Land Dynamics Australia

Geotechnical Site Classification

Proposed Residential Subdivision

Stage 1 The Sanctuary, 344 John Oxley Drive, Thrumster

Report No. RGS21087.1-AP_Rev1

21 June 2025





Manning-Great Lakes

Port Macquarie

Coffs Harbour

RGS21087.1-AP_Rev1

21 June 2025

Land Dynamics Australia 77 Lord Street PORT MACQUARIE NSW 2444

Attention: Jodie Chapman

Dear Jodie,

RE: Proposed Residential Subdivision – Stage 1 The Sanctuary, 344 John Oxley Drive, Thrumster

Geotechnical Site Classification

As requested, Regional Geotechnical Solutions Pty Ltd (RGS) has undertaken a geotechnical site classification in accordance with AS2870-2011 Residential Slabs and Footings for the proposed residential lots located in Stage 1 of The Sanctuary Estate, 344 John Oxley Drive (Lot 1 DP 1245588) Thrumster. Stage 1 comprises Lot No's 101 to 136 as shown on the supplied plan titled "Plan of Subdivision of Lot 1 DP 12455888".

Based on the existing profiles encountered at the time of the field investigations and on the basis that all fill present in the fill platform was placed under Level One Inspection and Testing as defined in AS3798-2007, the building areas within the lots present are classified in accordance with AS2870-2011 Residential Slabs and Footings as detailed in the attached report.

If you have any questions regarding this project, please contact the undersigned.

For and on behalf of Regional Geotechnical Solutions Pty Ltd

Prepared by

Reviewed by

Grant Colliar

Senior Engineering Geologist

u Salla

Steven Morton

Principal Geotechnical Engineer

Email grant.c@regionalgeotech.com.au Web: www.regionalgeotech.com.au



Table of Contents

| 1 | 11 | NTRODUCTION | . 1 |
|---|-----|--|-----|
| 2 | ٨ | METHODOLOGY | . 1 |
| 3 | L | ABORATORY TESTING | , 1 |
| 4 | S | ITE CONDITIONS | . 2 |
| 4 | 4.1 | Surface Conditions | . 2 |
| 4 | 4.2 | Subsurface Conditions | . 3 |
| 5 | S | ITE CLASSIFICATION | . 5 |
| 6 | C | CONSTRUCTION AND SITE MAINTENANCE CONSIDERATIONS | . 6 |
| 7 | L | IMITATIONS | . 7 |

Figures

Figure 1 Investigation Location Plan

Appendices

Appendix A Results of Field Investigations

Appendix B Laboratory Test Result Sheets



1 INTRODUCTION

Regional Geotechnical Solutions Pty Ltd (RGS) has undertaken a geotechnical site classification in accordance with AS2870-2011 Residential Slabs and Footings for the proposed residential lots located in Stage 1 of The Sanctuary Estate, 344 John Oxley Drive (Lot 1 DP 1245588) Thrumster. Stage 1 comprises Lot No's 101 to 136 as shown on the supplied plan titled "Plan of Subdivision of Lot 1 DP 12455888".

The majority of the residential lots have been modified by site regrading works comprising up to approximately 5m cut, or placement of up to approximately 3m of clay fill. Filling works was undertaken by Kazac Civil Pty Ltd, with Level One Inspection and Testing of the works undertaken by Douglas CMG Pty Ltd. A copy of the Level One report has been provided to RGS.

2 METHODOLOGY

Field work for the assessment was undertaken on 20 December 2023 and was based on the supplied drawing titled "Plan of Subdivision of Lot 1 DP 12455888". Fieldwork was undertaken by an Engineering Geologist from RGS and included:

- Observation of site features and surrounding features relevant to the geotechnical conditions of the site;
- 19 boreholes undertaken by a 4WD mounted drilling rig to depths of between 1.5m and 2m logged and sampled by an Engineering Geologist; and
- U50 tube samples collected from soil horizons considered representative of cohesive soil profiles.

Engineering logs of the boreholes are presented in Appendix A. Investigation locations are shown on Figure 1 and were obtained by measurements to prominent site features. Coordinates of investigation locations were recorded using a hand held GPS and the coordinates are shown on the engineering logs. Reduced levels at the borehole locations were estimated from the supplied drawings and are shown on the engineering logs.

3 LABORATORY TESTING

Samples considered representative of foundation soils were submitted to a NATA accredited laboratory for the measurement of soil volume change over an extreme range of moisture content (shrink / swell index) on nine U50 samples. Atterberg Limits testing was undertaken on one sample that crumbled during extraction from the U50 tube. Results are presented in Appendix B and summarised in Table 1.

Table 1: Laboratory Testing Summary

| Location | Depth (m) | Lot | Material | Shrink Swell Index (%) | Linear Shrinkage (%) | Plasticity Index (%) |
|----------|-----------|-----|---------------|------------------------------|----------------------------|----------------------------|
| BH202 | 0.4 – 0.7 | 105 | Residual Clay | 1.8 | - | - |
| BH203 | 0.3 – 0.7 | 110 | Fill Clay | 2.3 | - | - |
| BH205 | 0.4 – 0.7 | 136 | Residual Clay | 1.1 | - | - |



| Location | Depth (m) | Lot | Material | Shrink Swell Index (%) | Linear Shrinkage (%) | Plasticity Index (%) |
|----------|-----------|---------|---------------|------------------------------|----------------------------|----------------------------|
| BH208 | 0.7 – 1.1 | 116/117 | EW Slate | 1.0 | - | - |
| BH210 | 0.3 – 0.7 | 120/121 | EW Slate | 1.4 | - | - |
| BH212 | 0.3 – 0.7 | 124/125 | Residual Clay | 1.8 | - | - |
| BH214 | 0.3 – 0.7 | 128/129 | EW Dolerite | 1.0 | - | - |
| BH217 | 0.3 – 0.7 | 108/109 | Fill Clay | 0.6 | - | - |
| BH218* | 0.3 – 0.6 | 101/102 | Fill Clay | - | 5.0 | 13.0 |

Note: * Atterberg Limits testing undertaken on U50 sample that crumbled upon extraction

4 SITE CONDITIONS

4.1 Surface Conditions

Stage 1 is located to the north of John Oxley Drive in an area of gently to moderately undulating topography where it is situated on the north east and east facing slopes a low hill that is up to RL 22m in elevation. Surface elevations across the site range from approximately RL 22m along the western boundary to approximately RL 8.5m along the eastern boundary.

A satellite image of the site that shows the location of the site and the site setting is reproduced below.



Satellite image dated 2023 obtained from Google Earth that illustrates the site location and setting. The approximate site boundaries for Stage 1 are outlined in red.



Surface slopes have been modified by cut and fill and range from approximately 2° – 8° . Some lots have been terraced and are separated by retaining walls that are up to approximately 2° height.

Lots 101 – 112 and 136 have been modified by earthworks comprising placement of more than 0.4m of clay fill that was placed under Level One inspection and monitoring as defined in AS3798-2007 Guidelines on Earthworks for Commercial and Residential Developments by Douglas Partners refer Level 1 Geotechnical Certification and Report, by Douglas - Project 209310, dated 10 November 2022. The approximate extent of the fill areas is shown on Figure 1.

Drainage of the site would be via a combination of overland flow and surface infiltration.

Selected site images are presented below.



Looking south west across Lots 14 and 105 which has been terraced and modified by controlled fill.



Looking north across Lots 126 -129. A 2m high concrete sleeper retaining wall is located along the western boundary.

4.2 Subsurface Conditions

The site is situated in an area underlain by deeply weathered geological units of the Port Macquarie Block which includes weathered slate and dolerite.

The materials encountered during the investigation are summarised in Table 2 and 3. Further details are presented on the engineering logs in Appendix B.

Table 2: Summary of Geotechnical Units

| Unit | Material | Material Description |
|---------|-----------------------------|---|
| UNIT 1A | TOPSOIL/ FILL | Sandy SILT to Sandy CLAY, low plasticity, dark brown/brown, traces of gravel |
| UNIT 1B | FILL – CLAY (CONTROLLED) | Sandy Silty CLAY to Sandy CLAY to Silty CLAY, medium to high plasticity, pale brown/pale red/pale grey, very stiff, traces to some gravel, fine to medium |



| Unit | Material | Material Description |
|--------|----------------|--|
| UNIT 2 | RESIDUAL | Sandy CLAY to Sandy Silty CLAY, medium to high plasticity, pale red/red/brown, very stiff, traces of gravel, fine |
| UNIT 3 | EW SLATE | Extremely Weathered SLATE, recovered as Silty CLAY or Sandy Silty CLAY, medium to high plasticity, pale red/pale grey/grey/pale red, traces of rock fabric |
| UNIT 4 | EW DOLERITE | Extremely Weathered dolerite, recovered as Sandy CLAY, medium to high plasticity, yellow/pale brown, traces or rock fabric |
| UNIT 5 | HW TO MW SLATE | Highly to Moderately Weathered Slate, pale grey/white/pale orange, inferred very low to low strength, foliated, recovered as Silty SAND to Sandy SILT |

Table 3: Summary of Subsurface Profiles - Depth to Base of Material Layer (m)

| ВН | Lot | Unit 1A – Fill/ Topsoil | Unit 1B - Controlled Fill Clay | Unit 2 - Residual | Unit 3 - EW Slate | Unit 4 - EW Dolerite | Unit 5 - HW to MW Slate |
|-------|---------|----------------------------|--------------------------------------|----------------------|----------------------|-------------------------|----------------------------|
| BH201 | 103 | 0.15 | 0.7 | ≥ 1.5 | - | - | - |
| BH202 | 105 | 0.2 | 1.0 | - | ≥ 1.5 | - | - |
| BH203 | 110 | 0.15 | 0.5 | ≥ 1.5 | - | - | - |
| BH204 | 111/112 | 0.15 | 1.5 | ≥2.0 | - | - | - |
| BH205 | 136 | 0.2 | 0.4 | 1.3 | ≥ 1.5 | - | - |
| BH206 | 113/134 | 0.1 | | - | ≥ 1.5 | - | - |
| BH207 | 114/115 | 0.2 | - | - | - | - | ≥ 1.5 |
| BH208 | 116/117 | 0.15 | | - | ≥ 1.5 | - | - |
| BH209 | 118/119 | 0.15 | - | - | - | - | ≥ 1.5 |
| BH210 | 120/121 | 0.1 | - | - | ≥ 1.5 | - | - |
| BH211 | 122/123 | 0.15 | - | - | 0.5 | - | ≥ 1.5 |
| BH212 | 124/125 | 0.1 | - | ≥ 1.5 | - | - | - |
| BH213 | 126/127 | 0.1 | - | ≥ 1.5 | - | - | - |
| BH214 | 128/129 | 0.15 | - | - | - | ≥ 1.5 | - |
| BH215 | 130/131 | 0.15 | - | - | - | ≥ 1.5 | - |
| BH216 | 132/133 | 0.2 | - | - | - | - | ≥ 1.5 |
| BH217 | 108/109 | 0.15 | ≥ 1.5 | - | - | - | - |



| ВН | Lot | Unit 1A – Fill/ Topsoil | Unit 1B - Controlled Fill Clay | Unit 2 - Residual | Unit 3 - EW Slate | Unit 4 - EW Dolerite | Unit 5 - HW to MW Slate |
|-------|---------|----------------------------|--------------------------------------|----------------------|----------------------|-------------------------|----------------------------|
| BH218 | 101/102 | 0.15 | 0.7 | - | - | - | ≥ 1.5 |
| BH219 | 106/107 | 0.15 | - | ≥ 1.5 | - | - | - |

Note: ≥ Indicates that base of material layer was not encountered

-- Indicates that the material was not encountered at the test location

Groundwater was not encountered within the boreholes. It should be noted that fluctuations in groundwater levels can occur as a result of seasonal variations, temperature, rainfall and other similar factors, the influence of which may not have been apparent at the time of the assessment.

5 SITE CLASSIFICATION

For structures or components that are similar in construction, performance expectation, and loading to a typical domestic structure, the guidance provided in AS2870-2011 "Residential Slabs and Footings" would be appropriate.

In assessing the estimated characteristic surface movement (y_s) values the following has been adopted:

- All clay fill of > 0.4m thickness was placed under Level 1 Inspection and Testing as defined in AS3798-2007, and can therefore be considered as Controlled Fill;
- Where there was cut undertaken the depth of cracked zone was reduced by the depth of cut;
- Suction change at ground surface of pf 1.2;
- Depth of suction change of 1.5m;
- Characteristic Iss for controlled clay fill of between 0.6 and 2.3%;
- Characteristic Iss for residual clay of between 1.1 and 1.8%;
- Characteristic Iss for extremely weathered slate of between 1.0 and 1.4%; and
- Characteristic Iss for extremely weathered dolerite of 1.0%.

The proposed building areas for Lot No's 101 – 112 and 136 have been modified by filling works of >0.4m thickness. These lots are classified as Class P in accordance with AS2870-2011, Clause 2.5.3 Section (a) due to the presence of clay fill of >0.4m, requiring footings to be designed in accordance with engineering principles.

The building areas for the lots modified by filling works undertaken under Level One supervision have been reclassified as summarised in Table 4 in accordance with Clause 2.5.3 Section(c) of AS2870-2011, based on the existing profiles at the time of field investigation, the properties of the Controlled Fill that was placed under Level One supervision as defined by AS3798- 2007, the properties of the underlying natural profile, and the estimated surface movement (y_s) .



Table 4: Site Classification Summary

| Lots | Site Re-classification | Expected Surface Movement y _s + y _t (mm) |
|--|------------------------|---|
| 114, 115, 118, 119, 122, 123, 132, 133 | Class S | 20mm |
| 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 116, 117, 120, 121, 124, 125, 126, 127, 128, 129, 130, 131, 134, 135, 136 | Class M | 30 – 40mm |

6 CONSTRUCTION AND SITE MAINTENANCE CONSIDERATIONS

All structural footings should be founded as follows:

- All footings should be founded in Controlled Fill or natural soils below all topsoil and uncontrolled fill materials;
- Footings can be designed on the basis of a maximum allowable base bearing pressure of 100kPa for footings founded within the Controlled Fill, residual clay or extremely weathered slate of at least very stiff strength. Footings founded in highly to moderately weathered rock of at least low strength can be designed on the basis of a maximum allowable base bearing pressure of 300kPa;
- All footings, edge beams and internal beams should be entirely founded on similar material
 and outside or below the zones of influence resulting from existing or future service trenches
 and other subsurface structures;
- The engineering design for the retaining walls present allows for any surcharge affecting the walls such as proposed footings, structures or sloping surfaces;
- The soils in the Port Macquarie area are prone to fretting and softening on exposure to air
 and water. It is therefore recommended that concrete be poured as soon as possible after
 footing excavation. In the event that wet weather occurs prior to pouring of concrete, the
 base of footing excavations should be checked for the presence of loose or softened
 material, which should be removed prior to pouring concrete; and
- Prior to the placement of concrete we recommend that footings be observed and assessed by a suitably experienced geotechnical engineer to assess that the correct founding material has been achieved.

Where further lot filling works are proposed, all fill for the support of structures should be placed and compacted in accordance with the recommendations outlined in AS3798-2007 Guidelines on Earthworks for Residential and Commercial Developments, under Level 1 supervision, for it to be considered Controlled Fill as defined in AS2870-2011. The founding of structures on fill that is not placed in accordance with Level 1 requirements is not recommended.

Site maintenance must comply with the recommendations and advice provided in CSIRO Sheet BTF18 "Foundation Maintenance and Footing Performance: A Homeowners Guide "a copy of which is available from the CSIRO website http://www.publish.csiro.au/pid/7076.htm

Shrink-swell related movements can be affected by alterations to the soil profile by cutting and filling, and by the suction related effects of trees close to the building area. The effects of any such cutting, filling, tree planting should be taken into account when selecting design values for differential movement across the building.



7 LIMITATIONS

This report comprises the results of an investigation carried out for a specific purpose and client as defined in the document. The report should not be used by other parties or for purposes or projects other than those assumed and stated within the report, as it may not contain adequate or appropriate information for applications other than those assumed or advised at the time of its preparation. The contents of the report are for the sole use of the client and no responsibility or liability will be accepted to any third party. The report should not be reproduced either in part or in full, without the express permission of Regional Geotechnical Solutions Pty Ltd.

Geotechnical site investigation is based on data collection, judgment, experience, and opinion. By its nature, it is less exact than other engineering disciplines. The findings presented in this report and used as the basis for the recommendations presented herein were obtained using normal, industry accepted geotechnical design practises and standards. To our knowledge, they represent a reasonable interpretation of the general condition of the site. Under no circumstances, however, can it be considered that these findings represent the actual state of the site at all points.

The recommended depth and properties of any soil, rock, groundwater, or other material referred to in this report is an engineering estimate based on the information available at the time of its writing. The estimate is influenced and limited by the fieldwork method and testing carried out in the site investigation, and other relevant information as has been made available. In cases where information has been provided to Regional Geotechnical Solutions for the purposes of preparing this report it has been assumed that the information is accurate and appropriate for such use. No responsibility is accepted by Regional Geotechnical Solutions for inaccuracies within any data supplied by others.

If site conditions encountered during construction vary significantly from those discussed in this report, Regional Geotechnical Solutions Pty Ltd should be contacted for further advice.

This report alone should not be used by contractors as the basis for preparation of tender documents or project estimates. Contractors using this report as a basis for preparation of tender documents should avail themselves of all relevant background information regarding the site before deciding on selection of construction materials and equipment.

If you have any questions regarding this project, or require any additional consultations, please contact the undersigned.

For and on behalf of Regional Geotechnical Solutions Pty Ltd

Prepared by

Reviewed by

Grant Colliar

Senior Engineering Geologist

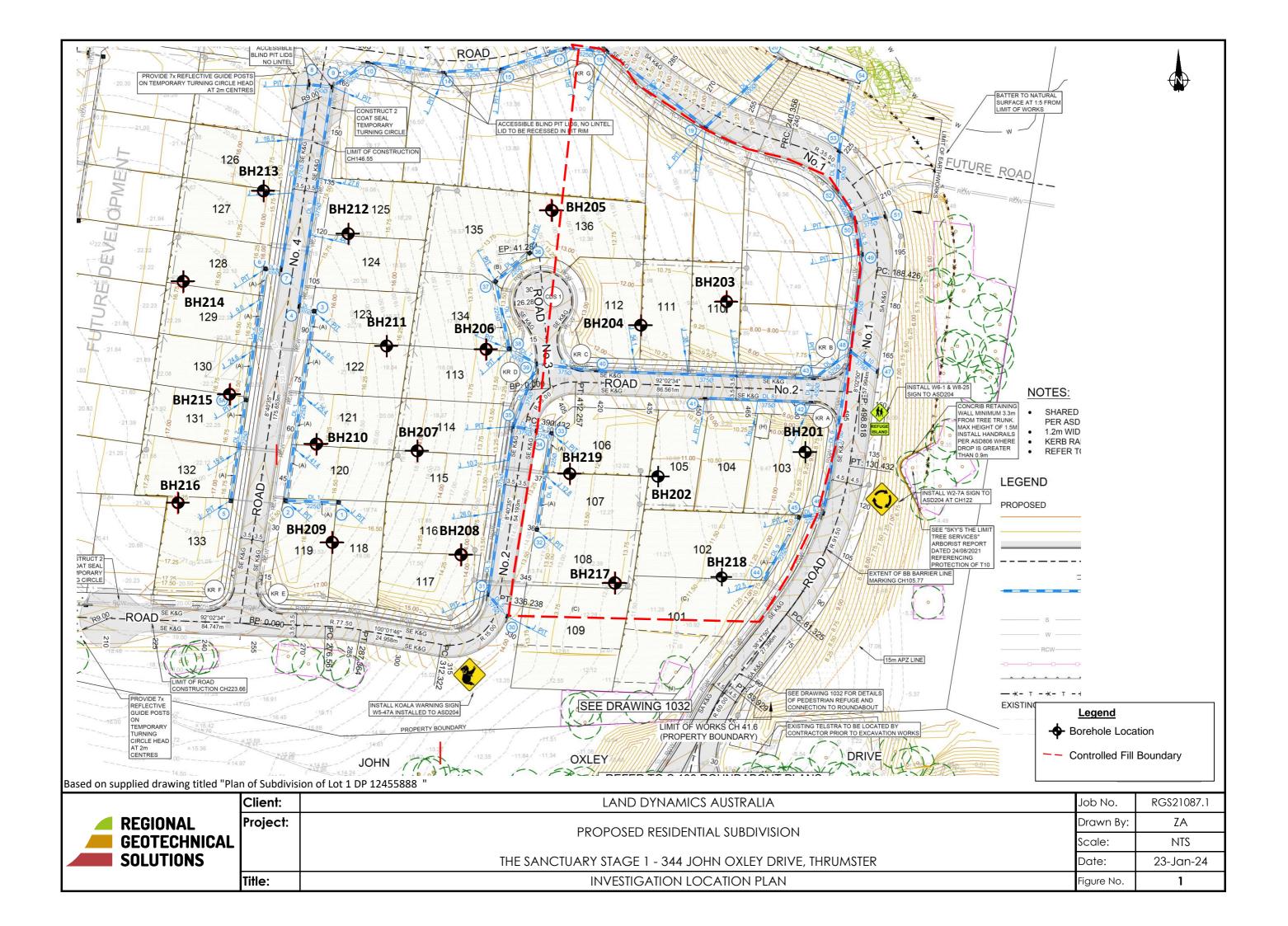
Alle

Steven Morton

Principal Geotechnical Engineer



Figures





Appendix A Results of Field Investigations



CLIENT: Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary JOB NO: RGS21087.1

BOREHOLE NO: BH201

1 of 1

GC

PAGE:

LOGGED BY:

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 103 DATE: 20/12/23

| | | TYPE: OLE DIAM | | Ite Mour : 120 n | | _ | EASTING: CLINATION: 90° NORTHING: | 485517 6519705 | | SURF. | | RL: | 9.8 m AHD |
|--------|-----------------------------------|---|-------------|---|------------------------------------|----------------------------|---|--|---|------------------------|--|--|---|
| | Dril | ling and San | npling | | | | Material description and profile information | | | | Fiel | d Test | |
| METHOD | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRIPTION: Soil type, plasticity characteristics,colour,minor component | | MOISTURE | CONSISTENCY DENSITY | Test Type | Result | Structure and additional observations |
| AD/T | tered | | | | | ML | FILL: Sandy SILT, brown, sand, fine to med grained | dium | D | | | | FILL/TOPSOIL |
| | Not Encountered | | 9. <u>5</u> | - - 0.5_ | | CI | 6.15m FILL: Silty CLAY, medium plasticity, pale by pale grey mottling | rown with | M < Wp | Fr / VSt | HP | 250 | FILL-CLAY |
| | | | 9. <u>0</u> | - - | | CI | 0.70m Sandy CLAY: Medium plasticity, red, trace brown | s of pale | _ | | HP | 300 | RESIDUAL |
| | | | 8. <u>5</u> | - - | | | | | | | HP | 280 | |
| | | | | 1.5 | <u> :</u> | | 1.50m Hole Terminated at 1.50 m | | | | | | |
| | SEND: | | 7. <u>5</u> | 2.0 <u> </u> | | d Toete | | Consister | | | | CS (KPa |) Moisture Condition |
| Wat | t <u>er</u> Wat (Dat Wat | ter Level te and time sl ter Inflow ter Outflow anges | hown) | U ₅₀ CBR E ASS B | 50mm Bulk s Enviro Acid S | Diame ample f nmenta | ter tube sample for CBR testing al sample Soil Sample | VS V S S F F St S VSt V H H | ery Soft oft irm tiff ery Stiff lard riable | | 25 50 10 20 >4 | 25 5 - 50 0 - 100 00 - 200 00 - 400 400 | D Dry M Moist W Wet W _p Plastic Limit W _L Liquid Limit |
| | G tra De | radational or ansitional stra efinitive or dis rata change | ata | Field Test PID DCP(x-y) HP | Photoi Dynan | nic pen | on detector reading (ppm) etrometer test (test depth interval shown) meter test (UCS kPa) | <u>Density</u> | V L ME D VD | Lo D D | ery Lo oose lediun ense ery De | n Dense | Density Index <15% Density Index 15 - 35% Density Index 35 - 65% Density Index 65 - 85% Density Index 85 - 100% |



CLIENT:

Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary JOB NO: RGS21087.1

BOREHOLE NO: BH202

1 of 1

GC

PAGE:

LOGGED BY:

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 105 DATE: 20/12/23

DRILL TYPE: RGS Ute Mounted Drill Rig **EASTING:** 485477 m SURFACE RL: 11.0 m

| | | YPE: OLE DIAM | | te Mour 120 n | | _ | EASTING: CLINATION: 90° NORTHING: | 485477 6519693 | | SURF. DATU | | RL: | 11.0 m AHD |
|--------|---------------------------|--|-----------------------------|---|---------------------------------------|--------------------------|---|-------------------------|--|------------------------|--|--|---|
| | Drill | ing and San | npling | | | | Material description and profile information | | | | Fiel | d Test | |
| МЕТНОD | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRIPTION: Soil type, plasticity characteristics, colour, minor component | | MOISTURE | CONSISTENCY DENSITY | Test Type | Result | Structure and additional observations |
| AD/T | tered | | | | | ML | FILL: Sandy SILT, dark brown, sand, fine to grained | o medium | D | | | | FILL/TOPSOIL |
| | Not Encountered | 0.40m U50 0.70m | - - 10. <u>5</u> - | - - 0.5_ | X X X X X X X X X X | СН | Sandy Silty CLAY: Medium to high plastic red with pale brown mottling, traces of grave grained, rounded | | M < Wp | Fr / VSt | HP | 250 | RESIDUAL |
| | | | - 10.0 - - | 1.0_ | x : | СН | 1.00m Silty CLAY: Medium to high plasticity, pale pale grey/white mottling, traces of rock fabr | | M ∨ W | St | HP | 150 | EXTREMELY WEATHERED SLATE |
| | | | 9.5 - | 1.5 | X | | 1.50m Hole Terminated at 1.50 m | | | | | | |
| | | | 9. <u>0</u> - | 2.0_ - | | | | | | | | | |
| | | | - 8. <u>5</u> - | 2.5_ - | | | | | | | | | |
| Wate | Wat (Dat Wat Wat | er Level e and time st er Inflow er Outflow | nown) | Notes, Sar U ₅₀ CBR E ASS B | 50mm Bulk s Enviro Acid S | Diame ample nmenta | ter tube sample for CBR testing al sample Soil Sample | S S F Fi St S VSt V H H | ery Soft oft irm tiff ery Stiff ard | | 50 10 20 | CS (kPa 25 5 - 50 0 - 100 00 - 200 00 - 400 | D Dry M Moist W Wet D W _p Plastic Limit |
| Strat | tra — De | inges radational or ansitional stra efinitive or dis rata change | ita | Field Test PID DCP(x-y) HP | Photoi Dynan | nic pen | on detector reading (ppm) etrometer test (test depth interval shown) ometer test (UCS kPa) | Fb Fi Density | riable V L ME D VD | Lo D D | ery Lo oose lediun ense ery De | n Dense | Density Index <15% Density Index 15 - 35% e Density Index 35 - 65% Density Index 65 - 85% Density Index 85 - 100% |



CLIENT:

Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary JOB NO:

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 110 DATE: 20/12/23

BOREHOLE NO: BH203

1 of 1

GC

RGS21087.1

PAGE:

LOGGED BY:

| | | TYPE: IOLE DIAN | | te Mour 120 n | | _ | EASTING: CLINATION: 90° NORTHIN | : 48550 G : 651975 | | SURF. | | RL: | 9.3 m AHD |
|--|---------------------------|--|---------------|-------------------------------------|----------------------------|--------------------------|---|------------------------------|---|---------------------|--|--|---|
| | Dri | illing and Sar | mpling | | | | Material description and profile information | n | | | Fiel | d Test | |
| METHOD | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRIPTION: Soil type, plasti characteristics,colour,minor compon | | MOISTURE | CONSISTENCY DENSITY | Test Type | Result | Structure and additional observations |
| AD/T | Not Encountered | | - | - | | CI | FILL: Sandy CLAY, medium plasticity, d traces of gravel 0.15m FILL: Silty CLAY, medium plasticity, pale | | M > W | Fr Fr/ | | | FILL-CLAY |
| | Not En | 0.30m | 9. <u>0</u> | - - | | | brown/pale red, traces of white | | | VSt | HP | 280 | |
| | | U50 0.70m | - | 0. <u>5</u> | | | | | | | HP | 300 | |
| 30 | | 0.70111 | 8. <u>5</u> | - - - | | СН | 0.80m Sandy CLAY: Medium to high plasticity, pale brown mottling, traces of gravel, fine subangular | brown with grained, | | | HP | 350 | RESIDUAL |
| Tool - DGD Lb: RG 2.00.3 2022-03-03 Pg: RG 2.00.0 2021-06-30 | | | - - 8.0 | 1. <u>0</u> | | | | | | | | | |
| b: RG 2:00:3 2022-03-03 | | | - 0. <u>0</u> | - 1.5 | | | 1.50m | | | | HP | 390 | |
| n 050 - loc | | | - | _ | | | Hole Terminated at 1.50 m | | | | | | |
| 10.03.00.09 Datgel Lab and in Situ To | | | 7. <u>5</u> | - - - | | | | | | | | | |
| 024 11:04 10:03:00:09 1 | | | - | 2.0_ | | | | | | | | | |
| Curawinghiess 30/1/20 | | | 7. <u>0</u> | - - - | | | | | | | | | |
| | | | - | 2. <u>5</u> | | | | | | | | | |
| IT RGS21087.1 BH200 SERIES LOGS.GPJ | | | 6. <u>5</u> | - - - | | | | | | | | | |
| LE: LEST Ma | GEND: | <u> </u> : | | Notes, Sar | nples an | d Tests | <u> </u> | <u>Consist</u> VS | ency Very Soft | | _ | CS (kPa 25 | Moisture Condition D Dry |
| G NON-CORED BOREH | Va (Da – Wa ■ Wa | ater Level ate and time s ater Inflow ater Outflow | hown) | U₅o CBR E ASS B | Bulk s Enviro Acid S | ample f nmenta | ter tube sample for CBR testing Il sample Soil Sample | S F St VSt H | Soft Firm Stiff Very Stiff Hard | | 25 50 10 20 | 5 - 50 0 - 100 00 - 200 00 - 400 400 | M Moist W Wet W _p Plastic Limit |
| RG 2:00:3 LIB. GLB Log R | ([| langes Gradational or ransitional stra Definitive or dis strata change | ata | Field Test PID DCP(x-y) HP | Photoi Dynan | nic pen | on detector reading (ppm) etrometer test (test depth interval shown) ometer test (UCS kPa) | Fb Density | Friable V L MC D VC | Lo D D | ery Lo oose lediun ense ery Do | n Dense | Density Index <15% Density Index 15 - 35% Density Index 35 - 65% Density Index 65 - 85% Density Index 85 - 100% |



CLIENT: Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 111/112 DATE: 20/12/23

BOREHOLE NO: BH204

1 of 1

GC

RGS21087.1

PAGE:

JOB NO:

LOGGED BY:

RGS Ute Mounted Drill Ria SURFACE RL: DRILL TYPE: 10.8 m EASTING: 485467 m

| | | YPE: OLE DIAM | | Ite Mour : 120 n | | _ | EASTING: CLINATION: 90° NORTHING: | 485467 6519751 | | OATU | | RL: | 10.8 m AHD |
|--------|---------------------------|--|--------------|---|------------------------------------|--------------------------|---|------------------------|--|------------------------|---|---|---|
| | Drill | ling and San | npling | | | | Material description and profile information | | | | Field | d Test | |
| METHOD | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRIPTION: Soil type, plasticit characteristics,colour,minor componen | | MOISTURE | CONSISTENCY DENSITY | Test Type | Result | Structure and additiona observations |
| AD/T | tered | | | | | ML | FILL: Sandy SILT, dark brown, traces of gr grained, subangular | avel, fine | D | | | | FILL/TOPSOIL |
| | Not Encountered | | 10. <u>5</u> | - 0.5 | | CI | 0.15m FILL: Silty CLAY, medium plasticity, pale gbrown, traces of gravel, fine to medium graisubangular | rey/pale ned, | M < Wp | Fr / VSt | HP | 250 | FILL-CLAY |
| | | | 10. <u>0</u> | - - - - - | | СН | o.70m FILL: Sandy CLAY, medium to high plastic brown, traces of white/yellow sand, fine to regrained, traces of gravel, fine grained, suba | nedium | | | HP | 300 | |
| | | | 9. <u>5</u> | 1.0 | | CI | 1.00m FILL: Silty CLAY, medium plasticity, pale ribrown with white mottling | ed/pale | | | | | |
| | | | 9. <u>0</u> | - 1. <u>5</u> - - - - | | CH | 1.50m Sandy CLAY: Medium plasticity, red, sand medium grained | , fine to | | | | | RESIDUAL |
| | | | | 2.0 | | | 2.00m Hole Terminated at 2.00 m | | | | | | |
| | | | 8. <u>5</u> | - - - | _ | | | | | | | | |
| | | | | 2.5_ | _ | | | | | | | | |
| | | | 8.0 | - - - | - | | | | | | | | |
| Vate | Wat (Dat Wat Wat | ter Level te and time si ter Inflow ter Outflow | hown) | Notes, San U ₅₀ CBR E ASS B | 50mm Bulk s Enviro Acid S | Diame ample nmenta | eter tube sample for CBR testing al sample Soil Sample | S S F F St S VSt N H F | Very Soft Soft Firm Stiff Very Stiff Hard | | 25 50 10 20 | CS (kPa 25 5 - 50 0 - 100 00 - 200 00 - 400 400 | D Dry M Moist W Wet W _p Plastic Limit |
| strat | tra — De | inges radational or ansitional stra efinitive or dis rata change | ata | Field Test PID DCP(x-y) HP | Photoi Dynan | nic pen | on detector reading (ppm) etrometer test (test depth interval shown) ometer test (UCS kPa) | Fb F | Friable V L MD D VD | Lo M De | ery Lo oose ediun ense ery De | n Dense | Density Index <15% Density Index 15 - 35% Density Index 35 - 65% Density Index 65 - 85% Density Index 85 - 100% |



CLIENT:

Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary JOB NO: RGS21087.1

BOREHOLE NO: BH205

1 of 1

GC

PAGE:

LOGGED BY:

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 136 DATE: 20/12/23

| | | TYPE: OLE DIAM | | Ite Mour | | _ | EASTING: CLINATION: 90° NORTHING: | 485445 | | SURF | | RL: | 13.0 m AHD |
|--|---------------------|--|--------------|-------------------------------------|------------------------------------|--------------------------|--|--|--|---------------------|--|--|---|
| Ë | | lling and San | | 12011 | | 114 | Material description and profile information | 0319773 | | JAIU | _ | d Test | AIID |
| METHOD | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRIPTION: Soil type, plasticity characteristics, colour, minor component | //particle s | MOISTURE | CONSISTENCY DENSITY | Test Type | Result | Structure and additional observations |
| AD/T | ntered | | | | | ML | FILL: Sandy SILT, dark brown, traces of grate to medium grained, subrounded | avel, fine | D | | | | FILL/TOPSOIL |
| | Not Encountered | 0.40m | | - - - | | CI | FILL: Silty CLAY, medium plasticity, pale brown/pale red | | M > M | Fr / VSt | HP | 250 | FILL-CLAY |
| | | U50 | 12. <u>5</u> | 0.5 | | СН | Sandy CLAY: Medium to high plasticity, ref fine to medium grained | d, sand, | - | | HP | 390 | RESIDUAL |
| | | 0.70m | | | | | | | | | HP | 400 | |
| 2007 0007 0007 | | | 12. <u>0</u> | 1.0_ | | | | | | | HP | 390 | |
| er n.e. 1000.000 Dagge Lab short four tour tour por x.00.3 sozzone nj. N.e. 100.0 s.e. 100.0 | | | 11.5 | 1.5 | x | CI | 1.30m Silty CLAY: Medium plasticity, pale grey/wl red mottling, traces of rock fabric | hite with | - | | HP | 370 | EXTREMELY WEATHERED SLATE |
| מן רפון פווים ווו כווים וכוים | | | | | | | Hole Terminated at 1.50 m | | | | | | |
| | | | 11. <u>0</u> | 2.0 | | | | | | | | | |
| | | | | - | | | | | | | | | |
| TOOK TOTAL TO TROOK THE TOOK OF THE TOOK O | | | 10. <u>5</u> | 2. <u>5</u> | | | | | | | | | |
| 5 | GEND: | | | Notes, Sar | nples an | d Tests | | Consister | ncy | | <u>U</u> | CS (kPa) |) Moisture Condition |
| - | . Wa (Da - Wa | ter Level te and time si ter Inflow ter Outflow anges | hown) | U₅₀ CBR E ASS B | 50mm Bulk s Enviro Acid S | Diame ample f | eter tube sample for CBR testing al sample Soil Sample | VS V S S F F St S VSt V H H | ery Soft oft irm tiff ery Stiff ard riable | | 25 50 10 20 | 25 5 - 50 0 - 100 00 - 200 00 - 400 400 | D Dry M Moist W Wet W _p Plastic Limit |
| | G | Gradational or ansitional stra definitive or dis trata change | ata | Field Test PID DCP(x-y) HP | Photoi Dynan | nic pen | on detector reading (ppm) etrometer test (test depth interval shown) ometer test (UCS kPa) | <u>Density</u> | V L ME D VD | Lo D | ery Lo oose lediun ense ery De | n Dense | Density Index <15% Density Index 15 - 35% Density Index 35 - 65% Density Index 65 - 85% Density Index 85 - 100% |



Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 113/134

CLIENT:

LOGGED BY:

PAGE:

DATE:

JOB NO:

BOREHOLE NO: BH206

1 of 1

20/12/23

GC

RGS21087.1

DRILL TYPE: RGS Ute Mounted Drill Rig **EASTING:** 485425 m SURFACE RL: 13.5 m

| DRI BOI | | OLE DIAM | ETER | : 120 n | nm | IN | CLINATION: 90° NORTHING | 6519739 | m [| DATU | М: | | AHD |
|-------------|-------------------|-------------------------------|-----------|-----------------|----------------|--------------------------|--|-------------|-------------------|------------------------|----------------|-----------------------|--|
| | Drill | ling and San | npling | | | | Material description and profile information | | | | Fiel | d Test | |
| METHOD | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRIPTION: Soil type, plastici characteristics,colour,minor componer | | MOISTURE | CONSISTENCY DENSITY | Test Type | Result | Structure and additional observations |
| AD/T | p _e | | | | | ML | FILL: Sandy SILT, dark brown, traces of g | | D | Fr | | | FILL/TOPSOIL |
| ⋖ | ounter | | | - | | | grained, subangular, sand, fine to medium | grained | × × | Fr / VSt | | | |
| | Not Encountered | | | | | СН | 0.25m Sandy Silty CLAY: Medium to high plastic white/pale grey with red mottling, traces of | city, | Ž | | | | EXTREMELY WEATHERED |
| | _ | | | - | | | white/pale grey with red mottling, traces or | TOCK IADIIC | | | | | OBTIL |
| | | | 13.0 | 0.5_ | × | | | | | | HP | 250 | |
| | | | | | <u>×</u> - | | | | | | | | |
| | | | | | <u>×</u> | | | | | | HP | 230 | |
| | | | | _ | X | | | | | | | | |
| | | | 12.5 | 1.0_ | × | | | | | | | | |
| | | | | | <u>x</u> | | | | | | | | |
| | | | | - | × | | | | | | | | |
| | | | 40.0 | | <u>×</u> | | | | | | | | |
| \dashv | | | 12.0 | 1.5 | - × | | Hole Terminated at 1.50 m | | | | | | |
| | | | | - | | | | | | | | | |
| | | | | - | | | | | | | | | |
| | | | | 1 - | | | | | | | | | |
| | | | 11.5 | 2.0 | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | - | | | | | | | | | |
| | | | | - | | | | | | | | | |
| | | | 11.0 | 2.5 | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | - | | | | | | | | | |
| | | | | - | | | | | | | | | |
| | | | | N-4 | | | | 10 | | | <u></u> | 20 // 5 | M.: |
| ate | END: <u>er</u> | | | Notes, Sar | | | | | ery Soft | | <2 | CS (kPa) 25 | D Dry |
| | | er Level | 20142) | U₅₀ CBR | Bulk s | ample f | ter tube sample or CBR testing | F F | oft irm | | 50 | 5 - 50) - 100 | M Moist W Wet |
| | | e and time sl er Inflow | iOWI) | E ASS | | | l sample Soil Sample | 1 | tiff ery Stiff | | | 00 - 200 00 - 400 | W _p Plastic Limit W _L Liquid Limit |
| | | er Outflow | | В | | Sample | • | н н | lard riable | | | 100 | |
| <u>ıral</u> | ta Cha | <u>inges</u> radational or | | Field Test | _ | | and the share and the section of the | Density | V | | ery Lo | ose | Density Index <15% |
| _ | | ansitional stra | | PID DCP(x-y) | | | on detector reading (ppm) etrometer test (test depth interval shown) | | L ME | | oose lediun | n Dense | Density Index 15 - 35% Density Index 35 - 65% |
| | | rata change | , alot | HP | - | | meter test (UCS kPa) | 1 | D | D. | ense | | Density Index 65 - 85% |



CLIENT:

Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary JOB NO: RGS21087.1

BOREHOLE NO: BH207

1 of 1

GC

PAGE:

LOGGED BY:

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 114/115 DATE: 20/12/23

SURFACE RL: DRILL TYPE: RGS Ute Mounted Drill Ria 485405 m 14.0 m EASTING:

| | | YPE: OLE DIAM | | Ite Mour 120 n | | _ | CLINATION: 90° | EASTING: NORTHING: | 485405 6519709 | | SURF/ | | RL: | 14.0 m AHD |
|--------|---------------------------|--|----------------------------------|---|------------------------------------|--------------------------|---|---|-------------------------|--|------------------------|---|-----------------------------|---|
| | | ling and San | | | | | Material description and | d profile information | | | | Field | Test | |
| METHOD | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRIPTIC characteristics,col | N: Soil type, plasticity our,minor component | | MOISTURE | CONSISTENCY DENSITY | Test Type | Result | Structure and additional observations |
| AD/T | intered | | - | - | | ML | FILL: Sandy SILT, da to medium grained, su | | avel, fine | D | Fr | | | FILL/TOPSOIL |
| | Not Encountered | | - - 13. <u>5</u> - - | 0.5 | | | SLATE: Pale grey/whi strength, foliated, reco | | o low | | | | | HIGHLY TO MODERATELY WEATHERED SLATE |
| | | | - 13. <u>0</u> - - | 1.0_ | | | Traces of pink | | | | | | | |
| | | | 12.5 - | 1.5 | | | 1.50m Hole Terminated at 1.5 | 50 m | | | | | | |
| | | | - 12. <u>0</u> - | 2.0_ | | | | | | | | | | |
| | | | - 11. <u>5</u> - - | 2. <u>5</u> | | | | | | | | | | |
| Wate | Wat (Dat Wat Wat | er Level te and time st ter Inflow ter Outflow | hown) | Notes, Sar U ₅₀ CBR E ASS B | 50mm Bulk s Enviro Acid S | Diame ample t | ter tube sample or CBR testing I sample Soil Sample | | S S F Fi St S VSt V H H | ery Soft oft irm tiff ery Stiff ard | | <25 25 - 50 - 100 | 50 100 - 200 - 400 | Moisture Condition D Dry M Moist W Wet W _p Plastic Limit W _L Liquid Limit |
| Stra | tra De | inges radational or ansitional stra efinitive or dis rata change | ata | Field Test PID DCP(x-y) HP | Photoi Dynan | nic pen | on detector reading (ppm) etrometer test (test depth interva meter test (UCS kPa) | al shown) | Fb Fi Density | riable V L ME D VD | Lo D De | ery Loose oose edium I ense ery Den | Dense | Density Index <15% Density Index 15 - 35% Density Index 35 - 65% Density Index 65 - 85% Density Index 85 - 100% |



CLIENT: Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary JOB NO: RGS21087.1

BOREHOLE NO: BH208

1 of 1

GC

PAGE:

LOGGED BY:

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 116/117 DATE: 20/12/23

DRILL TYPE: RGS Ute Mounted Drill Rig **EASTING:** 485414 m SURFACE RL: 14.0 m

| | | YPE: | | te Mour 120 n | | _ | EASTING: CLINATION: 90° NORTHING: | 485414 6519680 | | SURF. DATU | | RL: | 14.0 m AHD |
|--------|---------------------------|---|------------------------|-------------------------------------|---|--------------------------|--|------------------------|--|------------------------|--|---|---|
| | Drill | ling and San | npling | | | | Material description and profile information | | | | Fiel | d Test | |
| METHOD | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRIPTION: Soil type, plasticit characteristics,colour,minor componen | | MOISTURE | CONSISTENCY DENSITY | Test Type | Result | Structure and additional observations |
| AD/T | pe J | | | | | ML | FILL: Sandy SILT, dark brown, sand, fine t | o medium | D | Fr | | | FILL/TOPSOIL |
| A | Not Encountered | | - | - | | | grained | | M > W | Fr / VSt | HP | 220 | |
| | | 0.70m | 13. <u>5</u> | 0. <u>5</u> | X X X X X X | CI | Silty CLAY: Medium plasticity, pale red/wh traces of rock fabric | ite, | - | | HP | 250 | EXTREMELY WEATHERED SLATE |
| | | U50 1.00m | - - 13.0 | 1.0 | x | | | | | | HP | 200 | |
| | | | - | - | x _ x x x _ x x _ | | | | | | | 200 | |
| | | | 12.5 | 1.5 | <u>× </u> | | 1.50m | | | | | | |
| | | | - | | | | Hole Terminated at 1.50 m | | | | | | |
| | | | 12. <u>0</u> | 2.0_ | | | | | | | | | |
| | | | - 11. <u>5</u> - | 2. <u>5</u> | | | | | | | | | |
| I EC | ENID: | | - - - | | males - | ol Ta-4 | | Court | | | 170 | 00 (1-0 |) Majohura Candillia |
| _ ► | wat Wat (Dat Wat | er Level e and time sh er Inflow er Outflow unges | nown) | U ₅₀ CBR E ASS B | 50mm Bulk s Enviro Acid S | Diame ample nmenta | ter tube sample for CBR testing Il sample Soil Sample | S S F F St S VSt V H H | ery Soft oft irm tiff ery Stiff ard riable | | 25 50 10 20 | CS (kPa 25 5 - 50 0 - 100 00 - 200 100 - 400 | D Dry M Moist W Wet W _p Plastic Limit |
| | Gi tra De | radational or ansitional stra efinitive or dis rata change | ıta | Field Test PID DCP(x-y) HP | Photoi Dynan | nic pen | on detector reading (ppm) etrometer test (test depth interval shown) emeter test (UCS kPa) | Density | V L ME D VE | Lo D D | ery Lo oose lediun ense ery De | n Dense | Density Index <15% Density Index 15 - 35% Density Index 35 - 65% Density Index 65 - 85% Density Index 85 - 100% |



CLIENT:

Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary JOB NO: RGS21087.1

BOREHOLE NO: BH209

1 of 1

GC

PAGE:

LOGGED BY:

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 118/119 DATE: 20/12/23

| Drilling and Sampling Material description and profile information Field Total AMAPLES RE. DEPTH (m) Grave Material DESCRIPTION Soil type, plasticity/particle drawade fistes, colour, relief components Field Total AMAPLES RE. DEPTH (m) Grave Material DESCRIPTION Soil type, plasticity/particle drawade fistes, colour, relief components Description AMAPLES Material DESCRIPTION Soil type, plasticity/particle drawade fistes, colour, relief components Description AMAPLES Material DESCRIPTION Soil type, plasticity/particle drawade fistes, colour, relief components Description AMAPLES Material DESCRIPTION Soil type, plasticity/particle drawade fistes, colour, relief components Description AMAPLES Material DESCRIPTION Soil type, plasticity/particle drawade fistes, colour, relief components Description AMAPLES Material DESCRIPTION Soil type, plasticity/particle drawade fistes, colour, relief components Description AMAPLES Material DESCRIPTION Soil type, plasticity/particle drawade fistes, colour, relief components Description AMAPLES Material DESCRIPTION Soil type, plasticity/particle drawade fistes, colour, relief components Description AMAPLES Material DESCRIPTION Soil type, plasticity/particle drawade fistes, colour, relief components Description AMAPLES Material DESCRIPTION Soil type, plasticity/particle drawade fistes, colour, relief components Description AMAPLES Material DESCRIPTION Soil type, plasticity/particle drawade fistes, colour, relief components Description AMAPLES Material DESCRIPTION Soil type, plasticity/particle drawade fistes, colour, relief components Description AMAPLES Material DESCRIPTION Soil type, plasticity/particle drawade fistes, colour, relief components Description AMAPLES Material Description AMAPLES Material DESCRIPTION Soil type description AMAPLES Material Description AMAPLES Material DESCRIPTION Soil type description AMAPLES Material DESCRIPTION Soil drawade fistes, colour relief components AMAPLES Material DESCRIPTION Soil dr | | 16.5 m AHD | L: | | | SURF. | | | 485374 | EASTING: | CLINATION: | _ | | te Mour | | | | |
|--|---|--|-----------|-----------------|-------------------------|------------------------|--------------|---------------|----------------|---|---------------------|--------------------------|-----------------|-----------------|---------------------------------------|------------------|-------------|--------|
| Shaubles | | АПИ | Tost | | _ | JATU | n . | 1 111 | 00 1907 | | | IIN | 1111 | 120 11 | | | | |
| Mult | | | est | ieid | | | | $\overline{}$ | | ripuon and profile information | iviateriai de | z | | Ī | ipiirig | iiiy and San | ווחט | |
| Multiple Market | | Structure and add observation | Result | lest iype | Test Type | CONSISTENCY DENSITY | MOISTURE | MOISTURE | | | | CLASSIFICATION SYMBOL | GRAPHIC LOG | | | SAMPLES | WATER | METHOD |
| 15.5 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 | L | FILL/TOPSOIL | | | | Fr | D | \dagger | | / SILT, dark brown | | ML | | _ | - | | itered | AD/T |
| LEGEND: Water Level (Date and time shown) Water inflow Water inflow Water find Water Outflow Water find Water Outflow B B Bulk Sample B Bulk Sample Strata Changes Consistency UCS (kPa) Moisture Conditi D Dry W Weter Level S S Soft 25-50 M Moist F Firm 50-100 W Wet Strata Changes | | HIGHLY TO MODEF WEATHERED SLAT | | | | | | | o low //EL | e grey/white, inferred very low hated, recovered as Sandy GRA | SLATE: strength, | | | 1.0 | - - - 15. <u>5</u> - - | | Not Encount | |
| LEGEND: Water Level (Date and time shown) Water Inflow Water Inflow Water Inflow Water Outflow B B Bulk sample B Bulk Sample Strata Changes Consistency UCS (kPa) Moisture Conditi | | | \dagger | | | | | | | ated at 1.50 m | | | | 1.5 | 13.0 | | | |
| Water VS Very Soft <25 | ondition |) Moisture Conditio | (kPa) | UCC | | | V | ency | Consiste | | | d Tests | mples an | 2.5_ | - - 14. <u>0</u> - - | | END: | |
| Water Level (Date and time shown) Water Inflow Water Outflow B Bulk Sample B Bulk Sample S Soft S Soft S Soft S Soft S Soft S Soft W Wet F Firm S 0 - 100 W Wet St Stiff 100 - 200 W _p Plastic Lively VSt Very Stiff S Water Level F Firm S 0 - 100 W Wet Liquid Lively F Finable | | | (KPA) | _ | | | | | | | <u>!</u> | u rests | npies an | votes, Sar | ! | | | |
| (Date and time shown) ► Environmental sample ASS Acid Sulfate Soil Sample Water Outflow Strata Changes Field Texts | ist | M Moist | | | | | t | Soft | s s | | | | | | | ter Level | | |
| ✓ Water Outflow B Bulk Sample H Hard >400 Strata Changes Fb Friable | stic Limit | W _p Plastic Lin | - 200 | 100 | | | f | Stiff | St S | | ıl sample | nmenta | Enviro | E | nown) | | • | |
| Strata Changes Fb Friable Page 11 Tests Page 12 Tests Page 12 Tests Page 13 Tests Page 13 Tests Page 14 Tests Page | uid Limit | W _∟ Liquid Lim | | | | | - | - | | | Soil Sample | | | | / | | | |
| Gradational or Field Tests Persity V Very Loose Density Index < 15 | -450′ | | | | | | able | Friab | Fb I | | | | | | | | | 2 |
| transitional strata Definitive or distict strata change PID Photoionisation detector reading (ppm) L Loose Density Index 15 DCP(x-y) Dynamic penetrometer test (test depth interval shown) MD Medium Dense Density Index 35 D Dense Density Index 65 | ex 15 - 35% ex 35 - 65% ex 65 - 85% | Density Index <159 Density Index 15 - Density Index 35 - Density Index 65 - Density Index 85 - | ense) | se ium se | .oose /ledic Dens | L N D | L ME D | • | <u>Density</u> | epth interval shown) | etrometer test (tes | nic pen | Photoi Dynan | PID DCP(x-y) | ıta | efinitive or dis | tra — De | |



CLIENT:

Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary JOB NO: RGS21087.1

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 120/121 DATE: 20/12/23

BOREHOLE NO: BH210

1 of 1

GC

PAGE:

LOGGED BY:

| | | TYPE: HOLE DIAM | | te Mour 120 n | | _ | EASTING: CLINATION: 90° NORTHING: | 485370 6519707 | | SURF. | | RL: | 16.5 m AHD |
|--|---------------------|---|---------------------------------------|-------------------------------------|--|-----------------------------|--|-----------------------------|---|------------------------|--|--|---|
| | Dr | illing and San | npling | | | | Material description and profile information | | | | Fiel | d Test | |
| METHOD | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRIPTION: Soil type, plasticity characteristics,colour,minor component | | MOISTURE | CONSISTENCY DENSITY | Test Type | Result | Structure and additional observations |
| AD/T | Intered | | - | - | | ML | FILL: Sandy SILT, dark brown, sand, fine to 0.10m grained Sandy Silty CLAY: Medium to high plastic | | D | Fr Fr/ | | | FILL/TOPSOIL EXTREMELY WEATHERED |
| | Not Encountered | | - - - 16.0 | 0.5 | | . | red with brown/red mottling, traces of rock f | | M < W _P | VSt | HP | 210 | SLATE |
| | | U50 0.70m | - | | | | | | | | HP | 220 | |
| .3 2022-03-03 PT: KG 2.00.0 2021-00-00 | | | 15. <u>5</u> - - | 1.0_ - | | | | | | | | | |
| LD: KG Z.vv. | | | 15.0 | 1.5 | - - | | 1.50m | | | | | | |
| RG Z 00.3 LBI CLEL LOG RON NOWCORED BORENDLE - TEST PTT RGSZNBK/Y BEAGOU SERVES LOGS GAS 42 44278Wingheise> 500/2017 RGS 110 300 300 300 300 300 300 300 300 300 | | | - - - 14. <u>5</u> - - | 2.0_ | | | Hole Terminated at 1.50 m | | | | | | |
| PIT RGSZ1087.1 Brzuu sekies LOGS.GFJ AAJRAWIIGT | | | - 14. <u>0</u> - - - | 2.5_ | | | | | | | | | |
| LEG Wa | GEND ter |]): | <u> </u> | Notes, Sar | | | | | ery Soft | | <2 | CS (kPa 25 | D Dry |
| Str | Z Wa (Da – Wa | ater Level ate and time sl ater Inflow ater Outflow <u>nanges</u> | nown) | U₅ CBR E ASS B | Bulk sa Enviro Acid S Bulk S | ample nmenta ulfate : | ter tube sample for CBR testing il sample Soil Sample | F F St S VSt V H H | oft irm stiff ery Stiff lard iriable | | 50 10 20 >4 | 5 - 50 0 - 100 00 - 200 00 - 400 100 | W _L Liquid Limit |
| KG Z.W.3 LIB. GLB LO | ((| Gradational or transitional stra Definitive or dis strata change | ıta | Field Test PID DCP(x-y) HP | Photoi Dynan | nic pen | on detector reading (ppm) etrometer test (test depth interval shown) meter test (UCS kPa) | <u>Density</u> | V L ME D VD | Lo D | ery Lo oose lediun ense ery De | n Dense | Density Index <15% Density Index 15 - 35% Density Index 35 - 65% Density Index 65 - 85% Density Index 85 - 100% |



Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary

PAGE: JOB NO:

DATE:

1 of 1 RGS21087.1

TEST LOCATION: Lot 122/123

CLIENT:

SITE LOCATION: John Oxley Drive, Port Macquarie

LOGGED BY: GC

BOREHOLE NO: BH211

20/12/23

DRILL TYPE:

485394 m SURFACE RL:

16.3 m

RGS Ute Mounted Drill Rig EASTING:

| | BOI | REH | OLE DIAM | IETER: | 120 m | nm | IN | CLINATION: 90° NORTHING: | 6519736 | m [| DATU | M: | | AHD |
|---|---------------|---------------------------|---|------------------------|--------------------------------------|------------------------------------|--------------------------|---|--------------------|---|------------------------|---|--|---|
| | | Drill | ling and San | npling | | | | Material description and profile information | | | | Field | d Test | |
| | METHOD | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRIPTION: Soil type, plasticit characteristics, colour, minor component | | MOISTURE | CONSISTENCY DENSITY | Test Type | Result | Structure and additional observations |
| | AD/T | red | | - | | XX | ML | FILL: Sandy SILT, dark brown, traces of gr to medium grained | avel, fine | D | Fr | | | FILL/TOPSOIL |
| | | Not Encountered | | - 16. <u>0</u> - | 0.5 | X | CI | Silty CLAY: Medium plasticity, pale red/pa traces of rock fabric | le grey, | M < W _P | Fr / VSt | HP | 250 | EXTREMELY WEATHERED SLATE |
| 30 | | | | - 15.5_ - | - - - - | | | SLATE: Pale orange/pale brown, inferred v low strength, recovered as Sandy SILT | ery low to | | | | | HIGHLY TO MODERATELY WEATHERED SLATE |
| 00/1/2024 11:05 10:03:00:09 Datgel Lab and In Situ Tool - DGD Lib: RG 2:00:3 2022-03-03 Prj: RG 2:00:0 2021-06-30 | | | | - 15.0_ - | 1.0_ - - - | | | | | | | | | |
| D Lib: R | | | | | 1.5 | | | 1.50m Hole Terminated at 1.50 m | | | | | | |
| atgel Lab and In Situ Tool - DG | | | | - 14.5_ | _ _ _ | | | | | | | | | |
| ^ | | | | - - 14.0_ | 2.0_ - - | | | | | | | | | |
| RGS21087.1 BH200 SERIES LOGS.GPJ < <drawingfile></drawingfile> | | | | - - 13. <u>5</u> | 2.5_ - - - | | | | | | | | | |
| PIT RGS. | | | | _ | _ | | | | | | | | | |
| RG NON-CORED BOREHOLE - TEST PIT | _ ⊢ | wat Wat (Dat Wat | er Level e and time si er Inflow er Outflow | hown) | U ₅₀ CBR E ASS | 50mm Bulk s Enviro Acid S | Diame ample t | ter tube sample or CBR testing I sample Soil Sample | S S F F St S VSt V | ncy Yery Soft Soft Firm Stiff Yery Stiff Hard | | 25 50 10 20 | CS (kPa 25 5 - 50 0 - 100 00 - 200 00 - 400 | D Dry M Moist W Wet W _p Plastic Limit |
| RG 2.00.3 LIB.GLB Log | | Gi tra De | radational or ansitional stra efinitive or dis rata change | ata - | Field Tests PID DCP(x-y) HP | Photoi Dynan | nic pen | on detector reading (ppm) etrometer test (test depth interval shown) meter test (UCS kPa) | Density | V L MD D VD | Lo Mo De | ery Lo oose edium ense ery De | n Dense | Density Index <15% Density Index 15 - 35% Density Index 35 - 65% Density Index 65 - 85% Density Index 85 - 100% |



CLIENT:

Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary JOB NO: RGS21087.1

BOREHOLE NO: BH212

1 of 1

GC

PAGE:

LOGGED BY:

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 124/125 DATE: 20/12/23

DRILL TYPE: RGS Ute Mounted Drill Rig **EASTING:** 485381 m SURFACE RL: 15.8 m

| | | YPE: OLE DIAM | | te Moun 120 m | | _ | EASTING: CLINATION: 90° NORTHING: | 485381 : 6519769 | | SURF/ DATU | | RL: | 15.8 m AHD |
|--------|--------------------|---|------------------------|--|------------------------------------|--------------------------|---|-----------------------------|--|------------------------|---|--|---|
| | Drill | ling and Sar | npling | | | | Material description and profile information | | | | Fiel | d Test | |
| METHOD | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRIPTION: Soil type, plastici characteristics,colour,minor componer | | MOISTURE | CONSISTENCY DENSITY | Test Type | Result | Structure and additional observations |
| AD/T | p _e | | - | | | ML | FILL: Sandy SILT, pale brown | | D | Fr | | | FILL/TOPSOIL |
| A | Not Encountered | | - 15. <u>5</u> - | 0.5 | | СН | Sandy CLAY: Medium plasticity, red, sand medium grained, traces of pale brown/white | | M < W _P | Fr / VSt | HP | 250 | RESIDUAL |
| | | | - 15. <u>0</u> - | - - - - | | | | | | | HP | 300 | |
| | | | - - 14. <u>5</u> | 1.0 | | | | | | | HP | 300 | |
| | | | | 1.5 | | | 1.50m Hole Terminated at 1.50 m | | | | | | |
| | | | - | - | | | Tole Tellimated at 1.50 III | | | | | | |
| | | | 14. <u>0</u> | - - - | | | | | | | | | |
| | | | - 13. <u>5</u> | 2.0_ | | | | | | | | | |
| | | | - | 2.5 | | | | | | | | | |
| | | | - - 13.0 | | | | | | | | | | |
| | | | - | - | | | | 1.6 | | | | | |
| Wate | Wat (Dat Wat | ter Level te and time si ter Inflow ter Outflow | hown) | Notes, Sar U₅ CBR E ASS B | 50mm Bulk s Enviro Acid S | Diame ample t | ter tube sample or CBR testing I sample Soil Sample | S S F F St S VSt V | ncy /ery Soft Soft Firm Stiff /ery Stiff lard Friable | | <2 25 50 10 20 | CS (kPa 25 5 - 50 0 - 100 00 - 200 00 - 400 | D Dry M Moist W Wet D W _p Plastic Limit |
| | Gi tra De | radational or ansitional stra efinitive or dis rata change | ata | Field Tests PID DCP(x-y) HP | Photoi Dynan | nic pen | on detector reading (ppm) etrometer test (test depth interval shown) meter test (UCS kPa) | Density | V L ME D VD | Lo M D | ery Lo oose ediun ense ery De | n Dense | Density Index <15% Density Index 15 - 35% Density Index 35 - 65% Density Index 65 - 85% Density Index 85 - 100% |



Field Tests

Photoionisation detector reading (ppm)

Hand Penetrometer test (UCS kPa)

Dynamic penetrometer test (test depth interval shown)

PID

DCP(x-y)

HP

Gradational or

strata change

transitional strata

Definitive or distict

ENGINEERING LOG - BOREHOLE

Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary

Sanctuary JOB NO:

BOREHOLE NO: BH213

1 of 1

20/12/23

RGS21087.1

PAGE:

DATE:

SITE LOCATION: John Oxley Drive, Port Macquarie LOGGED BY: GC

TEST LOCATION: Lot 126/127

DRILL TYPE: RGS Ute Mounted Drill Rig **EASTING:** 485358 m SURFACE RL: 16.0 m **BOREHOLE DIAMETER:** 120 mm INCLINATION: 90° **NORTHING:** 6519786 m DATUM: AHD Field Test Drilling and Sampling Material description and profile information CLASSIFICATION SYMBOL CONSISTENCY DENSITY MOISTURE CONDITION GRAPHIC LOG Structure and additional **Fest Type** METHOD WATER Result RL DEPTH MATERIAL DESCRIPTION: Soil type, plasticity/particle SAMPLES (m) (m) characteristics, colour, minor components FILL/TOPSOIL AD/T CL FILL: Sandy CLAY, low plasticity, dark brown Fr Encountered RESIDUAL СН Sandy CLAY: Medium to high plasticity, red, sand, fine to medium grained ğ 450 HP Fr/H 15.5 HP 470 15.0 HP 450 14.5 1.50n Hole Terminated at 1.50 m 14.0 2.0 13.5 2.5 LEGEND: UCS (kPa) **Moisture Condition** Notes, Samples and Tests Consistency Very Soft VS <25 D Dry Water S 25 - 50 Moist U₅₀ 50mm Diameter tube sample Soft М Water Level Bulk sample for CBR testing CBR F Firm 50 - 100 W Wet (Date and time shown) Plastic Limit F Environmental sample St Stiff 100 - 200 W. Water Inflow Acid Sulfate Soil Sample Very Stiff ASS VSt 200 - 400 Liquid Limit W, Н ■ Water Outflow В **Bulk Sample** Hard >400 Fb Friable Strata Changes

Density

Very Loose

Medium Dense

Loose

Dense

Very Dens

MD

VD

D

Density Index <15%

Density Index 15 - 35%

Density Index 35 - 65%

Density Index 65 - 85%

Density Index 85 - 100%



CLIENT: Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary JOB NO: RGS21087.1

BOREHOLE NO: BH214

1 of 1

GC

PAGE:

LOGGED BY:

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 128/129 DATE: 20/12/23

| | | TYPE: OLE DIAM | | te Mour 120 m | | _ | EASTING: CLINATION: 90° NORTHING: | 485340 6519754 | | SURF. DATU | | RL: | 16.8 m AHD |
|-------------|---------------------------------|---|------------------------|---|------------------------------------|--------------------------|---|-------------------------------------|---|------------------------|--|---------|---|
| L | Dril | ling and San | npling | | | | Material description and profile information | | | | Fiel | d Test | |
| МЕТНОБ | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRIPTION: Soil type, plasticity characteristics, colour, minor component | | MOISTURE | CONSISTENCY DENSITY | Test Type | Result | Structure and additional observations |
| AD/T | Encountered | | - | _ | | CL | FILL: Sandy CLAY, low plasticity, dark bro | | ν × × | Fr | | | FILL/TOPSOIL |
| | Not Enco | 0.30m | 16. <u>5</u> | _ - - | | CH | Sandy CLAY: Medium to high plasticity, ye brown, sand, fine to medium grained, traces fabric | | | Fr / VSt | HP | 300 | EXTREMELY WEATHERED DOLERITE |
| | | U50 | - | 0.5_ | | | | | | | HP | 250 | |
| | | 0.70m | 16. <u>0</u> | - - - | | | | | | | HP | 230 | |
| | | | - - | - 1. <u>0</u> | | | | | | | | | |
| LEG Wate | | | 15. <u>5</u> | - - - - - | | | | | | | | | |
| | | | - | 1.5 | | | 1.50m | | | | | | |
| | | | - - 15.0_ | - - - | | | Hole Terminated at 1.50 m | | | | | | |
| | | | - | 2.0_ | | | | | | | | | |
| | | | 14. <u>5</u> | - | | | | | | | | | |
| | | | - | 2. <u>5</u> | | | | | | | | | |
| | | | - 14. <u>0</u> - | - - - | | | | | | | | | |
| LEG | END: | | - | Notes, Sar | nples an | d Tests | | Consister | ncy | | U | CS (kPa | Moisture Condition |
| Wat | er Wat (Dat Wat Wat | ter Level te and time si ter Inflow ter Outflow anges | hown) | U _{so} CBR E ASS B | 50mm Bulk s Enviro Acid S | Diame ample t | ter tube sample or CBR testing I sample Soil Sample | VS V S S F F St S VSt V | Yery Soft Soft Firm Stiff Yery Stiff Hard Friable | | <2 25 50 10 20 | | D Dry M Moist W Wet W _p Plastic Limit |
| | G tra D | radational or ansitional stra efinitive or dis rata change | ata | Field Tests PID DCP(x-y) HP | Photoi Dynan | nic pen | on detector reading (ppm) etrometer test (test depth interval shown) meter test (UCS kPa) | Density | V L ME D VD | Lo M D | ery Lo oose lediun ense ery De | n Dense | Density Index <15% Density Index 15 - 35% Density Index 35 - 65% Density Index 65 - 85% Density Index 85 - 100% |



CLIENT:

Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary JOB NO: RGS21087.1

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 130/131 DATE: 20/12/23

BOREHOLE NO: BH215

1 of 1

GC

PAGE:

LOGGED BY:

| | | ΓΥΡΕ: OLE DIAM | | te Mour 120 n | | _ | EASTING: CLINATION: 90° NORTHING: | 485345 6519726 | | SURF. | | RL: | 16.8 m AHD |
|------------------------------------|-----------------|--|--------------|---|--------------------------|--------------------------|--|------------------------|---|---------------------|--|---|---|
| | Dril | ling and San | npling | | | | Material description and profile information | | | | Fiel | d Test | |
| METHOD | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRIPTION: Soil type, plasticity characteristics,colour,minor component | | MOISTURE | CONSISTENCY DENSITY | Test Type | Result | Structure and additional observations |
| AD/T | ntered | | - | - | | ML | FILL: Sandy SILT, dark brown, traces of gragarined, subangular | avel, fine | D | Fr | | | FILL/TOPSOIL |
| | Not Encountered | | 16. <u>5</u> | - - 0.5_ | | СН | Sandy CLAY: Medium plasticity, pale brow traces of rock fabric | n/yellow, | M < Wp | Fr / VSt | HP | 210 | EXTREMELY WEATHERED DOLERITE |
| 00 | | | 16. <u>0</u> | - - - - | | | | | | | HP | 200 | |
| EC Wat VI | | | 15. <u>5</u> | 1.0 | | | | | | | HP | 220 | |
| 3 | | | | 1.5 | . x | | Hole Terminated at 1.50 m | | | | | | |
| 9 Daigel Lab and III oldd 1001 - L | | | 15. <u>0</u> | - - - - - | | | | | | | | | |
| 200.00.00 | | | 14. <u>5</u> | 2.0_ - - | | | | | | | | | |
| | | | | 2.5_ | | | | | | | | | |
| 10 TH 1005 100 10 100 00 | | | 14.0 | - - - | | | | | | | | | |
| Wat | Wat (Dat | ter Level te and time sl ter Inflow ter Outflow | hown) | Notes, Sar U ₅₀ CBR E ASS B | 50mm Bulk s Enviro | Diame ample nmenta | eter tube sample for CBR testing al sample Soil Sample | S S F F St S VSt V H F | rery Soft fort form Stiff fery Stiff lard friable | | 25 50 10 20 | CS (kPa 25 5 - 50 0 - 100 00 - 200 00 - 400 400 | D Dry M Moist W Wet W _p Plastic Limit |
| | G tra D | radational or ansitional stra efinitive or dis trata change | ata | Field Test PID DCP(x-y) HP | Photoi Dynan | nic pen | on detector reading (ppm) etrometer test (test depth interval shown) ometer test (UCS kPa) | Density | V L ME D VD | Lo D D | ery Lo oose lediun ense ery De | n Dense | Density Index <15% Density Index 15 - 35% Density Index 35 - 65% Density Index 65 - 85% Density Index 85 - 100% |



CLIENT:

Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary JOB NO: RGS21087.1

BOREHOLE NO: BH216

1 of 1

GC

PAGE:

LOGGED BY:

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 132/133 DATE: 20/12/23

| | | YPE: OLE DIAM | | te Mour | | _ | EASTING: CLINATION: 90° NORTHING: | 485341 | | SURF | ACE RL: | 17.3 m AHD |
|-----------------|---|--|---------------|---|---|--|---|------------------------|--|---------------------|---|--|
| F-0 | | ling and San | | 12011 | | 114 | Material description and profile information | 0319097 | | AIU | Field Tes | 1 |
| METHOD | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRIPTION: Soil type, plasticity characteristics, colour, minor component | | MOISTURE | CONSISTENCY DENSITY | Test Type Result | Structure and additional observations |
| AD/T | Not Encountered | | 17. <u>0</u> | - 0. <u>5</u> | | ML | FILL: Sandy SILT, dark brown, traces of gr grained, subangular 0.20m SLATE: Yellow/pale grey, very low to low s recovered as Sandy SILT | | D | Fr | | FILL/TOPSOIL HIGHLY TO MODERATELY WEATHERED SLATE |
| | | | 16. <u>0</u> | - - - 1.5 | | | 1.50m | | | | | |
| | | | 15.5 <u>_</u> | - | | | Hole Terminated at 1.50 m | | | | | |
| LEG Wat Y | | | 15.0 | - 2.5_ - | | | | | | | | |
| LEG Wate | Wat (Dat Wat Wat ta Cha tra D | ter Level te and time st ter Inflow ter Outflow anges radational or ansitional stra efinitive or dis rata change | nown) | U ₅₀ CBR E ASS B Field Tests PID DCP(x-y) HP | 50mm Bulk s Enviro Acid S Bulk S Photoi Dynan | Diame ample inmenta ulfate s ample onisation | ter tube sample for CBR testing I sample Soil Sample on detector reading (ppm) etrometer test (test depth interval shown) meter test (UCS kPa) | S S F F St S VSt V H H | ncy dery Soft oft irm tiff dery Stiff lard riable V L ME | Vi Lo | UCS (kl <25 25 - 50 50 - 100 100 - 20 200 - 40 >400 ery Loose pose edium Den | D Dry M Moist W Wet W, Plastic Limit W Liquid Limit Density Index <15% Density Index 15 - 35% |



CLIENT:

Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary **JOB NO:** RGS21087.1

BOREHOLE NO: BH217

1 of 1

GC

PAGE:

LOGGED BY:

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 108/109 **DATE:** 20/12/23

DRILL TYPE: RGS Ute Mounted Drill Rig EASTING: 485464 m SURFACE RL: 13.8 m

| | | YPE: OLE DIAM | | lte Moun : 120 m | | - | EASTING: CLINATION: 90° NORTHING: | 485464 : 6519664 | | SURF/ DATU | | RL: | 13.8 m AHD |
|--------|---------------------------|--|--------------|---|--------------------------|----------------------------|--|-----------------------|--|---------------------|---|---|---|
| | | ling and San | | | | | Material description and profile information | | | | Fiel | d Test | |
| METHOD | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRIPTION: Soil type, plastici characteristics,colour,minor componer | | MOISTURE | CONSISTENCY DENSITY | Test Type | Result | Structure and additional observations |
| AD/T | tered | | | _ | | ML | FILL: Sandy SILT, dark brown, traces of g to medium grained, subangular | ravel, fine | D | Fr | | | FILL/TOPSOIL |
| | Not Encountered | | 13. <u>5</u> | - - - 0.5_ | | CI | 6.15m FILL: Sandy Silty CLAY, medium plasticity red/pale grey, some gravel, fine to medium subangular | /, pale i grained, | M < W | Fr / VSt | HP | 220 | FILL-CLAY |
| | | | 13. <u>0</u> | - - - | | | | | | | HP | 250 | |
| | | | 12. <u>5</u> | - - | | | | | | | HP | 230 | |
| | | | | 1.5 | | | 1.50m Hole Terminated at 1.50 m | | | | | | |
| | | | 12.0 | - | | | | | | | | | |
| | | | | 2.0_ | | | | | | | | | |
| | | | 11. <u>5</u> | - - | | | | | | | | | |
| | | | | 2. <u>5</u> | | | | | | | | | |
| | | | 11. <u>0</u> | - - - - | | | | | | | | | |
| Wate | Wat (Dat Wat Wat | ter Level te and time si ter Inflow ter Outflow | hown) | Notes, Sar U ₅₀ CBR E ASS B | 50mm Bulk s Enviro | Diame ample f nmenta | ter tube sample for CBR testing il sample Soil Sample | S S F I St S VSt N | Very Soft Soft Firm Stiff Very Stiff Hard | | 50 10 20 | CS (kPa 25 5 - 50 0 - 100 00 - 200 00 - 400 400 | D Dry M Moist W Wet W _p Plastic Limit |
| Stra | tra — De | inges radational or ansitional stra efinitive or dis rata change | ata | Field Tests PID DCP(x-y) HP | Photoi Dynan | nic pen | on detector reading (ppm) etrometer test (test depth interval shown) ometer test (UCS kPa) | Fb I | Friable V L MI D VI | Lo D D | ery Lo oose ediun ense ery Do | n Dense | Density Index <15% Density Index 15 - 35% Density Index 35 - 65% Density Index 65 - 85% Density Index 85 - 100% |



CLIENT:

Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary JOB NO: RGS21087.1

BOREHOLE NO: BH218

1 of 1

GC

PAGE:

LOGGED BY:

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 101/102 DATE: 20/12/23

| | RILL TYPE: RGS Ute Mounted Drill Rig EASTING: 485494 m SURFACE FOREHOLE DIAMETER: 120 mm INCLINATION: 90° NORTHING: 6519666 m DATUM: | | | | RL: | 11.5 m AHD | | | | | | | | |
|--|--|--|-----------------------------|-----------------------|----------------|--------------------------|---|---|-----------------------|---------------------|------------------------|----------------------------------|----------------------|--|
| F | DREHOLE DIAMETER: 120 mm INCLINATION: 90° NORTHING: Drilling and Sampling Material description and profile information | | | | | Field Test | | | | AHD | | | | |
| <u> </u> | Dril | iing and San | ipiing | | | 7 | iviateriai descriptio | ii and profile information | ı | T | | riel | u rest | |
| METHOD | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRI characteristic | PTION: Soil type, plasti s,colour,minor compon | city/particle ents | MOISTURE | CONSISTENCY DENSITY | Test Type | Result | Structure and additional observations |
| AD/T | ntered | | - | _ | | ML | to medium graine | T, dark brown, traces of d, subrounded | gravel, fine | D | Fr | | | FILL/TOPSOIL |
| | Not Encountered | | 11. <u>0</u> | 0.5_ | | CI | grey/white with re | , low to medium plastici d mottling | ty, pale | M < Wp | Fr / VSt | HP | 350 | FILL-CLAY |
| TNO ELOUGO BUESTOCOU I II INO ELOUGO BOSE L'OUTOO | | | 10. <u>5</u> | 1.0_ | | | | y/pale red, inferred very ed as Sandy SILT | low to low | | | | | HIGHLY WEATHERED SLATE |
| 1 | | | 10.0 | 1.5 | | | Hole Terminated | at 1.50 m | | | | | | |
| THE TRANSFORM DESCRIPTION OF THE EXPONENT OF THE PROPERTY OF T | GEND: | | 9.5 9.5 - - 9.0 | 2.0 | | d Tests | | | Consiste | ncy | | U | CS (kPa |) Moisture Condition |
| Wa | | | ' | | | | | | VS V | Very Soft | : | <2 | 25 | D Dry |
| = | | ter Level | | U₅o CBR | | | ter tube sample or CBR testing | | I | Soft Firm | | | 5 - 50 0 - 100 | M Moist W Wet |
| _ | • | te and time sl ter Inflow | hown) | E ASS | Enviro | nmenta | l sample Soil Sample | | 1 | Stiff Very Stiff | : | | 00 - 200 00 - 400 | _ · |
| <u> </u> | | ter Outflow | ' | 433 B | | ample | on Cample | | н | Hard | | | 100 - 400 100 | VVL Elquid Ellillit |
| Str. | ata Cha G | anges radational or | | Field Test | _ | | | | Fb F | riable V | | ery Lo | ose | Density Index <15% |
| | tra D | ansitional stra efinitive or dis rata change | 1.1 | PID DCP(x-y) HP | Dynan | nic pen | on detector reading (ppm) etrometer test (test depth i meter test (UCS kPa) | nterval shown) | | L ME D VD | D M | oose lediun ense ery De | n Dense ense | Density Index 15 - 35% Density Index 35 - 65% Density Index 65 - 85% Density Index 85 - 100% |



CLIENT:

Land Dynamics Australia

PROJECT NAME: Stage 1, The Sanctuary JOB NO: RGS21087.1

BOREHOLE NO: BH219

1 of 1

GC

PAGE:

LOGGED BY:

SITE LOCATION: John Oxley Drive, Port Macquarie

TEST LOCATION: Lot 106 DATE: 20/12/23

| | | L TYPE: RGS Ute Mounted Drill Rig EASTING: 485454 m SURFACE RI | | | | RL: | 12.5 m | | | | | | |
|--|---------------------------------------|---|--------------|---------------------------------|---------------------------------------|--------------------------|--|------------------------|---|------------------------|----------------|--|---------------------------------------|
| В | | | | | | 6519704 | m [| DATU | | | AHD | | |
| | Dri | lling and San | npling | 1 | | | Material description and profile information | | | | Fiel | d Test | |
| METHOD | WATER | SAMPLES | RL (m) | DEPTH (m) | GRAPHIC LOG | CLASSIFICATION SYMBOL | MATERIAL DESCRIPTION: Soil type, plasticity characteristics, colour, minor component | y/particle s | MOISTURE | CONSISTENCY DENSITY | Test Type | Result | Structure and additional observations |
| AD/T | ntered | | | _ | | ML | FILL: Sandy SILT, dark brown, traces of gr to medium grained, subangular, sand, fine t 0.15m grained | | D | Fr | | | FILL/TOPSOIL |
| 7,007,200 Fig. No. 2,007,200 Fig. 1-90-50 | Not Encountered | | 12. <u>0</u> | - - - - - - - | | Cl | Sandy CLAY: Medium plasticity, red, sand medium grained Some pale brown mottling | , fine to | M < w _p | Fr/ VSt | HP HP | 390 380 250 | RESIDUAL |
| DOD EE, 196 2,000 2 | | | 11.0 | 1.5 | | | 1.50m Hole Terminated at 1.50 m | | | | | | |
| THE THIN TO SECURE TO SECURE TO SECURE TO SECURE THE SECURE THE SECURE TO SE | GGEND | | 10. <u>5</u> | | mples an | d Tests | | Consiste | ney | | <u>U</u> | CS (kPa |) Moisture Condition |
| 1 | (Da — Wa ⊲ Wa rata Ch | | hown) | U₅ CBR E ASS B | Bulk sa Enviro Acid S Bulk S | ample t nmenta | eter tube sample for CBR testing al sample Soil Sample | S S F F St S VSt V H F | Yery Soft Soft Firm Stiff Yery Stiff lard Friable | | 50 10 20 | 5 - 50 0 - 100 00 - 200 00 - 400 100 | _ · |
| _ | tr C | Gradational or cansitional stra Definitive or dis trata change | ata | PID DCP(x-y) HP | Photoi Dynan | nic pen | on detector reading (ppm) etrometer test (test depth interval shown) ometer test (UCS kPa) | | L ME D VD | Lo M De | ose | n Dense | Density Index 15 - 35% |



Appendix B Laboratory Test Result Sheets

Report Number: MNC16P-0001-29

Issue Number:

Date Issued: 16/01/2024

Client: Regional Geotechnical Solutions Pty Ltd

44 Bent Street, Wingham NSW 2429

Project Number: MNC16P-0001
Project Name: Various Testing

Project Location: The Sanctuary John Oxley Drive, Port Macquarie, NSW

Client Reference: RGS21087.1

Work Request: 1583

Sample Number: NEW23S-1583A

Date Sampled: 20/12/2023

Dates Tested: 21/12/2023 - 09/01/2024
Sampling Method: Sampled by Client

The results apply to the sample as received

Sample Location: BH202 - (0.4 - 0.7m)

Material: Clay

Material Source: On-Site Insitu

Report Number: MNC16P-0001-29



Newcastle Laboratory

2 Murray Dwyer Circuit Mayfield West NSW 2304

Phone: (02) 4968 4468

Email: brentcullen@qualtest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Brent Cullen

Engineering Geologist

NATA Accredited Laboratory Number: 18686

| Shrink Swell Index (AS 1289 7.1.1 & 2.1.1) | | | | | | |
|---|------|--|--|--|--|--|
| Iss (%) | 1.8 | | | | | |
| Visual Description | Clay | | | | | |
| * Shrink Swell Index (Iss) reported as the percentage vertical strain p | | | | | | |

| pF change in suction. | | | | | | |
|---|-----|--|--|--|--|--|
| Core Shrinkage Test | | | | | | |
| Shrinkage Strain - Oven Dried (%) | 3.2 | | | | | |
| Estimated % by volume of significant inert inclusions | 6 | | | | | |

Estimated % by volume of significant inert inclusions 6

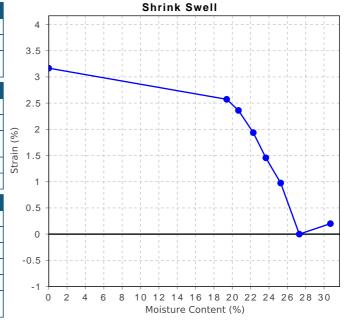
Cracking Moderately Cracked

Crumbling No

Moisture Content (%) 27.3

| moretare content (70) | |
|-----------------------------------|------|
| Swell Test | |
| Initial Pocket Penetrometer (kPa) | 500 |
| Final Pocket Penetrometer (kPa) | 430 |
| Initial Moisture Content (%) | 27.7 |
| Final Moisture Content (%) | 30.7 |
| Swell (%) | -0.2 |

^{*} NATA Accreditation does not cover the performance of pocket penetrometer readings.



Report Number: MNC16P-0001-29

Issue Number:

Date Issued: 16/01/2024

Client: Regional Geotechnical Solutions Pty Ltd

44 Bent Street, Wingham NSW 2429

Project Number: MNC16P-0001 **Project Name:** Various Testing

Project Location: The Sanctuary John Oxley Drive, Port Macquarie, NSW

Client Reference: RGS21087.1

Work Request: 1583

Sample Number: NEW23S-1583B **Date Sampled:** 20/12/2023

Dates Tested: 21/12/2023 - 09/01/2024

Sampling Method: Sampled by Client

The results apply to the sample as received

Sample Location: BH203 - (0.3 - 0.7m)

Material: Clay

pF change in suction.

Crumbling

Swell (%)

Report Number: MNC16P-0001-29

Material Source: On-Site Insitu

| Shrink Swell Index (AS 1289 7.1.1 & 2.1.1) | | | | | | |
|--|------|--|--|--|--|--|
| Iss (%) | 2.3 | | | | | |
| Visual Description | Clay | | | | | |
| * Shrink Swall Index (Ics) reported as the percentage vertical strain no | | | | | | |

| Core Shrinkage Test | |
|---|---------------------|
| Shrinkage Strain - Oven Dried (%) | 4.1 |
| Estimated % by volume of significant inert inclusions | 6 |
| Cracking | Slightly Cracked |

No

-0.1

| Moisture Content (%) | 30.4 |
|-----------------------------------|------|
| Swell Test | |
| Initial Pocket Penetrometer (kPa) | 480 |
| Final Pocket Penetrometer (kPa) | 450 |
| Initial Moisture Content (%) | 29.4 |
| Final Moisture Content (%) | 33.8 |

^{*} NATA Accreditation does not cover the performance of pocket penetrometer readings



Newcastle Laboratory

2 Murray Dwyer Circuit Mayfield West NSW 2304

Phone: (02) 4968 4468

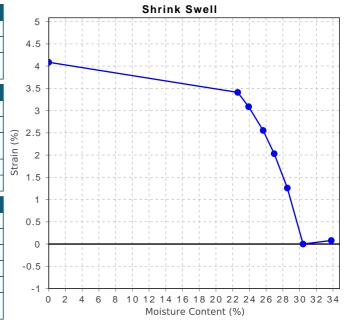
Email: brentcullen@qualtest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Brent Cullen

Engineering Geologist



Report Number: MNC16P-0001-29

Issue Number:

Date Issued: 16/01/2024

Client: Regional Geotechnical Solutions Pty Ltd

44 Bent Street, Wingham NSW 2429

Project Number: MNC16P-0001
Project Name: Various Testing

Project Location: The Sanctuary John Oxley Drive, Port Macquarie, NSW

Client Reference: RGS21087.1

Work Request: 1583

Sample Number: NEW23S-1583C Date Sampled: 20/12/2023

Dates Tested: 21/12/2023 - 09/01/2024
Sampling Method: Sampled by Client

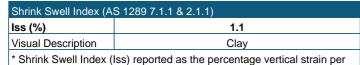
The results apply to the sample as received

Sample Location: BH205 - (0.4 - 0.7m)

Material: Clay

Material Source: On-Site Insitu

Report Number: MNC16P-0001-29



| pr change in suction. | |
|---|-----|
| Core Shrinkage Test | |
| Shrinkage Strain - Oven Dried (%) | 1.9 |
| Estimated % by volume of significant inert inclusions | 4 |
| | |

| Estimated % by volume of significant inert inclusions | 4 |
|---|---------------------|
| Cracking | Slightly Cracked |
| Crumbling | No |
| Moisture Content (%) | 22.8 |

| | <u> </u> |
|-----------------------------------|----------|
| Swell Test | |
| Initial Pocket Penetrometer (kPa) | >600 |
| Final Pocket Penetrometer (kPa) | 520 |
| Initial Moisture Content (%) | 22.8 |
| Final Moisture Content (%) | 25.8 |
| Swell (%) | 0.2 |

^{*} NATA Accreditation does not cover the performance of pocket penetrometer readings.



Newcastle Laboratory

2 Murray Dwyer Circuit Mayfield West NSW 2304

Phone: (02) 4968 4468

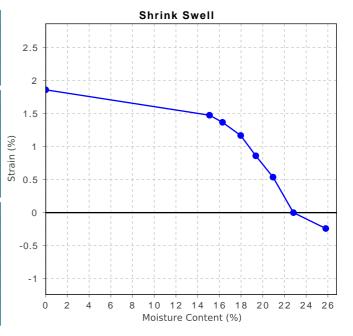
Email: brentcullen@qualtest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Brent Cullen

Engineering Geologist



Report Number: MNC16P-0001-29

Issue Number:

Date Issued: 16/01/2024

Client: Regional Geotechnical Solutions Pty Ltd

44 Bent Street, Wingham NSW 2429

Project Number: MNC16P-0001
Project Name: Various Testing

Project Location: The Sanctuary John Oxley Drive, Port Macquarie, NSW

Client Reference: RGS21087.1

Work Request: 1583

Sample Number: NEW23S-1583D Date Sampled: 20/12/2023

Dates Tested: 21/12/2023 - 09/01/2024
Sampling Method: Sampled by Client

The results apply to the sample as received

Sample Location: BH208 - (0.7 - 1.1m)

Material: Clay

Material Source: On-Site Insitu

Report Number: MNC16P-0001-29

| Shrink Swell Index (A | S 1289 7.1.1 & 2.1.1) |
|------------------------|---|
| Iss (%) | 1.0 |
| Visual Description | Clay |
| * Chrink Cwall Inday (| lea) reported as the percentage vertical strain per |

* Shrink Swell Index (Iss) reported as the percentage vertical strain per pF change in suction.

| Core Shrinkage Test | |
|---|-----------------------|
| Shrinkage Strain - Oven Dried (%) | 1.7 |
| Estimated % by volume of significant inert inclusions | 6 |
| Cracking | Moderately Cracked |
| Crumbling | No |
| Moisture Content (%) | 30.2 |

| Swell Test | |
|-----------------------------------|------|
| Initial Pocket Penetrometer (kPa) | >600 |
| Final Pocket Penetrometer (kPa) | 420 |
| Initial Moisture Content (%) | 29.2 |
| Final Moisture Content (%) | 36.9 |
| Swell (%) | 0.2 |

^{*} NATA Accreditation does not cover the performance of pocket penetrometer readings.



Newcastle Laboratory

2 Murray Dwyer Circuit Mayfield West NSW 2304

Phone: (02) 4968 4468

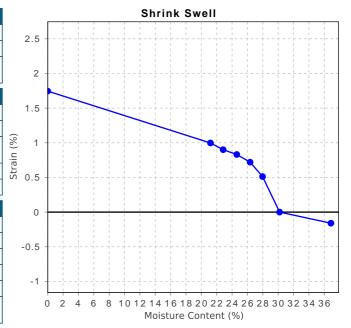
Email: brentcullen@qualtest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Brent Cullen

Engineering Geologist



Report Number: MNC16P-0001-29

Issue Number:

Date Issued: 16/01/2024

Client: Regional Geotechnical Solutions Pty Ltd

44 Bent Street, Wingham NSW 2429

Project Number: MNC16P-0001
Project Name: Various Testing

Project Location: The Sanctuary John Oxley Drive, Port Macquarie, NSW

Client Reference: RGS21087.1

Work Request: 1583

Sample Number: NEW23S-1583E

Date Sampled: 20/12/2023

Dates Tested: 21/12/2023 - 09/01/2024
Sampling Method: Sampled by Client

The results apply to the sample as received

Sample Location: BH210 - (0.3 - 0.7m)

Material: Clay

Material Source: On-Site Insitu

Report Number: MNC16P-0001-29



* Shrink Swell Index (Iss) reported as the percentage vertical strain per pF change in suction.

| Core Shrinkage Test | |
|---|-----------------------|
| Shrinkage Strain - Oven Dried (%) | 2.5 |
| Estimated % by volume of significant inert inclusions | 3 |
| Cracking | Moderately Cracked |
| Crumbling | No |
| Moisture Content (%) | 33.1 |

| Swell Test | |
|-----------------------------------|------|
| Initial Pocket Penetrometer (kPa) | 350 |
| Final Pocket Penetrometer (kPa) | 330 |
| Initial Moisture Content (%) | 32.7 |
| Final Moisture Content (%) | 40.4 |
| Swell (%) | -0.2 |

^{*} NATA Accreditation does not cover the performance of pocket penetrometer readings.



Newcastle Laboratory

2 Murray Dwyer Circuit Mayfield West NSW 2304

Phone: (02) 4968 4468

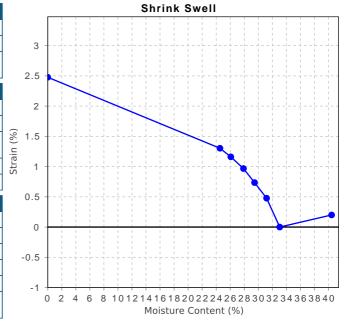
Email: brentcullen@qualtest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Brent Cullen

Engineering Geologist



Report Number: MNC16P-0001-29

Issue Number:

Date Issued: 16/01/2024

Client: Regional Geotechnical Solutions Pty Ltd

44 Bent Street, Wingham NSW 2429

Project Number: MNC16P-0001
Project Name: Various Testing

Project Location: The Sanctuary John Oxley Drive, Port Macquarie, NSW

Client Reference: RGS21087.1

Work Request: 1583

Sample Number: NEW23S-1583F Date Sampled: 20/12/2023

Dates Tested: 21/12/2023 - 09/01/2024
Sampling Method: Sampled by Client

The results apply to the sample as received

Sample Location: BH212 - (0.3 - 0.7m)

Material: Clay

Material Source: On-Site Insitu

Report Number: MNC16P-0001-29



Newcastle Laboratory

2 Murray Dwyer Circuit Mayfield West NSW 2304

Phone: (02) 4968 4468

Email: brentcullen@qualtest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Brent Cullen

Engineering Geologist

NATA Accredited Laboratory Number: 18686

| Shrink Swell Index (A | S 1289 7.1.1 & 2.1.1) |
|-----------------------|-----------------------|
| Iss (%) | 1.8 |
| Visual Description | Clay |
| * 01 : 1 0 . 11 1 . / | |

* Shrink Swell Index (Iss) reported as the percentage vertical strain per pF change in suction.

| Core Shrinkage Test | |
|---|---------------------|
| Shrinkage Strain - Oven Dried (%) | 3.2 |
| Estimated % by volume of significant inert inclusions | 3 |
| Cracking | Slightly Cracked |
| Crumbling | No |
| Moisture Content (%) | 33.3 |

| Swell Test | |
|-----------------------------------|------|
| Initial Pocket Penetrometer (kPa) | >600 |
| Final Pocket Penetrometer (kPa) | 520 |
| Initial Moisture Content (%) | 34.1 |
| Final Moisture Content (%) | 40.1 |
| Swell (%) | -0.0 |

^{*} NATA Accreditation does not cover the performance of pocket penetrometer readings.



Report Number: MNC16P-0001-29

Issue Number:

Date Issued: 16/01/2024

Client: Regional Geotechnical Solutions Pty Ltd

44 Bent Street, Wingham NSW 2429

Project Number: MNC16P-0001
Project Name: Various Testing

Project Location: The Sanctuary John Oxley Drive, Port Macquarie, NSW

Client Reference: RGS21087.1

Work Request: 1583

Sample Number: NEW23S-1583G Date Sampled: 20/12/2023

Dates Tested: 21/12/2023 - 09/01/2024
Sampling Method: Sampled by Client

The results apply to the sample as received

Sample Location: BH214 - (0.3 - 0.7m)

Material: Clay

Material Source: On-Site Insitu

Report Number: MNC16P-0001-29

| Shrink Swell Index (AS 1289 7.1.1 & 2.1.1) | | |
|--|------|--|
| Iss (%) | 1.0 | |
| Visual Description | Clay | |
| * Christ, Conall landon / | \ | |

* Shrink Swell Index (Iss) reported as the percentage vertical strain per pF change in suction.

| Core Shrinkage Test | |
|---|-----------------------|
| Shrinkage Strain - Oven Dried (%) | 1.7 |
| Estimated % by volume of significant inert inclusions | 2 |
| Cracking | Moderately Cracked |
| Crumbling | No |
| Moisture Content (%) | 27.9 |

| Swell Test | |
|-----------------------------------|------|
| Initial Pocket Penetrometer (kPa) | >600 |
| Final Pocket Penetrometer (kPa) | 510 |
| Initial Moisture Content (%) | 26.8 |
| Final Moisture Content (%) | 33.9 |
| Swell (%) | 0.2 |

^{*} NATA Accreditation does not cover the performance of pocket penetrometer readings.



Newcastle Laboratory

2 Murray Dwyer Circuit Mayfield West NSW 2304

Phone: (02) 4968 4468

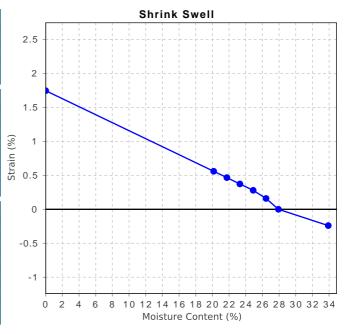
Email: brentcullen@qualtest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Brent Cullen

Engineering Geologist



Report Number: MNC16P-0001-29

Issue Number:

Date Issued: 16/01/2024

Client: Regional Geotechnical Solutions Pty Ltd

44 Bent Street, Wingham NSW 2429

Project Number: MNC16P-0001
Project Name: Various Testing

Project Location: The Sanctuary John Oxley Drive, Port Macquarie, NSW

Client Reference: RGS21087.1

Work Request: 1583

Sample Number: NEW23S-1583H Date Sampled: 20/12/2023

Dates Tested: 21/12/2023 - 09/01/2024
Sampling Method: Sampled by Client

The results apply to the sample as received

Sample Location: BH217 - (0.3 - 0.7m)

Material: Clay

Material Source: On-Site Insitu

Report Number: MNC16P-0001-29



Newcastle Laboratory

2 Murray Dwyer Circuit Mayfield West NSW 2304

Phone: (02) 4968 4468

Email: brentcullen@qualtest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Brent Cullen

Engineering Geologist

NATA Accredited Laboratory Number: 18686

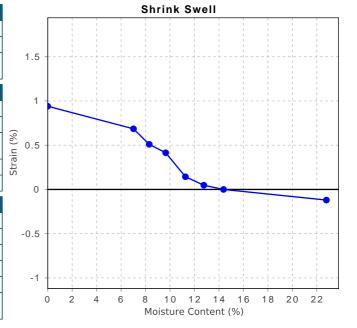
| Shrink Swell Index (A | S 1289 7.1.1 & 2.1.1) |
|--------------------------|---|
| Iss (%) | 0.6 |
| Visual Description | Clay |
| * Chainle Count In day / | las) was a stantage of the managed and continued attacks were |

* Shrink Swell Index (Iss) reported as the percentage vertical strain per pF change in suction.

| Core Shrinkage Test | |
|---|---------------------|
| Shrinkage Strain - Oven Dried (%) | 0.9 |
| Estimated % by volume of significant inert inclusions | 7 |
| Cracking | Slightly Cracked |
| Crumbling | No |
| Moisture Content (%) | 14.4 |

| Swell Test | |
|-----------------------------------|------|
| Initial Pocket Penetrometer (kPa) | >600 |
| Final Pocket Penetrometer (kPa) | 370 |
| Initial Moisture Content (%) | 13.7 |
| Final Moisture Content (%) | 22.8 |
| Swell (%) | 0.1 |

^{*} NATA Accreditation does not cover the performance of pocket penetrometer readings.



Report Number: MNC16P-0001-29

Issue Number:

Date Issued: 16/01/2024

Client: Regional Geotechnical Solutions Pty Ltd

44 Bent Street, Wingham NSW 2429

Project Number: MNC16P-0001
Project Name: Various Testing

Project Location: The Sanctuary John Oxley Drive, Port Macquarie, NSW

Client Reference: RGS21087.1

Work Request: 1583

Sample Number: NEW23S-1583I Date Sampled: 20/12/2023

Dates Tested: 21/12/2023 - 15/01/2024

Sampling Method: Sampled by Client

The results apply to the sample as received

Sample Location: BH218 - (0.3 - 0.6m)

Material: Clay

Material Source: On-Site Insitu

Report Number: MNC16P-0001-29

| Atterberg Limit (AS1289 3.1.2 & 3.2.1 & 3.3.1) | | Min | Max |
|--|------------|-----|-----|
| Sample History | Oven Dried | | |
| Preparation Method | Dry Sieve | | |
| Liquid Limit (%) | 41 | | |
| Plastic Limit (%) | 28 | | |
| Plasticity Index (%) | 13 | | |

| Linear Shrinkage (AS1289 3.4.1) | | Min | Max |
|----------------------------------|---------------|-----|-----|
| Moisture Condition Determined By | AS 1289.3.1.1 | | |
| Linear Shrinkage (%) | 5.0 | | |
| Cracking Crumbling Curling | Cracking | | |



Newcastle Laboratory

2 Murray Dwyer Circuit Mayfield West NSW 2304

Phone: (02) 4968 4468

Email: brentcullen@qualtest.com.au

Accredited for compliance with ISO/IEC 17025 - Testing



Approved Signatory: Brent Cullen

Engineering Geologist