Reference
No.: 1917-074

# LEVEL ONE

# SURVEILLANCE

# AND INSPECTION REPORT

*Carried Out*
*By*

GEOTECHNICAL LABORATORIES

PREPARED FOR: -

DRAPERS CIVIL CONTRACTING PTY LTD

# Table of Contents



# Appendices

Client Name: Drapers Civil Contracting Pty Ltd

Project Name: The Quay 2 Estate Stage 9

Date: 7th of December 2018

Author: Mr. Sam Loza

Reference No.: 1917-074

Revision: 0

Project Manager: Mr. Matthew Jackman

## *1. Introduction & Scope*

At the request of Drapers Civil Contracting Pty Ltd, Geotechnical Laboratories has carried out inspection and testing of the above-mentioned site on the 18th of May 2018 and the 8th of June 2018 where a residential development is being constructed. Inspection and testing of stripping, material quality and compaction control tests were carried out to comply with the requirements of AS 3798 Appendix B, Level 1.

The following documentation was submitted to Geotechnical Laboratories by Drapers Civil Contracting Pty Ltd and was used to determine compliance of earthworks in conjunction with the requirements of AS 3798 – 2007 (See Appendix A).

(1). Reeds Consulting Standard Faceplan Layout Reference No. 21437E/9.

General site works involved the placement of fill, using on-site derived clay, to bring the fill region to the required finished levels as indicated on the faceplan drawings.

## *2. Site Preparation*

Site inspections were undertaken on the 18th of May 2018 confirming that selected areas to be filled were completely stripped of topsoil prior to filling. The brown silty topsoils had been stockpiled around the site for later removal off-site.

Initial proof roll inspections were performed and subsequently throughout the project duration to ensure no significant soft areas were present prior to filling.

## *3. Fill Material*

It is understood that the fill material used was sourced from on-site excavations, mainly service trenches and road boxing.

The fill material is best described as a CLAY / SAND, brown, grey-brown, medium plasticity, slightly silty, slightly moist to moist with basalt gravel and cobbles.

The fill material is consistent with the naturally occurring soils for this region.

Source material was deemed a **Suitable Material** in accordance with guidelines set out in AS 3798 - 2007 Section 4.4.

## *4. Fill Construction Procedure*

The following plant (but not always limited to) were engaged in the fill placement process:

- Dump trucks and / or highway trucks
- A watercart
- A sheepsfoot compactor (815)

The sheepsfoot compactor placed material in horizontal loose layers of approximately 250mm-300mm. The sheepsfoot compactor also performed compaction of the clay fill operating in a criss-cross pattern.

The moisture condition of the fill was closely monitored and moisture conditioning procedures were applied to bring the material closer to its Standard Optimum Moisture Content (AS 1289 5.7.1).

## *5. Compaction Control Testing*

Compaction control testing was performed on-site using a Nuclear Densometer in accordance with AS 1289 5.8.1. Laboratory reference densities were determined from material sampled at each test site location using the Hilf Rapid Compaction Method in accordance with AS 1289 5.7.1.

A total of thirty compaction tests were performed on the fill construction. Results are presented in Appendix B of this report.

## *6. Testing Frequency*

Testing frequencies were in accordance with ***AS 3798 - 2007 Table 8.1*** for ***Large Scale Operations.***

Acceptance of fill layers for compaction was based on the requirements of ***AS 3798 - 2007 Table 5.1 Item 1. Residential.*** As a result, the compliance criteria adopted by Geotechnical Laboratories was a hilf density ratio not less than 95 percent of the maximum hilf density value as determined by the Standard Hilf Rapid Compaction Method in accordance with AS 1289 5.7.1.

Test results indicate that the above-mentioned requirements have been successfully achieved.

No moisture criteria was specified.

## *7. Statement of Compliance*

So far as can be determined, Drapers Civil Contracting Pty Ltd has satisfactorily complied with the compaction and construction processes required for the structural filling of this site. As such, structural filling placed on this site by Drapers Civil Contracting Pty Ltd from the 18th of May 2018 to the 8th of June 2018 can be categorised as CONTROLLED FILL in accordance with AS 2870-2011.

## 8. Limitations and Liability of this Report

This report has been produced for and remains the property of Drapers Civil Contracting Pty Ltd.

The release of this report to a third party will only occur if Geotechnical Laboratories Pty Ltd has received, in writing, the authority to do so by our client.

Geotechnical Laboratories Pty Ltd will not engage in any third-party communication regarding this report.

Where information has been supplied by the client or third party, the assumption is made that this is correct. Geotechnical Laboratories Pty Ltd will not be held responsible for any inaccuracies supplied.

Test results and controlled fill compliance relates only to fill placed by Drapers Civil Contracting Pty Ltd and for earthworks completed at the time of inspection and testing. Any previous or subsequent earthworks will require a separate evaluation.

For & on behalf of
Geotechnical Laboratories Pty Ltd.

Sam Loza
Laboratory Manager.

# LEVEL ONE

# SURVEILLANCE

# AND INSPECTION REPORT

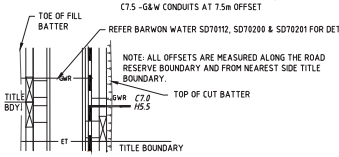
# APPENDIX A


N

## LEGEND

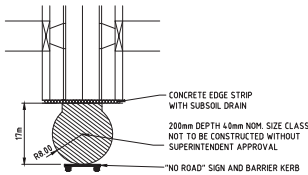
- 170.0 / 170.2 — EXISTING SURFACE CONTOURS (0.20m INT.)
- TGSI - REFER TO IDM SD200
- OVERALL DIRECTION TO LEGAL POINT OF DISCHARGE
- FILL IN EXCESS OF 200mm
- - TREE PROTECTION ZONES
- - TREES TO BE REMOVED
- - TREES TO BE RETAINED NOT REQUIRING TREE PROTECTION
- - PROPOSED STREET TREES, REFER TO LANDSCAPE PLAN

DESCRIPTION OF ABBREV.
X 0.50 -EDGE OF VEHICLE CROSSING AT 0.50m OFFSET (ONLY SHOWN WHERE NON-STD.)
H5.5 -PROPERTY DRAIN AT 5.5m OFFSET (WHERE DRAIN IN NON-PERPEDNDICULAR, O/S REFERS TO INTERS. OF DRAIN & BL).
C7.5 -G&W CONDUITS AT 7.5m OFFSET




## TYPICAL NOTATIONS - EXAMPLE:

NOT TO SCALE




## TYPICAL TEMPORARY TURN AREA DETAIL

NOT TO SCALE

0 5 10 20
Scale 1:500 @ A1

**WARNING**

BEWARE OF UNDERGROUND SERVICES

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

**CONSTRUCTION PLAN**

| VERSION | REMARKS | | |
|---|---|---|---|
| C | PROPOSED STREET TREES SHOWN | 20.03.18 | JZ |
| B | CONSTRUCTION ISSUE | 19.03.18 | JZ |
| A | PRELIMINARY ISSUE | 19.02.18 | JZ |

LEGEND

DRAIN, PROPERTY INLET & PIT; EX DRAIN & PIT; HOUSE DRAIN; SEWER AND MAINTENANCE HOLE; EX SEWER AND MAINTENANCE HOLE; WATER MAIN; EX WATER MAIN, VALVE & HYDRANT; GAS MAIN; EX GAS MAIN, VALVE; TELSTRA SERVICES & PITS; EX TELSTRA SERVICES & PITS; RECYCLED WATER; EX RECYCLED WATER; ELECTRICAL U/G SERVICES; EX ELECTRICAL U/G SERVICES; ELECTRICAL SERVICE & PIT; EX ELECTRICAL ASSETS; EX ELECTRICAL OVERHEADS; GAS & WATER CONDUITS; TOP OF BATTER; TOE OF BATTER; EX FENCE; EX WALL OR BUILDING

F FINISHED SURFACE AFTER CUTTING OR FILLING
/B TOP OF PROPOSED BATTER
P PROPOSED PAVEMENT OR FOOTPATH SURFACE
IL EXISTING OR PROPOSED INVERT LEVEL OF PIPE OR OPEN DRAIN
TP TANGENT POINT
CH CHAINAGE
PSM
STREET SIGN
DRAINAGE PIT No.
TBM

| | | | |
|---|---|---|---|
| DRAWN BY | N.KASHA | DESIGNED BY | J.ZHOU |
| MELWAY | 493 D12 | CHECKED BY | - |
| DATUM | AHD | AUTHORISED BY | S.RAVIDA |

REEDS CONSULTING
LAND SURVEYING
CIVIL ENGINEERING
PLANNING
DEVELOPMENT CONSULTING

SURF COAST SHIRE
THE QUAY 2 ESTATE
STAGE 9
LAYOUT PLAN - 1

| DRAWING No. | VERSION |
|---|---|
| 9R2 | C |
| REFERENCE | |
| 21437E/9 | |
| SHEET | |
| 2 OF 29 | |

H:\21437\STAGE 9\CAD\ENGSET\ROAD AND DRAINAGE\21437_9R2-3_9R19-23.DWG

THIS DRAWING IS NOT TO BE PRINTED OR SCALED

# LEVEL ONE

# SURVEILLANCE

# AND INSPECTION REPORT

# APPENDIX B

GEOTECHNICAL LABORATORIES
ACN 102 571 077
Factory 1/8-10 Catalina Drive, Tullamarine Vic 3043
PO Box 2693 Gladstone Park VIC 3043
PH: (03) 9335 1225

# DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 1916/232

LOCATION: DRAPERS - The Quay 2 Estate Stage 9

| DATE OF TESTS | TEST NUM. | TEST LOCATION | FIELD WET DENSITY (t/m³) | FIELD MOISTURE CONTENT (%) | HILF DENSITY RATIO STANDARD (%) | STANDARD PCWD OR APCWD (t/m³) | STANDARD OPTIMUM MOISTURE CONTENT (%) | PROBE DEPTH SETTING (mm) | VARIATION FROM OPTIMUM MOISTURE CONTENT (%) | MOISTURE RATIO (%) | WET +19mm (%) | WET +37.5mm (%) | APPROX. DEPTH BELOW FINISH LEVEL (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18/05/18 | 1 | *Refer to #1916/233 for approx. test site locations.* | 2.05 | 6.5 | 101.5 | 2.02 | 8.5 | 175 | 2.0 Drier | 77.5 | 0 | 0 | 0 |
| 18/05/18 | 2 | | 2.03 | 4.0 | 99.0 | 2.06 | 7.5 | 175 | 3.5 Drier | 52.0 | 0 | 0 | 0 |
| 18/05/18 | 3 | | 2.03 | 5.5 | 101.0 | 2.01 | 7.5 | 175 | 2.0 Drier | 72.5 | 0 | 0 | 0 |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |

NOTES: Sandy Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 11.45am Finish Time: 12.10pm

A Hilf Rapid Compaction test was carried out on a sample taken from each Field Density location to obtain the Compaction Parameters tabulated on this Report.

Moisture Content: AS 1289 2.1.1

Soil Layer thickness: 200mm

Compaction Test: AS 1289 5.7.1

Hilf Density Ratio and Hilf Moisture Variation ,Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1

Field Density, Nuclear Gauge: AS 1289 5.8.1

Materials Sampled : AS 1289 1.2.1 Clause 6.4(b)

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*NATA Accredited Laboratory Number 14561*

MICK CROWE

(Approved Signatory)

Issue Date: 22/5/2018


GEOTECHNICAL LABORATORIES

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| | | |
|---|---|---|
| **CLIENT: DRAPERS** | **DATE: 18/5/18** | **JOB No.: 1916/233** |
| **LOCATION: The Quay 2 Estate Stage 9** | **OPERATOR: NW** | **CHECKED: EG** |
| **Sketch indicating compaction test locations** | **SCALE: NTS** | **FIGURE No: -** |

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# DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 1916/234

LOCATION: DRAPERS - The Quay 2 Estate Stage 9

| DATE OF TESTS | TEST NUM. | TEST LOCATION | FIELD WET DENSITY (t/m³) | FIELD MOISTURE CONTENT (%) | HILF DENSITY RATIO STANDARD (%) | STANDARD PCWD OR APCWD (t/m³) | STANDARD OPTIMUM MOISTURE CONTENT (%) | PROBE DEPTH SETTING (mm) | VARIATION FROM OPTIMUM MOISTURE CONTENT (%) | MOISTURE RATIO (%) | WET +19mm (%) | WET +37.5mm (%) | APPROX. DEPTH BELOW FINISH LEVEL (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21/05/18 | 1 | ***Refer to #1916/235 for approx. test site locations.*** | 2.06 | 9.5 | 98.0 | 2.09 | 9.5 | 175 | 0.0 Wetter | 102.5 | 0 | 0 | 0 |
| 21/05/18 | 2 | | 2.06 | 9.0 | 98.0 | 2.10 | 9.0 | 175 | 0.0 Drier | 100.0 | 0 | 0 | 0 |
| 21/05/18 | 3 | | 2.06 | 9.0 | 101.0 | 2.04 | 8.5 | 175 | 0.5 Wetter | 108.0 | 0 | 0 | 0 |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |

NOTES: Sandy Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 12.40pm Finish Time: 12.55pm

A Hilf Rapid Compaction test was carried out on a sample taken from each Field Density location to obtain the Compaction Parameters tabulated on this Report.

Moisture Content: AS 1289 2.1.1

Soil Layer thickness: 200mm

Compaction Test: AS 1289 5.7.1

Hilf Density Ratio and Hilf Moisture Variation ,Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1

Field Density, Nuclear Gauge: AS 1289 5.8.1

Materials Sampled : AS 1289 1.2.1 Clause 6.4(b)

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MICK CROWE

(Approved Signatory)

Issue Date: 23/5/2018


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| | | |
|---|---|---|
| **CLIENT: DRAPERS** | **DATE: 21/5/18** | **JOB No.: 1916/235** |
| **LOCATION: The Quay 2 Estate Stage 9** | **OPERATOR: NW** | **CHECKED: EG** |
| **Sketch indicating compaction test locations** | **SCALE: NTS** | **FIGURE No: -** |

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# DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 1916/236

LOCATION: DRAPERS - The Quay 2 Estate Stage 9

| DATE OF TESTS | TEST NUM. | TEST LOCATION | FIELD WET DENSITY (t/m³) | FIELD MOISTURE CONTENT (%) | HILF DENSITY RATIO STANDARD (%) | STANDARD PCWD OR APCWD (t/m³) | STANDARD OPTIMUM MOISTURE CONTENT (%) | PROBE DEPTH SETTING (mm) | VARIATION FROM OPTIMUM MOISTURE CONTENT (%) | MOISTURE RATIO (%) | WET +19mm (%) | WET +37.5mm (%) | APPROX. DEPTH BELOW FINISH LEVEL (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22/05/18 | 1 | ***Refer to #1916/237 for approx. test site locations.*** | 2.01 | 6.5 | 103.5 | 1.95 | 8.5 | 175 | 2.0 Drier | 77.5 | 0 | 0 | 0 |
| 22/05/18 | 2 | | 2.00 | 7.5 | 103.0 | 1.95 | 7.0 | 175 | 0.5 Wetter | 106.0 | 0 | 0 | 0 |
| 22/05/18 | 3 | | 2.03 | 8.0 | 104.0 | 1.95 | 9.0 | 175 | 1.0 Drier | 88.0 | 0 | 0 | 0 |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |

NOTES: Sandy Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 1.20pm Finish Time: 1.45pm

A Hilf Rapid Compaction test was carried out on a sample taken from each Field Density location to obtain the Compaction Parameters tabulated on this Report.

Moisture Content: AS 1289 2.1.1

Soil Layer thickness: 200mm

Compaction Test: AS 1289 5.7.1

Hilf Density Ratio and Hilf Moisture Variation ,Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1

Field Density, Nuclear Gauge: AS 1289 5.8.1

Materials Sampled : AS 1289 1.2.1 Clause 6.4(b)

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*NATA Accredited Laboratory Number 14561*

SAM LOZA

(Approved Signatory)

Issue Date: 25/5/2018


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| | | |
|---|---|---|
| **CLIENT: DRAPERS** | **DATE: 22/5/18** | **JOB No.: 1916/237** |
| **LOCATION: The Quay 2 Estate Stage 9** | **OPERATOR: NW** | **CHECKED: EG** |
| **Sketch indicating compaction test locations** | **SCALE: NTS** | **FIGURE No: -** |

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# DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 1916/238

LOCATION: DRAPERS - The Quay Stage 9

| DATE OF TESTS | TEST NUM. | TEST LOCATION | FIELD WET DENSITY (t/m³) | FIELD MOISTURE CONTENT (%) | HILF DENSITY RATIO STANDARD (%) | STANDARD PCWD OR APCWD (t/m³) | STANDARD OPTIMUM MOISTURE CONTENT (%) | PROBE DEPTH SETTING (mm) | VARIATION FROM OPTIMUM MOISTURE CONTENT (%) | MOISTURE RATIO (%) | WET +19mm (%) | WET +37.5mm (%) | APPROX. DEPTH BELOW FINISH LEVEL (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24/05/18 | 1 | ***Refer to #1916/239 for approx. test site locations.*** | 2.01 | 9.0 | 97.5 | 2.06 | 9.0 | 175 | 0.0 Drier | 100.0 | 0 | 0 | 0 |
| 24/05/18 | 2 | | 2.07 | 8.0 | 102.0 | 2.02 | 9.5 | 175 | 1.5 Drier | 86.5 | 0 | 0 | 0 |
| 24/05/18 | 3 | | 2.00 | 8.5 | 98.0 | 2.04 | 10.0 | 175 | 1.0 Drier | 89.0 | 0 | 0 | 0 |
| 24/05/18 | 4 | | 2.04 | 9.5 | 98.0 | 2.08 | 9.0 | 175 | 0.5 Wetter | 107.5 | 0 | 0 | 0 |
| 24/05/18 | 5 | | 2.02 | 11.5 | 95.0 | 2.12 | 11.0 | 175 | 0.5 Wetter | 104.0 | 0 | 0 | 0 |
| 24/05/18 | 6 | | 2.03 | 8.5 | 100.5 | 2.02 | 10.0 | 175 | 1.5 Drier | 85.0 | 0 | 0 | 0 |

NOTES: Sandy Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 11.40am Finish Time: 12.15pm

A Hilf Rapid Compaction test was carried out on a sample taken from each Field Density location to obtain the Compaction Parameters tabulated on this Report.

Moisture Content: AS 1289 2.1.1

Soil Layer thickness: 200mm

Compaction Test: AS 1289 5.7.1

Hilf Density Ratio and Hilf Moisture Variation ,Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1

Field Density, Nuclear Gauge: AS 1289 5.8.1

Materials Sampled : AS 1289 1.2.1 Clause 6.4(b)

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SAM LOZA

(Approved Signatory)

Issue Date: 28/5/2018


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| | | |
|---|---|---|
| **CLIENT: DRAPERS** | **DATE: 24/5/18** | **JOB No.: 1916/239** |
| **LOCATION: The Quay 2 Estate Stage 9** | **OPERATOR: NW** | **CHECKED: EG** |
| **Sketch indicating compaction test locations** | **SCALE: NTS** | **FIGURE No: -** |

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# DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 1916/257

LOCATION: DRAPERS - The Quay 2 Estate Stage 9

| DATE OF TESTS | TEST NUM. | TEST LOCATION | FIELD WET DENSITY (t/m³) | FIELD MOISTURE CONTENT (%) | HILF DENSITY RATIO STANDARD (%) | STANDARD PCWD OR APCWD (t/m³) | STANDARD OPTIMUM MOISTURE CONTENT (%) | PROBE DEPTH SETTING (mm) | VARIATION FROM OPTIMUM MOISTURE CONTENT (%) | MOISTURE RATIO (%) | WET +19mm (%) | WET +37.5mm (%) | APPROX. DEPTH BELOW FINISH LEVEL (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4/06/18 | 1 | ***Refer to #1916/258 for approx. test site locations.*** | 1.94 | 23.0 | 103.5 | 1.87 | 26.0 | 175 | 3.0 Drier | 88.5 | 0 | 0 | 0 |
| 4/06/18 | 2 | | 1.94 | 23.0 | 101.5 | 1.91 | 25.0 | 175 | 2.0 Drier | 92.0 | 0 | 0 | 600 |
| 4/06/18 | 3 | | 1.92 | 15.5 | 96.0 | 2.00 | 18.0 | 175 | 2.5 Drier | 87.0 | 0 | 0 | 400 |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |

NOTES: Onsite Clayey Fill

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 12.10pm Finish Time: 12.30pm

A Hilf Rapid Compaction test was carried out on a sample taken from each Field Density location to obtain the Compaction Parameters tabulated on this Report.

Moisture Content: AS 1289 2.1.1

Soil Layer thickness: 200mm

Compaction Test: AS 1289 5.7.1

Hilf Density Ratio and Hilf Moisture Variation ,Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1

Field Density, Nuclear Gauge: AS 1289 5.8.1

Materials Sampled : AS 1289 1.2.1 Clause 6.4(b)

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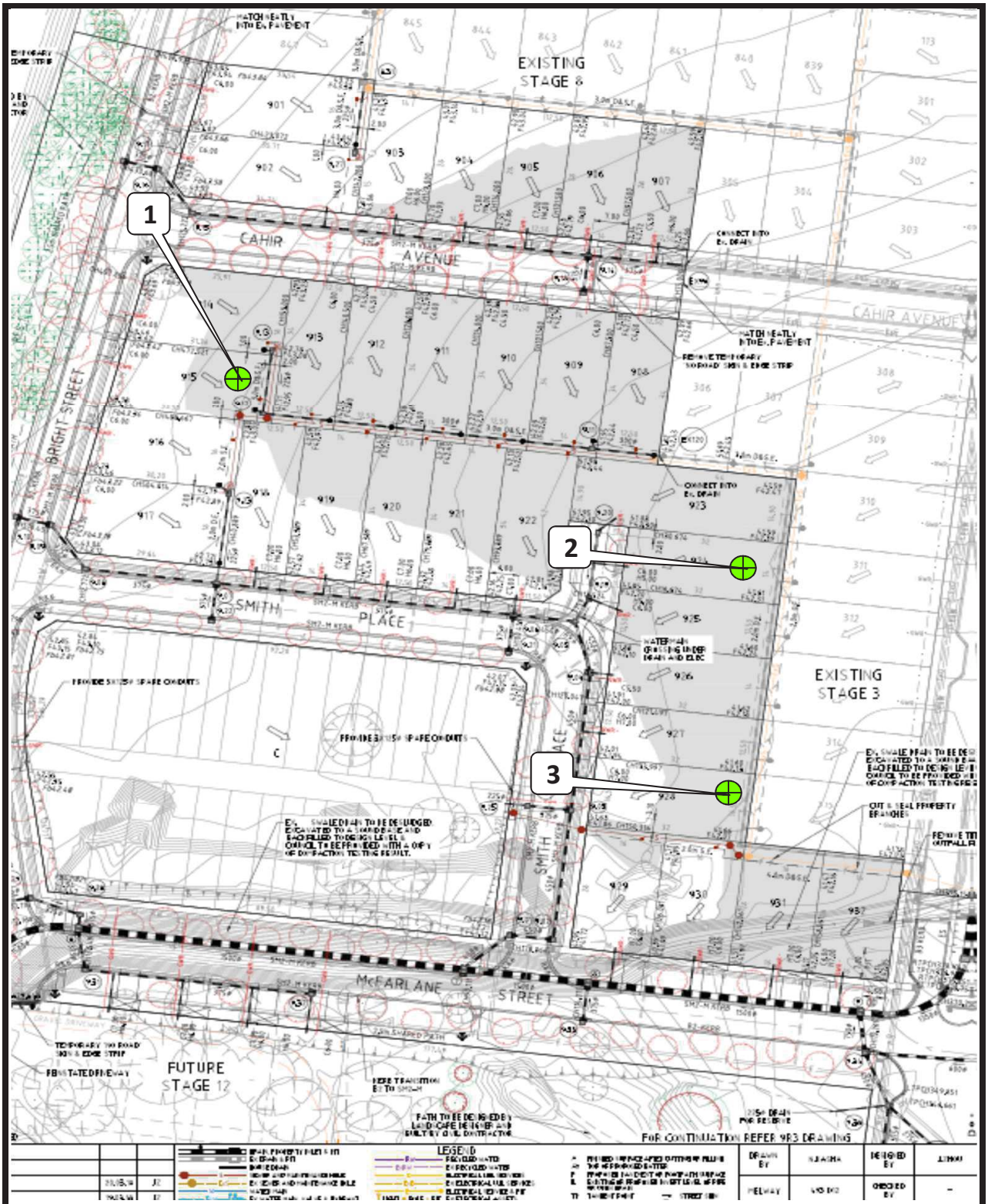
MICK CROWE
(Approved Signatory)

Issue Date: 7/6/2018

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| | | |
|---|---|---|
| **CLIENT: DRAPERS** | **DATE: 4/6/18** | **JOB No.: 1916/258** |
| **LOCATION: The Quay 2 Estate Stage 9** | **OPERATOR: JC** | **CHECKED: EG** |
| **Sketch indicating compaction test locations** | **SCALE: NTS** | **FIGURE No: -** |

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# DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 1916/259

LOCATION: DRAPERS - The Quay 2 Estate Stage 9

| DATE OF TESTS | TEST NUM. | TEST LOCATION | FIELD WET DENSITY (t/m³) | FIELD MOISTURE CONTENT (%) | HILF DENSITY RATIO STANDARD (%) | STANDARD PCWD OR APCWD (t/m³) | STANDARD OPTIMUM MOISTURE CONTENT (%) | PROBE DEPTH SETTING (mm) | VARIATION FROM OPTIMUM MOISTURE CONTENT (%) | MOISTURE RATIO (%) | WET +19mm (%) | WET +37.5mm (%) | APPROX. DEPTH BELOW FINISH LEVEL (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/06/18 | 1 | ***Refer to #1916/260 for approx. test site locations.*** | 1.97 | 17.0 | 98.0 | 2.01 | 19.0 | 175 | 2.0 Drier | 90.0 | 0 | 0 | 400 |
| 5/06/18 | 2 | | 2.05 | 15.0 | 104.0 | 1.97 | 18.5 | 175 | 3.5 Drier | 81.5 | 0 | 0 | 400 |
| 5/06/18 | 3 | | 2.04 | 20.5 | 101.5 | 2.01 | 21.0 | 175 | 0.5 Drier | 96.5 | 0 | 0 | 0 |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 12.36pm Finish Time: 12.50pm

A Hilf Rapid Compaction test was carried out on a sample taken from each Field Density location to obtain the Compaction Parameters tabulated on this Report.

Moisture Content: AS 1289 2.1.1

Soil Layer thickness: 200mm

Compaction Test: AS 1289 5.7.1

Hilf Density Ratio and Hilf Moisture Variation ,Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1

Field Density, Nuclear Gauge: AS 1289 5.8.1

Materials Sampled : AS 1289 1.2.1 Clause 6.4(b)

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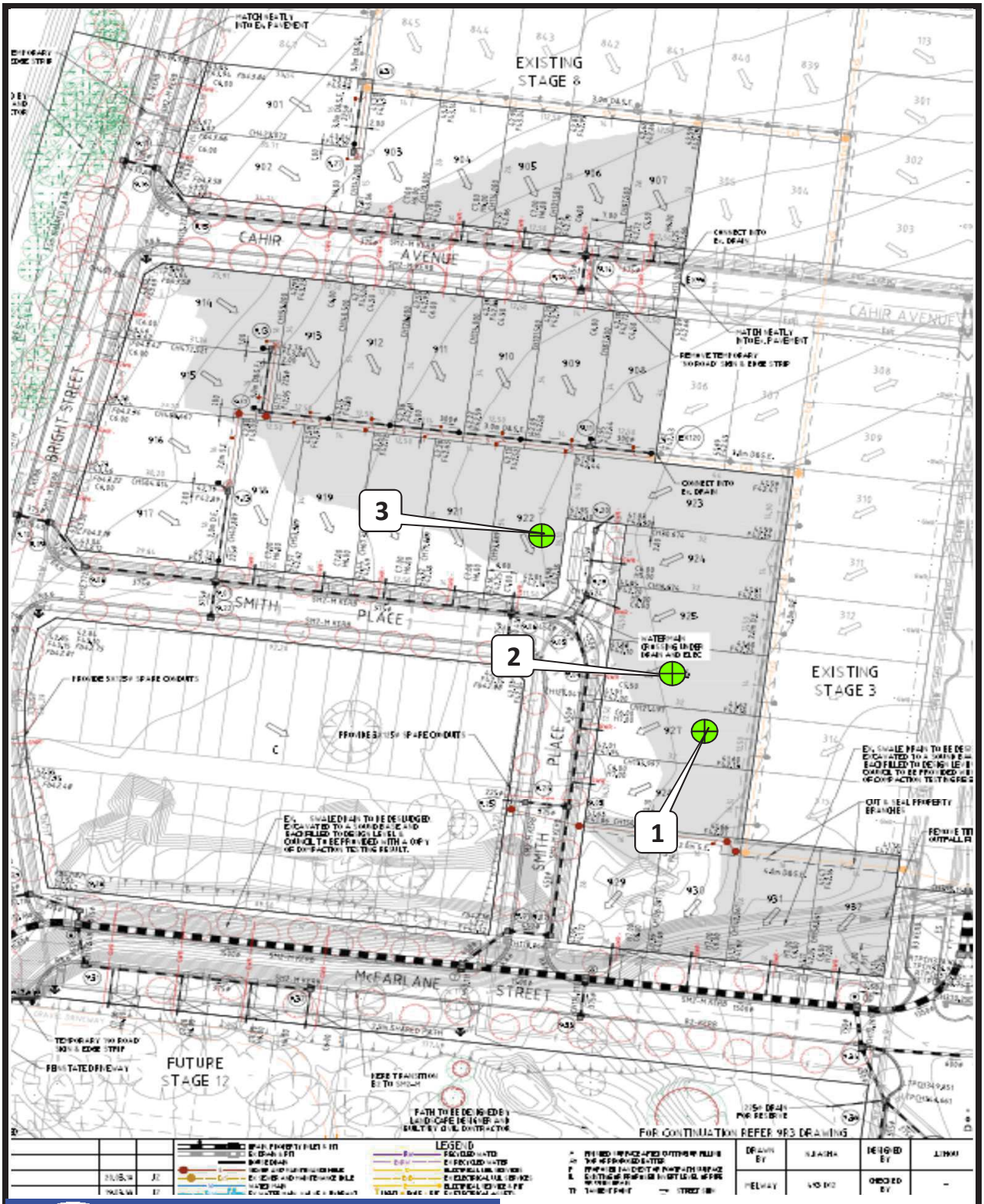
SAM LOZA

(Approved Signatory)

Issue Date: 8/6/2018

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| | | |
|---|---|---|
| **CLIENT: DRAPERS** | **DATE: 5/6/18** | **JOB No.: 1916/260** |
| **LOCATION: The Quay 2 Estate Stage 9** | **OPERATOR: NW** | **CHECKED: EG** |
| **Sketch indicating compaction test locations** | **SCALE: NTS** | **FIGURE No: -** |

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# DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 1916/263

LOCATION: DRAPERS - The Quay Estate Stage 9

| DATE OF TESTS | TEST NUM. | TEST LOCATION | FIELD WET DENSITY (t/m³) | FIELD MOISTURE CONTENT (%) | HILF DENSITY RATIO STANDARD (%) | STANDARD PCWD OR APCWD (t/m³) | STANDARD OPTIMUM MOISTURE CONTENT (%) | PROBE DEPTH SETTING (mm) | VARIATION FROM OPTIMUM MOISTURE CONTENT (%) | MOISTURE RATIO (%) | WET +19mm (%) | WET +37.5mm (%) | APPROX. DEPTH BELOW FINISH LEVEL (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/06/18 | 1 | ***Refer to #1916/264 for approx. test site locations.*** | 2.02 | 19.0 | 99.0 | 2.04 | 18.0 | 175 | 0.5 Wetter | 104.0 | 0 | 0 | 0 |
| 7/06/18 | 2 | | 1.97 | 20.0 | 96.0 | 2.06 | 19.5 | 175 | 0.5 Wetter | 103.5 | 0 | 0 | 0 |
| 7/06/18 | 3 | | 2.01 | 16.5 | 99.0 | 2.03 | 16.0 | 175 | 0.0 Wetter | 101.5 | 0 | 0 | 0 |
| 7/06/18 | 4 | | 1.95 | 11.5 | 96.0 | 2.03 | 15.5 | 175 | 3.5 Drier | 76.5 | 0 | 0 | 0 |
| 7/06/18 | 5 | | 1.97 | 17.0 | 97.0 | 2.03 | 17.5 | 175 | 0.5 Drier | 96.0 | 0 | 0 | 200 |
| 7/06/18 | 6 | | 1.94 | 12.0 | 97.0 | 2.00 | 14.5 | 175 | 2.0 Drier | 84.5 | 0 | 0 | 200 |

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 11.50am Finish Time: 12.10pm

A Hilf Rapid Compaction test was carried out on a sample taken from each Field Density location to obtain the Compaction Parameters tabulated on this Report.

Moisture Content: AS 1289 2.1.1

Soil Layer thickness: 200mm

Compaction Test: AS 1289 5.7.1

Hilf Density Ratio and Hilf Moisture Variation ,Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1

Field Density, Nuclear Gauge: AS 1289 5.8.1

Materials Sampled : AS 1289 1.2.1 Clause 6.4(b)

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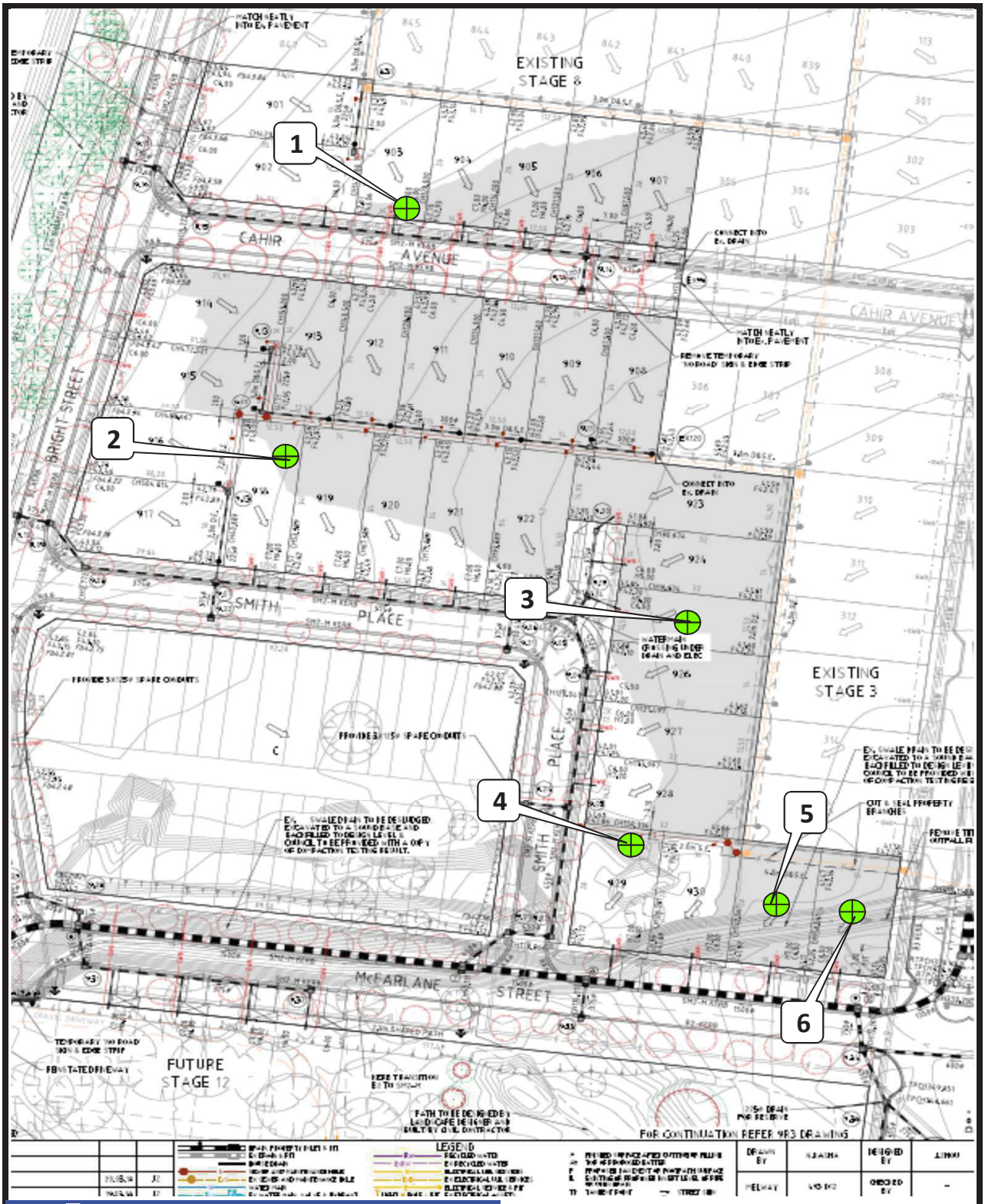
(Approved Signatory)

Issue Date: 14/6/2018

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|---|---|---|
| **CLIENT: DRAPERS** | **DATE: 7/6/18** | **JOB No.: 1916/264** |
| **LOCATION: The Quay 2 Estate Stage 9** | **OPERATOR: NW** | **CHECKED: EG** |
| **Sketch indicating compaction test locations** | **SCALE: NTS** | **FIGURE No: -** |

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# DAILY SUMMARY - FIELD DENSITY TESTS

REPORT NO.: # 1916/265

LOCATION: DRAPERS - The Quay 2 Estate Stage 9

| DATE OF TESTS | TEST NUM. | TEST LOCATION | FIELD WET DENSITY (t/m³) | FIELD MOISTURE CONTENT (%) | HILF DENSITY RATIO STANDARD (%) | STANDARD PCWD OR APCWD (t/m³) | STANDARD OPTIMUM MOISTURE CONTENT (%) | PROBE DEPTH SETTING (mm) | VARIATION FROM OPTIMUM MOISTURE CONTENT (%) | MOISTURE RATIO (%) | WET +19mm (%) | WET +37.5mm (%) | APPROX. DEPTH BELOW FINISH LEVEL (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8/06/18 | 1 | ***Refer to #1916/266 for approx. test site locations.*** | 1.95 | 18.5 | 95.5 | 2.05 | 18.5 | 175 | 0.0 Drier | 100.0 | 0 | 0 | 600 |
| 8/06/18 | 2 | | 2.03 | 16.0 | 99.5 | 2.04 | 19.0 | 175 | 3.0 Drier | 85.0 | 0 | 0 | 0 |
| 8/06/18 | 3 | | 1.94 | 15.5 | 99.0 | 1.96 | 18.5 | 175 | 3.0 Drier | 82.5 | 0 | 0 | 0 |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |
| - | - | | - | - | - | - | - | - | - | - | - | - | - |

NOTES: Clayey Fill Ex. Onsite

Test sites located - Geolab Procedure 4, Part 4.4.

Compaction specimens sampled after compaction.

Start Time: 11.10am Finish Time: 11.21am

A Hilf Rapid Compaction test was carried out on a sample taken from each Field Density location to obtain the Compaction Parameters tabulated on this Report.

Moisture Content: AS 1289 2.1.1

Soil Layer thickness: 200mm

Compaction Test: AS 1289 5.7.1

Hilf Density Ratio and Hilf Moisture Variation ,Hilf Adjusted (APCWD) & Peak (PCWD) Converted Wet Density AS 1289 5.7.1

Field Density, Nuclear Gauge: AS 1289 5.8.1

Materials Sampled : AS 1289 1.2.1 Clause 6.4(b)

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MICK CROWE

(Approved Signatory)

Issue Date: 14/6/2018


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|---|---|---|
| **CLIENT: DRAPERS** | **DATE: 8/6/18** | **JOB No.: 1916/266** |
| **LOCATION: The Quay 2 Estate Stage 9** | **OPERATOR: NW** | **CHECKED: EG** |
| **Sketch indicating compaction test locations** | **SCALE: NTS** | **FIGURE No: -** |