and cultural effects

9.5 Raukawa and Ngāti Koroki Kahukura remain opposed to the proposal. Their concerns include effects on:

- the relationship between the Waikato River, surrounding whenua, ancestral pā and Maungatautari;
- cultural sightlines and the integrity of the wider cultural landscape;

- the mauri and cultural and spiritual health of the Waikato River;
- the ability of tangata whenua to access the awa and exercise kaitiakitanga; and
- the cumulative development of the Waikato River corridor.

9.6 Council acknowledges that the amended proposal provides a materially improved physical response but does not consider that all cultural concerns have been resolved.

9.7 The applicant acknowledges the cultural significance of the Waikato River, its margins and the wider Horahora landscape.

9.8 The proposal has been materially amended in response to the matters raised, including:

- reducing the residential yield;
- reducing earthworks from approximately 270,000 m³ to 72,000 m³;
- retaining the principal gullies, terraces and natural landform;
- increasing ecological restoration;
- strengthening building, lighting and landscape controls; and
- providing a 10 m esplanade strip along the river frontage.

9.9 Although no final Cultural Impact Assessment has been provided, the submissions clearly identify the matters of concern. In my opinion, the Panel has sufficient information to determine the application.

9.10 The applicant has undertaken further engagement with Ngaati Koroki Kahukura Trust on the cultural matters raised. A Memorandum of Understanding has been agreed in principle to provide a framework for addressing those matters through the implementation of the proposal. I understand that, on this basis, a separate Cultural Impact Assessment may no longer be required.

9.11 At the time of preparing this evidence, a Memorandum of Understanding with Ngaati Koroki Kahukura Trust and Ngati Haua had not been signed, however it is anticipated that it will be prior to the hearing. While Raukawa's

position is unclear, the Applicant is committed to on-going engagement and inclusion in the MOU.

9.12 Consent conditions have been recommended to ensure appropriate accidental discovery procedures are implemented, and incorporation of cultural monitoring and tangata whenua input into relevant management plans, including the Construction Management Plan. The applicant is also encouraging of a karakia/blessing of the site prior to construction commencing.

9.13 In my opinion, the proposal provides a substantive and proportionate response to the cultural context and landscape values of the site. While there is some uncertainty remaining as to Raukawa's position, the information currently available does not in my view establish that the proposal is contrary to Te Ture Whaimana o Te Awa o Waikato or that consent should be declined. Furthermore, the applicant is committed to advancing a MOU with mana whenua to ensure appropriate protections for the cultural significance of the Waikato River, its margins and the wider Horahora landscape.

Cultural landscape and cumulative development

9.14 Council notes the absence of a specific tangata whenua-led assessment of cultural sightlines and cumulative rural-lifestyle development along the Waikato River corridor.

9.15 I accept that landscape evidence does not determine cultural effects and that cultural values remain for tangata whenua to determine. It nevertheless confirms that the amended proposal retains more natural landform and openness, reduces the number and visibility of dwellings, strengthens indigenous vegetation patterns and limits the prominence of future buildings. Furthermore, the applicant is committed to advancing a MOU with mana whenua to ensure appropriate protections for the cultural significance of the Waikato River, its margins and the wider Horahora landscape.

9.16 The proposal must also be assessed in the context of the operative Rural Lifestyle zoning, which anticipates subdivision and development subject to appropriate effects management.

9.17 In my opinion, the amended design materially reduces the proposal's contribution to cumulative landscape change. The absence of a separate cultural sightline assessment does not provide a sufficient basis to decline consent.

Landscape and visual effects

9.18 Council accepts that the proposal will permanently change part of the Horahora Outstanding Natural Landscape and may result in localised moderate effects. Its remaining concerns relate to development pattern, the establishment of planting and the need to secure the full mitigation package.

9.19 The amended proposal materially reduces those effects through fewer lots, substantially reduced earthworks, greater landform retention, defined building areas, extensive planting and controls on the scale and appearance of future development.

9.20 The relevant District Plan provisions do not require the complete avoidance of any linear relationship with Horahora Road or the Waikato River. They require the values of the Outstanding Natural Landscape to be appropriately protected and adverse effects to be adequately managed.

9.21 Council's landscape reviewer does not identify a landscape reason to decline consent, provided the full mitigation package is secured.

9.22 I therefore consider that landscape and visual effects can be appropriately managed through conditions requiring staged planting, establishment standards, replacement of failed planting and ongoing maintenance.

Esplanade strip and public access

9.23 Council supports the proposed 10 m esplanade strip but seeks certainty regarding its alignment, continuity, legal protection and maintenance.

9.24 The alignment and continuity are clear from the plans. Those matters can be recorded again in the final survey plans and legal protection will be assured by the esplanade instrument before section 224(c) certification.

9.25 The esplanade strip will secure permanent legal public access along the Waikato River frontage where none currently exists. I consider that to be a significant positive effect.

9.26 The proposal does not include a formed walkway or relocation of the Waikato River Trail. Any future physical works on the strip and relocation of the Trail would be separate projects and are not necessary to mitigate the effects of the subdivision.

9.27 The applicant will, however, protect, temporarily manage and reinstate any part of the existing trail directly affected by construction.

Ecological effects

9.28 Council's ecological concerns relate to the final form and legal implementation of the ecological mitigation, including:

- permanent protection of restoration areas;
- setbacks from existing and future bat habitat;
- pest-plant and pest-animal control;
- external lighting controls;
- bat-box protection and monitoring; and
- pre-works lizard habitat assessment.

9.29 The applicant accepts that the Ecological Management Plan and associated plans should be updated before physical works commence.

9.30 The final framework should provide clear performance outcomes, responsibilities, monitoring and ongoing maintenance, while avoiding unnecessary duplication between management plans, consent notices and covenants.

9.31 In my opinion, these matters concern the refinement and implementation of accepted mitigation. Subject to appropriate conditions and legal protection, adverse ecological effects will be less than minor and the restoration programme will provide material positive effects.

Stormwater management

9.32 Council does not intend to own or maintain stormwater assets located outside the road reserve. The remaining issues concern ownership, access, maintenance, repair, cost allocation and legal protection.

9.33 The applicant accepts that those assets will remain privately owned and maintained.

9.34 A Stormwater Management Plan for each stage will identify each asset, the responsible owner, benefiting lots, access arrangements, maintenance requirements, cost allocation and incident-response procedures.

9.35 These obligations can be secured through easements or consent notices and final engineering documentation. They do not identify any unresolved deficiency in the technical stormwater solution.

Wastewater servicing

9.36 Council requires confirmation that each residential lot can accommodate a secondary-treatment system and separate primary and reserve disposal areas that comply with the applicable setbacks and site constraints.

9.37 A wastewater assessment has been prepared by GWE Consulting Engineers and is attached to this evidence as **Appendix B**. It confirms that each residential lot contains sufficient land to accommodate a primary and

reserve wastewater disposal area, based on conservative assumptions for a five-bedroom dwelling, a design flow of 1,440 litres per day and Category 3 soils. The available disposal area on every lot exceeds the maximum indicative requirement of 540 m².

9.38 Detailed design of each secondary treatment and land-disposal system can appropriately occur when the dwelling location, size and likely occupancy are known. Each system will need to comply with the identified treatment standards, loading rates and setbacks, and be located outside unsuitable fill and upgradient or cross-gradient of stormwater infrastructure.

9.39 Guided by that assessment, I am satisfied that each lot can be appropriately serviced for on-site wastewater disposal. Subject to lot-specific design, certification, ongoing monitoring and maintenance, I consider the resulting effects on surface water, groundwater, soils, public health and amenity to be less than minor.

Transport and access

9.40 The remaining transport matters concern detailed design, including intersection widening, sight distances, access gradients, drainage, curve safety, vehicle tracking and protection of the Waikato River Trail.

9.41 The applicant accepts the need to address those matters through detailed engineering design and certification.

9.42 The transport evidence does not support requiring upgrades to the Pokaiwhenua Stream bridge or the State Highway 1 intersection. Any change to the posted speed limit would also require a separate statutory process.

9.43 The existing Waikato River Trail can remain safe and continuous through consolidated crossings, visibility controls, appropriate gradients, construction management and reinstatement of affected sections.

9.44 I am guided by the transportation evidence that the road network has sufficient capacity and that the remaining safety matters can be appropriately resolved through conditions.

Construction effects

9.45 Council acknowledges that construction may generate temporary noise, dust, traffic, exposed soils and disruption to the Waikato River Trail.

9.46 The substantial reduction in earthworks and removal of significant inter-stage material transfers will materially reduce the scale and duration of those effects.

9.47 Stage-specific Construction Management Plans should address construction hours, noise, dust, traffic, erosion and sediment control, complaints, trail access and site stabilisation.

9.48 Subject to those controls, I consider that construction effects will be temporary, localised and no more than minor.

Geotechnical matters and natural hazards

9.49 Council requires detailed design and certification addressing slope stability, building-platform suitability, setbacks from constrained land, foundation design, stormwater effects and verification of completed earthworks.

9.50 The applicant accepts those requirements. Conditions can require stage-specific investigation, confirmation of suitable building areas, construction monitoring, completion reporting and consent notices for any enduring lot-specific controls.

9.51 These are conventional detailed-design matters. The available evidence establishes that the site can be safely developed subject to appropriate investigation, design and certification.

Management plans and conditions

9.52 The proposal relies on several management plans and legal instruments. The principal outstanding issue is ensuring that the final conditions are clear, proportionate and enforceable.

9.53 The key considerations and principles that underpin the recommended conditions include:

- distinguishing between consultation, information, certification and approval;
- specify clear outcomes and performance standards;
- avoid unnecessary duplication between management plans and legal instruments;
- retain Council as the statutory decision-maker;
- provide meaningful opportunities for tangata whenua input without creating a third-party veto;
- establish a process for reviewing and amending management plans; and
- clearly allocate responsibilities between the consent holder and future landowners.

9.54 The applicant acknowledges and appreciates the work undertaken by Council in preparing the recommended conditions. Those conditions provide a sound basis for the parties to work towards finalising an agreed suite of consent conditions for the Panel's consideration.

9.55 The applicant has however identified several issues with the recommended conditions as drafted, not so much in terms of substantive content or intent, but more so in terms of overall structure and sequencing. A tracked change version of the recommended conditions is attached to this evidence as **Appendix C.** The primary consideration is to make it clearer what is required pre-construction, what is required before issue of title versus post-title, and better accommodate staged implementation. It is anticipated that further amendments will be warranted as proceedings progress and the

Applicant is amenable to working with the parties to ensure the conditions are agreeable.

Overall conclusion

9.56 The section 42A report and Council's technical reviews do not identify any adverse effect that cannot be appropriately addressed through the amended design, proposed mitigation, detailed engineering, management plans, legal instruments and consent conditions.

9.57 The section 42A report includes the comment that effects on tangata whenua values and the wider cultural landscape have not been fully resolved. Those matters warrant careful consideration and appropriate weight considering any further input on behalf of the submitters. However, the proposal has been materially amended in response to submissions and discussions and now provides:

- a substantially reduced residential yield and earthworks footprint;
- greater retention of natural landform;
- expanded ecological restoration;
- stronger controls on future buildings and lighting; and
- permanent legal public access along the Waikato River frontage.

9.58 The remaining landscape, ecological, servicing, transport, construction and geotechnical matters principally concern the detailed implementation and enduring protection of mitigation accepted by Council's technical reviewers.

9.59 I therefore consider that the residual uncertainties identified by Council have been appropriately addressed given the information made available and the discussions to date.

9.60 Subject to a clear, proportionate and enforceable suite of conditions, I consider that the proposal will appropriately avoid, remedy or mitigate its adverse effects and provide enduring public access, landscape and ecological benefits.

9.61 On that basis, I support the grant of resource consent for the amended proposal.

10. Conclusions

10.1 For the purposes of my assessment, I have considered the proposal now before the Hearings Panel. I have not assumed that the Rural Lifestyle zoning determines the outcome, nor treated the Outstanding Natural Landscape overlay as prohibiting development. My conclusions are based on an integrated assessment of the proposal, the evidence concerning effects, the submissions, the relevant statutory instruments and the conditions and legal mechanisms required to secure the outcomes relied upon.

10.2 The principal planning consideration is the relationship between the Rural Lifestyle Zone, which anticipates rural-lifestyle subdivision at this location, and the Horahora Outstanding Natural Landscape overlay, which requires outstanding landscape values to be protected from inappropriate subdivision, use and development. Neither framework is determinative. The relevant question is whether the proposed layout, mitigation and enduring controls make this development appropriate in its particular location.

10.3 The proposal comprises 73 residential lots and complies with the average lot-size requirement in Rule SUB-R5(4). It is therefore a discretionary activity under the South Waikato District Plan, including because the site adjoins the Waikato River and hydro-electric power operating easements.

10.4 The proposal provides for a generally clustered and consolidated rural-residential form, supported by internal access and roading. It limits earthworks, retains the principal Stage 3 gully and natural terraces, provides protected ecological restoration and strengthened habitat connectivity, and establishes a 10-metre-wide esplanade strip along the Waikato River frontage. Collectively, these measures provide an appropriate response to the Waikato River, the Horahora Outstanding Natural Landscape, ecological values, public access, and the rural-residential character and amenity of the locality.

10.5 I also consider that the proposal is not contrary to Te Ture Whaimana o Te Awa o Waikato. The development intensity, retention of natural landform, indigenous restoration, ecological connectivity, stormwater and wastewater controls, setbacks from the River and esplanade strip provide an integrated response to the River and its margins.

10.6 Subject to the proposed management measures and conditions, together with the continued recognition of mana whenua interests, I consider that the proposal will not undermine the mauri of the Waikato River, inhibit the exercise of kaitiakitanga, or materially diminish the cultural and spiritual relationships of mana whenua with the awa.

10.7 Having considered the proposal and the relevant statutory framework as a whole, it is my independent opinion that consent can properly be granted. I acknowledge that the proposal will result in a permanent change to the site and that some adverse effects will remain. However, I consider those effects to be acceptable and that they do not render the proposal inappropriate.

10.8 My conclusion relies upon the landscape, ecological, infrastructure, public-access and cultural outcomes relied upon in my assessment being secured through clear and appropriate consent conditions and legal mechanisms. Subject to those safeguards, I consider that the proposal provides an appropriate planning outcome and that there is no planning basis to decline consent or require the removal of further lots or a fundamental redesign.

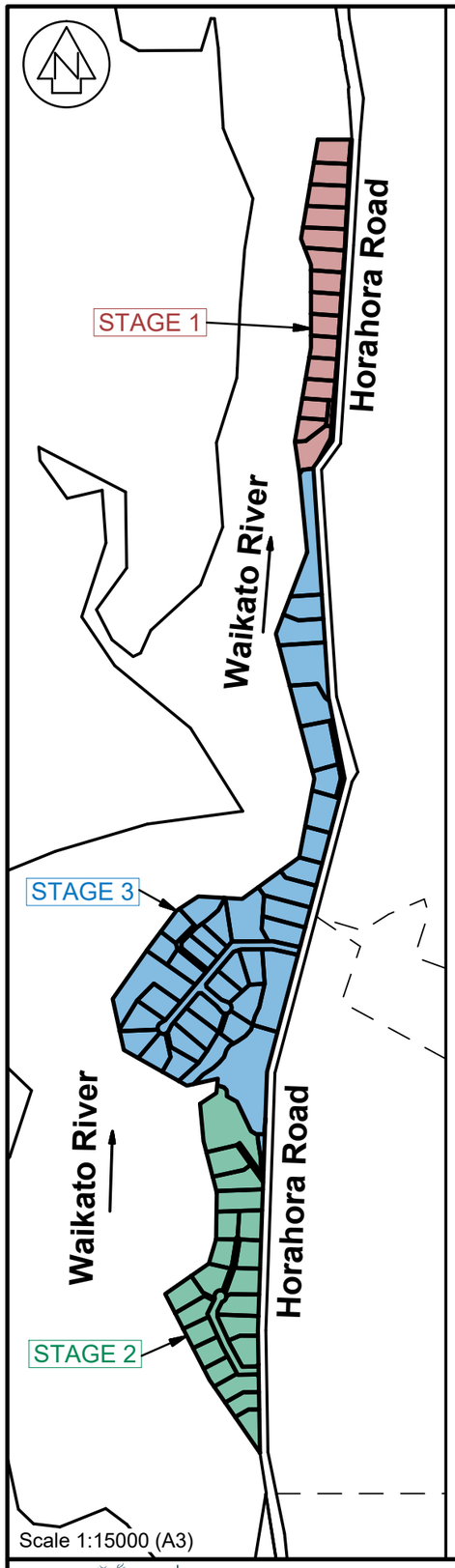
Dated: 7 October 2026



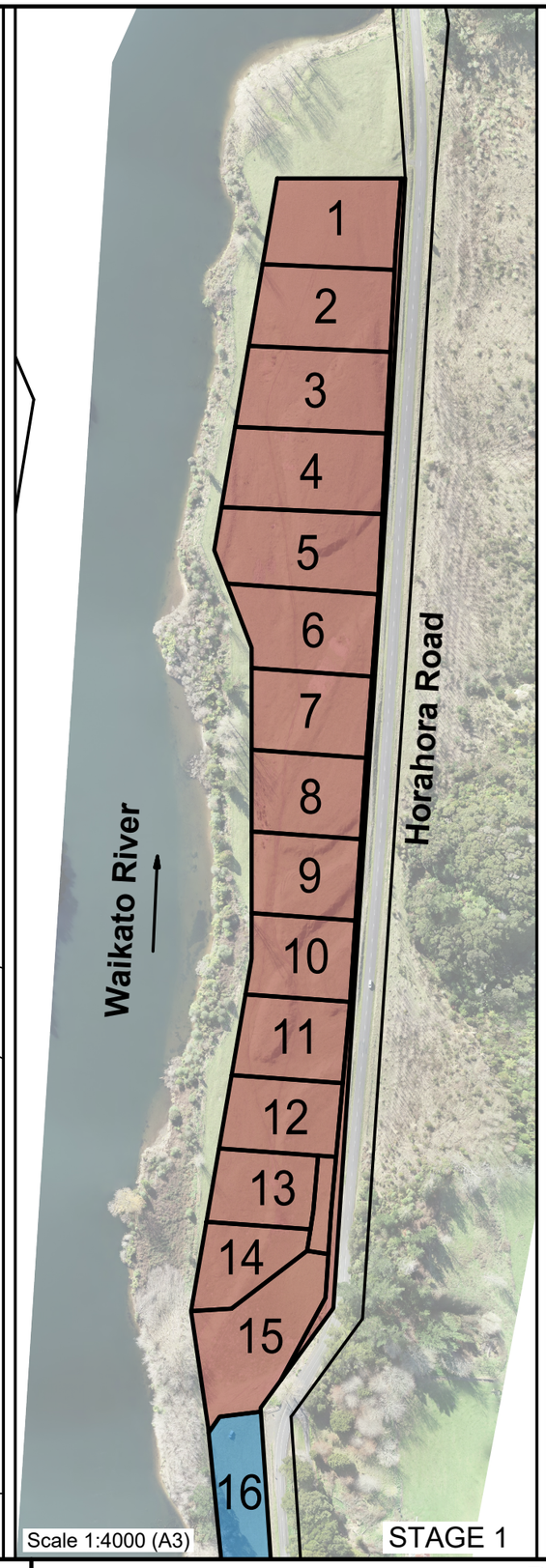
Dave Moule

APPENDIX A

Updated Scheme Plans (Rev J)

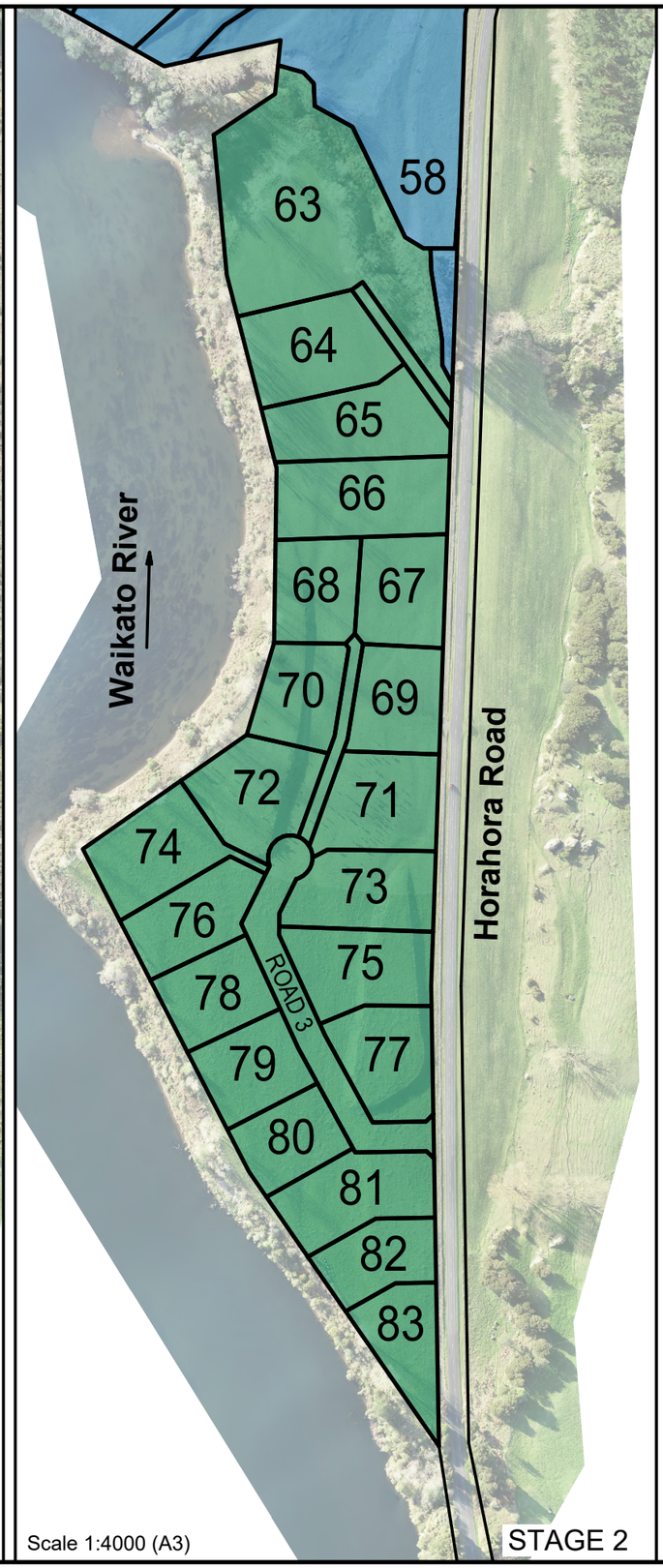


Scale 1:15000 (A3)



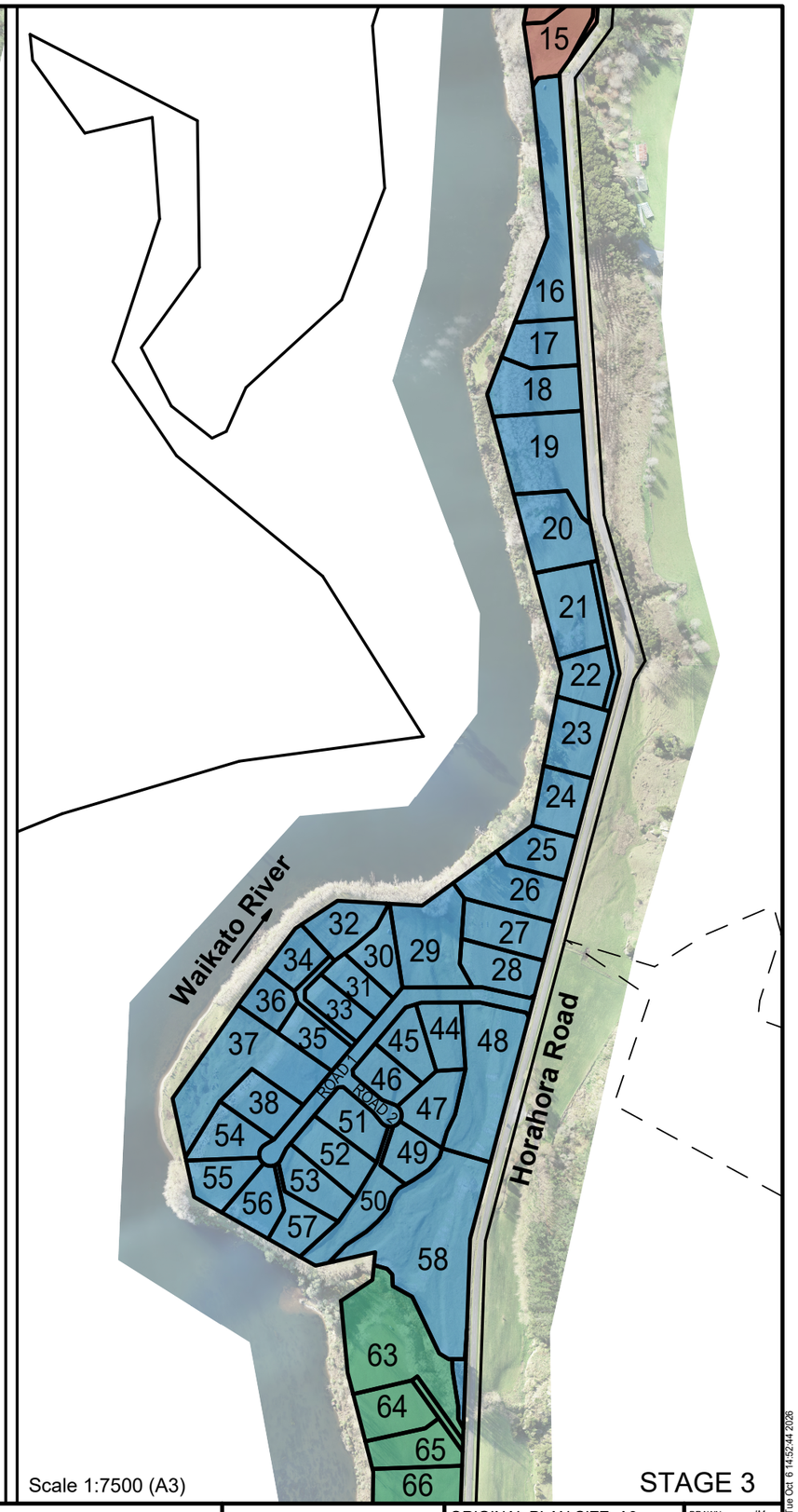
Scale 1:4000 (A3)

STAGE 1



Scale 1:4000 (A3)

STAGE 2



Scale 1:7500 (A3)

STAGE 3

COGSWELL
SURVEYING | ENGINEERING | PLANNING
5 MILICICH PLACE, CAMBRIDGE
P: (07)8275071 E: office@cogswell.co.nz

REF: 5237

www.cogswell.co.nz

Proposed Subdivision of Lot 1 DPS 21946

Horahora Road, Arapuni, Putaruru

PREPARED FOR: Tylee, Kevin & Lynn

SCALE: AS SHOWN

ORIGINAL PLAN SIZE: A3
SHEET: 1 of 6

DRAWN: JM
DESIGNED: RS
CHECKED: RS

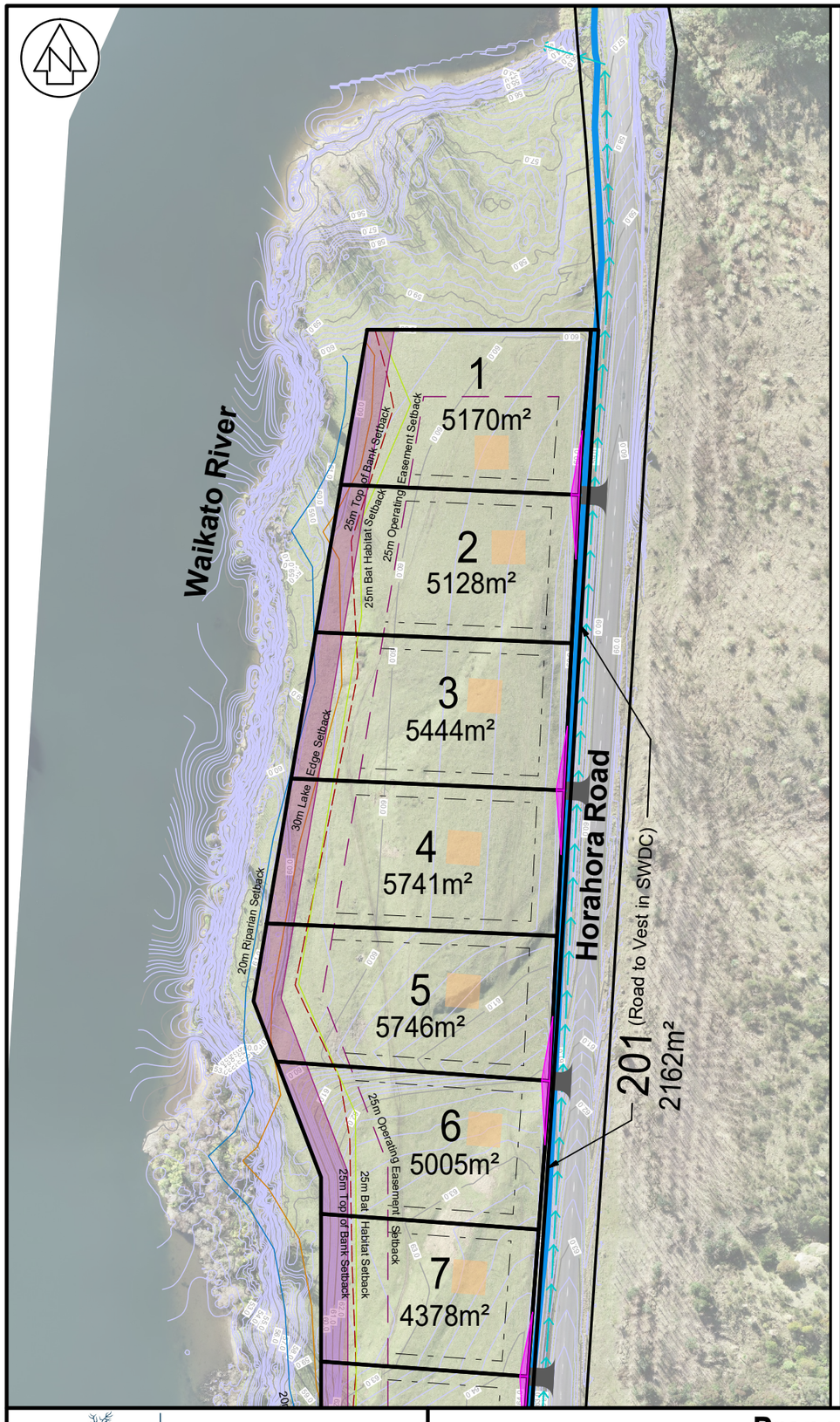
DATE: 06/10/26

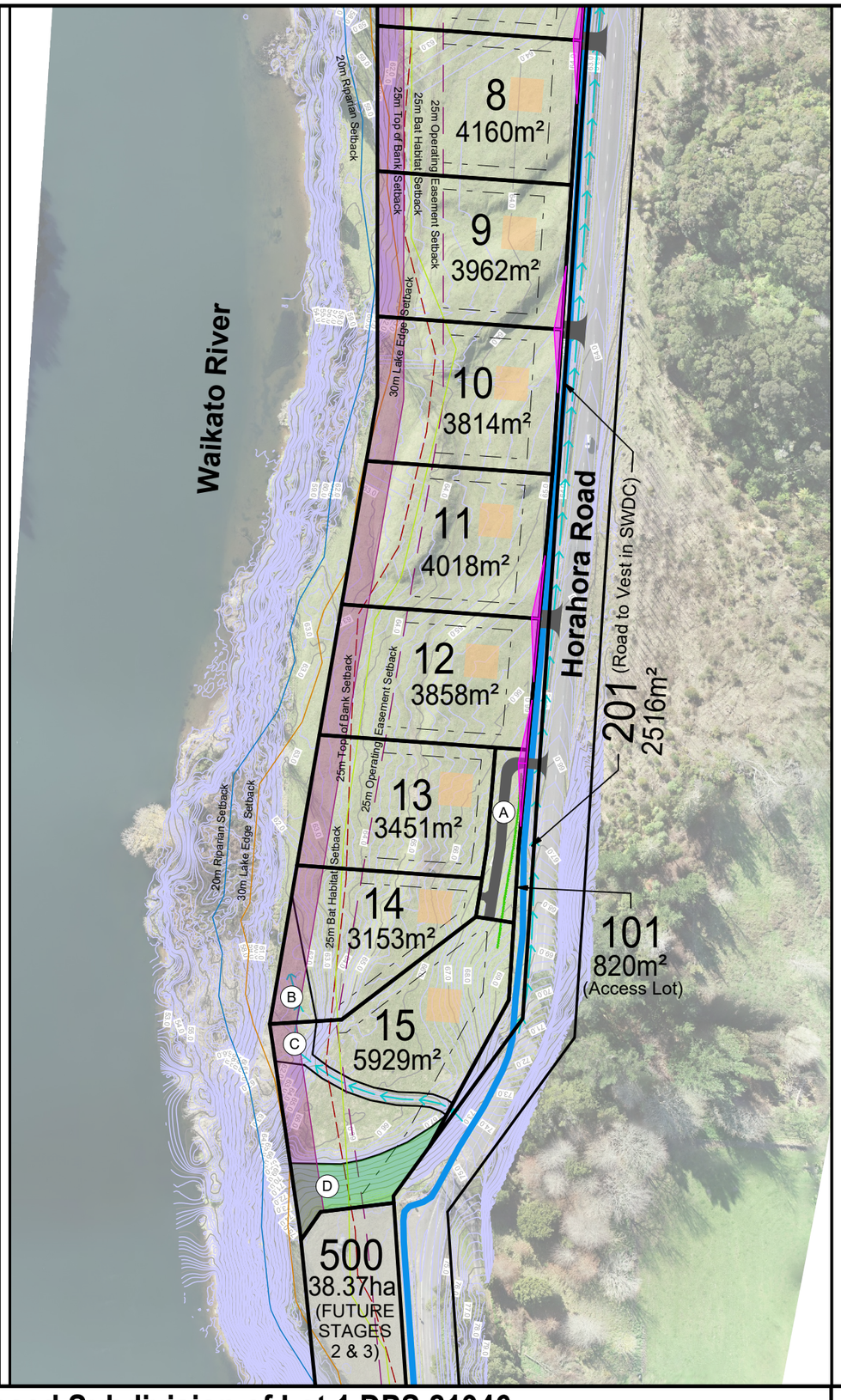
NOTE: BOUNDARIES AND DIMENSIONS AND AREAS ARE APPROXIMATE AND SUBJECT TO ALTERATION BY APPROVAL OR SURVEY.
LEVELS ARE IN TERMS OF NZVD 2016.
ORIGIN OF LEVELS - AV17 [AGLE] RL=66.729m.

REV: J

THIS DRAWING OR DESIGN REMAINS THE PROPERTY OF, AND MAY NOT BE REPRODUCED, WITHOUT THE WRITTEN PERMISSION OF COGSWELL SURVEYS LTD

PLOT FILE: Stages, PLOTTED: Tue Oct 6 14:52:44 2026





Property Details:

Address:	Horahora Road, Arapuni, Putaruru
Parcel:	Lot 1 DPS 21946
Record of Title:	SA22C/92
Area:	45.612Ha
Zone:	Rural Residential
Policy Overlays:	Significant Natural Areas & Outstanding Landscape

Stage 1 Details:

Lots:	1 – 15 (15 lots)
Access Lots:	Lot 101
Road to Vest:	Lot 201

Amalgamation Conditions:

That Lot 101 hereon (legal access) be held as to 3 undivided one-third shares by the owners of Lots 13, 14 & 15 hereon as tenants in common in the said shares and that individual Record of Titles be issued in accordance therewith.
See s220(1)(b)(iv) RMA 1991.

Memorandum of Easements			
Purpose/Interest	**Shown**	**Burdened Land**	**Benefited Land**
Right of Way, Right to Convey Water, Electricity, Telecommunications	A	Lot 101	Lots 13, 14 & 15

Proposed Consent Notice Areas		
Purpose	**Shown**	**Burdened Land**
Planting & Natural Feature Protection	D	Lot 15
Drainage - (No earthworks, buildings or obstructions)	B	Lot 14
	C	Lot 15
Sight Distance / Visibility	See Note 5.	Lots 1–12 & 101

Notes:

1) All lots can suitably accommodate the 160m² (12.65m x 12.65m) Building Shape Factor, as shown.
2) All road boundary setbacks shown are 10m.
3) All side and rear boundary setbacks shown are 5m, except where the 25m Top of Bank and Operating Easement setbacks are shown.
4) 10m wide Esplanade Strip located adjacent to the Waikato River boundary, as shown.
5) Consent notice areas for sight distance/visibility at each entrance (3m x 48m) and both intersections (10m x 48m), restricted to 0.5m vegetation height, as shown.

COGSWELL
SURVEYING | ENGINEERING | PLANNING
5 MILICICH PLACE, CAMBRIDGE
P: (07)8275071 E: office@cogswell.co.nz
www.cogswell.co.nz

REF: 5237

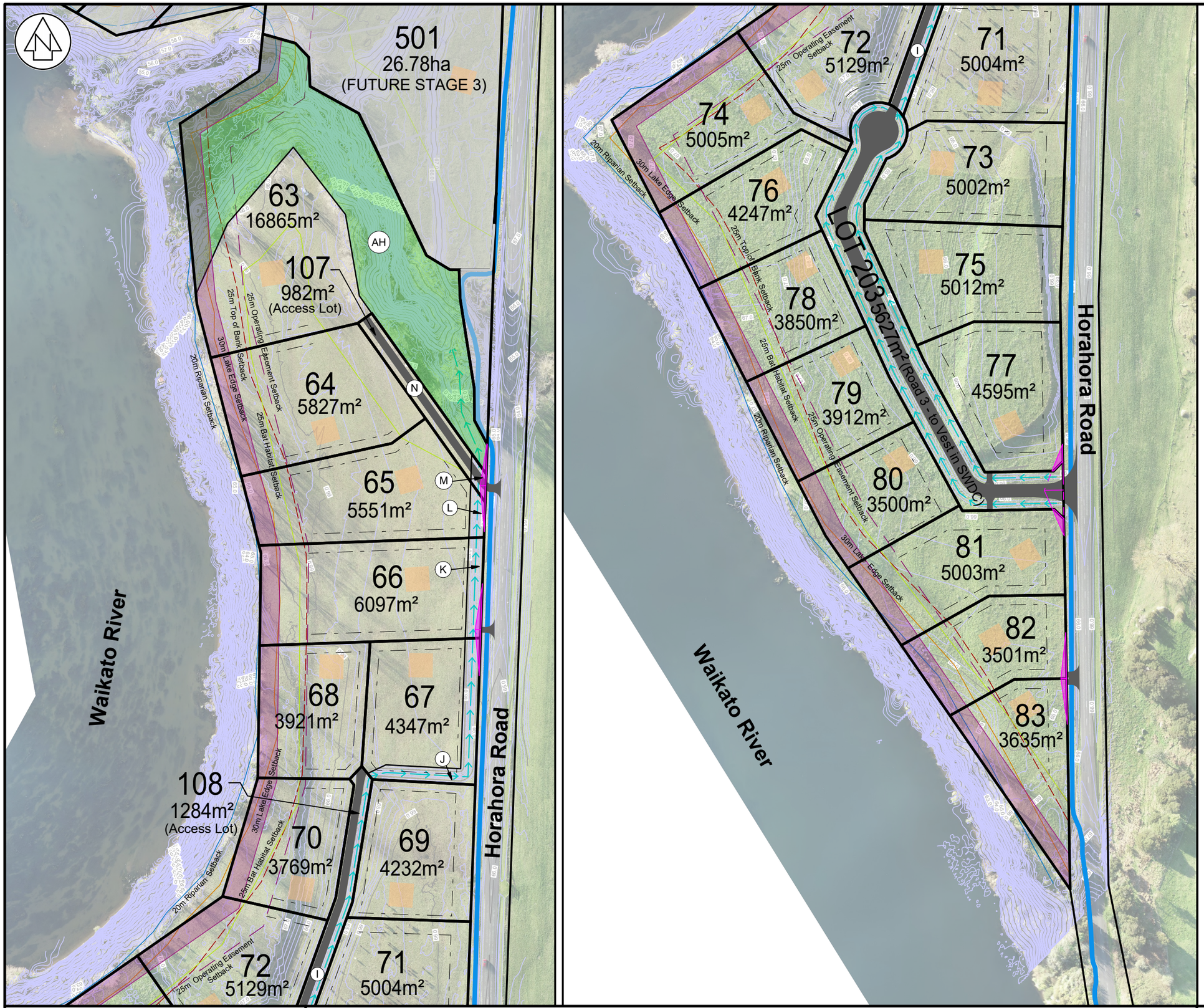
Proposed Subdivision of Lot 1 DPS 21946
STAGE 1
Horahora Road, Arapuni, Putaruru

PREPARED FOR: Tylee, Kevin & Lynn

SCALE: 1:2000
ORIGINAL PLAN SIZE: A3
SHEET: 2 of 6
DRAWN: JM
DESIGNED: RS
CHECKED: RS
DATE: 06/10/26
NOTE: BOUNDARIES AND DIMENSIONS AND AREAS ARE APPROXIMATE AND SUBJECT TO ALTERATION BY APPROVAL OR SURVEY.
LEVELS ARE IN TERMS OF NZVD 2016.
ORIGIN OF LEVELS - AV17 [AGLE] RL=66.729m.
REV: J

THIS DRAWING OR DESIGN REMAINS THE PROPERTY OF, AND MAY NOT BE REPRODUCED, WITHOUT THE WRITTEN PERMISSION OF COGSWELL SURVEYS LTD

PLOT FILE: STAGE 1 PLOTTED: Tue Oct 6 14:53:03 2026



Property Details:

Address:	Horahora Road, Arapuni, Putaruru
Parcel:	Lot 1 DPS 21946
Record of Title:	SA22C/92
Area:	45.612Ha
Zone:	Rural Residential
Policy Overlays:	Significant Natural Areas & Outstanding Landscape

Stage 2 Details:

Lots:	63 – 83 (21 lots)
Access Lots:	107 & 108 (2 lots)
Road to Vest:	Lot 203

Amalgamation Conditions:

That Lot 107 hereon (legal access) be held as to 3 undivided one-third shares by the owners of Lots 63, 64 & 65 hereon as tenants in common in the said shares and that individual Record of Titles be issued in accordance therewith.
See s220(1)(b)(iv) RMA 1991.

That Lot 108 hereon (legal access) be held as to 4 undivided one-fourth shares by the owners of Lots 67, 68, 69 & 70 hereon as tenants in common in the said shares and that individual Record of Titles be issued in accordance therewith. See s220(1)(b)(iv) RMA 1991.

Memorandum of Easements

Purpose/Interest	Shown	Burdened Land	Benefited Land
Right of Way, Right to Convey Water, Electricity, Telecommunications, Right to Drain Water	M, N	Lot 107	Lots 63, 64 & 65
Right of Way, Right to Convey Water, Electricity, Telecommunications	I	Lot 108	Lots 67, 68, 69 & 70

Proposed Consent Notice Areas

Purpose	Shown	Burdened Land
Planting & Natural Feature Protection	AH	Lot 63
Drainage - (No earthworks, buildings or obstructions)	I	Lot 108
	J	Lot 67
	K	Lot 66
	L	Lot 65
	M	Lot 107
	AH	Lot 63
Sight Distance / Visibility	See Note 5.	Lots 65-67, 77, 81, 82, 83 & 107

Notes:

1) All lots can suitably accommodate the 160m² (12.65m x 12.65m) Building Shape Factor, as shown.
2) All road boundary setbacks shown are 10m.
3) All side and rear boundary setbacks shown are 5m, except where the 25m Top of Bank and Operating Easement setbacks are shown.
4) 10m wide Esplanade Strip located adjacent to the Waikato River boundary, as shown.
5) Consent notice areas for sight distance/visibility at each entrance (3m x 48m) and both intersections (10m x 48m), restricted to 0.5m vegetation height, as shown.

COGSWELL
SURVEYING | ENGINEERING | PLANNING
5 MILICICH PLACE, CAMBRIDGE
P: (07)8275071 E: office@cogswell.co.nz
www.cogswell.co.nz

REF: 5237

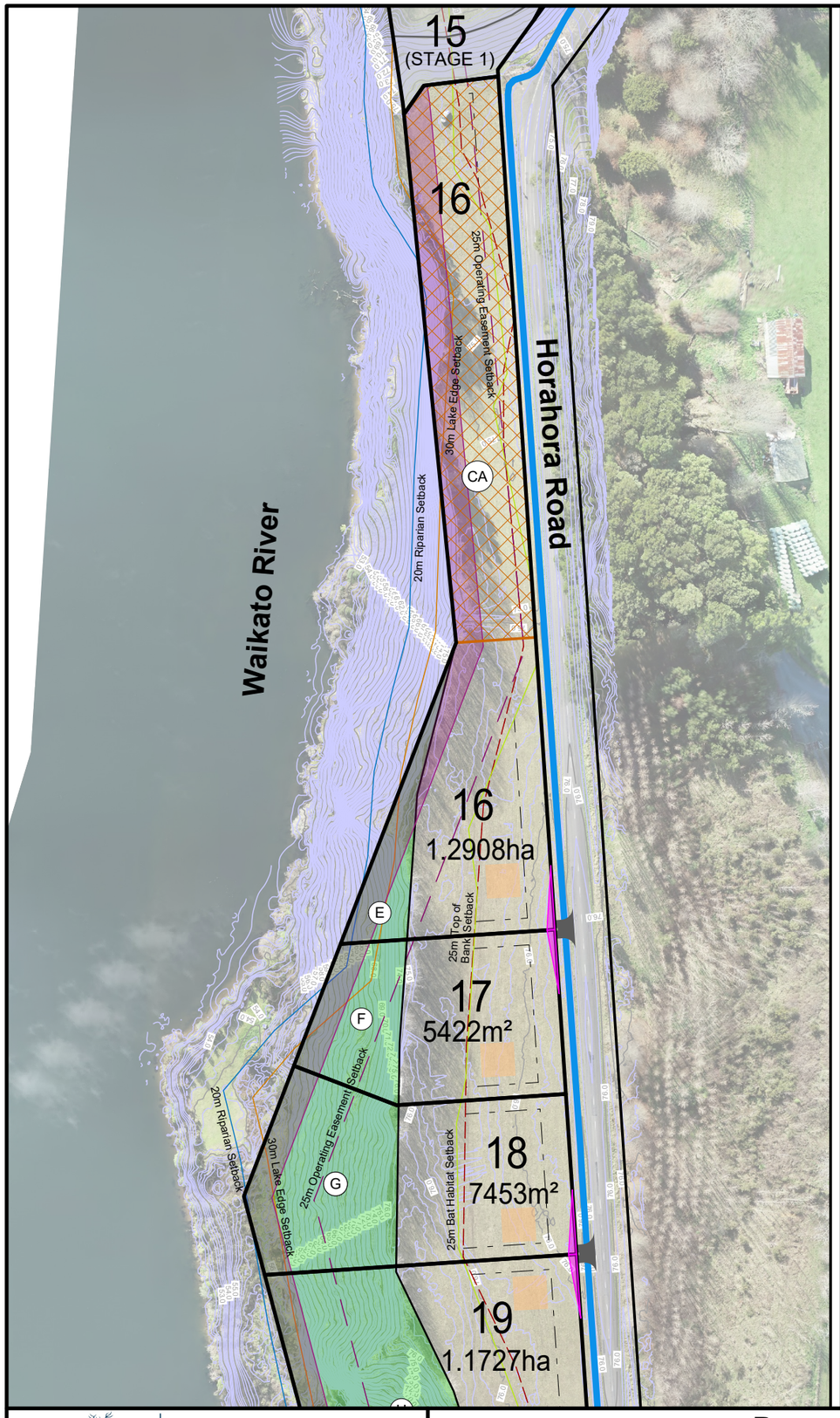
Proposed Subdivision of Lot 1 DPS 21946
STAGE 2
Horahora Road, Arapuni, Putaruru

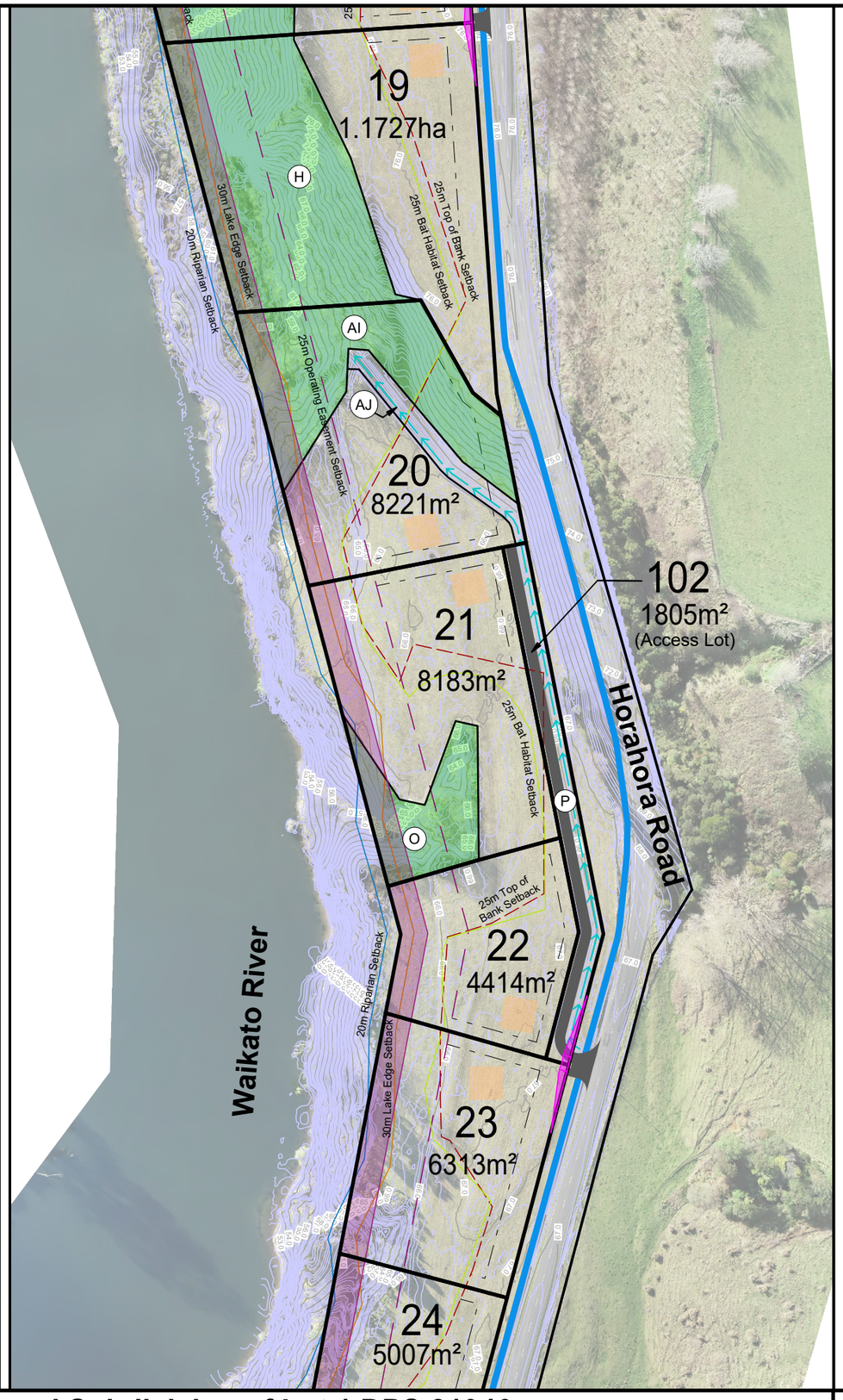
PREPARED FOR: Tylee, Kevin & Lynn

SCALE: 1:2000
ORIGINAL PLAN SIZE: A3
SHEET: 3 of 6
DRAWN: JM
DESIGNED: RS
CHECKED: RS
DATE: 06/10/26
NOTE: BOUNDARIES AND DIMENSIONS AND AREAS ARE APPROXIMATE AND SUBJECT TO ALTERATION BY APPROVAL OR SURVEY.
LEVELS ARE IN TERMS OF NZVD 2016.
ORIGIN OF LEVELS - AV17 [AGLE] RL=66.729m.
REV: J

THIS DRAWING OR DESIGN REMAINS THE PROPERTY OF, AND MAY NOT BE REPRODUCED, WITHOUT THE WRITTEN PERMISSION OF COGSWELL SURVEYS LTD

PLOT FILE: STAGE 2, PLOTTED: Tue Oct 6 14:53:09 2026





Property Details:

Address:	Horahora Road, Arapuni, Putaruru
Parcel:	Lot 1 DPS 21946
Record of Title:	SA22C/92
Area:	45.612Ha
Zone:	Rural Residential
Policy Overlays:	Significant Natural Areas & Outstanding Landscape

Stage 3 Details:

Lots:	16 – 38 & 44 - 58 (37 lots)
Access Lots:	102, 103 (2 lots)
Road to Vest:	Lot 202 & Lot 204 (2 lots)
Reserve to Vest:	Lot 37 (1 lot)

Amalgamation Conditions:

That Lot 102 hereon (legal access) be held as to 3 undivided one-third shares by the owners of Lots 20, 21 & 22 hereon as tenants in common in the said shares and that individual Record of Titles be issued in accordance therewith.
See s220(1)(b)(iv) RMA 1991.

That Lot 103 hereon (legal access) be held as to 3 undivided one-third shares by the owners of Lots 32, 34 & 36 hereon as tenants in common in the said shares and that individual Record of Titles be issued in accordance therewith.
See s220(1)(b)(iv) RMA 1991.

Memorandum of Easements			
Purpose/Interest	Shown	Burdened Land	Benefited Land
Right of Way, Right to Convey Water, Electricity, Telecommunications, Right to Drain Water	P	Lot 102	Lots 20, 21 & 22
Right of Way, Right to Convey Water, Electricity, Telecommunications	U	Lot 103	Lots 32, 34 & 36
Right to Drain Water	U	Lot 103	Lots 31, 33, 34 & 35
	T	Lot 32	Lots 30, 31, 33, 34, 35 & 103
	AJ	Lot 20	Lots 102, 22 & 21

Notes:

1) All lots can suitably accommodate the 160m² (12.65m x 12.65m) Building Shape Factor, as shown.
2) All road boundary setbacks shown are 10m.
3) All side and rear boundary setbacks shown are 5m, except where the 25m Top of Bank and Operating Easement setbacks are shown.
4) 10m wide Esplanade Strip located adjacent to the Waikato River boundary, as shown.
5) Consent notice areas for sight distance/visibility at each entrance (3m x 48m) and both intersections (10m x 48m), restricted to 0.5m vegetation height, as shown. No area shown for Lot 58, as boundary is further than 3m from the cycleway.

See Sheet 6 for the Proposed Consent Notice Areas table.

COGSWELL
SURVEYING | ENGINEERING | PLANNING
5 MILICICH PLACE, CAMBRIDGE
P: (07)8275071 E: office@cogswell.co.nz
www.cogswell.co.nz

REF: 5237

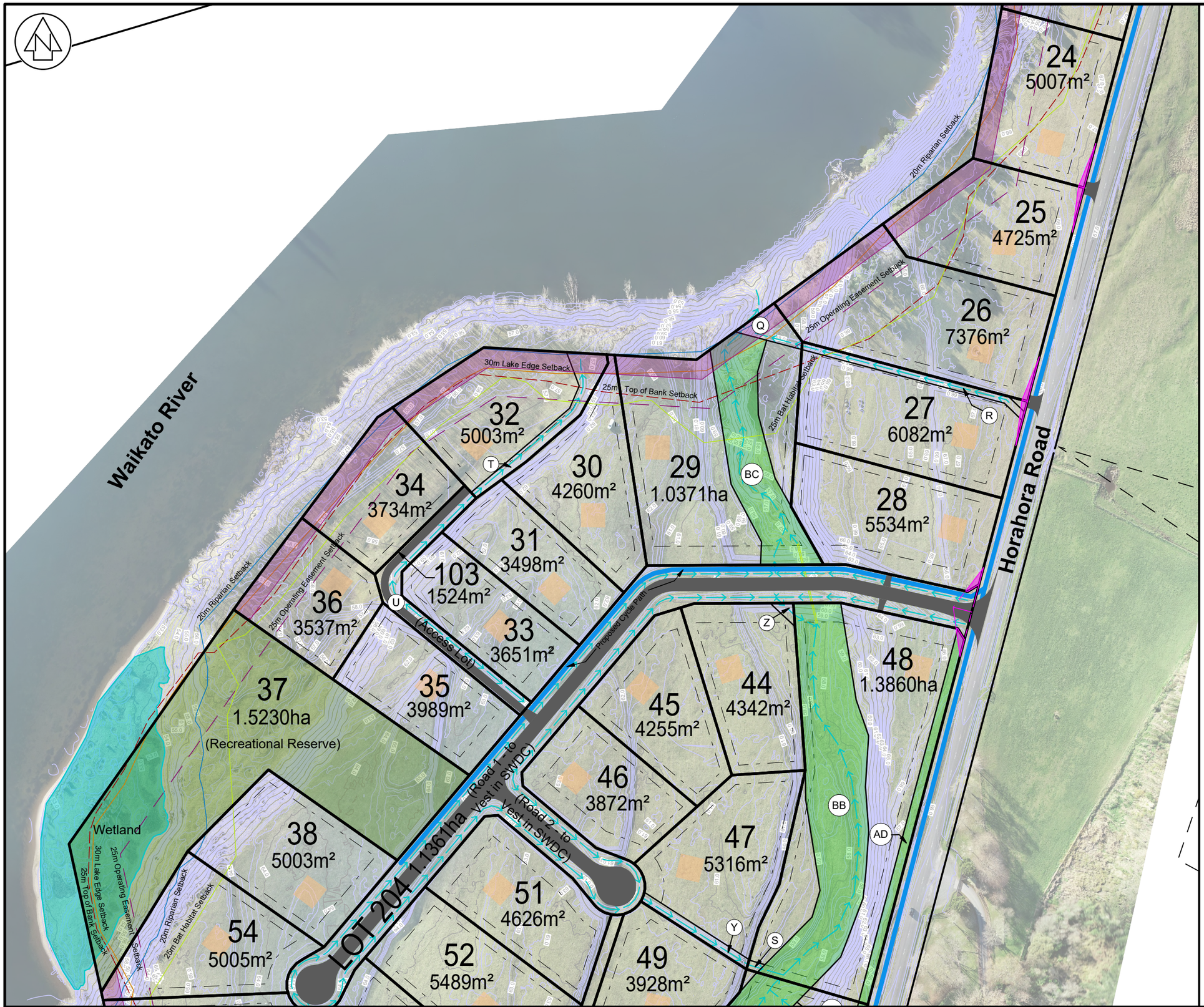
Proposed Subdivision of Lot 1 DPS 21946
STAGE 3
Horahora Road, Arapuni, Putaruru

PREPARED FOR: Tylee, Kevin & Lynn

SCALE: 1:2000
ORIGINAL PLAN SIZE: A3
SHEET: 4 of 6
DRAWN: JM
DESIGNED: RS
CHECKED: RS
DATE: 06/10/26
NOTE: BOUNDARIES AND DIMENSIONS AND AREAS ARE APPROXIMATE AND SUBJECT TO ALTERATION BY APPROVAL OR SURVEY.
LEVELS ARE IN TERMS OF NZVD 2016.
ORIGIN OF LEVELS - AV17 [AGLE] RL=66.729m.
REV: J

THIS DRAWING OR DESIGN REMAINS THE PROPERTY OF, AND MAY NOT BE REPRODUCED, WITHOUT THE WRITTEN PERMISSION OF COGSWELL SURVEYS LTD

PLOT FILE: STAGE 3 Sht A, PLOTTED: Tue Oct 6 14:53:15 2026



Property Details:

Address:	Horahora Road, Arapuni, Putaruru
Parcel:	Lot 1 DPS 21946
Record of Title:	SA22C/92
Area:	45.612Ha
Zone:	Rural Residential
Policy Overlays:	Significant Natural Areas & Outstanding Landscape

Stage 3 Details:

Lots:	16 – 38 & 44 - 58 (37 lots)
Access Lots:	102, 103 (2 lots)
Road to Vest:	Lot 202 & Lot 204 (2 lots)
Reserve to Vest:	Lot 37 (1 lot)

Amalgamation Conditions:

That Lot 102 hereon (legal access) be held as to 3 undivided one-third shares by the owners of Lots 20, 21 & 22 hereon as tenants in common in the said shares and that individual Record of Titles be issued in accordance therewith.
See s220(1)(b)(iv) RMA 1991.

That Lot 103 hereon (legal access) be held as to 3 undivided one-third shares by the owners of Lots 32, 34 & 36 hereon as tenants in common in the said shares and that individual Record of Titles be issued in accordance therewith.
See s220(1)(b)(iv) RMA 1991.

Memorandum of Easements

Purpose/Interest	Shown	Burdened Land	Benefited Land
Right of Way, Right to Convey Water, Electricity, Telecommunications, Right to Drain Water	P	Lot 102	Lots 20, 21 & 22
Right of Way, Right to Convey Water, Electricity, Telecommunications	U	Lot 103	Lots 32, 34 & 36
Right to Drain Water	U	Lot 103	Lots 31, 33, 34 & 35
	T	Lot 32	Lots 30, 31, 33, 34, 35 & 103
	AJ	Lot 20	Lots 102, 22 & 21

Notes:

1) All lots can suitably accommodate the 160m² (12.65m x 12.65m) Building Shape Factor, as shown.
2) All road boundary setbacks shown are 10m.
3) All side and rear boundary setbacks shown are 5m, except where the 25m Top of Bank and Operating Easement setbacks are shown.
4) 10m wide Esplanade Strip located adjacent to the Waikato River boundary, as shown.
5) Consent notice areas for sight distance/visibility at each entrance (3m x 48m) and both intersections (10m x 48m), restricted to 0.5m vegetation height, as shown. No area shown for Lot 58, as boundary is further than 3m from the cycleway.

See Sheet 6 for the Proposed Consent Notice Areas table.

COGSWELL
SURVEYING | ENGINEERING | PLANNING
5 MILICICH PLACE, CAMBRIDGE
P: (07)8275071 E: office@cogswell.co.nz
REF: 5237
www.cogswell.co.nz

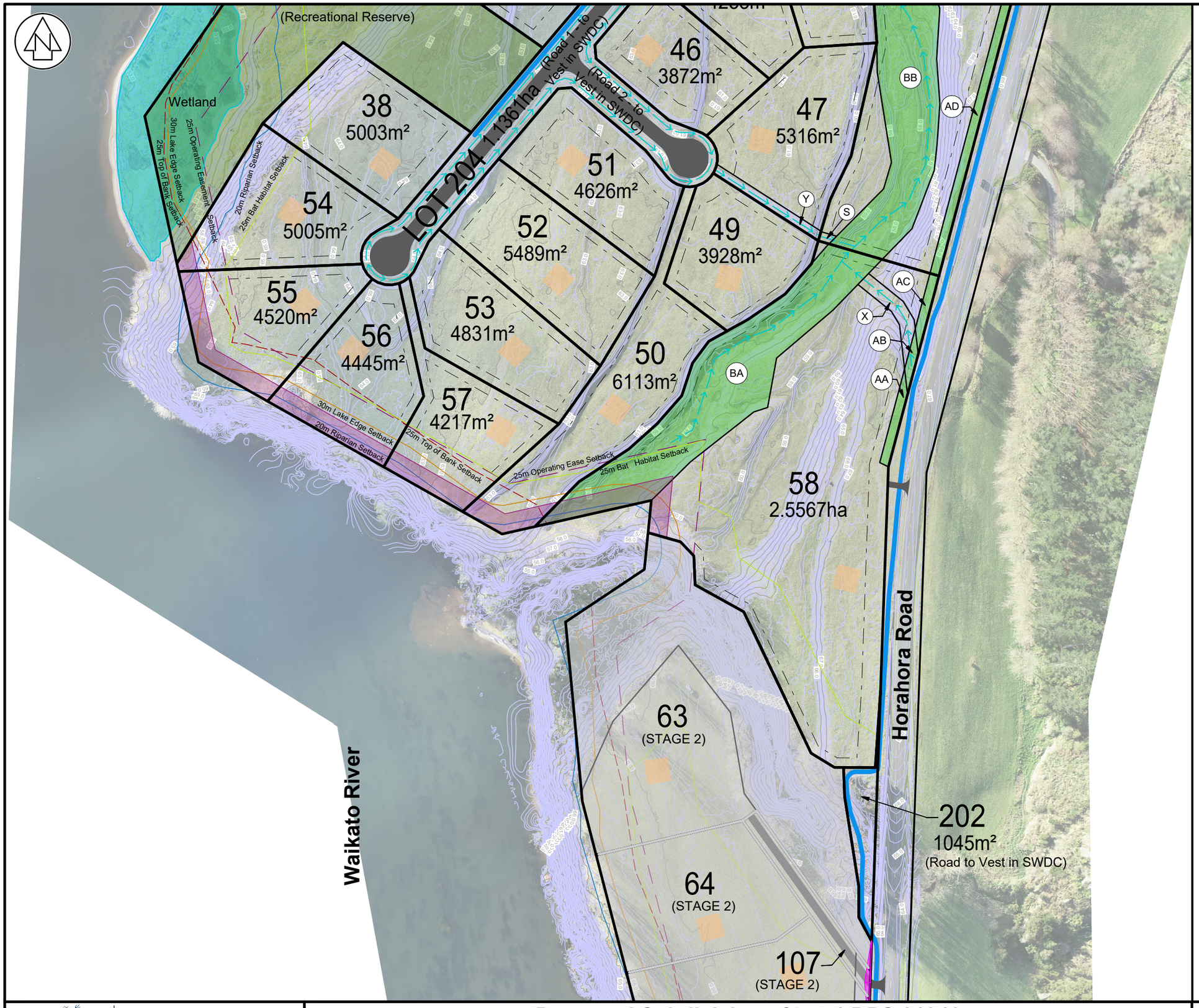
Proposed Subdivision of Lot 1 DPS 21946
STAGE 3
Horahora Road, Arapuni, Putaruru

PREPARED FOR: Tylee, Kevin & Lynn

SCALE: 1:2000
ORIGINAL PLAN SIZE: A3
SHEET: 5 of 6
DRAWN: JM
DESIGNED: RS
CHECKED: RS
DATE: 06/10/26
NOTE: BOUNDARIES AND DIMENSIONS AND AREAS ARE APPROXIMATE AND SUBJECT TO ALTERATION BY APPROVAL OR SURVEY.
LEVELS ARE IN TERMS OF NZVD 2016.
ORIGIN OF LEVELS - AV17 [AGLE] RL=66.729m.
REV: J

THIS DRAWING OR DESIGN REMAINS THE PROPERTY OF, AND MAY NOT BE REPRODUCED, WITHOUT THE WRITTEN PERMISSION OF COGSWELL SURVEYS LTD

PLOT FILE: STAGE 3.tbl8, PLOTTED: Tue Oct 6 14:53:21 2026



Proposed Consent Notice Areas		
Purpose	**Shown**	**Burdened Land**
Planting & Natural Feature Protection	E	Lot 16
	F	Lot 17
	G	Lot 18
	H	Lot 19
	AI	Lot 20
	O	Lot 21
	AD	Lot 48
	AA, AB, AC, BA	Lot 58
	BB	Lot 48
	BC	Lot 29
Drainage - (No earthworks, buildings or obstructions)	AB	Lot 58
	X	
	Y	Lot 47
	Z	Lot 44
	R	Lot 27
	Q	Lot 29
	P	Lot 102
	AJ	Lot 20
	AI	
	BA	Lot 58
	BB	Lot 48
	S	
	BC	Lot 29
Sight Distance / Visibility	See Note 5.	Lots 16-19, 23-28, 48 & 102
No Build	CA	Lot 16

COGSWELL
SURVEYING | ENGINEERING | PLANNING
5 MILICICH PLACE, CAMBRIDGE
P: (07)8275071 E: office@cogswell.co.nz
www.cogswell.co.nz

REF: 5237

Proposed Subdivision of Lot 1 DPS 21946
STAGE 3
Horahora Road, Arapuni, Putaruru

PREPARED FOR: Tylee, Kevin & Lynn

SCALE: 1:2000

ORIGINAL PLAN SIZE: A3
SHEET: 6 of 6

DRAWN: JM
DESIGNED: RS
CHECKED: RS

DATE: 06/10/26

NOTE: BOUNDARIES AND DIMENSIONS AND AREAS ARE APPROXIMATE AND SUBJECT TO ALTERATION BY APPROVAL OR SURVEY.
LEVELS ARE IN TERMS OF NZVD 2016.
ORIGIN OF LEVELS - AV17 [AGLE] RL=66.729m.

REV: J

THIS DRAWING OR DESIGN REMAINS THE PROPERTY OF, AND MAY NOT BE REPRODUCED, WITHOUT THE WRITTEN PERMISSION OF COGSWELL SURVEYS LTD

PLOT FILE: STAGE 3 Sht C, PLOTTED: Tue Oct 6 14:53:27 2026

APPENDIX B

Wastewater Assessment

GWE
CONSULTING ENGINEERS

SUBDIVISION WASTEWATER ASSESSMENT

597 Horahora Road
Arapuni

KEVIN AND LYNN TYLEE

October 2026 | V1



PROGRESS ENGINEERED. PROBLEMS SOLVED.

Auckland | Waiheke | Waikato | Bay of Plenty

DOCUMENT CONTROL RECORD

Client:	Kevin and Lynn Tylee
Project Location:	597 Horahora Road, Arapuni
Job Number:	J8352
Document:	Subdivision Wastewater | Assessment
Version:	V1
Document Status:	Final - Approved for Issue
Date:	October 2026
Prepared by:	 Alan Woodger, Senior Environmental Engineer
Reviewed and Approved by:	 Gareth Williams, Wastewater Specialist/Director
Filename:	https://gweconsult.sharepoint.com/sites/WaikatoWorkingFolder/Shared Documents/2026/Working Folder 2026/J8352_597 Horahora Road, Piarere/GWE Reports/Wastewater/RENV01v1 FINAL-597 Horahora Rd-Subdivision WW Assmt.docx

GWE Consulting Engineers
www.gwe.co.nz
0800 445 001

COPYRIGHT: The concepts and information contained in this document are the property of GWE Consulting Ltd. Use or copying of this document in whole or in part without the written permission of GWE constitutes an infringement of copyright.

DOCUMENT STATUS

STATUS	DATE	DETAILS	AUTHOR	CHECKED	APPROVED
Final	October 2026	RWW01v1 FINAL	AW	GW	GW

TABLE OF CONTENTS

1 INTRODUCTION 1

1.1 Site Description 1

1.2 Site Setting 1

2 PROPOSED DEVELOPMENT 1

2.1 Effluent Generation 2

3 ENVIRONMENTAL SETTING 2

3.1 Topography 2

3.2 Groundwater 2

3.3 Surface Water 3

3.4 Flooding 3

3.5 Waikato Regional Council Consents 3

3.6 Geological Setting 3

3.7 Ground Conditions 3

4 REGULATORY SETTING 3

4.1 Rule 3.5.7.6 4

5 SITE CHARACTERISTICS AND RISK CONSIDERATIONS 5

6 TREATMENT SYSTEM 6

6.1 Secondary Treatment 6

7 LAND DISPOSAL SYSTEM 7

7.1 Soil Category 7

7.2 Treated Effluent Land Disposal 7

7.3 Lot Assessment 7

8 ASSESSMENT OF ENVIRONMENTAL EFFECTS 8

8.2 Impact on Groundwater 8

8.3 Impact on Soil 8

9 LIMITATIONS 9

APPENDICES

APPENDIX A Proposed Developoment

APPENDIX B Bore Logs

LIST OF TABLES

Table 1: Site Details 1

Table 2: Design Flow Assumption 2

Table 3 :Permitted Activity Rule – Discharge of Sewage from Improved On-Site Domestic Sewage Treatment and Disposal Systems 4

Table 4: Site Constraints 5

Table 5: Land Disposal Area Summary 7

1 INTRODUCTION

GWE Consulting Ltd (GWE) has been engaged to assess onsite wastewater requirements for a proposed residential subdivision at 597 Horahora Road, Arapuni (the site). A post notification memo on consent RM240115 from South Waikato District Council (SWDC) requests further information under Section 4.2 Council Technical Review Matters under Wastewater servicing. The request is that the application demonstrates that sufficient land is available on every residential lot for onsite wastewater treatment and disposal. The request identifies that secondary-treatment of wastewater is required with enough space on each lot to do this as a permitted activity. The compliance of any system installed on the individual lot the reasonability of that lot owner.

This report has been undertaken to address council's wastewater queries.

1.1 Site Description

The site description is summarised in Table 1.

Table 1: Site Details

ATTRIBUTE	
Address	597 Horahora Road, Arapuni
Appellation	Lot 1 DPS 21946
Title	SA22C/92
Site Area	45.6ha
Local Council	South Waikato District Council
Regional Council	Waikato Regional Council

Source: maps.southwaikato.govt.nz

1.2 Site Setting

The site comprises an approximately 3.3 km-long strip of land between Lake Karapiro and Horahora Road. It is currently used for stock grazing, crop production, and other agricultural activities, and contains no residential dwellings.

Land surrounding the site to the east and west, including land beyond the Lake Karapiro, is predominantly used for agriculture, with some rural-residential development. To the northwest of the site is the Takapoto Estate events venue, which primarily hosts equestrian events, together with two adventure camps.

2 PROPOSED DEVELOPMENT

The proposed development plans provided to GWE comprises a staged subdivision of Lot 1 DPS 21946 into 73 new residential lots, together with access lots, new roads, and recreational reserves.

The proposed residential lots generally range from approximately 2,162 m^2 to 25,567 m^2. The proposed subdivision plans reviewed for this report have been provided in Appendix A.

Each lot has an 800 m^2 area allocated for a building platform with rainwater harvest to be used as the potable water supply on each lot.

The scheme plan identifies setback areas that constrain the land available for building platforms and wastewater disposal fields. These comprise a 30 m lake-edge setback, 25 m top-of-bank setback, 25 m operating-easement setback, 25 m bat-habitat setback, and 20 m riparian setback.

2.1 Effluent Generation

Given the proposed lot sizes, GWE has conservatively assumed that each lot could accommodate a five-bedroom dwelling. This assumption provides a higher design wastewater flow and, consequently, a larger indicative land area requirement for assessing whether each lot can accommodate a suitable effluent disposal field. Table 2 provides daily loading assumptions.

Table 2: Design Flow Assumption

ATTRIBUTE	DESIGN PERAMETER
No Bedrooms	5
Occupancy	8
Daily Flows Per Person	180L/Day
Total Daily Loading	1.440 L/day

3 ENVIRONMENTAL SETTING

The site is located approximately 8.5 km east of Tirau within an area characterised predominantly by agricultural land use. The site occupies a narrow strip of land between Horahora Road and Lake Karapiro, with ground levels generally falling towards the river.

3.1 Topography

Land Information New Zealand (LINZ) elevation data indicate that the site is predominantly undulating, with ground elevations ranging from approximately RL 53 m to 76 m NZVD 2016. Overall, the property falls from west to east towards the Lake Karapiro, reaching an elevation of approximately RL 53 m near the river margin.

The land generally falls steeply towards Lake Karapiro along the eastern boundary. In the central part of the site, this slope extends farther west into the property and is separated from a second, west-facing slope by an intervening landform. Outside these areas, the site does not contain other significant slopes.

3.2 Groundwater

GWE completed a review of the WRC maps (WRC, 2025) which indicates there are no groundwater bores on the site or within 100 m of the site. The venue and adventure camps to the northeast of site across Lake Karapiro have seven bores between <25 m to greater than 100 m depths.

Site investigations completed by Mitchell Geocon (MGG, 2022) identified no groundwater to the extent of investigation of 4.0 m, in late April. CPT tests encountered groundwater between 8.6 m and 12 m below ground level consistent with level of lake Karapiro. Bore logs have been provided in Appendix B.

3.3 Surface Water

Lake Karapiro is located adjacent to the west of the site. A small unnamed stream passes through the site from east to west in the southern portion of the site.

The small stream is registered on the Waikato Classification Maps, Lake Karapiro is classified as an Indigenous Fish Habitat, Trout Habitat and Contact Recreation water body.

3.4 Flooding

GWE reviewed the South Waikato District Council maps (SWDC, 2026) and the Waikato Regional Hazards Portal. Neither source identifies the site as being susceptible to flooding.

3.5 Waikato Regional Council Consents

One water take consent is recorded within 100 m of the site area, on the opposing bank of Lake Karapiro from the site.

3.6 Geological Setting

GNS science Geological mapping indicates that the site is underlain by Holocene River deposits (Taupo Pumice Alluvium) consisting of Predominantly pumice sand, silt and gravel alluvium with charcoal fragments; derived from Taupo Pumice Formation.

The Landcare Research SMAP (SMAP, 2026) indicates that the underlying geology is overlain by pumice alluvium considered to be well-draining sandy to loamy pumice soils.

3.7 Ground Conditions

A geotechnical investigation was conducted by Mitchell Geocon Geotechnical in 2022 (MGG, 2022) which identified topsoil overlying coarse sand with minor silts to at least 4.0 m below ground level at three of the four areas of the site (see site plan). The fourth area of site reported topsoil overlying minor silt layers overlying fine sandy SILT to 0.7 m overlying coarse sand to 4.0 m.

4 REGULATORY SETTING

New Permitted residential onsite wastewater discharges from secondary treatment plants are controlled under the Waikato Regional Council (WRC) Waikato Regional Plan (WRP) rule, 3.5.7.6 for an improved wastewater treatment system. This has been summarised below. Critical setbacks have been noted against the relevant rule.

4.1 Rule 3.5.7.6

Except as provided for by Rule 3.5.7.6, the discharge of domestic sewage effluent (including grey water but not including stormwater) onto or into land outside the Lake Taupo Catchment from an on-site domestic sewage treatment and disposal system is a permitted activity subject to the following conditions:

Table 3 :Permitted Activity Rule – Discharge of Sewage from Improved On-Site Domestic Sewage Treatment and Disposal Systems

	RULE	ASSESSMENT
A	The volume of effluent to be discharged shall not exceed three cubic metres per day averaged over any one-month period.	To be assessed on each individual lot. The assumed 8 person dwelling complies.
B	The design, construction, operation and maintenance of the system shall meet the following standards: • Pretreatment of effluent to a standard not to exceed concentrations of 20g/m^3 of Biological Oxygen Demand and 30g/m^3 of suspended solids • During times of normal wet winter groundwater level, there shall be at least 600 mm separation distance between the groundwater level and the bottom of the disposal trench or 300 mm between the groundwater level and dripper irrigation lines, where dripper irrigation lines are used and the design loading rate for effluent disposal is less than 5 mm/day. • There shall be no adverse change in groundwater quality as a result of the discharge, or in combination with other discharges • There shall be no adverse change in surface water quality as a result of the discharge, or in combination with other discharges • There shall be no direct discharge of effluent into groundwater or surface water.	A tested and approved system must be selected. Minimum setback of 0.6 m from the base of the disposal system to groundwater or 1.2m from surface for the deepest conventional system.
C	The discharge shall not result in any objectionable effects from odour beyond the boundary of the subject property.	Can comply with appropriate treatment and disposal system
D	The sewage disposal system shall not be sited within 30 m of a Natural State Water Body or Fisheries Class Water Body as specified in the Water Management Class Maps, and 10 m from any other surface water body.	A minimum setback from Lake Karapiro of 30 m and the small stream of 10 m is required.
E	Written proof of compliance with this Rule shall be provided to the Waikato Regional Council on require in the form of either: • Certification by a person who is qualified and experienced in the field of onsite sewage treatment and disposal that the system will consistently satisfy the above standards taking into account the relevant site constraints, or • The discharge shall not result in any objectionable odour beyond the boundary of the subject property.	This report has been completed and reviewed by persons qualified and experienced in onsite wastewater treatment and disposal assessments.
f	The discharge shall not occur within 20 m of a Significant Geothermal Feature.	NA

5 SITE CHARACTERISTICS AND RISK CONSIDERATIONS

Due to the preliminary nature of the investigation no specific location has been identified for the treatment plant or disposal field, and assessments have been made on a per lot based assessment. A summary of site characteristics and constraints of the new lots has been presented in Table 4.

Table 4: Site Constraints

CHARASTERICTIC	ASSESSMENT
Slope	It is understood that the lots will be predominantly level with more significant slopes accommodated within reserve areas. Within areas of more significant slopes in the north of site which fall to Lake Karapiro, a 25 m Top of bank setback has been adopted for the proposed dwelling location, this should also be applied to the onsite wastewater treatment and disposal fields.
Groundwater	Groundwater beneath the site is expected to correspond to Lake Karapiro level of RL 52 m, this is a minimum of 3 m below ground level within the lower lying lots.
Surface Water	A minimum 30 m setback from Lake Karapiro should be observed for any wastewater treatment and disposal system, and a 10 m setback from the small stream onsite should be observed.
Fill	No filling has been noted, however the levelling of the sections may require some cut to fill may occur, any disposal area must not be within an area of fill unless detailed fill design is completed to ensure that over or under compaction of soils does not occur and that appropriate fill material is used.
Stormwater Disposal	The wastewater disposal areas are to be located up or cross gradient of any stormwater disposal infrastructure, to ensure no stormwater flows onto or over the wastewater disposal fields.
Land use History	Stock Grazing.
Vegetation Cover	Grassed, final disposal areas may be plated in appropriate plantings.
Utilities	No water or wastewater reticulation is provided to the site.
Critical Setback	• Property boundary 1.5 m. • Lake Karapiro 30 m. • 25 m Top of bank setback. • Unnamed stream 10 m. • Groundwater 1.2 m below ground level.

6 TREATMENT SYSTEM

The final size and type of wastewater treatment system used on each lot will depend on the final layout of the lot and the wastewater generation potential of the building constructed e.g. flow allowances and site occupancy., Minimum sizing for primary/reserve disposal areas has been provided in the following sections and sizing is based on the assumed wastewater generation potential presented in section 2.1.

6.1 Secondary Treatment

Based on the concentration of onsite effluent disposal resulting from the proposed subdivision a secondary treatment is required for each lot. Any secondary wastewater treatment plant is required to treated wastewater to the following standard and have independent and or otherwise approved testing to verify its performance (e.g. OSET certification).

- 20g/m^3 of Biological Oxygen Demand
- 30g/m^3 of suspended solids

The sizing on any wastewater treatment plant will rely on the final design of the dwelling on each lot however the adopted plant must be designed and tested to treat the design flow volumes for the proposed dwelling. For the assumed development a minimum design loading of 1,440L/day is required.

The flowing secondary treatment systems have been approved for use within the Rotorua Lakes area for their tested secondary treatment ability and improved nitrogen removal. Other products are available on the market which achieve similar results with the specific system selected at the time of lot development.

- Hynds Advanced Lifestyle (now Lifestyle Ultimate)
- Innoflow Advantex AX 20 Mode 3
- Ozzi Kleen RPA 10A+
- Waterflow NZ Ltd Econo-Treat VBB C-2200-2

7 LAND DISPOSAL SYSTEM

7.1 Soil Category

The boreholes intersected sandy soil consistent with a Category 2, along with Fine sandy Silt soils consistent with a Category 3 soil.

The design soil category has been assessed as soil Category 3, as this is the most restrictive soil capacity encountered within the soil profile, in accordance with AS/NZS 1547:2012 C.5.2.3.1.

7.2 Treated Effluent Land Disposal

Based on the on-site soil category and groundwater depths encountered, the following land-disposal options are suitable for the design area. Each option is based on Category 3 soil and complies with Table M1 of AS/NZS 1547:2012:

- Conventional Trenches –30 mm/day.
- Conventional Beds – 30 mm/day.
- Pressure Compensating Dripper Irrigation (PCDI) – 4 mm/day.

The total area for each has been provided in Table 6.

Table 5: Land Disposal Area Summary

METHOD	SECONDARY TREATMENT	
	Loading Rate	Area
Beds	30 mm/day	1 x Bed 48 m^2
Trenches	30 mm/day	5 x Trenches – 130 m^2
PCDI	4 mm/day	360 m^2

The most specially demanding disposal method is a PCDI design; therefore, this area requirement has been adopted as the default area requirement for effluent disposal. For the adopted five-bedroom dwelling this equates to a primary disposal area comprising of 360 m^2 with a reserve area of 50% (180 m^2) of the main disposal area requiring a maximum total area required of 540 m^2.

Where lots have 540 m^2 or more for wastewater disposal there is no restriction on wastewater treatment and disposal method, those with less will require either a higher level of treatment or a site-specific assessment to use a less conservative loading rate.

7.3 Lot Assessment

Cogswell Surveys Limited have produced an available effluent disposal areas plan identifying areas available on each lot with the following allowances.

- 1.5 m property boundary setback.
- 30 m Lake edge setback.
- 25 m Top of bank setback.
- 800 m^2 building platform.

Areas identified range from 1,568 m^2 to 16,755 m^2, indicating that the necessary maximum area required for effluent disposal area is achievable on each lot.

8 ASSESSMENT OF ENVIRONMENTAL EFFECTS

8.1 Impact on Surface Water

Lake Karapiro is located adjacent to the west of the site, a setback of 30 m has been observed from the lake edge. This complies with the WRP minimum setback of 30 m.

Overall, the effects on surface water are assessed as less than minor.

8.2 Impact on Groundwater

The proposed land disposal systems will distribute highly treated effluent over an area at a loading rate recommended for the soil types encountered during ground investigation on the site, the site conditions and constraints.

Investigations across the site did not encounter groundwater at depths of up to 4.0 m below ground level, CPT investigations encountered groundwater at between 8 m to 10 m below ground level, corresponding to the level of Lake Karapiro.

The separation distance exceeds the minimum setback required of 0.6 m below the base of the disposal system required in the WRP. No bores are located within 100 m of the site which exceeds the WRP minimum 30 m setback to a water supply bore.

Based on the above information, the impact on groundwater at the site is considered to be less than minor.

8.3 Impact on Soil

The soils are categorised as Category 3 loading rates specified represent a conservative loading rate provided in ASNZ1547:2017 Tables L1 and M1, which is not expected to adversely affect the long-term acceptance rate (LTAR) of the soils at the site. Any nitrate/nitrogen from the treatment plant will be denitrified by the carbon in the soil layers and micro-organisms.

Overall, effects on soil processes and nutrient loading are assessed as less than minor.

8.4 Impact on Amenity Values

Given the high level of treatment provided by the secondary treatment systems, odours are not anticipated at the plant nor the disposal field. The volume of treated effluent produced is proposed to be dispersed over a large disposal area. The treatment plant will be located at least 1.5 m from habitable spaces and 1.5 m from lot boundaries. The treatment plant is not expected to result in any discernible adverse noise effects to the owners or neighbours.

Constituents remaining in the treated effluent such as nitrogen and phosphorus will be taken up by surrounding vegetation and transpired to the air. Regular doses of treated wastewater within the disposal area will promote vegetation growth.

Adverse effects of amenity values are therefore assessed as less than minor.

8.5 Summary

The proposed wastewater treatment and disposal systems have been designed in accordance with relevant technical standards and is consistent with the Resource Management Act (RMA) and the WRC WRP. Furthermore, there are several minimum setbacks and design features that will mitigate against environmental effects, including:

- Secondary treatment meeting the required effluent quality standards of 20 g/m^3 biochemical oxygen demand and 30 g/m^3 suspended solids.
- Land disposal by conventional beds or trenches at 30 mm/day, or PCDI at 4 mm/day, based on Category 3 soil.
- Minimum setbacks of 30 m from Lake Karapiro, 10 m from the unnamed stream, 1.5 m from property boundaries, and 0.6 m between the base of the disposal system and groundwater. A 25 m setback from the top of bank for wastewater treatment and disposal fields.
- Provision of a primary disposal area and a reserve area equal to 50% of the primary disposal area.

- Siting wastewater disposal areas upgradient or cross-gradient of stormwater infrastructure, with ongoing monitoring and maintenance in accordance with supplier requirements.

Overall, adverse effects on surface water, groundwater, soil, public health, and amenity are expected to be less than minor and contained entirely within the site boundaries of each lot. Ongoing monitoring and maintenance of the system in accordance with supplier requirements will ensure the low level of effects are maintained throughout the system's operational life.

9 LIMITATIONS

This report has been prepared for the sole benefit of **Kevin and Lynn Tylee** as our Client, and their appointed representatives, according to their instructions, for the specific objectives described herein. This report is qualified in its entirety and should be considered in the light of our Terms of Engagement with the Client and the following:

a. Data or opinions contained within the report may not be used in other contexts or for any other purpose without our prior review and written agreement. Any reliance will be at the parties' sole risk.

b. No responsibility is assumed for inaccuracies in reporting by the information providers. In no event, regardless of whether GWE 's consent has been provided, does GWE accept any liability, whether directly or indirectly, for any liability or loss suffered or incurred by any third party to whom this report is disclosed placing any reliance on this report, in part or in full.

c. GWE has relied on information provided by the Client and by third parties to produce this document and arrive at its conclusions. GWE has not verified information provided (unless specifically noted otherwise) and we assume no responsibility and make no representations with respect to the adequacy, accuracy, or completeness of such information.

APPENDIX A
PROPOSED DEVELOPOMENT



Available Effluent Disposal Area Analysis

Note: The below excludes lot areas that are within; 1.5m of the property boundary, 1.5m of the 30m Lake Edge Setback, 30m of the lake edge, the 800m² building platform and easements.

Lot Number	Area Available for Effluent Disposal
1	3642
2	3695
3	3604
4	4079
5	4234
6	3766
7	3183
8	2855
9	2445
10	2469
11	2841
12	2685
13	2304
14	1669
15	3369
16	9427
17	2591
18	2825
19	4634
20	2568
21	4696
22	2984
23	4264
24	3298
25	3440
26	5388
27	4460
28	4277
29	5575
30	2982
31	2321
32	2224
33	2468
34	1829
35	2795
36	2103
38	3780
44	3093
45	3054
46	2706
47	3853
48	6014
49	2774
50	4027
51	3405
52	4223
53	3594
54	3584
55	2695
56	2255
57	2268
58	16755
63	4848
64	4187
65	3760
66	4010
67	2397
68	2205
69	3046
70	2507
71	3778
72	3799
73	3766
74	3025
75	3766
76	2570
77	3401
78	2208
79	2542
80	2183
81	3276
82	1681
83	1568

Lot with largest available area	
58	16755

Lot with smallest available area	
83	1568

COGSWELL
SURVEYING | ENGINEERING | PLANNING
5 MILICICH PLACE, CAMBRIDGE
P: (07)8275071 E: office@cogswell.co.nz
www.cogswell.co.nz

REF: 5237

Proposed Subdivision of Lot 1 DPS 21946
Available Effluent Disposal Areas
Horahora Road, Arapuni, Putaruru

PREPARED FOR: Tylee, Kevin & Lynn

SCALE: 1:4000

ORIGINAL PLAN SIZE: A3
SHEET: 1 of 1

DRAWN: JM
DESIGNED: JM
CHECKED: RS

DATE: 17/09/26

NOTE: BOUNDARIES AND DIMENSIONS AND AREAS ARE APPROXIMATE AND SUBJECT TO ALTERATION BY APPROVAL OR SURVEY.
LEVELS ARE IN TERMS OF NZVD 2016.
ORIGIN OF LEVELS - AV17 [AGLE] RL=66.729m.

REV: A

THIS DRAWING OR DESIGN REMAINS THE PROPERTY OF, AND MAY NOT BE REPRODUCED, WITHOUT THE WRITTEN PERMISSION OF COGSWELL SURVEYS LTD

PLOT FILE: Stages, PLOTTED: Thu Sep 17 16:21:22 2026

APPENDIX B
BORE LOGS

PRELIMINARY GEOTECHNICAL INVESTIGATION

K & L TYLEE

PROPOSED SUBDIVISION

NO. 597 HORAHORA ROAD, PIARERE

Site Investigations

- Bore Hole Log Nos. A-1 to A-24
- Stormwater Test Results
- CPT Field Test Data Nos. B-1 to B-10 series (A to E)

Liquefaction Assessment

- Cone Penetrometer Test (CPT) Nos. 1 to 10

Slope Stability Analysis

- Slope Stability Assessment Figures D-1 to D-20

BORE HOLE LOG No. 1 - AREA A

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	SHEAR VANE DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL.		TS			
	fine to coarse SAND with some silt. Medium dense to dense, moist, light brownish grey.	1 2 3	Hinuera Formation			No Groundwater
	Bottom of Bore Hole completed 02/05/2022	4				

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 02/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 1
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-1

BORE HOLE LOG No. 2 - AREA A

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	SHEAR VANE DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL.		TS			
	fine to coarse SAND. Loose to dense, moist, light greyish brown.	1 2 3	Hinuera Formation		12	No Groundwater
	Bottom of Bore Hole completed 02/05/2022	4				

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 02/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 2
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-2

BORE HOLE LOG No. 3 - AREA A

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	SHEAR VANE DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL.		TS			
	fine to coarse SAND with some silt. Medium dense, moist, light brownish grey. Becoming very dense @ 3.0 metres.	1 2 3	Hinuera Formation		14 17 14 14 11 13 14 12 12 20+	No Groundwater
	Bottom of Bore Hole completed 02/05/2022	4				

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 02/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 3
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-3

BORE HOLE LOG No. 4 - AREA A

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	SHEAR VANE DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL.		TS			
× × ×	fine sandy SILT. Firm, moist, light yellowish brown.		Loam			
	fine to coarse SAND with some silt and fine to coarse gravel. Loose to dense, moist, light brownish grey.	1 2 3 4	Hinuera Formation			No Groundwater
	Bottom of Bore Hole completed 02/05/2022					

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 02/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 4
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-4

BORE HOLE LOG No. 5 - AREA A

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION
	TOPSOIL.		TS
× × ×	fine sandy SILT. Firm, dry to moist, light yellowish brown.		Loam
	fine to coarse SAND with some fine to coarse gravel and silt. Loose to dense, moist, light brownish grey.	1 2	Hinuera Formation
	silty fine to coarse SAND with some gravel. Loose to medium dense, moist, light brownish grey.	3 4	
	Bottom of Bore Hole completed 02/05/2022		

SHEAR VANE DIAL READING (In-situ/Remoulded)

SCALA PENETROMETER (blows/100mm)

1 2 3 4 5 6 7 8 9 10

11
13

PIEZOMETER / WATER LEVEL

No Groundwater

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 02/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

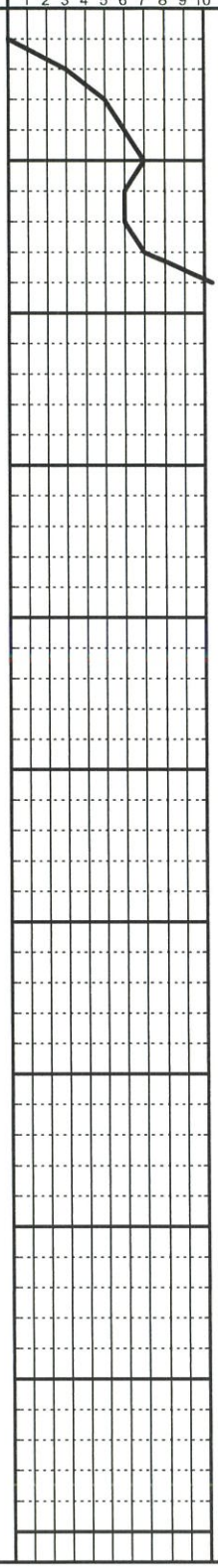
BORE HOLE No. 5
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-5

BORE HOLE LOG No. 6 - AREA A

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION
	TOPSOIL.		TS
	fine sandy SILT. Stiff, dry to moist, light yellowish brown.		Loam
	silty fine to coarse SAND with some gravel. Medium dense, moist, light grey. Becoming dense @ 0.8 metres.		Hinuera Formation
	Unable to penetrate using Hand Auger. Bottom of Bore Hole completed 02/05/2022	1 2 3 4	

SHEAR VANE DIAL READING (In-situ/Remoulded)

SCALA PENETROMETER (blows/100mm)



PIEZOMETER / WATER LEVEL

No Groundwater

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Hand Auger
RIG:
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 02/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 6
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-6

BORE HOLE LOG No. 7 - AREA A

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION
	TOPSOIL.		TS
	fine sandy SILT. Firm to stiff, moist, light yellowish brown.		Loam
	fine to coarse SAND with some fine to coarse gravel. Medium dense, moist, light brownish grey. Becoming loose @ 1.1 metres. " medium dense @ 2.1 metres.	1 2 3	Hinuera Formation
	Bottom of Bore Hole completed 02/05/2022	4	

SHEAR VANE DIAL READING (In-situ/Remoulded)

SCALA PENETROMETER (blows/100mm)

1 2 3 4 5 6 7 8 9 10

PIEZOMETER / WATER LEVEL

No Groundwater

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 02/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

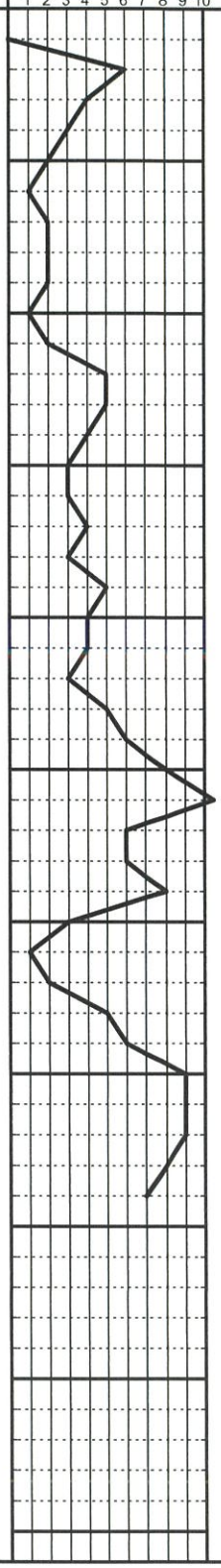
BORE HOLE No. 7
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-7

BORE HOLE LOG No. 8 - AREA A

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION
	TOPSOIL.		TS
	fine sandy SILT. Firm to stiff, moist, light grey.		Recent Alluvium
	organic SILT with some sand. Soft to firm. moist, dark brown.		
	silty fine to coarse SAND. Loose to dense, moist, light greyish brown.	1 2	Hinuera Formation
	fine to coarse SAND with some silt. Medium dense to dense, moist, pumiceous, light brownish grey. Becoming loose and fine SAND @ 3.0 metres. " medium dense to dense and fine to coarse SAND @ 3.2 metres	3	
	Bottom of Bore Hole completed 03/05/2022	4	

SHEAR VANE DIAL READING (In-situ/Remoulded)

SCALA PENETROMETER (blows/100mm)



PIEZOMETER / WATER LEVEL: No Groundwater

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 03/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 8
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-8

BORE HOLE LOG No. 9 - AREA B

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION
	TOPSOIL.		TS
	fine sandy SILT. Firm to stiff, moist, light brown.		Loam
	silty fine to coarse SAND. Medium dense to dense, moist, light greyish brown.	1 2 3 4	Hinuera Formation
	Bottom of Bore Hole completed 03/05/2022		

SHEAR VANE DIAL READING (In-situ/Remoulded)

SCALA PENETROMETER (blows/100mm)

1 2 3 4 5 6 7 8 9 10

PIEZOMETER / WATER LEVEL

No Groundwater

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 03/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 9
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-9

BORE HOLE LOG No. 10 - AREA B

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	SHEAR VANE DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL.		TS			
	silty fine to coarse SAND. Medium dense to dense, moist, light brownish grey.	1	Hinuera Formation			No Groundwater
	silty fine to coarse SAND with minor gravel. Medium dense, moist, light greyish brown. Becoming medium dense to dense @ 2.8 metres.	2 3			11	
	Bottom of Bore Hole completed 03/05/2022	4				

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 03/05/2022
CHECKED: SJ

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 10
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-10

BORE HOLE LOG No. 11 - AREA B

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	SHEAR VANE DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL.		TS			
	fine to coarse SAND with minor silt and gravel. Medium dense to dense, moist, light brownish grey.	1 2 3	Hinuera Formation		12	No Groundwater
	Bottom of Bore Hole completed 03/05/2022	4				

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 03/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 11
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-11

BORE HOLE LOG No. 12 - AREA C

SOIL DESCRIPTION

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	SHEAR VANE DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL.		TS			
	fine to coarse SAND with minor silt and some gravel. Loose to dense, moist, light greyish brown.	1 2 3	Hinuera Formation			No Groundwater
	Bottom of Bore Hole completed 03/05/2022	4				

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 03/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 12
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-12

BORE HOLE LOG No. 13 - AREA C

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION
	TOPSOIL.		TS
	silty fine SAND. Loose to medium dense, moist, light greyish brown.		
	fine to coarse SAND with minor silt and some gravel. Medium dense, moist, light brownish grey. Becoming medium dense to dense @ 2.7 metres.	1 2 3	Hinuera Formation
	Bottom of Bore Hole completed 04/05/2022	4	

SHEAR VANE DIAL READING (In-situ/Remoulded)

SCALA PENETROMETER (blows/100mm)

1 2 3 4 5 6 7 8 9 10

12
11

PIEZOMETER / WATER LEVEL

No Groundwater

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 04/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 13
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-13

BORE HOLE LOG No. 14 - AREA C

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	SHEAR VANE DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL.		TS			
	fine to coarse SAND with silt and gravel. Loose to medium dense, Becoming medium dense to dense @ 3.7 metres.	1 2 3 4	Hinuera Formation			No Groundwater
	Bottom of Bore Hole completed 04/05/2022					

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 04/05/2022
CHECKED:

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 14
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-14

BORE HOLE LOG No. 15 - AREA C

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	SHEAR VANE DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL.		TS			
	fine to coarse SAND with some gravel and minor silt. Medium dense to dense, moist, light brownish grey. Becoming loose @ 0.9 metres.	1	Hinuera Formation			No Groundwater
	silty fine to coarse SAND with some gravel. Loose to medium dense, moist, light greyish brown.	2 3				
	Bottom of Bore Hole completed 04/05/2022	4				

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 04/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 15
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-15

BORE HOLE LOG No. 16 - AREA C

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	SHEAR VANE DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL.		TS			
	fine to coarse SAND with some gravel and some minor silt. Medium dense, moist, light brownish grey. Becoming medium dense to dense @ 0.9 metres.	1 2	Hinuera Formation			No Groundwater
	Unable to retrieve sample Bottom of Bore Hole completed 04/05/2022	3 4				

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 04/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 16
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-16

BORE HOLE LOG No. 17 - AREA C

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	SHEAR VANE DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL.		TS			
	fine to coarse SAND with some gravel and some silt. Loose to medium dense, moist, light brownish grey. " medium dense to dense @ 1.6 metres.	1 2	Hinuera Formation			No Groundwater
	Unable to penetrate. Bottom of Bore Hole completed 04/05/2022	3 4				

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

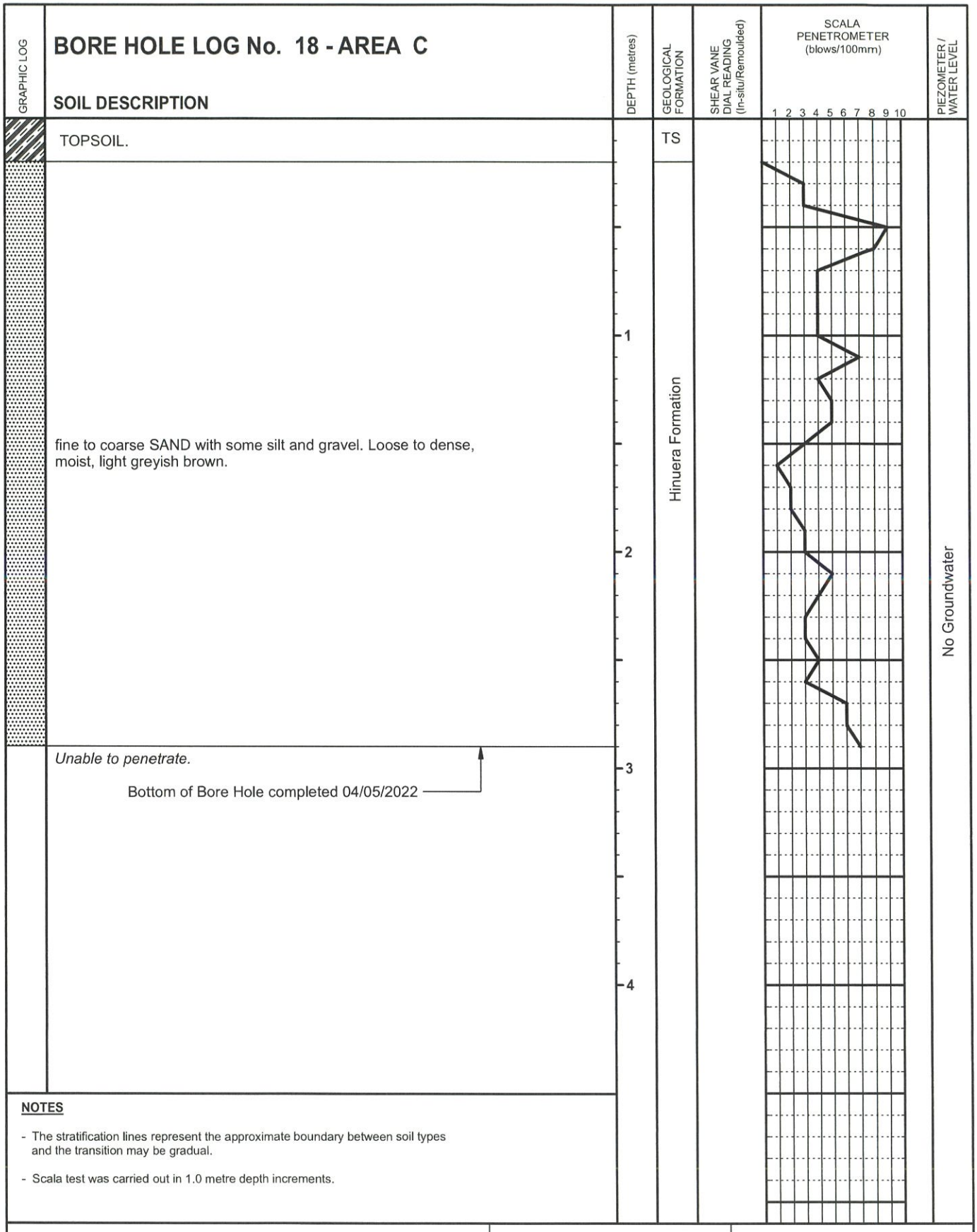
LOGGED: TFD PLOTTED: RS
DATE LOGGED: 04/05/2022
CHECKED: RL

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 17
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-17

BORE HOLE LOG No. 18 - AREA C



NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE	DRILL METHOD: Machine Auger	LOGGED: TFD	PLOTTED: RS
JOB LOCATION: No. 597 Horahora Road, Piarere	RIG: Hilux	DATE LOGGED: 04/05/2022	
JOB NUMBER: W-17006	DRILLER: RS	CHECKED: SW	

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 18
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-18

BORE HOLE LOG No. 19 - AREA C

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	SHEAR VANE DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL.		TS			
	fine to coarse SAND with some silt and gravel. Loose to medium dense, moist, light brownish grey.	1 2 3 4	Hinuera Formation			No Groundwater
	Bottom of Bore Hole completed 04/05/2022					

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 04/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 19
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-19

BORE HOLE LOG No. 20 - AREA C

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION
	TOPSOIL.		TS
	fine to coarse SAND with some silt and gravel. Medium dense to dense, moist, greyish brown.		Hinuera Formation
	fine to coarse SAND with some gravel. Loose to medium dense, moist, brownish grey.	1	
	fine to coarse SAND with some silt and gravel. Medium dense to dense, moist, greyish brown.	2	
		3	
	Bottom of Bore Hole completed 04/05/2022	4	

SHEAR VANE DIAL READING (In-situ/Remoulded)

SCALA PENETROMETER (blows/100mm)

1 2 3 4 5 6 7 8 9 10

PIEZOMETER / WATER LEVEL

No Groundwater

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 04/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 20
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-20

BORE HOLE LOG No. 21 - AREA D

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	SHEAR VANE DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL.		TS			
	fine to coarse SAND with some silt and gravel. Medium dense to dense, moist, light brownish grey.	1 2 3 4	Hinuera Formation			No Groundwater
	Bottom of Bore Hole completed 05/05/2022					

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 05/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 21
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-21

BORE HOLE LOG No. 22 - AREA D

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	SHEAR VANE DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL.		TS			
	fine to coarse SAND with some silt and gravel. Loose to dense, moist, light greyish brown.	1 2 3 4	Hinuera Formation			No Groundwater
	Bottom of Bore Hole completed 05/05/2022					

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 05/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 22
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-21

BORE HOLE LOG No. 23 - AREA D

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	SHEAR VANE DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL.		TS			
	fine to coarse SAND with some silt and gravel. Loose to medium dense, moist, light greyish brown.	1 2 3 4	Hinuera Formation			No Groundwater
	Bottom of Bore Hole completed 05/05/2022					

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 05/05/2022
CHECKED: SW

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

BORE HOLE LOG

BORE HOLE No. 23
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-23

BORE HOLE LOG No. 24 - AREA D

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	SHEAR VANE DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL.		TS			
	fine to coarse SAND with some silt and gravel. Loose to medium dense, moist, light brownish grey. Becoming greyish brown @ 1.1 metres. " medium dense to dense @ 1.8 metres.	1 2 3	Hinuera Formation			No Groundwater
	Bottom of Bore Hole completed 05/05/2022	4				

NOTES

- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Scala test was carried out in 1.0 metre depth increments.

JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux
DRILLER: RS

LOGGED: TFD PLOTTED: RS
DATE LOGGED: 05/05/2022
CHECKED:

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

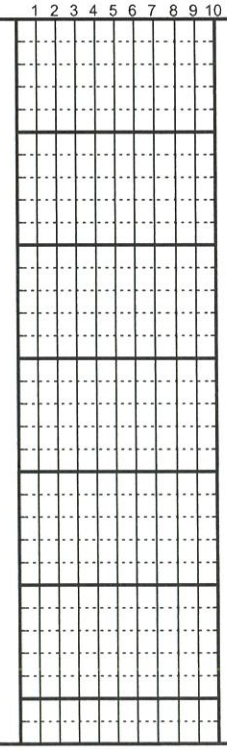
BORE HOLE LOG

BORE HOLE No. 24
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-24

STORMWATER TEST A

GRAPHIC LOG	SOIL DESCRIPTION	DEPTH (metres)	GEOLOGICAL FORMATION	VANE SHEAR DIAL READING (In-situ/Remoulded)	SCALA PENETROMETER (blows/100mm) 1 2 3 4 5 6 7 8 9 10	PIEZOMETER / WATER LEVEL
	TOPSOIL		T/S			
	fine to coarse SAND with some gravel and trace silt. Loose to dense, moist, light greyish brown.	1	Hinuera Formation			No Groundwater
	Bottom of Bore Hole completed 07/06/22	2				
		3				

NOTES
- The stratification lines represent the approximate boundary between soil types and the transition may be gradual.
- Vane shear values shown are as-recorded in the field, to which a calibration factor from Geotechnics Vane 443 of 1.419 should be applied to attain Vane Shear Strength (kPa).
- Scala test was carried out in 1.0 metre depth increments.



JOB NAME: K & L TYLEE
JOB LOCATION: No. 597 Horahora Road, Piarere
JOB NUMBER: W-17006

DRILL METHOD: Machine Auger
RIG: Hilux VANE No.
DRILLER: KW

LOGGED: TFD PLOTTED: TFD
DATE LOGGED: 30/08/22
CHECKED:

Mitchell Geocon Geotechnical
Geotechnical Engineers
1150 Victoria Street, P.O. Box 9123, Hamilton

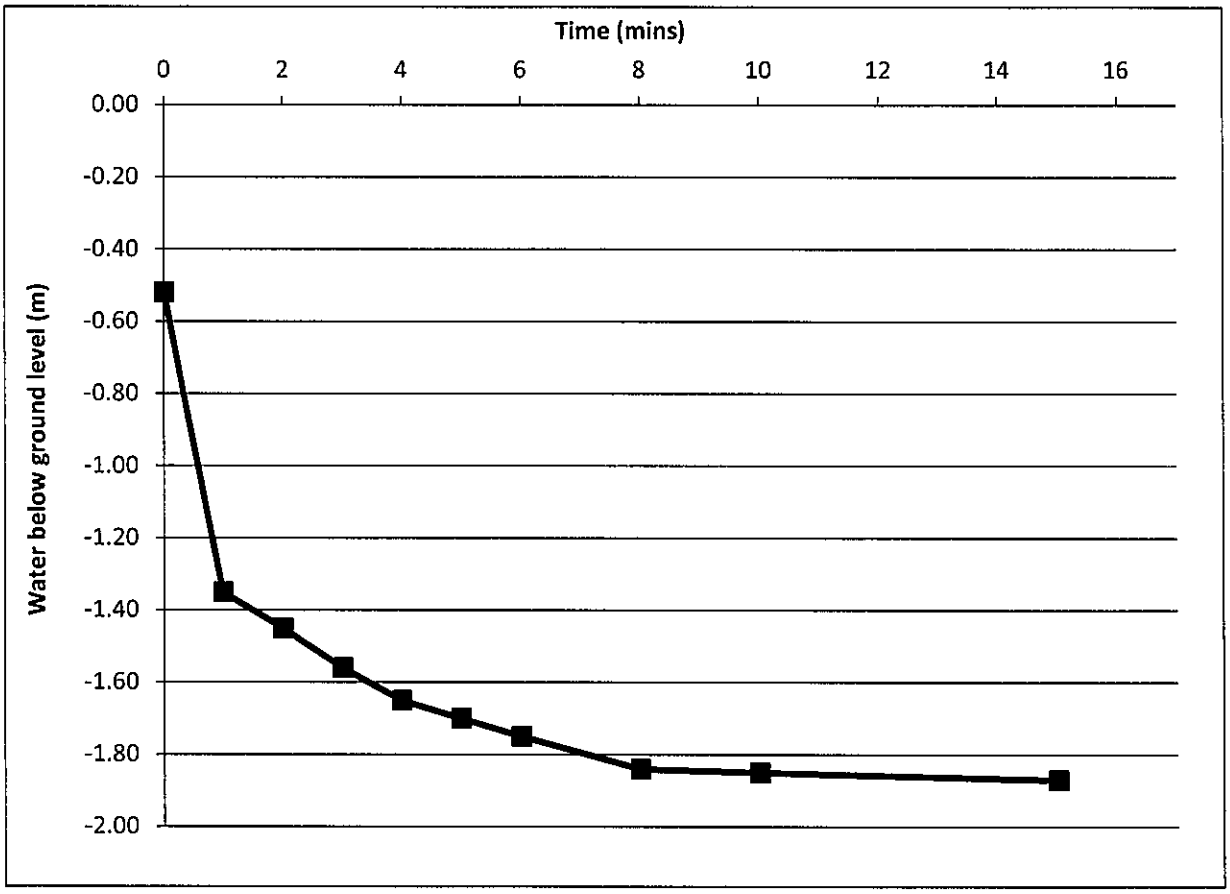
BORE HOLE LOG

STORMWATER TEST A
LOCATION: refer Site Plan RL (m):
SHEET: 1 OF 1 Fig. No. A-25

FALLING HEAD SOAKAGE TEST

JOB NO. W-17006
PROJECT: K & L TYLEE
LOCATION: No. 597 Horahora Road, Piarere

SOAKAGE TEST A



Time (mins)	Water Level below top of PVC (m)	Water Level Relative to Ground Level (m)	Change in Water Level (m)	Water Level head (m)
0	0.52	-0.52	0.00	1.87
1	1.35	-1.35	0.83	-1.35
2	1.45	-1.45	0.10	-1.45
3	1.56	-1.56	0.11	-1.56
4	1.65	-1.65	0.09	-1.65
5	1.70	-1.70	0.05	-1.70
6	1.75	-1.75	0.05	-1.75
8	1.84	-1.84	0.09	-1.84
10	1.85	-1.85	0.01	-1.85
15	1.87	-1.87	0.02	-1.87
20				
25				
30				

Mitchell Geocon Geotechnical
Consulting Geotechnical Engineers
1150 Victoria Street, PO Box 9123, Hamilton

FALLING HEAD SOAKAGE TEST RESULTS

Figure No. C-1
DATE: August 2022
CHECKED:

Mitchell Geocon Geotechnical

Consulting Geotechnical Engineers

K & L TYLEE — W-17006

Stormwater Assessment for Induistrial Development at No. 597 Horahora Road, Piarere — Date of test: 30 August 2022

Field Soakage Test Data

TABLE 1: FALLING HEAD SOAKAGE TEST RESULTS STORMWATER TEST A

Length of PVC Casing (m)	1.87
Length of PVC Above Ground (m)	0.00
Depth of Soakhole (m)	1.87
Groundwater Level (m)	0.00
Groundwater Level (height above base of Soakhole) (m)	na
Test Hole Diameter (m)	0.095

Time (mins)	Water Level below top of PVC (m)	Water Level Relative to Ground Level (m)	Change in Water Level (m)	Water Level head (m)
0.0	0.52	-0.52	0.00	1.87
1.0	1.35	-1.35	0.83	0.52
2.0	1.45	-1.45	0.10	0.42
3.0	1.56	-1.56	0.11	0.31
4.0	1.65	-1.65	0.09	0.22
5.0	1.70	-1.70	0.05	0.17
6.0	1.75	-1.75	0.05	0.12
8.0	1.84	-1.84	0.09	0.03
10.0	1.85	-1.85	0.01	0.02
15.0	1.87	-1.87	0.02	0.00
20.0				
25.0				
30.0				

Mitchell Geocon Geotechnical

Consulting Geotechnical Engineers

COEFFICIENT OF PERMEABILITY DERIVATION

Use Hvorslev Case 7 (from Kortegast NZGS Vol 16 Issue 1) - hole extended in uniform soil

ie. soakage occurs out the side and base of test hole (slotted) with overlying restrictive layer

PERMEABILITY CALCULATIONS — STORMWATER TEST A

Shape Factor F = $\frac{2 \times \pi \times L}{\ln\{(L/R) + [1 + (L/R)^2]^{0.5}\}}$ where L = soakage (sand) length (m), R = test hole radius (m)

Perm coeff. $k = \frac{A}{F \times (t2 - t1)} \times \ln \frac{h1}{h2}$ where A = test hole flow area, h1 = initial water level, h2 = final water level, t1 = time at h1, t2 = time at h2

Soil Parameters

1.7 m impermeable materal depth

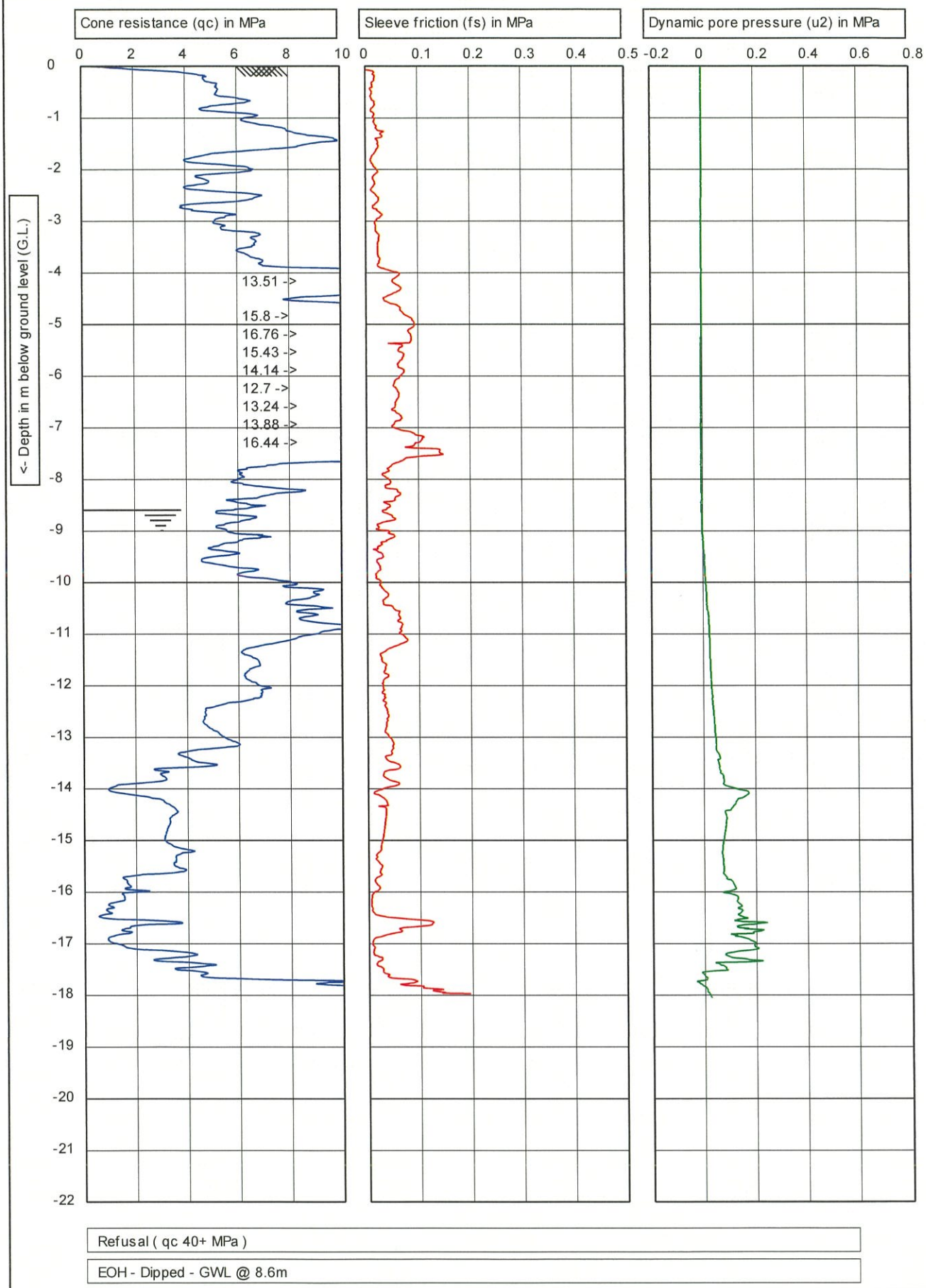
0.2 m permeable materal depth

Elapsed Time (mins)	Water Level head (m)	Av Water Level Head (m) (=H/2)	L (m)	Av. L (m)	F	k (m/sec)
0.0	1.87	1.80	0.15			
1.0	0.52	0.45	0.15	0.15	0.50	3.3E-04
2.0	0.42	0.35	0.15	0.15	0.50	6.0E-05
3.0	0.31	0.24	0.15	0.15	0.50	9.0E-05
4.0	0.22	0.14	0.15	0.15	0.50	1.1E-04
5.0	0.17	0.10	0.15	0.15	0.50	9.9E-05
6.0	0.12	0.06	0.12	0.14	0.48	1.1E-04
8.0	0.03	0.02	0.03	0.08	0.38	2.2E-04
10.0	0.02	0.01	0.02	0.03	0.31	7.7E-05
15.0	0.00	0.00	0.00	0.01	0.30	ERR
20.0	0.00	0.00	0.00	0.00	ERR	ERR
25.0	0.00	0.00	0.00	0.00	ERR	ERR
30.0	0.00	0.00	0.00	0.00	ERR	ERR

COMPUTED ADJUSTED AVERAGE: 1.2E-04 m/sec

10.2 m/day

Checked:



Test results indicated as not accredited are outside the scope of the laboratory's accreditation

Test according ASTM D5778:12 & ISO 22476-1:2012

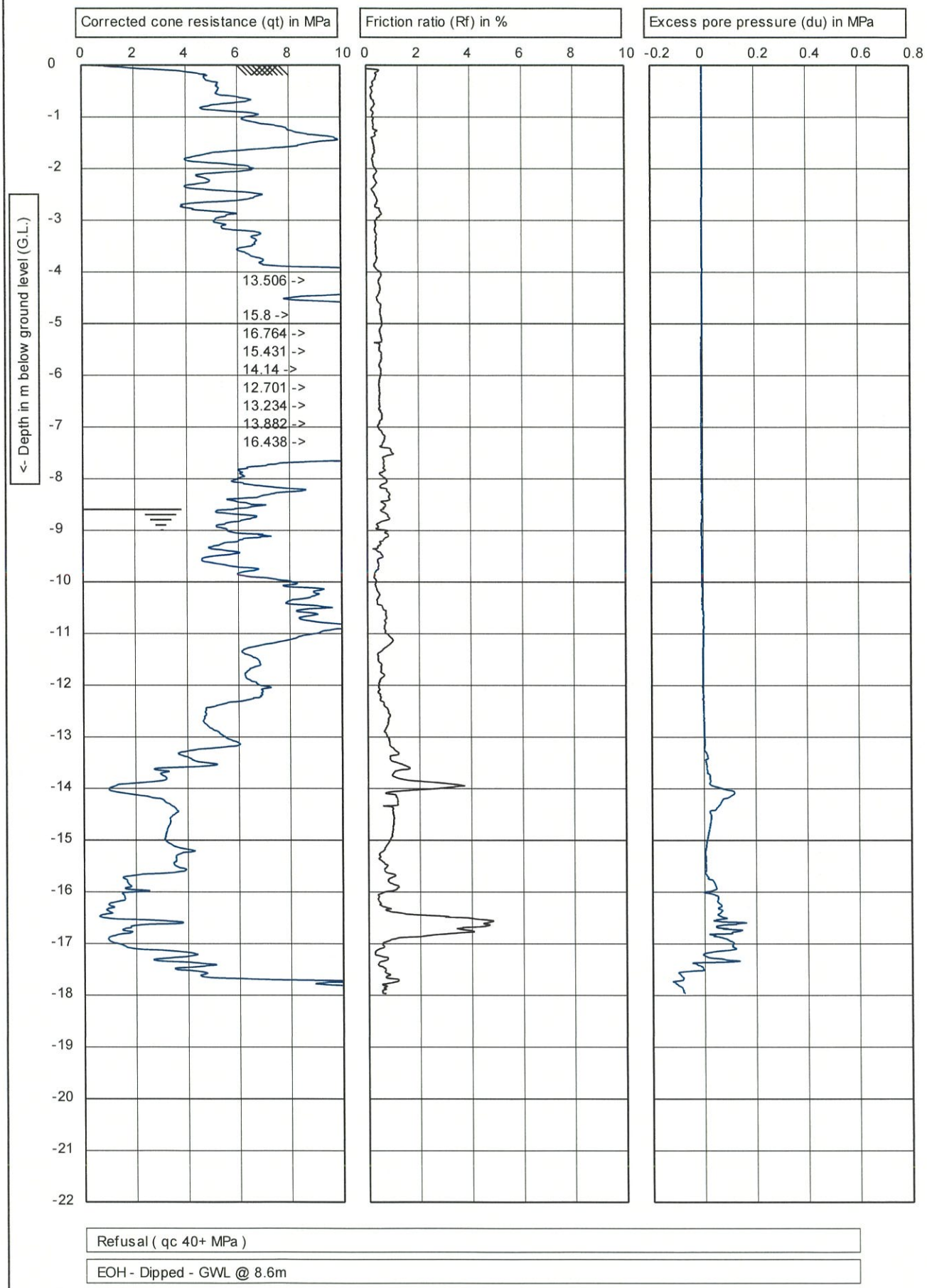
G.L.: **0.00 m MSL** W.L.: **-8.60 m**

Project: **597 Horahora Rd**

Location: **Piarere (17009)**

Position: **1833613, 5791805 NZTM**

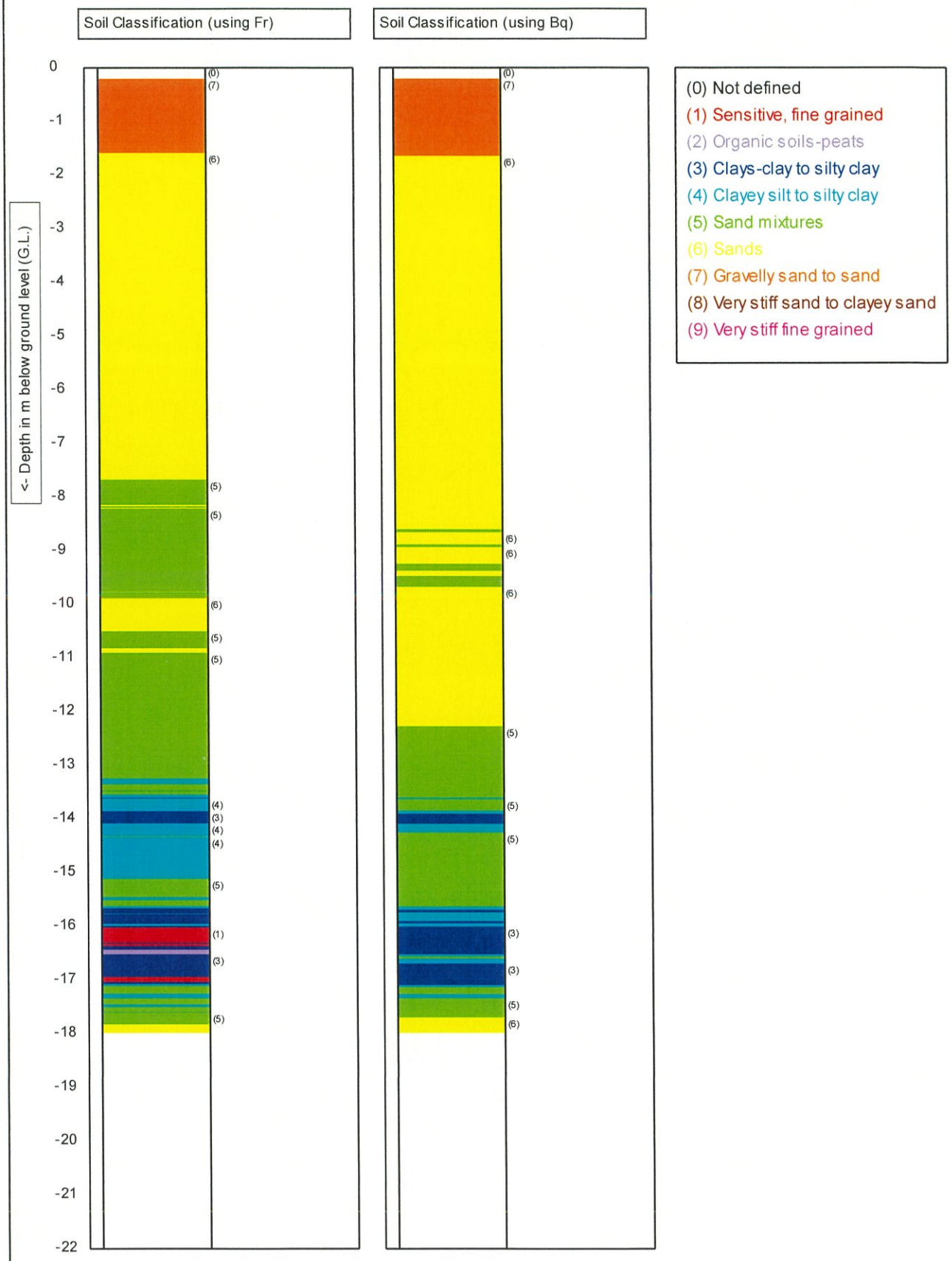
Predrill:	**0.00 m Predrilled**
Date:	**11/05/2022**
Cone no.:	**C10CFIIP.C13236**
Project no.:	**2-68002.00_HA9058**
CPT01 Fig. B-1A	



Graphs on this page are not IANZ accredited

Test according ASTM D5778:12 & ISO 22476-1:2012		Predrill:	**0.00 m Predrilled**
G.L.: **0.00 m MSL**	W.L.: **-8.60 m**	Date:	**11/05/2022**
Project: **597 Horahora Rd**		Cone no.:	**C10CFIIP.C13236**
Location: **Piarere (17009)**		Project no.:	**2-68002.00_HA9058**
Position: **1833613, 5791805 NZTM**		CPT01 Fig. B-1B	

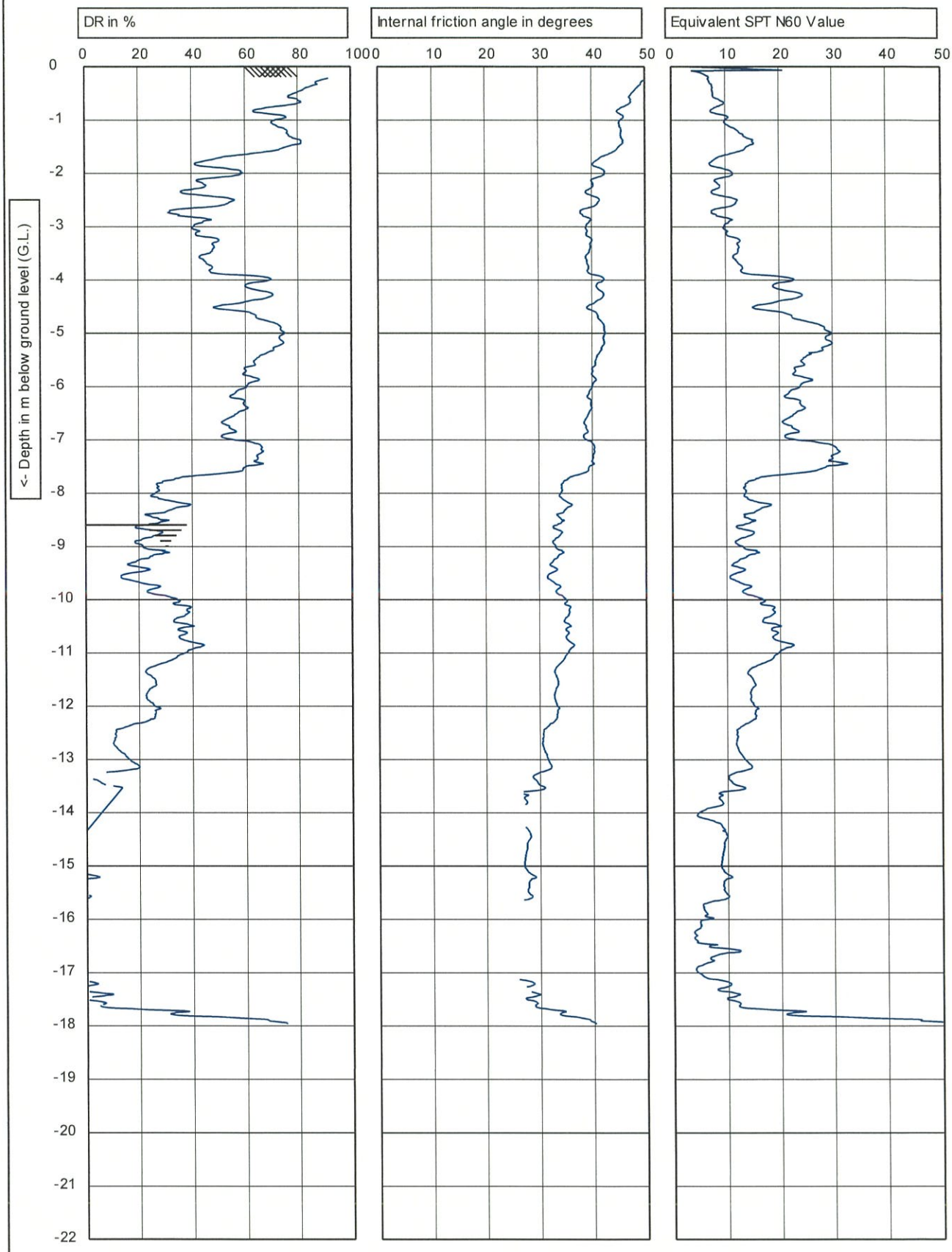
1.49



Graphs on this page are not IANZ accredited

r u2 / 150 cm² / 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012		Predrill: **0.00 m Predrilled**
	G.L.: **0.00 m MSL**	W.L.: **-8.60 m**	Date: **11/05/2022**
Project: **597 Horahora Rd**			Cone no.: **C10CFIIP.C13236**
Location: **Piarere (17009)**			Project no.: **2-68002.00_HA9058**
Position: **1833613, 5791805 NZTM**			CPT01 Fig. B-1C

1.49



Refusal (qc 40+ MPa)

EOH - Dipped - GWL @ 8.6m

Graphs on this page are not IANZ accredited

u2 150 cm² 10 cm²

Test according ASTM D5778:12 & ISO 22476-1:2012

G.L.: **0.00 m MSL** W.L.: **-8.60 m**

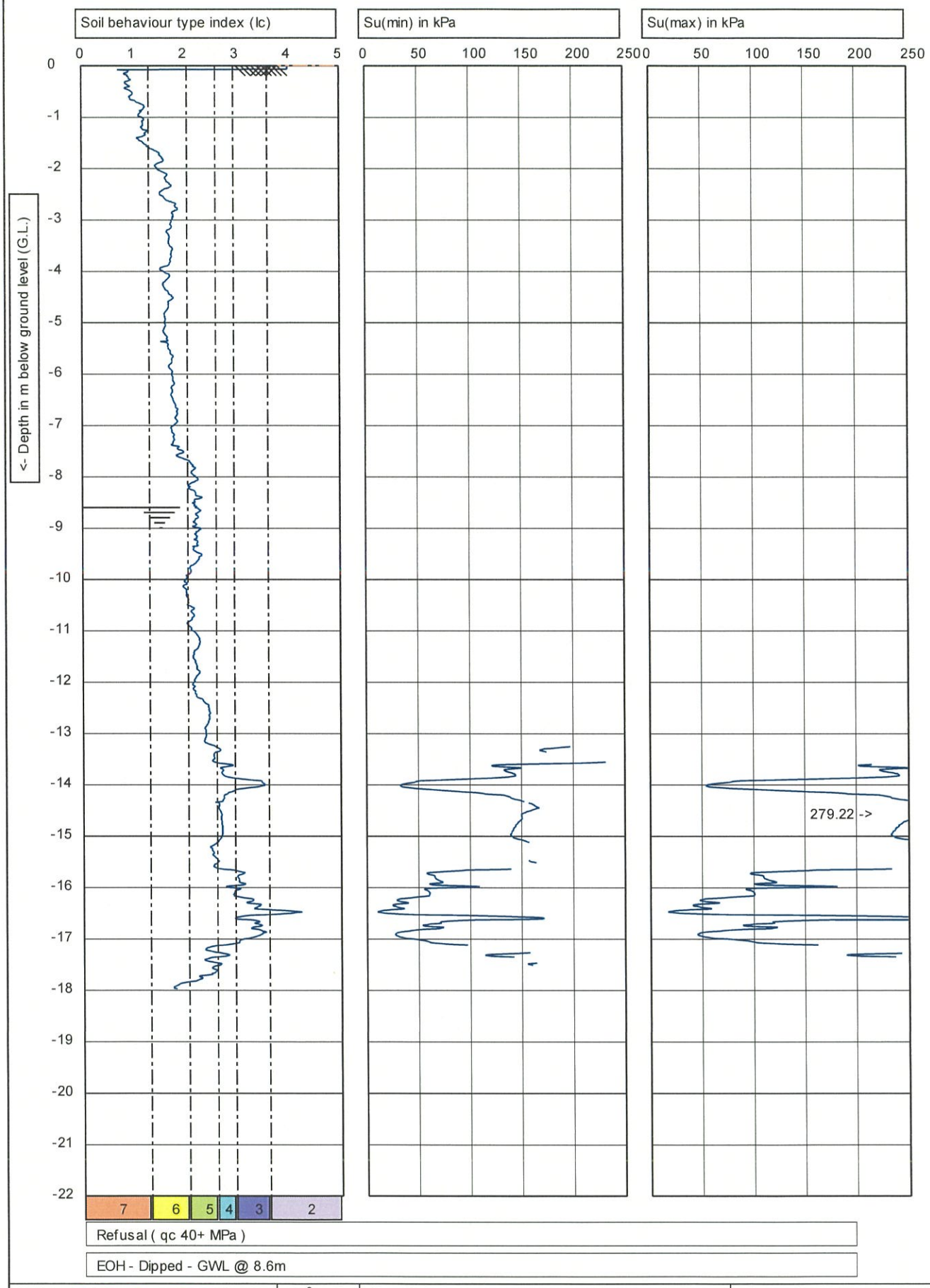
Project: **597 Horahora Rd**

Location: **Piarere (17009)**

Position: **1833613, 5791805 NZTM**

Predrill:	**0.00 m Predrilled**
Date:	**11/05/2022**
Cone no.:	**C10CFIIP.C13236**
Project no.:	**2-68002.00_HA9058**
CPT01 Fig. B-1D	

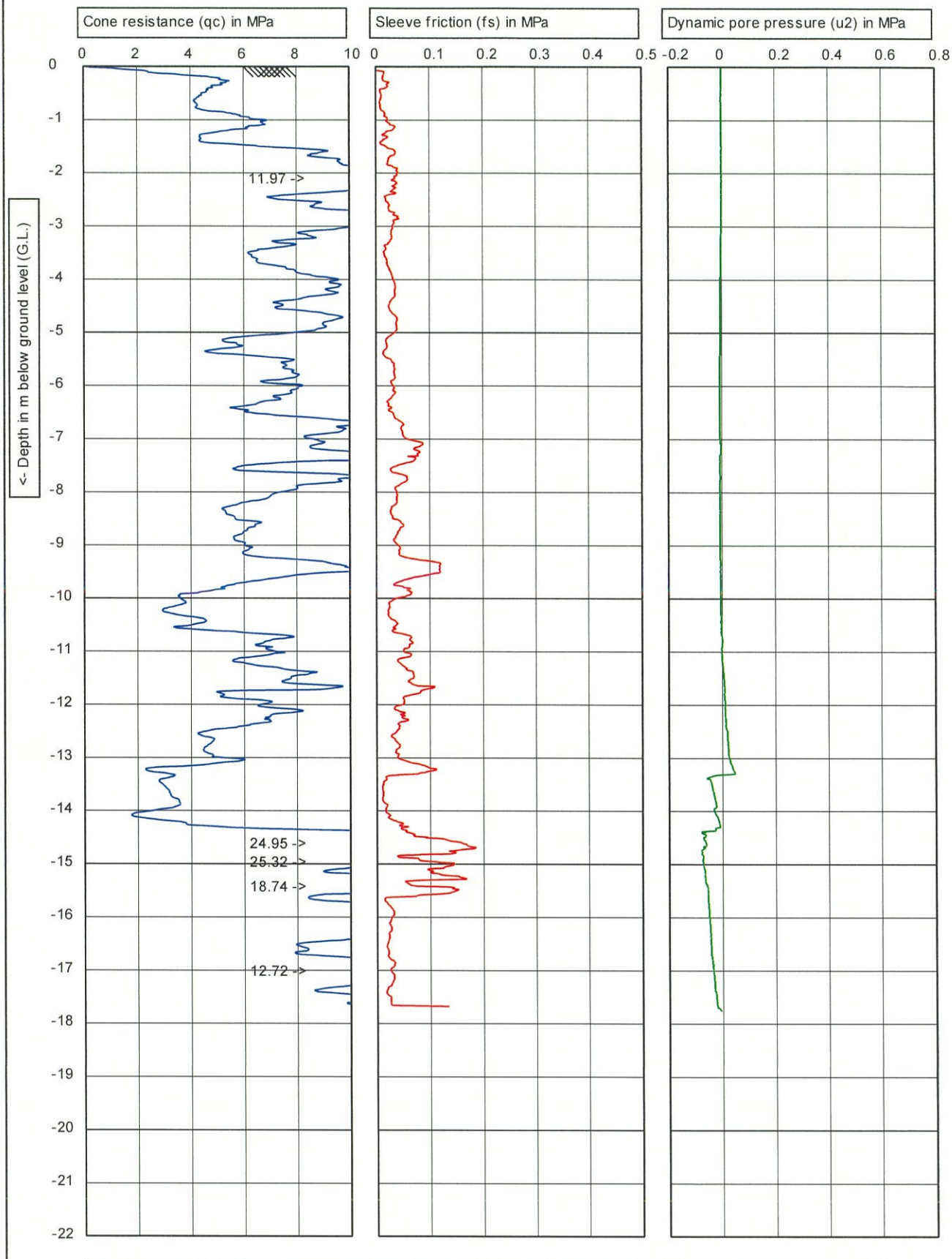
1.49



Graphs on this page are not IANZ accredited

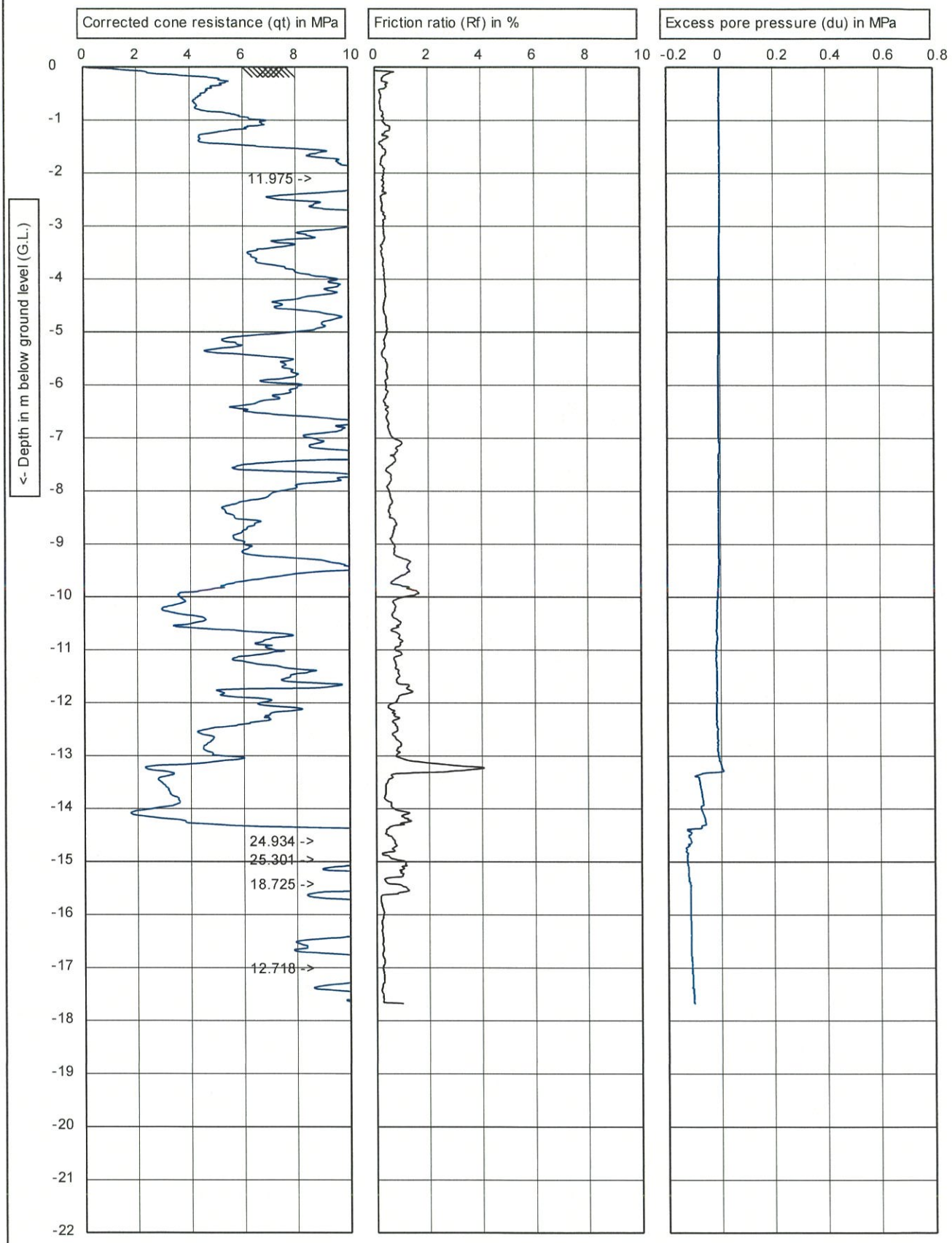
Test according ASTM D5778:12 & ISO 22476-1:2012		Predrill:	0.00 m Predrilled
G.L.: 0.00 m MSL	W.L.: -8.60 m	Date:	11/05/2022
Project: 597 Horahora Rd		Cone no.:	C10CFIIP.C13236
Location: Piarere (17009)		Project no.:	2-68002.00_HA9058
Position: 1833613, 5791805 NZTM		CPT01 Fig. B-1E	

1.49



WSP ACCREDITED IANZ TESTING LABORATORY. Test results indicated as not accredited are outside the scope of the laboratory's accreditation	r u2 150 cm² 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill: **0.00 m Predrilled**
		G.L.: **0.00 m MSL**	Date: **11/05/2022**
	Project: **597 Horahora Rd**		Cone no.: **C10CFIIP.C181009**
	Location: **Piarere (17009)**		Project no.: **2-68002.00_HA9058**
	Position: **1833618, 5791517 NZTM**		CPT02 Fig. B-2A

1.49



Graphs on this page are not IANZ accredited

Test according ASTM D5778:12 & ISO 22476-1:2012

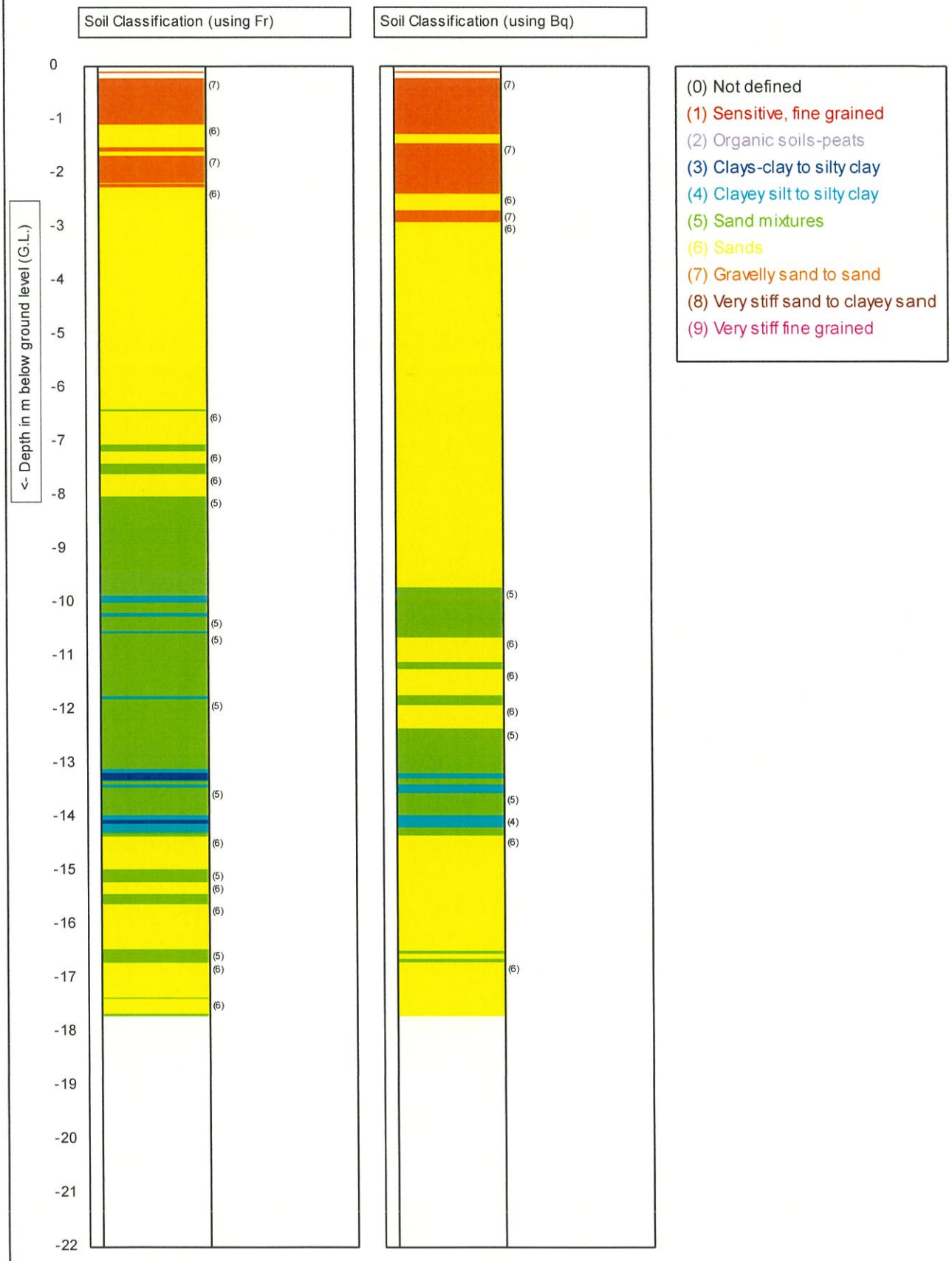
G.L.: **0.00 m MSL**

Project: **597 Horahora Rd**

Location: **Piarere (17009)**

Position: **1833618, 5791517 NZTM**

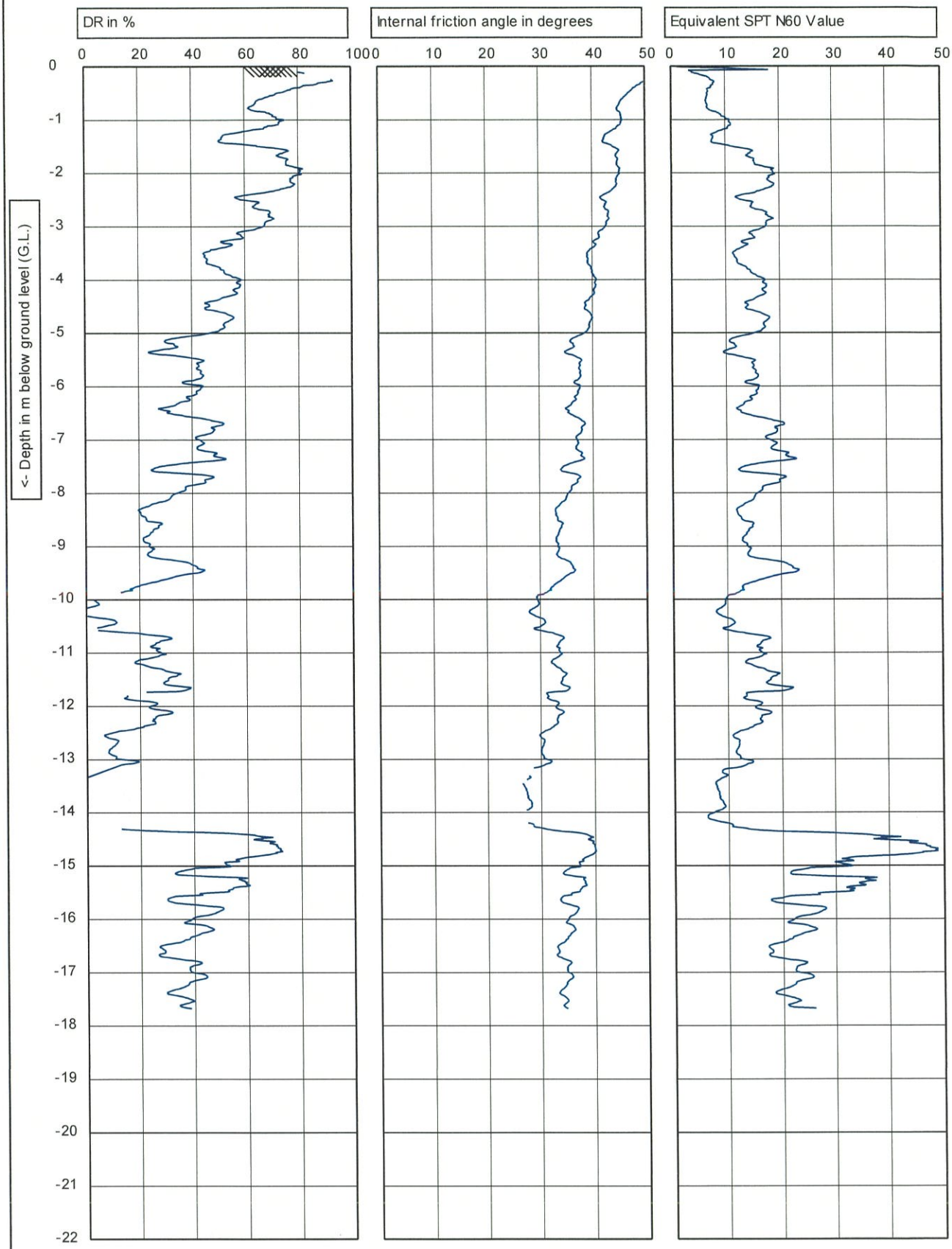
Predrill:	**0.00 m Predrilled**
Date:	**11/05/2022**
Cone no.:	**C10CFIIP.C181009**
Project no.:	**2-68002.00_HA9058**
CPT02 Fig. B-2B	



Graphs on this page are not IANZ accredited

r u2 150 cm² 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C181009**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833618, 5791517 NZTM**	CPT02 Fig. B-2C	

1.49



Refusal (qc 40+ MPa)

EOH - Dipped - Collapsed dry @ 9.4m

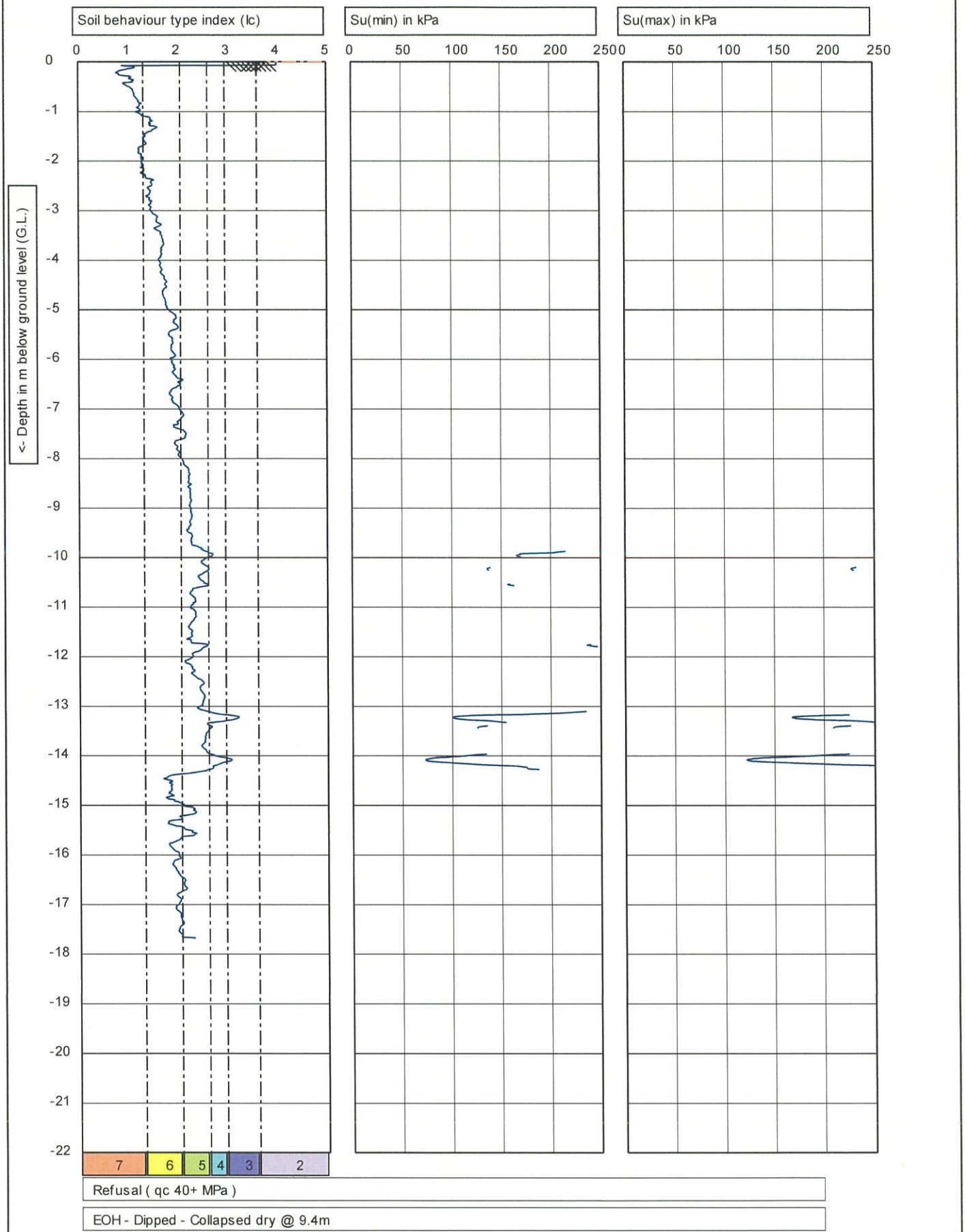
wsp

Graphs on this page are not IANZ accredited

	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	0.00 m Predrilled
	G.L.: 0.00 m MSL	Date:	11/05/2022
Project:	597 Horahora Rd	Cone no.:	C10CFIIP.C181009
Location:	Piarere (17009)	Project no.:	2-68002.00_HA9058
Position:	1833618, 5791517 NZTM	CPT02 Fig. B-2D	

u2 150 cm² 10 cm²

1.49

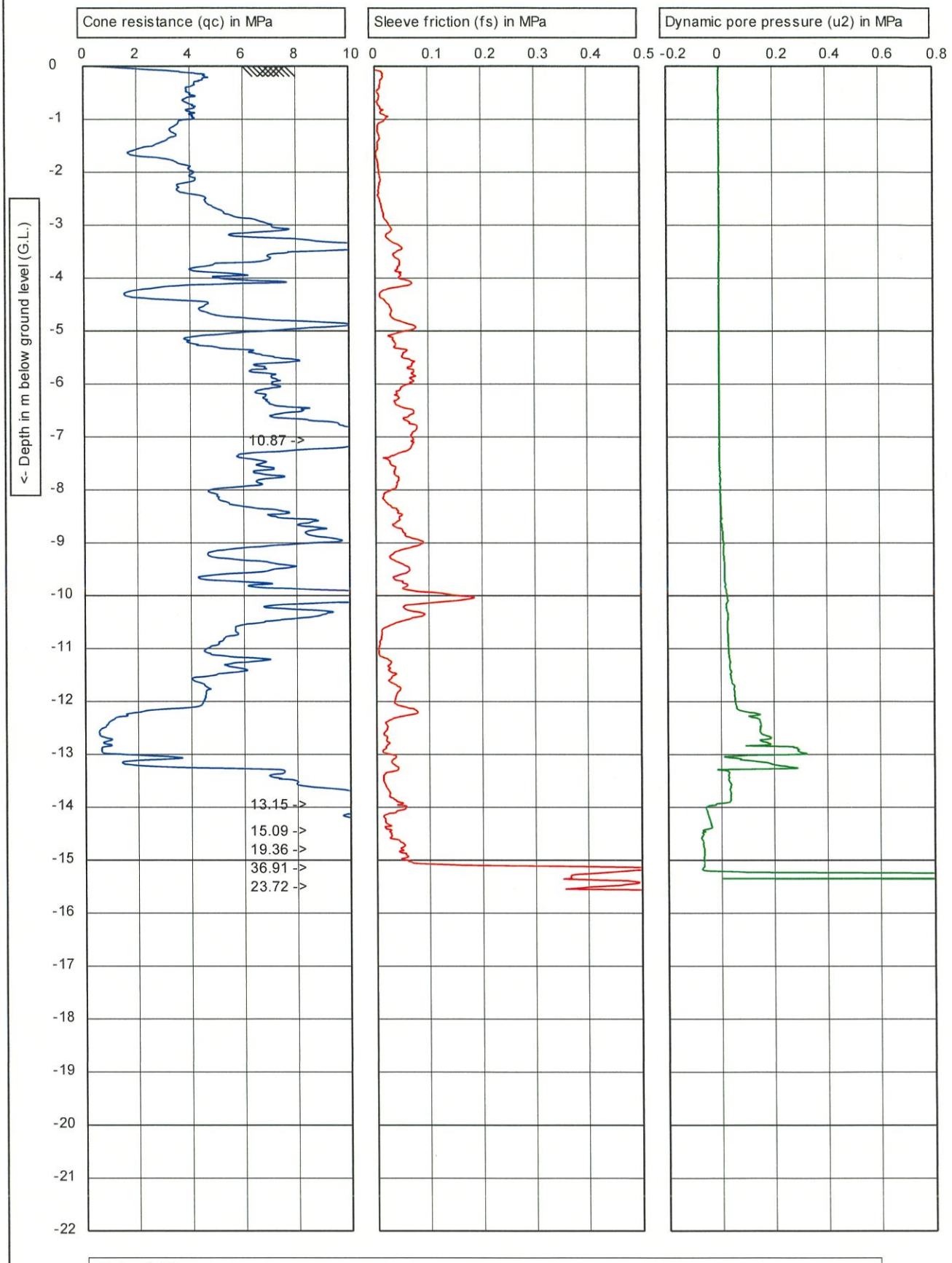


wsp

Graphs on this page are not IANZ accredited

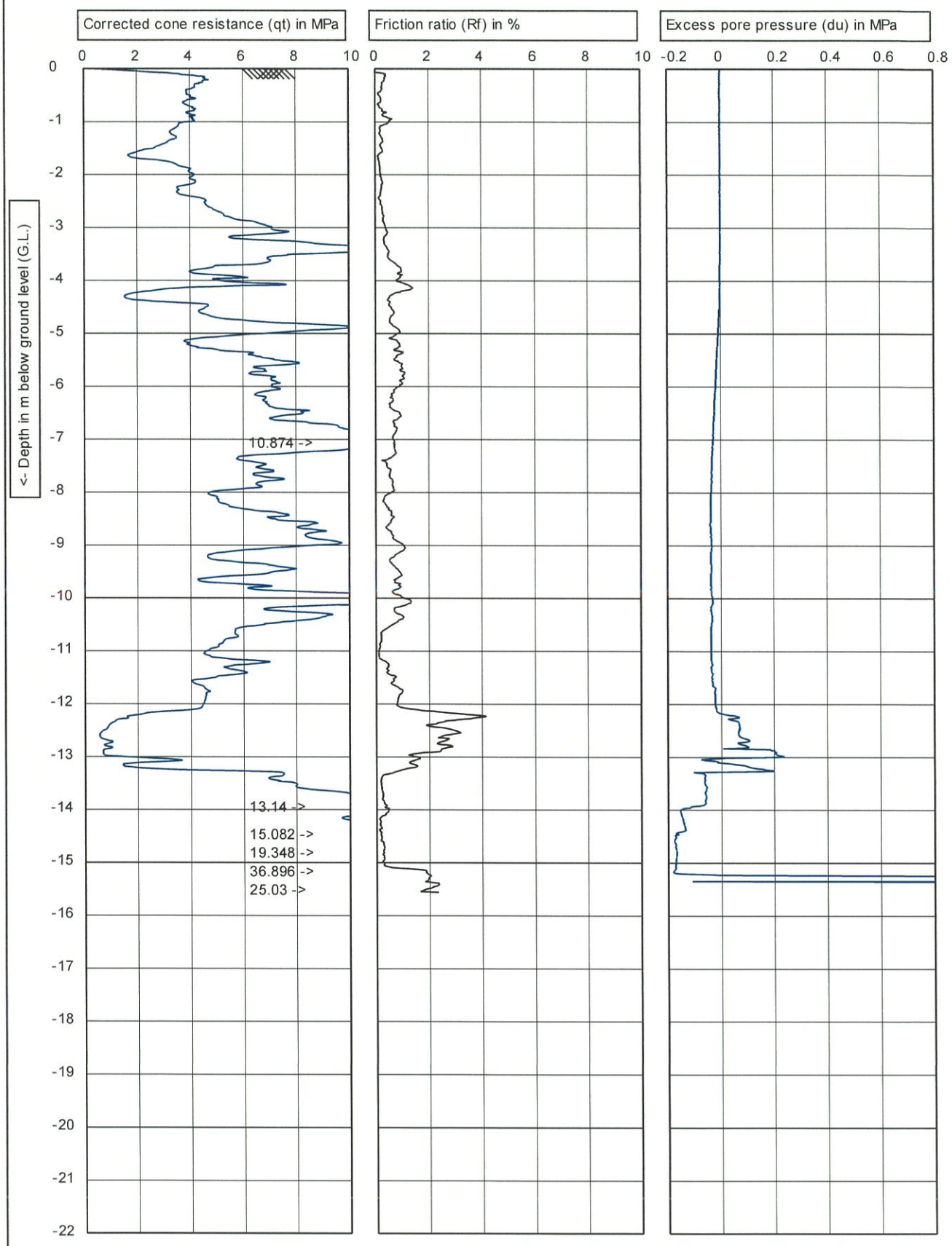
Δu2 / 150 cm² / 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C181009**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833618, 5791517 NZTM**	CPT02 Fig. B-2E	

1.49



wsp	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
Test results indicated as not accredited are outside the scope of the laboratory's accreditation	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
	Project: **597 Horahora Rd**	Cone no.:	**C10CFIIP.C13236**
	Location: **Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
	Position: **1833574, 5791261 NZTM**	CPT03 Fig. B-3A	

1.49



Graphs on this page are not IANZ accredited

Test according ASTM D5778:12 & ISO 22476-1:2012

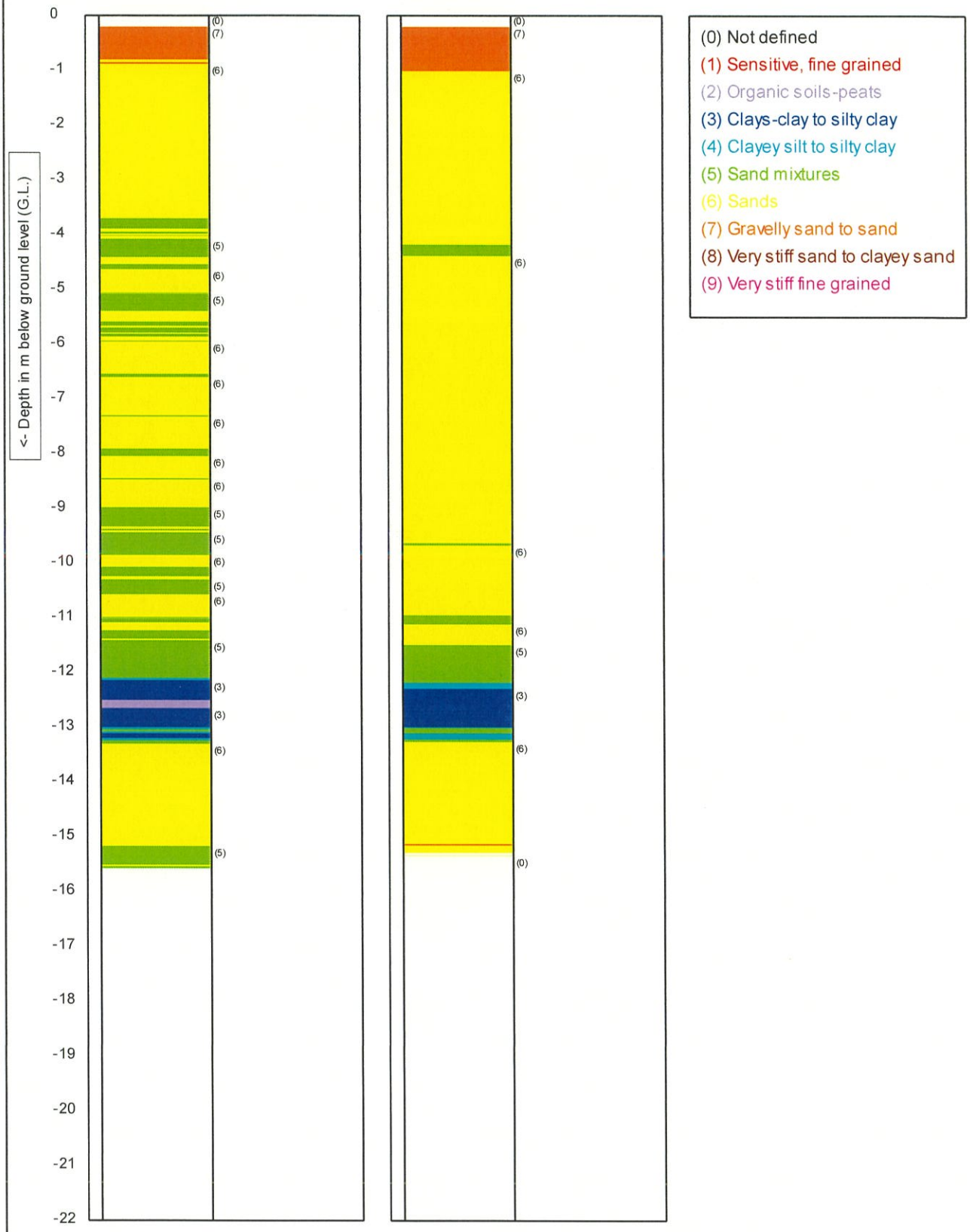
G.L.: **0.00 m MSL**

Project: **597 Horahora Rd**

Location: **Piarere (17009)**

Position: **1833574, 5791261 NZTM**

Predrill:	**0.00 m Predrilled**
Date:	**11/05/2022**
Cone no.:	**C10CFIIP.C13236**
Project no.:	**2-68002.00_HA9058**
CPT03 Fig. B-3B	

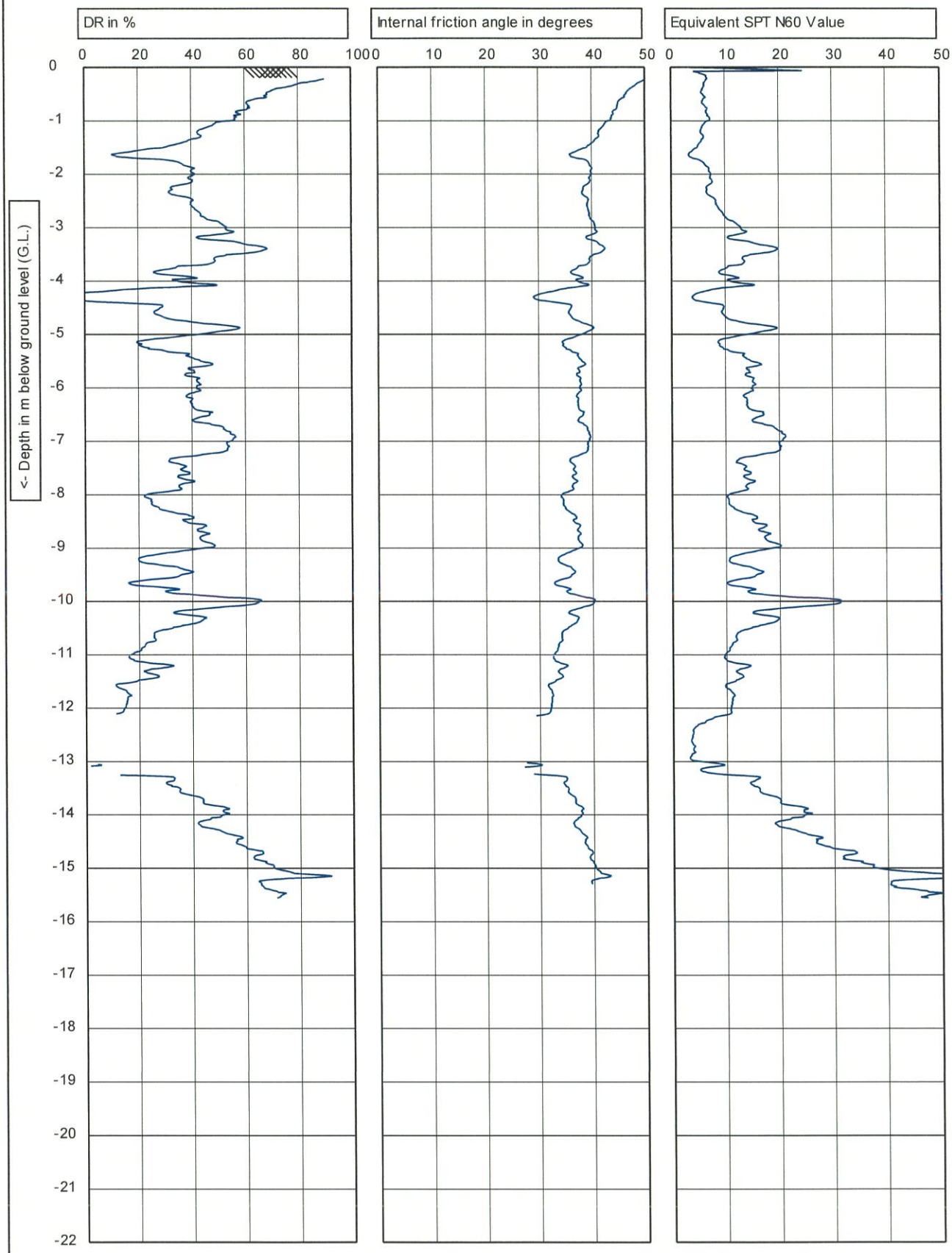


wsp

Graphs on this page are not IANZ accredited

r u2 150 cm² 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C13236**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833574, 5791261 NZTM**	CPT03 Fig. B-3C	

1.49



Refusal 10t.

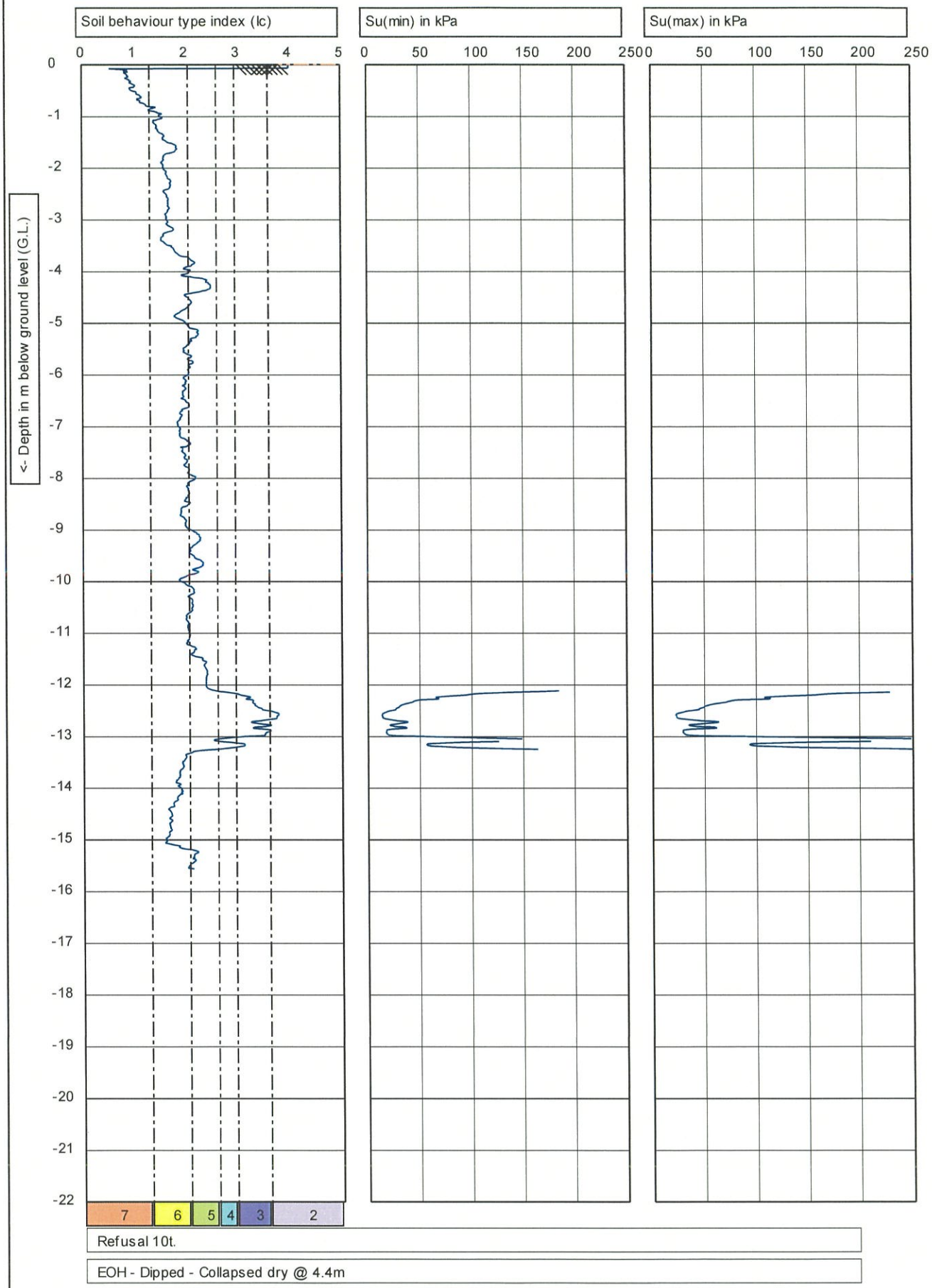
EOH - Dipped - Collapsed dry @ 4.4m

wsp

Graphs on this page are not IANZ accredited

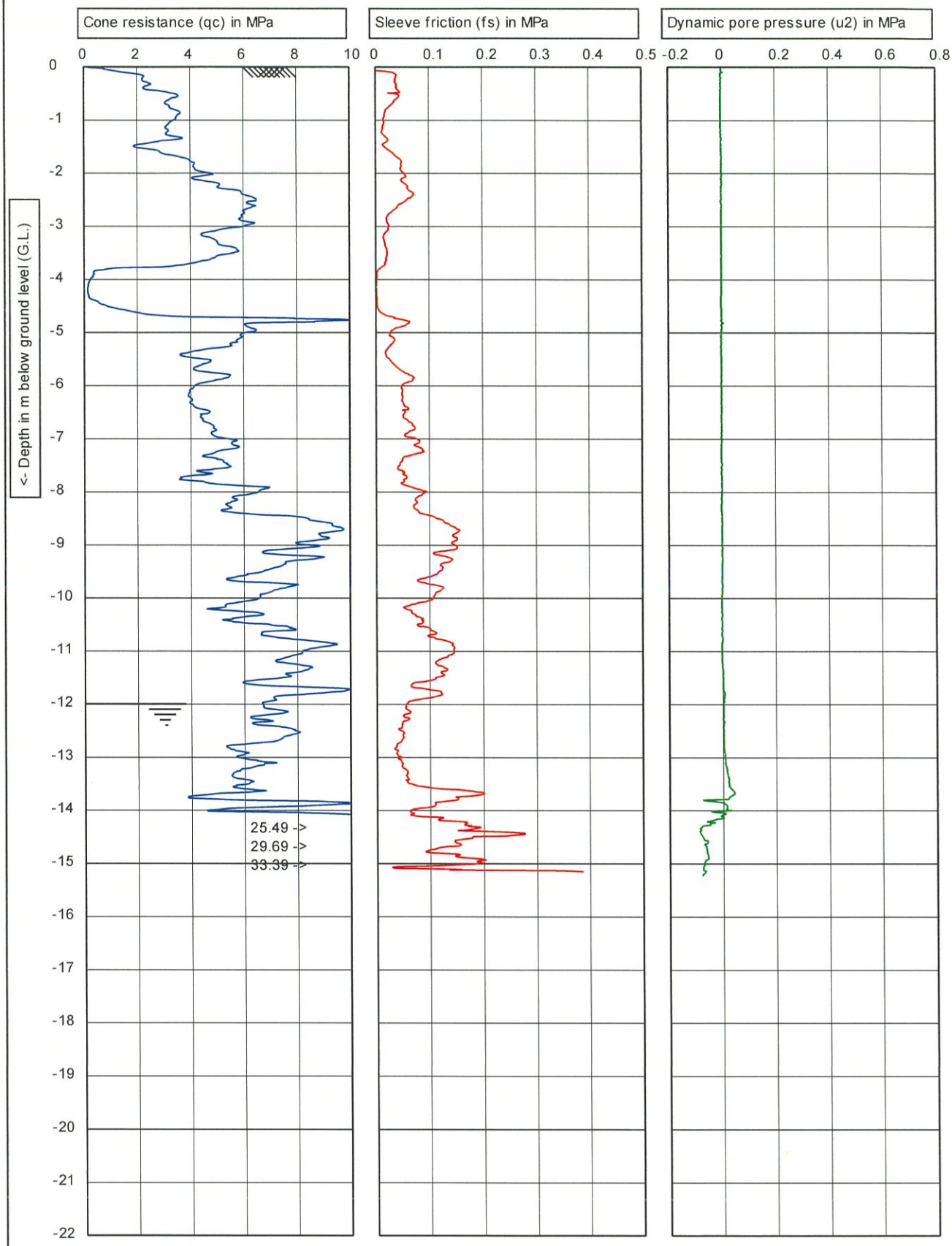
r u2 150 cm² 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C13236**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833574, 5791261 NZTM**	CPT03 Fig. B-3D	

1.49



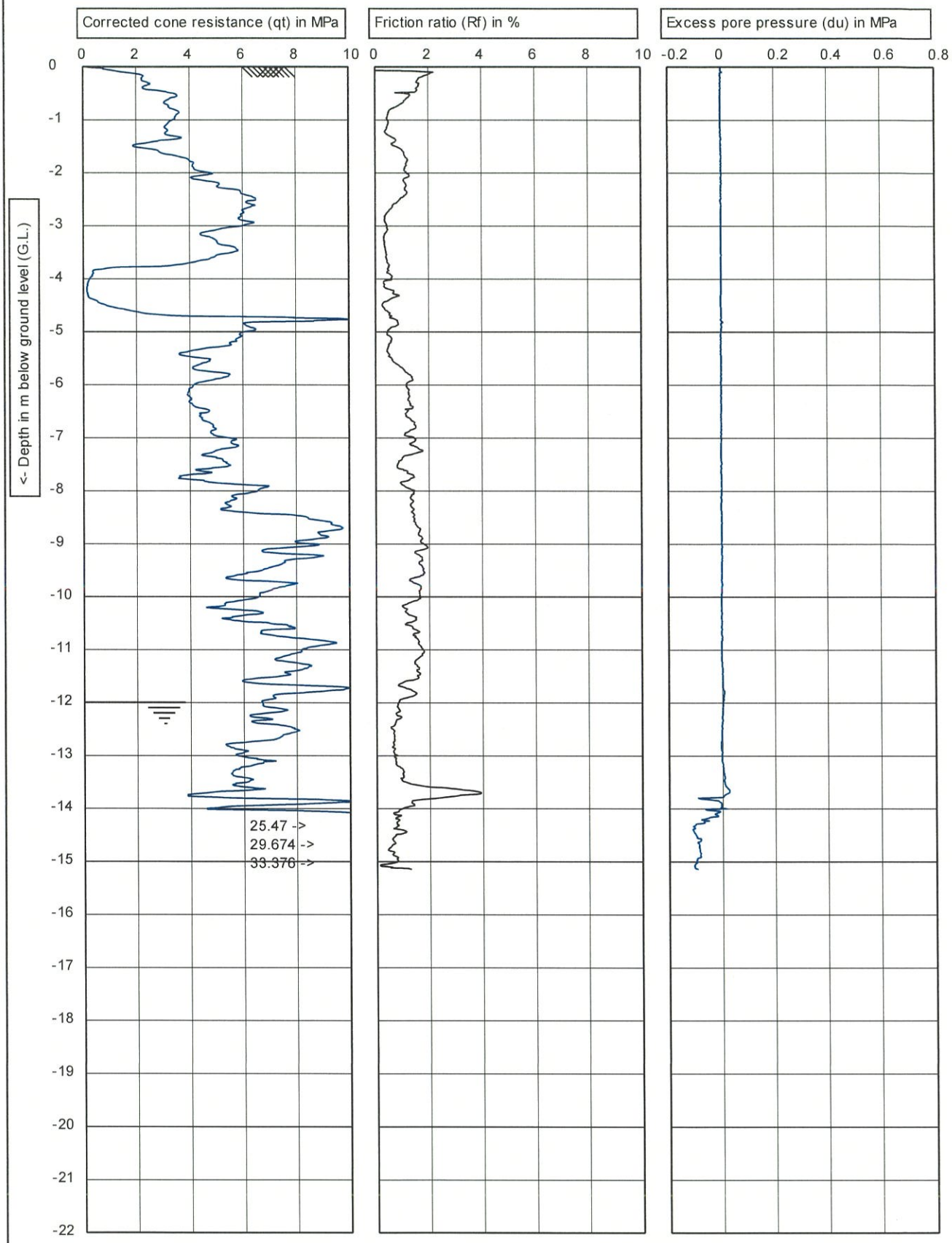
Graphs on this page are not IANZ accredited

r u2 150 cm² 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
Project: **597 Horahora Rd**		Cone no.:	**C10CFIIP.C13236**
Location: **Piarere (17009)**		Project no.:	**2-68002.00_HA9058**
Position: **1833574, 5791261 NZTM**		CPT03 Fig. B-3E	



WSP — Test results indicated as not accredited are outside the scope of the laboratory's accreditation	r u2 150 cm² 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill: **0.00 m Predrilled**
		G.L.: **0.00 m MSL** — W.L.: **-12.00 m**	Date: **11/05/2022**
	Project: **597 Horahora Rd**		Cone no.: **C10CFIIP.C181009**
	Location: **Piarere (17009)**		Project no.: **2-68002.00_HA9058**
	Position: **1833557, 5791089 NZTM**		CPT04 Fig. B-4A

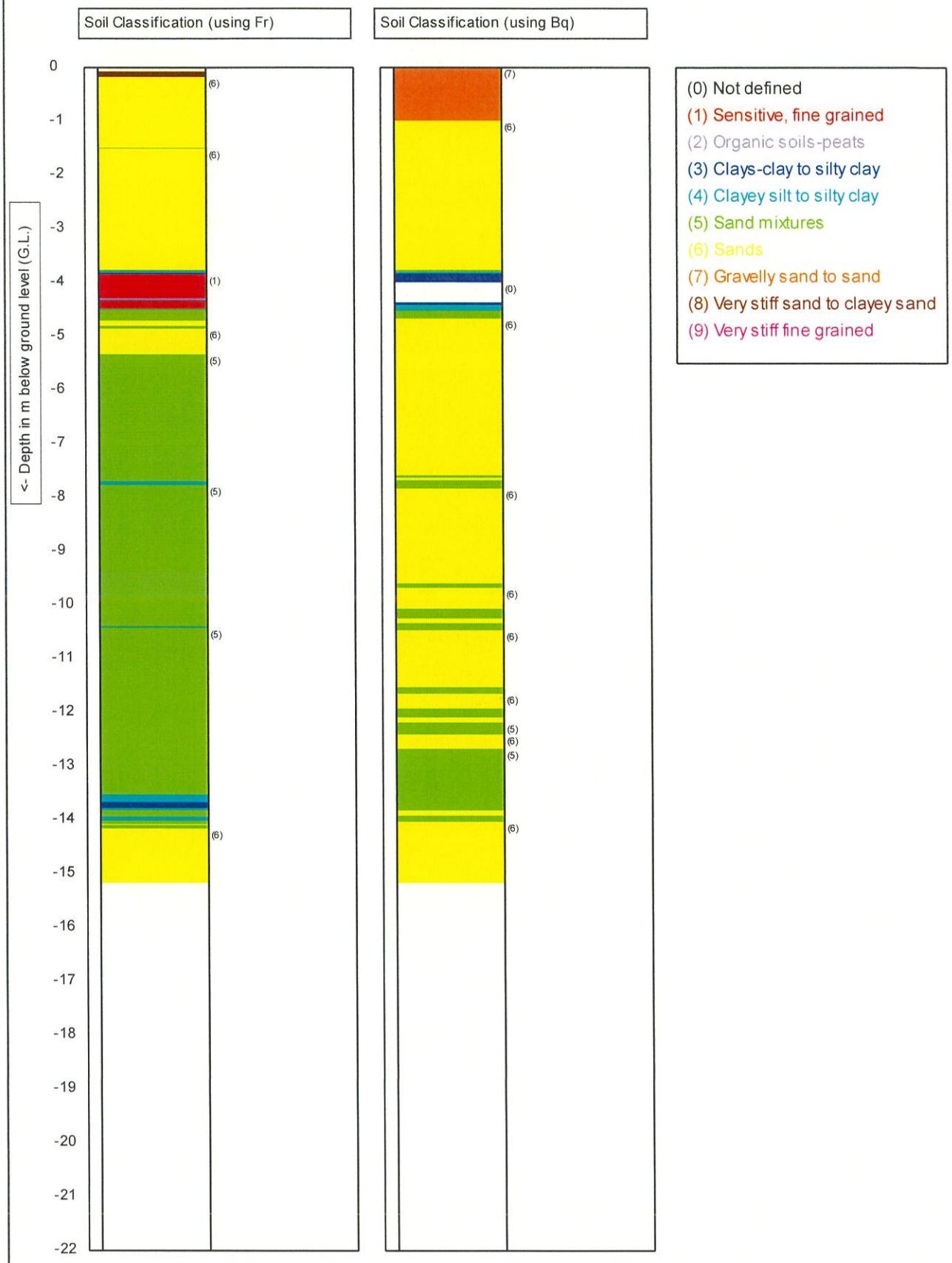
1.49



Graphs on this page are not IANZ accredited

Test according ASTM D5778:12 & ISO 22476-1:2012		Predrill:	**0.00 m Predrilled**
G.L.: **0.00 m MSL**	W.L.: **-12.00 m**	Date:	**11/05/2022**
Project: **597 Horahora Rd**		Cone no.:	**C10CFIIP.C181009**
Location: **Piarere (17009)**		Project no.:	**2-68002.00_HA9058**
Position: **1833557, 5791089 NZTM**		CPT04 Fig. B-4B	

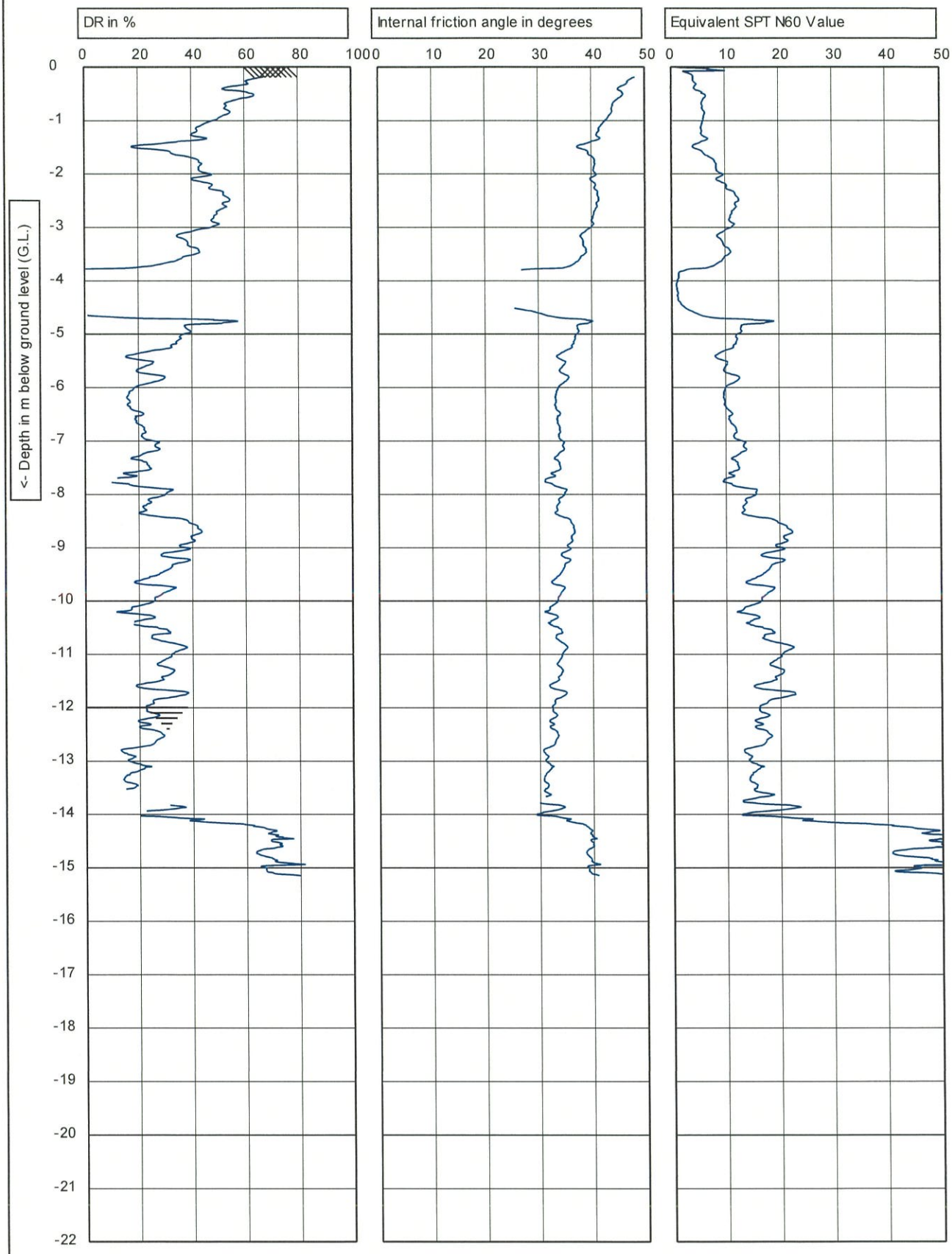
1.49



Graphs on this page are not IANZ accredited

Test according ASTM D5778:12 & ISO 22476-1:2012		Predrill:	**0.00 m Predrilled**
G.L.: **0.00 m MSL**	W.L.: **-12.00 m**	Date:	**11/05/2022**
Project: **597 Horahora Rd**		Cone no.:	**C10CFIIP.C181009**
Location: **Piarere (17009)**		Project no.:	**2-68002.00_HA9058**
Position: **1833557, 5791089 NZTM**		CPT04 Fig. B-4C	

1.49



Refusal (qc 40+ MPa)

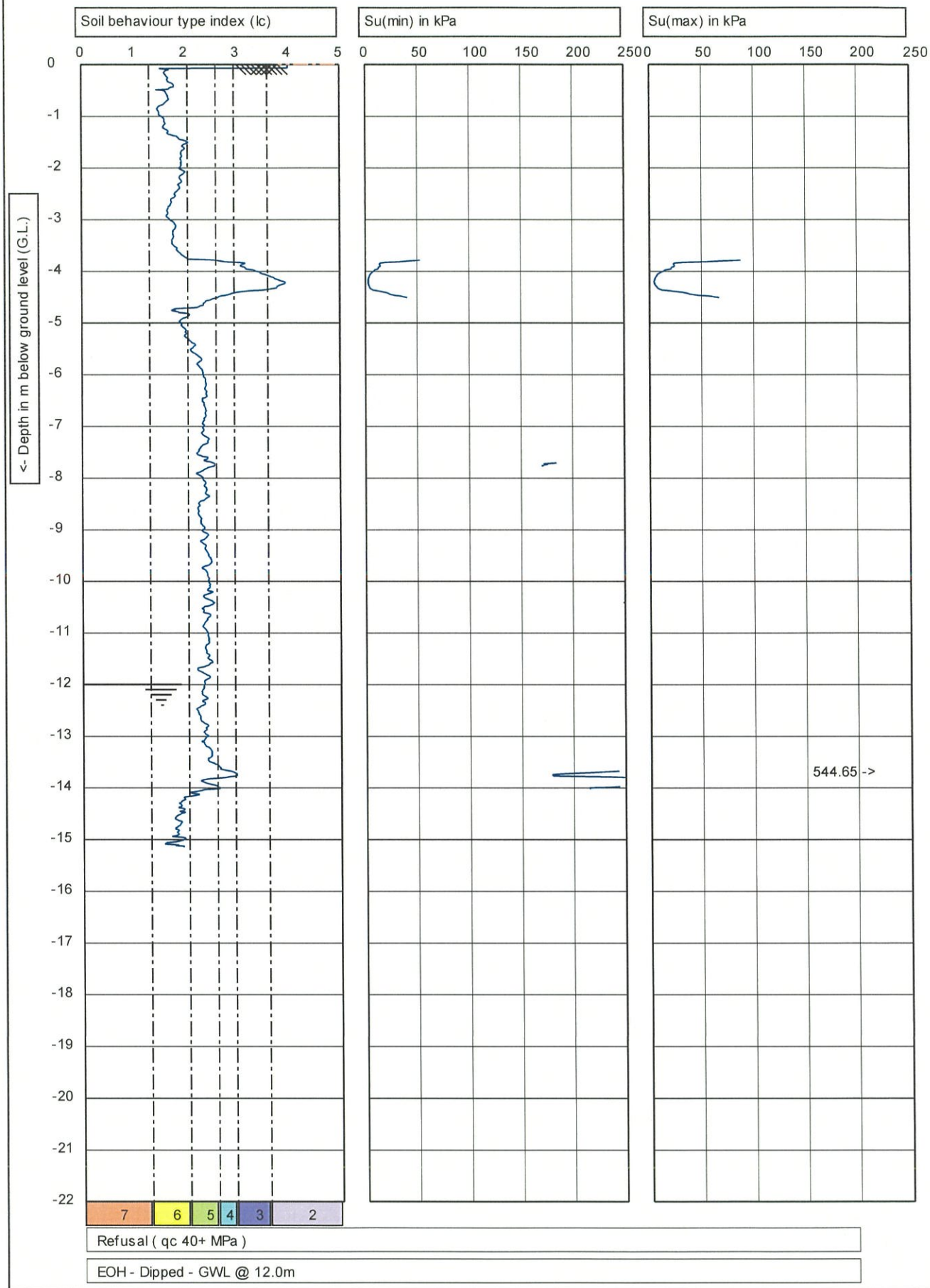
EOH - Dipped - GWL @ 12.0m

WSP

Graphs on this page are not IANZ accredited

r u2 150 cm² 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012		Predrill: **0.00 m Predrilled**
	G.L.: **0.00 m MSL**	W.L.: **-12.00 m**	Date: **11/05/2022**
Project: **597 Horahora Rd**			Cone no.: **C10CFIIP.C181009**
Location: **Piarere (17009)**			Project no.: **2-68002.00_HA9058**
Position: **1833557, 5791089 NZTM**			CPT04 Fig. B-4D

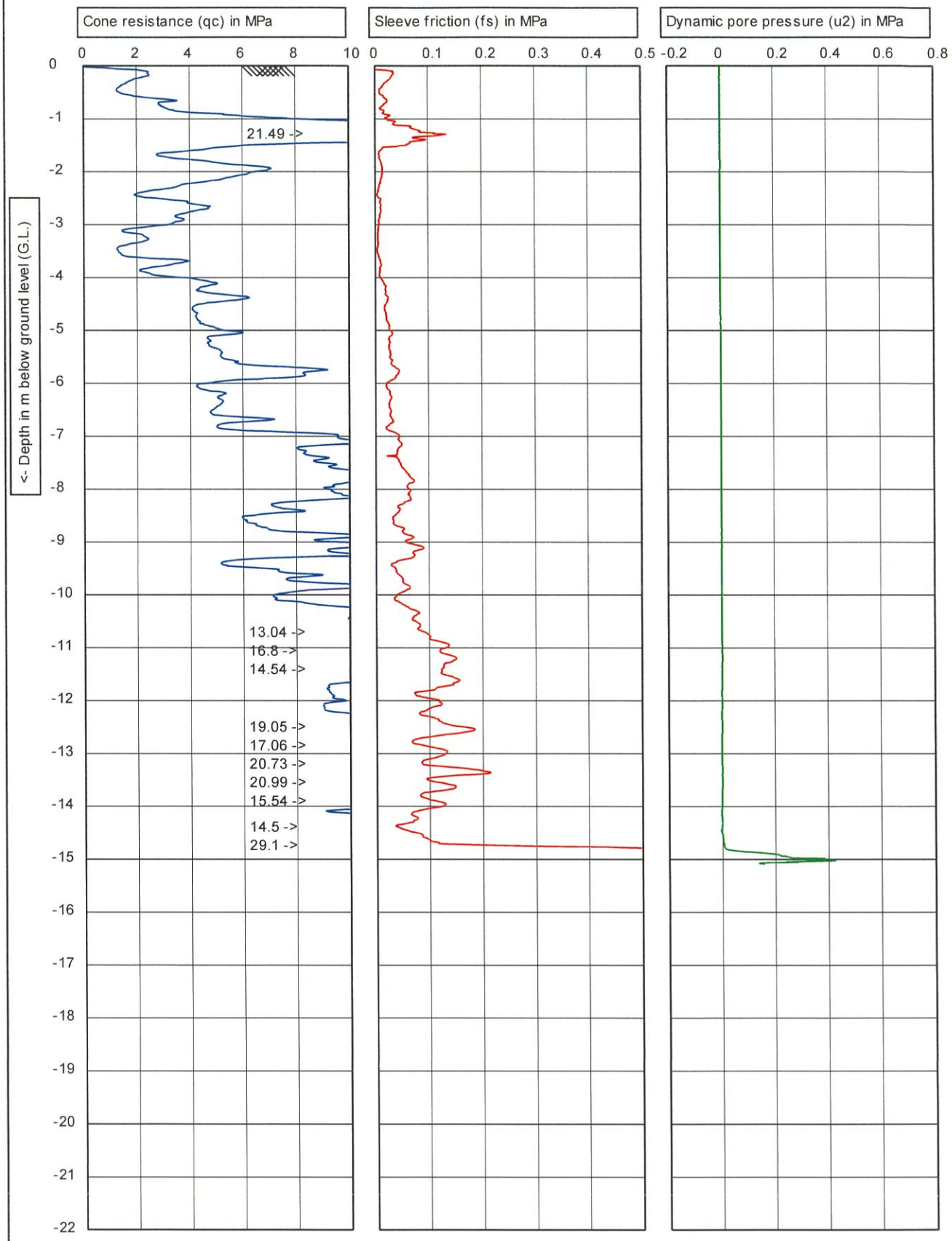
1.49



Graphs on this page are not IANZ accredited

Test according ASTM D5778:12 & ISO 22476-1:2012		Predrill:	**0.00 m Predrilled**
G.L.: **0.00 m MSL**	W.L.: **-12.00 m**	Date:	**11/05/2022**
Project: **597 Horahora Rd**		Cone no.:	**C10CFIIP.C181009**
Location: **Piarere (17009)**		Project no.:	**2-68002.00_HA9058**
Position: **1833557, 5791089 NZTM**		CPT04 Fig. B-4E	

1.49



Refusal (fs 1.6+ MPa)

EOH-Dipped-Collapsed dry @ 13.5m

wsp

ACCREDITED IANZ TESTING LABORATORY

Test results indicated as not accredited are outside the scope of the laboratory's accreditation

u2
150 cm²
10 cm²

Test according ASTM D5778:12 & ISO 22476-1:2012

G.L.: **0.00 m MSL**

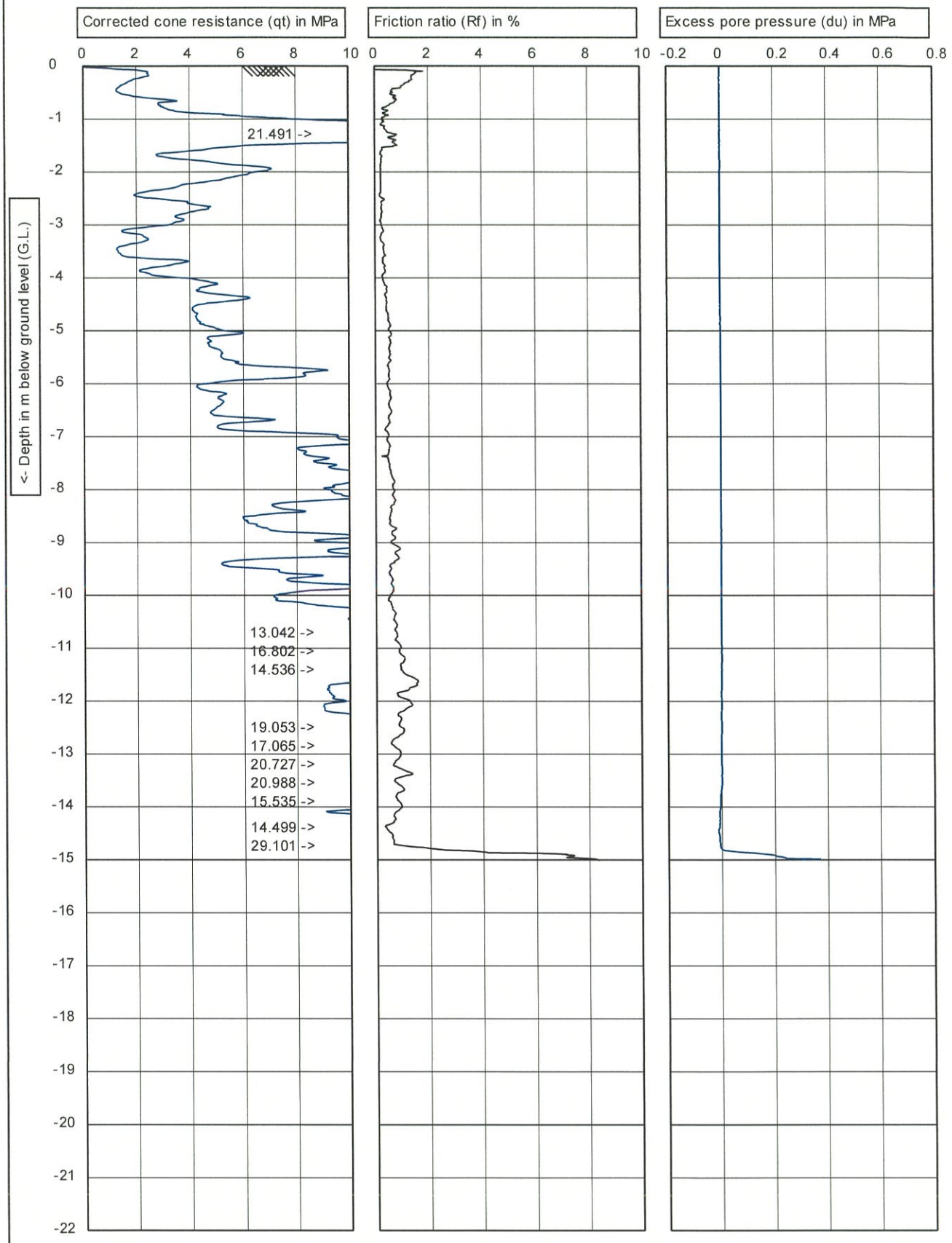
Project: **597 Horahora Rd**

Location: **Piarere (17009)**

Position: **1833530, 5790612 NZTM**

Predrill:	**0.00 m Predrilled**
Date:	**11/05/2022**
Cone no.:	**C10CFIIP.C13236**
Project no.:	**2-68002.00_HA9058**
CPT05 Fig. B-5A	

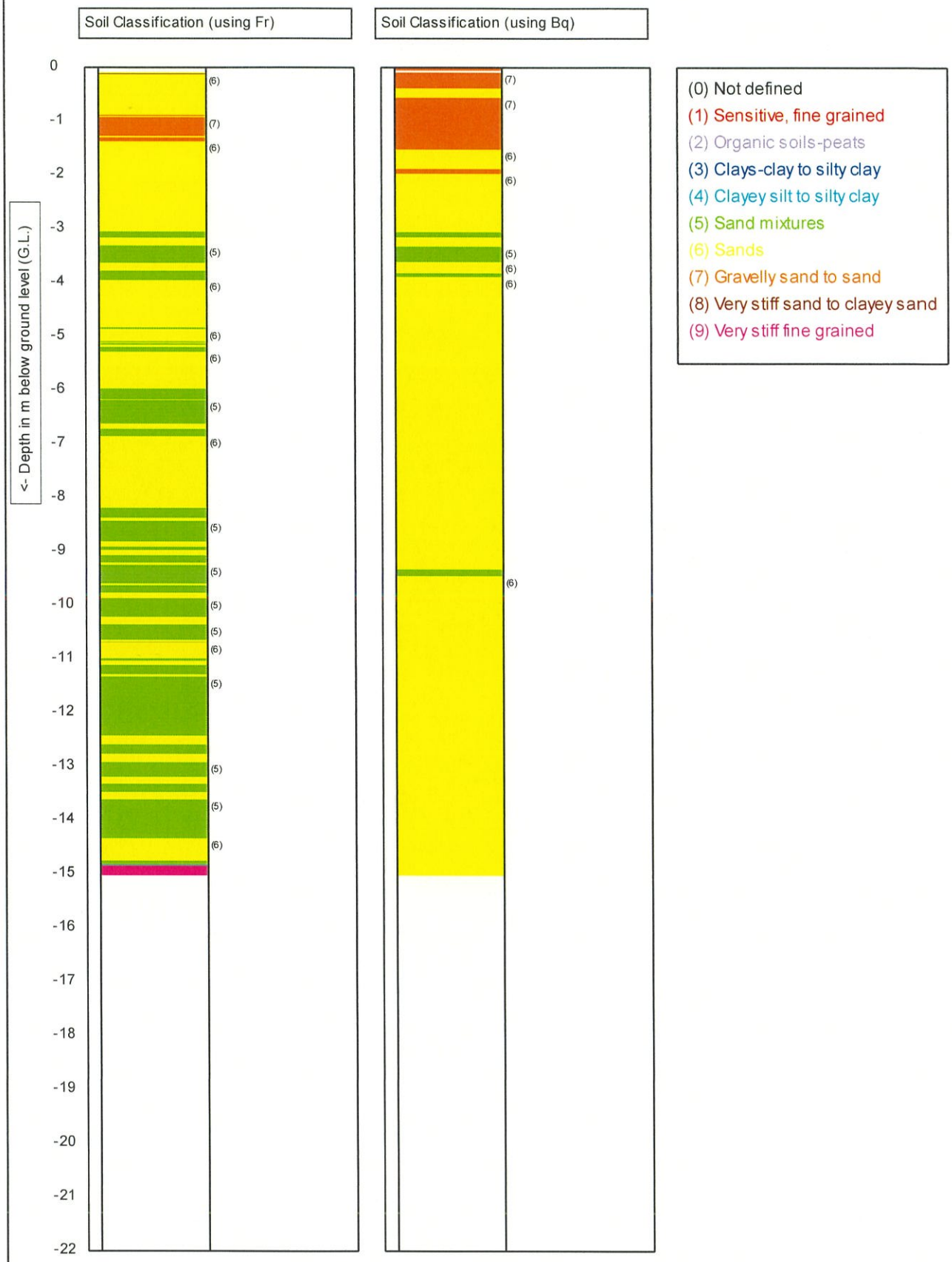
1.49



Graphs on this page are not IANZ accredited

	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C13236**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833530, 5790612 NZTM**	CPT05 Fig. B-5B	

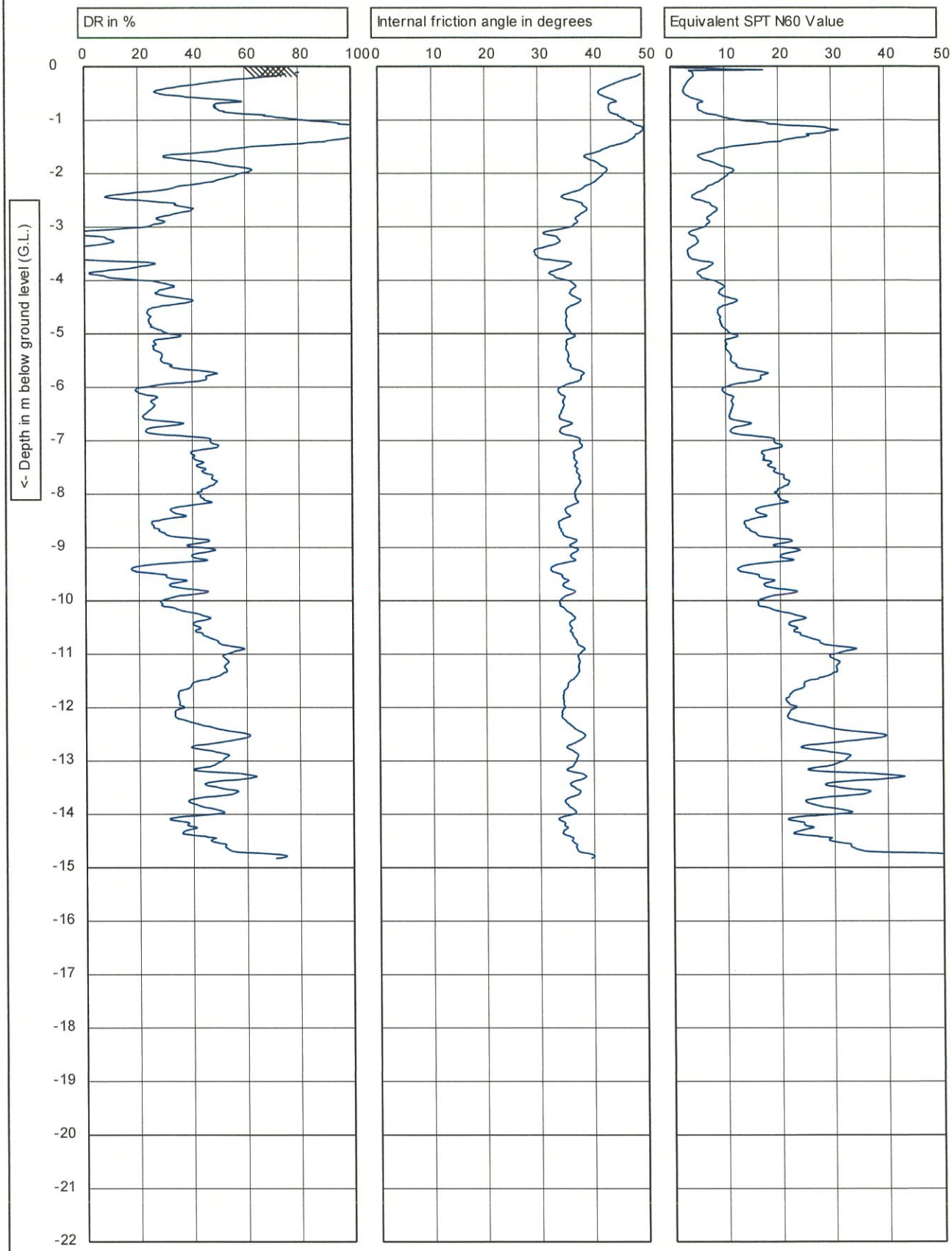
1.49



Graphs on this page are not IANZ accredited

r u2 150 cm² 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C13236**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833530, 5790612 NZTM**	CPT05 Fig. B-5C	

1.49



Refusal (fs 1.6+ MPa)

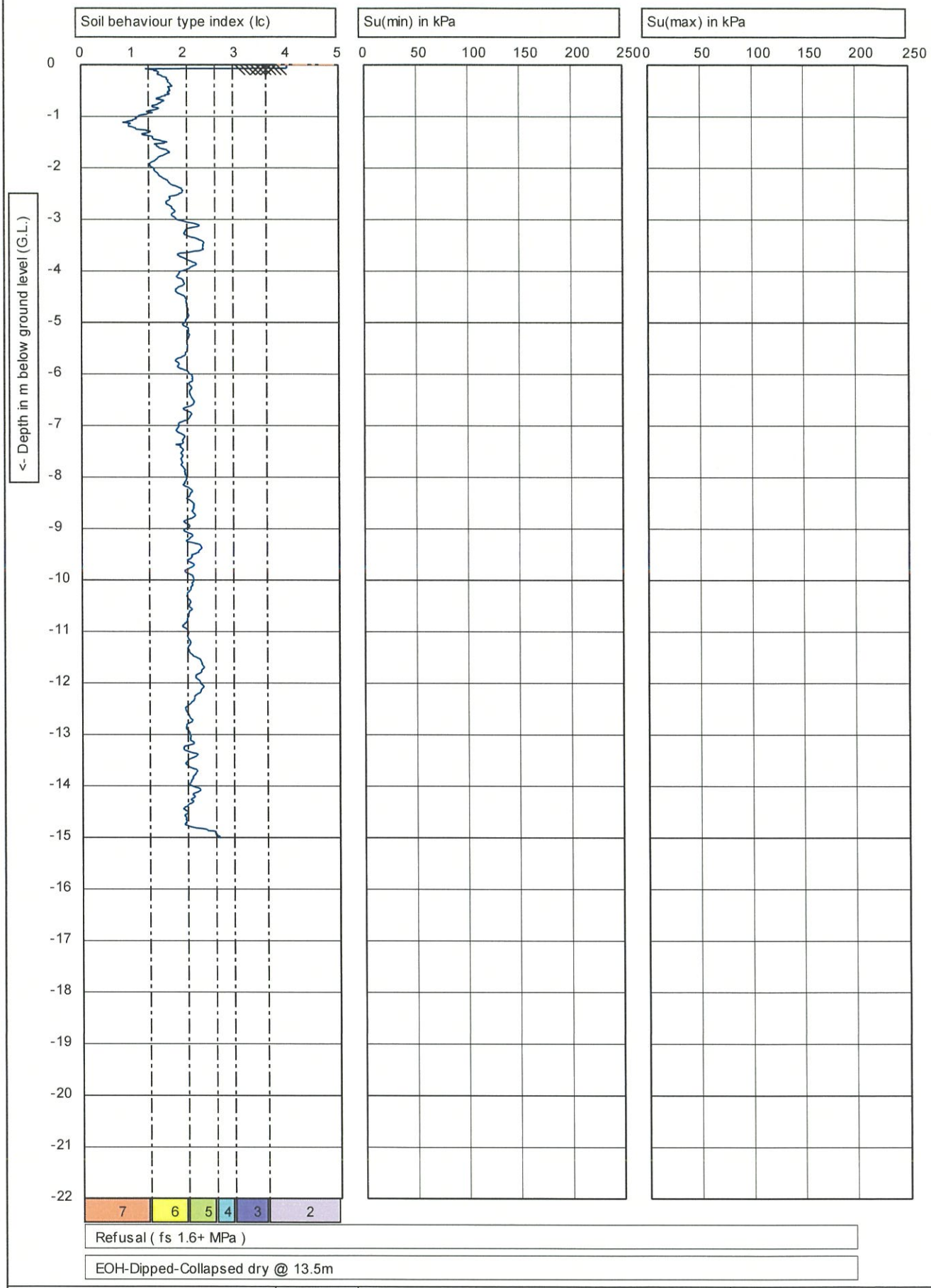
EOH-Dipped-Collapsed dry @ 13.5m

wsp

Graphs on this page are not IANZ accredited

r u2 150 cm² 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C13236**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833530, 5790612 NZTM**	CPT05 Fig. B-5D	

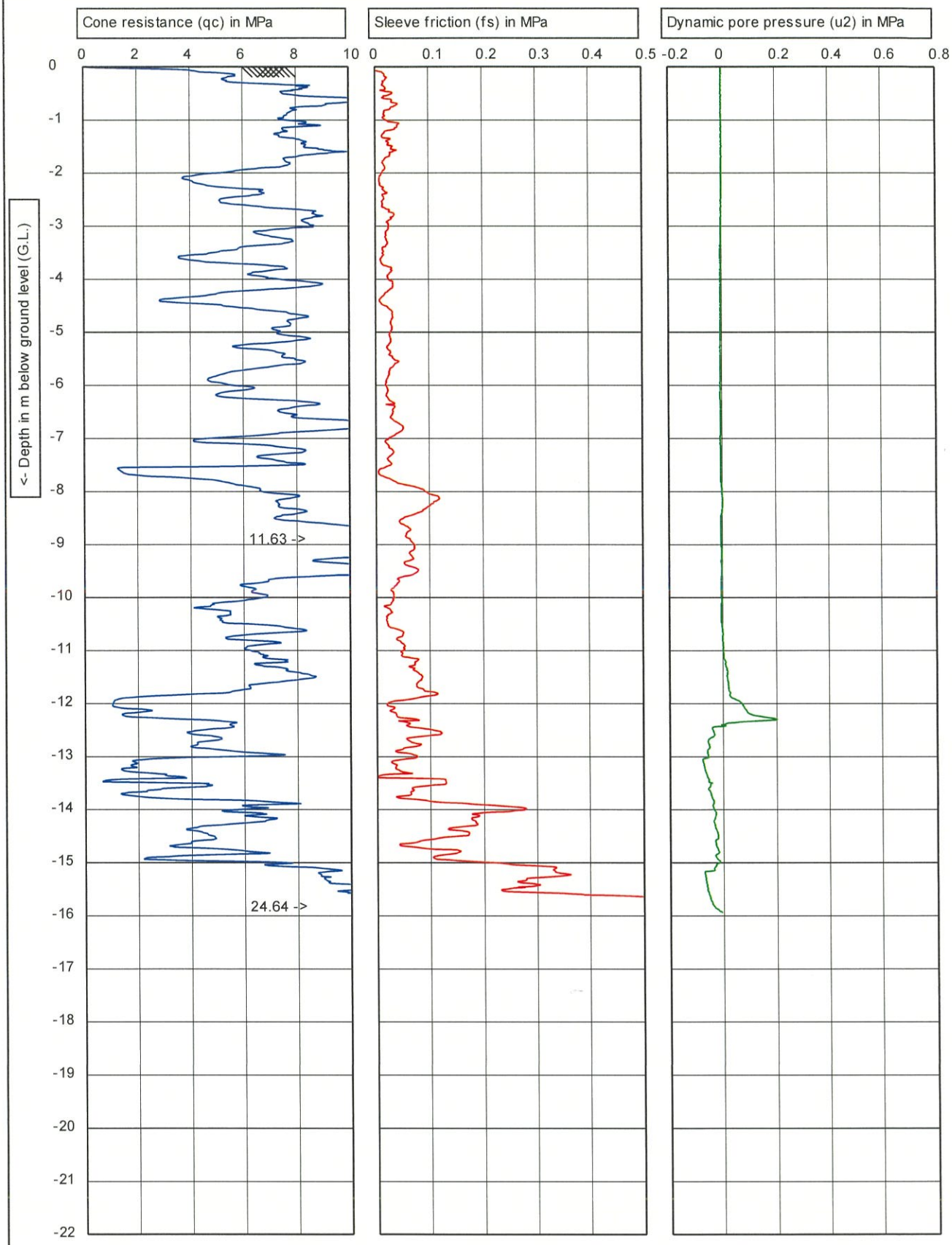
1.49



Graphs on this page are not IANZ accredited

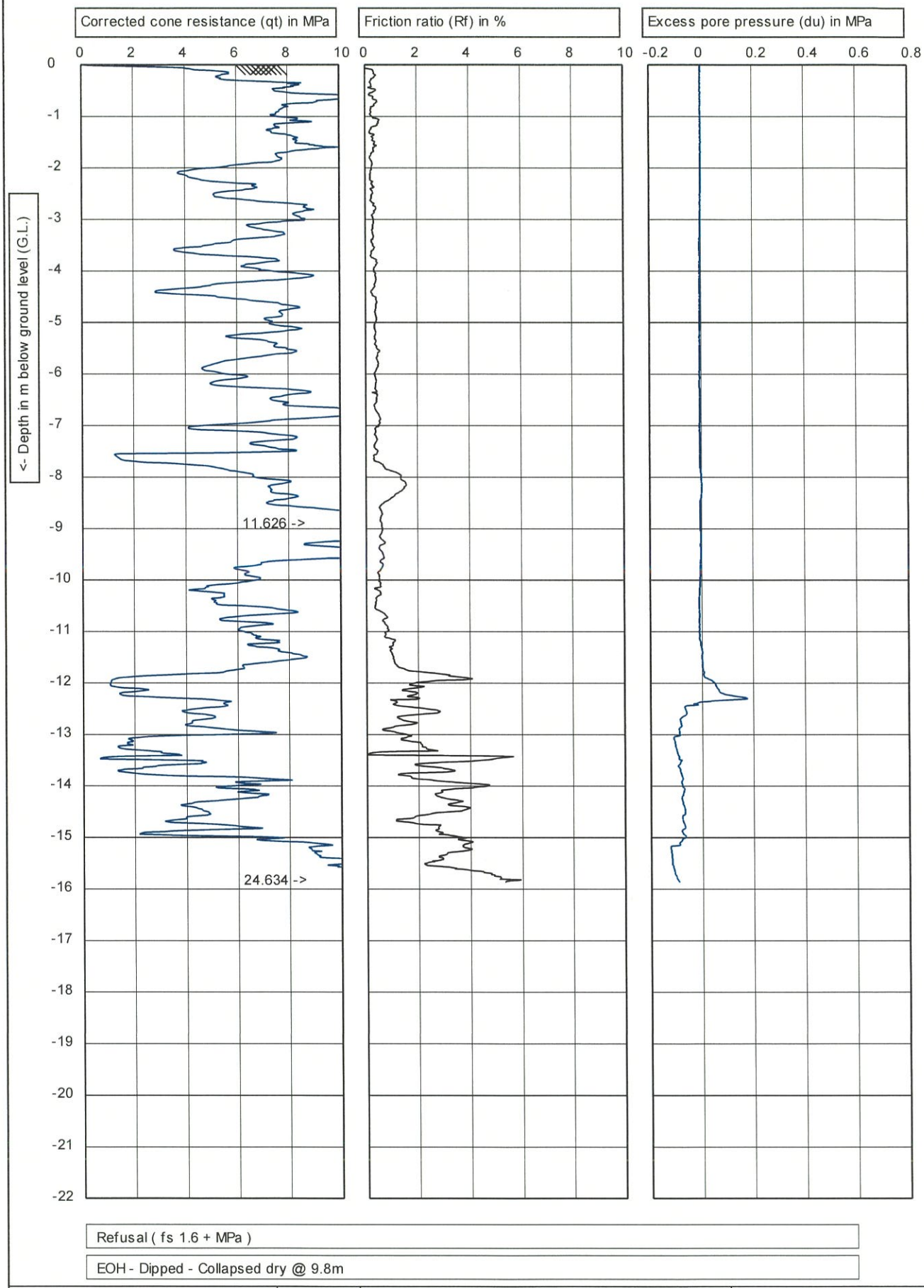
r u2 150 cm² 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C13236**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833530, 5790612 NZTM**	CPT05 Fig. B-5E	

1.49



wsp	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
ACCREDITED IANZ TESTING LABORATORY — Test results indicated as not accredited are outside the scope of the laboratory's accreditation	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
	Project: **597 Horahora Rd**	Cone no.:	**C10CFIIP.C181009**
	Location: **Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
	Position: **1833585, 5790295 NZTM**	CPT06 Fig. B-6A	

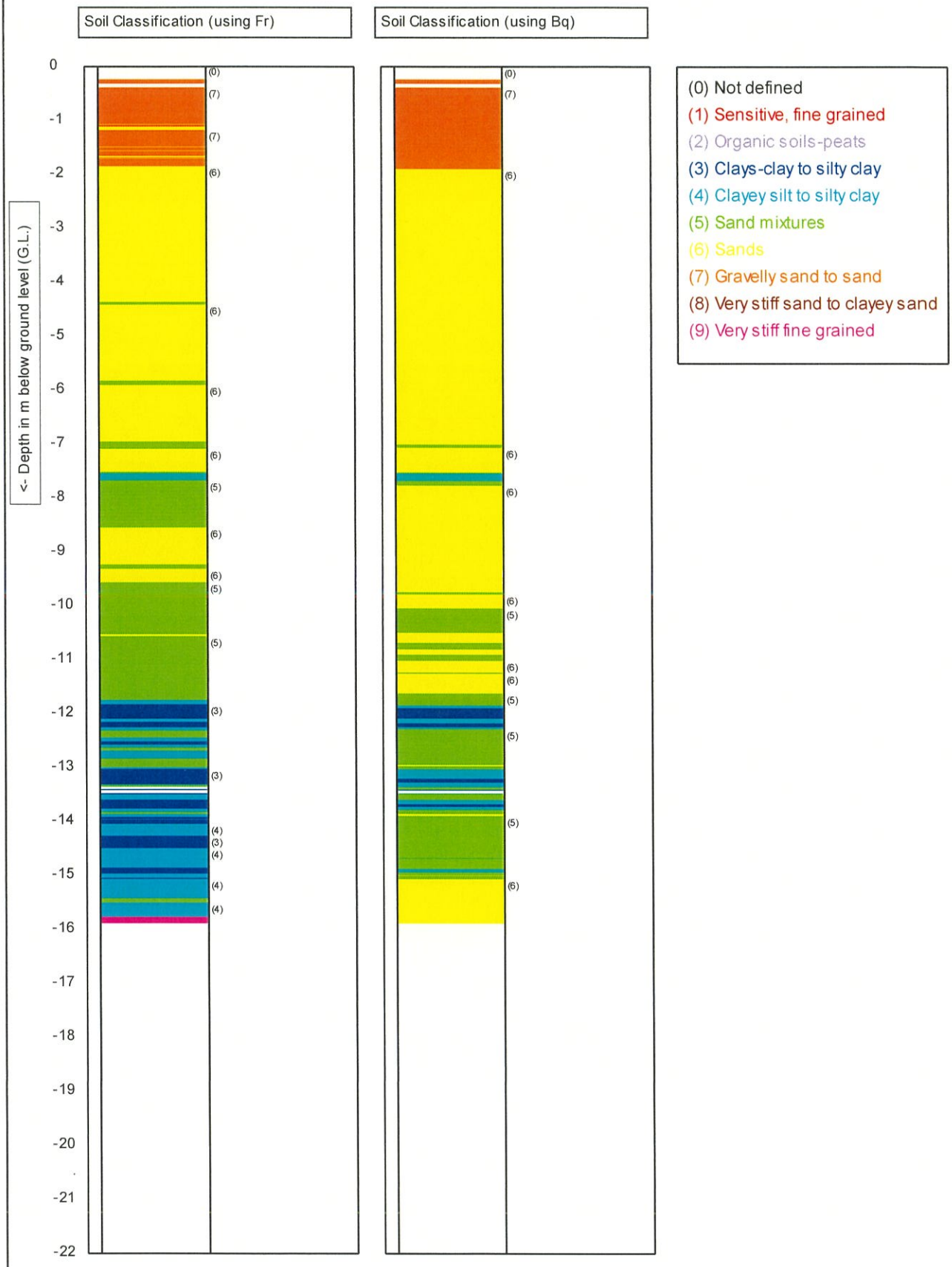
1.49



Graphs on this page are not IANZ accredited

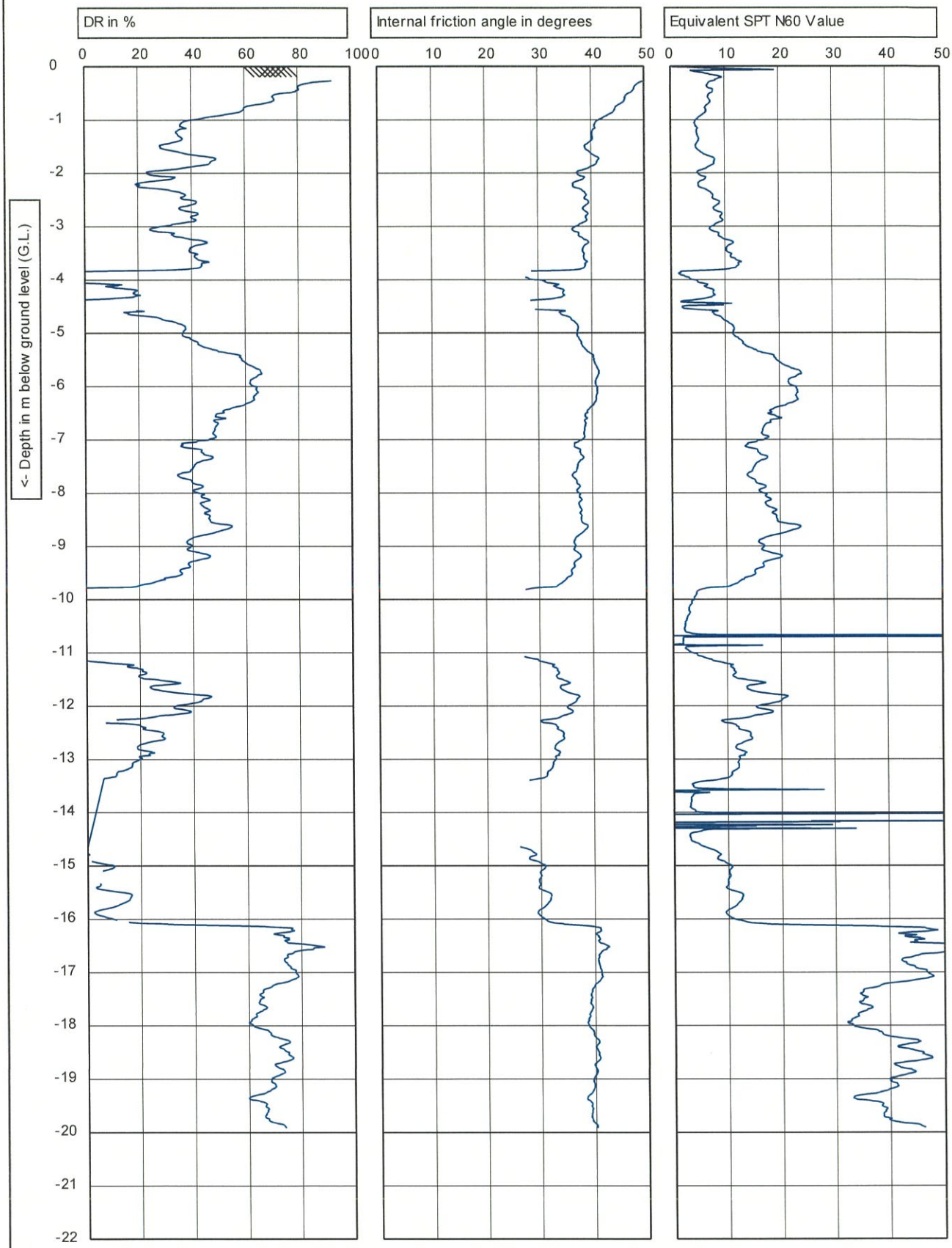
	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C181009**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833585, 5790295 NZTM**	CPT06 Fig. B-6B	

1.49



Graphs on this page are not IANZ accredited

	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C181009**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833585, 5790295 NZTM**	CPT06 Fig. B-6C	



Target Depth

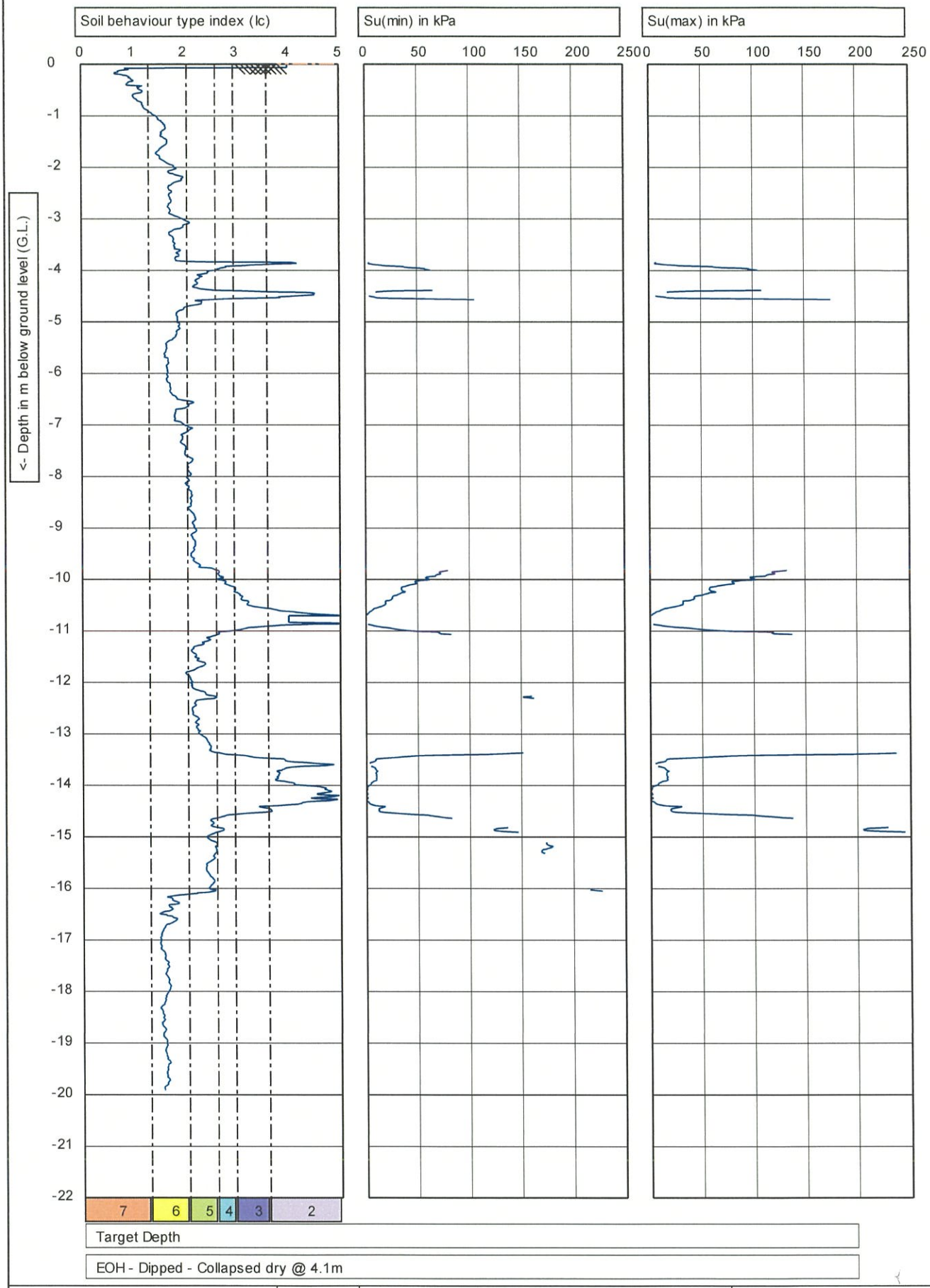
EOH - Dipped - Collapsed dry @ 4.1m

wsp

Graphs on this page are not IANZ accredited

r u2 150 cm² 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C181009**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833189, 5789790 NZTM**	CPT08 Fig. B-8D	

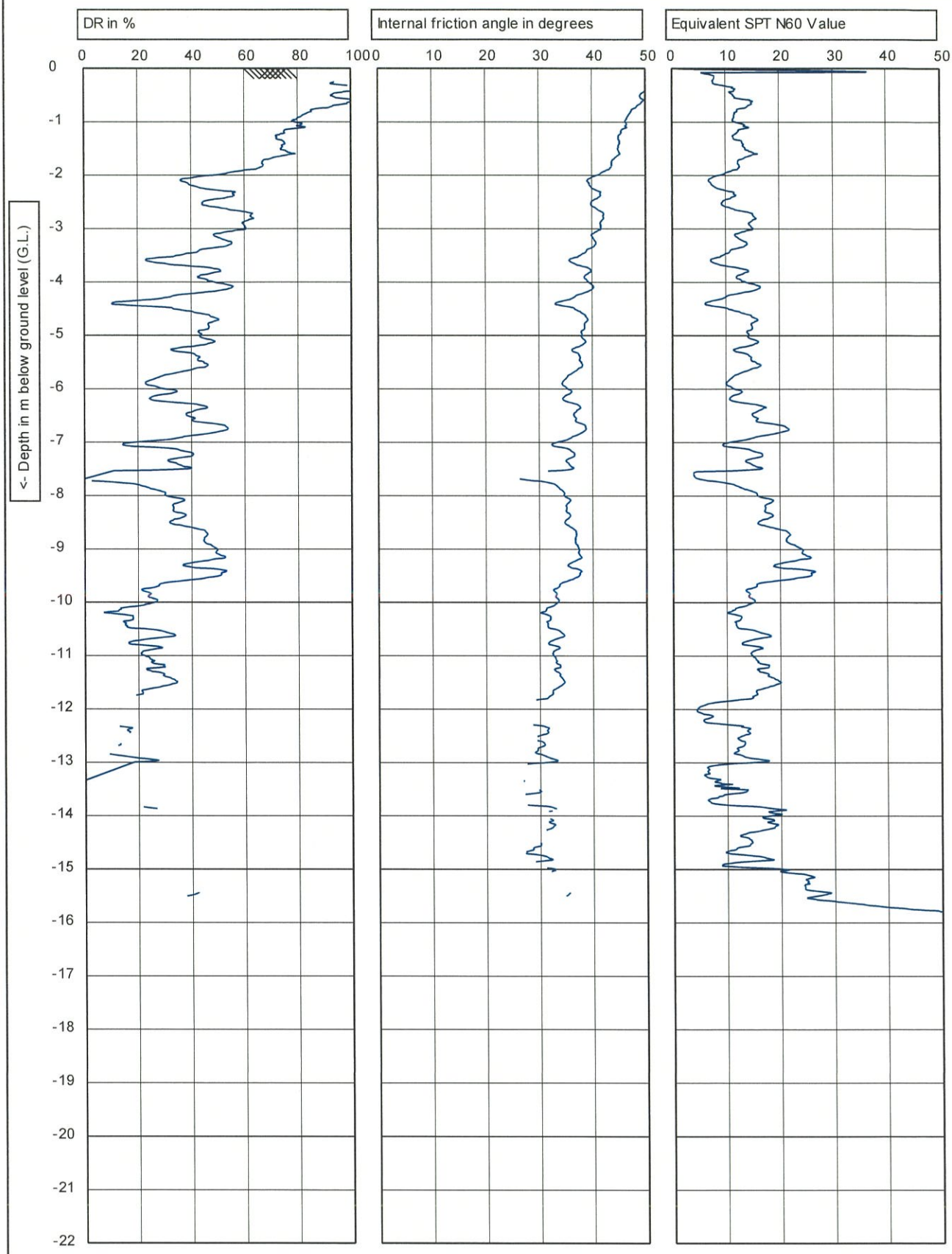
1.49



Graphs on this page are not IANZ accredited

r u2 150 cm² 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C181009**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833189, 5789790 NZTM**	CPT08 Fig. B-8E	

1.49



Refusal (fs 1.6 + MPa)

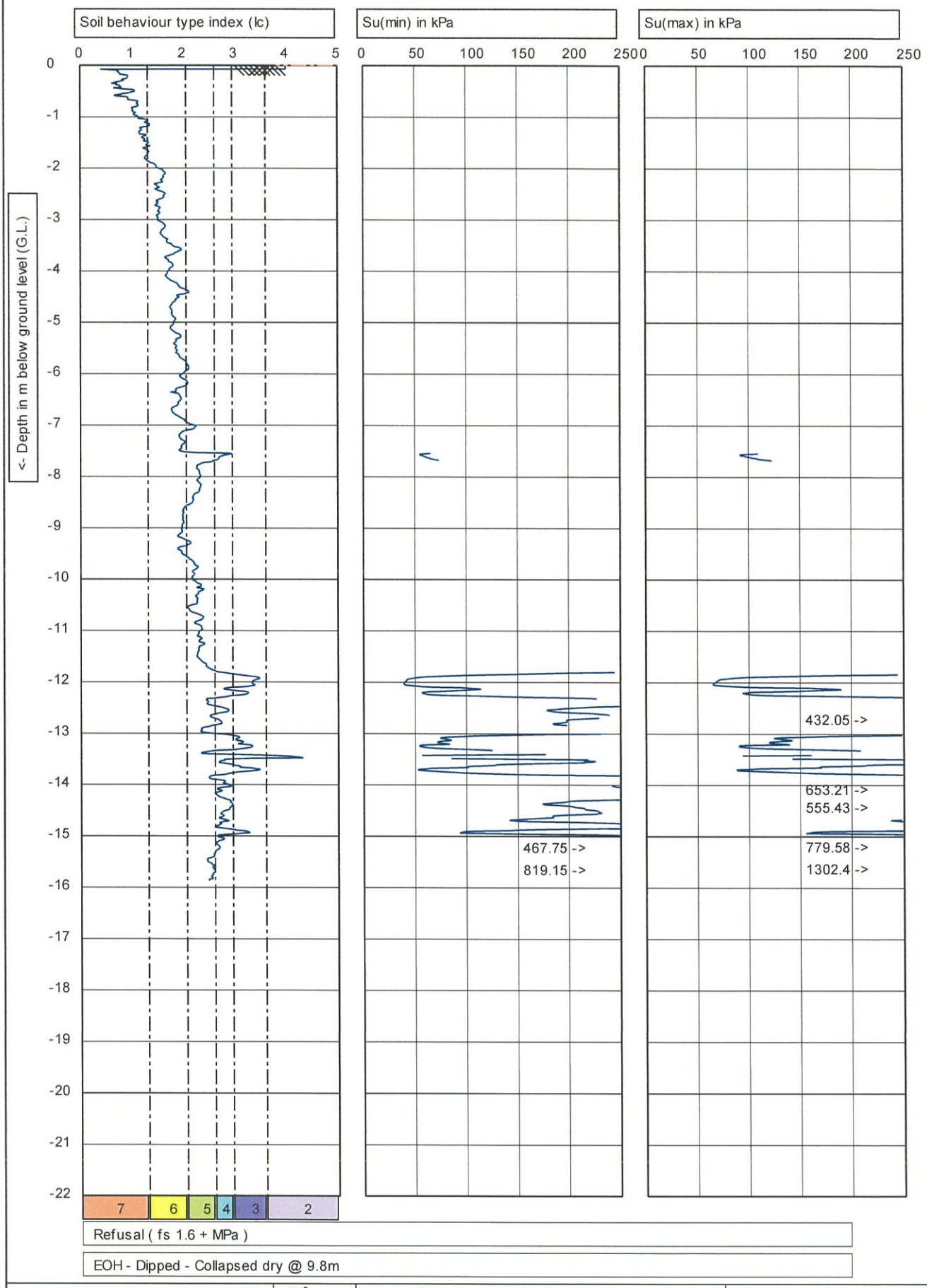
EOH - Dipped - Collapsed dry @ 9.8m

wsp

Graphs on this page are not IANZ accredited

r u2 / 150 cm² / 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C181009**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833585, 5790295 NZTM**	CPT06 Fig. B-6D	

1.49



wsp

Graphs on this page are not IANZ accredited

r u2
150 cm²
10 cm²

Test according ASTM D5778:12 & ISO 22476-1:2012

G.L.: **0.00 m MSL**

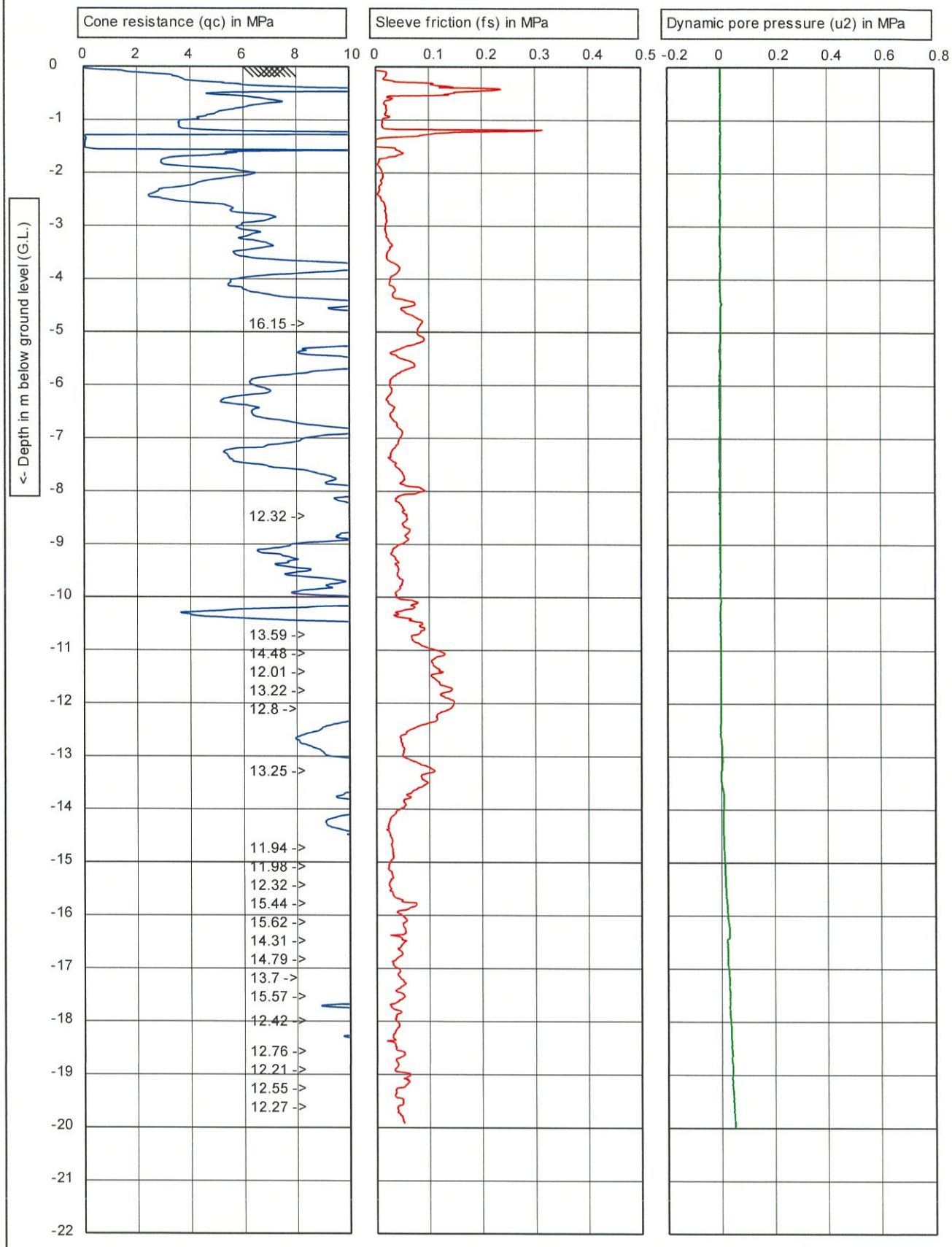
Project: **597 Horahora Rd**

Location: **Piarere (17009)**

Position: **1833585, 5790295 NZTM**

Predrill:	**0.00 m Predrilled**
Date:	**11/05/2022**
Cone no.:	**C10CFIIP.C181009**
Project no.:	**2-68002.00_HA9058**
CPT06 Fig. B-6E	

1.49



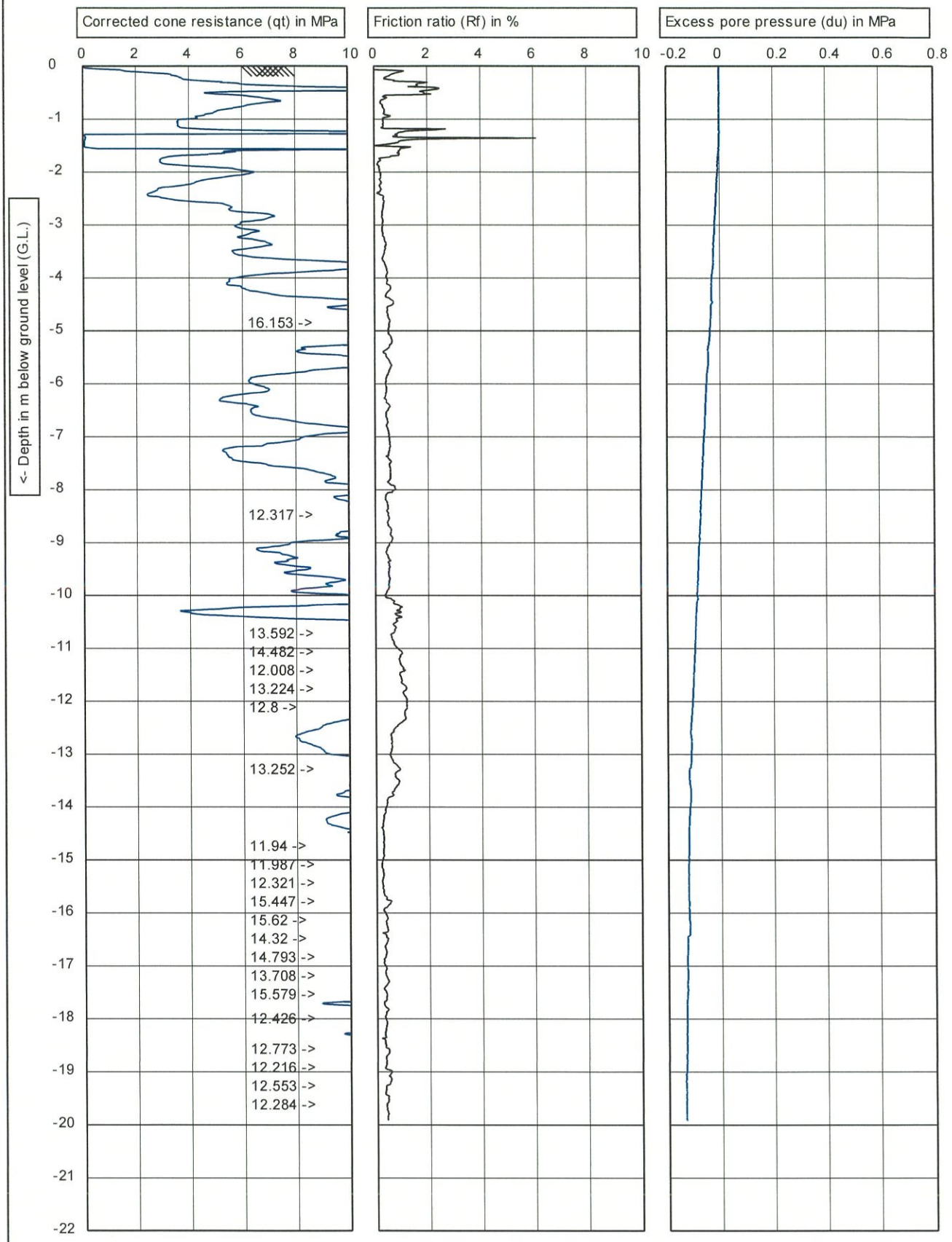
Target Depth - Tomo at approx 1.4m

EOH - Dipped - Collapsed dry @ 1.4m

Test results indicated as not accredited are outside the scope of the laboratory's accreditation

r u2 / 150 cm² / 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C13236**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833467, 5789993 NZTM**	CPT07 Fig. B-7A	

1 49



Target Depth - Tomo at approx 1.4m

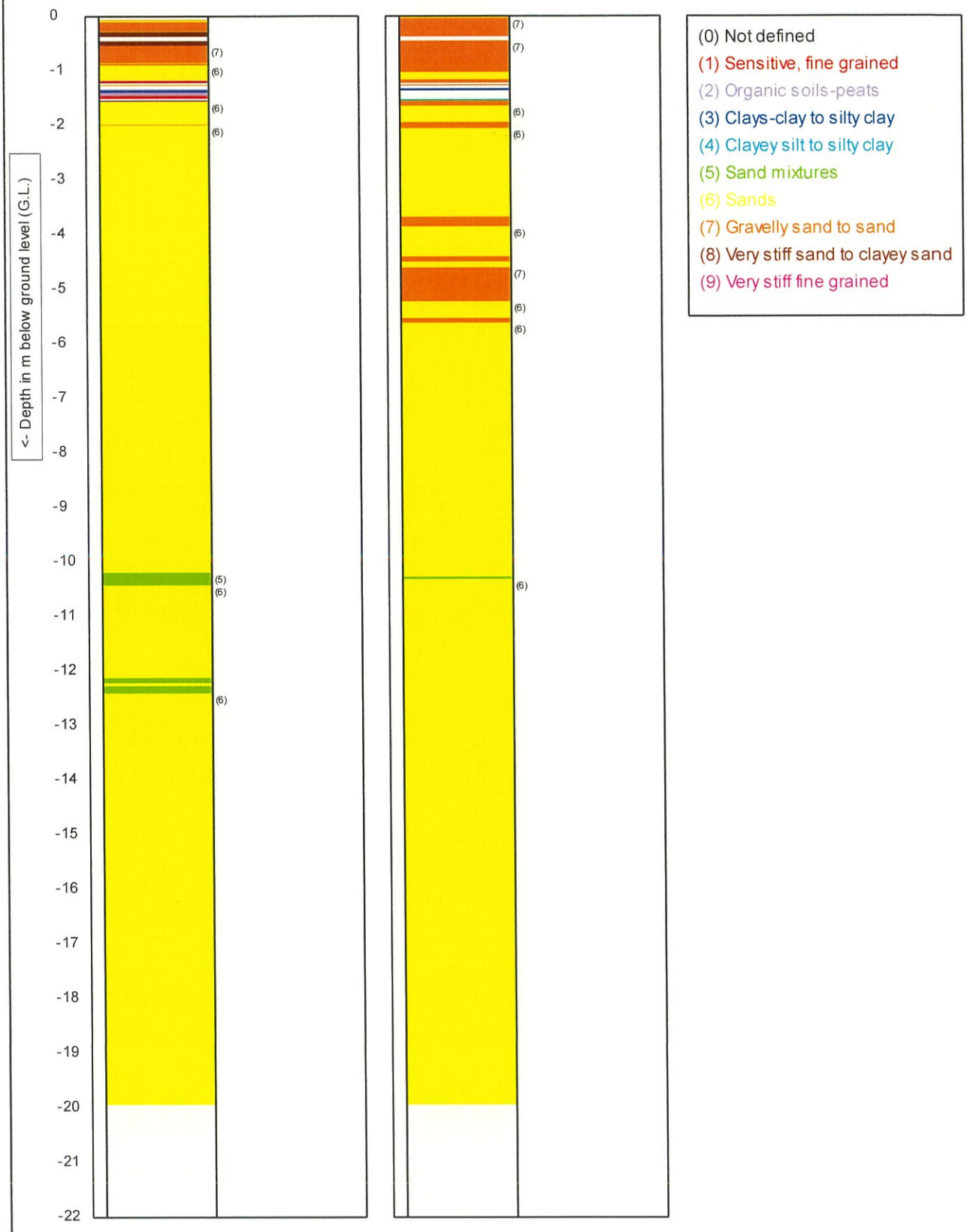
EOH - Dipped - Collapsed dry @ 1.4m

wsp

Graphs on this page are not IANZ accredited

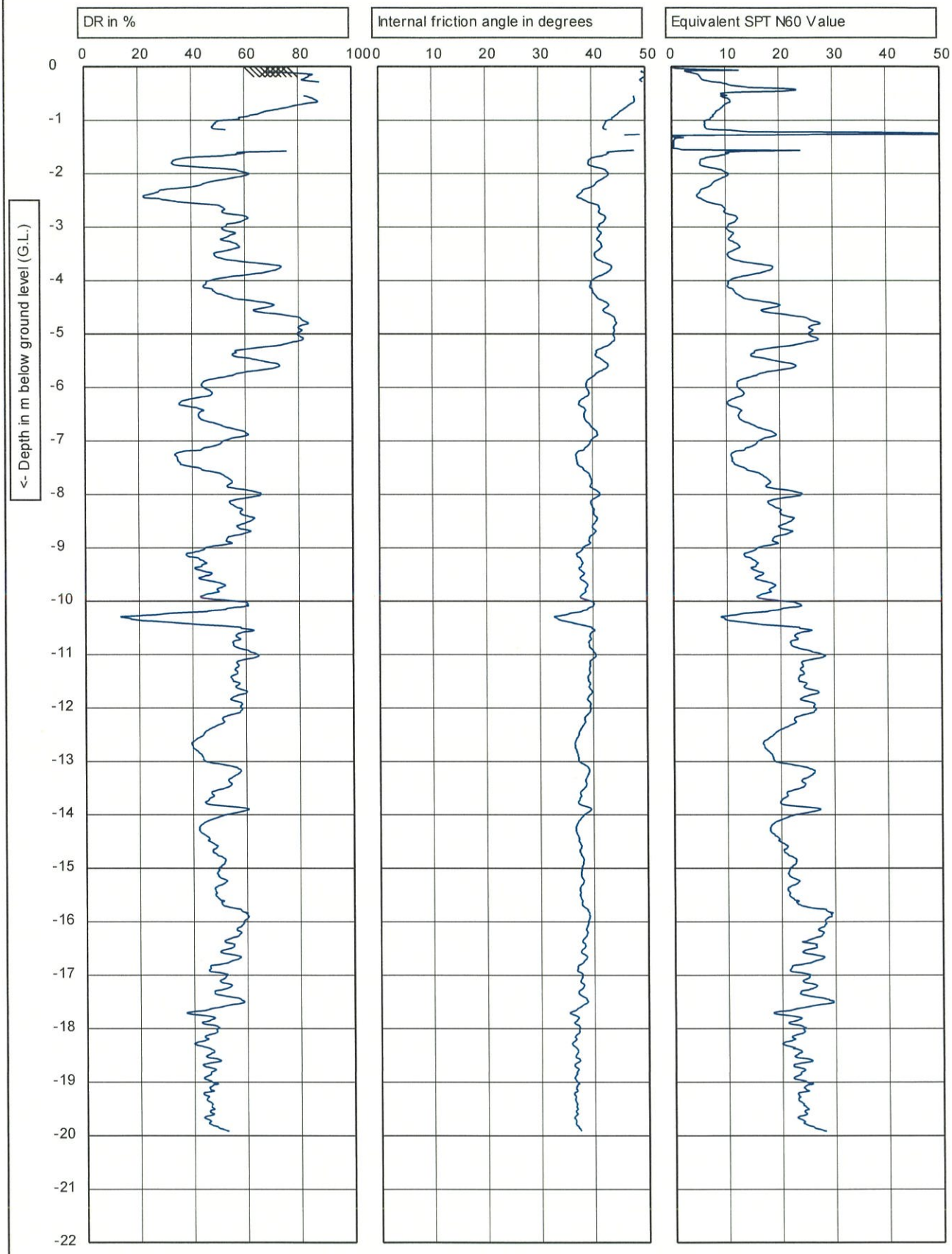
Test according ASTM D5778:12 & ISO 22476-1:2012		Predrill:	**0.00 m Predrilled**
G.L.: **0.00 m MSL**		Date:	**11/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C13236**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833467, 5789993 NZTM**	CPT07 Fig. B-7B	

1.49



wsp Graphs on this page are not IANZ accredited	Δu2 150 cm² 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill: **0.00 m Predrilled**
		G.L.: **0.00 m MSL**	Date: **11/05/2022**
	Project:	**597 Horahora Rd**	Cone no.: **C10CFIIP.C13236**
	Location:	**Piarere (17009)**	Project no.: **2-68002.00_HA9058**
	Position:	**1833467, 5789993 NZTM**	CPT07 Fig. B-7C

1.49



Target Depth - Tomo at approx 1.4m

EOH - Dipped - Collapsed dry @ 1.4m

wsp

Graphs on this page are not IANZ accredited

r u2
150 cm²
10 cm²

Test according ASTM D5778:12 & ISO 22476-1:2012

G.L.: **0.00 m MSL**

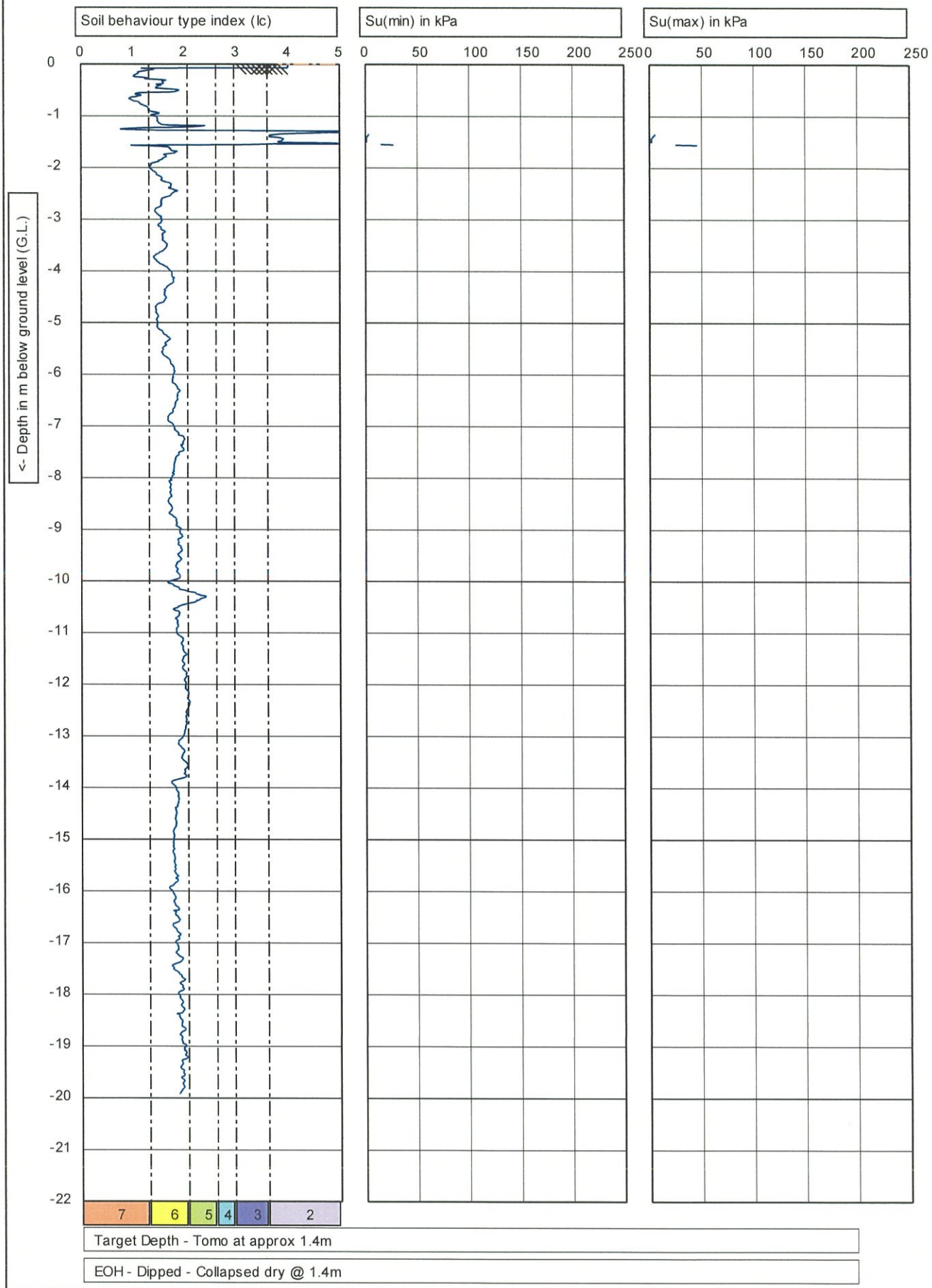
Project: **597 Horahora Rd**

Location: **Piarere (17009)**

Position: **1833467, 5789993 NZTM**

Predrill:	**0.00 m Predrilled**
Date:	**11/05/2022**
Cone no.:	**C10CFIIP.C13236**
Project no.:	**2-68002.00_HA9058**
CPT07 Fig. B-7D	

1.49



Target Depth - Tomo at approx 1.4m

EOH - Dipped - Collapsed dry @ 1.4m

wsp

Graphs on this page are not IANZ accredited

qu2 150 cm² 10 cm²

Test according ASTM D5778:12 & ISO 22476-1:2012

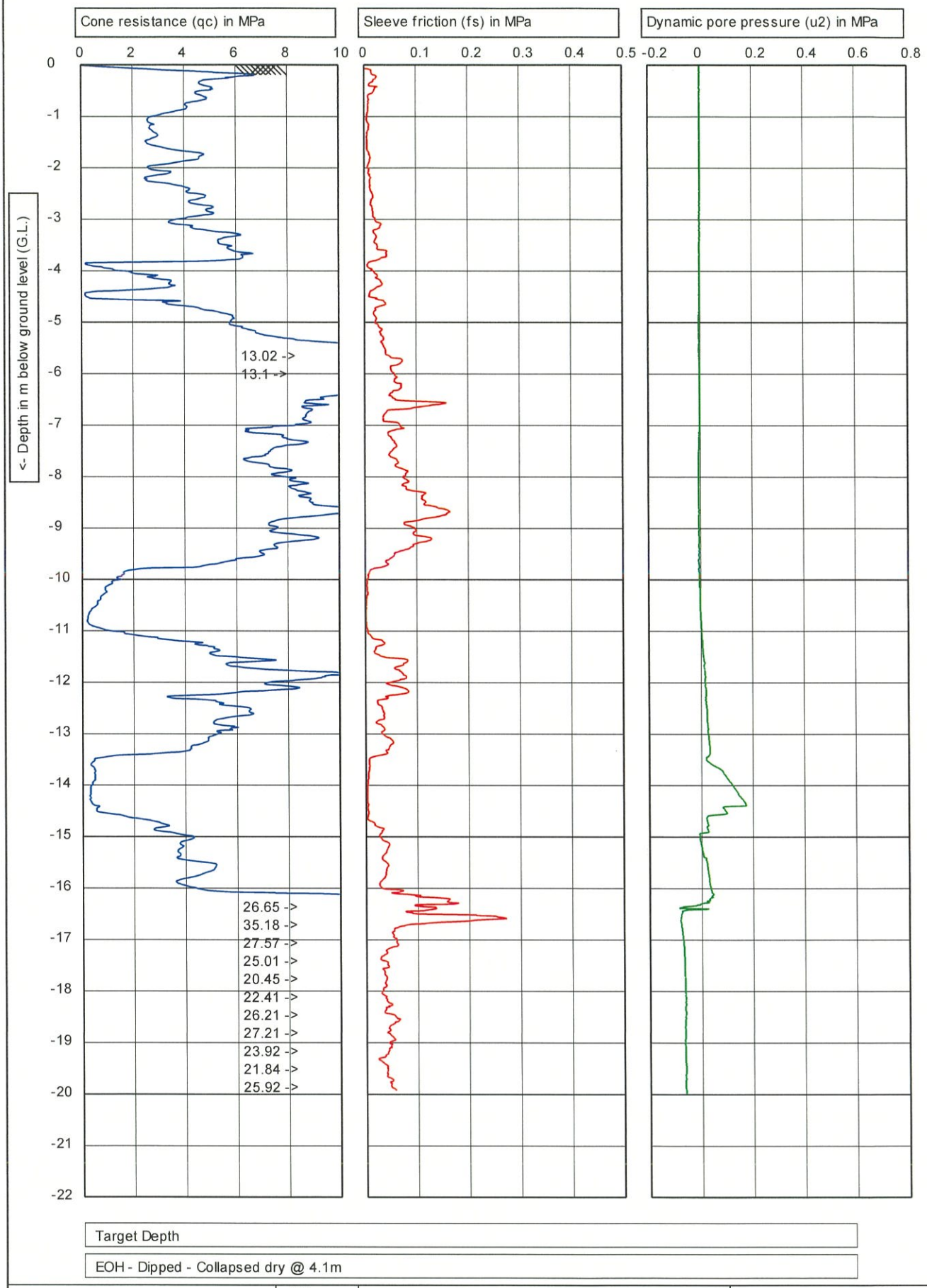
G.L.: **0.00 m MSL**

Project: **597 Horahora Rd**

Location: **Piarere (17009)**

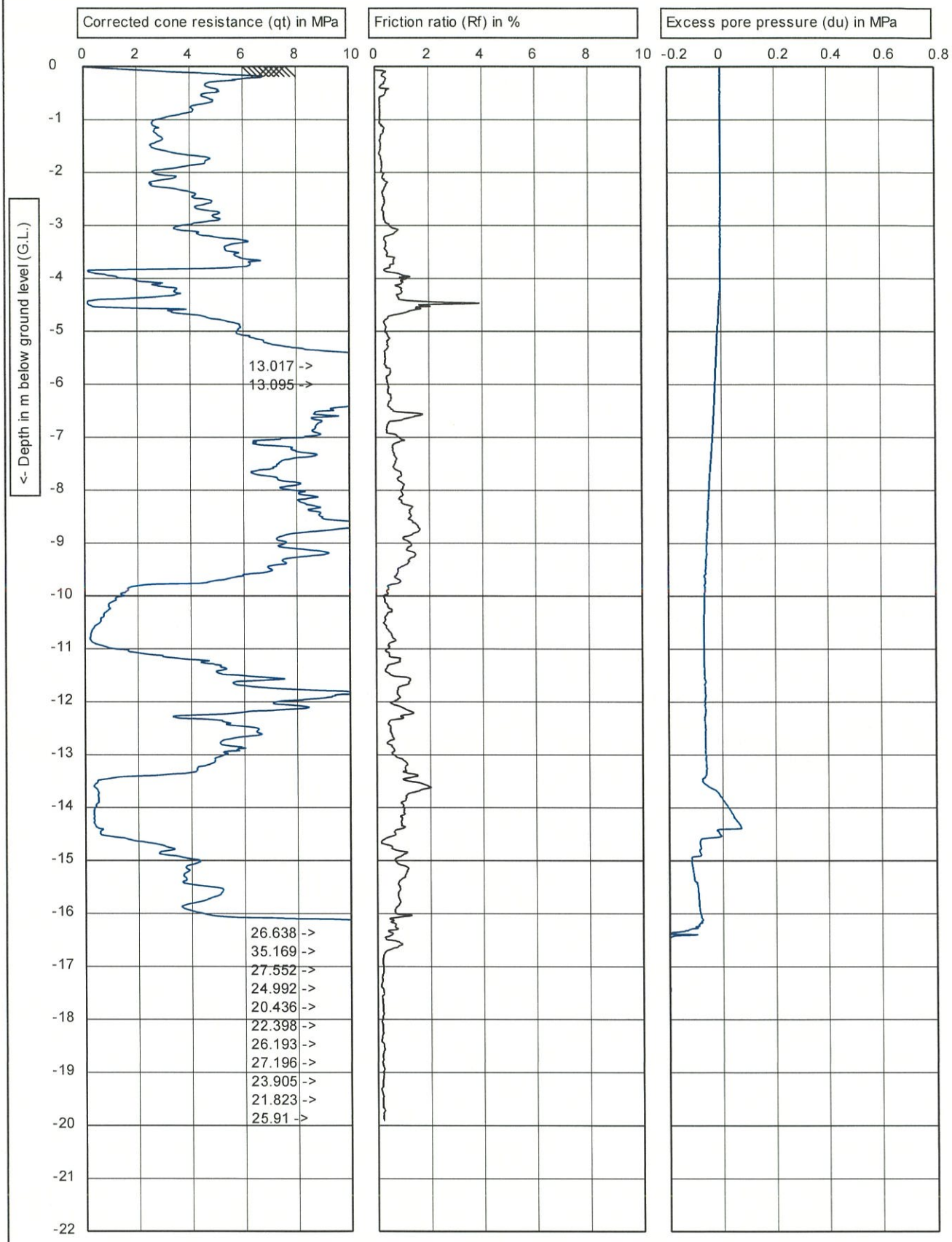
Position: **1833467, 5789993 NZTM**

Predrill:	**0.00 m Predrilled**
Date:	**11/05/2022**
Cone no.:	**C10CFIIP.C13236**
Project no.:	**2-68002.00_HA9058**
CPT07 Fig. B-7E	



wsp	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
ACCREDITED IANZ TESTING LABORATORY — Test results indicated as not accredited are outside the scope of the laboratory's accreditation	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
	Project: **597 Horahora Rd**	Cone no.:	**C10CFIIP.C181009**
	Location: **Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
	Position: **1833189, 5789790 NZTM**	CPT08 Fig. B-8A	

1.49



Graphs on this page are not IANZ accredited

Test according ASTM D5778:12 & ISO 22476-1:2012

G.L.: **0.00 m MSL**

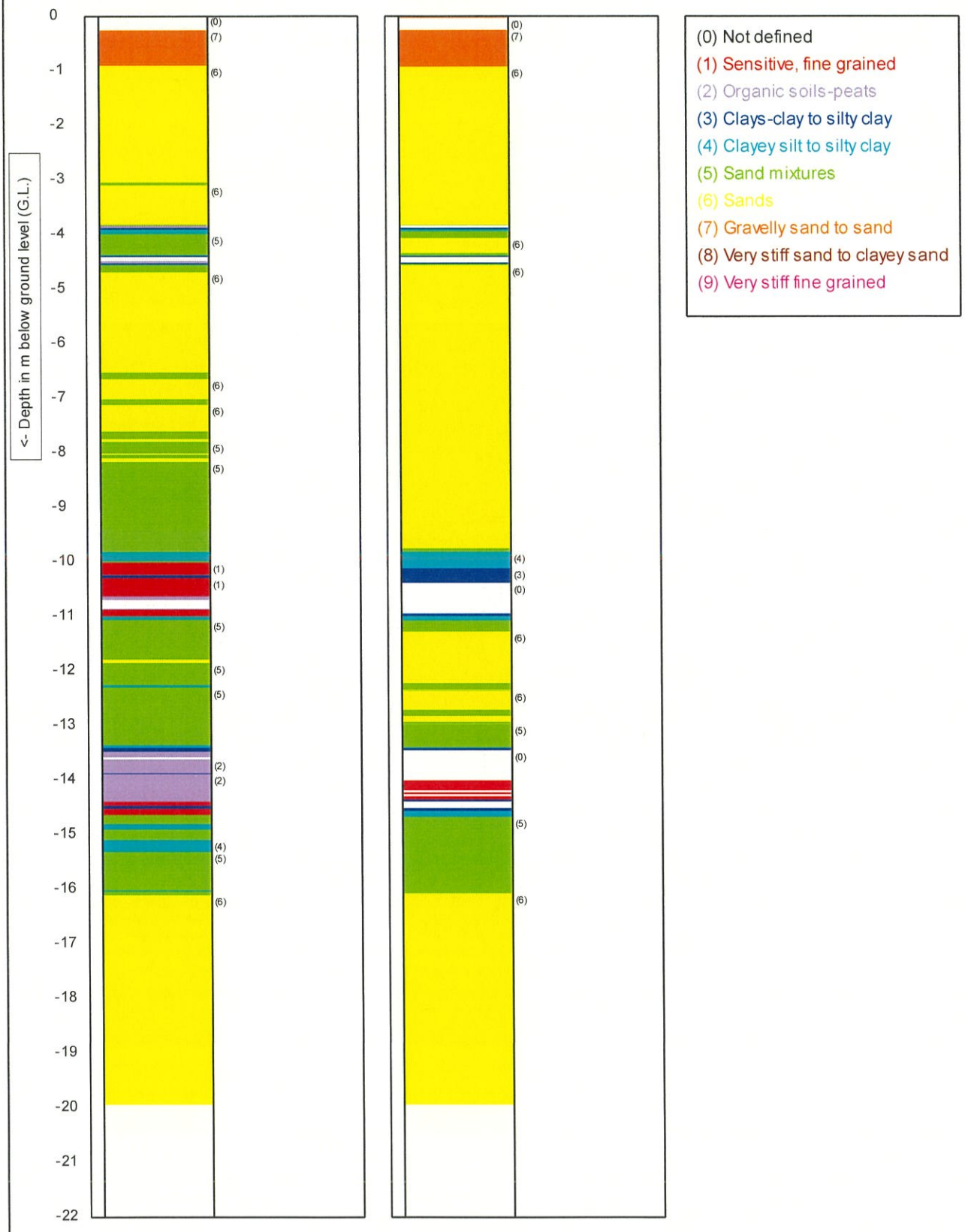
Project: **597 Horahora Rd**

Location: **Piarere (17009)**

Position: **1833189, 5789790 NZTM**

Predrill:	**0.00 m Predrilled**
Date:	**11/05/2022**
Cone no.:	**C10CFIIP.C181009**
Project no.:	**2-68002.00_HA9058**
CPT08 Fig. B-8B	

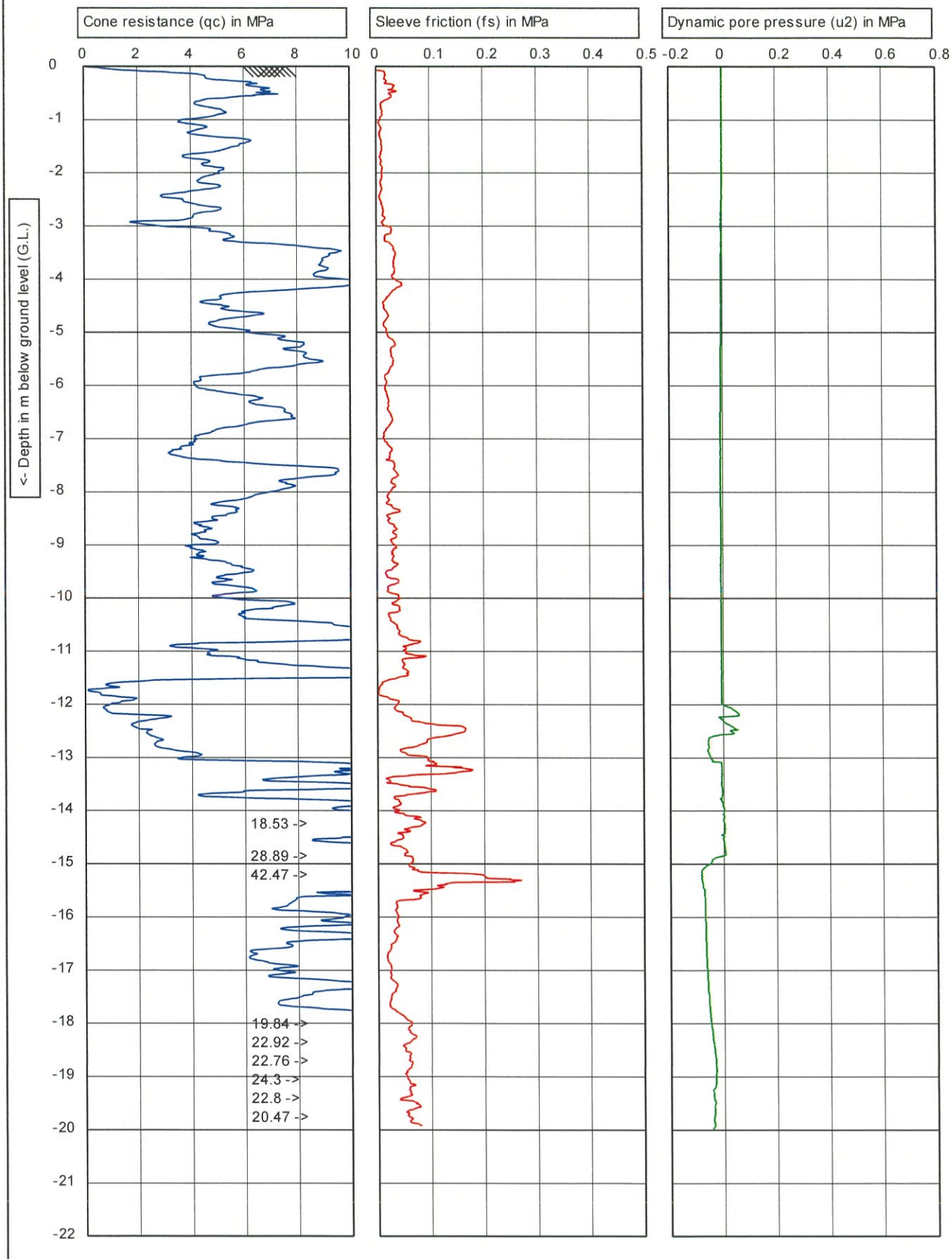
1.49



Graphs on this page are not IANZ accredited

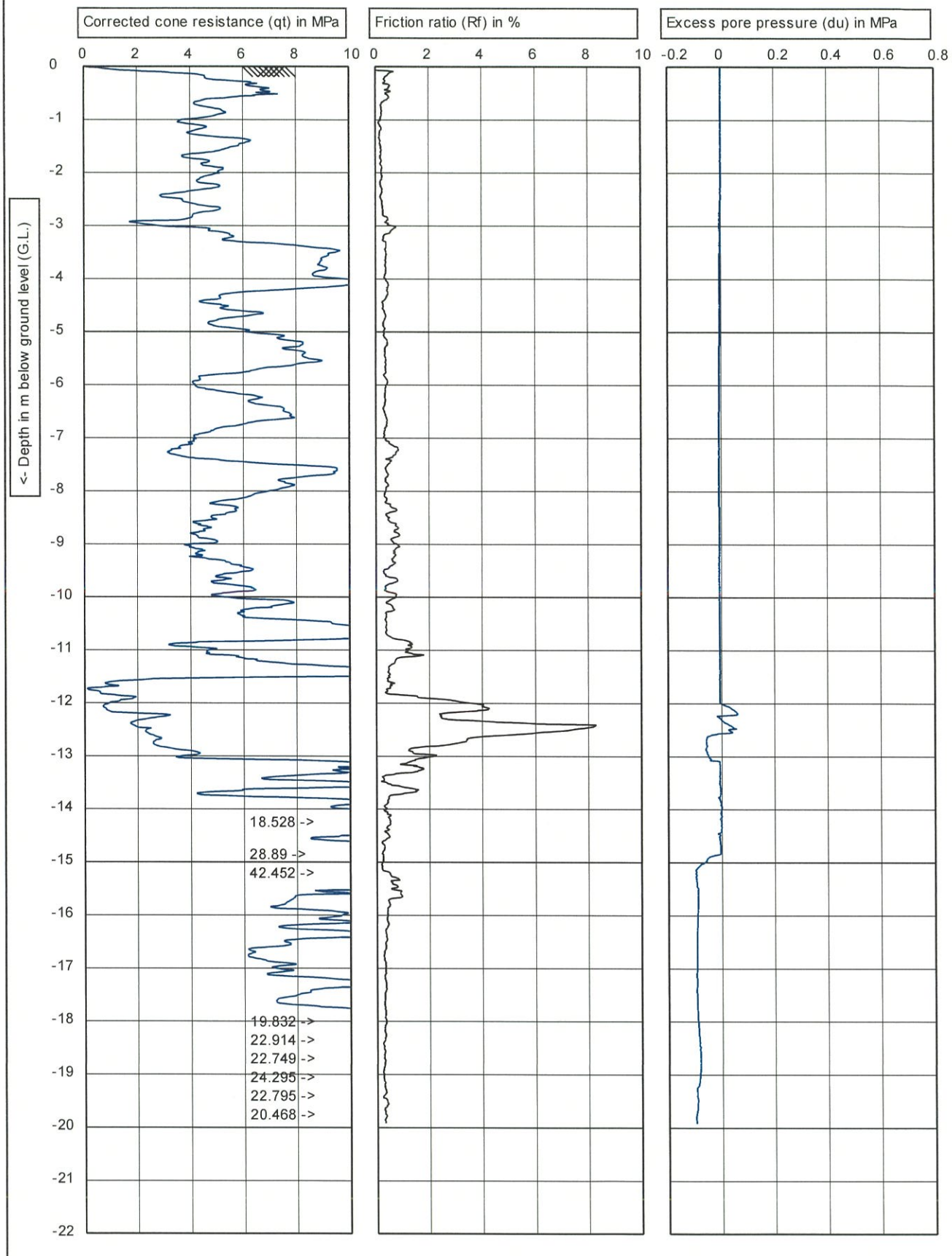
	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**11/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C181009**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833189, 5789790 NZTM**	CPT08 Fig. B-8C	

1.49



wsp	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
Test results indicated as not accredited are outside the scope of the laboratory's accreditation	G.L.: **0.00 m MSL**	Date:	**13/05/2022**
	Project: **597 Horahora Rd**	Cone no.:	**C10CFIIP.C181009**
	Location: **Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
	Position: **1833295, 5789410 NZTM**	CPT09 Fig. B-9A	

1.49



Graphs on this page are not IANZ accredited

Test according ASTM D5778:12 & ISO 22476-1:2012

G.L.: **0.00 m MSL**

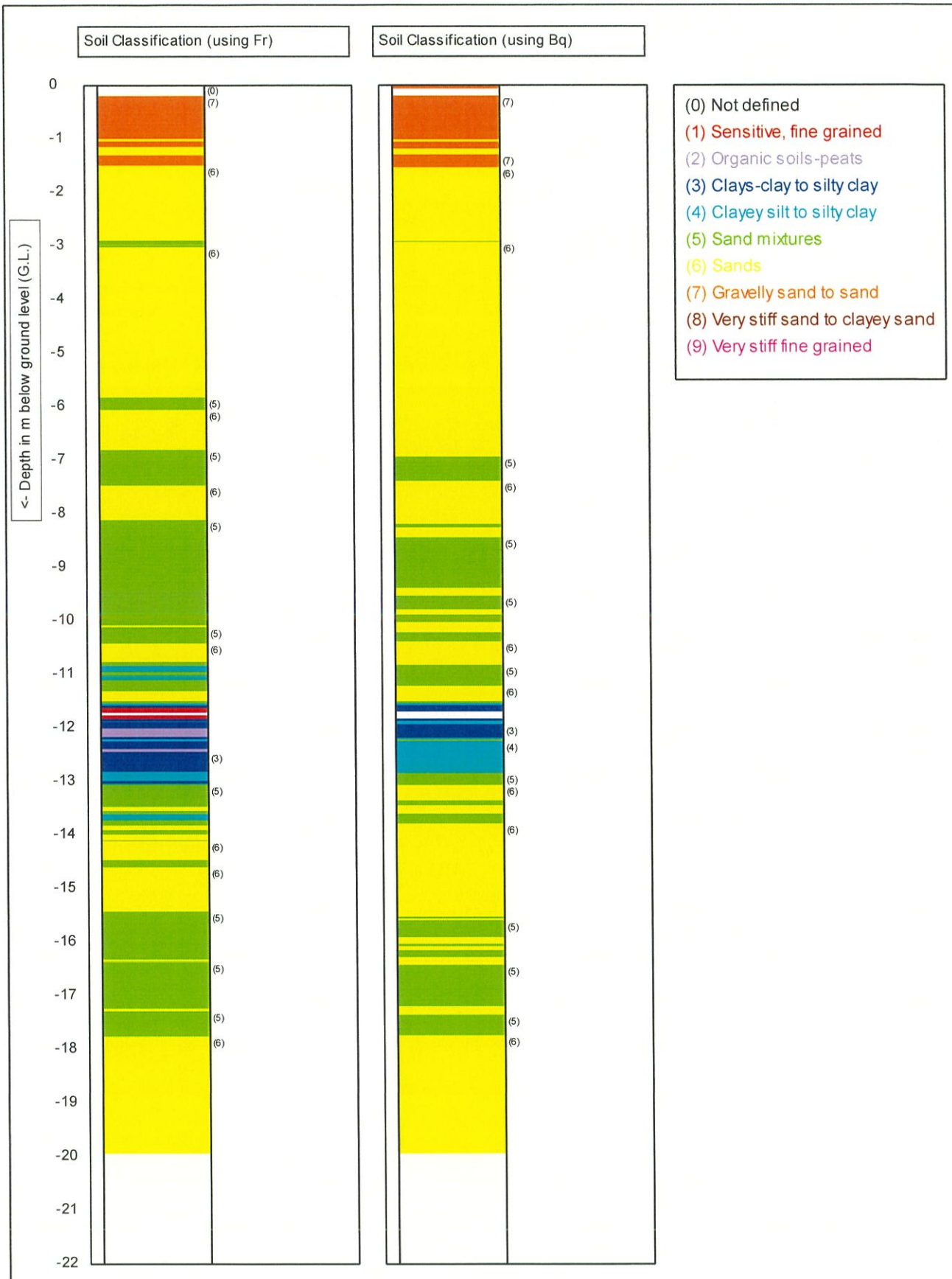
Project: **597 Horahora Rd**

Location: **Piarere (17009)**

Position: **1833295, 5789410 NZTM**

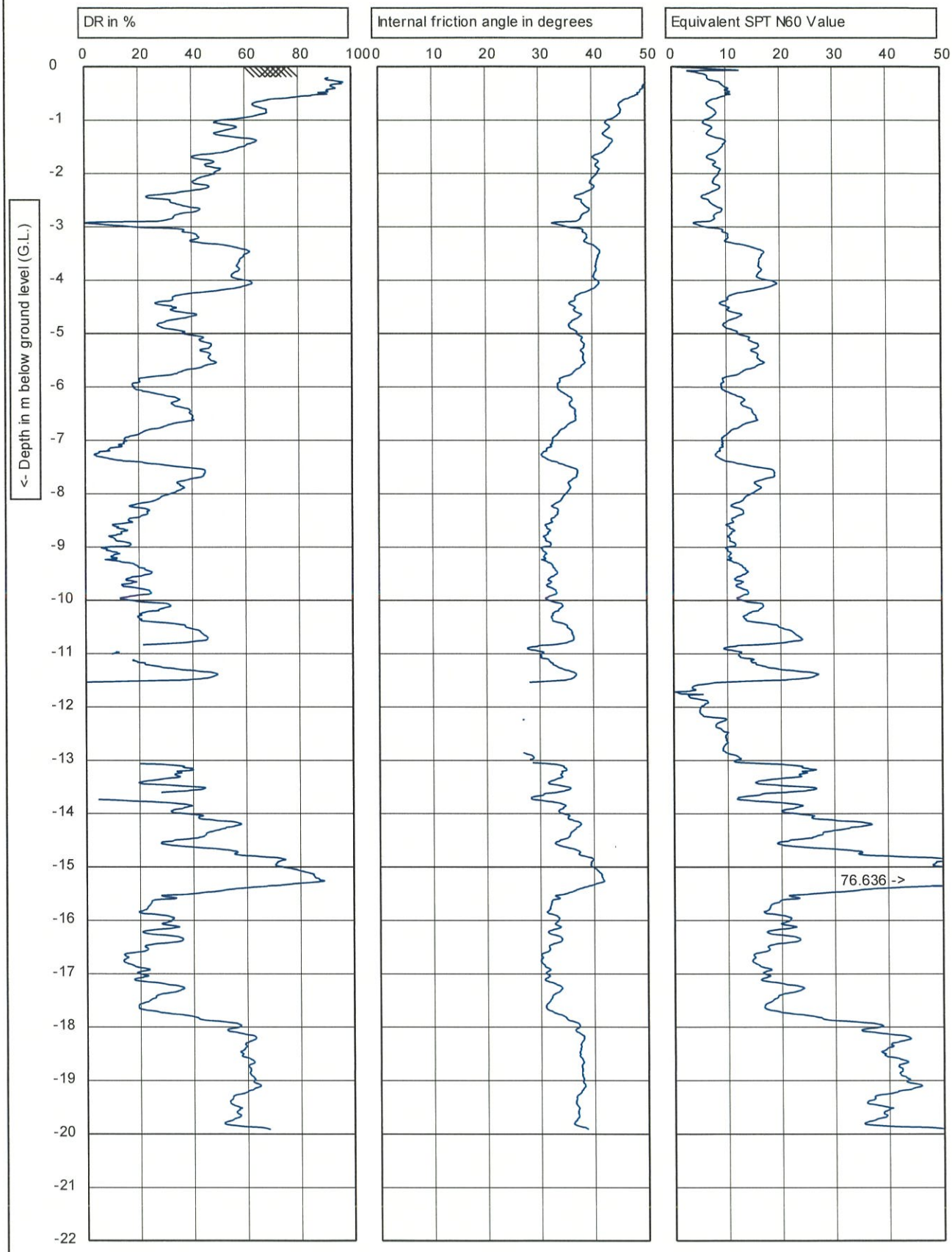
Predrill:	**0.00 m Predrilled**
Date:	**13/05/2022**
Cone no.:	**C10CFIIP.C181009**
Project no.:	**2-68002.00_HA9058**
CPT09 Fig. B-9B	

1.49



wsp Graphs on this page are not IANZ accredited	qu2 150 cm² 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill: **0.00 m Predrilled**
		G.L.: **0.00 m MSL**	Date: **13/05/2022**
	Project: **597 Horahora Rd**		Cone no.: **C10CFIIP.C181009**
	Location: **Piarere (17009)**		Project no.: **2-68002.00_HA9058**
	Position: **1833295, 5789410 NZTM**		CPT09 Fig. B-9C

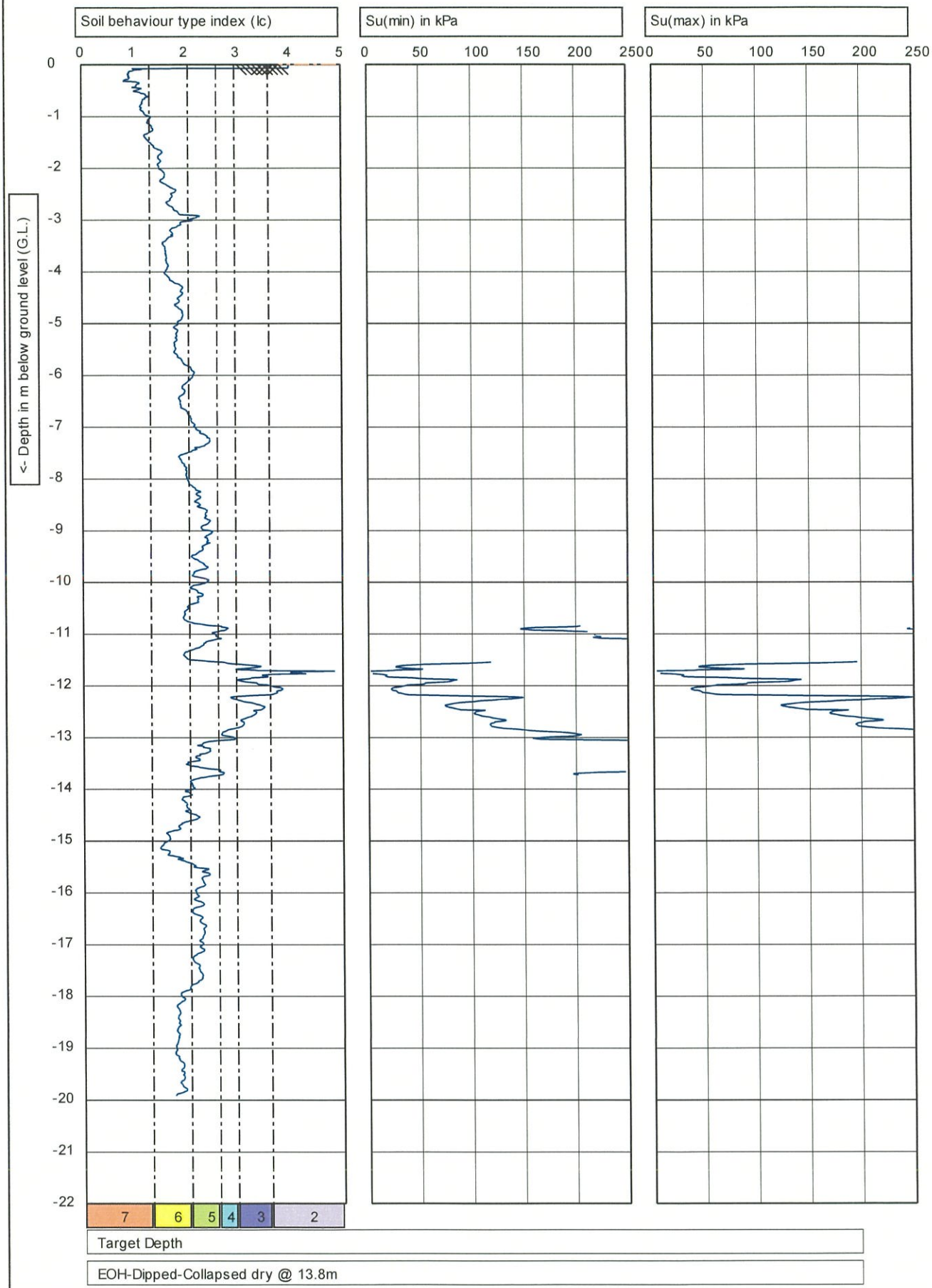
1.49



Graphs on this page are not IANZ accredited

	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
u2 150 cm² 10 cm²	G.L.: **0.00 m MSL**	Date:	**13/05/2022**
Project: **597 Horahora Rd**		Cone no.:	**C10CFIIP.C181009**
Location: **Piarere (17009)**		Project no.:	**2-68002.00_HA9058**
Position: **1833295, 5789410 NZTM**		CPT09 Fig. B-9D	

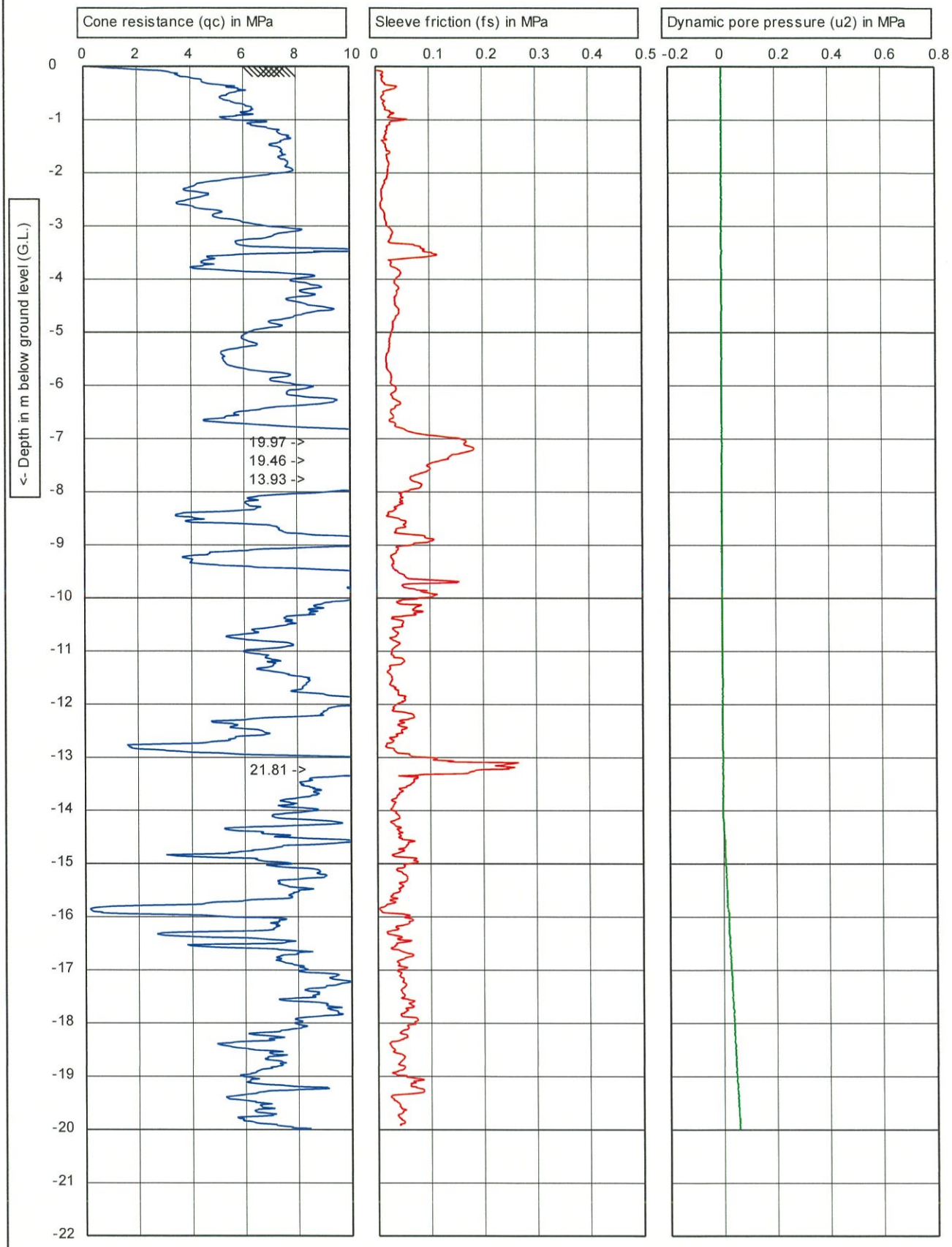
1 49



Graphs on this page are not IANZ accredited

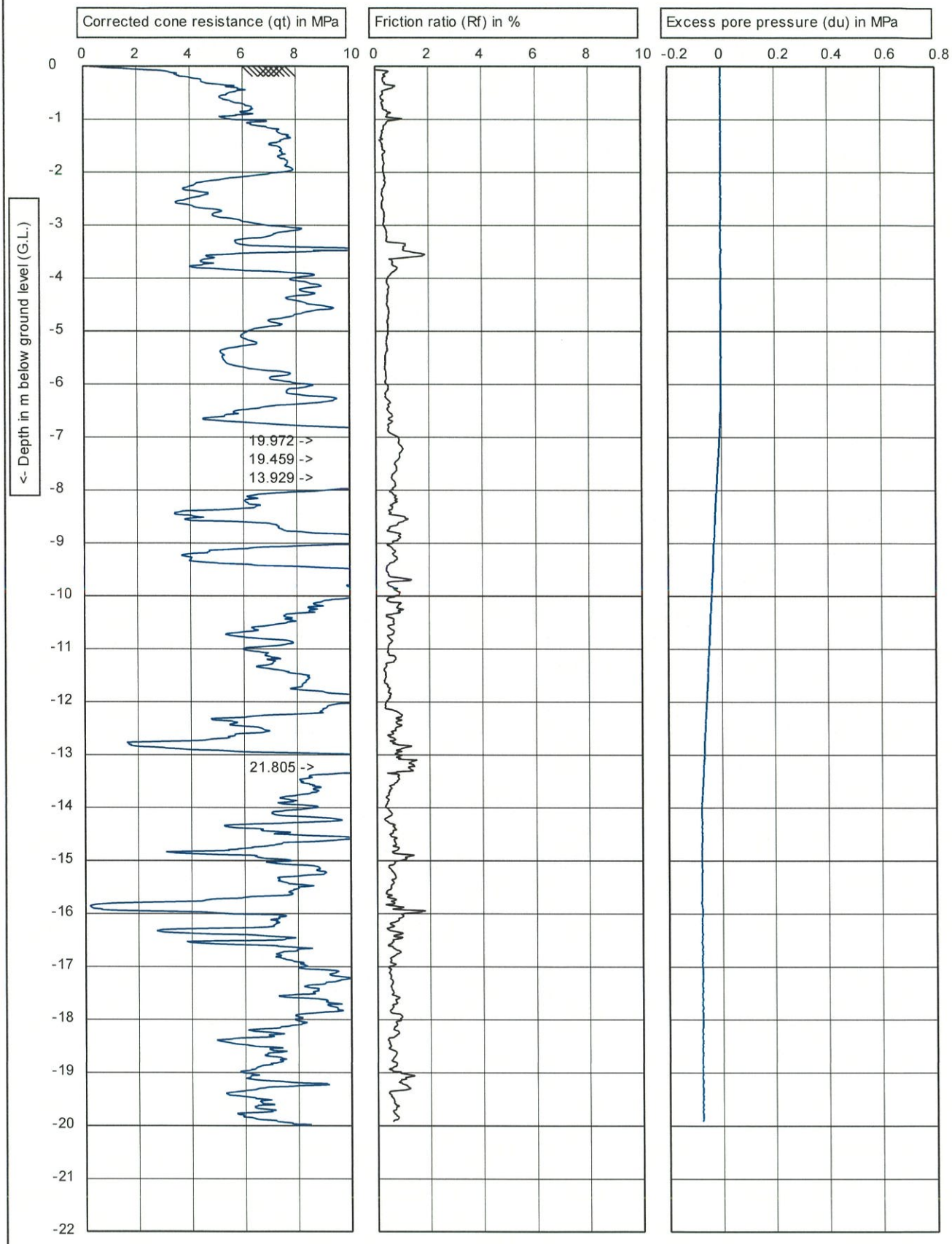
r u2 / 150 cm² / 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**13/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C181009**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833295, 5789410 NZTM**	CPT09 Fig. B-9E	

1.49



Test results indicated as not accredited are outside the scope of the laboratory's accreditation	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**13/05/2022**
Project: **597 Horahora Rd**		Cone no.:	**C10CFIIP.C13236**
Location: **Piarere (17009)**		Project no.:	**2-68002.00_HA9058**
Position: **1833265, 5788905 NZTM**		CPT10 Fig. B-10A	

1.49



Graphs on this page are not IANZ accredited

Test according ASTM D5778:12 & ISO 22476-1:2012

G.L.: **0.00 m MSL**

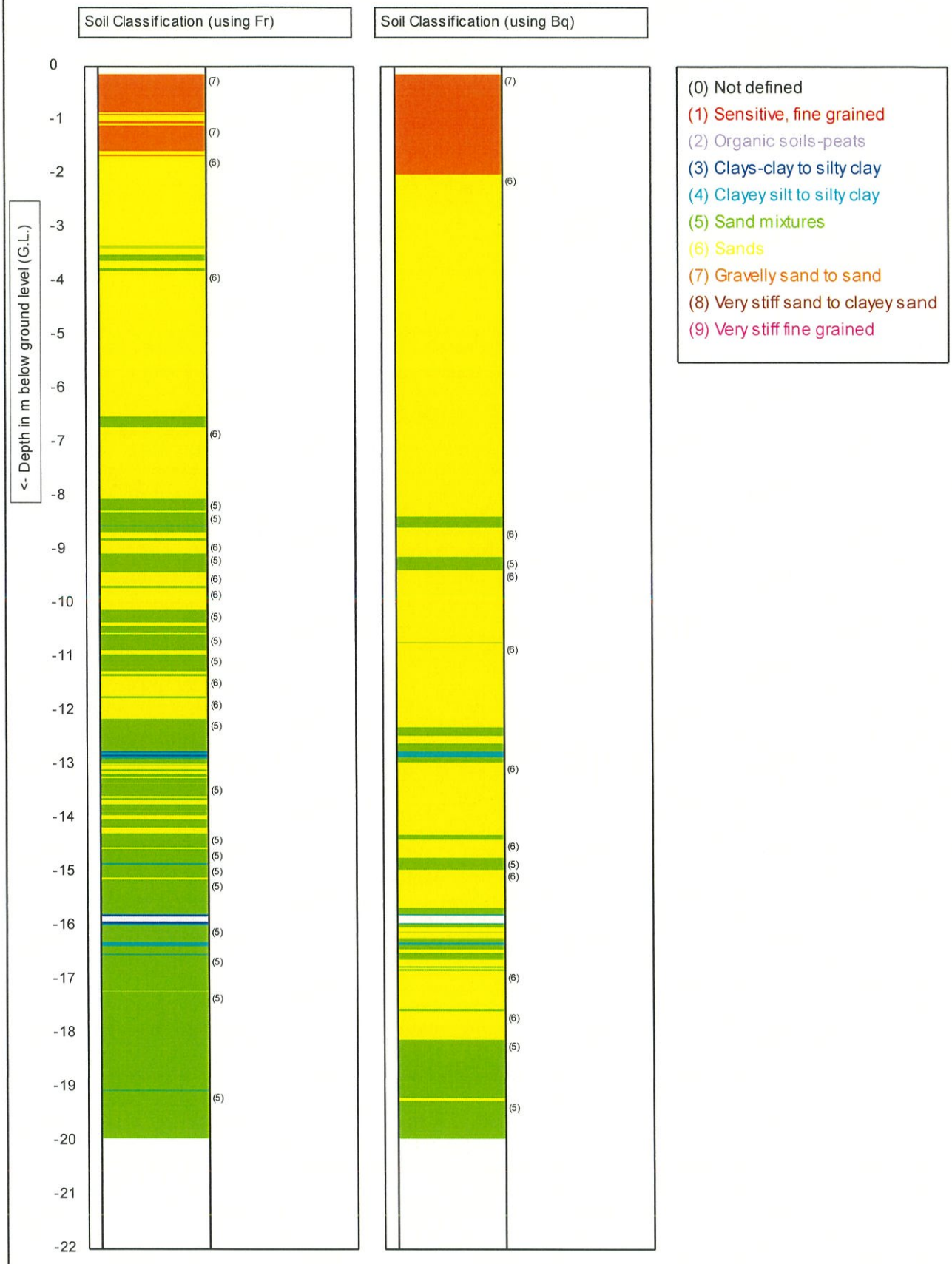
Project: **597 Horahora Rd**

Location: **Piarere (17009)**

Position: **1833265, 5788905 NZTM**

Predrill:	**0.00 m Predrilled**
Date:	**13/05/2022**
Cone no.:	**C10CFIIP.C13236**
Project no.:	**2-68002.00_HA9058**
CPT10 Fig. B-10B	

1.49

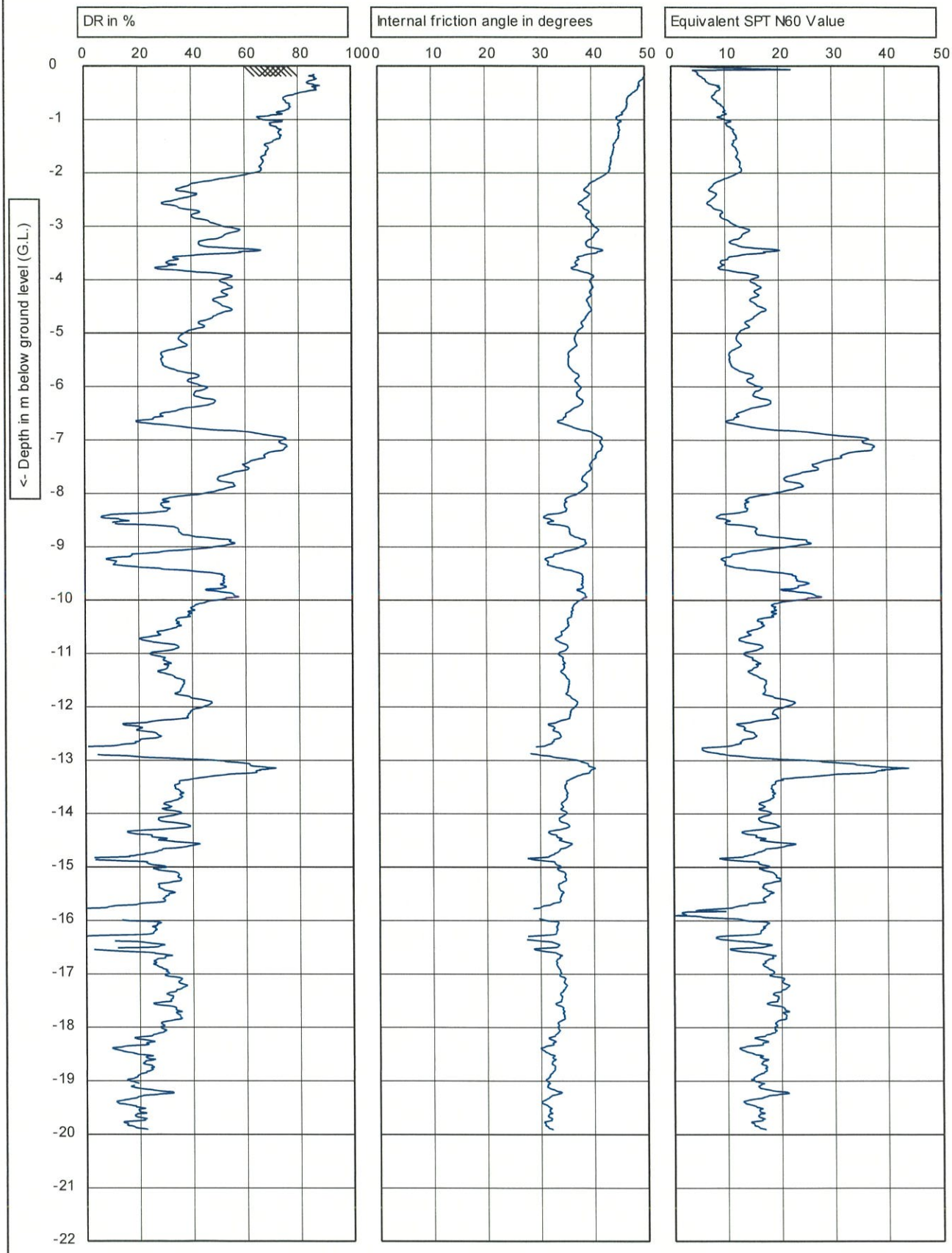


wsp

Graphs on this page are not IANZ accredited

qu2 150 cm² / 10 cm²	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**13/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C13236**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833265, 5788905 NZTM**	CPT10 Fig. B-10C	

1.49



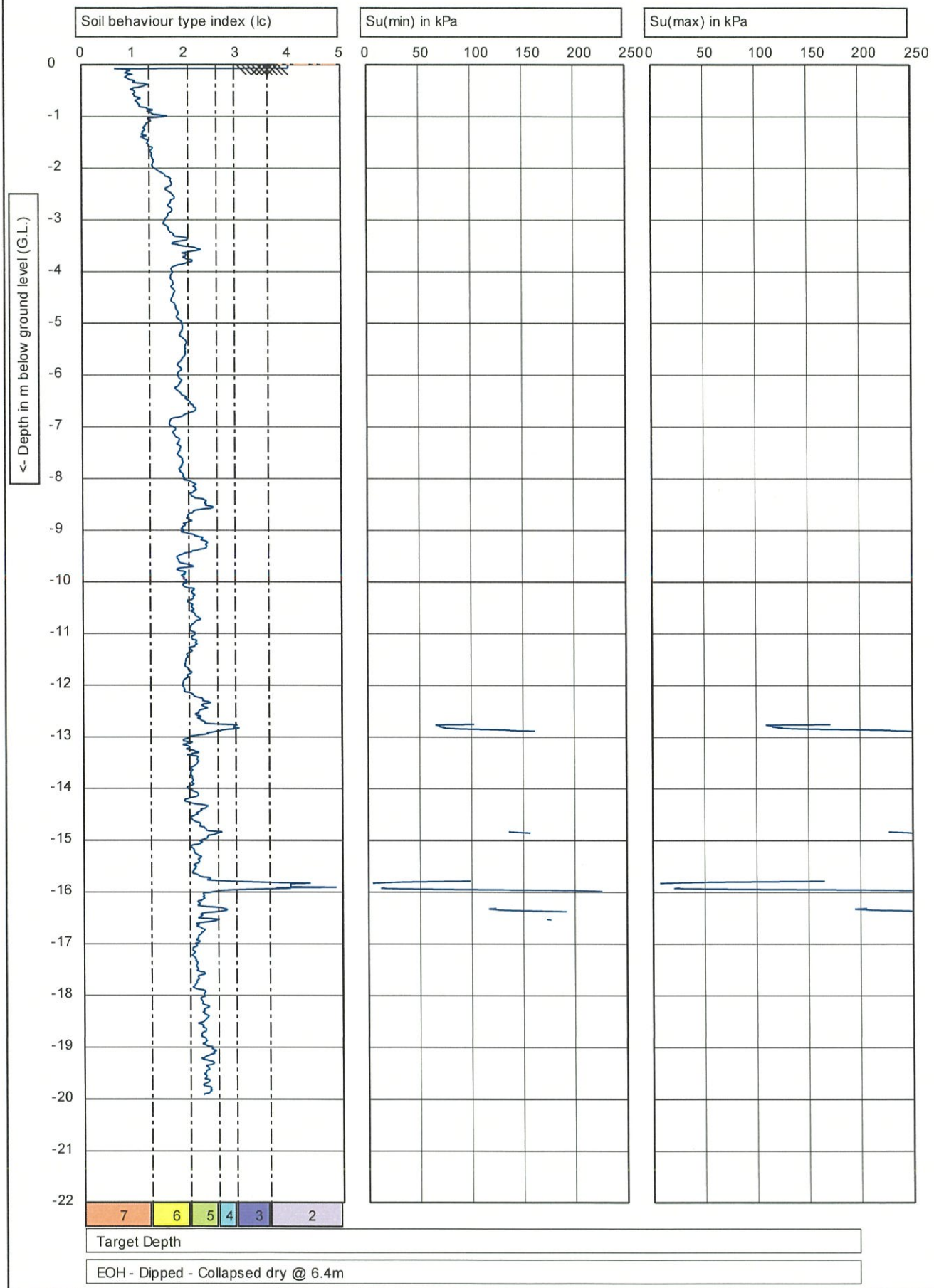
Target Depth

EOH - Dipped - Collapsed dry @ 6.4m

Graphs on this page are not IANZ accredited

	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**13/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C13236**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833265, 5788905 NZTM**	CPT10 Fig. B-10D	

1.49



Graphs on this page are not IANZ accredited

	Test according ASTM D5778:12 & ISO 22476-1:2012	Predrill:	**0.00 m Predrilled**
	G.L.: **0.00 m MSL**	Date:	**13/05/2022**
Project:	**597 Horahora Rd**	Cone no.:	**C10CFIIP.C13236**
Location:	**Piarere (17009)**	Project no.:	**2-68002.00_HA9058**
Position:	**1833265, 5788905 NZTM**	CPT10 Fig. B-10E	

1.49

APPENDIX C

Amended Conditions of Consent

Recommended Conditions:

1. The subdivision and associated land-use activities must be undertaken in general accordance with the following plans approved on XX November 2026 and documents, except where modified by another condition of these consents:

   a. [final scheme plan title, author, drawing number, revision and date];

   b. [the addendum prepared by author, titled, dated;

   c. [approved staging plan title, author, drawing number, revision and date];

   d. [approved Landscape Master Plan title, author, drawing number, revision and date];

   e. [approved Landscape and Visual Assessment title, author and date];

   f. [approved Ecological Management Plan title, author, revision and date];

   g. [approved civil-engineering plans and reports, identified individually by title, author, reference, revision and date];

   h. [approved transportation assessment and subsequent responses, identified individually by title, author and date]; and

   i. [any other approved documents].

2. Where there is any inconsistency between an approved plan or document and a condition of these consents, the condition must prevail.

3. The consent holder shall ensure that the Land Transfer Plan submitted for certification under s223 of the Resource Management Act 1991 for each stage is in general accordance with the plans approved under Condition 1(a) and (c).

~~4. The consent holder shall ensure that Lots 203 and 204 are shown on the Land Transfer Plan submitted for s223 certification as road to vest in Council.~~

~~5.~~4. The consent holder shall ensure that the Land Transfer Plan submitted for s223 certification for each applicable stage of the subdivision is endorsed with the following amalgamation conditions:

   a. Stage 1:

      That Lot 101 hereon (legal access) be held as to 3 undivided one-third shares by the owners of Lots 13, 14 and 15 hereon as tenants in common in the said shares and that individual Records of Title be issued in accordance herewith. (LINZ reference 1997610);

   b. Stage 2:

      That Lot 107 hereon (legal access) be held as to 3 undivided one-third shares by the owners of Lots 63, 64 & 65 as tenants in common in the said shares and that individual Records of Title be issued in accordance herewith.

      That Lot 108 hereon (legal access) be held as to 4 undivided one-fourth shares by the owners of Lots 67, 68, 69 & 70 as tenants in common in the said shares and that individual Records of Title be issued in accordance herewith. (LINZ reference 1997612);

c. Stage 3:

That Lot 102 hereon (legal access) be held as to 3 undivided one-third shares by the owners of Lots 20, 21 & 22 hereon as tenants in common in the said shares and that individual Records of Title be issued in accordance therewith.

That Lot 103 hereon (legal access) be held as to 3 undivided one-third shares by the owners of Lots 32, 34 & 36 hereon as tenants in common in the said shares and that individual Records of Title be issued in accordance therewith. (LINZ reference 1997613).

~~6.~~5. The consent holder shall ensure that the section 224(c) certification application for each stage lists and details how each condition has been met.

Staging

~~7.~~6. The subdivision may be undertaken in three stages, in general accordance with the approved staging plan, subject to the following requirements:

~~a. unless a condition expressly provides otherwise, every condition of this consent applies separately to each stage;~~

~~b.~~a. any requirement that must be satisfied before physical works commence applies before physical works commence within each stage;

~~c.~~b. any requirement that must be satisfied before certification under section 223 or section 224(c) of the Resource Management Act 1991 applies before that certification is sought for each stage;

~~d.~~c. each stage must be designed, constructed and serviced so that it can operate independently until the subsequent stages are completed;

~~e. all works, services, mitigation, certifications, consent notices, covenants and other legal instruments required for a stage must be completed or secured before section 224(c) certification is sought for that stage;~~

~~f.~~d. physical works associated with a subsequent stage must not commence until Council has issued the 224(c) certificate for the preceding stage; and

~~g. any ongoing monitoring, maintenance, replacement or protection obligation continues to apply notwithstanding the completion of that stage or commencement of a subsequent stage.~~

Lapse

~~8.~~7. Pursuant to section 125 of the Resource Management Act 1991, these consents will lapse ~~five~~ 10 years after the date on which they commence unless:

a. the relevant consent has been given effect to before that date; or

b. Council grants an extension under section 125 of the Resource Management Act 1991.

DRAFT

Stage One

Engineering plans

~~9.~~8. No less than 20 working days before physical works commence ~~within each stage~~for stage one, the consent holder must submit detailed engineering plans for that stage to Council for certification.

~~10.~~9. The engineering plans must be prepared by a suitably qualified and experienced professional or professionals with experience relevant to the works being designed.

~~11.~~10. The purpose of the engineering-plan certification is to confirm that the detailed design for ~~the relevant stage~~stage one is consistent with:

a. the approved plans and documents;

b. the applicable requirements of the Regional Infrastructure Technical Specifications;

c. the certified subdivision-wide Stormwater Management Plan;

d. the performance standards and other requirements of these conditions; and;

e. any departure from the Regional Infrastructure Technical Specifications or approved plans expressly authorised by these consents.

~~12.~~11. The engineering plans must, where relevant to the stage, include:

~~a. the 25 m building restriction line measured from the top of the bank of the Waikato River;~~

~~b. the building setback determined by a 1V:2H projection from the toe of any slope exceeding 25 degrees;~~

~~c. the boundaries of all approved building areas, primary and reserve wastewater disposal areas, ecological protection areas and bat habitat setbacks;~~

~~d.~~a. earthworks, proposed finished contours and final landforms;

~~e. erosion and sediment control measures;~~

~~f.~~b. the design of ~~roads, intersections,~~ rights of way and vehicle crossings, including carriageway widths and~~,~~ gradients~~; and sight distances;~~

~~g.~~c. stormwater collection, conveyance, treatment, detention, soakage and discharge, including roadside swales, culverts, discharge points, overland-flow paths and erosion protection captured in an updated stormwater management plan;

~~h.~~d. how the stormwater design for the stage implements the certified Stormwater Management Plan;

~~i.~~e. electricity and telecommunications infrastructure;

~~j.~~f. the existing Waikato River Trail where it is affected by roads, intersections, vehicle crossings, drainage works or sightline improvements, including any temporary diversion, local regrading or local realignment required during construction;

~~k.~~g. utility, access, drainage and maintenance easements;

~~l.~~h. the ownership and maintenance responsibility for each infrastructure asset;

DRAFT

and

~~m.~~i. connections to infrastructure established or to be established through another stage.

~~13.~~12. Any material change to a certified engineering plan must be submitted to Council for further certification before the change is implemented. Council may certify the change only where it remains consistent with the matters identified in conditions 11 and 12.

~~14.~~13. Physical works associated with a stage must not commence until Council has certified in writing that the engineering plans ~~for that stage~~ satisfy conditions 9–12.

Construction management

~~15.~~14. No less than 20 working days before physical works commence ~~within each stage~~, the consent holder must submit a Construction Management Plan for stage one~~that stage~~ to Council for certification.

~~16.~~15. The purpose of the Construction Management Plan is to set out the procedures and measures that will be implemented to avoid or minimise adverse construction effects on neighbouring properties, the road network, the Waikato River, ecological areas, public infrastructure and public access.

~~17.~~16. The Construction Management Plan must include:~~:~~

a. the name and contact details of the contractor and site manager;

b. the anticipated construction programme;

c. construction hours;

d. site access and construction-traffic arrangements;

e. contractor parking and loading areas;

f. the location of construction compounds, material-storage areas, equipment-storage areas and stockpiles, together with any screening measures;

g. dust, noise and vibration controls;

h. erosion and sediment controls;

i. temporary stormwater-management measures;

j. earthworks and stockpile management;

k. measures applying near the Waikato River, gullies and ecological areas;

l. measures for maintaining safe public use of the existing Waikato River Trail, including any temporary closure, diversion or local alteration required during construction;

m. procedures for receiving, recording and responding complaints;

n. procedures for preventing damage to public infrastructure; and

o. procedures for restoring any public or private property affected by the works.

p. Accidental discovery protocol included as mentioned below in condition 18.

~~o.~~q. Requirements of the Ecological Management Plan such as accidental discovery of lizards protocol and removal of any potential roosting trees.

DRAFT

Accidental discovery

17. If any archaeological material, kōiwi or taonga is discovered during earthworks:

    a. all works within 20 m of the discovery must cease immediately;

    b. the discovery area must be secured against further disturbance;

    c. Council, Heritage New Zealand Pouhere Taonga, Raukawa Charitable Trust and Ngāti Koroki Kahukura must be notified as soon as practicable;

    d. the New Zealand Police must also be notified if the discovery includes kōiwi;the discovery must be managed in accordance with the requirements of the Heritage New Zealand Pouhere Taonga Act 2014 and any applicable tikanga agreed with tangata whenua; and

    e. works must not recommence within the affected area until any necessary statutory authority has been obtained and Council has received written confirmation that the applicable archaeological and cultural requirements have been addressed.

18. Council may certify a Construction Management Plan only where it demonstrates that the purpose in condition 16 will be achieved and includes the information required by condition 17.

19. Physical works within a stage must not commence until Council has certified the Construction Management Plan for that stage in writing.

20. All construction activities must be undertaken in accordance with the certified Construction Management Plan. A copy of the certified plan must be held on site and made available to Council on request.

Earthworks and geotechnical requirements

21. Earthworks must be undertaken in general accordance with the approved earthworks plans (approved as part of conditions 11 and 12), ~~the certified engineering plans~~ and the approved geotechnical recommendations.

22. Earthworks must be supervised by a suitably qualified and experienced geotechnical professional to the extent required by the approved geotechnical recommendations.

23. Any uncontrolled or unsuitable fill encountered during construction must be removed or remediated in accordance with the written recommendations of the supervising geotechnical professional.

24. Fill supporting a building area, road or other structure must be placed and compacted as engineered fill and certified by a suitably qualified and experienced geotechnical professional.

~~25. Earthworks must be undertaken so that runoff, sediment, dust or debris does not:~~

    ~~a. cause damage or nuisance beyond the area of works; or~~

    ~~b. enter the Waikato River, a wetland, gully or other waterbody.~~

~~26.~~25. ~~Before earthworks commence within each stage, the erosion, sediment and dust control measures required by the certified Construction Management Plan must be~~

~~installed and made available for Council inspection.~~

~~27. Erosion and sediment control measures must remain in place and be maintained in effective operating condition until the affected land has been stabilised against erosion.~~

~~28. The consent holder shall ensure that the following areas as confirmed by a suitably qualified and experienced geotechnical professional are identified using a unique identifier on the Land Transfer Plan submitted for s223 certification:~~

~~a) the 25 m building restriction line measured from the top of the bank of the Waikato River;~~

~~b) for any lot containing slopes steeper than 25 degrees, the building setback determined by a 1V:2H projection from the toe of the relevant slope;~~

~~c) the relationship of those restrictions to the proposed lot boundaries and approved building areas;~~

~~d) any additional geotechnical restriction applying to an approved building area; and~~

~~e) the building restriction areas described in (a) and (b), and any additional area in which building is prohibited under (d), must be accurately shown and uniquely identified on the Land Transfer Plan submitted for certification under section 223.~~

~~29. No approved building area may be located within a building restriction or geotechnical setback identified under condition 28.~~

~~30.~~26. ~~Before certification under section 224(c) of the Resource Management Act 1991 is sought for each stage, the~~The consent holder must provide a geotechnical-completion report prepared by a suitably qualified and experienced geotechnical professional confirming:

a. the nature, extent and depth of fill placed;

b. the compaction standards achieved;

c. the suitability of each approved building area;

d. any limitations applying to future buildings or foundations;

e. that the 25 m building restriction line and the setback determined by a 1V:2H projection from the toe of slopes exceeding 25 degrees have been accurately identified;

f. that the identified building restrictions and slope setbacks remain appropriate following completion of the earthworks; and

g. any geotechnical limitation or recommendation that must be secured through a consent notice.

~~g.~~h. Any restrictions that need to be shown on the s223 LT plan.

Roads and access

~~31.~~27. The ~~roads to vest in Council, intersections~~, rights of way and vehicle crossings must be designed and constructed in accordance with:

a. the approved scheme plans;

DRAFT

b. the certified engineering plans;

c. the applicable Regional Infrastructure Technical Specifications; and

d. the transportation mitigation identified in Council's transportation-review documents dated 1 July 2025 and 14 August 2025.

~~32. The detailed engineering plans for each intersection with Horahora Road must:~~

~~a. provide basic left-turn and right-turn widening as per Austroads;~~

~~b. be prepared in accordance with Parts 4 and 4A of the Austroads Guide to Road Design;~~

~~c. demonstrate that all widening, entry and exit tapers, drainage infrastructure, roadside regrading and local alterations to the existing Waikato River Trail can be accommodated within the road reserve, unless an alternative legal arrangement has been secured;~~

~~d. maintain effective roadside drainage, including through culverts or equivalent measures where required; and~~

~~e. provide for the safe regrading, local realignment and reinstatement of the existing Waikato River Trail where it is affected by the intersection works.~~

~~33. Before section 224(c) certification is sought for the first stage relying on an intersection with Horahora Road, the consent holder must provide certification from a suitably qualified and experienced transportation engineer confirming that the intersection has been constructed in accordance with the certified engineering plans and condition 32.~~

~~34.~~28. Each vehicle crossing must:

a. be located generally in accordance with the approved scheme and transportation plans;

b. be formed in accordance with the applicable Regional Infrastructure Technical Specifications rural-residential vehicle-crossing standard;

c. have a gradient no steeper than 1 vertical in 12 horizontal within the vehicle-crossing formation;

d. be at or above the level of Horahora Road for at least the first 6 m measured from the edge of the road carriageway, unless an alternative design is certified under conditions 9-12 as providing the required sight distance;

e. provide the sight distance required by condition 35;

f. be designed so that stormwater does not discharge onto Horahora Road; and

g. provide for the safe crossing and continuity of the Waikato River Trail.

~~35.~~29. For the purpose of detailed ~~intersection and~~ vehicle-crossing design, sight distance must be assessed using the legal speed limit of the road along the development frontage and must provide:

a. at least 160 m sight distance at each vehicle crossing, measured in accordance with RTS 6~~; and~~.

~~b. at least 248 m sight distance at each subdivision intersection, measured in accordance with the applicable Austroads requirements.~~

~~36.~~30. The sight distance available at every ~~intersection and~~ vehicle crossing created within stage one ~~a stage~~ must be demonstrated through the engineering-plan certification required by conditions 9-12. The assessment must take account of:

a. the final intersection or vehicle-crossing location and level;

b. the driver-eye position prescribed by RTS 6;

c. the final road and vehicle-crossing gradients;

d. roadside vegetation;

e. roadside berms and embankments; and

f. the alignment and level of the Waikato River Trail.

~~37.~~31. Where the required sight distance cannot be conclusively demonstrated before construction, it must be verified on site following formation of the ~~intersection or~~ vehicle crossing. Before section 224(c) certification is sought for stage one ~~the relevant stage~~, the consent holder must provide certification from a suitably qualified and experienced transportation engineer confirming that the sight distance required by condition 3~~25~~ has been achieved.

~~38.~~32. Where excavation or regrading of a roadside berm or embankment is necessary to provide the required sight distance or intersection widening, the consent holder must:

a. maintain effective roadside drainage;

b. Where the works required ~~by condition 39~~ affect the Waikato River Trail, the affected section of the trail must be safely realigned, regraded and reinstated in accordance with the certified engineering plans before the shared access is brought into use.

~~b. safely regrade or locally realign the existing Waikato River Trail where necessary;~~

c. reinstate the affected section of the trail in accordance with the certified engineering plans and to a standard consistent with the adjoining trail; and

d. before section 224(c) certification is sought ~~for the relevant stage,~~ provide certification from a suitably qualified and experienced engineer confirming that the drainage and trail-reinstatement works have been completed in accordance with the certified engineering plans.

~~**Access serving Lots 1 and 2**~~

~~39. Before section 224(c) certification is sought for the stage containing Lots 1 and 2, the roadside embankment north of the shared access serving those lots must be cut down and regraded to provide the sight distance shown on the approved transportation plans.~~

~~40.1. Where the works required by condition 39 affect the Waikato River Trail, the affected section of the trail must be safely realigned, regraded and reinstated in accordance with the certified engineering plans before the shared access is brought into use.~~

Access serving Lots 13–15

~~41.~~33. The shared access serving Lots 13–15 must:

a. be located ~~approximately 35 m north of the location originally assessed,~~ as shown on the approved scheme and transportation plans;

b. include the removal of vegetation on the western side of the curve where it intrudes into the required sight envelope;

c. provide a sight envelope extending from the outside edge of the Horahora Road carriageway to a point 2 m behind the driver-eye position at the shared access;

d. maintain the sight envelope free of buildings, structures and vegetation that would obstruct visibility; and

e. provide headlight screening no more than 1 m high, located close to the eastern edge of the access carriageway and extending to the boundary with Lot 15, or for such other distance shown on the approved transportation plans.

~~42. Before section 224(c) certification is sought for the stage containing Lots 13–15:~~

~~a. the sight envelope works, vegetation removal and headlight screening required by condition 41 must be completed;~~

~~b.~~f. a suitably qualified and experienced transportation engineer must certify that the completed works provide the visibility and headlight mitigation shown on the approved transportation plans; and

g. No gate may be installed across the entrance of a shared right of way where it connects with Horahora Road.

h. Where a lot boundary is less than 8 m from the edge of the Horahora Road carriageway, any gate providing vehicle access from Horahora Road must be recessed at least 8 m from the edge of the carriageway.

~~c.~~i. ~~a consent notice must be prepared in registrable form against each lot containing or relying on the sight envelope or headlight screening, requiring those measures to be retained and maintained on an ongoing basis~~.

Rights of way and gates

~~43.~~34. ~~All shared~~The right~~s~~ of way must be designed and constructed in accordance with the certified engineering plans and the applicable Regional Infrastructure Technical Specifications and must meet the following minimum standards:

~~a. where serving one residential lot, a formed carriageway width of 4.5 m;~~

~~b.~~a. where serving between two and six residential lots, a formed carriageway width of 6 m;

~~c. Lot 104 may have a minimum legal width of 6 m where it serves only Lots 43 and 47; and~~

~~d.~~b. ~~all other shared rights of way must have a minimum legal width of 7 m.~~No gate may be installed across the entrance of a shared right of way where it connects with Horahora Road.

~~44.~~35. Where a lot boundary is less than 8 m from the edge of the Horahora Road carriageway, any gate providing vehicle access from Horahora Road must be recessed at least 8 m from the edge of the carriageway.

~~45.~~1. ~~No gate may be installed across the entrance of a shared right of way where it~~

~~connects with Horahora Road.~~

Horahora Road curve-safety improvements

~~46.~~36. ~~Before section 224(c) certification is sought for the first residential stage, t~~The consent holder must complete the following safety improvements to the reverse curves adjoining the site:

a. install or reinstate edge-marker posts at the spacing required by the Traffic Control Devices Manual, including at approximately 15 m centres through the reverse curves where applicable;

b. install white raised reflective pavement markers at 20 m centres along the centreline and at 10 m centres along the solid centreline through the reverse curves;

c. install red raised reflective pavement markers at 10 m centres along the left-hand edge lines through the reverse curves;

d. install compliant advance curve-warning and advisory-speed signage;

e. install four-bar chevron sight boards on both approaches to the reverse curves; and

f. confirm that the existing chevron curve-indicator signs are located in accordance with the Traffic Control Devices Manual and relocate any non-compliant sign.

Waikato River Trail

~~47.~~37. Safe and continuous public use of the Waikato River Trail must be maintained throughout construction, except during a temporary closure or diversion undertaken in accordance with ~~condition 48.~~the below condition.

~~48.~~38. Before temporarily closing or diverting any part of the Waikato River Trail, the consent holder must:

a. ~~obtain the prior written agreement of~~notify the Council's trail manager;

b. provide a safe and clearly marked temporary route, where practicable;

c. install appropriate warning and directional signage;

d. provide barriers or other public-safety measures appropriate to the nature of the works; and

e. notify trail users through the method and within the timeframe agreed with Council's trail manager.

~~49.~~39. Any part of the Waikato River Trail damaged ~~or~~, disturbed or relocated by construction must be:

a. safely regraded or locally realigned where necessary to accommodate an approved intersection, vehicle crossing, roadside-drainage work or sightline improvement;

b. reinstated in accordance with the certified engineering plans;

c. reinstated to a formation width, surface and standard consistent with the adjoining trail; and

DRAFT

~~d. available for safe public use before section 224(c) certification is sought for the relevant stage.~~

Stormwater

~~50. Before or at the same time as the detailed engineering plans for the first stage are submitted under condition 9, the consent holder must submit an updated subdivision-wide Stormwater Management Plan to Council for certification.~~

~~51.~~40. The purpose of the Stormwater Management Plan is to:

a. identify the stormwater infrastructure and treatment measures required to service the subdivision;

b. ensure that stormwater runoff is collected, conveyed, treated and discharged in accordance with the approved stormwater design;

c. protect the Waikato River, gullies, wetlands and other receiving environments from scour, erosion, sediment and contaminants; and

d. establish clear and enforceable requirements for the operation, inspection, maintenance, repair and replacement of all private and communal stormwater infrastructure.

~~52.~~41. The Stormwater Management Plan must be prepared by a suitably qualified and experienced stormwater professional and submitted as part of the engineering design and must include:

a. plans identifying all communal and on-lot stormwater infrastructure;

b. the stormwater collection, conveyance, treatment, detention, soakage and discharge measures applying to roads, accessways, common areas and residential lots;

c. the design and performance requirements for roadside swales, culverts, treatment devices, detention and soakage devices, discharge points and overland-flow paths;

d. erosion and scour protection at discharge points;

e. the stormwater-treatment measures required before discharge;

f. the ownership and maintenance responsibility for each stormwater asset;

g. the inspection, servicing, maintenance, repair and replacement requirements for each type of stormwater asset;

h. the required frequency of inspections and maintenance;

i. the allocation of maintenance, repair and replacement costs for any stormwater asset serving more than one lot;

j. any access arrangements required to inspect, maintain, repair or replace communal stormwater infrastructure;

k. ~~t~~he records that must be retained to demonstrate inspection and maintenance;

l. procedures for responding to blockages, failures, erosion, flooding or other stormwater-related incidents; and

~~m.~~ the ongoing obligations to be imposed on the owners of the residential lots

DRAFT

through consent notices.

~~53. Council may certify the Stormwater Management Plan only where it demonstrates consistency with:~~

~~a. the approved stormwater design;~~

~~b.~~m. the applicable requirements of the Regional Infrastructure Technical Specifications;

~~c.~~n. ~~the conditions of these consents;~~

~~d.~~o. any Waikato Regional Council consent held in relation to the land, or Waikato Regional Council Guideline for stormwater~~; and~~.

~~e. the stormwater treatment, detention, soakage and discharge outcomes relied upon in the application and decision.~~

~~54. The detailed engineering plans for the first stage must not be certified until Council has certified the Stormwater Management Plan. The stormwater system for each stage must subsequently be designed and constructed in accordance with:~~

~~a. the certified Stormwater Management Plan;~~

~~b. the certified engineering plans; and~~

~~c. the conditions of these consents.~~

~~55.~~42. Any material amendment to the certified Stormwater Management Plan must be submitted to Council for further certification before it is implemented. Council may certify an amendment only where it achieves the purpose in condition ~~51~~42 and remains consistent with the matters identified in condition 43~~53~~.

~~56.~~43. ~~Before section 224(c) certification is sought for each stage,~~T ~~t~~he consent holder must provide Council with:

a. as-built plans identifying all stormwater infrastructure established within stage one~~that stage~~;

b. certification from a suitably qualified and experienced stormwater professional confirming that the stormwater system has been constructed in accordance with the certified engineering plans and Stormwater Management Plan;

~~c. confirmation of the ownership and ongoing maintenance responsibility for every stormwater asset established within that stage; and~~

~~d. final version of the Stormwater Management Plan incorporating the as-built stormwater system for that stage.~~

~~57. Before section 224(c) certification is sought for each stage, the consent holder must prepare in registrable form a consent notice under section 221 of the Resource Management Act 1991 against every residential title created by that stage.~~

~~58. The consent notice required by condition 57 must:~~

~~a. identify the applicable Stormwater Management Plan by title, author, reference, revision and date;~~

~~b. identify the stormwater assets located on or serving the lot, state who owns each asset, and specify the lot owner's responsibilities for any shared asset, including access, inspection, maintenance, repair, replacement and costs~~

require;

c. require the owner to inspect, operate, maintain, repair and replace all private stormwater devices located within the lot in accordance with the Stormwater Management Plan;

d. require the owner to comply with the responsibilities allocated to the lot for any communal stormwater infrastructure serving that lot;

e. require the owner to meet the lot's allocated share of the reasonable inspection, maintenance, repair and replacement costs for any communal stormwater infrastructure;

f. prohibit any building, structure, earthwork, planting or storage that would obstruct stormwater infrastructure, prevent access for maintenance or impede an identified overland flow path; and

g. prohibit the modification, removal or obstruction of a stormwater device or overland flow path except in accordance with a design prepared or certified by a suitably qualified and experienced stormwater professional and any required statutory authorisation.

59.44. Where the certified Stormwater Management Plan identifies that stormwater infrastructure serving one lot is located on another lot, or that access across another lot is required for its inspection, operation, maintenance, repair or replacement, the consent holder must, before section 224(c) certification is sought for the relevant stage, provide registrable private drainage and access easement instruments. The instruments must identify the burdened and benefited land, the stormwater assets and drainage rights, and the rights of entry and maintenance. They must be consistent with the ownership and cost responsibilities in the certified Stormwater Management Plan.

Wastewater

60. Each residential lot must be capable of accommodating an on-site treatment and land disposal system providing, as a minimum, secondary treatment of domestic wastewater.

a. the design and performance of these systems must be compliant with Waikato Regional Council Regional Plan Rule 36.5.7.6 which governs effluent disposal loadings;

b. The disposal areas be planted with water-tolerant vegetation to assist with further treatment and environmental integration;

61. Each residential lot must contain both a primary land disposal area and a reserve land disposal area that:

g. are suitable for the proposed on-site wastewater system;

h. comply with the required setbacks from boundaries, buildings, waterbodies, wetlands and the Waikato River;

i. are located outside any area subject to inundation or geotechnical instability;

j. are located outside any identified overland flow path, ecological protection area or building restriction; and

DRAFT

k. are shown on the certified engineering plans.

62. Before section 224(c) certification is sought for each stage, a suitably qualified and experienced wastewater professional must provide written confirmation that each residential lot created by that stage can accommodate a compliant on-site wastewater treatment and land disposal system within the areas identified under condition 61.

63. The consent holder shall ensure that the s224(c) certification application for each stage is accompanied by a consent notice in a registrable form under section 221 of the Resource Management Act 1991 against every residential title created by that stage recording that:

a. wastewater must be treated through an on-site wastewater system providing, as a minimum, secondary treatment;

b. the wastewater system must be designed by a suitably qualified and experienced wastewater professional;

c. the primary and reserve land disposal areas shown on the certified engineering plans must be retained and kept free of buildings, accessways and impermeable surfaces; and

d. where the wastewater discharge does not comply with the applicable permitted activity requirements, the necessary regional resource consent must be obtained before the system is installed or operated.

Water

64. Before section 224(c) certification is sought for each stage, the consent holder must prepare in registrable form a consent notice under section 221 of the RMA against every residential title created by that stage. The consent notice must require the owner, before occupying a dwelling on the lot, to provide:

a. a potable water supply and storage of sufficient quality and capacity for the residential use; and

b. firefighting water storage and access in accordance with SNZ PAS 4509:2008, New Zealand Fire Service Firefighting Water Supplies Code of Practice.

The design of these facilities must be provided with the building consent application, and the facilities must be installed before the dwelling is occupied.

Electricity and telecommunications

65.45. The consent holder must provide an electricity power connection to the boundary of each residential lot created by stage one that stage. Written confirmation from the network utility provider that a connection is completed to their satisfaction shall be submitted to Council prior to section 224(c) RMA certification

66.46. That either:

a. The consent holder must provide evidence to prior to 224c that each residential lot created in stage one the relevant stage, as shown on the approved scheme plan has been provided a wired telecommunications connection, OR

b. The consent holder must ensure that pursuant to section 221 of the Act the following consent notice conditions is imposed on the titles of each residential

lot created in stage onethe relevant stage, as shown on the approved scheme plan stating; "Future owners of a lot to which this consent notice relates are advised that a wired telecommunications connection to the allotment has not been installed at the time of subdivision. Future owners are advised to investigate wired or wireless connections at their own expense."

Landscape mitigation

67.47. No less than 20 working days before physical works commence within each stage, the consent holder must submit a Landscape, Visual Amenity and Mitigation Planting Plan for stage onethat stage to Council for certification.

68.48. TheEach Landscape, Visual Amenity and Mitigation Planting Plan must:

a. be prepared by a suitably qualified and experienced landscape architect;

b. be in general accordance with the approved Landscape Master Plan;

c. integrate the requirements of the certified Ecological Management Plan; and

d. demonstrate how the landscape mitigation required for stage onethe relevant stage will be established, protected and maintained.

69.49. Each Landscape, Visual Amenity and Mitigation Planting Plan must include:

a. the location and extent of vegetation to be retained;

b. the location and extent of proposed planting required prior to s224 certification for stage one;

c. the planting required along the Waikato River frontage, gullies, roads, accessways, ecological restoration areas and external site boundaries;

d. the planting required within or adjoining individual residential lots;

e.c. plant species, numbers, spacing and grades;

f.d. anticipated plant heights at establishment, 10 years after establishment and maturity;

g.e. site preparation, soil, staking, irrigation and mulching requirements;

h.f. planting-season requirements;

i.g. plant-maintenance and replacement requirements;

j.h. pest-plant and animal pest control measures;

k.i. monitoring requirements and measurable performance targets;

l. the location and design of any fencing required to protect planting or retained vegetation; and

m. the person or entity responsible for implementing, monitoring and maintaining each planting area.

70. Council may certify a Landscape, Visual Amenity and Mitigation Planting Plan only where it demonstrates consistency with:

a. the approved Landscape Master Plan;

b.j. be consistent with the approved Landscape and Visual Assessment and master plan, including proposed mitigation;

DRAFT

~~c. the certified Ecological Management Plan;~~

~~d. the conditions of these consents; and~~

~~e. the landscape and visual mitigation relied upon in the application and decision.~~

~~71.~~50. All landscape planting required ~~for each stage~~ prior to s224 must ~~must~~ be completed before section 224(c) certification is sought for that stage, unless:

a. planting during that period would be inconsistent with the planting season specified in the certified Landscape, Visual Amenity and Mitigation Planting Plan;

b. the consent holder has submitted an alternative implementation programme requiring the planting to be completed during the next specified planting season;

c. Council has certified that implementation programme; and

d. the consent holder has provided a bond under section 108(2)(b) of the Resource Management Act 1991 sufficient to cover the reasonable cost of completing and maintaining the deferred planting.

~~72.~~51. Where planting is deferred under the above condition~~condition 71~~:

a. the planting must be completed during the next planting season specified in the certified Landscape, Visual Amenity and Mitigation Planting Plan;

b. a suitably qualified and experienced landscape architect must provide Council with written certification that the planting has been completed in accordance with the certified plan; and

c. the bond must not be released until Council has received the certification required by clause (b).

~~73. All landscape and visual mitigation planting must be maintained for:~~

~~a. a minimum of five years following completion of the planting; and~~

~~b. thereafter until at least 80% canopy cover and the other performance targets specified in the certified Landscape, Visual Amenity and Mitigation Planting Plan have been achieved,~~

~~c. provided that the active maintenance period required by this condition need not exceed 15 years.~~

~~74. During the maintenance period required by condition 73:~~

~~a. dead, diseased, damaged or failed plants must be replaced during the next appropriate planting season;~~

~~b. replacement planting must use the same species or an alternative species specified in the certified Landscape, Visual Amenity and Mitigation Planting Plan;~~

~~c. pest plants and animal pests must be controlled in accordance with the certified plan; and~~

~~d. fences, stakes, guards, irrigation and other measures required to protect the planting must be maintained in effective condition.~~

DRAFT

~~75. At the end of the maintenance period, the consent holder must provide Council with written certification from a suitably qualified and experienced landscape architect confirming that:~~

~~a. the required canopy cover has been achieved;~~

~~b. the other performance targets in the certified Landscape, Visual Amenity and Mitigation Planting Plan have been achieved; and~~

~~c. the planting is established and is likely to remain viable without active establishment maintenance.~~

~~76. Completion of the maintenance period does not authorise the removal or material reduction of planting required as landscape or visual mitigation. That planting must be retained thereafter, except where an individual plant is dead, diseased or presents a demonstrable safety risk, in which case replacement planting must be undertaken during the next appropriate planting season.~~

~~77.~~52. ~~Before approval of the survey plan under section 223 of the Resource Management Act 1991 for each stage, t~~The consent holder must ensure that any landscape or visual mitigation planting areas required ongoing retention within privately owned lots are identified on the survey/LT plan for stage one.~~that stage.~~ The areas shown must be generally consistent with the certified Landscape, Visual Amenity and Mitigation Planting Plan and must be identified in the consent notice to be registered against each affected lot.

~~78. Before section 224(c) certification is sought for each stage the obligations in conditions 73–76, and condition 72 where planting has been deferred under condition 71 must be included, insofar as they apply to the lot concerned, in consent notices registered against the titles containing that planting.~~

Ecology

~~79.~~ Before physical works commence within the first stage, the consent holder must submit a final subdivision-wide Ecological Management Plan to Council for certification~~.~~

~~80.~~53. ~~The Ecological Management Plan must be prepared by a suitably qualified and experienced ecologist and must:~~ which;

a. incorporates the recommendations of Council's ecological reviewer dated 10 August 2026;

~~a.~~

~~b. identify all existing and proposed ecological protection and restoration areas;~~

~~c. identify the bat habitat setbacks applying to existing and proposed bat habitat;~~

~~d. specify the protocols applying to the inspection and removal of potential bat roost trees;~~

~~e.~~b. ~~specify~~ specifies the measures applying to potential lizard habitat such as accidental discovery;

~~f. set out the indigenous restoration and enhancement planting requirements;~~

~~g.~~c. sets out the pest ~~plant and~~ animal pest control programme;

~~h. establish measurable planting, canopy closure, habitat and pest control performance targets;~~

~~i. specify the monitoring and reporting required to demonstrate that the performance targets are being achieved; and~~

~~j.~~d. ~~identify~~ identifies the person or entity responsible for implementing, monitoring and maintaining each ecological protection or restoration area.

~~81.~~54. Council may certify the Ecological Management Plan only where it demonstrates consistency with:

a. the approved ecological assessment and plans;

b. the recommendations of Council's ecological reviewer dated 10 August 2026;

c. the approved Landscape Master Plan;

d. the conditions of these consents; and

e. the ecological mitigation and enhancement relied upon in the ~~application and~~ decision.

~~82.~~55. Physical works must not commence within any stage until Council has certified the Ecological Management Plan in writing.

~~83.~~56. Before physical works commence within each stage, the consent holder must provide Council with written confirmation from a suitably qualified and experienced ecologist that:

a. a. the ecological protection and restoration areas within or adjoining that stage have been clearly marked or fenced;

b. the required bat-habitat setbacks have been identified and clearly marked;

c. contractors have been inducted into the ecological requirements applying to this stage;

d. the pre works ecological inspections and surveys required by the certified Ecological Management Plan have been completed.

~~84. No building, structure, earthwork, accessway, construction compound, storage area or other construction or domestic activity may occur within an ecological protection area or bat habitat setback, except where expressly shown on an approved plan and provided for in the certified Ecological Management Plan.~~

~~85.~~57. A 25 m-wide bat-habitat setback must be illustrated on the LT plan for s223 certification in accordance with the areas shown on the approved scheme plan. ~~maintained around the outer edge of the existing and proposed bat habitat identified on the approved ecological plans and in the certified Ecological Management Plan, including the relevant parts of Areas D and AI and Areas BA, BB and BC.~~

~~86.~~58. ~~Before section 224(c) certification is sought for each stage, all~~All ecological protection and restoration areas located within ~~that stage~~stage one (Area D only) must be legally protected in perpetuity through:

~~a. a registered conservation covenant; and~~

~~b.~~a. a consent notice under section 221 of the Resource Management Act 1991.

~~87.~~59. The legal protection required by the above condition ~~92~~ must:

a. prohibit buildings, ~~structures, earthworks, vegetation clearance, dumping, storage and domestic activities within the protected area, except where expressly authorised by the certified Ecological Management Plan;~~

b. require the indigenous vegetation, restoration planting and habitat values to be retained and protected;

c. require the pest-plant and animal-pest control programme in the certified Ecological Management Plan to be implemented on an ongoing basis;

d. require continued compliance with the applicable monitoring, maintenance and replacement requirements of the certified Ecological Management Plan; and

e. identify the person or entity responsible for those obligations.

~~**Lighting**~~

~~88. Exterior lighting must be designed, located and operated to minimise light spill onto the Waikato River margin, gullies, ecological protection areas and identified bat habitat.~~

~~89. Exterior lighting within or adjoining a bat habitat setback must:~~

~~a. be directed downward;~~

~~b. be shielded away from the Waikato River, gullies and vegetation;~~

~~c. use luminaires with a correlated colour temperature not exceeding 2700 Kelvin;~~

~~d. ensure that artificial light spill does not exceed 0.3 lux at the outer edge of the 25 m bat habitat setback; and~~

~~e. be extinguished when not required for safety or essential access.~~

~~**Accidental discovery**~~

~~90.1. If any archaeological material, kōiwi or taonga is discovered during earthworks:~~

~~a. all works within 20 m of the discovery must cease immediately;~~

~~b.a. the discovery area must be secured against further disturbance;~~

~~c.a. Council, Heritage New Zealand Pouhere Taonga, Raukawa Charitable Trust and Ngāti Koroki Kahukura must be notified as soon as practicable;~~

~~d.a. the New Zealand Police must also be notified if the discovery includes kōiwi;~~

~~e.a. the discovery must be managed in accordance with the requirements of the Heritage New Zealand Pouhere Taonga Act 2014 and any applicable tikanga agreed with tangata whenua; and~~

~~f.a. works must not recommence within the affected area until any necessary statutory authority has been obtained and Council has received written confirmation that the applicable archaeological and cultural requirements have been addressed.~~

Esplanade strip

~~91.~~60. ~~Before section 224(c) certification is sought for each stage, T~~the consent holder must,

in relation to the part of the Waikato River frontage contained within that stage:

a. create a 10 m-wide esplanade strip along the full extent of that frontage in accordance with sections 232 and 233 and Schedule 10 of the RMA and connect it with the boundary of stage 3;

b. identify the location and width of that part of the esplanade strip on the relevant survey plan;

c. submit the proposed esplanade-strip instrument to Council for certification;

d. undertake to register the certified instrument against each Record of Title containing part of the esplanade strip;

~~e. ensure that the esplanade strip established through that stage connects continuously with any adjoining part of the strip previously established or required to be established through another stage;~~

~~f.~~e. ensure that the ~~registered~~ instrument:

i. secures public access along the Waikato River frontage;

ii. binds the registered proprietors of the affected land and their successors in title; and

iii. specifies the applicable rights, restrictions and ongoing landowner responsibilities relating to the use and management of the strip; and

~~g. complete the fencing, planting, weed control, erosion protection and other works within or adjoining that part of the esplanade strip required by the approved plans, certified Landscape, Visual Amenity and Mitigation Planting Plan or certified Ecological Management Plan.~~

Advice note: *These consents do not require the Waikato River Trail to be permanently relocated into the esplanade strip. Any future relocation of the trail by Council would be undertaken separately. Any part of the existing trail disturbed by the subdivision works must be protected, temporarily managed and reinstated in accordance with the applicable conditions of this consent.*

~~**Recreation reserve**~~

~~92. The consent holder shall ensure that Lot 37 is shown on the Land Transfer Plan submitted for s223 certification as Local Purpose Reserve (Recreation) to vest in Council.~~

Easements and legal instruments

~~93.~~61. The consent holder shall ensure that ~~for each stage~~, as part of the s223 certification application, all easements required to provide legal access, services, drainage, ~~sightlines~~ or rights of inspection and maintenance for the lots or infrastructure created by that stage must:

a. be duly granted or reserved;

b. be shown in the memorandum of easements on the relevant survey plan; and

c. ~~be registered against the relevant Records of Title.~~

~~c.~~d. Be prepared at the cost of the consent holder.

~~94. Public infrastructure located within private land must be protected by an easement in gross in favour of Council, except where these conditions expressly provide for the infrastructure to remain privately owned and managed in accordance with a certified management plan and consent notice.~~

~~95. Private infrastructure serving more than one lot must be protected by appropriate easements in favour of every lot relying on that infrastructure. The easements must provide sufficient rights of access for inspection, operation, maintenance, repair and replacement of the infrastructure.~~

~~96. The consent holder must, at its expense:~~

~~a. prepare all easement, covenant and consent notice instruments required by these conditions;~~

~~b. submit the instruments to Council for certification before registration; and~~

~~c. register the certified instruments before section 224(c) certification is issued for the relevant stage.~~

Financial contributions

~~97.~~62. Pursuant to Rule FC-R2(1) and FC-R2(4) of the South Waikato Operative District Plan and section 108(2)(a) of the Resource Management Act 1991, the consent holder shall pay financial contributions ~~totalling~~totaling $6,529.00 per additional allotment (GST inclusive). The consent holder shall pay the applicable contributions for stage one~~each stage~~, prior to the release of the section 224(c) certificate. ~~for that stage.~~

The contribution is made up of $4,632.00 for roading and $1,897.00 for reserves with the total amount payable ~~for each stage and the additional 72 allotments being created shown on the staging plan approved under Condition 1~~ being:

Stage	Additional Allotments Created	Total Contributions Payable per Stage
1	15	$97,935.00
~~**2**~~	~~21~~	~~$137,109.00~~
~~**3**~~	~~36~~	~~$235,044.00~~

Consent notices

~~98.~~ The consent holder shall ensure that pursuant to Section 221 of the Act the following consent notice conditions shall be ~~imposed on~~registered against? the titles of Lots 1 to 15: ~~The consent holder must submit to Council as part of the s224(c) certification application for each stage, and subsequently register under section 221 of the RMA, a consent notice against every residential title created by that stage.~~

~~99. For each balance lot created by Stage 1 or Stage 2, the section 224(c) application must identify any ongoing obligation under these conditions that will apply to that lot after the survey plan for that stage is deposited, including obligations relating to infrastructure, planting or ecological protection. The consent holder must submit the consent notice or other legal instrument required by these conditions to secure that obligation against the balance lot. An obligation that arises only upon~~

DRAFT

commencement or completion of a subsequent stage need not be secured as part of the earlier stage.

a. Condition 104 applies to the following residential lots shown on the approved Cogswell Surveys Limited Scheme Plan, reference 5237, Revision I, dated 18 June 2026:Lots 1–36;

b. Lot 38; and

c. Lots 44–83.

100. Each consent notice must include the requirements of conditions 115-137 that are applicable to the lot concerned, together with:

a. the applicable obligations contained in the certified Stormwater Management Plan;

b. the applicable on-site wastewater requirements;

c. the potable-water and firefighting-water requirements;

d. any landscape, ecological protection, planting, fencing, lighting or pest-control obligations applying to the lot;

e. for each lot containing a building restriction area identified under condition 28, the consent notice must identify that area by reference to its designation on the Land Transfer Plan and prohibit buildings and other structures, other than fencing, within it; the notice must also include any other geotechnical or natural hazard restriction applying to the lot;

f. any reverse sensitivity acknowledgment applying to the lot; and

g. any other ongoing obligation that these conditions expressly require to be secured through a consent notice.

101. Before section 224(c) certification is issued for a stage, the consent holder must provide Council with:

a. copies of all consent notices and land covenants registered in relation to that stage; and

b. updated Records of Title confirming that the instruments have been registered against every title to which they apply.

LAXON FAMILY LAND COVENANT

102. Before section 224(c) certification is sought for the stage containing the relevant riverside residential lots, the consent holder must register a land covenant against each riverside residential title identified on the approved plans as being subject to the Laxon Family covenant.

103. The covenant required by condition 109 must:

a. burden the relevant riverside residential titles;

b. be for the benefit of the land at 104 and 1/104 Finlay Road, Maungatautari, legally described as Lot 1 DP 597929, Record of Title 1158714, and Lot 1 DP 427392, Record of Title 508005, or such updated legal descriptions as apply at the date of registration;

c. be enforceable by the registered proprietors of the benefited land and their

~~successors in title;~~

~~d. incorporate, in materially the same terms as the corresponding consent notices, the applicable building location, building design, colour, reflectivity, landscaping and vegetation retention requirements imposed by these conditions;~~

~~e. provide that those obligations bind the registered proprietors of the burdened titles and their successors in title; and~~

~~104. not be varied, surrendered or extinguished without the prior written agreement of the registered proprietors of the benefited land.Where a proposed variation, surrender or extinguishment of the covenant required by condition 109 would be inconsistent with a condition or consent notice imposed under this consent, the corresponding condition or consent notice requirement must first be varied or cancelled in accordance with the RMA.~~

TAKAPOTO ESTATE ~~LAND COVENANT AND~~ CONSENT NOTICE

a) ~~That T~~the s221 consent notice prepared and submitted with the application (email dated 10 April 2026) be finalised at the approval of Council and an undertaking be provided to Council to confirm it will be registered to the titles to Lots 1 to 15.

~~105. Before section 224(c) certification is sought for a stage, the consent holder must register the land covenant agreed between the applicant and Profile Farms Limited against every residential title created by that stage to which that agreement applies.~~

~~106. The covenant required by condition 112 must:~~

~~a. be in materially the same terms as the covenant agreed between the applicant and Profile Farms Limited and attached to the Profile Farms Limited submission;~~

~~b. identify the relevant Takapoto Estate land, including:~~

~~i. Takapoto North at 43 and 81 Finlay Road, Maungatautari, also referred to as 37 Plantation Road, legally described as Lot 2 DPS 35212, Record of Title SA440/890; and~~

~~ii. Takapoto South at 80 Finlay Road, Maungatautari, legally described as Lot 2 DP 597929, Record of Title 868472;~~

~~c. acknowledge the existing and lawfully established activities and events undertaken at Takapoto Estate and the noise, traffic, lighting, visual and amenity effects that may arise from those activities;~~

~~d. include the agreed restriction relating to complaints concerning lawfully established activities and events at Takapoto Estate;~~

~~e. prohibit the discharge of firearms and setting off of fireworks on the burdened residential lots;~~

~~f. bind the registered proprietors and occupiers of the burdened titles and their successors in title; and~~

~~g. not be varied, surrendered or extinguished without the prior written agreement of Profile Farms Limited or the registered proprietor of the benefited land.~~

DRAFT

~~107. The acknowledgment of Takapoto Estate's existing activities and the prohibition on the discharge of firearms and setting off of fireworks must also be included in the consent notices registered against the residential lots to which those requirements apply.~~

BUILDING USE, LOCATION AND COVERAGE

~~108.~~63. No more than one dwelling may be constructed or used on each residential lot unless specifically provided for in a separate land use consent.~~.~~

~~109.~~64. An accessory building may be established on a residential lot but must not be designed, constructed or used as a separate dwelling, minor residential unit, secondary dwelling or independent residential unit unless specifically provided for in a separate land use consent ~~.~~

~~110.~~65. The combined building footprint of all buildings on a residential lot must not exceed 500m^2.~~:~~

~~a. 500 m^2; or~~

~~111.~~66. ~~10% of the net site area, whichever is the lesser.~~ Every dwelling and accessory building must be located wholly within ~~the approved~~ an 800 m^2 building area ~~shown for the lot on the approved plans~~illustrated at the time of building consent, unless otherwise authorised by a subsequent resource consent.

~~112.~~67. No building or structure, except fencing along a boundary, may be located within:

~~a. the approved 25 m building restriction line measured from the top of the Waikato Riverbank;~~

~~b. the setback defined by a 1 vertical to 2 horizontal projection from the toe of a slope exceeding 25 degrees; or~~

a. any other geotechnical or natural-hazard building restriction area ~~shown on the approved plans.~~as confirmed in the geotechnical completion report.

b. 25m from the edge of the Lake for purposes of the Operating Easement.

c. 25m from the bat habitat setback as shown on the LT plan.

~~c.~~d.

BUILDING DESIGN

~~113.~~68. All buildings must comply with the following requirements:

a. building height must not exceed 6 m above final ground level;

b. roof colours and materials must have a Light Reflectance Value of less than 20%;

c. wall colours and materials must have a Light Reflectance Value of less than 30%;

d. exterior materials must have a recessive appearance and must not be highly reflective; and

e. detached accessory buildings, water tanks and other vertical infrastructure must, where practicable, be located beside or behind the dwelling when viewed from the Waikato River.

~~e.~~f. A lighting design (for exterior lighting only) must be provided at the time of building consent confirming that any lighting emits no more than 0.3 lux

measured 20m from any bat habitat including along the edge of the Lake and in Area 'D' as shown on the LT plan.

~~114. The finished floor level of every dwelling constructed on Lots 1–36, Lot 38 and Lots 44–83 must be no lower than 56.8 m RL in terms of New Zealand Vertical Datum 2016.~~

GEOTECHNICAL ~~CONFIRMATION~~requirements

70 ~~That for~~For subsequent development of Lots 1 to 15 a suitably qualified and experienced engineer will be required to inspect the site and submit to Council for approval, at the time of building consent, the design details on the foundations of the buildings. The design details must reflect the findings of the Geotech completion report submitted and approved as part of the subdivision consent including the relevant geotechnical setback from the top of the bank and the slope.

~~115. Before an application for building consent is lodged for a dwelling or accessory building, a suitably qualified and experienced geotechnical professional must:~~

~~a. confirm that the proposed building location is geotechnically suitable;~~

~~b. confirm that the building is located outside the building restriction areas shown on the approved plans;~~

~~c. identify any site specific earthworks, foundation design or slope stability requirements; and~~

~~d. provide the resulting written assessment and recommendations with the building consent application.~~

ON-LOT LANDSCAPING

71 The owner of each residential lot must establish all on-lot planting shown for that lot in the certified Landscape, Visual Amenity and Mitigation Planting Plan before the principal dwelling is occupied/Code of Compliance is issued (whichever is sooner).

~~116.~~69. The planting required by the condition above~~123~~ must be retained and maintained ~~for the life of the development~~in perpetuity. Any dead, diseased, damaged or failed plant must be replaced during the next appropriate planting season with a plant of the same species or an alternative species specified in the certified Landscape, Visual Amenity and Mitigation Planting Plan.

~~117. Existing vegetation identified for retention on an approved plan or certified management plan must not be removed unless:~~

~~a. the vegetation is dead, diseased or presents a demonstrable risk to people or property;~~

~~b. its removal is supervised or approved by a suitably qualified and experienced arborist, ecologist or landscape architect, as appropriate; and~~

~~c. replacement planting is undertaken in accordance with the applicable certified management plan.~~

STORMWATER

70. For subsequent development of Lots 1 to 15 a suitably qualified and experienced

engineer will be required to inspect the site and submit to Council for approval, at the time of building consent, the design details for the proposed stormwater system.

~~d.~~a. Reason: The purpose of approval is to ensure all stormwater generated from the buildings onsite are disposed of onsite to the 10-year ARI event. All development of a residential lot must comply with the certified Stormwater Management Plan, including the on-lot detention, soakage, conveyance, treatment and discharge measures specified for that lot.

~~118. The owner of each residential lot is responsible for inspecting, operating, maintaining, repairing and, when necessary, replacing every private stormwater device located within or serving the lot, in accordance with the certified Stormwater Management Plan.~~

~~119.~~71. The owners of Lots 14 and 15 shall be aware that Area 'B' and 'C' as shown on the approved LT plan must not have any ~~No~~ buildings or~~,~~ structures, complete any earthworks, planting or other activity that may:

a. obstruct or divert an overland-flow path identified in the certified Stormwater Management Plan;

b. reduce the effectiveness of an approved stormwater device; or

c. prevent reasonable access to a stormwater device for inspection, maintenance, repair or replacement.

~~c.~~ Alter or modify an approved stormwater device

~~No owner or occupier may modify or remove an approved stormwater device or depart from the certified Stormwater Management Plan~~ (unless the change has first been certified by Council in accordance with the stormwater conditions of this consent and any necessary regulatory approvals have been obtained).

WASTEWATER

72. For subsequent development of Lots 1 to 15 a suitably qualified and experienced engineer will be required to inspect the site and submit to Council for approval, at the time of building consent, the design details for the proposed wastewater system. This requires:-

a. a secondary treatment system to be designed and approved;

b. a 30 metre setback from the lake edge as a minimum.

Advice Note: Where an on-site wastewater discharge does not comply with the applicable permitted-activity requirements, the necessary regional consent must be obtained before the system is installed or operated.

~~120. Wastewater generated on a residential lot must be treated and discharged through an on-site wastewater treatment and land disposal system:~~

~~a. designed by a suitably qualified and experienced wastewater professional;~~

~~b. providing at least secondary treatment;~~

~~c. located within the approved primary land-disposal area;~~

~~d. provided with an approved reserve land disposal area; and~~

~~e.~~c. ~~installed and operated in accordance with the designer's requirements and all applicable regional requirements.~~

~~121. No building, structure, accessway, impermeable surface or activity that may compromise wastewater disposal may be established within an approved primary or reserve wastewater disposal area.~~

~~122.~~1. ~~Where an on-site wastewater discharge does not comply with the applicable permitted activity requirements, the necessary regional consent must be obtained before the system is installed or operated.~~

WATER SUPPLY

~~123.~~73. The owner must provide with the building consent for any dwelling, information to demonstrate that the following requirements for water supply are met:

a. a potable-water supply of sufficient quality and capacity for the intended residential use; and

b. a firefighting water supply that meets the requirements of the New Zealand Fire Service Firefighting Water Supplies Code of Practice SNZ PAS 4509:2008 storage and Fire and Emergency New Zealand access that comply with the applicable firefighting-water requirements.

ECOLOGICAL, FENCING AND LIGHTING CONTROLS

~~124.~~74. Current and future owners of Lots 1 to 15 must ~~be aware that there is an approved~~comply with and implement the certified Ecological Management Plan ~~which must be complied with and implemented~~ within the protected ecological areas. All ecological areas must be kept free of ~~No~~ buildings, structures, and earthworks~~, storage area or domestic activity may be established or undertaken within an ecological protection area or bat habitat setback, except where expressly authorised by the certified Ecological Management Plan.~~

~~125.~~75. Any ~~F~~fencing adjoining the Waikato River, an esplanade strip, or gully area must:

a. comprise rural-style post-and-rail, post-and-wire, or post-and-wire-netting fencing;

b. not exceed 1.2 m in height; and

c. not comprise solid panels or close-boarded fencing.

~~126. Exterior lighting on a residential lot must comply with the lighting conditions of this consent, including the applicable restrictions on the direction, shielding, colour temperature, hours of operation and maximum light spill of exterior lighting.~~

76. No domestic cat may be kept or permitted to remain on a residential lot.

RURAL REVERSE SENSITIVITY

~~127.~~77. Each consent notice must advise future owners and occupiers that the residential lot is located within a rural environment in which lawfully established farming and rural-production activities may generate noise, dust, odour, agrichemical spray, vibration, traffic, machinery movements, stock movements and other effects that are characteristic of the rural environment.

RIGHTS OF WAY AND GATES

78. The current and subsequent owners of Lot 101 are aware that: -

a. a gate is not permitted to be installed across the entrance;

b. the sight line envelope must be free of buildings, structures and vegetation that would obstruct visibility; and

c. retain the headlight screening no more than 1 m high, located close to the eastern edge of the access carriageway and extending to the boundary with Lot 15, or for such other distance shown on the approved transportation plans.

~~a. consent notice registered against each residential lot served by a shared right of way must include the requirement in condition 45 that no gate may be installed across the entrance to that of a right of way of way where it connects with Horahora Road.~~

~~128.~~79. ~~That t~~The current and future owners must be aware that there is a sight line envelope demonstrated on the LT plan which must be kept free of any structures (excluding post and rail fencing) or vegetation which are more than 0.5m high.

~~129.~~80. No additional entrances, excluding those formed as part of the subdivision shall be permitted to connect directly to Horahora Road.

DRAFT

Stage 2

Engineering plans

81. No less than 20 working days before physical works commence for stage two, the consent holder must submit detailed engineering plans for that stage to Council for certification.

82. The engineering plans must be prepared by a suitably qualified and experienced professional or professionals with experience relevant to the works being designed.

83. The purpose of the engineering-plan certification is to confirm that the detailed design for stage two is consistent with:

    a. the approved plans and documents;

    b. the applicable requirements of the Regional Infrastructure Technical Specifications;

    c. the certified subdivision-wide Stormwater Management Plan;

    d. the performance standards and other requirements of these conditions; and;

    e. any departure from the Regional Infrastructure Technical Specifications or approved plans expressly authorised by these consents.

84. The engineering plans must, where relevant to the stage, include:

    a. earthworks, proposed finished contours and final landforms;

    b. the design of road intersections, roads to vest. rights of way and vehicle crossings, including carriageway widths and gradients;

    c. stormwater collection, conveyance, treatment, detention, soakage and discharge, including roadside swales, culverts, discharge points, overland-flow paths and erosion protection captured in an updated stormwater management plan;

    d. how the stormwater design for the stage implements the certified Stormwater Management Plan;

    e. electricity and telecommunications infrastructure;

    f. the existing Waikato River Trail where it is affected by roads, intersections, vehicle crossings, drainage works or sightline improvements, including any temporary diversion, local regrading or local realignment required during construction;

    g. utility, access, drainage and maintenance easements;

    h. the ownership and maintenance responsibility for each infrastructure asset; and

    i. connections to infrastructure established or to be established through another stage.

85. Any material change to a certified engineering plan must be submitted to Council for further certification before the change is implemented. Council may certify the change only where it remains consistent with the matters identified in the above conditions.

DRAFT

86. Physical works associated with a stage must not commence until Council has certified in writing that the engineering plans for stage two are approved.

Construction management

87. No less than 20 working days before physical works commence within stage two, the consent holder must submit a Construction Management Plan for that stage to Council for certification.

88. The purpose of the Construction Management Plan is to set out the procedures and measures that will be implemented to avoid or minimise adverse construction effects on neighbouring properties, the road network, the Waikato River, ecological areas, public infrastructure and public access.

89. The Construction Management Plan must include:-

    a. the name and contact details of the contractor and site manager;

    b. the anticipated construction programme;

    c. construction hours;

    d. site access and construction-traffic arrangements;

    e. contractor parking and loading areas;

    f. the location of construction compounds, material-storage areas, equipment-storage areas and stockpiles, together with any screening measures;

    g. dust, noise and vibration controls;

    h. erosion and sediment controls;

    i. temporary stormwater-management measures;

    j. earthworks and stockpile management;

    k. measures applying near the Waikato River, gullies and ecological areas;

    l. measures for maintaining safe public use of the existing Waikato River Trail, including any temporary closure, diversion or local alteration required during construction;

    m. procedures for receiving, recording and responding complaints;

    n. procedures for preventing damage to public infrastructure; and

    o. procedures for restoring any public or private property affected by the works.

    p. Accidental discovery protocol included as mentioned below in condition 18.

    q. Any requirements for the ecological area within 'AH' as shown on the approved subdivision scheme plan including marking the area and protecting it appropriately from construction.

Accidental discovery

90. If any archaeological material, kōiwi or taonga is discovered during earthworks:

    a. all works within 20 m of the discovery must cease immediately;

    b. the discovery area must be secured against further disturbance;

c. Council, Heritage New Zealand Pouhere Taonga, Raukawa Charitable Trust and Ngāti Koroki Kahukura must be notified as soon as practicable;

d. the New Zealand Police must also be notified if the discovery includes kōiwi;the discovery must be managed in accordance with the requirements of the Heritage New Zealand Pouhere Taonga Act 2014 and any applicable tikanga agreed with tangata whenua; and

e. works must not recommence within the affected area until any necessary statutory authority has been obtained and Council has received written confirmation that the applicable archaeological and cultural requirements have been addressed.

91. Council may certify a Construction Management Plan only where it demonstrates that the purpose in condition 16 will be achieved and includes the information required by condition 17.

92. Physical works within a stage must not commence until Council has certified the Construction Management Plan for that stage in writing.

93. All construction activities must be undertaken in accordance with the certified Construction Management Plan. A copy of the certified plan must be held on site and made available to Council on request.

Earthworks and geotechnical requirements

94. Earthworks must be undertaken in general accordance with the approved earthworks plans (approved as part of engineering design above), and the approved geotechnical recommendations.

95. Earthworks must be supervised by a suitably qualified and experienced geotechnical professional to the extent required by the approved geotechnical recommendations.

96. Any uncontrolled or unsuitable fill encountered during construction must be removed or remediated in accordance with the written recommendations of the supervising geotechnical professional.

97. Fill supporting a building area, road or other structure must be placed and compacted as engineered fill and certified by a suitably qualified and experienced geotechnical professional.

98. The consent holder shall ensure that the areas identified in condition 101 below are captured as a consent notice area on the LT Plan submitted for s223.

99. The consent holder must provide a geotechnical-completion report prepared by a suitably qualified and experienced geotechnical professional confirming:

a. the nature, extent and depth of fill placed;

b. the compaction standards achieved;

c. the suitability of each approved building area;

d. any limitations applying to future buildings or foundations;

e. that the 25 m building restriction line and the setback determined by a 1V:2H projection from the toe of slopes exceeding 25 degrees have been accurately identified;

f. that the identified building restrictions and slope setbacks remain appropriate following completion of the earthworks; and

g. any geotechnical limitation or recommendation that must be secured through a consent notice.

Roads and access

100. The roads to vest in Council, intersections, rights of way and vehicle crossings must be designed and constructed in accordance with:

a. the approved scheme plans;

b. the certified engineering plans;

c. the applicable Regional Infrastructure Technical Specifications; and

d. the transportation mitigation identified in Council's transportation-review documents dated 1 July 2025 and 14 August 2025.

101. The detailed engineering plans for each intersection with Horahora Road must:

a. provide basic left-turn and right-turn widening as per Austroads;

b. be prepared in accordance with Parts 4 and 4A of the Austroads Guide to Road Design;

c. demonstrate that all widening, entry and exit tapers, drainage infrastructure, roadside regrading and local alterations to the existing Waikato River Trail can be accommodated within the road reserve, unless an alternative legal arrangement has been secured;

d. maintain effective roadside drainage, including through culverts or equivalent measures where required; and

e. provide for the safe regrading, local realignment and reinstatement of the existing Waikato River Trail where it is affected by the intersection works.

102. The consent holder must provide certification from a suitably qualified and experienced transportation engineer confirming that the intersection has been constructed in accordance with the certified engineering plans and condition XX.

103. Each vehicle crossing must:

a. be located generally in accordance with the approved scheme and transportation plans;

b. be formed in accordance with the applicable Regional Infrastructure Technical Specifications rural-residential vehicle-crossing standard;

c. have a gradient no steeper than 1 vertical in 12 horizontal within the vehicle-crossing formation;

d. be at or above the level of Horahora Road for at least the first 6 m measured from the edge of the road carriageway, unless an alternative design is certified as providing the required sight distance;

e. provide the sight distance required by condition XX;

f. be designed so that stormwater does not discharge onto Horahora Road; and
g. provide for the safe crossing and continuity of the Waikato River Trail.

104. For the purpose of detailed intersection and vehicle-crossing design, sight distance must be assessed using the legal speed limit of the road along the development frontage and must provide:

a. at least 160 m sight distance at each vehicle crossing, measured in accordance with RTS 6; and

b. at least 248m sight distance at each subdivision intersection, measured in accordance with Austroads requirements.

105. The sight distance available at every vehicle intersection and vehicle crossing created within a stage must be demonstrated through the engineering-plan certification required by conditions XX. The assessment must take account of:

a. the final intersection or vehicle-crossing location and level;

b. the driver-eye position prescribed by RTS 6;

c. the final road and vehicle-crossing gradients;

d. roadside vegetation;

e. roadside berms and embankments; and

f. the alignment and level of the Waikato River Trail.

106. Where the required sight distance cannot be conclusively demonstrated before construction, it must be verified on site following formation of the intersection or vehicle crossing. Before section 224(c) certification is sought for the relevant stage, the consent holder must provide certification from a suitably qualified and experienced transportation engineer confirming that the sight distance required by condition XX has been achieved.

107. Where excavation or regrading of a roadside berm or embankment is necessary to provide the required sight distance or intersection widening, the consent holder must:

a. maintain effective roadside drainage;

b. Where the works required by condition XX affect the Waikato River Trail, the affected section of the trail must be safely realigned, regraded and reinstated in accordance with the certified engineering plans before the shared access is brought into use.

c. reinstate the affected section of the trail in accordance with the certified engineering plans and to a standard consistent with the adjoining trail; and

d. before section 224(c) certification is sought for the relevant stage, provide certification from a suitably qualified and experienced engineer confirming that the drainage and trail-reinstatement works have been completed in accordance with the certified engineering plans.

DRAFT

Rights of way and gates

108. All shared rights of way must be designed and constructed in accordance with the certified engineering plans and the applicable Regional Infrastructure Technical Specifications and must meet the following minimum standards:

    a. where serving one residential lot, a formed carriageway width of 4.5 m;

    b. where serving between two and six residential lots, a formed carriageway width of 6 m;

    c. all other shared rights of way must have a minimum legal width of 7 m.

109. Where a lot boundary is less than 8 m from the edge of the Horahora Road carriageway, any gate providing vehicle access from Horahora Road must be recessed at least 8 m from the edge of the carriageway.

Waikato River Trail

110. Safe and continuous public use of the Waikato River Trail must be maintained throughout construction, except during a temporary closure or diversion undertaken in accordance with condition 48.

111. Before temporarily closing or diverting any part of the Waikato River Trail, the consent holder must:

    a. notify the Council's trail manager;

    b. provide a safe and clearly marked temporary route, where practicable;

    c. install appropriate warning and directional signage;

    d. provide barriers or other public-safety measures appropriate to the nature of the works; and

    e. notify trail users through the method and within the timeframe agreed with Council's trail manager.

112. Any part of the Waikato River Trail damaged or disturbed by construction must be:

    a. safely regraded or locally realigned where necessary to accommodate an approved intersection, vehicle crossing, roadside-drainage work or sightline improvement;

    b. reinstated in accordance with the certified engineering plans;

    c. reinstated to a formation width, surface and standard consistent with the adjoining trail; and

Stormwater

113. The purpose of the Stormwater Management Plan is to:

    a. identify the stormwater infrastructure and treatment measures required to service the subdivision;

    b. ensure that stormwater runoff is collected, conveyed, treated and discharged in accordance with the approved stormwater design;

    c. protect the Waikato River, gullies, wetlands and other receiving environments from scour, erosion, sediment and contaminants; and

DRAFT

d. establish clear and enforceable requirements for the operation, inspection, maintenance, repair and replacement of all private and communal stormwater infrastructure.

114. The Stormwater Management Plan must be prepared by a suitably qualified and experienced stormwater professional and submitted as part of the engineering design and must include:

a. plans identifying all communal and on-lot stormwater infrastructure;

b. the stormwater collection, conveyance, treatment, detention, soakage and discharge measures applying to roads, accessways, common areas and residential lots;

c. the design and performance requirements for roadside swales, culverts, treatment devices, detention and soakage devices, discharge points and overland-flow paths;

d. erosion and scour protection at discharge points;

e. the stormwater-treatment measures required before discharge;

f. the ownership and maintenance responsibility for each stormwater asset;

g. the inspection, servicing, maintenance, repair and replacement requirements for each type of stormwater asset;

h. the required frequency of inspections and maintenance;

i. the allocation of maintenance, repair and replacement costs for any stormwater asset serving more than one lot;

j. any access arrangements required to inspect, maintain, repair or replace communal stormwater infrastructure;

k. the records that must be retained to demonstrate inspection and maintenance;

l. procedures for responding to blockages, failures, erosion, flooding or other stormwater-related incidents; and

m. the applicable requirements of the Regional Infrastructure Technical Specifications;

~~o.~~n. any Waikato Regional Council consent held in relation to the land, or Waikato Regional Council Guideline for stormwater; and

115. Any material amendment to the certified Stormwater Management Plan must be submitted to Council for further certification before it is implemented. Council may certify an amendment only where it achieves the purpose in condition XX and remains consistent with the matters identified in condition XX.

116. The consent holder must provide Council with:

a. as-built plans identifying all stormwater infrastructure established within stage two;

b. certification from a suitably qualified and experienced stormwater professional confirming that the stormwater system has been constructed in accordance with the certified engineering plans and Stormwater Management Plan;

c.

Electricity and telecommunications

117. The consent holder must provide an electric power connection to the boundary of each residential lot created by that stage. Written confirmation from the network utility provider that a connection is completed to their satisfaction shall be submitted to Council prior to section 224(c) RMA certification

118. ~~That either~~Either:

a. The consent holder must provide evidence to prior to 224c that each residential lot created in the relevant stage, as shown on the approved scheme plan has been provided a wired telecommunications connection, OR

b. The consent holder must ensure that pursuant to section 221 of the Act the following consent notice conditions is imposed on the titles of each residential lot created in the relevant stage, as shown on the approved scheme plan stating; "Future owners of a lot to which this consent notice relates are advised that a wired telecommunications connection to the allotment has not been installed at the time of subdivision. Future owners are advised to investigate wired or wireless connections at their own expense."

Landscape mitigation

119. No less than 20 working days before physical works commence within stage two, the consent holder must submit a Landscape, Visual Amenity and Mitigation Planting Plan for that stage to Council for certification.

120. The Landscape, Visual Amenity and Mitigation Planting Plan must:

a. be prepared by a suitably qualified and experienced landscape architect;

b. be in general accordance with the approved Landscape Master Plan;

c. integrate the requirements of the certified Ecological Management Plan; and

d. demonstrate how the landscape mitigation required for the relevant stage will be established, protected and maintained.

121. Each Landscape, Visual Amenity and Mitigation Planting Plan must include:

a. the location and extent of vegetation to be retained;

b. the location and extent of proposed planting required prior to s224 certification for that stage;

c. plant species, numbers, spacing and grades;

d. anticipated plant heights at establishment, 10 years after establishment and maturity;

e. site preparation, soil, staking, irrigation and mulching requirements;

f. planting-season requirements;

g. plant-maintenance and replacement requirements;

h. pest-plant control measures;

i. monitoring requirements and measurable performance targets;

j. be consistent with the approved Landscape and Visual Assessment and master

plan, including proposed mitigation;

122. All landscape planting required prior to s224 must be completed before section 224(c) certification is sought for that stage, unless:

a. planting during that period would be inconsistent with the planting season specified in the certified Landscape, Visual Amenity and Mitigation Planting Plan;

b. the consent holder has submitted an alternative implementation programme requiring the planting to be completed during the next specified planting season;

c. Council has certified that implementation programme; and

d. the consent holder has provided a bond under section 108(2)(b) of the Resource Management Act 1991 sufficient to cover the reasonable cost of completing and maintaining the deferred planting.

123. Where planting is deferred under condition ~~71~~122:

a. the planting must be completed during the next planting season specified in the certified Landscape, Visual Amenity and Mitigation Planting Plan;

b. a suitably qualified and experienced landscape architect must provide Council with written certification that the planting has been completed in accordance with the certified plan; and

c. the bond must not be released until Council has received the certification required by clause (b).

124. Before approval of the survey plan under section 223 of the Resource Management Act 1991 for each stage, the consent holder must ensure that any landscape or visual mitigation planting areas required ongoing retention within privately owned lots are identified on the survey/LT plan for that stage. The areas shown must be consistent with the certified Landscape, Visual Amenity and Mitigation Planting Plan and must be identified in the consent notice to be registered against each affected lot.

Ecology

125. All ecological protection and restoration areas located within stage two (Area AH only) must be legally protected in perpetuity through:

a. a consent notice under section 221 of the Resource Management Act 1991;

b. illustrating area AH on the LT plan for s223 approval.

126. Pest plant, animal control and planting must be undertaken within area AH as required in the Ecological Management Plan approved by Council as part of the conditions of this consent. Once completed, a suitably qualified and experienced ecologist must provide certification that these measures are complete.

Esplanade strip

127. The consent holder must, in relation to the part of the Waikato River frontage contained within that stage:

a. create a 10 m-wide esplanade strip along the full extent of that frontage in

accordance with sections 232 and 233 and Schedule 10 of the RMA and connect it with the boundary of stage 3;

b. identify the location and width of that part of the esplanade strip on the relevant survey plan;

c. submit the proposed esplanade-strip instrument to Council for certification;

d. undertake to register the certified instrument against each Record of Title containing part of the esplanade strip;

e. ensure that the instrument:

    a. secures public access along the Waikato River frontage;

    b. binds the registered proprietors of the affected land and their successors in title; and

    c. specifies the applicable rights, restrictions and ongoing landowner responsibilities relating to the use and management of the strip; and

f. complete the fencing, planting, weed control, erosion protection and other works within or adjoining that part of the esplanade strip required by the approved plans, certified Landscape, Visual Amenity and Mitigation Planting Plan or certified Ecological Management Plan.

Advice note: *These consents do not require the Waikato River Trail to be permanently relocated into the esplanade strip. Any future relocation of the trail by Council would be undertaken separately. Any part of the existing trail disturbed by the subdivision works must be protected, temporarily managed and reinstated in accordance with the applicable conditions of this consent.*

Easements and legal instruments

128. The consent holder shall ensure that for each stage, as part of the s223 certification application, all easements required to provide legal access, services, drainage, sightlines or rights of inspection and maintenance for the lots or infrastructure created by that stage must:

    a. be duly granted or reserved;

    b. be shown in the memorandum of easements on the relevant survey plan; and

    c. Be prepared at the cost of the consent holder.

Financial contributions

129. Pursuant to Rule FC-R2(1) and FC-R2(4) of the South Waikato Operative District Plan and section 108(2)(a) of the Resource Management Act 1991, the consent holder shall pay financial contributions totalling $6,529.00 per additional allotment (GST inclusive). The consent holder shall pay the applicable contributions for each stage, prior to the release of the section 224(c) certificate for that stage.

    The contribution is made up of $4,632.00 for roading and $1,897.00 for reserves with the total amount payable for each stage and the additional 72 allotments being created shown on the staging plan approved under Condition 1 being:

Stage	Additional Allotments Created	Total Contributions Payable per Stage
2	21	$137,109.00

Consent notices

The consent holder shall ensure that pursuant to Section 221 of the Act the following consent notice conditions shall be ~~imposed on~~registered against the titles of Lots 63 to 83:

TAKAPOTO ESTATE CONSENT NOTICE

130. ~~That~~ The s221 consent notice prepared and submitted with the application (email dated 10 April 2026) shall be finalised at the approval of Council and an undertaking be provided to confirm it will be registered to the titles to Lots 63 to 83.

BUILDING USE, LOCATION AND COVERAGE

131. No more than one dwelling may be constructed or used on each residential lot unless specifically provided for in a separate land use consent.

132. An accessory building may be established on a residential lot but must not be designed, constructed or used as a separate dwelling, minor residential unit, secondary dwelling or independent residential unit unless specifically provided for in a separate land use consent

133. The combined building footprint of all buildings on a residential lot must not exceed: 500 m²

134. Every dwelling and accessory building must be located wholly within an 800 m² building area illustrated at the time of building consent, unless otherwise authorised by a subsequent resource consent.

135. No building or structure, except fencing along a boundary, may be located within:

    a. any other geotechnical or natural-hazard building restriction area as confirmed in the geotechnical completion report.

    b. 25m from the edge of the Lake for purposes of the Operating Easement.

    c. 25m from the bat habitat setback as shown on the LT plan.

BUILDING DESIGN

136. All buildings must comply with the following requirements:

    a. building height must not exceed 6 m above final ground level;

    b. roof colours and materials must have a Light Reflectance Value of less than 20%;

    c. wall colours and materials must have a Light Reflectance Value of less than 30%;

    d. exterior materials must have a recessive appearance and must not be highly reflective; and

    e. detached accessory buildings, water tanks and other vertical infrastructure must, where practicable, be located beside or behind the dwelling when viewed from the Waikato River.

f. A lighting design (for exterior lighting only) must be provided at the time of building consent confirming that any lighting has no more than 0.3 lux measured 20m from any bat habitat including along the edge of the Lake and in Area 'AH' as shown on the LT plan. This applies to Lots 63 to 66, 68, 70, 72, 74, 76, 78 to 83 only.

GEOTECHNICAL

137. That for subsequent development of Lots 63 to 83 a suitably qualified and experienced engineer will be required to inspect the site and submit to Council for approval, at the time of building consent, the design details on the foundations of the buildings. The design details must reflect the findings of the Geotech completion report submitted and approved as part of the subdivision consent including the relevant geotechnical setback from the top of the bank and the slope.

ON-LOT LANDSCAPING

138. The owner of each residential lot must establish all on-lot planting shown for that lot in the certified Landscape, Visual Amenity and Mitigation Planting Plan before the principal dwelling is occupied/Code of Compliance is issued (whichever is sooner).

139. The planting required by condition ~~XX~~ 138 must be retained and maintained in perpetuity. Any dead, diseased, damaged or failed plant must be replaced during the next appropriate planting season with a plant of the same species or an alternative species specified in the certified Landscape, Visual Amenity and Mitigation Planting Plan.

STORMWATER

140. ~~That~~ For subsequent development of Lots 63 to 83 a suitably qualified and experienced engineer will be required to inspect the site and submit to Council for approval, at the time of building consent, the design details on the proposed stormwater system.

a. Reason: The above condition is required to make sure all stormwater generated from the buildings onsite are disposed of onsite to the 10-year ARI event. All development of a residential lot must comply with the certified Stormwater Management Plan, including the on-lot detention, soakage, conveyance, treatment and discharge measures specified for that lot.

141. ~~That the~~The owners of Lots 65 to 67 shall be aware that Area 'J', 'K', 'L' as shown on the approved LT plan must not have any buildings or structures, complete any earthworks, planting or other activity that may:

a. obstruct or divert an overland-flow path identified in the certified Stormwater Management Plan;

b. reduce the effectiveness of an approved stormwater device; or

c. prevent reasonable access to a stormwater device for inspection, maintenance, repair or replacement.

d. Alter or modify an approved stormwater device (unless the change has first been certified by Council in accordance with the stormwater conditions of this consent and any necessary regulatory approvals have been obtained).

WASTEWATER

142. ~~That~~ For subsequent development of Lots 63 to 83 a suitably qualified and experienced

engineer will be required to inspect the site and submit to Council for approval, at the time of building consent, the design details on the proposed wastewater system. This requires:-

a. A) a secondary treatment system to be designed and approved;

b. B) a 30 metre setback from the lake edge as a minimum.

c. Note: Where an on-site wastewater discharge does not comply with the applicable permitted-activity requirements, the necessary regional consent must be obtained before the system is installed or operated.

WATER SUPPLY

143. The owner must provide, with the building consent for any dwelling, information to demonstrate that the following requirements for water supply are met:

a. a potable-water supply of sufficient quality and capacity for the intended residential use; and

b. firefighting water supply that meets the requirements of the New Zealand Fire Service Firefighting Water Supplies Code of Practice SNZ PAS4509:2008 storage and Fire and Emergency New Zealand access that comply with the applicable firefighting-water requirements.

ECOLOGICAL, FENCING AND LIGHTING CONTROLS

144. ~~That C~~current and future owners of Lots 63 to 66, 68, 70, 72, 74, 76, 78, 79 to 83 to must ~~be aware that~~comply with and implement~~there is an approved~~the certified Ecological Management Plan ~~which must be complied with and implemented~~ within the protected ecological areas. All ecological areas must be kept free of buildings, structures, and earthworks.

145. Fencing adjoining the Waikato River, an esplanade strip, or gully area must:

a. comprise rural-style post-and-rail, post-and-wire, or post-and-wire-netting fencing;

b. not exceed 1.2 m in height; and

c. not comprise solid panels or close-boarded fencing.

146. No domestic cat may be kept or permitted to remain on a residential lot. RURAL REVERSE SENSITIVITY

147. Each consent notice must advise future owners and occupiers that the residential lot is located within a rural environment in which lawfully established farming and rural-production activities may generate noise, dust, odour, agrichemical spray, vibration, traffic, machinery movements, stock movements and other effects that are characteristic of the rural environment.

RIGHTS OF WAY AND GATES

148. The current and subsequent owners of Lot 108 ~~are aware that~~shall not permit a gate ~~is not permitted~~ to be installed across the entrance;

149. ~~That T~~the current and future owners of Lots 65, 66, 77, 81 to 83 must ~~be aware that there is a~~keep the sight line envelope demonstrated on the LT plan ~~which must be kept~~ free of any structures or vegetation which are more than 0.5m high.

DRAFT

150. No additional entrances, excluding those formed as part of the subdivision, shall be permitted to connect directly to Horahora Road.

151. The current and future owners must ~~be aware that there is a~~keep the sight line envelope demonstrated on the LT plan ~~which must be kept~~ free of any structures (excluding post and rail fencing) or vegetation which are more than 0.5m high.

152. No additional entrances, excluding those formed as part of the subdivision shall be permitted to connect directly to Horahora Road.

DRAFT

Stage 3

Engineering plans

153. No less than 20 working days before physical works commence for stage three, the consent holder must submit detailed engineering plans for that stage to Council for certification.

154. The engineering plans must be prepared by a suitably qualified and experienced professional or professionals with experience relevant to the works being designed.

155. The purpose of the engineering plan certification is to confirm that the detailed design for stage three is consistent with:

    a. the approved plans and documents;

    b. the applicable requirements of the Regional Infrastructure Technical Specifications;

    c. the certified subdivision-wide Stormwater Management Plan;

    d. the performance standards and other requirements of these conditions; and;

    e. any departure from the Regional Infrastructure Technical Specifications or approved plans expressly authorised by these consents.

156. The engineering plans must, where relevant to the stage, include:

    a. earthworks, proposed finished contours and final landforms;

    b. the design of road intersections, roads to vest. rights of way and vehicle crossings, including carriageway widths and gradients;

    c. stormwater collection, conveyance, treatment, detention, soakage and discharge, including roadside swales, culverts, discharge points, overland-flow paths and erosion protection captured in an updated stormwater management plan;

    d. how the stormwater design for the stage implements the certified Stormwater Management Plan;

    e. electricity and telecommunications infrastructure;

    f. the existing Waikato River Trail where it is affected by roads, intersections, vehicle crossings, drainage works or sightline improvements, including any temporary diversion, local regrading or local realignment required during construction;

    g. utility, access, drainage and maintenance easements;

    h. the ownership and maintenance responsibility for each infrastructure asset; and

    i. connections to infrastructure established or to be established through another stage.

157. Any material change to a certified engineering plan must be submitted to Council for further certification before the change is implemented. Council may certify the change only where it remains consistent with the matters identified in conditions XX.

158. Physical works associated with a stage must not commence until Council has certified in writing that the engineering plans for that stage satisfy conditions XX.

DRAFT

Construction management

159. No less than 20 working days before physical work commences within stage three the consent holder must submit a Construction Management Plan for that stage to Council for certification.

160. The purpose of the Construction Management Plan is to set out the procedures and measures that will be implemented to avoid or minimise adverse construction effects on neighbouring properties, the road network, the Waikato River, ecological areas, public infrastructure and public access.

161. The Construction Management Plan must include.

    a. the name and contact details of the contractor and site manager;

    b. the anticipated construction programme;

    c. construction hours;

    d. site access and construction-traffic arrangements;

    e. contractor parking and loading areas;

    f. the location of construction compounds, material-storage areas, equipment-storage areas and stockpiles, together with any screening measures;

    g. dust, noise and vibration controls;

    h. erosion and sediment controls;

    i. temporary stormwater-management measures;

    j. earthworks and stockpile management;

    k. measures applying near the Waikato River, gullies and ecological areas;

    l. measures for maintaining safe public use of the existing Waikato River Trail, including any temporary closure, diversion or local alteration required during construction;

    m. procedures for receiving, recording and responding complaints;

    n. procedures for preventing damage to public infrastructure; and

    o. procedures for restoring any public or private property affected by the works.

    p. Accidental discovery protocol included as mentioned below in condition 18.

    q. Any requirements for the ecological areas within 'BA', 'BB', 'BC' as shown on the approved subdivision scheme plan including marking the area and protecting it appropriately from construction.

Accidental discovery

162. If any archaeological material, kōiwi or taonga is discovered during earthworks:

    a. all works within 20 m of the discovery must cease immediately;

    b. the discovery area must be secured against further disturbance;

    c. Council, Heritage New Zealand Pouhere Taonga, Raukawa Charitable Trust and Ngāti Koroki Kahukura must be notified as soon as practicable;

DRAFT

d. the New Zealand Police must also be notified if the discovery includes kōiwi;the discovery must be managed in accordance with the requirements of the Heritage New Zealand Pouhere Taonga Act 2014 and any applicable tikanga agreed with tangata whenua; and

e. works must not recommence within the affected area until any necessary statutory authority has been obtained and Council has received written confirmation that the applicable archaeological and cultural requirements have been addressed.

163. Council may certify a Construction Management Plan only where it demonstrates that the purpose in condition XX will be achieved and includes the information required by condition XX.

164. Physical works within a stage must not commence until Council has certified the Construction Management Plan for that stage in writing.

165. All construction activities must be undertaken in accordance with the certified Construction Management Plan. A copy of the certified plan must be held on site and made available to Council on request.

Earthworks and geotechnical requirements

166. Earthworks must be undertaken in general accordance with the approved earthworks plans (approved as part of condition XX), and the approved geotechnical recommendations.

167. Earthworks must be supervised by a suitably qualified and experienced geotechnical professional to the extent required by the approved geotechnical recommendations.

168. Any uncontrolled or unsuitable fill encountered during construction must be removed or remediated in accordance with the written recommendations of the supervising geotechnical professional.

169. Fill supporting a building area, road or other structure must be placed and compacted as engineered fill and certified by a suitably qualified and experienced geotechnical professional.

170. Earthworks must be undertaken so that runoff, sediment, dust or debris does not:

a. cause damage or nuisance beyond the area of works; or

b. enter the Waikato River, a wetland, gully or other waterbody.

171. The consent holder shall ensure that the areas identified in condition XX below are captured as a consent notice area on the LT Plan submitted for s223.

172. Before certification under section 224(c) of the Resource Management Act 1991 is sought for each stage, the consent holder must provide a geotechnical-completion report prepared by a suitably qualified and experienced geotechnical professional confirming:

a. the nature, extent and depth of fill placed;

b. the compaction standards achieved;

c. the suitability of each approved building area;

d. any limitations applying to future buildings or foundations;

e. that the 25 m building restriction line and the setback determined by a 1V:2H projection from the toe of slopes exceeding 25 degrees have been accurately identified;

f. that the identified building restrictions and slope setbacks remain appropriate following completion of the earthworks; and

g. any geotechnical limitation or recommendation that must be secured through a consent notice.

Roads and access

173. The roads to vest, intersections, rights of way and vehicle crossings must be designed and constructed in accordance with:

a. the approved scheme plans;

b. the certified engineering plans;

c. the applicable Regional Infrastructure Technical Specifications; and

d. the transportation mitigation identified in Council's transportation-review documents dated 1 July 2025 and 14 August 2025.

174. The detailed engineering plans for each intersection with Horahora Road must:

a. provide basic left-turn and right-turn widening as per Austroads;

b. be prepared in accordance with Parts 4 and 4A of the Austroads Guide to Road Design;

c. demonstrate that all widening, entry and exit tapers, drainage infrastructure, roadside regrading and local alterations to the existing Waikato River Trail can be accommodated within the road reserve, unless an alternative legal arrangement has been secured;

d. maintain effective roadside drainage, including through culverts or equivalent measures where required; and

e. provide for the safe regrading, local realignment and reinstatement of the existing Waikato River Trail where it is affected by the intersection works.

175. Before section 224(c) certification is sought for the first stage relying on an intersection with Horahora Road, the consent holder must provide certification from a suitably qualified and experienced transportation engineer confirming that the intersection has been constructed in accordance with the certified engineering plans and condition XX.

176. Each vehicle crossing must:

e. be located generally in accordance with the approved scheme and transportation plans;

f. be formed in accordance with the applicable Regional Infrastructure Technical Specifications rural-residential vehicle-crossing standard;

g. have a gradient no steeper than 1 vertical in 12 horizontal within the vehicle-crossing formation;

h. be at or above the level of Horahora Road for at least the first 6 m measured from the edge of the road carriageway, unless an alternative design is certified

under conditions 9-12 as providing the required sight distance;

e. provide the sight distance required by condition 35;
f. be designed so that stormwater does not discharge onto Horahora Road; and
g. provide for the safe crossing and continuity of the Waikato River Trail.

177. For the purpose of detailed intersection and vehicle-crossing design, sight distance must be assessed using the legal speed limit of the road along the development frontage and must provide:

a. at least 160 m sight distance at each vehicle crossing, measured in accordance with RTS 6; and

b. at least 248m sight distance at each subdivision intersection, measured in accordance with Austroads requirements.

178. The sight distance available at every vehicle intersection and vehicle crossing created must be demonstrated through the engineering-plan certification required by conditions XX. The assessment must take account of:

a. the final intersection or vehicle-crossing location and level;

b. the driver-eye position prescribed by RTS 6;

c. the final road and vehicle-crossing gradients;

d. roadside vegetation;

e. roadside berms and embankments; and

f. the alignment and level of the Waikato River Trail.

179. Where the required sight distance cannot be conclusively demonstrated before construction, it must be verified on site following formation of the intersection or vehicle crossing. Before section 224(c) certification is sought for the relevant stage, the consent holder must provide certification from a suitably qualified and experienced transportation engineer confirming that the sight distance required by condition XX has been achieved.

180. Where excavation or regrading of a roadside berm or embankment is necessary to provide the required sight distance or intersection widening, the consent holder must:

a. maintain effective roadside drainage;

b. Where the works required by condition XX affect the Waikato River Trail, the affected section of the trail must be safely realigned, regraded and reinstated in accordance with the certified engineering plans before the shared access is brought into use.

c. reinstate the affected section of the trail in accordance with the certified engineering plans and to a standard consistent with the adjoining trail; and

d. before section 224(c) certification is sought for the relevant stage, provide certification from a suitably qualified and experienced engineer confirming that the drainage and trail-reinstatement works have been completed in accordance with the certified engineering plans.

DRAFT

Rights of way and gates

181. All shared rights of way must be designed and constructed in accordance with the certified engineering plans and the applicable Regional Infrastructure Technical Specifications and must meet the following minimum standards:

    a. where serving one residential lot, a formed carriageway width of 4.5 m;

    b. where serving between two and six residential lots, a formed carriageway width of 6 m;

    c. Lot 104 may have a minimum legal width of 6 m where it serves only Lots 43 and 47; and

    d. all other shared rights of way must have a minimum legal width of 7 m.

182. Where a lot boundary is less than 8 m from the edge of the Horahora Road carriageway, any gate providing vehicle access from Horahora Road must be recessed at least 8 m from the edge of the carriageway.

Waikato River Trail

183. Safe and continuous public use of the Waikato River Trail must be maintained throughout construction, except during a temporary closure or diversion undertaken in accordance with condition 48.

184. Before temporarily closing or diverting any part of the Waikato River Trail, the consent holder must:

    a. notify the Council's trail manager;

    b. provide a safe and clearly marked temporary route, where practicable;

    c. install appropriate warning and directional signage;

    d. provide barriers or other public-safety measures appropriate to the nature of the works; and

    e. notify trail users through the method and within the timeframe agreed with Council's trail manager.

185. Any part of the Waikato River Trail damaged or disturbed by construction must be:

    a. safely regraded or locally realigned where necessary to accommodate an approved intersection, vehicle crossing, roadside-drainage work or sightline improvement;

    b. reinstated in accordance with the certified engineering plans;

    c. reinstated to a formation width, surface and standard consistent with the adjoining trail.

Stormwater

186. The purpose of the Stormwater Management Plan is to:

    a. identify the stormwater infrastructure and treatment measures required to service the subdivision;

    b. ensure that stormwater runoff is collected, conveyed, treated and discharged in accordance with the approved stormwater design;

c. protect the Waikato River, gullies, wetlands and other receiving environments from scour, erosion, sediment and contaminants; and

d. establish clear and enforceable requirements for the operation, inspection, maintenance, repair and replacement of all private and communal stormwater infrastructure.

187. The Stormwater Management Plan must be prepared by a suitably qualified and experienced stormwater professional and submitted as part of the engineering design and must include:

a. plans identifying all communal and on-lot stormwater infrastructure;

b. the stormwater collection, conveyance, treatment, detention, soakage and discharge measures applying to roads, accessways, common areas and residential lots;

c. the design and performance requirements for roadside swales, culverts, treatment devices, detention and soakage devices, discharge points and overland-flow paths;

d. erosion and scour protection at discharge points;

e. the stormwater-treatment measures required before discharge;

f. the ownership and maintenance responsibility for each stormwater asset;

g. the inspection, servicing, maintenance, repair and replacement requirements for each type of stormwater asset;

h. the required frequency of inspections and maintenance;

i. the allocation of maintenance, repair and replacement costs for any stormwater asset serving more than one lot;

j. any access arrangements required to inspect, maintain, repair or replace communal stormwater infrastructure;

k. the records that must be retained to demonstrate inspection and maintenance;

l. procedures for responding to blockages, failures, erosion, flooding or other stormwater-related incidents; and

m. the applicable requirements of the Regional Infrastructure Technical Specifications;

n. any Waikato Regional Council consent held in relation to the land, or Waikato Regional Council Guideline for stormwater; and

188. Any material amendment to the certified Stormwater Management Plan must be submitted to Council for further certification before it is implemented. Council may certify an amendment only where it achieves the purpose in condition XX and remains consistent with the matters identified in condition XX.

189. The consent holder must provide Council with:

a. as-built plans identifying all stormwater infrastructure established within stage three;

b. certification from a suitably qualified and experienced stormwater professional confirming that the stormwater system has been constructed in accordance

with the certified engineering plans and Stormwater Management Plan.

Electricity and telecommunications

190. The consent holder must provide an electric power connection to the boundary of each residential lot created by that stage. Written confirmation from the network utility provider that a connection is completed to their satisfaction shall be submitted to Council prior to section 224(c) RMA certification

191. That either:

    a. The consent holder must provide evidence to prior to 224c that each residential lot created in the relevant stage, as shown on the approved scheme plan has been provided a wired telecommunications connection, OR

    b. The consent holder must ensure that pursuant to section 221 of the Act the following consent notice conditions is imposed on the titles of each residential lot created in the relevant stage, as shown on the approved scheme plan stating; "Future owners of a lot to which this consent notice relates are advised that a wired telecommunications connection to the allotment has not been installed at the time of subdivision. Future owners are advised to investigate wired or wireless connections at their own expense."

Landscape mitigation

192. No less than 20 working days before physical works commence within stage three, the consent holder must submit a Landscape, Visual Amenity and Mitigation Planting Plan for that stage to Council for certification.

193. The Landscape, Visual Amenity and Mitigation Planting Plan must:

    a. be prepared by a suitably qualified and experienced landscape architect;

    b. be in general accordance with the approved Landscape Master Plan;

    c. integrate the requirements of the certified Ecological Management Plan; and

    d. demonstrate how the landscape mitigation required for the relevant stage will be established, protected and maintained.

194. Each Landscape, Visual Amenity and Mitigation Planting Plan must include:

    a. the location and extent of vegetation to be retained;

    b. the location and extent of proposed planting required prior to s224 certification for that stage;

    c. plant species, numbers, spacing and grades;

    d. anticipated plant heights at establishment, 10 years after establishment and maturity;

    e. site preparation, soil, staking, irrigation and mulching requirements;

    f. planting-season requirements;

    g. plant-maintenance and replacement requirements;

    h. pest-plant control measures;

    i. monitoring requirements and measurable performance targets;

j. be consistent with the approved Landscape and Visual Assessment and master plan, including proposed mitigation;

195. All landscape planting required prior to s224 must be completed before section 224(c) certification is sought for that stage, unless:

a. planting during that period would be inconsistent with the planting season specified in the certified Landscape, Visual Amenity and Mitigation Planting Plan;

b. the consent holder has submitted an alternative implementation programme requiring the planting to be completed during the next specified planting season;

c. Council has certified that implementation programme; and

d. the consent holder has provided a bond under section 108(2)(b) of the Resource Management Act 1991 sufficient to cover the reasonable cost of completing and maintaining the deferred planting.

196. Where planting is deferred under condition 71:

a. the planting must be completed during the next planting season specified in the certified Landscape, Visual Amenity and Mitigation Planting Plan;

b. a suitably qualified and experienced landscape architect must provide Council with written certification that the planting has been completed in accordance with the certified plan; and

c. the bond must not be released until Council has received the certification required by clause (b).

197. Before approval of the survey plan under section 223 of the Resource Management Act 1991 for each stage, the consent holder must ensure that any landscape or visual mitigation planting areas required ongoing retention within privately owned lots are identified on the survey/LT plan for that stage. The areas shown must be consistent with the certified Landscape, Visual Amenity and Mitigation Planting Plan and must be identified in the consent notice to be registered against each affected lot.

198. The LT plan submitted to satisfy s223 survey plan shall include a consent notice area within Lot 16 as shown on the approved scheme plan for the purpose of protecting views from Horahora Road toward the west.

Ecology

199. All ecological protection and restoration areas located within stage three (Area BA, BB, BC only) must be legally protected in perpetuity through:

a. a consent notice under section 221 of the Resource Management Act 1991;

b. illustrating areas on the LT plan for s223 approval.

200. Pest plant, animal control and planting must be undertaken within area BA to BC as required in the Ecological Management Plan approved by Council as part of the conditions of this consent. Once completed, a suitably qualified and experienced ecologist must provide certification that these measures are complete.

Esplanade strip

201. The consent holder must, in relation to the part of the Waikato River frontage contained within that stage:

a. create a 10 m-wide esplanade strip along the full extent of that frontage in accordance with sections 232 and 233 and Schedule 10 of the RMA and connect it with the boundary of stages 1 and 2;

b. identify the location and width of that part of the esplanade strip on the relevant survey plan;

c. submit the proposed esplanade-strip instrument to Council for certification;

d. undertake to register the certified instrument against each Record of Title containing part of the esplanade strip;

e. ensure that the instrument:

a. secures public access along the Waikato River frontage;

b. binds the registered proprietors of the affected land and their successors in title; and

c. specifies the applicable rights, restrictions and ongoing landowner responsibilities relating to the use and management of the strip; and

f. complete the fencing, planting, weed control, erosion protection and other works within or adjoining that part of the esplanade strip required by the approved plans, certified Landscape, Visual Amenity and Mitigation Planting Plan or certified Ecological Management Plan.

Advice note: *These consents do not require the Waikato River Trail to be permanently relocated into the esplanade strip. Any future relocation of the trail by Council would be undertaken separately. Any part of the existing trail disturbed by the subdivision works must be protected, temporarily managed and reinstated in accordance with the applicable conditions of this consent.*

Reserve to be vested

202. The reserve to vest as shown on the approved subdivision scheme plan as Lot 37 must be vested in Council.

Easements and legal instruments

203. The consent holder shall ensure that for each stage, as part of the s223 certification application, all easements required to provide legal access, services, drainage, sightlines or rights of inspection and maintenance for the lots or infrastructure created by that stage must:

a. be duly granted or reserved;

b. be shown in the memorandum of easements on the relevant survey plan; and

c. Be prepared at the cost of the consent holder.

Financial contributions

204. Pursuant to Rule FC-R2(1) and FC-R2(4) of the South Waikato Operative District Plan and section 108(2)(a) of the Resource Management Act 1991, the consent holder shall

pay financial contributions totaling $6,529.00 per additional allotment (GST inclusive). The consent holder shall pay the applicable contributions for stage three, prior to the release of the section 224(c) certificate for that stage.

The contribution is made up of $4,632.00 for roading and $1,897.00 for reserves with the total amount payable for this stage being:

Stage	Additional Allotments Created	Total Contributions Payable per Stage
3	36	$235,044.00

Consent notices

205. The consent holder shall ensure that pursuant to Section 221 of the Act the following consent notice conditions shall be imposed on the titles of Lots 16 to 36, 38, 44 to 58:

TAKAPOTO ESTATE CONSENT NOTICE

206. ~~That~~ T~~t~~he s221 consent notice prepared and submitted with the application (email dated 10 April 2026) be finalised at the approval of Council and an undertaking be provided to confirm it will be registered to the titles to Lots 16 to 36, 38, 44 to 58.

BUILDING USE, LOCATION AND COVERAGE

207. No more than one dwelling may be constructed or used on each residential lot unless specifically provided for in a separate land use consent.

208. An accessory building may be established on a residential lot but must not be designed, constructed or used as a separate dwelling, minor residential unit, secondary dwelling or independent residential unit unless specifically provided for in a separate land use consent

209. The combined building footprint of all buildings on a residential lot must not exceed: 500 m²

210. Every dwelling and accessory building must be located wholly within an 800 m² building area illustrated at the time of building consent, unless otherwise authorised by a subsequent resource consent.

211. No building or structure, except fencing along a boundary, may be located within:

a. any other geotechnical or natural-hazard building restriction area as confirmed in the geotechnical completion report.

b. 25m from the edge of the Lake for purposes of the Operating Easement.

c. 25m from the bat habitat setback as shown on the LT plan.

BUILDING DESIGN

212. All buildings must comply with the following requirements:

a. building height must not exceed 6 m above final ground level;

b. roof colours and materials must have a Light Reflectance Value of less than 20%;

c. wall colours and materials must have a Light Reflectance Value of less than 30%;

d. exterior materials must have a recessive appearance and must not be highly reflective; and

e. detached accessory buildings, water tanks and other vertical infrastructure must, where practicable, be located beside or behind the dwelling when viewed from the Waikato River.

f. A lighting design (for exterior lighting only) must be provided at the time of building consent confirming that any lighting has no more than 0.3 lux measured 20m from any bat habitat including along the edge of the Lake as shown on the LT plan. This applies to Lots 16 to 30, 32, 34, 36, 38, 50, 54 to 58.

GEOTECHNICAL

213. ~~That~~ F~~f~~or subsequent development of Lots 16 to 36, 38, 44 to 58 a suitably qualified and experienced engineer will be required to inspect the site and submit to Council for approval, at the time of building consent, the design details on the foundations of the buildings. The design details must reflect the findings of the Geotech completion report submitted and approved as part of the subdivision consent including the relevant geotechnical setback from the top of the bank and the slope.

ON-LOT LANDSCAPING

214. The owner of each residential lot must establish all on-lot planting shown for that lot in the certified Landscape, Visual Amenity and Mitigation Planting Plan before the principal dwelling is occupied/Code of Compliance is issued (whichever is sooner).

215. The planting required by condition ~~XX~~ 214 must be retained and maintained in perpetuity. Any dead, diseased, damaged or failed plant must be replaced during the next appropriate planting season with a plant of the same species or an alternative species specified in the certified Landscape, Visual Amenity and Mitigation Planting Plan.

STORMWATER

216. ~~That~~ F~~f~~or subsequent development of Lots 16 to 36, 38, 44 to 58 a suitably qualified and experienced engineer will be required to inspect the site and submit to Council for approval, at the time of building consent, the design details on the proposed stormwater system.

Reason: The purpose of the above condition is ~~required~~ to make sure all stormwater generated from the buildings onsite are disposed of onsite to the 10-year ARI event. All development of a residential lot must comply with the certified Stormwater Management Plan, including the on-lot detention, soakage, conveyance, treatment and discharge measures specified for that lot.

217. ~~That~~ T~~t~~he owners of Lots 20, 27, 29, 44, 47, 48, 58 shall ~~be aware~~ensure that Areas as shown on the approved LT plan ~~must~~ do not have any buildings or structures, complete any earthworks, planting or other activity that may:

a. obstruct or divert an overland-flow path identified in the certified Stormwater Management Plan;

b. reduce the effectiveness of an approved stormwater device; or

c. prevent reasonable access to a stormwater device for inspection, maintenance, repair or replacement.

d. Alter or modify an approved stormwater device (unless the change has first been certified by Council in accordance with the stormwater conditions of this consent and any necessary regulatory approvals have been obtained).

WASTEWATER

218. ~~That~~ F~~f~~or subsequent development of Lots 16 to 36, 38, 44 to 58 a suitably qualified and experienced engineer will be required to inspect the site and submit to Council for approval, at the time of building consent, the design details on the proposed wastewater system. This requires:-

a. a secondary treatment system to be designed and approved;

b. 30 metre setback from the lake edge as a minimum.

Note: Where an on-site wastewater discharge does not comply with the applicable permitted-activity requirements, the necessary regional consent must be obtained before the system is installed or operated.

WATER SUPPLY

219. The owner must provide, with the building consent for any dwelling, information to demonstrate that the following requirements for water supply are met:

a. a potable-water supply of sufficient quality and capacity for the intended residential use; and

b. firefighting water supply that meets the requirements of the New Zealand Fire Service Firefighting Water Supplies Code of Practice SNZ PAS4509:2008 storage and Fire and Emergency New Zealand access that comply with the applicable firefighting-water requirements.

ECOLOGICAL, FENCING AND LIGHTING CONTROLS

220. ~~That~~ C~~c~~urrent and future owners of Lots 16 to 36, 38, 44 to 58 ~~to~~ must ~~be aware~~ensure that the~~re is an approved~~certified Ecological Management Plan ~~which must be~~is complied with and implemented within the protected ecological areas. All ecological areas must be kept free of buildings, structures, and earthworks.

221. Fencing adjoining the Waikato River, an esplanade strip, or gully area must:

a. comprise rural-style post-and-rail, post-and-wire, or post-and-wire-netting fencing;

b. not exceed 1.2 m in height; and

c. not comprise solid panels or close-boarded fencing.

222. No domestic cat may be kept or permitted to remain on a residential lot.

RURAL REVERSE SENSITIVITY

223. Each consent notice must advise future owners and occupiers that the residential lot is located within a rural environment in which lawfully established farming and rural-production activities may generate noise, dust, odour, agrichemical spray, vibration, traffic, machinery movements, stock movements and other effects that are

characteristic of the rural environment.

RIGHTS OF WAY AND GATES

224. The current and subsequent owners of Lots 102 and 103 ~~are aware~~shall ensure that ~~a~~ no gate is ~~not~~ permitted to be installed across the entrance;

225. ~~That T~~the current and future owners of Lots 16 to 19, 22 to 28, 48 and 58 ~~must be aware~~shall ensure that the~~re is a~~ sight line envelope demonstrated on the LT plan ~~which must be~~is kept free of any structures or vegetation which are more than 0.5m high.

226. No additional entrances, excluding those formed as part of the subdivision, shall be permitted to connect directly to Horahora Road.

227. The current and future owners must be aware that there is a sight line envelope demonstrated on the LT plan which must be kept free of any structures (excluding post and rail fencing) or vegetation which are more than 0.5m high.

228. No additional entrances, excluding those formed as part of the subdivision shall be permitted to connect directly to Horahora Road.

VIEWSHAFT

229. The area identified as part of condition XX on the LT plan over Lot 16 shall remain free of buildings and structures.
Reason: the purpose of this requirement is to retain the viewshaft from Horahora Road to the west.

DRAFT

ADVICE NOTES

a. Plans required to be submitted to Council for certification shall be submitted electronically via planningteam@southwaikato.govt.nz

b. The consent holder shall pay to the South Waikato District Council the actual and reasonable costs associated with the monitoring of conditions (or review of consent conditions), or supervision of the resource consent as set in accordance with Section 36 of the Resource Management Act 1991. These costs* may include site visits, correspondence and the actual costs of materials or services which may have to be obtained.

*Please refer to South Waikato District Council's current schedule of Resource Management fees for guidance on the current hourly rate chargeable for Council's staff.

c. The consent holder shall notify the Council's Environmental Monitoring and Compliance Officer of the start and completion dates of the works in writing at least three working days before the works are carried out. The consent holder shall fill out and return (by email to the Environmental Monitoring and Compliance Officer at planningteam@southwaikato.govt.nz, or by post to Private Bag 7, Tokoroa 3444) the form that is attached to this decision.

d. It is the consent holder's responsibility to comply with any conditions imposed on this resource consent prior to and during (as applicable) exercising this resource consent.

e. If you disagree with any of the above conditions or disagree with the additional charges relating to the processing of the application, you have a right of objection pursuant to sections 357A or 357B of the Resource Management Act 1991. Any

objection must be made in writing to the Council's Resource Consents Manager within 15 working days of notification of the decision.

f. The consent holder is responsible for obtaining all other necessary consents, permits, and licences, including those under the Building Act 2004, and the Heritage New Zealand Pouhere Taonga Act 2014. This consent does not remove the need to comply with all other applicable Acts (including the Property Law Act 2007 and the Health and Safety in Employment Act 1992), regulations, relevant Bylaws, and rules of law. This consent does not constitute building consent approval. Please check whether a building consent is required under the Building Act 2004.

g. Additional fees will be required by the Council with the application(s) for the Section 223 and 224 certificates. The section 224 certificate will be issued following compliance with all conditions of consent set out above, and payment of any applicable financial contribution.

h. Applications for sections 223 and 224(c) certifications shall be submitted electronically via planningteam@southwaikato.govt.nz

DRAFT