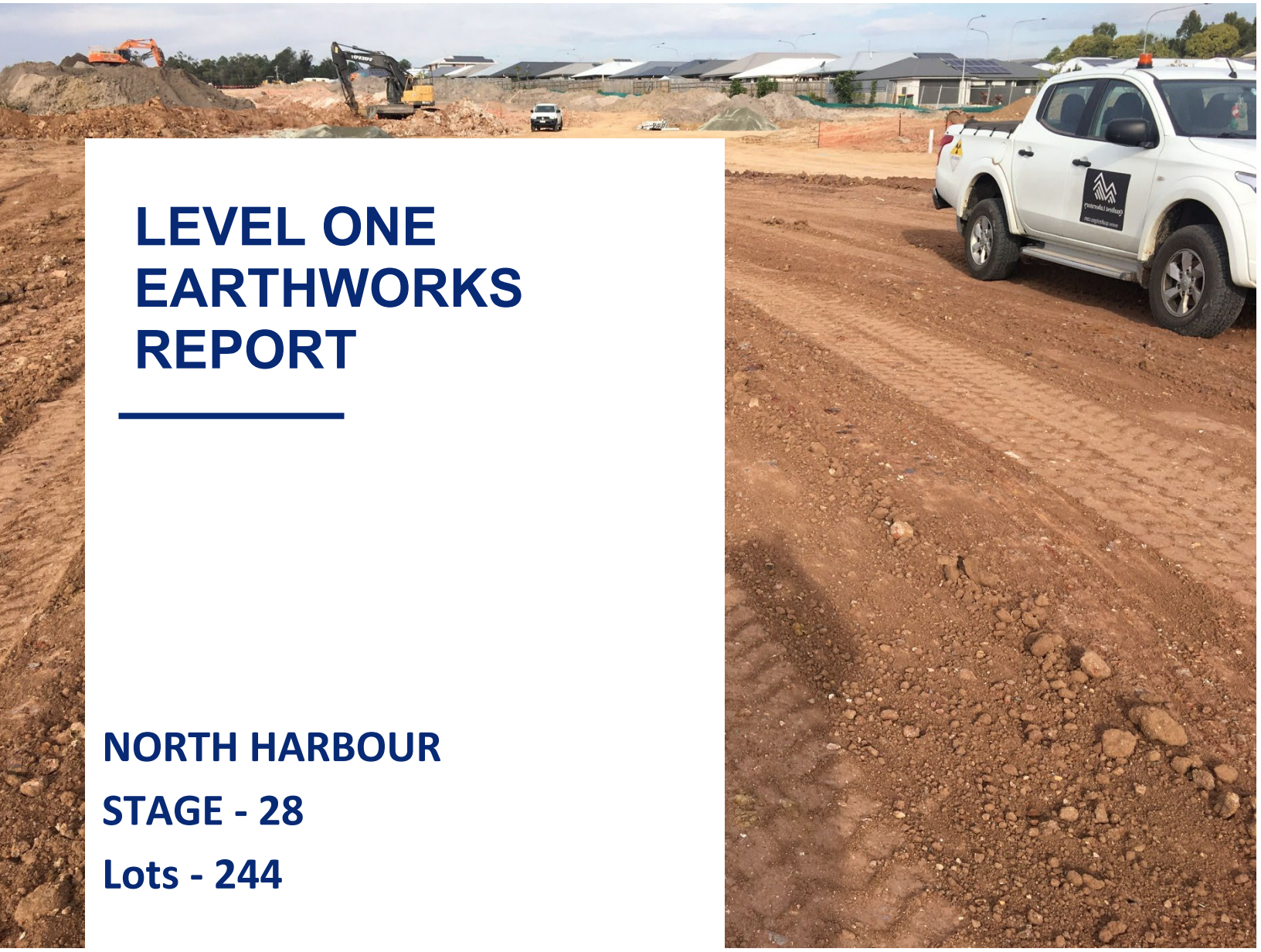


LEVEL ONE EARTHWORKS REPORT

NORTH HARBOUR

STAGE - 28

Lots - 244

JULY 7 2022

Hall Contracting Pty Ltd

Authored by: QUALTEST LABORATORY PTY LTD

REF: 1647

Qualtest Laboratory

Est. 1987

Ref: 1647
Job: 22-155
Author: D. Taylor

Qualtest Laboratory
Est. 1987

7th July 2022

Hall Contracting
PO Box 519
Buderim QLD 4556

ATTENTION: **MR HAYDYN CLIFF**
Email: haydyncliff@hallcontracting.com.au

Dear Sir,

RE: **LEVEL ONE EARTHWORKS REPORT**
NORTH HARBOUR – STAGE 28

PROJECT: **NORTH HARBOUR – STAGE 28**

CLIENT: **NORTH HARBOUR**

SUPERINTENDENT: **KN GROUP**

CONTRACTOR: **HALL CONTRACTING**

Qualtest Laboratory Pty Ltd
2/40 Boyland Avenue
Coopers Plains QLD 4108
PO Box 733 Archerfield QLD 4108
(07) 3875 1898
qualtest@qualtestgeo.com
www.qualtestgeo.com
ABN 74 010 752 815

1.0 INTRODUCTION

1.1 General

This report presents results and documentation for the Level One Inspection and Testing of earthworks filling operations at North Harbour – Stage 28. (The Site).

Qualtest Laboratory Pty Ltd was commissioned by Hall Contracting (The Client) to provide Level 1 Earthworks Inspection and Testing services as defined in Section 8 of AS3798.

Filling operations covered by this report were constructed during March 2022 and April 2022.

The purpose of Level 1 commission and this report is to provide an opinion that the earthworks operations carried out by the Client have been carried out in accordance with AS3798, relevant project specifications and Local Authority requirements as appropriate.

This report has been carried out in general accordance with the following: -

- AS3798-2007 - *Guidelines on Earthwork for Commercial and Residential Developments*
- AS1289 – *Testing of Soils for Engineering Purposes.*
- AS2870 -2011 – *Residential Slabs and Footings.*
- Moreton Bay Regional Council Requirements
- Notes on KN Group Drawings.

This report does not cover underground services, trench backfill, pavements, retaining walls, or any other works after April 2022.

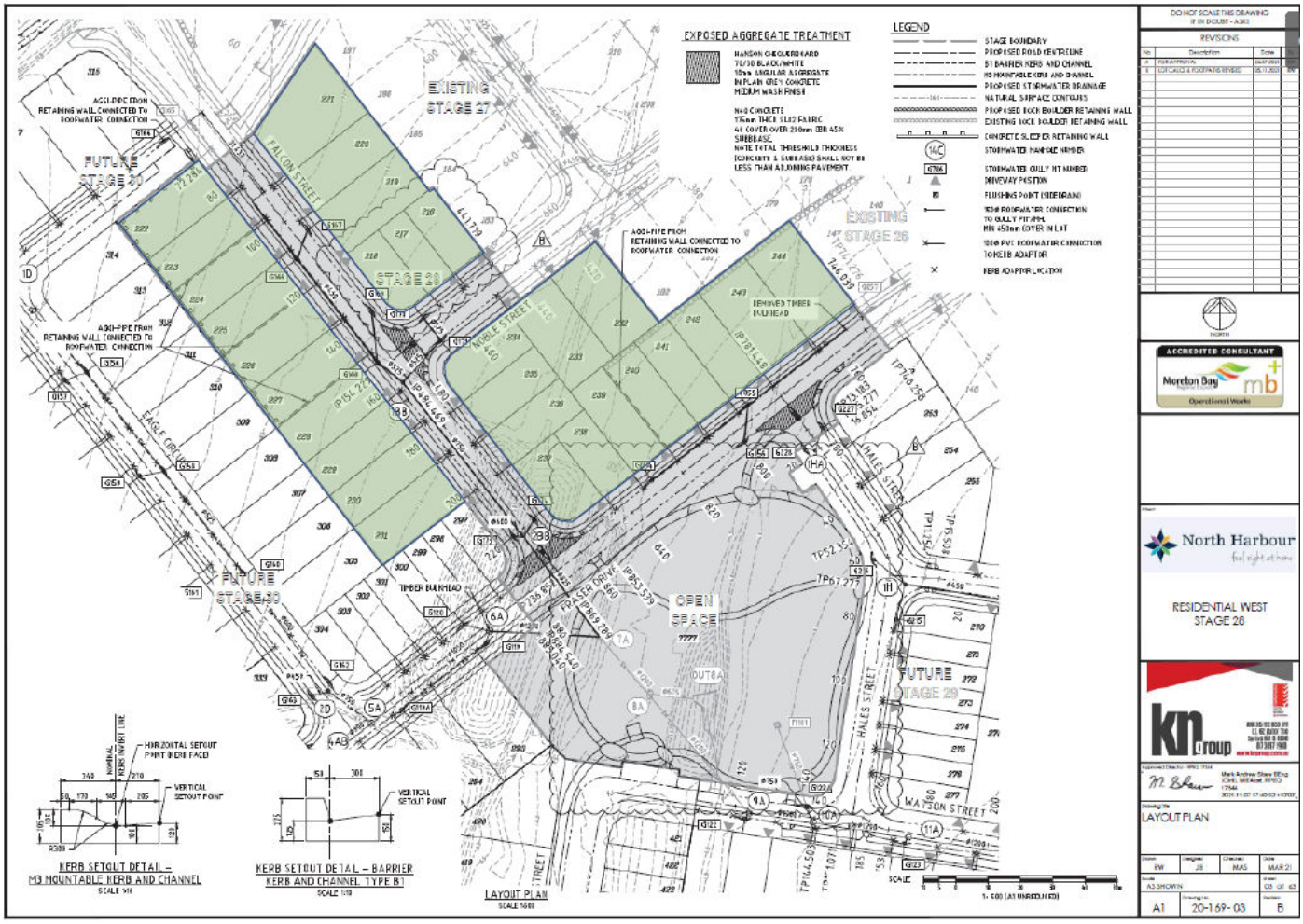
1.2 The Development

The development comprises a 28 - Lot residential subdivision and associated infrastructure including pavements, stormwater, and water reticulation.

The earthworks generally comprised:

- Filling on parts of Lots 216 – 244 to raise the ground level by approximately 200mm to 300mm.

A Lot Disclosure Plan should be requested from the developer to confirm the actual depth of fill on an individual lot.



2.0 WORKS AND SPECIFICATIONS

All filling operations at the Site are to be placed and compacted in accordance with the following: -

- AS3798 – Type 1 Earthworks Operations.
- Moreton Bay Regional Council Specifications.
- Notes on KN Group Drawings.
- Density Ratio – 95% Standard

3.0 FILL FOUNDATION ASSESSMENT

Areas to be filled at the site were observed to be stripped of grass and topsoil to depths exposing competent natural ground.

Compliance of the fill foundation with Section 2.0 and approval to commence filling was given on the basis of:

- Adequate removal of topsoil and organics
- Compliant proof roll testing of the stripped surface using onsite heavy earthworks plant.

A view of the stripped surface prior to the placement and compaction of fill is presented below.

Picture 1: View of Stripped Surface

4.0 FILLING OPERATIONS

Fill at the site was sourced from onsite cuts.

Materials used as fill can be broadly summarised as: -

- Sandy Clay (CI) medium plasticity, fine to medium grained sand, brown and moist.

Fill was constructed using the following plant: -

- Cat D6 Dozer
- 815 Compactor
- 1 x Moxy
- Excavator

Fill was observed to be placed in layers within the capacity of the above plant, moisture conditioned and compacted using several passes.

To the extent that was reasonably practical, fill materials visibly containing excessive amounts of silts or deleterious materials such as sticks, oversize particles were sorted to remove the contaminants prior to placement, or rejected for use. Some / occasional cobble sized particles may remain in the body of the fill, however, are unlikely to be in sufficient quantities to adversely affect the performance of the new fill. Sloping areas requiring filling were benched and continually keyed into the slope prior to and during fill placement.

Picture 2: View of Filling Operations

5.0 COMPACTION TESTING

Compaction testing was carried out on the compacted fill materials in accordance with Table 5.1 and 8.1 of AS3798 2007 and tested to AS1289 test methods. All test locations were selected by Qualtest at random and staggered over the fill area and depth. Test locations were not obtained by survey and on this basis, the locations should be considered as approximate only.

Compaction testing achieved the minimum required compaction specification of 95% Standard at the test locations. Areas where the compaction specification was not achieved were reworked and re-tested using random stratified location processes.

The location of the compaction tests and area of fill covered under this report are shown on the Site Plan contained in Appendix A.

Compaction test reports are contained in Appendix B.

4.0 STATEMENT OF COMPLIANCE

Our representatives observed the relevant earthworks operations during our engagement including the stripped surface, new fill placement and compaction operations, and compaction testing.

As far as Qualtest could assess, the fill at The Site has been observed to be placed and compacted in accordance with the requirements outlined in Section 2.0.

The fill at The Site can be considered to be “Controlled” as defined in AS2870.

5.0 EXCLUSIONS

The compliance statement specifically excludes any topsoil, which may be placed for use as Lot dressing or any other subsequent earthworks after April 2022. All trench backfill, landscaping fill and other fill placed without our knowledge is also excluded.

Assessments of batter stability, global stability, and material quality such as soaked CBR and site classifications are excluded from this commission. The stability of any fill batters in the long term must take account of the variable materials used for the construction of the fill platforms and all surface loads including traffic loads near the crest of all batters.

Our on-site attendance specifically excludes assessments of fill material quality and engineering properties that are outside the requirements of AS3798, including soil or fill reactivity and soaked CBR values. We note that the fill materials comprise clay soils, which may result in unfavourable site classifications for individual lots and low subgrade design strengths for pavements.

Footings and ground slabs for any structures constructed over natural soils or controlled fill should be designed to accommodate the characteristic ground surface movements and settlement potential. Assessments of these design parameters are beyond the scope of this Report.

Controlled fill (Level 1 Fill) provides an overview that the Earthwork Specification has been met. There are instances where significant long-term settlements of controlled fill can occur. Large total and differential settlements can be expected where fill has been placed over soft and compressible soils and where the thickness of controlled fill varies significantly across a lot.

Should you require further information regarding the above please do not hesitate to contact this office.

Yours faithfully,

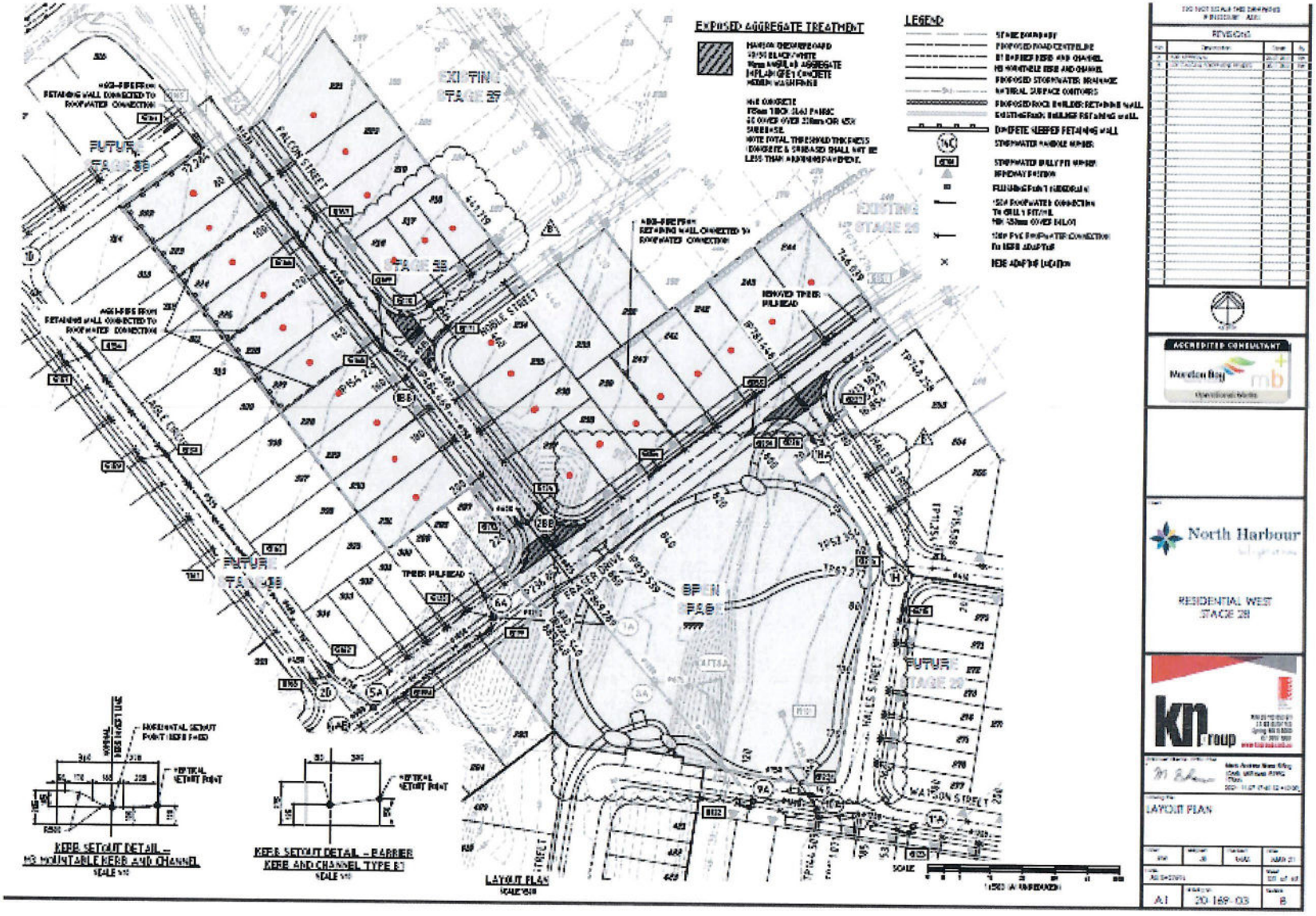
MICHAEL MORRISON
For and on behalf of
QUALTEST LABORATORY PTY LTD.

Attachments
Appendix A – Site Plan and Approximate Test Locations
Appendix B – Compaction Test Reports

APPENDIX A

SITE PLAN AND COMPACTION TEST LOCATIONS

Qualtest Laboratory
Est. 1987


EXPOSED AGGREGATE TREATMENT
LEGEND
EXISTING STAGE 27
EXISTING STAGE 28
FUTURE STAGE 28B
FUTURE STAGE 28A
FUTURE STAGE 29
FALCON STREET
NOBLE STREET
EAGLE CRESCENT
FRASER DRIVE
HALES STREET
WATSON STREET
REMOVE TREES: PULLHEAD
TREES: PULLHEAD
LAYOUT PLAN
SCALE
KERB SETOUT DETAIL – M3 MOUNTABLE KERB AND CHANNEL
SCALE
KERB SETOUT DETAIL – BARRIER KERB AND CHANNEL TYPE B1
SCALE
DO NOT SCALE THIS DRAWING
REVISIONS
ACCREDITED CONSULTANT
North Harbour
RESIDENTIAL WEST
STAGE 28
kn group
LAYOUT PLAN
A1
20-169-03
B

APPENDIX B

COMPACTION TEST REPORTS

Qualtest Laboratory
Est. 1987

Material Test Report

Report Number: 22-155-1
Issue Number: 1
Date Issued: 10/05/2022
Client: HALL CONTRACTING PTY LTD
PO BOX 519, BUDERIM QLD 4556
Contact: HAYDYN CLIFF
Project Number: 22-155
Project Name: BULK EARTHWORKS
Project Location: NORTH HARBOUR - STAGE 28
Client Reference: NH28-22641
Work Request: 736

Qualtest Laboratory Pty Ltd
Qualtest Laboratory Pty Limited
2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
Email: ryan@qualtestgeo.com

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Ryan Osborne
Soil Technician
NATA Accredited Laboratory Number: 2316

Date Sampled: 20/04/2022
Dates Tested: 20/04/2022 - 10/05/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Preparation Method: AS 1289.1.1 - Sampling and preparation of soils
Specification: 95% Standard
Site Selection: Selected by GTA
Location: Stage 28 Bulk Fill
Material: Sandy CLAY
Material Source: Onsite

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S736A	S736B	S736C	S736D	S736E	S736F
Test Number	15	16	17	18	19	20
Date Tested	20/04/2022	20/04/2022	20/04/2022	20/04/2022	20/04/2022	20/04/2022
Time Tested	12:30	12:35	12:40	12:45	12:50	12:55
Test Request #/Location	Lot 221	Lot 220	Lot 219	Lot 218	Lot 217	Lot 216
Elevation (m)	F/L	F/L	F/L	F/L	F/L	F/L
Layer / Reduced Level	Lot Fill	Lot Fill	Lot Fill	Lot Fill	Lot Fill	Lot Fill
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY
Test Depth (mm)	150	150	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	0	0	**	0	**
Field Wet Density (FWD) t/m^3	2.21	2.12	2.09	2.05	2.03	2.13
Field Moisture Content %	12.6	11.9	12.8	2.3	14.8	12.6
Field Dry Density (FDD) t/m^3	1.97	1.90	1.85	2.00	1.77	1.89
Peak Converted Wet Density t/m^3	2.22	2.14	2.11	2.12	2.03	2.16
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	2.0	2.5	-0.5	0.5	2.0	2.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**99.5**	**99.0**	**99.0**	**97.0**	**99.5**	**98.5**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

1

Material Test Report

Report Number: 22-155-1
Issue Number: 1
Date Issued: 10/05/2022
Client: HALL CONTRACTING PTY LTD
PO BOX 519, BUDERIM QLD 4556
Contact: HAYDYN CLIFF
Project Number: 22-155
Project Name: BULK EARTHWORKS
Project Location: NORTH HARBOUR - STAGE 28
Client Reference: NH28-22641
Work Request: 736

Qualtest Laboratory Pty Ltd
Qualtest Laboratory Pty Limited
2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
Email: ryan@qualtestgeo.com

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Ryan Osborne
Soil Technician
NATA Accredited Laboratory Number: 2316

Date Sampled: 20/04/2022
Dates Tested: 20/04/2022 - 10/05/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Preparation Method: AS 1289.1.1 - Sampling and preparation of soils
Specification: 95% Standard
Site Selection: Selected by GTA
Location: Stage 28 Bulk Fill
Material: Sandy CLAY
Material Source: Onsite

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S736G	S736H	S736I	S736J	S736K	S736L
Test Number	21	22	23	24	25	26
Date Tested	20/04/2022	20/04/2022	20/04/2022	20/04/2022	20/04/2022	20/04/2022
Time Tested	13:00	13:05	13:10	13:15	13:20	13:25
Test Request #/Location	Lot 232	Lot 233	Lot 234	Lot 235	Lot 236	Lot 237
Elevation (m)	F/L	F/L	F/L	F/L	F/L	F/L
Layer / Reduced Level	Lot Fill	Lot Fill	Lot Fill	Lot Fill	Lot Fill	Lot Fill
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY
Test Depth (mm)	150	150	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	**	0	0	**	**
Field Wet Density (FWD) t/m^3	2.18	2.17	2.10	2.18	2.17	2.20
Field Moisture Content %	11.5	11.7	14.0	11.4	10.7	8.7
Field Dry Density (FDD) t/m^3	1.96	1.94	1.84	1.96	1.96	2.02
Peak Converted Wet Density t/m^3	2.21	2.17	2.10	2.17	2.21	2.20
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	1.5	1.5	0.5	2.0	1.5	-0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**98.5**	**100.0**	**100.5**	**100.5**	**98.0**	**100.0**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Report Number: 22-155-1
Issue Number: 1
Date Issued: 10/05/2022
Client: HALL CONTRACTING PTY LTD
PO BOX 519, BUDERIM QLD 4556
Contact: HAYDYN CLIFF
Project Number: 22-155
Project Name: BULK EARTHWORKS
Project Location: NORTH HARBOUR - STAGE 28
Client Reference: NH28-22641
Work Request: 736
Date Sampled: 20/04/2022
Dates Tested: 20/04/2022 - 10/05/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Preparation Method: AS 1289.1.1 - Sampling and preparation of soils
Specification: 95% Standard
Site Selection: Selected by GTA
Location: Stage 28 Bulk Fill
Material: Sandy CLAY
Material Source: Onsite

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Approved Signatory: Ryan Osborne
Soil Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S736M	S736N	S736O	S736P	S736Q	S736R
Test Number	27	28	29	30	31	32
Date Tested	20/04/2022	20/04/2022	20/04/2022	20/04/2022	20/04/2022	20/04/2022
Time Tested	13:30	13:35	13:40	13:45	13:50	13:55
Test Request #/Location	Lot 238	Lot 239	Lot 240	Lot 241	Lot 242	Lot 243
Elevation (m)	F/L	F/L	F/L	F/L	F/L	F/L
Layer / Reduced Level	Lot Fill	Lot Fill	Lot Fill	Lot Fill	Lot Fill	Lot Fill
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY
Test Depth (mm)	150	150	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	0	**	0	**	0
Field Wet Density (FWD) t/m^3	2.19	2.16	2.16	2.10	2.10	2.22
Field Moisture Content %	10.5	8.8	9.1	8.0	7.5	9.0
Field Dry Density (FDD) t/m^3	1.98	1.98	1.98	1.94	1.95	2.03
Peak Converted Wet Density t/m^3	2.18	2.21	2.21	2.15	2.15	2.25
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.0	-1.0	0.0	-1.0	0.0	1.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**100.5**	**97.5**	**97.5**	**97.5**	**98.0**	**98.5**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Report Number: 22-155-1
Issue Number: 1
Date Issued: 10/05/2022
Client: HALL CONTRACTING PTY LTD
PO BOX 519, BUDERIM QLD 4556
Contact: HAYDYN CLIFF
Project Number: 22-155
Project Name: BULK EARTHWORKS
Project Location: NORTH HARBOUR - STAGE 28
Client Reference: NH28-22641
Work Request: 736
Date Sampled: 20/04/2022
Dates Tested: 20/04/2022 - 10/05/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Preparation Method: AS 1289.1.1 - Sampling and preparation of soils
Specification: 95% Standard
Site Selection: Selected by GTA
Location: Stage 28 Bulk Fill
Material: Sandy CLAY
Material Source: Onsite

Qualtest Laboratory Pty Ltd
Qualtest Laboratory Pty Limited
2 / 40 Boyland Ave Cooper Plains QLD 4108
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Approved Signatory: Ryan Osborne
Soil Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S736S					
Test Number	33					
Date Tested	20/04/2022					
Time Tested	14:00					
Test Request #/Location	Lot 244					
Elevation (m)	F/L					
Layer / Reduced Level	Lot Fill					
Thickness of Layer (mm)	200					
Soil Description	Sandy CLAY					
Test Depth (mm)	150					
Sieve used to determine oversize (mm)	19.0					
Percentage of Wet Oversize (%)	0					
Field Wet Density (FWD) t/m^3	2.21					
Field Moisture Content %	9.6					
Field Dry Density (FDD) t/m^3	2.02					
Peak Converted Wet Density t/m^3	2.21					
Adjusted Peak Converted Wet Density t/m^3	**					
Moisture Variation (Wv) %	2.0					
Adjusted Moisture Variation %	**					
Hilf Density Ratio (%)	**100.0**					
Compaction Method	**Standard**					
Report Remarks	**					

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Report Number: 22-155-2
Issue Number: 1
Date Issued: 11/05/2022
Client: HALL CONTRACTING PTY LTD
PO BOX 519, BUDERIM QLD 4556
Contact: HAYDYN CLIFF
Project Number: 22-155
Project Name: BULK EARTHWORKS
Project Location: NORTH HARBOUR - STAGE 28
Client Reference: NH28-22641
Work Request: 730
Date Sampled: 20/04/2022 11:00
Dates Tested: 20/04/2022 - 11/05/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard
Location: Stg 28 Bulk Fill
Material: Sandy CLAY
Material Source: Onsite

Qualtest Laboratory Pty Ltd
Qualtest Laboratory Pty Limited
2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
Email: mick@qualtestgeo.com

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Approved Signatory: David Taylor
Soil Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S730A	S730B	S730C	S730D	S730E	S730F
Test Number	1	2	3	4	5	6
Date Tested	20/04/2022	20/04/2022	20/04/2022	20/04/2022	20/04/2022	20/04/2022
Time Tested	11:00	11:04	11:08	11:13	11:18	11:25
Test Request #/Location	Lot 222	Lot 223	Lot 224	Lot 225	Lot 226	Lot 227
Line / Offset	Center Of Lot	Center Of Lot	Center Of Lot	Center Of Lot	Center Of Lot	Center Of Lot
Offset	**	**	**	**	**	**
Layer / Reduced Level	F/L	F/L	F/L	F/L	F/L	F/L
Soil Description	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY
Test Depth (mm)	150	150	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0	0
Field Wet Density (FWD) t/m^3	2.00	2.10	2.10	2.12	2.12	1.96
Field Moisture Content %	13.2	13.7	14.2	16.8	15.8	20.4
Field Dry Density (FDD) t/m^3	1.77	1.85	1.84	1.81	1.83	1.63
Peak Converted Wet Density t/m^3	1.99	2.07	2.12	2.11	2.09	2.05
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	-1.0	-1.0	-1.0	-3.5	-2.0	-3.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**100.0**	**101.5**	**99.5**	**100.5**	**101.5**	**95.0**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Report Number: 22-155-2
Issue Number: 1
Date Issued: 11/05/2022
Client: HALL CONTRACTING PTY LTD
PO BOX 519, BUDERIM QLD 4556
Contact: HAYDYN CLIFF
Project Number: 22-155
Project Name: BULK EARTHWORKS
Project Location: NORTH HARBOUR - STAGE 28
Client Reference: NH28-22641
Work Request: 730
Date Sampled: 20/04/2022 11:00
Dates Tested: 20/04/2022 - 11/05/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard
Location: Stg 28 Bulk Fill
Material: Sandy CLAY
Material Source: Onsite

Qualtest Laboratory Pty Ltd
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2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
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Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: David Taylor
Soil Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S730G	S730H	S730I	S730J	S730K	S730L
Test Number	7	8	9	10	11	12
Date Tested	20/04/2022	20/04/2022	20/04/2022	20/04/2022	20/04/2022	20/04/2022
Time Tested	11:30	11:35	11:40	11:45	11:50	11:55
Test Request #/Location	Lot 228	Lot 229	Lot 230	Lot 231	Lot 297	Lot 298
Line / Offset	Center Of Lot	Center Of Lot	Center Of Lot	Center Of Lot	Center Of Lot	Center Of Lot
Offset	**	**	**	**	**	**
Layer / Reduced Level	F/L	F/L	F/L	F/L	F/L	F/L
Soil Description	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY	Sandy CLAY
Test Depth (mm)	150	150	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	**	0	0
Field Wet Density (FWD) t/m^3	2.13	2.10	2.05	1.96	2.04	2.04
Field Moisture Content %	16.3	18.6	15.0	14.3	11.6	15.5
Field Dry Density (FDD) t/m^3	1.83	1.77	1.78	1.71	1.82	1.77
Peak Converted Wet Density t/m^3	2.18	2.07	2.06	2.06	2.09	2.11
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	-2.0	-1.0	0.5	1.5	2.5	-1.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**97.5**	**102.0**	**99.5**	**95.0**	**97.5**	**96.5**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**	**	**	**

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Report Number: 22-155-2
Issue Number: 1
Date Issued: 11/05/2022
Client: HALL CONTRACTING PTY LTD
PO BOX 519, BUDERIM QLD 4556
Contact: HAYDYN CLIFF
Project Number: 22-155
Project Name: BULK EARTHWORKS
Project Location: NORTH HARBOUR - STAGE 28
Client Reference: NH28-22641
Work Request: 730
Date Sampled: 20/04/2022 11:00
Dates Tested: 20/04/2022 - 11/05/2022
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: 95% Standard
Location: Stg 28 Bulk Fill
Material: Sandy CLAY
Material Source: Onsite

Qualtest Laboratory Pty Ltd
Qualtest Laboratory Pty Limited
2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
Email: mick@qualtestgeo.com

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: David Taylor
Soil Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S730M	S730N				
Test Number	13	14				
Date Tested	20/04/2022	20/04/2022				
Time Tested	12:00	12:05				
Test Request #/Location	Lot 299	Lot 300				
Line / Offset	Center Of Lot	Center Of Lot				
Offset	**	**				
Layer / Reduced Level	F/L	F/L				
Soil Description	Sandy CLAY	Sandy CLAY				
Test Depth (mm)	150	150				
Sieve used to determine oversize (mm)	19.0	19.0				
Percentage of Wet Oversize (%)	0	0				
Field Wet Density (FWD) t/m^3	2.09	2.04				
Field Moisture Content %	13.7	14.5				
Field Dry Density (FDD) t/m^3	1.83	1.79				
Peak Converted Wet Density t/m^3	2.03	2.11				
Adjusted Peak Converted Wet Density t/m^3	**	**				
Moisture Variation (Wv) %	1.0	-1.0				
Adjusted Moisture Variation %	**	**				
Hilf Density Ratio (%)	**103.0**	**96.5**				
Compaction Method	**Standard**	**Standard**				
Report Remarks	**	**				

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC