LEVEL ONE EARTHWORKS REPORT

Residential Subdivision

Dawn Stage 6F

FEBRUARY 20 2023

Winslow Pty Ltd

Authored by: QUALTEST LABORATORY PTY LTD

REF: 5045

Qualtest Laboratory

Est. 1987

Qualtest Laboratory
Est. 1987

Ref: 5045
Job: 23-375
Author: J. Fowler

19th February 2024

Winslow
Building 4, G1,
107 Miles Platting Road,
Eight Mile Plains, QLD, 4113

ATTENTION: **MR HAYDEN LANE**
Email: haydenl@winslow.com.au

Dear Sir

RE: **LEVEL ONE EARTHWORKS FILLING REPORT**
RESIDENTIAL SUBDIVISION
DAWN STAGE 6F

PROJECT: **DAWN STAGE 6F**

CLIENT: **WINSLOW**

SUPERINTENDANT: **EGIS**

CONTRACTOR: **WINSLOW**

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 Dawn Stage 6F – Walloon (The Site).

Qualtest Laboratory Pty Ltd was commissioned by CCA Winslow (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 between 14th November 2023 to the 23rd January 2024.

The purpose of Level 1 commission, and this report, is to provide an opinion that the earthworks operations carried out by the Contractor 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.
- Ipswich City Council Requirements
- EGIS Drawings and Notes on Drawings.

This report does not cover underground services, pavements, retaining walls, or any other works after the 23rd of January 2024.

1.2 Previous Earthworks

Existing fill was present at The Site. Previous fill was constructed by Winslow under Level One Inspections and Testing by Qualtest Laboratory between 26th August 2022 and 26th June 2023 and 24th May 2022 and 23rd February 2023. For information regarding the existing fill, refer to the Qualtest Laboratory reports – “Level One Earthworks Report – Proposed Residential Subdivision, Dawn Estate Waterlea Stages 6B2 & 6B3” dated July 2023 and “Level One Earthworks Report – Waterlea Gravity Trunk Sewer” dated April 2023, respectively.

This report has been reviewed by Qualtest Laboratory and is assessed to be appropriate for the existing fill.

Previous earthworks Qualtest Laboratory reports are attached.

1.3 The Development

The development comprises of a 45-lot residential subdivision and associated infrastructure including pavements, stormwater, and sewer reticulation.

The earthworks filling covered by this report generally comprised:

- Filling Lots and part of Lots 733-735, 725, 726-731 and 732

EGIS Drawings, Bulk Earthworks Layout Plan Sheet 1 of 2 and Sheet 2 of 2, Project No. 23-000032.3, Drawing No. 1200 and 1201, Rev. 1 indicates the approximate extent of earthworks filling to be constructed at The Site.

These plans are considered to be a reasonable indication of the actual extent of fill constructed during our involvement and are presented as Figure 1 and Figure 2 below.

The extent of earthworks covered by this report is presented as a marked up plan below as Figure 3 and Figure 4. .

A Lot Disclosure Plan should be requested from the developer to confirm the actual depth of fill at the site.

Figure 1: Bulk Earthworks Layout Plan Sheet 1 of 2

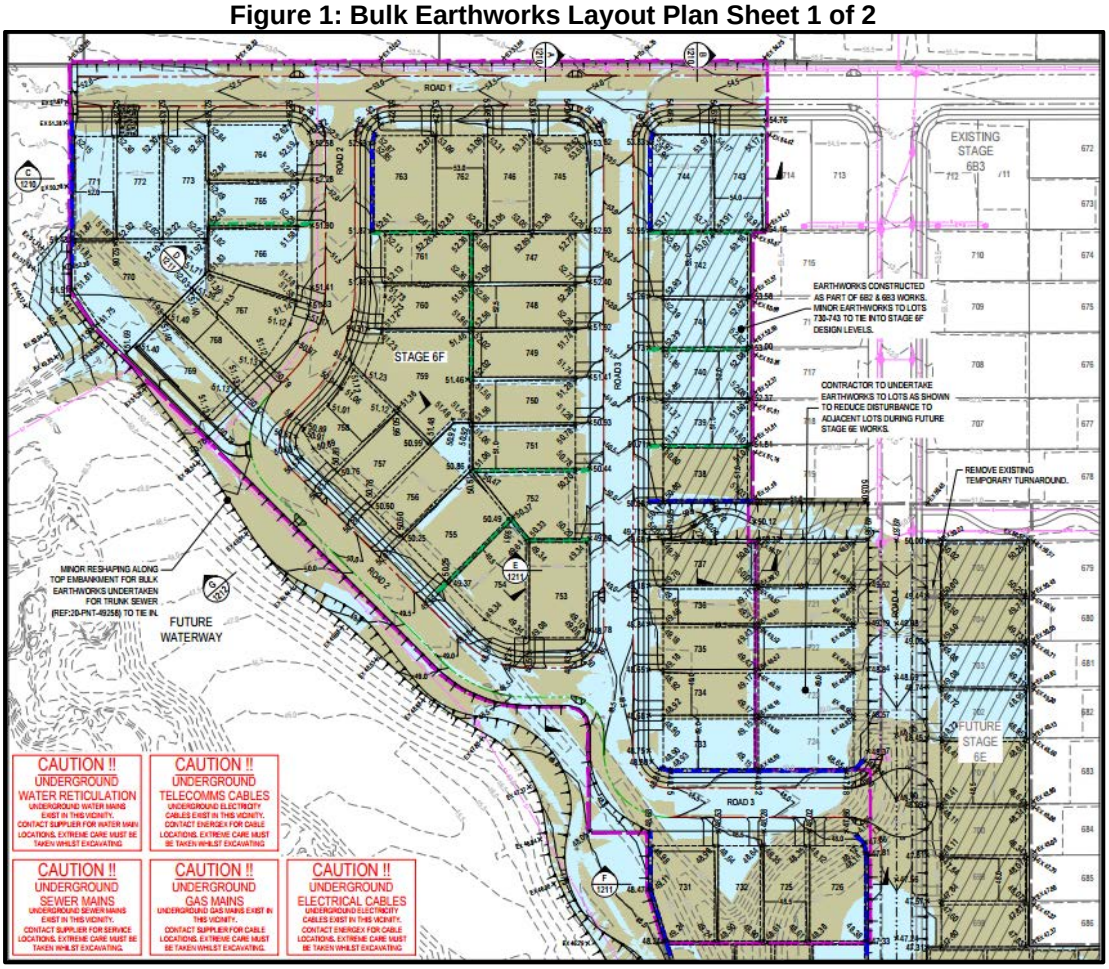
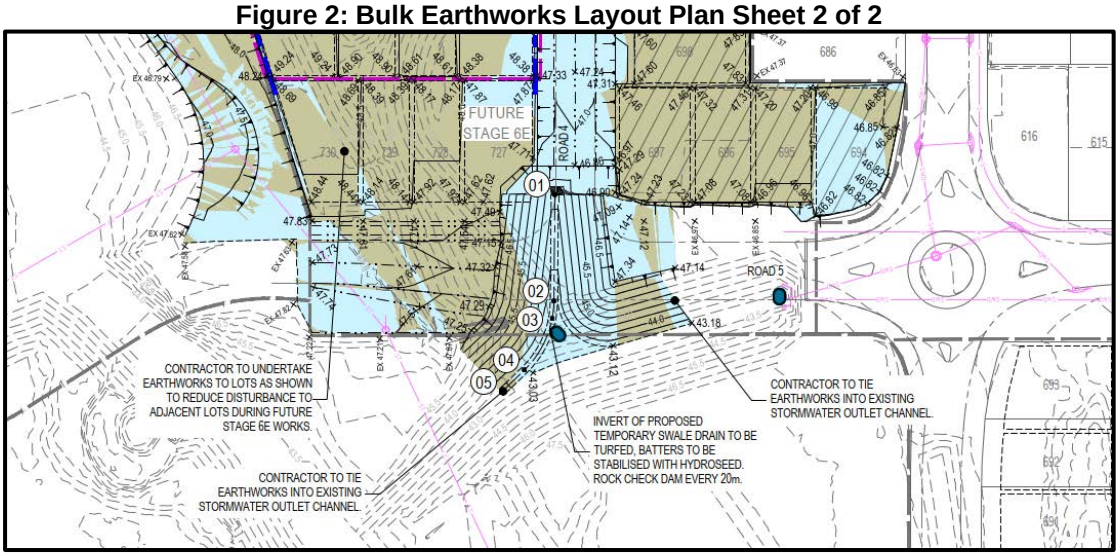


Figure 2: Bulk Earthworks Layout Plan Sheet 2 of 2



EGIS Earthworks Plan showing approximate extents of controlled filling are presented on Figure 3 and 4 below.

Figure 3: Bulk Earthworks Plan Showing Approx Extents of Controlled Filling (Shaded Blue)

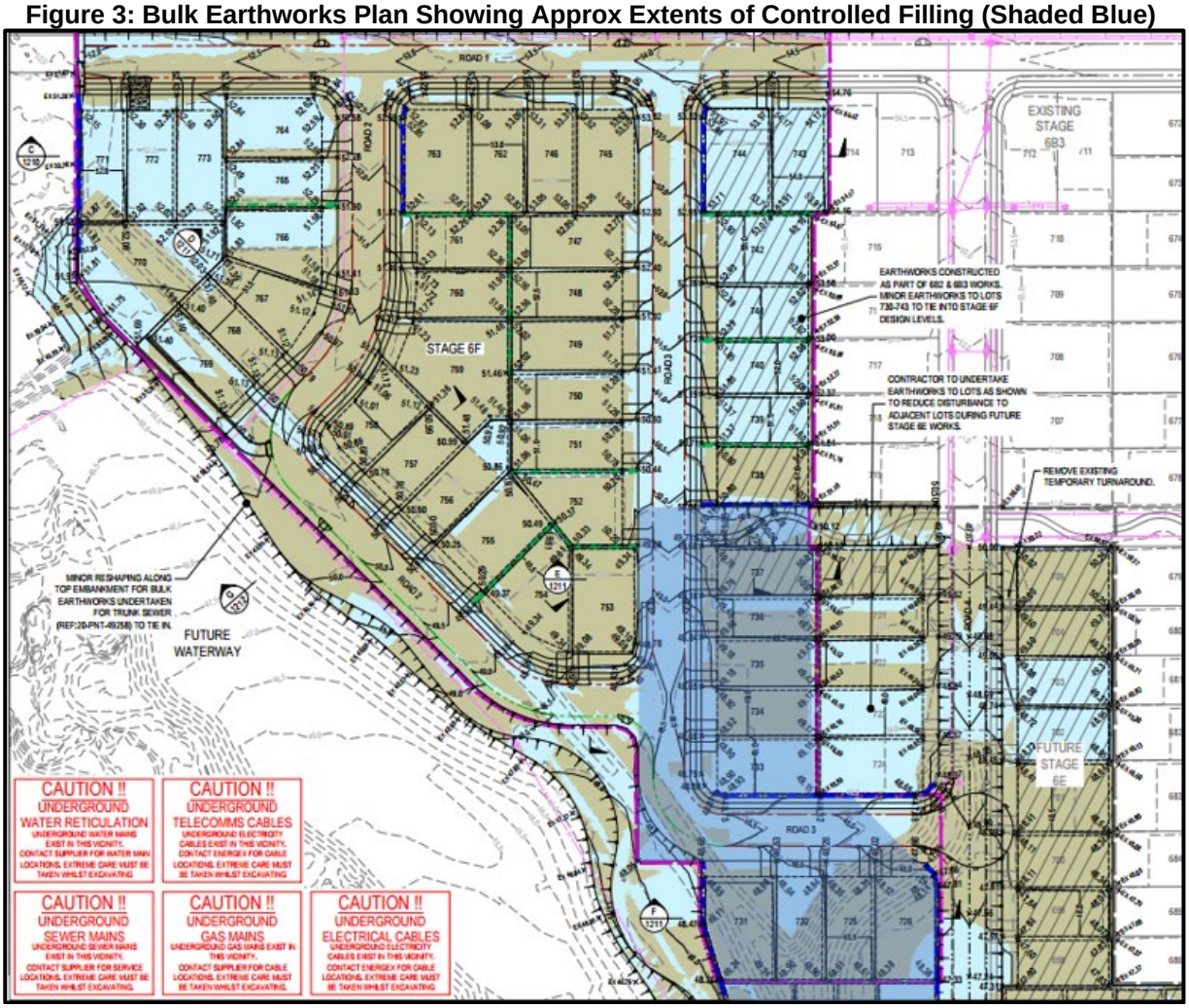
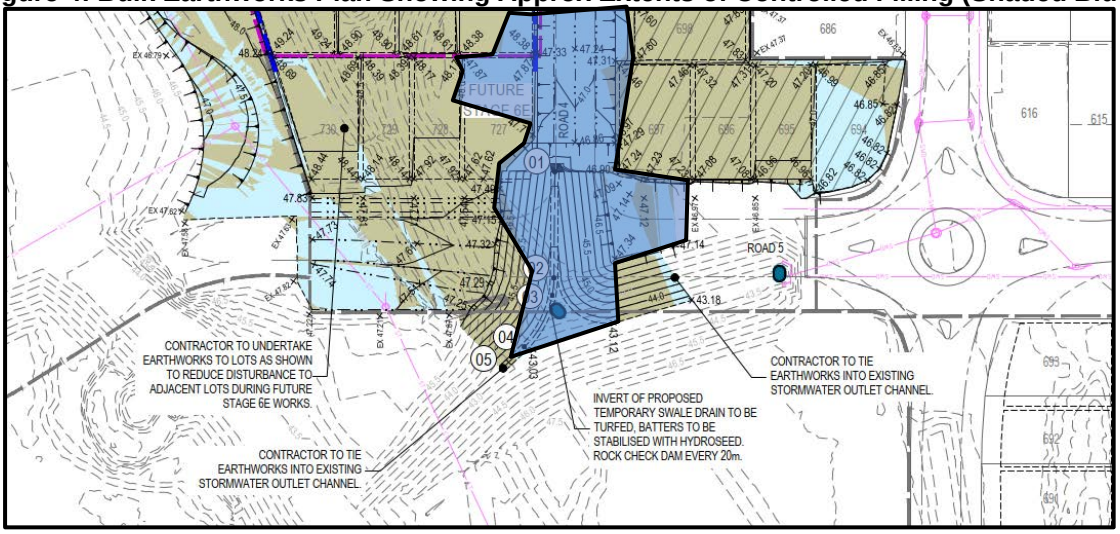


Figure 4: Bulk Earthworks Plan Showing Approx Extents of Controlled Filling (Shaded Blue)



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.
- Ipswich City Council Specifications.
- Notes on EGIS Drawings.
- Density Ratio – 95% Standard.

3.0 FILL FOUNDATION

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 and approval to commence filling was on the basis of: -

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

A picture of the stripped surface are presented below.

Picture 1: View of the Stripped Surface

4.0 FILLING OPERATIONS

Fill at the site was sourced from onsite cuts and stockpiled materials onsite.

Materials used as fill can be broadly summarised as: -

- Silty Clay (CH) – high plasticity fines, traces of fine to medium sands, dark brown and moist.

Fill was constructed using the following plant: -

- Padfoot Roller
- Dozer
- Articulated Dump Trucks
- Compactor
- Water Truck
- Excavators

Fill was observed to be placed in layers within the capacity of the above plant and compacted using several passes (up and back).

To the extent that was reasonably practicable, 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 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.

A pictures of the filling operations is presented below.

Picture 2: View of the 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.

6.0 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.

7.0 EXCLUSIONS

The compliance statement specifically excludes any topsoil, which may be placed for use as Lot dressing or any other subsequent earthworks after 26th January 2024. 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.

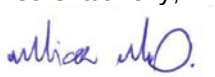
Our on-site attendance specifically excludes assessments of fill material quality and engineering properties that are outside the requirements of AS.3798 - 2007, including soil or fill reactivity and soaked CBR values. We note that the fill materials comprise clay soils, which may result in unfavourable 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 LABORAOTRY PTY LTD.

Appendix A – Site Plan Showing Approximate Test Locations
Appendix B – Test Reports
Appendix C – Previous Earthworks Reports

APPENDIX A

Site Plan Showing Approximate Test Locations

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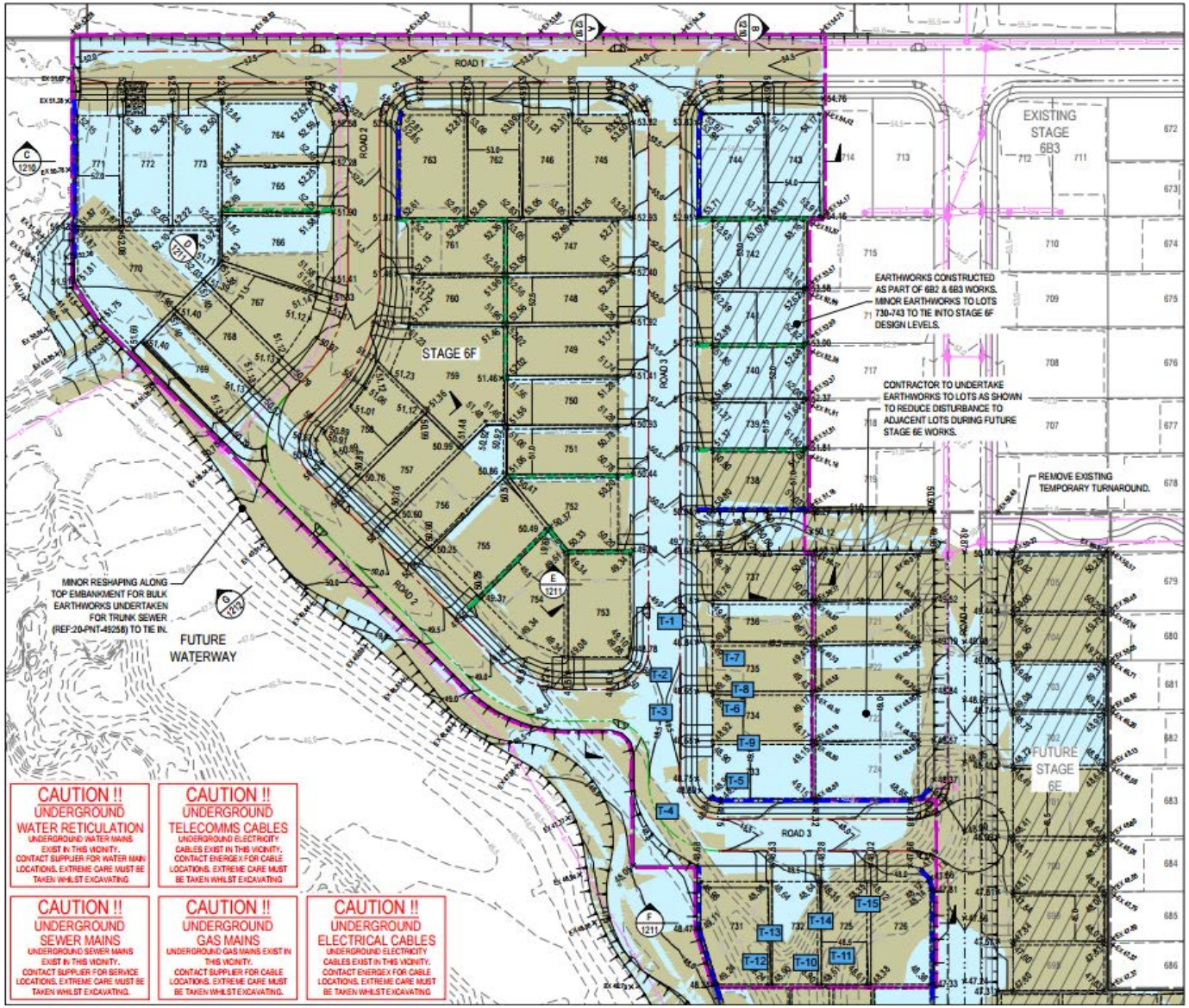


Qualtest Laboratory
Est. 1987

LEGEND:

Test Locations

CLIENT: WINSLOW

LOCATION: DAWN ESTATE STAGE 6F

TITLE: APPROXIMATE FIELD DENSITY TEST LOCATIONS

DRAWING NO: 23-375

DATE: 10th May 2023

PROJECT NO: 23-375

CHECKED BY: GG

APPENDIX B

COMPACTION TEST REPORTS

Qualtest Laboratory
Est. 1987

Material Test Report

Report Number: 23-375_a-1
Issue Number: 1
Date Issued: 13/12/2023
Client: WINSLOW PTY LTD
BUILDING 4, G1, 107 MILES PLATTING RD, EIGHT MILE PLAINS QLD 4113
Contact: HAYDN LANE
Project Number: 23-375_a
Project Name: LEVEL ONE SUPERVISION
Project Location: DAWN ESTATE - STAGE 6F - WALLOON
Client Reference: 55484
Work Request: 8238
Date Sampled: 27/11/2023
Dates Tested: 27/11/2023 - 12/12/2023
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: Dawn 6F,Walloon
Material: General Fill
Material Source: Onsite

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S8238A	S8238B	S8238C	S8238D
Test Number	1	2	3	4
Date Tested	27/11/2023	27/11/2023	27/11/2023	27/11/2023
Time Tested	10:05	10:10	10:20	10:25
Test Request #/Location	General Fill	General Fill	General Fill	General Fill
Chainage (m)	145	150	160	180
Location Offset (m)	On Centre Line	On Centre Line	On Centre Line	On Centre Line
Layer / Reduced Level	1m Below F/L	0.7m Below F/L	0.4m Below F/L	0.1m Below F/L
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.04	2.01	1.95	1.94
Field Moisture Content %	17.7	17.3	18.1	19.8
Field Dry Density (FDD) t/m^3	1.73	1.71	1.65	1.62
Peak Converted Wet Density t/m^3	2.04	2.01	1.93	1.96
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	1.0	3.0	3.0	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**100.0**	**100.0**	**101.0**	**99.0**
Compaction Method	**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

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Report Number: **23-375_a-2**
Issue Number: 1
Date Issued: 18/12/2023
Client: WINSLOW PTY LTD
BUILDING 4, G1, 107 MILES PLATTING RD, EIGHT MILE PLAINS QLD 4113
Contact: HAYDN LANE
Project Number: 23-375_a
Project Name: LEVEL ONE SUPERVISION
Project Location: DAWN ESTATE - STAGE 6F - WALLOON
Client Reference: 55484
Work Request: 8325
Date Sampled: 07/12/2023
Dates Tested: 07/12/2023 - 18/12/2023
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: Dawn - Stage 6F
Material: Allotment Fill
Material Source: Onsite

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S8325A	S8325B	S8325C	S8325D	S8325E
Test Number	5	6	7	8	9
Date Tested	07/12/2023	07/12/2023	07/12/2023	07/12/2023	07/12/2023
Time Tested	09:40	09:42	09:43	10:03	10:05
Test Request #/Location	Lot 733	Lot 734	Lot 735	Lot 753/754	Lot 754/755
Latitude	5m from. Left Lot Boundary	4m from Right Lot Boundary	6m from Left Lot Boundary	Lot 753/754 Boundary Line	Lot 754/755 Boundary Line
Longitude	7m from Front Lot Boundary	7m from Front Lot Boundary	8m from Front Lot Boundary	8.5m from Front Lot Boundary	6m from Front Lot Boundary
Layer / Reduced Level	0.2m Below Finish Level	0.2m Below Finish Level	0.2m Below Finish Level	0.2m Below Finish Level	0.2m Below Finish Level
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175
Sieve used to determine oversize (mm)	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	2.01	1.98	2.07	1.98	1.99
Field Moisture Content %	19.0	17.5	17.2	17.0	19.0
Field Dry Density (FDD) t/m^3	1.69	1.69	1.77	1.69	1.67
Peak Converted Wet Density t/m^3	1.93	2.01	2.10	2.00	2.00
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	2.0	0.0	0.0	0.0	0.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**104.0**	**98.5**	**98.5**	**99.0**	**99.5**
Compaction Method	**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: 23-375_a-3
Issue Number: 1
Date Issued: 22/01/2024
Client: WINSLOW PTY LTD
BUILDING 4, G1, 107 MILES PLATTING RD, EIGHT MILE PLAINS QLD 4113
Contact: HAYDN LANE
Project Number: 23-375_a
Project Name: LEVEL ONE SUPERVISION
Project Location: DAWN ESTATE - STAGE 6F - WALLOON
Client Reference: 55484
Work Request: 8578
Date Sampled: 18/01/2024
Dates Tested: 18/01/2024 - 19/01/2024
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: Dawn 6F,Walloon
Material: General Fill
Material Source: Onsite

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S8578A	S8578B	S8578C
Test Number	10	11	12
Date Tested	18/01/2024	18/01/2024	18/01/2024
Time Tested	10:00	10:05	10:10
Test Request #/Location	Swale Drain Fill Lot 732	Swale Drain Fill Lot 725	Swale Drain Fill Lot 731
Easting	3m Off South Boundary	6m Off South Boundary	3m Off East Boundary
Northing	4m Off East Boundary	3m Off West Boundary	5m Off South Boundary
Layer / Reduced Level	2m Below F/L	1.5m Below F/L	1m Below F/L
Thickness of Layer (mm)	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m^3	1.92	1.92	1.91
Field Moisture Content %	21.6	19.7	20.3
Field Dry Density (FDD) t/m^3	1.58	1.61	1.59
Peak Converted Wet Density t/m^3	2.00	2.02	1.97
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	-2.5	-2.5	-3.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**96.0**	**95.5**	**97.0**
Compaction Method	**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: **23-375_a-4**
Issue Number: 1
Date Issued: 25/01/2024
Client: WINSLOW PTY LTD
BUILDING 4, G1, 107 MILES PLATTING RD, EIGHT MILE PLAINS QLD 4113
Contact: HAYDN LANE
Project Number: 23-375_a
Project Name: LEVEL ONE SUPERVISION
Project Location: DAWN ESTATE - STAGE 6F - WALLOON
Client Reference: 55484
Work Request: 8631
Dates Tested: 23/01/2024 - 24/01/2024
Location: Dawn Estate 6F,Walloon

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S8631A	S8631B	S8631C
Test Number	13	14	15
Date Tested	23/01/2024	23/01/2024	23/01/2024
Time Tested	01:15	11:20	11:25
Test Request #/Location	General Fill	General Fill	General Fill
Easting	Common Boundary Of Lots 731 & 732	Common Boundary Of Lots 732 & 725	Common Boundary Of Lots 725 & 726
Northing	16m Off North Boundary	10m Off North Boundary	4m Off North Boundary
Layer / Reduced Level	Finish Level	Finish Level	Finish Level
Thickness of Layer (mm)	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m^3	2.01	2.05	2.01
Field Moisture Content %	17.6	18.2	17.2
Field Dry Density (FDD) t/m^3	1.71	1.73	1.72
Peak Converted Wet Density t/m^3	1.99	2.00	2.02
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	2.0	2.0	2.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**101.5**	**102.5**	**99.5**
Compaction Method	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**

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

APPENDIX C

Previous Earthworks Reports

Qualtest Laboratory
Est. 1987

LEVEL ONE EARTHWORKS REPORT

Proposed Residential Subdivision
Dawn Estate Waterlea
Stages 6B2 & 6B3

JULY 19 2023

Winslow

Authored by: QUALTEST LABORATORY PTY LTD

REF: 3912

Qualtest Laboratory
Est. 1987

Ref: 3912
Job: 22-372
Author: J Fowler

Qualtest Laboratory
Est. 1987

19th July 2023

Winslow,
1587 Ipswich Road,
Rocklea QLD 4106.

ATTENTION: **MR KIERAN HOY**
Email: kieranh@ccawinslow.com.au

Dear Sir

RE: **LEVEL ONE EARTHWORKS REPORT**
PROPOSED RESIDENTIAL SUBDIVISION
DAWN ESTATE WATERLEA 6B2 AND 6B3

PROJECT: **DAWN ESTATE DAWN ESTATE STAGES 6B2 AND 6B3**

CLIENT: **WINSLOW**

SUPERINTENDENT: **CALIBRE**

CONTRACTOR: **WINSLOW**

1.0 INTRODUCTION

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

This report presents results and documentation for the Level One Inspection and Testing of earthworks filling operations at Dawn Estate Waterlea Stage 6B2 and 6B3 – Walloon (The Site).

Qualtest Laboratory Pty Ltd was commissioned by Winslow (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 between 26th August 2022 to the 26th June 2023.

The purpose of the Level 1 commission, and this report, is to provide an opinion that the earthworks operations carried out by the Contractor 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;
- Ipswich City Council Requirements; and
- Calibre Drawings and Notes on Drawings.

This report does not cover underground services, pavements, retaining walls, or any other works after the 26th of June 2023.

2.0 THE DEVELOPMENT

The development comprises a 75-lot residential subdivision and associated infrastructure including pavements, stormwater and sewer reticulation.

The earthworks generally comprised:

- Filling of the following on Stage 6B2 Lots and Road Embankments:
  - Lots 666, 672 to 678, 659 to 660 and 626 to 629.
  - Part of Roads 1, 3, 5 and 7.
- Filling of the following on Stage 6B3 Lots and Road Embankments:
  - Lots 706 to 719.
  - Part of Roads 5 and 6.
- Filling of the following on Future Stage 6E Lots and Road Embankments:
  - Lots 687 to 705, 720 to 721 and 726 to 727.
  - Parts of Road 6.
- Filling of the following on Future Stage 6F Lots and Road Embankments:
  - Lots 727 to 734.
  - Parts of Road 5.

Calibre Earthworks Plans, Bulk Earthworks Layout Plan Sheet 1 to 2, Drawing No. 2200 and 2201, Revision 1, dated 22nd May 2022 indicates the approximate extent of earthworks filling to be constructed at The Site. These plans are considered to be a reasonable indication of the actual extent of fill constructed during our involvement.

The extent of earthworks covered by this report is presented as a marked-up Site Plan in Figure 1, while Figure 2 shows the controlled fill plan highlighted in yellow.
A Lot Disclosure Plan should be requested from the developer to confirm the actual depth of fill at the site.

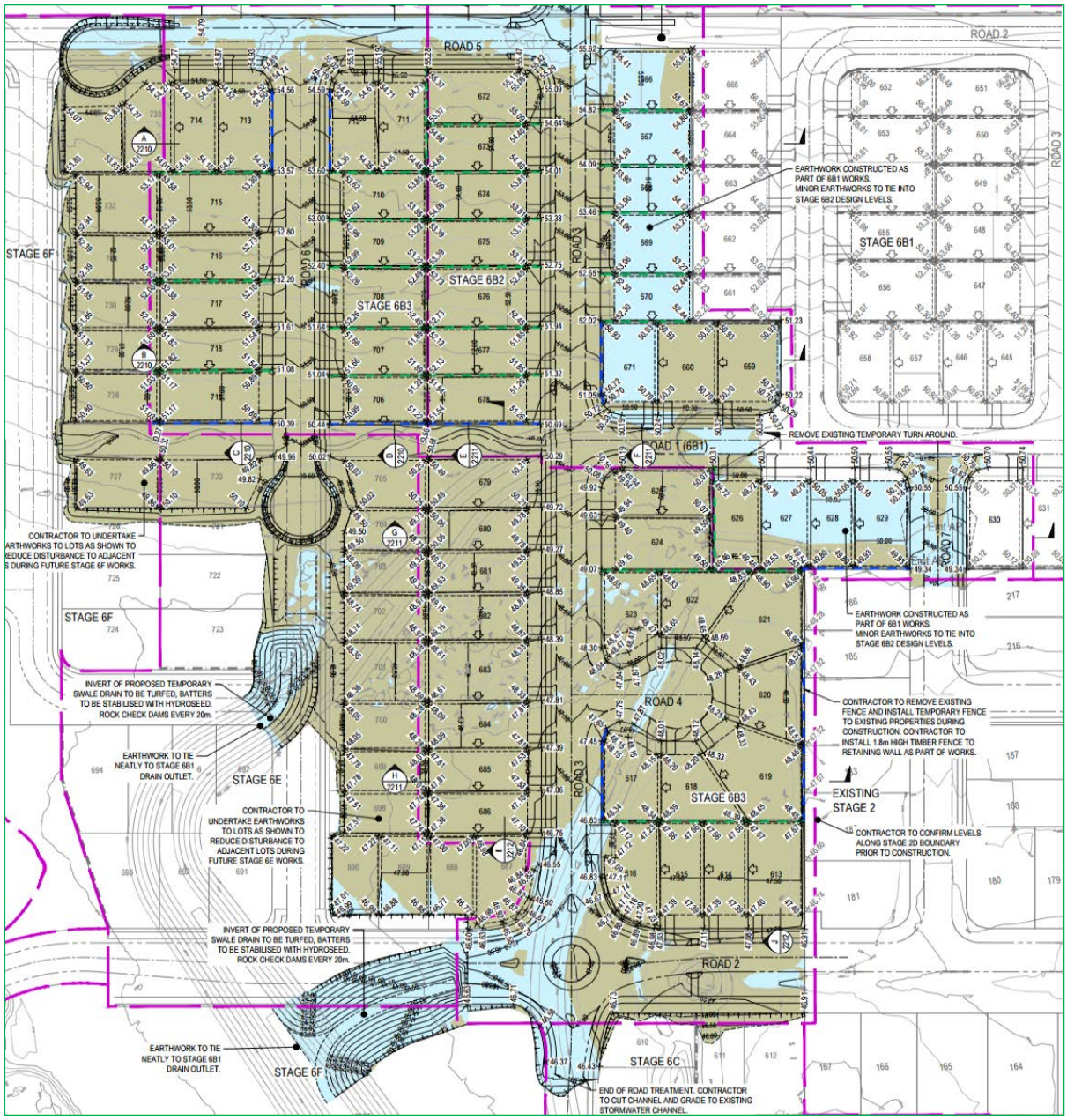


Figure 1: Site Layout Plan

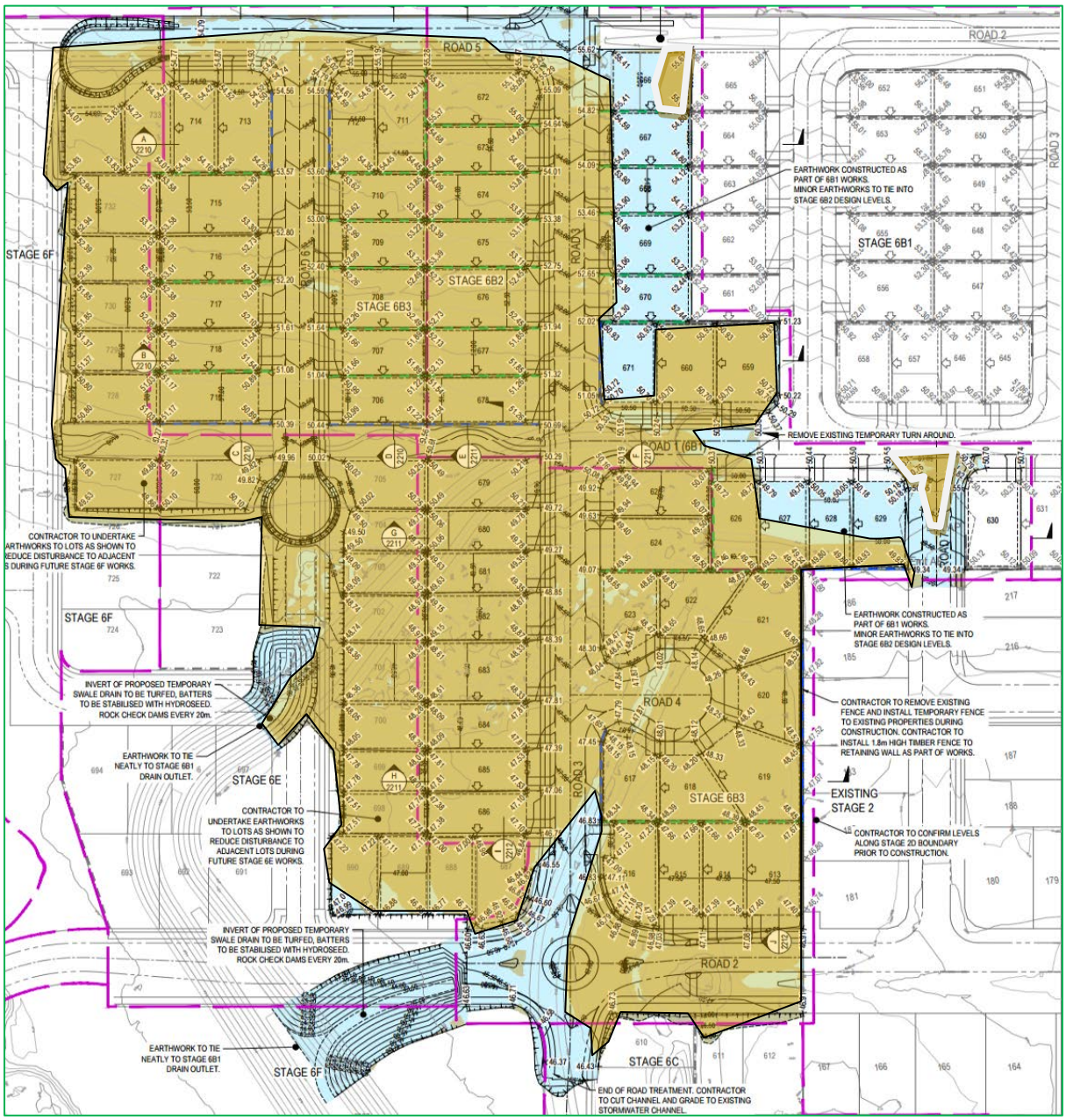


Figure 2: Controlled Fill Plan – Shaded Yellow

3.0 WORKS AND SPECIFICATIONS

All filling operations at The Site were placed and compacted in accordance with the following:

- AS3798 – Type 2 Earthworks Operations;
- Ipswich City Council Specifications;
- Notes on Calibre Drawings; and
- Density Ratio – 95% Standard.

4.0 FILL FOUNDATION

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 and approval to commence filling was on the basis of:

- Adequate removal of topsoil and organics exposing natural ground which generally consisted of:
  - Silty Clay (CH), at least stiff, high plasticity fines, dark brown, brown, mottled orange-brown and moist; and

- Compliant proof roll testing of the stripped surface using onsite heavy earthworks plant.

A picture of the stripped surface is presented in Figure 3.

Figure 3: View of the Stripped Surface on Stage 6B1 and 6B2

5.0 FILLING OPERATIONS

Fill at the site was sourced from localised onsite cuts, trench spoil, and road box spoil.

Materials used as fill can be broadly summarised as:

- Silty Clay (CH), high plasticity fines, dark-brown, mottled brown, orange-brown and moist.

Fill was constructed using the following plant:

- Padfoot Roller;
- Water Trucks;
- Compactor;
- Articulated Moxi Dump Trucks;
- Dozer; and
- Excavator.

Fill was observed to be placed in layers within the capacity of the above plants and compacted using several passes (up to and greater than 8).

To the extent that was reasonably practicable, fill materials visibly containing excessive amounts of silts or deleterious materials such as sticks, and oversize particles were sorted to remove the contaminants prior to placement or rejected for use. Some 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.

Pictures of the filling operations are presented in Figure 4.

Figure 4: View of Filling Operations

6.0 COMPACTION TESTING

Compaction testing was carried out on the compacted fill materials in accordance with Tables 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.

7.0 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 AS3798.

8.0 EXCLUSIONS

The compliance statement specifically excludes any topsoil, which may be placed for use as Lot dressing or any other subsequent earthworks after 26th June 2023. All trench backfill, landscaping fill and other fill placed without our knowledge are 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 AS.3798 - 2007, 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.

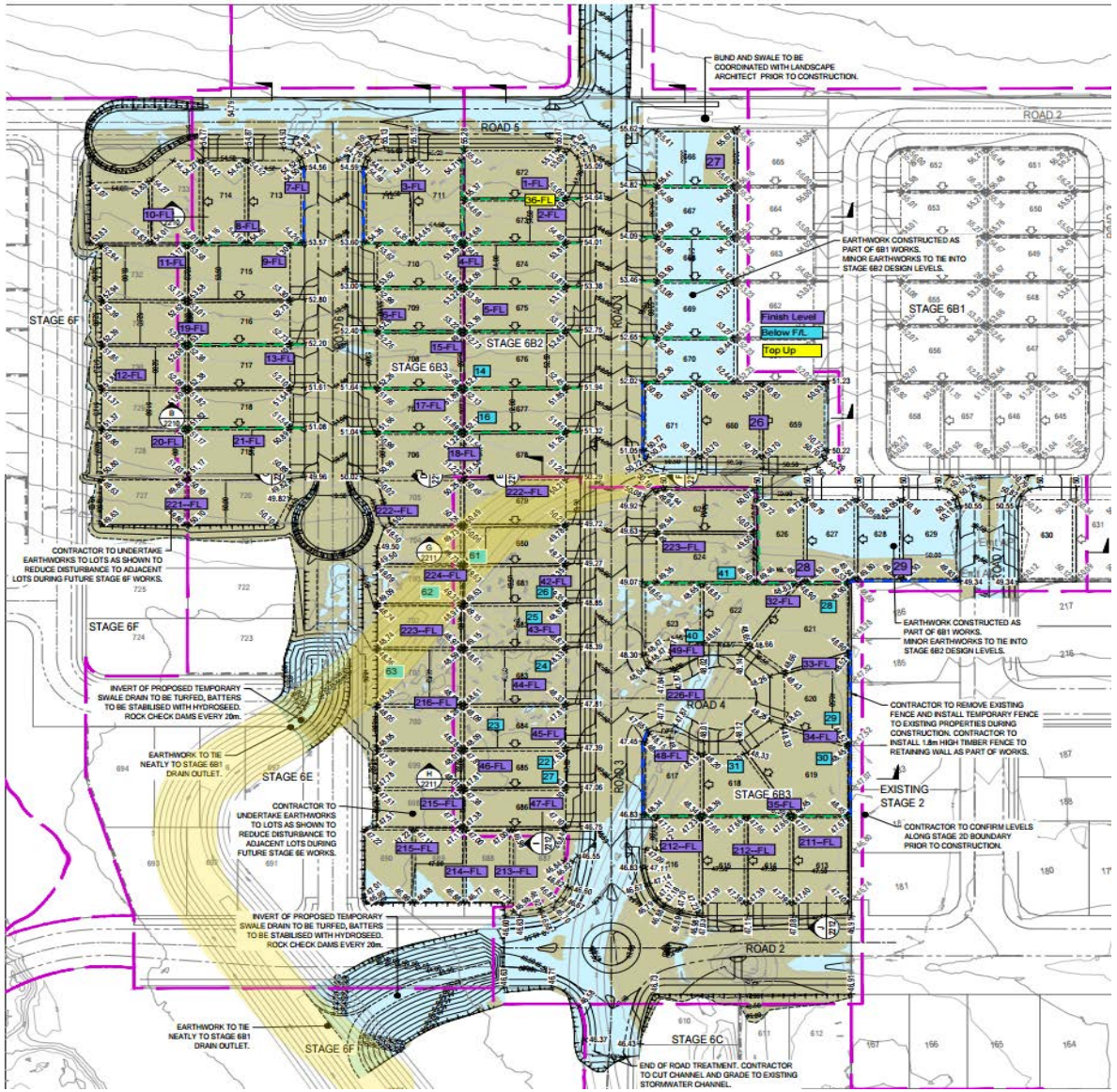
DENNIS ALAZIGHA, *RPEQ 22169*

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

APPENDIX A

Site Plan and Compaction Test Locations

Qualtest Laboratory
Est. 1987



Qualtest Laboratory
Est. 1987

LEGEND:

Test Locations

CLIENT: WINSLOW

LOCATION: DAWN ESTATE STAGE 6B2 & 6B3

TITLE: APPROXIMATE FIELD DENSITY TEST LOCATIONS

DRAWING NO: 22-372-01

DATE: 19th July 2023

PROJECT NO: 22-372

CHECKED BY: GG

APPENDIX B

COMPACTION TEST REPORTS

Qualtest Laboratory
Est. 1987

Material Test Report

Report Number: 22-372-1
Issue Number: 1
Date Issued: 02/09/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 2299
Date Sampled: 30/08/2022
Dates Tested: 30/08/2022 - 01/09/2022
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: Dawn Estate Stage 6B2
Material: Allotment Fill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S2299A	S2299B	S2299C	S2299D
Test Number	1	2	3	4
Date Tested	30/08/2022	30/08/2022	30/08/2022	30/08/2022
Time Tested	01:30	01:35	01:40	01:00
Test Request #/Location	Allotment Fill Lot 672	Allotment Fill Lot 673	Allotment Fill Lot 711	Allotment Fill Lot 710
Easting	6m Off South Boundary	8m Off Northern Boundary	8m Off North Boundary	6m Off North Boundary
Northing	10m Off East Boundary	6m Off East Boundary	0m Off West Boundary	3m Off East Boundary
Layer / Reduced Level	Final Level	Final Level	Final Level	Final Level
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.02	2.06	1.95	2.05
Field Moisture Content %	20.8	18.6	28.3	18.6
Field Dry Density (FDD) t/m^3	1.67	1.74	1.52	1.73
Peak Converted Wet Density t/m^3	2.02	2.03	1.93	1.92
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	1.0	3.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**100.5**	**101.5**	**101.5**	**106.5**
Compaction Method	**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: **22-372-2**
Issue Number: 1
Date Issued: 06/09/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 2328
Date Sampled: 01/09/2022
Dates Tested: 01/09/2022 - 05/09/2022
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: Dawn Estate Stage 6B3
Material: Allotment Fill
Material Source: on-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S2328A	S2328B	
Test Number	5	6	
Date Tested	01/09/2022	01/09/2022	
Time Tested	12:30	12:35	
Test Request #/Location	Allotment Fill Lot 675	Allotment Fill Lot 709	
Easting	5m Off South Boundary	2m Off South Boundary	
Northing	11m Off West Boundary	5m Off West Boundary	
Layer / Reduced Level	Final Level	Final Level	
Thickness of Layer (mm)	200	200	
Soil Description	Silty CLAY	Silty CLAY	
Test Depth (mm)	175	175	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	1.92	1.93	
Field Moisture Content %	19.0	19.2	
Field Dry Density (FDD) t/m^3	1.61	1.62	
Peak Converted Wet Density t/m^3	1.91	1.94	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	1.0	0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**100.5**	**99.5**	
Compaction Method	**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: 22-372-3
Issue Number: 1
Date Issued: 20/09/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 2428
Date Sampled: 08/09/2022
Dates Tested: 08/09/2022 - 19/09/2022
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: Dawn Estate Stage 6B3
Material: Allotment Fill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S2428A	S2428B	S2428C
Test Number	7	8	9
Date Tested	08/09/2022	08/09/2022	08/09/2022
Time Tested	10:00	10:05	10:10
Test Request #/Location	Allotment Fill Lot 713	Allotment Fill Lot 714	Allotment Fill Lot 715
Easting	5m Off East Boundary	6m Off East Boundary	7m Off East Boundary
Northing	6m Off North Boundary	7m Off South Boundary	4m Off North Boundary
Layer / Reduced Level	Finish Level	Finish Level	Finish Level
Thickness of Layer (mm)	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m^3	1.91	1.88	1.95
Field Moisture Content %	25.0	22.3	23.6
Field Dry Density (FDD) t/m^3	1.53	1.54	1.58
Peak Converted Wet Density t/m^3	1.96	1.94	1.98
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	-1.5	-0.5	0.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**97.0**	**97.0**	**98.5**
Compaction Method	**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: **22-372-4**
Issue Number: 1
Date Issued: 26/09/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 2571
Date Sampled: 20/09/2022
Dates Tested: 20/09/2022 - 23/09/2022
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: Dawn Estate Stage 6B2 And 6B3
Material: General Fill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S2571A	S2571B	
Test Number	14	15	
Date Tested	20/09/2022	20/09/2022	
Time Tested	01:00	01:05	
Test Request #/Location	General Fill Lot 676	General Fill Lot 708	
Easting	4m Off South Boundary	4m Off North Boundary	
Northing	5m Off East Boundary	6m Off East Boundary	
Layer / Reduced Level	0.5m Below F/L	Finish Level	
Thickness of Layer (mm)	200	200	
Soil Description	Silty CLAY	Silty CLAY	
Test Depth (mm)	175	175	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	1.96	1.92	
Field Moisture Content %	24.3	25.6	
Field Dry Density (FDD) t/m^3	1.57	1.53	
Peak Converted Wet Density t/m^3	1.96	1.96	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	0.5	0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**100.0**	**98.5**	
Compaction Method	**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: **22-372-5**
Issue Number: 1
Date Issued: 28/09/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 2465
Date Sampled: 13/09/2022
Dates Tested: 13/09/2022 - 26/09/2022
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: Dawn Stage 6B2, 6B3 and Partial 6F
Material: Allotment Fill
Material Source: Onsite

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S2465A	S2465B	S2465C	S2465D
Test Number	10	11	12	13
Date Tested	13/09/2022	13/09/2022	13/09/2022	13/09/2022
Time Tested	10:12	10:15	10:22	10:27
Test Request #/Location	Lot 733 / Lot 734	Lot 732	Lot 730	Lot 717
Easting	On Boundary Line of Lot 733 & 734	6m from North Boundary	7m from South Boundary	6m from North Boundary
Northing	10m from front of Lot	5m from East Boundary	5m from West Boundary	5m from East Boundary
Layer / Reduced Level	Finish Level	Finish Level	Finish Level	Finish Level
Thickness of Layer (mm)	175	175	175	175
Soil Description	Silty Clay	Silty Clay	Silty Clay	Silty Clay
Test Depth (mm)	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.98	1.95	1.98	1.98
Field Moisture Content %	18.2	20.0	19.1	19.0
Field Dry Density (FDD) t/m^3	1.68	1.63	1.67	1.67
Peak Converted Wet Density t/m^3	1.94	1.96	1.90	1.97
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	1.0	-0.5	2.5	1.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**102.0**	**99.5**	**104.5**	**100.5**
Compaction Method	**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: **22-372-6**
Issue Number: 1
Date Issued: 28/09/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 2594
Date Sampled: 21/09/2022
Dates Tested: 21/09/2022 - 26/09/2022
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: Dawn Estate Stage 6B2-6B3,Walloon
Material: General Fill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S2594A	S2594B	
Test Number	16	17	
Date Tested	21/09/2022	21/09/2022	
Time Tested	12:20	12:25	
Test Request #/Location	Lot 677	Lot 707	
Easting	6m Off West Boundary	4m Off North Boundary	
Northing	7m Off South Boundary	7m Off East Boundary	
Layer / Reduced Level	0.5m Below F/L	Finish Level	
Thickness of Layer (mm)	200	200	
Soil Description	Silty CLAY	Silty CLAY	
Test Depth (mm)	175	175	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	
Field Wet Density (FWD) t/m^3	1.95	2.00	
Field Moisture Content %	23.3	20.2	
Field Dry Density (FDD) t/m^3	1.59	1.66	
Peak Converted Wet Density t/m^3	1.93	1.99	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	23.3	20.2	
Moisture Ratio % (AS1289.5.4.1)	97.0	98.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	0.5	0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**101.5**	**100.0**	
Compaction Method	**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: **22-372-7**
Issue Number: 1
Date Issued: 10/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 2655
Date Sampled: 28/09/2022
Dates Tested: 28/09/2022 - 05/10/2022
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: Dawn Estate Stage 6B2 & 6B3
Material: Allotment Fill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S2655A	S2655B	S2655C	S2655D
Test Number	18	19	20	21
Date Tested	28/09/2022	28/09/2022	28/09/2022	28/09/2022
Time Tested	12:00	12:05	12:10	12:15
Test Request #/Location	Allotment Fill Lot 706 & 678	Allotment Fill Lot 731 & 716	Allotment Fill Lot 728	Allotment Fill Lot 719
Easting	Boarder Between Lots 706 & 678	Boarder Between Lots 731 & 716	6m Off North Boundary	17m Off West Boundary
Northing	5m Off South Boarder	10m Off South Boarder	10m Off East Boundary	7m Off South Boundary
Layer / Reduced Level	Finish Level	Finish Level	Finish Level	Finish Level
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.96	1.94	1.91	1.95
Field Moisture Content %	20.2	22.6	24.5	24.4
Field Dry Density (FDD) t/m^3	1.63	1.59	1.53	1.57
Peak Converted Wet Density t/m^3	1.92	1.94	1.96	1.95
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**102.0**	**100.0**	**97.5**	**100.0**
Compaction Method	**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: **22-372-8**
Issue Number: 1
Date Issued: 13/01/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 3809
Date Sampled: 14/12/2022
Dates Tested: 14/12/2022 - 13/01/2023
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: Dawn Estate Stage 6B3
Material: General Fill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3809A	S3809B	S3809C	S3809D	S3809E	S3809F
Test Number	22	23	24	25	26	27
Date Tested	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Time Tested	10:00	10:05	10:10	10:15	10:20	10:25
Test Request #/Location	General Fill Lot 685	General Fill Lot 684	General Fill Lot 683	General Fill Lot 682	General Fill Lot 681	General Fill Lot 685
Easting	6m Off North Boundary	10m Off West Boundary	11m Off East Boundary	12m Off East Boundary	9m Off East Boundary	2m Off South Boundary
Northing	5m Off West Boundary	7m Off North Boundary	4m Off North Boundary	4m Off South Boundary	4m Off South Boundary	3m Off East Boundary
Layer / Reduced Level	0.5m Below F/L	0.5m Below F/L	0.5m Below F/L	0.2m Below F/L	0.2m Below F/L	0.2m Below F/L
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)	175	175	175	175	175	175
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	2.03	2.03	2.06	2.07	2.01	2.03
Field Moisture Content %	17.0	18.7	20.5	20.7	18.2	17.9
Field Dry Density (FDD) t/m^3	1.73	1.71	1.71	1.71	1.70	1.72
Peak Converted Wet Density t/m^3	2.13	2.11	2.00	1.96	2.03	2.00
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	2.0	-0.5	2.0	2.5	-0.5	-0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**95.0**	**96.0**	**103.0**	**105.0**	**99.0**	**102.0**
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: 22-372-9
Issue Number: 1
Date Issued: 16/01/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 3878
Date Sampled: 16/12/2022
Dates Tested: 16/12/2022 - 16/01/2023
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: Dawn Estate Stage 6B3.Walloon
Material: General Fill
Material Source: Onsite

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S3878A	S3878B	S3878C	S3878D
Test Number	28	29	30	31
Date Tested	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Time Tested	10:00	10:05	10:10	10:15
Test Request #/Location	General Fill Lot 621	General Fill Lot 620	General Fill Lot 619	General Fill Lot 618
Easting	4m Off East Boundary	4m Off East Boundary	7m Off East Boundary	3m Off East Boundary
Northing	6m Off North Boundary	7m Off North Boundary	5m Off North Boundary	3m Off North Boundary
Layer / Reduced Level	0.6m Below F/L	0.6m Below F/L	1m Below F/L	1.3m Below F/L
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	**	**	**
Field Wet Density (FWD) t/m^3	1.97	1.97	1.94	1.94
Field Moisture Content %	19.9	21.1	21.1	19.9
Field Dry Density (FDD) t/m^3	1.64	1.63	1.60	1.62
Peak Converted Wet Density t/m^3	2.00	1.96	2.02	1.97
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.5	1.5	-0.5	0.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**98.5**	**100.0**	**95.5**	**98.5**
Compaction Method	**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: 22-372-10
Issue Number: 1
Date Issued: 01/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 4023
Date Sampled: 12/01/2023
Dates Tested: 12/01/2023 - 27/01/2023
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: Dawn Estate Stage 6B3
Material: General Fill
Material Source: Onsite

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S4023A	S4023B	S4023C	S4023D	S4023E
Test Number	32	33	34	35	36
Date Tested	12/01/2023	12/01/2023	12/01/2023	12/01/2023	12/01/2023
Time Tested	13:05	13:08	**	**	**
Test Request #/Location	General Fill Lot 622/621	General Fill Lot 621/620	General Fill Lot 620/619	General Fill Lot 619/618	General Fill Lot 672/673
Easting	6m Off North Boundary	5m Off East Boundary	4m Off East Boundary	8m Off South Boundary	Boundary Of Lot 672/673
Northing	Boundary Of Lot 622/621	Boundary Of Lot 621/620	Boundary Of Lot 620/619	Boundary Of Lots 618/619	6m Off East Boundary
Layer / Reduced Level	Finish Level	Finish Level	Finish Level	Finish Level	Finish Level
Thickness of Layer (mm)	175	175	175	175	175
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	150	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	**	**	**	**
Field Wet Density (FWD) t/m^3	2.02	2.06	2.06	2.03	2.04
Field Moisture Content %	19.8	16.7	14.3	14.9	17.4
Field Dry Density (FDD) t/m^3	1.69	1.76	1.80	1.77	1.74
Peak Converted Wet Density t/m^3	1.95	2.05	2.02	1.99	2.05
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	2.5	1.0	3.0	1.5	3.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**103.5**	**100.5**	**102.0**	**102.5**	**99.5**
Compaction Method	**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: **22-372-11**
Issue Number: 1
Date Issued: 06/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 4099
Date Sampled: 18/01/2023
Dates Tested: 18/01/2023 - 31/01/2023
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: Dawn Estate Stage 6B2-3,(Basin Backfill)
Material: General Fill (Basin)
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S4099A	S4099B	
Test Number	40	41	
Date Tested	18/01/2023	18/01/2023	
Time Tested	10:00	10:05	
Test Request #/Location	Basin Backfill Lot 623	Basin Backfill Lot 624	
Easting	6m Off North Boundary	7m Off South Boundary	
Northing	4m Off East Boundary	5m Off East Boundary	
Layer / Reduced Level	2m Below Final Level	1.5mm Below Final Level	
Thickness of Layer (mm)	200	200	
Soil Description	Silty CLAY	Silty CLAY	
Test Depth (mm)	175	175	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	2.03	2.03	
Field Moisture Content %	20.3	20.1	
Field Dry Density (FDD) t/m^3	1.69	1.69	
Peak Converted Wet Density t/m^3	2.01	2.05	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	1.0	0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**101.0**	**98.5**	
Compaction Method	**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: **22-372-13**
Issue Number: 1
Date Issued: 21/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 4458
Date Sampled: 13/02/2023
Dates Tested: 13/02/2023 - 17/02/2023
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: Dawn Estate Stage 6B2-B3
Material: General Fill
Material Source: Onsite

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S4458A	S4458B	S4458C	S4458D
Test Number	42	43	44	45
Date Tested	13/02/2023	13/02/2023	13/02/2023	13/02/2023
Time Tested	07:05	07:10	07:15	07:20
Test Request #/Location	General Fill Lot 681	General Fill Lot 682	General Fill Lot 683	General Fill Lot 684
Easting	7m Off North Boundary	7m Off East Boundary	9m Off North Boundary	7m Off East Boundary
Northing	6m Off East Boundary	4m Off North Boundary	6m Off East Boundary	4m Off South Boundary
Layer / Reduced Level	Finish Level	Finish Level	Finish Level	Finish Level
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.09	2.10	2.12	2.11
Field Moisture Content %	18.0	15.8	12.2	15.9
Field Dry Density (FDD) t/m^3	1.77	1.82	1.88	1.82
Peak Converted Wet Density t/m^3	2.10	2.11	2.13	2.13
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	-2.0	2.0	2.0	2.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**99.5**	**100.0**	**99.5**	**99.0**
Compaction Method	**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: 22-372-13
Issue Number: 1
Date Issued: 21/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 4458
Date Sampled: 13/02/2023
Dates Tested: 13/02/2023 - 17/02/2023
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: Dawn Estate Stage 6B2-B3
Material: General Fill
Material Source: Onsite

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S4458E	S4458F	S4458G	S4458H
Test Number	46	47	48	49
Date Tested	13/02/2023	13/02/2023	13/02/2023	13/02/2023
Time Tested	07:25	07:50	07:55	08:00
Test Request #/Location	General Fill Lot 685	General Fill Lot 686	General Fill Lot 617	General Fill Lot 623
Easting	4m Off West Boundary	4m Off East Boundary	3m Off North Boundary	10m Off North Boundary
Northing	5m Off North Boundary	6m Off North Boundary	5m Off West Boundary	3m Off East Boundary
Layer / Reduced Level	Finish Level	Finish Level	Finish Level	Finish Level
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.06	2.08	2.01	2.07
Field Moisture Content %	13.5	11.6	19.5	12.5
Field Dry Density (FDD) t/m^3	1.82	1.87	1.68	1.84
Peak Converted Wet Density t/m^3	2.14	2.13	2.05	2.12
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	2.5	3.0	0.5	2.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**96.5**	**98.0**	**98.0**	**97.5**
Compaction Method	**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: 22-372-20
Issue Number: 1
Date Issued: 15/03/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 4782
Date Sampled: 06/03/2023
Dates Tested: 06/03/2023 - 07/03/2023
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: Dawn Estate Stage 6 General Fill (V Drain)
Material: General Fill (V Drain)
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S4782A	S4782B	S4782C
Test Number	61	62	63
Date Tested	06/03/2023	06/03/2023	06/03/2023
Time Tested	10:05	10:10	10:25
Test Request #/Location	V Drain Lot 680	V Drain Lot 703	V Drain Lot 701
Easting	5m Off West Boundary	7m Off North Boundary	6m Off North Boundary
Northing	5m Off South Boundary	9m Off East Boundary	4m Off West Boundary
Layer / Reduced Level	1.5m Below F/L	1.5m Below F/L	1.2 Below F/L
Thickness of Layer (mm)	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	**
Field Wet Density (FWD) t/m^3	2.02	2.02	1.90
Field Moisture Content %	19.2	19.3	17.1
Field Dry Density (FDD) t/m^3	1.69	1.69	1.62
Peak Converted Wet Density t/m^3	2.04	1.99	1.98
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**98.5**	**101.5**	**96.0**
Compaction Method	**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: 22-372-55
Issue Number: 1
Date Issued: 01/06/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 5895
Date Sampled: 25/05/2023
Dates Tested: 25/05/2023 - 31/05/2023
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: Dawn Estate Stage 6B
Material: General Fill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S5895A	S5895B	S5895C	S5895D
Test Number	211	212	213	214
Date Tested	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Tested	08:00	08:05	08:10	08:15
Test Request #/Location	General Fill Lot 613	General Fill Lot 614/615	General Fill Lot 616	General Fill Lot 688/687
Easting	5m Off North Boundary	8m Off North Boundary	6m Off North Boundary	9m Off North Boundary
Northing	7m Off East Boundary	14m Off East Boundary	8m Off East Boundary	14m Off East Boundary
Layer / Reduced Level	Finish Level	Finish Level	Finish Level	Finish Level
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.08	2.10	2.03	2.09
Field Moisture Content %	14.8	15.4	14.3	14.1
Field Dry Density (FDD) t/m^3	1.81	1.82	1.78	1.83
Peak Converted Wet Density t/m^3	2.04	2.06	2.01	2.12
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	2.0	2.5	2.5	3.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**102.0**	**102.0**	**101.5**	**99.0**
Compaction Method	**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: **22-372-55**
Issue Number: 1
Date Issued: 01/06/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 5895
Date Sampled: 25/05/2023
Dates Tested: 25/05/2023 - 31/05/2023
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: Dawn Estate Stage 6B
Material: General Fill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S5895E	S5895F	S5895G	S5895H
Test Number	215	216	217	218
Date Tested	25/05/2023	25/05/2023	25/05/2023	25/05/2023
Time Tested	08:20	08:25	08:30	08:40
Test Request #/Location	General Fill Lot 689/688	General Fill Lot 690/689	General Fill Lot 699	General Fill Lot 700/701
Easting	9m Off North Boundary	10m Off North Boundary	6m Off North Boundary	6m Off North Boundary
Northing	14m Off East Boundary	15m Off East Boundary	11m Off East Boundary	7m Off East Along Common Boundary
Layer / Reduced Level	Finish Level	Finish Level	Finish Level	Finish Level
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.94	1.94	1.91	1.93
Field Moisture Content %	20.2	19.3	19.5	19.2
Field Dry Density (FDD) t/m^3	1.61	1.63	1.60	1.62
Peak Converted Wet Density t/m^3	1.95	1.95	1.90	1.92
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	1.0	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**99.5**	**99.5**	**100.5**	**101.0**
Compaction Method	**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: 22-372-58
Issue Number: 1
Date Issued: 06/06/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 5963
Date Sampled: 30/05/2023
Dates Tested: 30/05/2023 - 01/06/2023
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: Dawn Estate Stage 6B (General Fill)
Material: General Fill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S5963A	S5963B	S5963C	S5963D
Test Number	221	222	223	224
Date Tested	30/05/2023	30/05/2023	30/05/2023	30/05/2023
Time Tested	09:50	09:55	10:00	10:05
Test Request #/Location	General Fill Lot 727/720	General Fill Lot 679	General Fill Lot 702	General Fill Lot 703
Easting	Common Boundary 727/720	4m Off North Boundary	7m Off North Boundary	7m Off North Boundary
Northing	5m Off North Boundary	6m Off EastBoundary	6m Off East Boundary	6m Off East Boundary
Layer / Reduced Level	Finish Level	Finish Level	Finish Level	Finish Level
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.97	2.03	1.99	2.00
Field Moisture Content %	16.1	16.0	16.0	16.2
Field Dry Density (FDD) t/m^3	1.69	1.75	1.72	1.72
Peak Converted Wet Density t/m^3	1.92	2.06	2.05	2.06
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	1.5	0.0	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**102.0**	**98.5**	**97.0**	**97.0**
Compaction Method	**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: 22-372-58
Issue Number: 1
Date Issued: 06/06/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 5963
Date Sampled: 30/05/2023
Dates Tested: 30/05/2023 - 01/06/2023
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: Dawn Estate Stage 6B (General Fill)
Material: General Fill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S5963E	S5963F	S5963G	
Test Number	225	226	227	
Date Tested	30/05/2023	30/05/2023	30/05/2023	
Time Tested	10:15	11:05	10:25	
Test Request #/Location	General Fill Lot 624	General Fill Road 4	General Fill Lot 705	
Easting	8m Off North Boundary	CH 20	3m Off South Boundary	
Northing	2m Off West Boundary	CL	3m Off West Boundary	
Layer / Reduced Level	Finish Level	Finish Level	Finish Level	
Thickness of Layer (mm)	200	200	200	
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	
Test Depth (mm)	175	175	175	
Sieve used to determine oversize (mm)	19.0	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	0	
Field Wet Density (FWD) t/m^3	2.01	2.05	2.02	
Field Moisture Content %	16.2	16.0	19.5	
Field Dry Density (FDD) t/m^3	1.73	1.77	1.69	
Peak Converted Wet Density t/m^3	2.01	2.10	2.09	
Adjusted Peak Converted Wet Density t/m^3	**	**	**	
Moisture Variation (Wv) %	0.5	0.5	0.5	
Adjusted Moisture Variation %	**	**	**	
Hilf Density Ratio (%)	**99.5**	**98.0**	**97.0**	
Compaction Method	**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: **22-372-72**
Issue Number: 1
Date Issued: 03/07/2023
Client: WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 6316
Date Sampled: 20/06/2023
Dates Tested: 20/06/2023 - 23/06/2023
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: Dawn - Western Fill
Material: General Fill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S6316A	S6316B	S6316C	S6316D
Test Number	465	466	467	468
Date Tested	20/06/2023	20/06/2023	20/06/2023	20/06/2023
Time Tested	13:00	13:05	13:10	13:15
Test Request #/Location	General Fill	General Fill	General Fill	General Fill
Easting	465045	465046	465058	465077
Northing	6947252	6947235	6947249	6947244
Layer / Reduced Level	Finish Level	Finish Level	Finish Level	Finish Level
Thickness of Layer (mm)	175	175	175	175
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.07	2.05	1.98	2.04
Field Moisture Content %	22.5	20.7	20.6	20.0
Field Dry Density (FDD) t/m^3	1.69	1.70	1.65	1.70
Peak Converted Wet Density t/m^3	2.05	2.03	2.00	2.03
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**101.0**	**100.5**	**99.0**	**100.5**
Compaction Method	**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: **22-372-76**
Issue Number: 1
Date Issued: 05/07/2023
Client: WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 4391
Date Sampled: 08/02/2023
Dates Tested: 08/02/2023 - 10/02/2023
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: Dawn Western Fill
Material: General Fill
Material Source: On site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4391A	S4391B	S4391C	S4391D	S4391E	S4391F
Test Number	407	408	409	410	411	412
Date Tested	08/02/2023	08/02/2023	08/02/2023	08/02/2023	08/02/2023	08/02/2023
Time Tested	10:00	10:05	10:10	10:15	10:20	10:30
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	26/T1 - 27/T1	27/T1 - 28/T1	28/T1 - 29/T1	28/T1 - 29/T1	26/T1 - 27/T1	28/T1 - 29/T1
Offset	20m Left 27/T1	50m Left 28/T1	40m Off 28/T1 And 55m Left Of Line	70m Off 28/T1 and 40m Left Of Line	30m Off 26/T1 and 20m Left Of Line	30m Left 29/T1 and 70m Off Line
Layer / Reduced Level	Finish Level	1.3m Below F/L	0.4m Below F/L	Finish Level	0.6m Below F/L	Finish Level
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.96	2.01	2.02	2.01	2.02	2.00
Field Moisture Content %	17.3	16.9	17.2	17.4	16.6	16.7
Field Dry Density (FDD) t/m^3	1.67	1.72	1.73	1.71	1.73	1.71
Peak Converted Wet Density t/m^3	2.01	1.99	2.04	2.01	2.02	2.01
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	1.5	-0.5	0.5	0.0	2.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**97.5**	**100.5**	**99.5**	**100.0**	**100.0**	**99.5**
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: **22-372-77**
Issue Number: 1
Date Issued: 05/07/2023
Client: WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 5809
Date Sampled: 22/05/2023
Dates Tested: 22/05/2023 - 26/05/2023
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: Western Fill Area
Material: General Fill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S5809A	S5809B	S5809C	S5809D	S5809E	S5809F
Test Number	430	431	432	433	434	435
Date Tested	22/05/2023	22/05/2023	22/05/2023	22/05/2023	22/05/2023	22/05/2023
Time Tested	08:45	09:00	09:30	09:40	09:50	10:00
Test Request #/Location	Western Fill	Western Fill	Western Fill	Western Fill	Western Fill	Western Fill
Easting	28/1 - 29/1	28/1 - 29/1	28/1 - 29/1	27/1 - 28/1	29/1 - 30/1	29/1 - 30/1
Northing	10m Off 29/1, 20m Left OF Line	20m Off 28/1, 20m Left Of Line	40m Off 28/1,40m Left Of Line	30m Off 27/1,20m Left Of Line	60m Left Of 29/1	20m Off 29/1,50m Left Of Line
Layer / Reduced Level	Finish Level	Finish Level	Finish Level	Finish Level	Finish Level	Finish Level
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	2.09	2.09	1.99	2.04	2.03	2.04
Field Moisture Content %	16.2	15.8	18.0	18.1	18.4	18.5
Field Dry Density (FDD) t/m^3	1.80	1.81	1.69	1.73	1.71	1.72
Peak Converted Wet Density t/m^3	2.12	2.14	2.07	2.10	2.08	2.07
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	1.0	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**98.5**	**98.0**	**96.0**	**97.0**	**97.5**	**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

Material Test Report

Report Number: **22-372-78**
Issue Number: 1
Date Issued: 05/07/2023
Client: WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 6208
Date Sampled: 14/06/2023
Dates Tested: 14/06/2023 - 19/06/2023
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: Dawn-Western Fill
Material Source: General Fill

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S6208A	S6208B	S6208C	S6208D	S6208E	S6208F
Test Number	443	444	445	446	447	448
Date Tested	14/06/2023	14/06/2023	14/06/2023	14/06/2023	14/06/2023	14/06/2023
Time Tested	10:00	10:05	10:10	10:15	10:25	10:30
Test Request #/Location	General Fill	General Fill	General Fill	General Fill	General Fill	General Fill
Easting	465065	465099	465145	465175	465195	465221
Northing	6947277	6947275	6947273	6947270	6947269	6947266
Layer / Reduced Level	0.5m Below F/L	0.6m Below F/L	0.6m Below F/L	0.5m Below F/L	0.7m Below F/L	0.7m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.94	1.98	1.76	1.76	1.78	1.78
Field Moisture Content %	20.0	17.4	21.4	22.0	21.0	21.7
Field Dry Density (FDD) t/m^3	1.62	1.69	1.45	1.45	1.47	1.47
Peak Converted Wet Density t/m^3	1.92	2.00	1.81	1.81	1.81	1.81
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	0.5	1.0	1.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**101.0**	**99.0**	**97.0**	**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: **22-372-79**
Issue Number: 1
Date Issued: 05/07/2023
Client: WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 6209
Date Sampled: 13/06/2023
Dates Tested: 13/06/2023 - 16/06/2023
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: Dawn-Western Fill
Material Source: General Fill

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S6209A	S6209B	S6209C	S6209D	S6209E	S6209F
Test Number	449	450	451	452	453	454
Date Tested	13/06/2023	13/06/2023	13/06/2023	13/06/2023	13/06/2023	13/06/2023
Time Tested	09:55	10:00	10:05	10:10	10:15	10:25
Test Request #/Location	General Fill	General Fill	General Fill	General Fill	General Fill	General Fill
Easting	465216	465185	465158	465123	465091	465059
Northing	6947238	6947239	6947240	6947243	6947242	6947256
Layer / Reduced Level	1m Below F/L	0.8m Below F/L	0.8m Below F/L	0.9m Below F/L	0.5m Below F/L	0.5m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.96	1.97	1.91	1.92	1.90	1.94
Field Moisture Content %	20.7	20.3	20.5	20.5	20.6	16.9
Field Dry Density (FDD) t/m^3	1.63	1.64	1.58	1.60	1.58	1.66
Peak Converted Wet Density t/m^3	2.01	2.00	1.97	1.97	1.98	2.02
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.0	0.0	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**97.5**	**98.5**	**97.0**	**98.0**	**96.0**	**96.0**
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: **22-372-80**
Issue Number: 1
Date Issued: 05/07/2023
Client: WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 6236
Date Sampled: 15/06/2023
Dates Tested: 15/06/2023 - 21/06/2023
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: Dawn-Western Fill
Material: General Fill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S6236A	S6236B	S6236C	S6236D
Test Number	455	456	457	458
Date Tested	15/06/2023	15/06/2023	15/06/2023	15/06/2023
Time Tested	09:50	09:55	10:00	10:10
Test Request #/Location	General Fill	General Fill	General Fill	General Fill
Easting	465201	465182	465161	465137
Northing	6947254	6947253	6947251	6947254
Layer / Reduced Level	1.2m Below F/L	1m Below F/L	1m Below F/L	0.9m Below F/L
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.94	2.01	2.00	1.96
Field Moisture Content %	23.2	22.6	22.9	22.2
Field Dry Density (FDD) t/m^3	1.57	1.64	1.62	1.61
Peak Converted Wet Density t/m^3	2.01	2.00	2.01	2.01
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	-1.5	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**96.5**	**100.5**	**99.0**	**97.5**
Compaction Method	**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: **22-372-81**
Issue Number: 1
Date Issued: 05/07/2023
Client: WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 6285
Date Sampled: 19/06/2023
Dates Tested: 19/06/2023 - 21/06/2023
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: Dawn - Western Fill
Material: General Fill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S6285A	S6285B	S6285C	S6285D	S6285E	S6285F
Test Number	459	460	461	462	463	464
Date Tested	19/06/2023	19/06/2023	19/06/2023	19/06/2023	19/06/2023	19/06/2023
Time Tested	10:00	10:10	10:15	10:20	10:23	10:30
Test Request #/Location	General Fill	General Fill	General Fill	General Fill	General Fill	General Fill
Easting	465085	465115	465138	465158	465179	465202
Northing	6947234	6947241	6947239	6947243	6947247	6947239
Layer / Reduced Level	0.8m Below F/L	1m Below F/L	0.6m Below F/L	0.8m Below F/L	0.6m Below F/L	0.8m Below F/L
Thickness of Layer (mm)	175	175	175	175	175	175
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty 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	2.07	2.04	2.07	2.05	2.02	2.06
Field Moisture Content %	17.9	18.6	18.4	18.2	18.4	18.4
Field Dry Density (FDD) t/m^3	1.75	1.72	1.75	1.73	1.71	1.74
Peak Converted Wet Density t/m^3	2.07	2.03	2.08	2.05	2.05	2.05
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.0	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**100.0**	**100.0**	**100.0**	**100.0**	**98.5**	**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

LEVEL ONE EARTHWORKS REPORT

Waterlea Gravity Trunk Sewer

APRIL 13 2023

CCA Winslow

Authored by: QUALTEST LABORATORY PTY LTD REF: 3127 RevB

Qualtest Laboratory
Est. 1987

Ref: 3127 – RevB
Job: 22-360
Author: J. Fowler

Qualtest Laboratory
Est. 1987

13th April 2023

CCA Winslow
1587 Ipswich Road
Rocklea QLD 4106

ATTENTION: MR KIERAN HOY
Email: kieranh@ccawinslow.com.au

Dear Sir

RE: LEVEL ONE EARTHWORKS REPORT
WATERLEA GRAVITY TRUNK SEWER

PROJECT: **WATERLEA GRAVITY TRUNK SEWER & TEMPORARY FISH PASSAGE**

CLIENT: **CCA WINSLOW**

CONSULTANT: **CALIBRE**

CONTRACTOR: **CCA WINSLOW**

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 Waterlea Gravity Trunk Sewer – Walloon (The Site).

Qualtest Laboratory Pty Ltd was commissioned by CCA Winslow (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 between 24th May 2022 and 23rd February 2023.

The purpose of Level 1 commission, and this report, is to provide an opinion that the earthworks operations carried out by the Contractor 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.
- Ipswich City Council Requirements
- Calibre Drawings and Notes on Drawings.

This report does not cover underground services, pavements, retaining walls, or any other works after the 23rd February 2023.

1.2 The Project

The project comprises of 2144m of Trunk Gravity Sewer pipeline, includes 19 manhole structures (10/T1 to 34/T1; 1/15 to 12/T1; 1/10 to 16/T1), Temporary Fish Passage and balance areas for excess fill material with the areas containing future lots and road embankments within the Waterlea Development.

Installation of the Trunk Sewer was carried out by trenching between the design invert level and approximately 2.4m above. Fill covered by this report includes fill placed at levels above the trench for the trunk sewer and the final earthworks level.

The following backfilling operations described below are not covered by this report:-

- Trench backfill along the trenched sections of the development (between trench invert and approximately 2.4m to 3.0m above).
- Backfilling operations immediately adjacent to manhole structures.

Calibre Earthworks Plan, Project No. 20-000608, Drawing no. 2450, Rev. 1, indicates the approximate extent of earthworks filling to be constructed at the Site. These plans are considered to be a reasonable indication of the actual extent of fill constructed during our involvement.

A Disclosure Plan should be requested from the developer to confirm the actual depth of fill at the site.

The actual extent of fill covered by this report is presented as Figure 1, Figure 2, Figure 3 and Figure 4 below.

Figure 1: Approximate Extents of Controlled Fill Plan – Shaded Blue

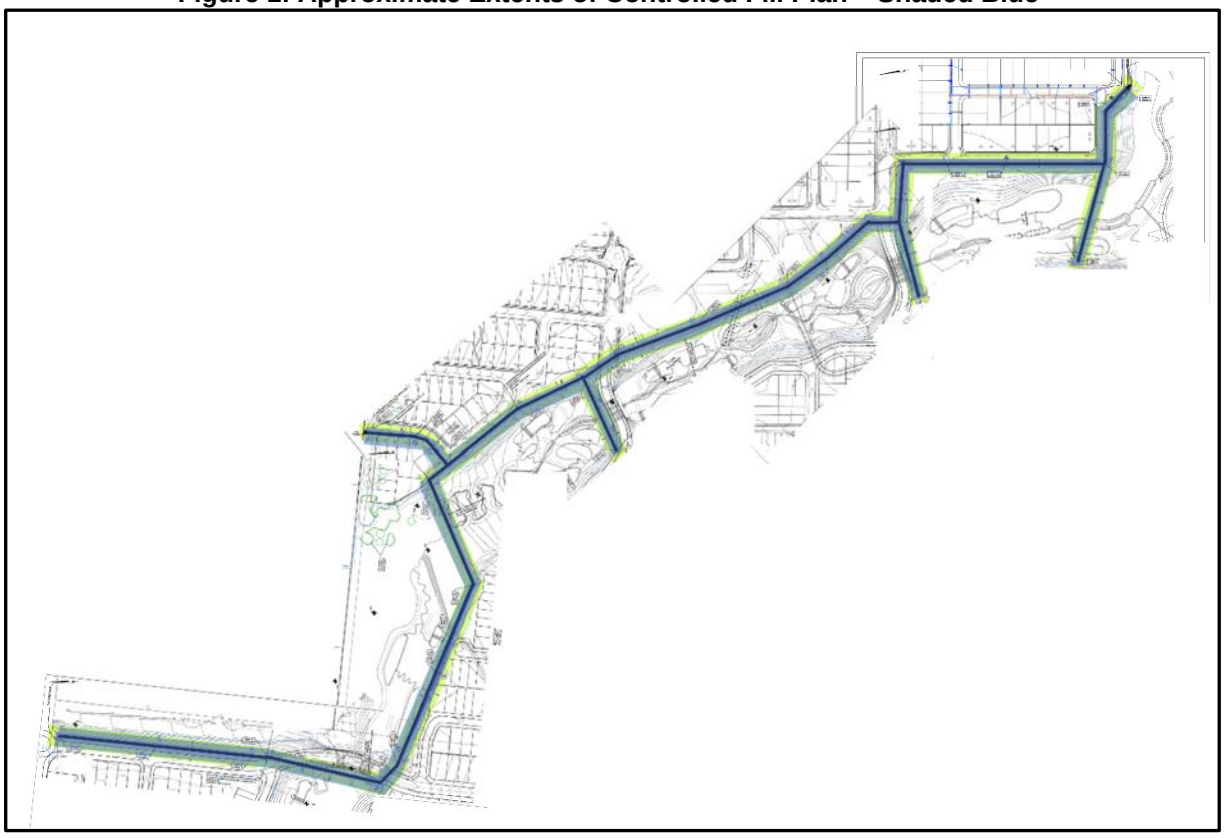


Figure 2: Approximate Extent of Controlled Fill Plan – Shaded Blue

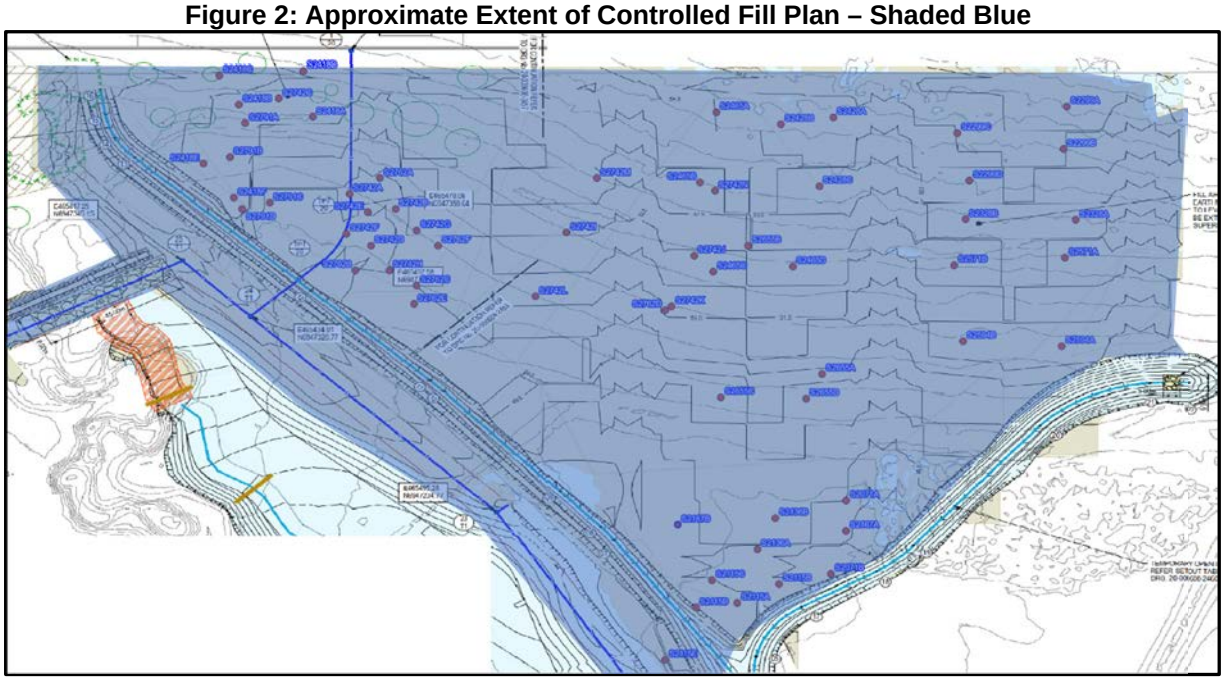


Figure 3: Approximate Extents of Controlled Fill Plan – Shaded Blue

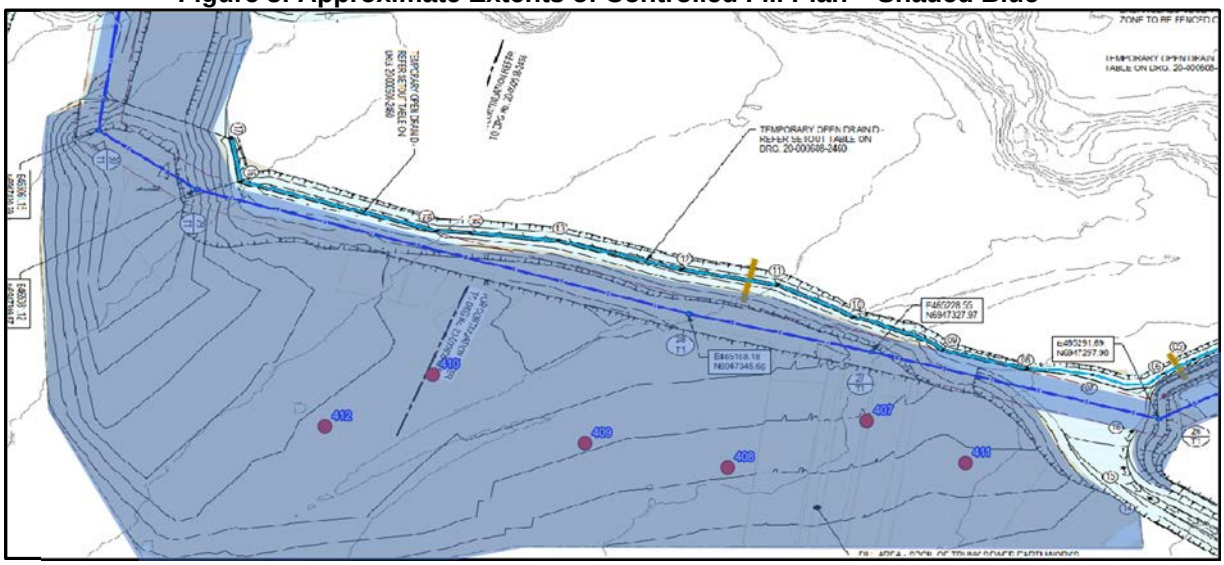
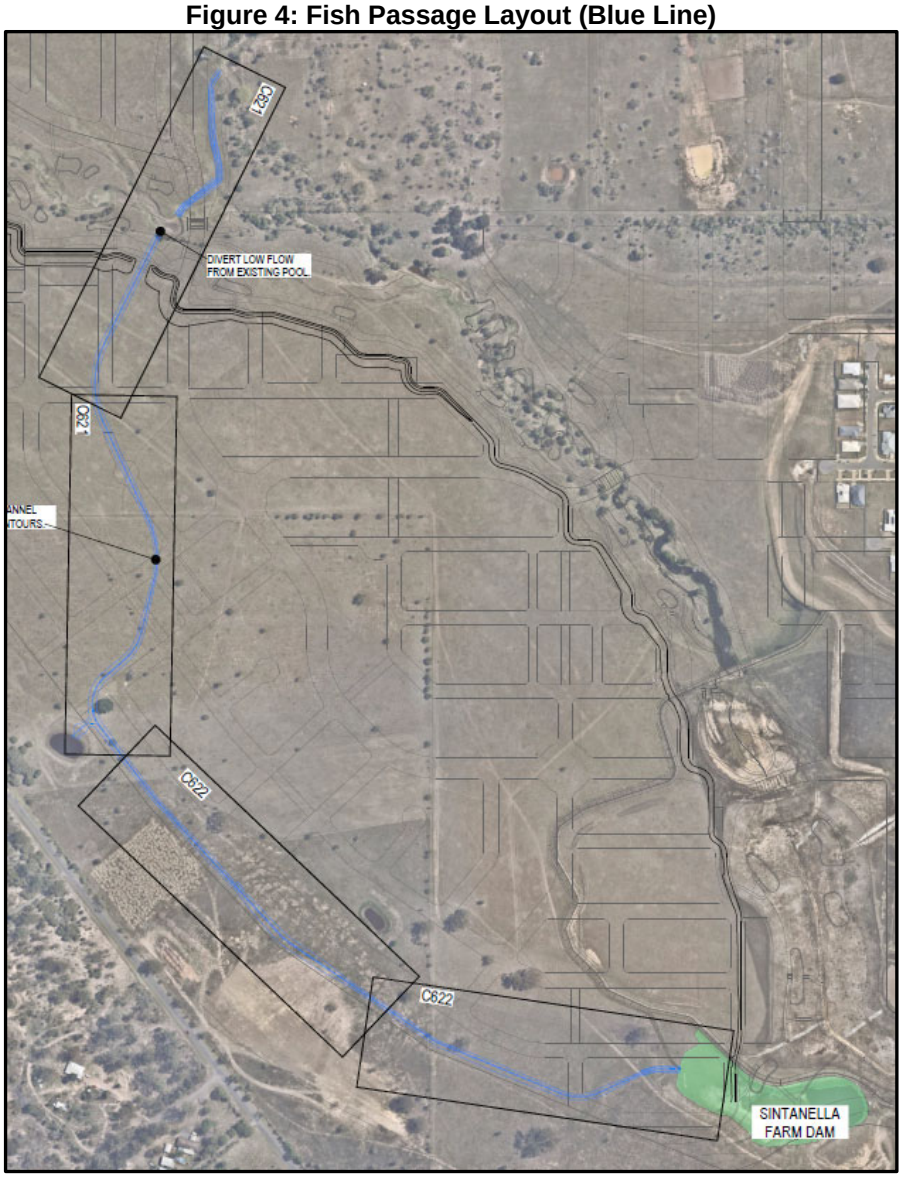


Figure 4: Fish Passage Layout (Blue Line)



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.
- Ipswich City Council Specifications.
- Notes on Calibre Drawings.
- Density Ratio – 95% Standard

3.0 FILL FOUNDATION

Areas to be filled at the site were observed to be stripped of grass and topsoil to depths exposing natural ground as well as trench backfill over the trunk sewer.

Compliance of the fill foundation and approval to commence filling was on the basis of

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

Picture 1: View of the Stripped Surface

4.0 FILLING OPERATIONS

Fill at the site was sourced from sewer line excavation.

Materials used as fill can be broadly summarised as: -

- Silty CLAY (CH) High Plasticity, dark brown and moist.

Fill was constructed using the following plant: -

- Padfoot Roller
- Compactor
- Water Truck
- Dozer

Fill was observed to be placed in layers within the capacity of the above plant and compacted using several passes (up and back).

To the extent that was reasonably practicable, 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 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.

Pictures of the filling operations are presented below.

Picture 2: View of the 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.

6.0 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.

7.0 EXCLUSIONS

The compliance statement specifically excludes any topsoil, which may be placed for use as Lot dressing or any other subsequent earthworks after 23rd February 2023. 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.

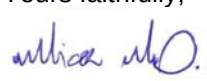
Our on-site attendance specifically excludes assessments of fill material quality and engineering properties that are outside the requirements of AS.3798 - 2007, including soil or fill reactivity and soaked CBR values. We note that the fill materials comprise clay soils, which may result in unfavourable 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,



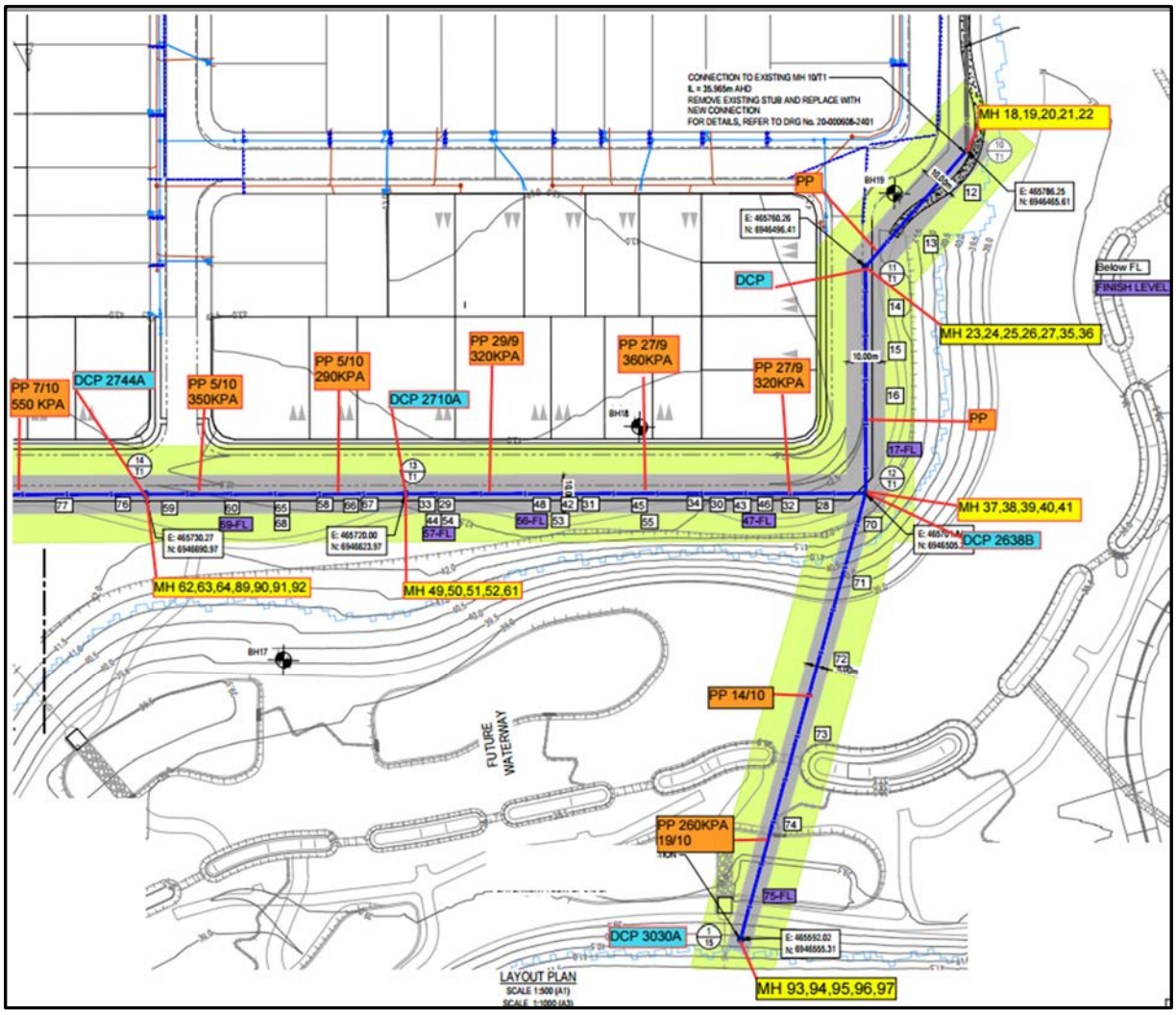
MICHAEL MORRISON
For and on behalf of
QUALTEST LABORAOTRY PTY LTD.

APPENDIX A

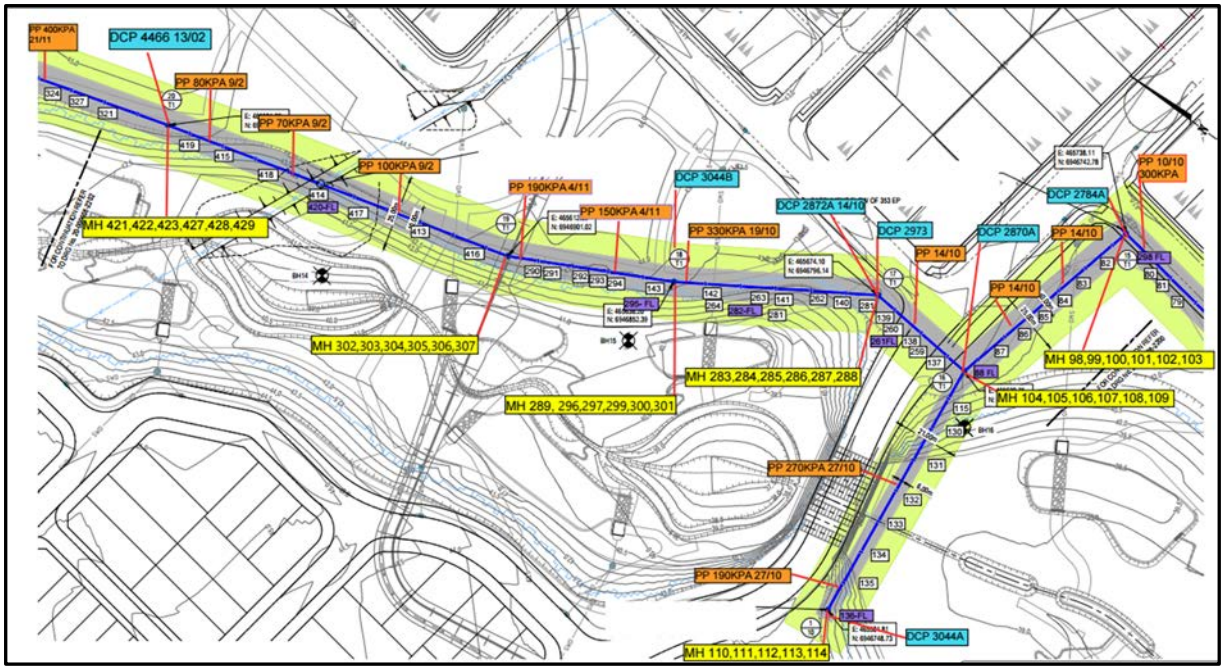
Site Plan and Compaction Test Locations

Qualtest Laboratory
Est. 1987

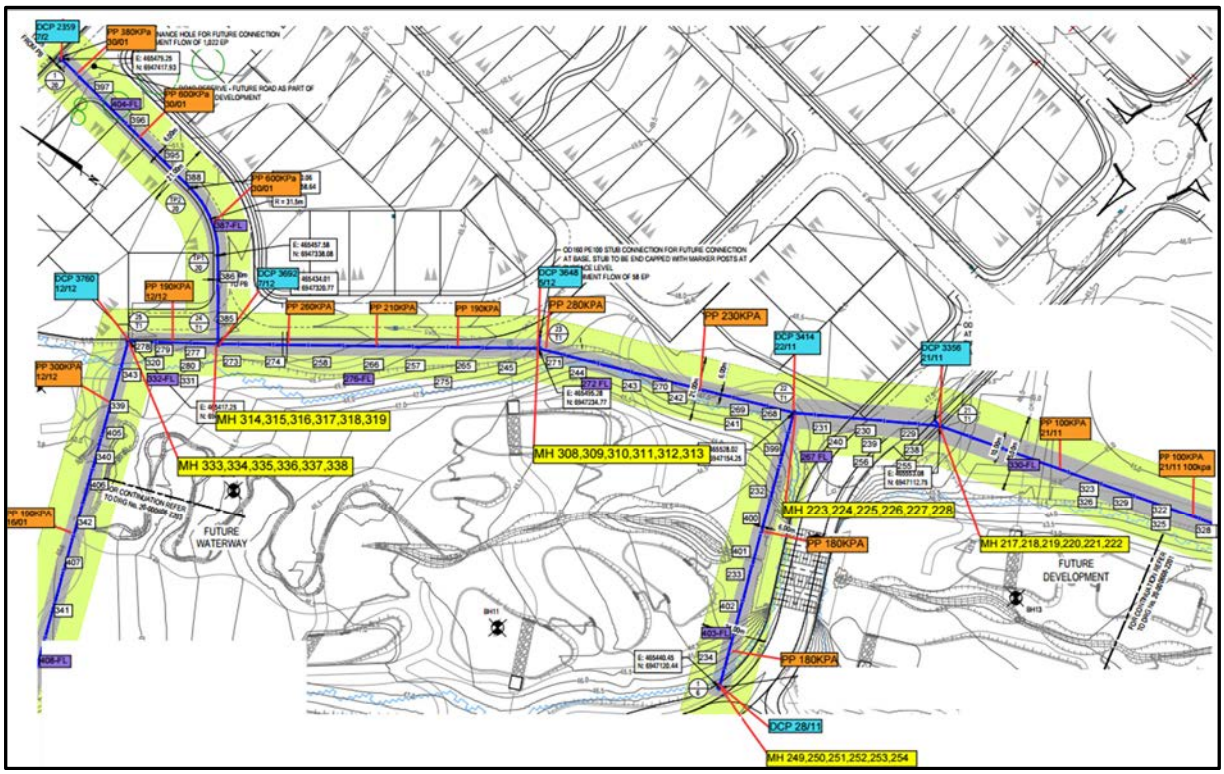
Site Plan and Test Locations
Sheet 1/8



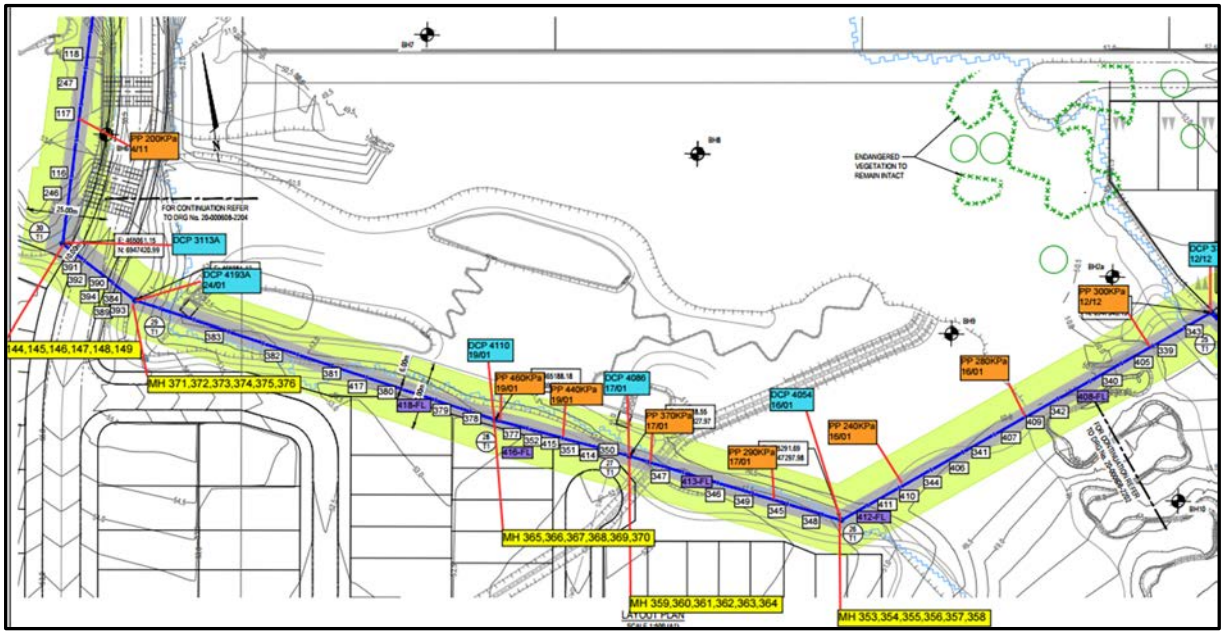
Site Plan and Test Locations
Sheet 2/8



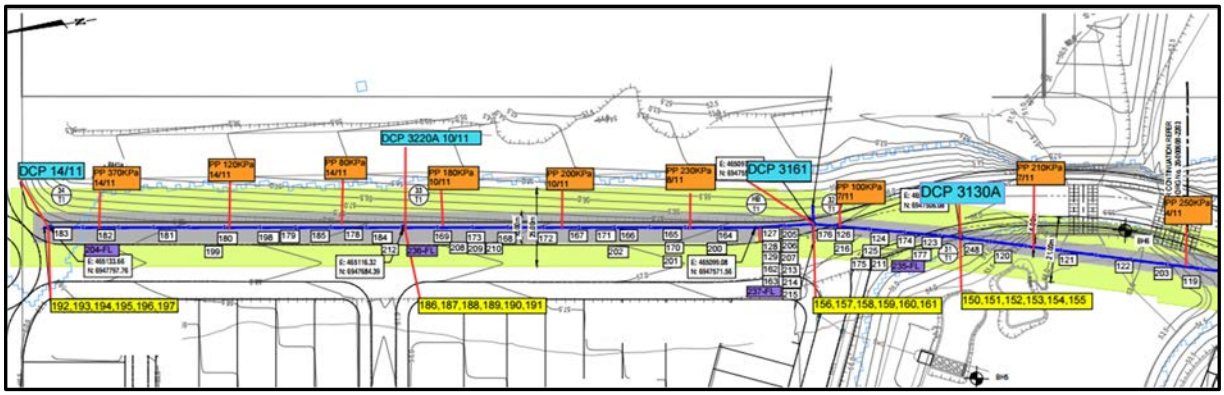
Site Plan and Test Locations
Sheet 3/8



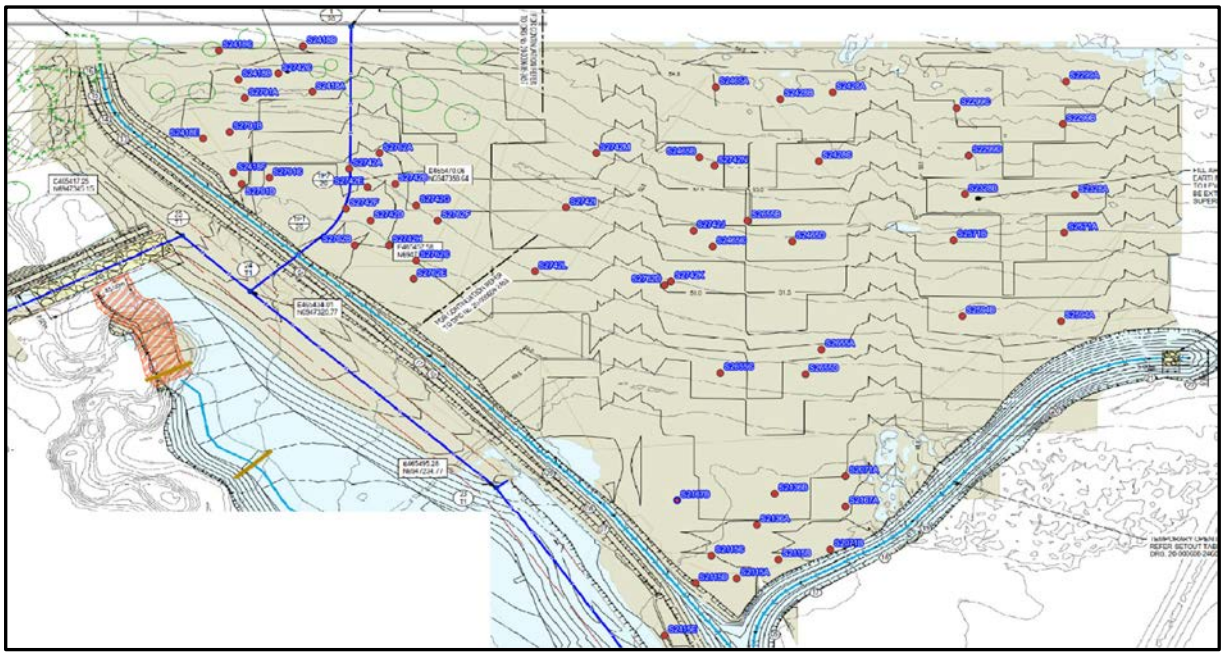
Site Plan and Test Locations
Sheet 4/8



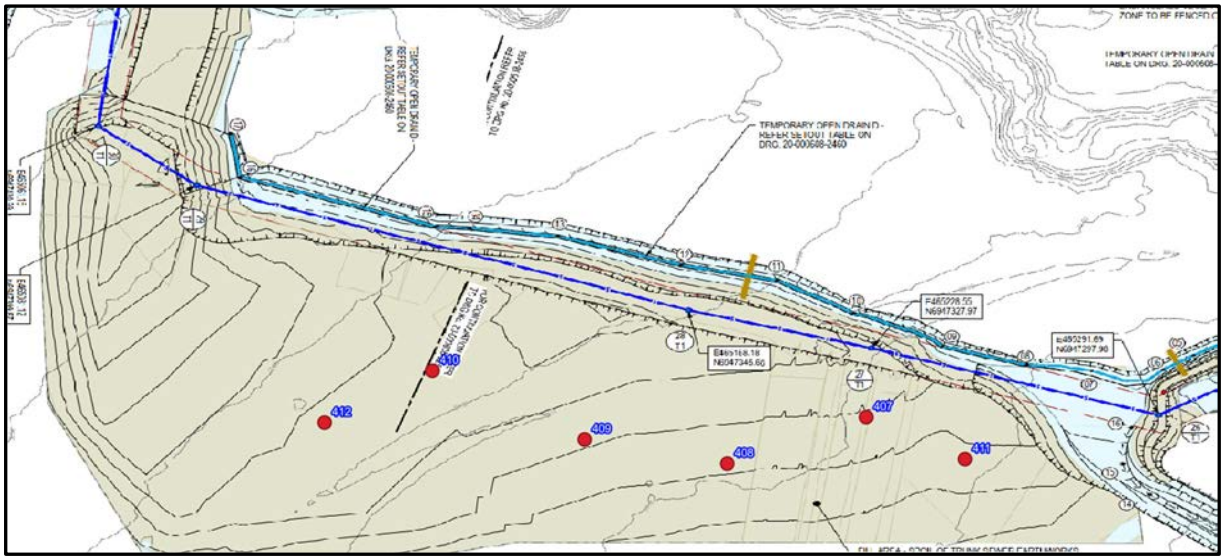
Site Plan and Test Locations
Sheet 5/8



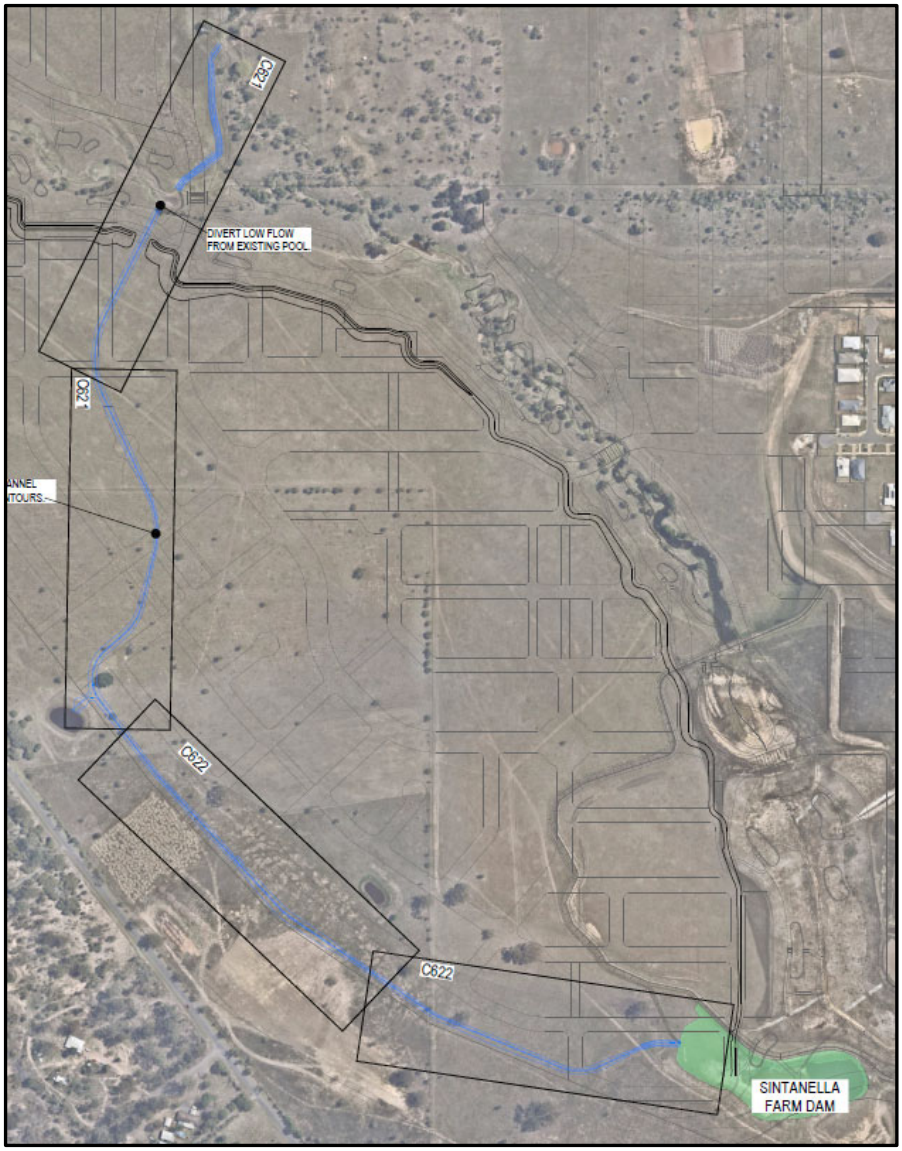
Site Plan and Test Locations
Sheet 6/8



Site Plan and Test Locations
Sheet 7/8



Site Layout Fish Bund
Sheet 8/8



APPENDIX B

COMPACTION TEST REPORTS

Qualtest Laboratory
Est. 1987

Material Test Report

Report Number: **22-360-1**
Issue Number: 1
Date Issued: 25/08/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Work Request: 2071
Date Sampled: 17/08/2022
Dates Tested: 17/08/2022 - 25/08/2022
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: Trunk Gravity Sewer,Walloon
Material: General Fill
Material Source: On-site Trunk Sewer

Qualtest Laboratory Pty Ltd
Qualtest Laboratory Pty Limited
2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
Email: greg@qualtestgeo.com
Accredited for compliance with ISO/IEC 17025 - Testing
Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S2071A	S2071B	
Test Number	1	2	
Date Tested	17/08/2022	17/08/2022	
Time Tested	09:30	09:35	
Test Request #/Location	General Fill	General Fill	
Easting	465635	465630	
Northing	6947269	6947245	
Elevation (m)	49.0	49.1	
Thickness of Layer (mm)	200	200	
Soil Description	Silty CLAY	Silty CLAY	
Test Depth (mm)	175	175	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	1.98	1.97	
Field Moisture Content %	25.7	16.2	
Field Dry Density (FDD) t/m^3	1.58	1.70	
Peak Converted Wet Density t/m^3	2.02	2.02	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	-3.0	-3.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**98.0**	**97.5**	
Compaction Method	**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: 22-360-2
Issue Number: 1
Date Issued: 30/08/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2115
Date Sampled: 19/08/2022
Dates Tested: 19/08/2022 - 29/08/2022
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: Trunk Gravity Sewer,Walloon
Material: General Fill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S2115A	S2115B	S2115C	S2115D	S2115E
Test Number	3	4	5	6	7
Date Tested	19/08/2022	19/08/2022	19/08/2022	19/08/2022	19/08/2022
Time Tested	08:25	08:30	08:35	08:40	08:45
Test Request #/Location	General Fill	General Fill	General Fill	General Fill	General Fill
Easting	465614	465613	465611	465586	465576
Northing	6947222	6947227	6947233	6947234	6947217
Elevation (m)	49.3	49.4	49.3	49.6	49.5
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175
Sieve used to determine oversize (mm)	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	1.94	1.93	1.92	1.90	1.93
Field Moisture Content %	25.8	20.9	23.2	22.9	22.4
Field Dry Density (FDD) t/m^3	1.55	1.59	1.56	1.55	1.58
Peak Converted Wet Density t/m^3	1.82	1.97	1.95	1.95	1.97
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	-3.0	1.0	0.5	0.5	1.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**106.5**	**98.0**	**99.0**	**97.5**	**98.0**
Compaction Method	**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: 22-360-3
Issue Number: 1
Date Issued: 31/08/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2136
Date Sampled: 20/08/2022
Dates Tested: 20/08/2022 - 29/08/2022
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: Trunk Gravity Sewer,Walloon
Material: General Fill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S2136A	S2136B	
Test Number	8	9	
Date Tested	20/08/2022	20/08/2022	
Time Tested	07:00	07:05	
Test Request #/Location	General Fill	General Fill	
Easting	465606	465608	
Northing	6947234	6947253	
Elevation (m)	48.7	48.9	
Thickness of Layer (mm)	200	200	
Soil Description	Silty CLAY	Silty CLAY	
Test Depth (mm)	175	175	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	1.89	1.89	
Field Moisture Content %	28.4	30.0	
Field Dry Density (FDD) t/m^3	1.47	1.45	
Peak Converted Wet Density t/m^3	1.90	1.97	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	0.5	-5.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**100.0**	**95.5**	
Compaction Method	**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: **22-360-4**
Issue Number: 1
Date Issued: 02/09/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2167
Date Sampled: 23/08/2022
Dates Tested: 23/08/2022 - 31/08/2022
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: Gravity Trunk Sewer Walloon
Material: General Fill
Material Source: On-site

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2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
Email: rhys@qualtestgeo.com

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S2167A	S2167B	
Test Number	10	11	
Date Tested	23/08/2022	23/08/2022	
Time Tested	10:20	10:25	
Test Request #/Location	General Fill	General Fill	
Easting	465635	465580	
Northing	6947259	6947261	
Elevation (m)	49.7	49.6	
Thickness of Layer (mm)	200	200	
Soil Description	Silty CLAY	Silty 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	1.99	2.01	
Field Moisture Content %	14.0	14.0	
Field Dry Density (FDD) t/m^3	1.75	1.76	
Peak Converted Wet Density t/m^3	1.90	1.94	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	3.0	1.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**104.5**	**103.5**	
Compaction Method	**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: **22-360-5**
Issue Number: 1
Date Issued: 05/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2638
Location: Trunk Gravity Sewer,Walloon

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S2638B			
Location	MH12/T1			
Chainage (m)	MH 12/T1			
Location Offset (m)	0.3m Off 12/T1			
Offset from				
Date Tested	27/09/2022			
Soil Description	Silty CLAY			
Reduced Level (mm)				
Moisture Condition	Moist			
Start Depth (mm)	Invert Level			
0-100 blows/100 mm	1			
100-200 blows/100 mm	2			
200-300 blows/100 mm	1			
300-400 blows/100 mm	2			
400-500 blows/100 mm	1			
500-600 blows/100 mm	2			
600-700 blows/100 mm	3			
700-800 blows/100 mm	4			
800-900 blows/100 mm	3			
900-1000 blows/100 mm	4			
1000-1100 blows/100 mm	3			
1100-1200 blows/100 mm	3			
1200-1300 blows/100 mm	5			
1300-1400 blows/100 mm	6			
1400-1500 blows/100 mm	13			
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-6**
Issue Number: 1
Date Issued: 10/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2710
Location: Gravity Trunk Sewer,Walloon

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S2710A			
Location	MH 13/T1			
Date Tested	05/10/2022			
Soil Description	Silty CLAY			
Reduced Level (mm)				
Moisture Condition	Wet			
Start Depth (mm)	Foundation			
0-100 blows/100 mm	0			
100-200 blows/100 mm	0			
200-300 blows/100 mm	0			
300-400 blows/100 mm	0			
400-500 blows/100 mm	0			
500-600 blows/100 mm	0			
600-700 blows/100 mm	0			
700-800 blows/100 mm	0			
800-900 blows/100 mm	0			
900-1000 blows/100 mm	3			
1000-1100 blows/100 mm	3			
1100-1200 blows/100 mm	4			
1200-1300 blows/100 mm	8			
1300-1400 blows/100 mm	13			
1400-1500 blows/100 mm				
1500-1600 blows/100 mm				
1600-1700 blows/100 mm				
1700-1800 blows/100 mm				
1800-1900 blows/100 mm				
1900-2000 blows/100 mm				
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-7**
Issue Number: 1
Date Issued: 10/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2744
Location: Trunk Gravity Sewer,Walloon

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S2744A			
Location	MH 14/T1			
Date Tested	06/10/2022			
Soil Description	Natural Rock			
Reduced Level (mm)				
Moisture Condition	Dry			
Start Depth (mm)	0.6m Below Inve			
0-100 blows/100 mm	R/21			
100-200 blows/100 mm				
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-8**
Issue Number: 1
Date Issued: 10/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2784
Location: Gravity Trunk Sewer Walloon

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S2784A			
Location	Trunk Sewer			
Chainage (m)	MH 15/T1			
Location Offset (m)	0.2m Off Centre Of MH 15/T1			
Offset from	CL			
Date Tested	10/10/2022			
Soil Description	Silt STONE			
Reduced Level (mm)				
Moisture Condition	Moist			
Start Depth (mm)	-50			
0-100 blows/100 mm	2			
100-200 blows/100 mm	5			
200-300 blows/100 mm	7			
300-400 blows/100 mm	9			
400-500 blows/100 mm	R21			
500-600 blows/100 mm				
600-700 blows/100 mm				
700-800 blows/100 mm				
800-900 blows/100 mm				
900-1000 blows/100 mm				
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-9**
Issue Number: 1
Date Issued: 14/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2870
Location: Gravity Trunk Sewer,Walloon

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S2870A			
Location	Gravity Trunk Sewer MH 15/T1			
Date Tested	13/10/2022			
Soil Description	Silty CLAY			
Reduced Level (mm)	Invert Level			
Moisture Condition	Wet			
Start Depth (mm)	-			
0-100 blows/100 mm	0			
100-200 blows/100 mm	0			
200-300 blows/100 mm	2			
300-400 blows/100 mm	0			
400-500 blows/100 mm	0			
500-600 blows/100 mm	1			
600-700 blows/100 mm	4			
700-800 blows/100 mm	17			
800-900 blows/100 mm	R21			
900-1000 blows/100 mm				
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-10**
Issue Number: 1
Date Issued: 14/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2872
Location: Gravity Trunk Sewer,Walloon

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S2872A			
Location	Gravity Trunk Sewer			
Chainage (m)	MH 16/T1			
Location Offset (m)	0.5m Off Centre Of MH16/T1			
Offset from				
Date Tested	14/10/2022			
Soil Description	Silty CLAY			
Reduced Level (mm)				
Moisture Condition	**			
Start Depth (mm)	-50			
0-100 blows/100 mm	0			
100-200 blows/100 mm	0			
200-300 blows/100 mm	0			
300-400 blows/100 mm	1			
400-500 blows/100 mm	6			
500-600 blows/100 mm	12			
600-700 blows/100 mm	R21			
700-800 blows/100 mm				
800-900 blows/100 mm				
900-1000 blows/100 mm				
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-11**
Issue Number: 1
Date Issued: 18/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2664
Date Sampled: 29/09/2022
Dates Tested: 29/09/2022 - 17/10/2022
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: Trunk Gravity Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S2664A	S2664B	S2664C	S2664D	S2664E
Test Number	12	13	14	15	16
Date Tested	29/09/2022	29/09/2022	29/09/2022	29/09/2022	29/09/2022
Time Tested	12:00	12:05	12:10	12:15	12:20
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	10/T1 - 11/T1	10/T1 - 11/T1	11/T1 - 12/T1	11/T1 - 12/T1	11/T1 - 12/T1
Offset	15m Off 10/T1	30m Off 10/T1	15m Off 11/T1	25m Off 11/T1	40m Off 11/T1
Layer / Reduced Level	4.5m Below F/L	3.6m Below F/L	2.7m Below F/L	1.8m Below F/L	0.9m Below F/L
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	150	150	150	150	150
Sieve used to determine oversize (mm)	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	1.94	1.95	1.96	1.92	1.92
Field Moisture Content %	20.2	21.5	20.7	20.4	20.5
Field Dry Density (FDD) t/m^3	1.62	1.60	1.62	1.59	1.59
Peak Converted Wet Density t/m^3	2.02	2.02	2.00	2.00	2.00
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	0.5	1.0	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**96.0**	**96.5**	**97.5**	**96.0**	**96.0**
Compaction Method	**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: **22-360-11**
Issue Number: 1
Date Issued: 18/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2664
Date Sampled: 29/09/2022
Dates Tested: 29/09/2022 - 17/10/2022
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: Trunk Gravity Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S2664F	S2664G	S2664H	S2664I	
Test Number	17	18	19	20	
Date Tested	29/09/2022	29/09/2022	29/09/2022	29/09/2022	
Time Tested	12:25	12:30	12:35	12:40	
Test Request #/Location	Sewer Trench Backfill	Sewer MH Backfill	Sewer MHBackfill	Sewer MH Backfill	
Line / Offset	11/T1 - 12/T1	MH 10/T1	MH 10/T1	MH 10/T1	
Offset	55m Off 11/T1	0.4m Off 10/T1	0.3m Off 10/T1	0.4m Off 10/T1	
Layer / Reduced Level	Finish Level	5m Below F/L	4m Below F/L	3m Below F/L	
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	
Test Depth (mm)	150	150	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	0	0	
Field Wet Density (FWD) t/m^3	1.93	1.88	1.90	1.91	
Field Moisture Content %	20.7	17.4	18.7	20.6	
Field Dry Density (FDD) t/m^3	1.60	1.60	1.60	1.58	
Peak Converted Wet Density t/m^3	2.03	1.94	1.98	1.98	
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	
Moisture Variation (Wv) %	0.5	0.5	0.5	1.0	
Adjusted Moisture Variation %	**	**	**	**	
Hilf Density Ratio (%)	**95.5**	**97.0**	**95.5**	**96.0**	
Compaction Method	**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: 22-360-12
Issue Number: 1
Date Issued: 19/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2681
Date Sampled: 30/09/2022
Dates Tested: 30/09/2022 - 18/10/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: Onsite

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S2681A	S2681B	S2681C	S2681D	S2681E	S2681F
Test Number	21	22	23	24	25	26
Date Tested	30/09/2022	30/09/2022	30/09/2022	30/09/2022	30/09/2022	30/09/2022
Time Tested	12:00	12:05	12:10	12:15	12:20	12:25
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH10/T1	MH10/T1	MH 11/T1	MH 11/T1	MH 11/T1	MH 11/T1
Offset	0.3m Off 10/T1	Finish Level	0.6m Off 11/T1	0.4m Off 11/T1	0.5m Off 11/T1	0.3m Off 11/T1
Layer / Reduced Level	1m Below F/L	Finish Level	5m Below F/L	4m Below F/L	3m Below F/L	2m Below F/L
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty 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	1.98	2.01	1.96	2.02	2.03	1.97
Field Moisture Content %	17.0	15.5	19.4	19.3	18.8	19.0
Field Dry Density (FDD) t/m^3	1.69	1.74	1.64	1.69	1.71	1.65
Peak Converted Wet Density t/m^3	1.97	1.96	1.98	2.04	2.01	2.00
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	1.0	1.0	1.0	0.5	0.5	1.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**100.5**	**102.5**	**98.5**	**99.0**	**101.0**	**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: **22-360-13**
Issue Number: 1
Date Issued: 20/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2972
Location: Gravity Trunk Sewer

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S2972A			
Location	16/T1			
Chainage (m)	Centre Of MH			
Location Offset (m)	CL			
Offset from	CL			
Date Tested	13/10/2022			
Soil Description	Silty CLAY			
Reduced Level (mm)				
Moisture Condition	Moist			
Start Depth (mm)	-50			
0-100 blows/100 mm	0			
100-200 blows/100 mm	0			
200-300 blows/100 mm	2			
300-400 blows/100 mm	0			
400-500 blows/100 mm	0			
500-600 blows/100 mm	1			
600-700 blows/100 mm	4			
700-800 blows/100 mm	17			
800-900 blows/100 mm	R21			
900-1000 blows/100 mm				
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-14**
Issue Number: 1
Date Issued: 20/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2973
Location: Trunk Gravity Sewer,Walloon

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S2973A			
Location	MH17/T1			
Date Tested	14/10/2022			
Soil Description	Silty CLAY			
Reduced Level (mm)				
Moisture Condition	Moist			
Start Depth (mm)	-50			
0-100 blows/100 mm	0			
100-200 blows/100 mm	0			
200-300 blows/100 mm	0			
300-400 blows/100 mm	1			
400-500 blows/100 mm	6			
500-600 blows/100 mm	12			
600-700 blows/100 mm	R21			
700-800 blows/100 mm				
800-900 blows/100 mm				
900-1000 blows/100 mm				
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-15**
Issue Number: 1
Date Issued: 24/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2942
Date Sampled: 18/10/2022
Dates Tested: 18/10/2022 - 21/10/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S2942A	S2942B	S2942C	S2942D
Test Number	45	46	47	48
Date Tested	18/10/2022	18/10/2022	18/10/2022	18/10/2022
Time Tested	10:00	10:05	10:10	10:15
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	12/T1 - 13/T1	12/T1 - 13/T1	12/T1 - 13/T1	12/T1 - 13/T1
Offset	50m Off 12/T1	20m Off 12/T1	25m Off 12/T1	40m Off 13/T1
Layer / Reduced Level	0.8m Below F/L	0.3m Below F/L	Finish Level	0.8m Below F/L
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.91	1.94	1.89	1.92
Field Moisture Content %	26.1	25.1	30.9	30.7
Field Dry Density (FDD) t/m^3	1.52	1.55	1.45	1.47
Peak Converted Wet Density t/m^3	1.93	2.03	1.90	1.94
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	1.0	7.0	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**99.5**	**95.5**	**99.5**	**99.0**
Compaction Method	**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: 22-360-15
Issue Number: 1
Date Issued: 24/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2942
Date Sampled: 18/10/2022
Dates Tested: 18/10/2022 - 21/10/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

Qualtest Laboratory Pty Ltd
Qualtest Laboratory Pty Limited
2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
Email: greg@qualtestgeo.com
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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S2942E	S2942F	S2942G	S2942H
Test Number	49	50	51	52
Date Tested	18/10/2022	18/10/2022	18/10/2022	18/10/2022
Time Tested	10:20	10:25	10:30	10:35
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 13/T1	MH 13/T1	MH 13/T1	MH 13/T1
Offset	0.3m Off MH 13/T1	0.4m Off MH 13/T1	0.3m Off MH 13/T1	0.3m Off MH 13/T1
Layer / Reduced Level	4m Below F/L	3m Below F/L	2m Below F/L	1m Below F/L
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.94	1.96	1.94	1.98
Field Moisture Content %	24.7	19.3	20.7	22.9
Field Dry Density (FDD) t/m^3	1.56	1.64	1.61	1.61
Peak Converted Wet Density t/m^3	1.98	2.00	1.97	2.02
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	-0.5	0.5	0.5	0.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**98.0**	**98.0**	**99.0**	**98.0**
Compaction Method	**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: **22-360-16**
Issue Number: 1
Date Issued: 25/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2858
Date Sampled: 13/10/2022
Dates Tested: 13/10/2022 - 24/10/2022
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: GravitybTrunk Sewer,Walloon (MH & Line)
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S2858A	S2858B	S2858C	S2858D
Test Number	27	28	29	30
Date Tested	13/10/2022	13/10/2022	13/10/2022	13/10/2022
Time Tested	10:00	10:05	10:10	10:15
Test Request #/Location	Sewer Manhole Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 11/T1	12/T1 - 13/T1	12/T1 - 13/T1	12/T1 - 13/T1
Offset	0.4m Off MH 11/T1	10m Off MH 12/T1	25m Off MH 13/T1	50m Off MH 12/T1
Layer / Reduced Level	Finish Level	4.1m Below F/L	4.1m Below F/L	3.2m Below F/L
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.97	1.98	1.96	1.92
Field Moisture Content %	21.9	20.4	20.9	21.5
Field Dry Density (FDD) t/m^3	1.62	1.64	1.62	1.58
Peak Converted Wet Density t/m^3	1.96	2.02	2.00	1.99
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.0	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**100.5**	**98.0**	**98.0**	**96.5**
Compaction Method	**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: **22-360-16**
Issue Number: 1
Date Issued: 25/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2858
Date Sampled: 13/10/2022
Dates Tested: 13/10/2022 - 24/10/2022
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: GravitybTrunk Sewer,Walloon (MH & Line)
Material: Sewer Trench Backfill
Material Source: On-site

Qualtest Laboratory Pty Ltd
Qualtest Laboratory Pty Limited
2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
Email: greg@qualtestgeo.com
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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S2858E	S2858F	S2858G	S2858H
Test Number	31	32	33	34
Date Tested	13/10/2022	13/10/2022	13/10/2022	13/10/2022
Time Tested	10:20	10:25	10:30	10:35
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	12/T1 - 13/T1	12/T1 - 13/T1	12/T1 - 13/T1	12/T1 - 13/T1
Offset	85m Off MH 12/T1	25m Off 12/T1	10m Off 13/T1	55m Off 12/T1
Layer / Reduced Level	3.2m Below F/L	2.3m Below F/L	2.3m Below F/L	1.8m Below F/L
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.00	1.99	1.88	1.95
Field Moisture Content %	21.1	21.0	27.2	26.9
Field Dry Density (FDD) t/m^3	1.65	1.64	1.48	1.53
Peak Converted Wet Density t/m^3	2.00	1.98	1.91	1.93
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**100.0**	**100.5**	**98.5**	**100.5**
Compaction Method	**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: 22-360-17
Issue Number: 1
Date Issued: 27/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2916
Date Sampled: 17/10/2022
Dates Tested: 17/10/2022 - 25/10/2022
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: Gravity Trunk Sewer,Walloon (MH & Line)
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S2916A	S2916B	S2916C	S2916D	S2916E
Test Number	35	36	37	38	39
Date Tested	17/10/2022	17/10/2022	17/10/2022	17/10/2022	17/10/2022
Time Tested	10:00	10:05	10:10	10:15	10:20
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 11/T1	MH 11/T1	MH 12/T1	MH 12/T1	MH 12/T1
Offset	0.3m Off 11/T1	0.2m Off 11/T1	0.4m Off 12/T	0.2m Off 12/T1	0.3m Off 12/T1
Layer / Reduced Level	1m Below F/L	Finish Level	4m Below F/L	3m Below F/L	2m Below F/L
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175
Sieve used to determine oversize (mm)	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	2.00	2.03	2.00	2.01	2.01
Field Moisture Content %	19.9	20.0	20.2	20.8	21.7
Field Dry Density (FDD) t/m^3	1.67	1.69	1.66	1.66	1.65
Peak Converted Wet Density t/m^3	2.06	2.06	2.04	2.02	1.98
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	-0.5	0.0	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**97.0**	**99.0**	**98.0**	**99.5**	**101.5**
Compaction Method	**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: 22-360-17
Issue Number: 1
Date Issued: 27/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2916
Date Sampled: 17/10/2022
Dates Tested: 17/10/2022 - 25/10/2022
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: Gravity Trunk Sewer,Walloon (MH & Line)
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S2916F	S2916G	S2916H	S2916I	S2916J
Test Number	40	41	42	43	44
Date Tested	17/10/2022	17/10/2022	17/10/2022	17/10/2022	17/10/2022
Time Tested	10:25	10:30	10:35	10:40	10:45
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 12/T1	MH 12/T1	12/T1 - 13/T1	12/T1 - 13/T1	12/T1 - 13/T1
Offset	0.4m Off 12/T1	0.2m Off 12/T1	40m Off 13/T1	30m Off 12/T1	10m Off 13/T1
Layer / Reduced Level	1m Below F/L	Finish Level	1.8m Below F/L	1.3m Below F/L	1.3m Below F/L
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175
Sieve used to determine oversize (mm)	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	1.97	1.99	1.98	1.95	1.94
Field Moisture Content %	22.1	22.2	21.5	21.6	22.6
Field Dry Density (FDD) t/m^3	1.61	1.63	1.63	1.61	1.59
Peak Converted Wet Density t/m^3	2.01	2.01	1.99	2.01	1.96
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	0.0	0.0	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**98.0**	**99.0**	**99.0**	**97.0**	**99.0**
Compaction Method	**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: 22-360-18
Issue Number: 1
Date Issued: 27/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2959
Date Sampled: 19/10/2022
Dates Tested: 19/10/2022 - 25/10/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On Site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S2959A	S2959B	S2959C	S2959D	S2959E	S2959F
Test Number	53	54	55	56	57	58
Date Tested	19/10/2022	19/10/2022	19/10/2022	19/10/2022	19/10/2022	19/10/2022
Time Tested	10:00	10:05	10:10	10:15	10:20	10:25
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	12/T1 - 13/T1	12/T1 - 13/T1	12/T1 - 13/T1	12/T1 - 13/T1	12/T1 - 13/T1	13/T1 - 14/T1
Offset	40m Off 13/T1	10m Off 13/T1	60m Off 13/T1	30m Off 13/T1	10m Off 13/T1	20m Off 13/T1
Layer / Reduced Level	0.3m Below F/L	0.3m Below F/L	0.3m Below F/L	Finish Level	Finish level	4.1m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.86	1.91	1.93	1.91	1.95	1.94
Field Moisture Content %	21.8	26.3	26.6	26.1	24.7	24.1
Field Dry Density (FDD) t/m^3	1.52	1.51	1.52	1.52	1.56	1.56
Peak Converted Wet Density t/m^3	1.92	1.92	1.94	1.99	2.01	2.02
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.0	0.0	0.0	0.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**96.5**	**99.0**	**99.5**	**96.0**	**97.0**	**96.0**
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: **22-360-18**
Issue Number: 1
Date Issued: 27/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2959
Date Sampled: 19/10/2022
Dates Tested: 19/10/2022 - 25/10/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On Site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S2959G	S2959H	S2959I	S2959J	S2959K	S2959L
Test Number	59	60	61	62	63	64
Date Tested	19/10/2022	19/10/2022	19/10/2022	19/10/2022	19/10/2022	19/10/2022
Time Tested	10:30	10:35	11:30	11:35	11:40	11:45
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	13/T1 - 14/T1	13/T1 - 14/T1	MH13/T1	MH14/T1	MH14/T1	MH14/T1
Offset	60m Off 13/T1r	30m Off 14/T1	0.4m Off 13/T1	0.2m Off MH 14/T2	0.3m Off MH 14/T1	0.2m Off MH14/T1
Layer / Reduced Level	3.2m Below F/L	2.3m Below F/L	Finish Level	5m Below F/L	4m Below F/L	3m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.98	1.97	2.04	2.02	1.98	2.02
Field Moisture Content %	22.4	24.3	25.8	18.3	16.9	17.9
Field Dry Density (FDD) t/m^3	1.62	1.58	1.62	1.70	1.70	1.72
Peak Converted Wet Density t/m^3	2.02	2.01	2.08	1.99	2.02	2.06
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.0	-0.5	-0.5	0.0	2.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**98.0**	**98.0**	**98.0**	**101.5**	**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: 22-360-18
Issue Number: 1
Date Issued: 27/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 2959
Date Sampled: 19/10/2022
Dates Tested: 19/10/2022 - 25/10/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On Site

Qualtest Laboratory Pty Ltd
Qualtest Laboratory Pty Limited
2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
Email: rhys@qualtestgeo.com
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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S2959M	S2959N				
Test Number	65	66				
Date Tested	19/10/2022	19/10/2022				
Time Tested	01:00	01:10				
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill				
Line / Offset	13/T1 - 14/T1	13/T1 - 14/T1				
Offset	30m Off 14/T1	10m Off 15/T1				
Layer / Reduced Level	1.3m Below F/L	1.3m Below F/L				
Thickness of Layer (mm)	200	200				
Soil Description	Silty CLAY	Silty CLAY				
Test Depth (mm)	175	175				
Sieve used to determine oversize (mm)	19.0	19.0				
Percentage of Wet Oversize (%)	0	0				
Field Wet Density (FWD) t/m^3	1.94	1.94				
Field Moisture Content %	24.2	20.1				
Field Dry Density (FDD) t/m^3	1.56	1.62				
Peak Converted Wet Density t/m^3	1.99	2.01				
Adjusted Peak Converted Wet Density t/m^3	**	**				
Moisture Variation (Wv) %	-0.5	0.5				
Adjusted Moisture Variation %	**	**				
Hilf Density Ratio (%)	**97.5**	**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

Material Test Report

Report Number: **22-360-19**
Issue Number: 2 - *This version supersedes all previous issues*
Reissue Reason: *Updated Test Location*
Date Issued: 01/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3030
Date Sampled: 28/10/2022
Location: Gravity Trunk Sewer,Walloon

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: Mick Morrison

NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S3030A			
Location	Gravity Trunk Sewer,Walloon			
Chainage (m)	MH 1/15			
Location Offset (m)	0.7m Off Centre Of MH			
Offset from				
Date Tested	28/10/2022			
Soil Description	Silty CLAY			
Reduced Level (mm)				
Moisture Condition	Wet			
Start Depth (mm)				
0-100 blows/100 mm	0			
100-200 blows/100 mm	0			
200-300 blows/100 mm	0			
300-400 blows/100 mm	2			
400-500 blows/100 mm	8			
500-600 blows/100 mm	11			
600-700 blows/100 mm	11			
700-800 blows/100 mm	16			
800-900 blows/100 mm	18			
900-1000 blows/100 mm	R21			
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-20**
Issue Number: 1
Date Issued: 01/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3044
Location: Gravity Trunk Sewer Walloon

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: Mick Morrison

NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S3044A	S3044B		
Location	MH 1/10	MH 18/T1		
Date Tested	31/10/2022	31/10/2022		
Soil Description	Silty CLAY	Silty CLAY		
Reduced Level (mm)	Foundation	Foundation		
Moisture Condition	Wet	Wet		
Start Depth (mm)	-45	-45		
0-100 blows/100 mm	1	0		
100-200 blows/100 mm	1	0		
200-300 blows/100 mm	1	0		
300-400 blows/100 mm	1	1		
400-500 blows/100 mm	1	3		
500-600 blows/100 mm	2	2		
600-700 blows/100 mm	2	5		
700-800 blows/100 mm	2	6		
800-900 blows/100 mm	3	7		
900-1000 blows/100 mm	4	8		
1000-1100 blows/100 mm	5	5		
1100-1200 blows/100 mm	5	7		
1200-1300 blows/100 mm	7	10		
1300-1400 blows/100 mm	6	15		
1400-1500 blows/100 mm	6	14		
1500-1600 blows/100 mm	4	17		
1600-1700 blows/100 mm	4			
1700-1800 blows/100 mm	4			
1800-1900 blows/100 mm	5			
1900-2000 blows/100 mm				
Ground Water Level				
Remarks				

Material Test Report

Report Number: 22-360-21
Issue Number: 1
Date Issued: 15/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3006
Date Sampled: 27/10/2022
Dates Tested: 27/10/2022 - 01/11/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3006A	S3006B	S3006C	S3006D	S3006E	S3006F
Test Number	67	68	69	70	71	72
Date Tested	27/10/2022	27/10/2022	27/10/2022	27/10/2022	27/10/2022	27/10/2022
Time Tested	10:00	10:05	10:10	10:15	10:20	10:25
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	13/T1 - 14/T1	13/T1 - 14/T1	13/T1 - 14/T1	12/T1 - 1/15	12/T1 - 1/15	12/T1 - 1/15
Offset	12m Off 13/T1	30m Off 13/T1	20m Off 14/T1	9m Off 12/T1	24m Off 12/T1	44m Off 12/T1
Layer / Reduced Level	0.8m Below F/L	0.3m Below F/L	Finish Level	3.1m Below F/L	2.3m Below F/L	1.4m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.94	1.92	1.91	1.94	1.94	1.92
Field Moisture Content %	28.3	28.0	23.5	24.9	21.6	28.0
Field Dry Density (FDD) t/m^3	1.51	1.50	1.55	1.55	1.60	1.50
Peak Converted Wet Density t/m^3	1.95	1.91	1.89	1.94	1.92	1.94
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	-2.5	1.0	0.5	0.0	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**99.0**	**100.0**	**101.0**	**100.0**	**101.5**	**99.5**
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: 22-360-21
Issue Number: 1
Date Issued: 15/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3006
Date Sampled: 27/10/2022
Dates Tested: 27/10/2022 - 01/11/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3006G	S3006H	S3006I	S3006J	S3006K	S3006L
Test Number	73	74	75	76	77	78
Date Tested	27/10/2022	27/10/2022	27/10/2022	27/10/2022	27/10/2022	27/10/2022
Time Tested	10:30	10:35	10:40	01:00	01:05	01:10
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	12/T1 - 1/15	12/T1 - 1/15	12/T1 - 1/15	14/T1 - 15/T1	14/T1 - 15/T1	14/T1 - 15/T1
Offset	50m Off 1/15	25m Off 1/15	10m Off 1/15	7m Off 14/T1	20m Off 14/T1	33m Off 14/T1
Layer / Reduced Level	0.9m Below F/L	0.4m Below F/L	Finish Level	4m Below FL	3.1m Below FL	2.2m Below FL
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.98	1.97	1.96	1.94	1.97	1.96
Field Moisture Content %	25.8	24.9	23.5	22.8	24.0	15.2
Field Dry Density (FDD) t/m^3	1.57	1.58	1.59	1.58	1.59	1.70
Peak Converted Wet Density t/m^3	2.02	1.94	1.97	1.99	1.97	1.96
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	1.0	1.0	0.5	1.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**98.0**	**101.5**	**99.5**	**97.5**	**100.0**	**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: 22-360-21
Issue Number: 1
Date Issued: 15/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3006
Date Sampled: 27/10/2022
Dates Tested: 27/10/2022 - 01/11/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3006M	S3006N	S3006O			
Test Number	79	80	81			
Date Tested	27/10/2022	27/10/2022	27/10/2022			
Time Tested	01:15	01:20	01:25			
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill			
Line / Offset	14/T1 - 15/T1	14/T1 - 15/T1	14/T1 - 15/T1			
Offset	10m Off 14/T1	10m Off 15/T1	20m Off 15/T1			
Layer / Reduced Level	1.7m Below FL	1.2m Below FL	0.6m Below F/L			
Thickness of Layer (mm)	200	200	200			
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY			
Test Depth (mm)	175	175	175			
Sieve used to determine oversize (mm)	19.0	19.0	19.0			
Percentage of Wet Oversize (%)	0	0	0			
Field Wet Density (FWD) t/m^3	1.96	2.02	2.00			
Field Moisture Content %	19.5	14.0	14.5			
Field Dry Density (FDD) t/m^3	1.64	1.77	1.75			
Peak Converted Wet Density t/m^3	1.94	2.00	2.01			
Adjusted Peak Converted Wet Density t/m^3	**	**	**			
Moisture Variation (Wv) %	1.0	0.5	0.5			
Adjusted Moisture Variation %	**	**	**			
Hilf Density Ratio (%)	**101.0**	**101.0**	**99.5**			
Compaction Method	**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: **22-360-22**
Issue Number: 1
Date Issued: 15/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3019
Dates Tested: 28/10/2022 - 04/11/2022
Location: Gravity Trunk Sewer,Walloon

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S3019A	S3019B	S3019C	S3019D
Test Number	82	83	84	85
Date Tested	28/10/2022	28/10/2022	28/10/2022	28/10/2022
Time Tested	07:30	07:35	07:40	07:45
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	15/T1 - 16/T1	15/T1 - 16/T1	15/T1 - 16/T1	15/T1 - 16/T1
Offset	10m Off 15/T1	20m Off 15/T1	30m Off 15/T1	40m Off 16/T1
Layer / Reduced Level	4m Below FL	3.1m Below FL	2.2m Below FL	1.7m Below FL
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.00	2.04	1.99	2.01
Field Moisture Content %	17.2	21.5	17.9	18.3
Field Dry Density (FDD) t/m^3	1.71	1.68	1.69	1.70
Peak Converted Wet Density t/m^3	1.99	1.98	2.05	2.03
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	1.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**100.5**	**103.0**	**97.0**	**99.0**
Compaction Method	**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: **22-360-22**
Issue Number: 1
Date Issued: 15/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3019
Dates Tested: 28/10/2022 - 04/11/2022
Location: Gravity Trunk Sewer,Walloon

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S3019E	S3019F	S3019G	S3019H
Test Number	86	87	88	89
Date Tested	28/10/2022	28/10/2022	28/10/2022	28/10/2022
Time Tested	07:50	07:55	08:00	08:05
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	15/T1 - 16/T1	15/T1 - 16/T1	15/T1 - 16/T1	MH 14/T1
Offset	50m Off 15/T1	10 Off 16/T1	25m Off 16/T1	0.3m Off MH 14/T1
Layer / Reduced Level	1.2m Below FL	0.7m Below FL	Finish Level	2m BelowF/L
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.00	2.01	2.06	2.03
Field Moisture Content %	19.1	18.7	15.5	19.0
Field Dry Density (FDD) t/m^3	1.68	1.69	1.78	1.71
Peak Converted Wet Density t/m^3	2.04	2.09	2.03	2.05
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	1.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**98.5**	**96.0**	**101.0**	**99.0**
Compaction Method	**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: **22-360-23**
Issue Number: 1
Date Issued: 15/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3113
Location: Gravity Trunk Sewer,Walloon

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S3113A			
Location	MH 30/T1			
Chainage (m)	MH 30/T1			
Location Offset (m)	0.6m Off MH 30/T1			
Offset from	CL			
Date Tested	04/11/2022			
Soil Description	Silty CLAY			
Reduced Level (mm)	-45			
Moisture Condition	Wet			
Start Depth (mm)	Foundation			
0-100 blows/100 mm	0			
100-200 blows/100 mm	1			
200-300 blows/100 mm	2			
300-400 blows/100 mm	1			
400-500 blows/100 mm	1			
500-600 blows/100 mm	2			
600-700 blows/100 mm	4			
700-800 blows/100 mm	8			
800-900 blows/100 mm	6			
900-1000 blows/100 mm	7			
1000-1100 blows/100 mm	4			
1100-1200 blows/100 mm	5			
1200-1300 blows/100 mm	9			
1300-1400 blows/100 mm	9			
1400-1500 blows/100 mm	21			
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-24**
Issue Number: 1
Date Issued: 17/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3266
Location: Gravity Trunk Sewer,Walloon

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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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NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Mick Morrison

NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S3266A			
Location	MH 34/T1			
Date Tested	14/11/2022			
Soil Description	Sandy CLAY			
Reduced Level (mm)				
Moisture Condition	Moist			
Start Depth (mm)	-45			
0-100 blows/100 mm	3			
100-200 blows/100 mm	4			
200-300 blows/100 mm	3			
300-400 blows/100 mm	6			
400-500 blows/100 mm	8			
500-600 blows/100 mm	10			
600-700 blows/100 mm	9			
700-800 blows/100 mm	8			
800-900 blows/100 mm	9			
900-1000 blows/100 mm	10			
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-25**
Issue Number: 1
Date Issued: 17/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3220
Location: Gravity Trunk Sewer,Walloon

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: Mick Morrison

NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S3220A			
Location	MH 33/T1			
Date Tested	10/11/2022			
Soil Description	Silty CLAY			
Reduced Level (mm)				
Moisture Condition	Moist			
Start Depth (mm)	-45			
0-100 blows/100 mm	0			
100-200 blows/100 mm	0			
200-300 blows/100 mm	1			
300-400 blows/100 mm	3			
400-500 blows/100 mm	3			
500-600 blows/100 mm	18			
600-700 blows/100 mm	R21			
700-800 blows/100 mm				
800-900 blows/100 mm				
900-1000 blows/100 mm				
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-26**
Issue Number: 1
Date Issued: 17/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3130
Location: Gravity Trunk Sewer,Walloon

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: Mick Morrison

NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S3130A			
Location	31/T1			
Date Tested	07/11/2022			
Soil Description	Silty CLAY			
Reduced Level (mm)				
Moisture Condition	Wet			
Start Depth (mm)	-45			
0-100 blows/100 mm	0			
100-200 blows/100 mm	0			
200-300 blows/100 mm	1			
300-400 blows/100 mm	1			
400-500 blows/100 mm	1			
500-600 blows/100 mm	4			
600-700 blows/100 mm	1			
700-800 blows/100 mm	2			
800-900 blows/100 mm	1			
900-1000 blows/100 mm	2			
1000-1100 blows/100 mm	6			
1100-1200 blows/100 mm	6			
1200-1300 blows/100 mm	9			
1300-1400 blows/100 mm	8			
1400-1500 blows/100 mm	11			
1500-1600 blows/100 mm	R21			
1600-1700 blows/100 mm				
1700-1800 blows/100 mm				
1800-1900 blows/100 mm				
1900-2000 blows/100 mm				
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-27**
Issue Number: 1
Date Issued: 17/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3161
Location: Gravity Trunk Sewer,Walloon

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: Mick Morrison

NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S3161A			
Location	32/T1			
Date Tested	08/11/2022			
Soil Description	Wet Silty CLAY			
Reduced Level (mm)				
Moisture Condition	Wet			
Start Depth (mm)	-45			
0-100 blows/100 mm	0			
100-200 blows/100 mm	0			
200-300 blows/100 mm	3			
300-400 blows/100 mm	1			
400-500 blows/100 mm	0			
500-600 blows/100 mm	0			
600-700 blows/100 mm	4			
700-800 blows/100 mm	8			
800-900 blows/100 mm	10			
900-1000 blows/100 mm	11			
1000-1100 blows/100 mm	20			
1100-1200 blows/100 mm	R21			
1200-1300 blows/100 mm				
1300-1400 blows/100 mm				
1400-1500 blows/100 mm				
Ground Water Level				
Remarks				

Material Test Report

Report Number: 22-360-28
Issue Number: 1
Date Issued: 21/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3167
Date Sampled: 08/11/2022
Dates Tested: 08/11/2022 - 18/11/2022
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
Remarks: ,
Specification: 95% Standard
Site Selection: Selected by GTA
Location: Gravity Trunk Sewer,Walloon,
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3167A	S3167B	S3167C	S3167D	S3167E	S3167F
Test Number	90	91	92	93	94	95
Date Tested	08/11/2022	08/11/2022	08/11/2022	08/11/2022	08/11/2022	08/11/2022
Time Tested	01:00	10:05	10:10	10:15	10:20	10:25
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH14/T1	MH14/T1	MH14/T1	MH 1/15	MH 1/15	MH 1/15
Offset	0.4m Off MH14/T1	0.3m Off MH14/T1	0.5m Off MH14/T1	0.2m Off MH1/T15	0.4m Off MH1/T5	0.3m Off MH1/T15
Layer / Reduced Level	2m Below Finish Level	1m Below Finish Level	Finish Level	2m Below Finish Level	1.5m Below Finish Level	1m Below Finish Level
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty 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	1.98	1.95	1.98	1.96	1.98	1.96
Field Moisture Content %	17.7	17.4	18.1	15.3	17.2	16.5
Field Dry Density (FDD) t/m^3	1.68	1.66	1.68	1.70	1.69	1.68
Peak Converted Wet Density t/m^3	1.91	1.92	1.99	1.93	1.96	1.96
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	3.0	1.0	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**103.5**	**101.5**	**99.5**	**101.5**	**101.0**	**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: **22-360-28**
Issue Number: 1
Date Issued: 21/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3167
Date Sampled: 08/11/2022
Dates Tested: 08/11/2022 - 18/11/2022
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
Remarks: ,
Specification: 95% Standard
Site Selection: Selected by GTA
Location: Gravity Trunk Sewer,Walloon,
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3167G	S3167H	S3167I	S3167J	S3167K	S3167L
Test Number	96	97	98	99	100	101
Date Tested	08/11/2022	08/11/2022	08/11/2022	08/11/2022	08/11/2022	08/11/2022
Time Tested	10:30	10:35	10:40	10:45	10:50	10:55
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 1/15	MH 1/15	MH 15/T1	MH 15/T1	MH 15/T1	MH 15/T1
Offset	0.5m Off MH1/T15	0.3m Off MH1/T15	0.2m Off 15/T1	0.4m Off 15/T1	0.3m Off 15/T1	0.3m Off 15/T1
Layer / Reduced Level	0.5m Below Finish Level	Finish Level	4.5m Below Finish Level	4m Below Finish Level	3.5m Below Finish Level	3m Below Finish Level
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty 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	1.90	1.88	1.90	1.95	1.97	1.94
Field Moisture Content %	21.1	16.2	18.5	20.7	18.6	17.8
Field Dry Density (FDD) t/m^3	1.57	1.62	1.61	1.62	1.67	1.64
Peak Converted Wet Density t/m^3	1.92	1.94	1.94	1.98	2.01	1.94
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	-0.5	0.5	3.0	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**99.0**	**97.0**	**98.5**	**98.5**	**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: **22-360-28**
Issue Number: 1
Date Issued: 21/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3167
Date Sampled: 08/11/2022
Dates Tested: 08/11/2022 - 18/11/2022
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
Remarks: ,
Specification: 95% Standard
Site Selection: Selected by GTA
Location: Gravity Trunk Sewer,Walloon,
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3167M	S3167N	S3167O	S3167P	S3167Q	S3167R
Test Number	102	103	104	105	106	107
Date Tested	08/11/2022	08/11/2022	08/11/2022	08/11/2022	08/11/2022	08/11/2022
Time Tested	11:00	11:05	01:00	01:05	01:10	01:15
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 15/T1	MH 15/T1	MH 16/T1	MH 16/T1	MH 16/T1	MH 16/T1
Offset	0.4m Off 15/T1	0.5m Off 15/T1	0.3m Off 16/T1	0.4m Off 16/T1	0.4m Off 16/T1	0.3m Off 16/T1
Layer / Reduced Level	2.5m Below Finish Level	2m Below Finish Level	5.5m Below Finish Level	5m Below Finish Level	4.5m Below Finish Level	4m Below Finish Level
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty 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	1.96	1.97	1.97	1.96	1.98	1.98
Field Moisture Content %	20.1	20.4	17.7	18.2	17.9	18.7
Field Dry Density (FDD) t/m^3	1.64	1.64	1.67	1.66	1.68	1.67
Peak Converted Wet Density t/m^3	2.00	2.02	1.93	1.97	1.94	1.97
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	1.0	0.5	2.5	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**98.5**	**98.0**	**102.0**	**100.0**	**102.0**	**100.5**
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: 22-360-28
Issue Number: 1
Date Issued: 21/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3167
Date Sampled: 08/11/2022
Dates Tested: 08/11/2022 - 18/11/2022
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
Remarks: ,
Specification: 95% Standard
Site Selection: Selected by GTA
Location: Gravity Trunk Sewer,Walloon,
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3167S	S3167T	S3167U	S3167V	S3167W	S3167X
Test Number	108	109	110	111	112	113
Date Tested	08/11/2022	08/11/2022	08/11/2022	08/11/2022	08/11/2022	08/11/2022
Time Tested	01:20	01:25	01:30	01:35	01:40	01:45
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 16/T1	MH 16/T1	MH 1/10	MH 1/10	MH 1/10	MH 1/10
Offset	0.4m Off 16/T1	0.2m Off 16/T1	0.2m Off 1/10	0.4m Off 1/10	0.3m Off 1/10	0.4m Off 1/10
Layer / Reduced Level	3.5m Below Finish Level	3m Below Finish Level	2.1m Below Finish Level	1.6m Below Finish Level	1.1m Below Finish Level	0.6m Below Finish Level
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty 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	1.87	1.87	1.86	1.88	1.94	1.95
Field Moisture Content %	22.3	19.6	22.1	23.1	20.9	21.5
Field Dry Density (FDD) t/m^3	1.53	1.57	1.52	1.53	1.61	1.60
Peak Converted Wet Density t/m^3	1.93	1.90	1.88	1.89	1.89	1.96
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	1.0	0.5	2.0	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**96.5**	**98.5**	**99.0**	**100.0**	**103.0**	**99.5**
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: **22-360-28**
Issue Number: 1
Date Issued: 21/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3167
Date Sampled: 08/11/2022
Dates Tested: 08/11/2022 - 18/11/2022
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
Remarks: ,
Specification: 95% Standard
Site Selection: Selected by GTA
Location: Gravity Trunk Sewer,Walloon,
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3167Y	S3167Z				
Test Number	114	115				
Date Tested	08/11/2022	08/11/2022				
Time Tested	01:50	01:55				
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill				
Line / Offset	MH 1/10	16/T1 - 1/10				
Offset	0.5m Off 1/10	10m Off 16/T1				
Layer / Reduced Level	Finish Level	4.5m Below FL				
Soil Description	Silty CLAY	Silty 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	2.05	2.06				
Field Moisture Content %	16.0	16.5				
Field Dry Density (FDD) t/m^3	1.77	1.77				
Peak Converted Wet Density t/m^3	1.99	2.07				
Adjusted Peak Converted Wet Density t/m^3	**	**				
Moisture Variation (Wv) %	0.5	0.5				
Adjusted Moisture Variation %	**	**				
Hilf Density Ratio (%)	**103.0**	**99.5**				
Compaction Method	**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: 22-360-29
Issue Number: 1
Date Issued: 21/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3185
Date Sampled: 09/11/2022
Dates Tested: 09/11/2022 - 18/11/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3185A	S3185B	S3185C	S3185D	S3185E	S3185F
Test Number	116	117	118	119	120	121
Date Tested	09/11/2022	09/11/2022	09/11/2022	09/11/2022	09/11/2022	09/11/2022
Time Tested	11:00	11:05	11:10	11:15	11:20	11:25
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	30/T1 - 31/T1	30/T1 - 31/T1	30/T1 - 31/T1	30/T1 - 31/T1	30/T1 - 31/T1	30/T1 - 31/T1
Offset	20m Off 30/T1	40m Off 30/T1	60m Off 30/T1	80m Off 30/T1	20m Off 31/T1	40m Off 31/T1
Layer / Reduced Level	5.8m Below F/L	4.9m Below F/L	4.0m Below F/L	3.5m Below F/L	3.0m Below F/L	2.5m Below F/L
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty 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	2.07	2.04	2.03	2.06	1.98	1.95
Field Moisture Content %	20.7	20.2	20.6	20.5	21.0	21.0
Field Dry Density (FDD) t/m^3	1.71	1.70	1.68	1.71	1.64	1.61
Peak Converted Wet Density t/m^3	2.03	2.05	2.00	1.97	1.99	1.97
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	0.5	0.0	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**101.5**	**100.0**	**101.5**	**104.5**	**99.5**	**99.0**
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: **22-360-29**
Issue Number: 1
Date Issued: 21/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3185
Date Sampled: 09/11/2022
Dates Tested: 09/11/2022 - 18/11/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3185G	S3185H	S3185I	S3185J	S3185K	S3185L
Test Number	122	123	124	125	126	127
Date Tested	09/11/2022	09/11/2022	09/11/2022	09/11/2022	09/11/2022	09/11/2022
Time Tested	11:30	11:35	11:50	11:55	12:00	12:05
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	30/T1 - 31/T1	31/T1 - 32/T1	31/T1 - 32/T1	31/T1 - 32/T1	31/T1 - 32/T1	32/T1 - HB/T1
Offset	60 Off 31/T1	10m Off 31/T1	20m Off 31/T1	30m Off 31/T1	40m Off 31/T1	2m Off 32/T1
Layer / Reduced Level	2.0m Below F/L	5.8m Below F/L	4.9m Below F/L	4.0m Below F/L	3.5m Below F/L	6.1Below F/L
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty 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	2.03	2.01	2.03	2.00	2.02	2.01
Field Moisture Content %	20.0	21.3	19.1	20.8	15.3	20.3
Field Dry Density (FDD) t/m^3	1.69	1.66	1.71	1.65	1.75	1.67
Peak Converted Wet Density t/m^3	2.03	2.01	2.01	2.02	2.02	2.06
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**100.5**	**100.0**	**101.0**	**99.0**	**100.0**	**97.5**
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: 22-360-29
Issue Number: 1
Date Issued: 21/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3185
Date Sampled: 09/11/2022
Dates Tested: 09/11/2022 - 18/11/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3185M	S3185N				
Test Number	128	129				
Date Tested	09/11/2022	09/11/2022				
Time Tested	12:10	12:15				
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill				
Line / Offset	32/T1 - HB/T1	32/T1 - HB/T1				
Offset	4m Off 32/T1	6m Off 32/T1				
Layer / Reduced Level	5.2m Below F/L	4.3m Below F/L				
Soil Description	Silty CLAY	Silty 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	2.03	2.06				
Field Moisture Content %	23.5	20.8				
Field Dry Density (FDD) t/m^3	1.64	1.71				
Peak Converted Wet Density t/m^3	2.00	2.02				
Adjusted Peak Converted Wet Density t/m^3	**	**				
Moisture Variation (Wv) %	0.5	0.5				
Adjusted Moisture Variation %	**	**				
Hilf Density Ratio (%)	**101.0**	**102.0**				
Compaction Method	**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: **22-360-30**
Issue Number: 1
Date Issued: 22/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3356
Location: Gravity Trunk Sewer,Walloon

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: Mick Morrison

NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S3356A			
Location	MH 21/T1			
Date Tested	18/11/2022			
Soil Description	Silty CLAY			
Reduced Level (mm)				
Moisture Condition	Moist			
Start Depth (mm)	-45			
0-100 blows/100 mm	4			
100-200 blows/100 mm	6			
200-300 blows/100 mm	5			
300-400 blows/100 mm	5			
400-500 blows/100 mm	8			
500-600 blows/100 mm	8			
600-700 blows/100 mm	8			
700-800 blows/100 mm	7			
800-900 blows/100 mm	8			
900-1000 blows/100 mm	8			
1000-1100 blows/100 mm	11			
1100-1200 blows/100 mm	7			
1200-1300 blows/100 mm	8			
1300-1400 blows/100 mm	8			
1400-1500 blows/100 mm	10			
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-31**
Issue Number: 1
Date Issued: 29/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3557
Location: Gravity Trunk Sewer,Walloon

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: Mick Morrison

NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S3557A			
Location	MH 1/6			
Date Tested	28/11/2022			
Soil Description	Silty CLAY			
Reduced Level (mm)				
Moisture Condition	Wet			
Start Depth (mm)	-45			
0-100 blows/100 mm	0			
100-200 blows/100 mm	1			
200-300 blows/100 mm	0			
300-400 blows/100 mm	0			
400-500 blows/100 mm	1			
500-600 blows/100 mm	0			
600-700 blows/100 mm	2			
700-800 blows/100 mm	4			
800-900 blows/100 mm	2			
900-1000 blows/100 mm	4			
1000-1100 blows/100 mm	4			
1100-1200 blows/100 mm	3			
1200-1300 blows/100 mm	5			
1300-1400 blows/100 mm	7			
1400-1500 blows/100 mm	13			
Ground Water Level	12			
Remarks				

Material Test Report

Report Number: 22-360-32
Issue Number: 1
Date Issued: 30/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3238
Date Sampled: 11/11/2022
Dates Tested: 11/11/2022 - 29/11/2022
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: Gravity trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: Onsite

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3238A	S3238B	S3238C	S3238D	S3238E	S3238F
Test Number	130	131	132	133	134	135
Date Tested	11/11/2022	11/11/2022	11/11/2022	11/11/2022	11/11/2022	11/11/2022
Time Tested	10:00	10:05	10:10	10:15	10:20	10:25
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	16/T1 - 1/10	16/T1 - 1/10	16/T1 - 1/10	16/T1 - 1/10	16/T1 - 1/10	16/T1 - 1/10
Offset	20m Off 16/T1	30m Off 16/T1	40m Off 16/T1	50m Off 16/T1	60m Off 16/T1	70m Off 16/T1
Layer / Reduced Level	3.8m Below F/L	2.9m Below F/L	2m Below F/L	1.5m Below F/L	1m Below F/L	0.5m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	2.11	2.08	1.98	2.06	2.03	2.08
Field Moisture Content %	17.1	15.2	19.9	20.5	16.2	18.0
Field Dry Density (FDD) t/m^3	1.80	1.81	1.66	1.71	1.75	1.77
Peak Converted Wet Density t/m^3	2.11	2.10	2.04	2.07	2.04	2.07
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	6.0	0.5	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**100.0**	**99.0**	**97.0**	**99.5**	**100.0**	**100.5**
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: 22-360-32
Issue Number: 1
Date Issued: 30/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3238
Date Sampled: 11/11/2022
Dates Tested: 11/11/2022 - 29/11/2022
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: Gravity trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: Onsite

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3238G	S3238H	S3238I	S3238J	S3238K	S3238L
Test Number	136	137	138	139	140	141
Date Tested	11/11/2022	11/11/2022	11/11/2022	11/11/2022	11/11/2022	11/11/2022
Time Tested	10:30	10:35	10:40	10:45	10:50	10:55
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	16/T1 - 1/10	16/T1 - 17/T1	16/T1 - 17/T1	16/T1 - 17/T1	17/T1 - 18/T1	167T1 - 17/T1
Offset	80m Off 1/10	6m Off 16/T1	21m Off 16/T1	5m Off 17/T1	20m Off 17/T1	40m Off 17/T1
Layer / Reduced Level	Finish Level	4.5m Below F/L	3.6m Below F/L	2.7m Below F/L	4.2m Below F/L	3.3m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.92	1.99	1.96	1.98	2.10	2.15
Field Moisture Content %	15.0	17.1	17.0	17.8	22.6	19.1
Field Dry Density (FDD) t/m^3	1.67	1.70	1.68	1.68	1.71	1.81
Peak Converted Wet Density t/m^3	1.96	1.99	1.97	2.00	2.09	2.16
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	2.5	1.0	0.5	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**97.5**	**100.0**	**99.5**	**98.5**	**100.5**	**99.5**
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: **22-360-32**
Issue Number: 1
Date Issued: 30/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3238
Date Sampled: 11/11/2022
Dates Tested: 11/11/2022 - 29/11/2022
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: Gravity trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: Onsite

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3238M	S3238N				
Test Number	142	143				
Date Tested	11/11/2022	11/11/2022				
Time Tested	11:00	11:05				
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill				
Line / Offset	167T1 - 17/T1	18/T1 - 19/T1				
Offset	60m Off 17/T1	10m Off 18/T1				
Layer / Reduced Level	2.4m Below F/L	4m Below F/L				
Thickness of Layer (mm)	200	200				
Soil Description	Silty CLAY	Silty CLAY				
Test Depth (mm)	175	175				
Sieve used to determine oversize (mm)	19.0	19.0				
Percentage of Wet Oversize (%)	0	0				
Field Wet Density (FWD) t/m^3	2.14	2.11				
Field Moisture Content %	23.3	18.9				
Field Dry Density (FDD) t/m^3	1.73	1.77				
Peak Converted Wet Density t/m^3	2.10	2.09				
Adjusted Peak Converted Wet Density t/m^3	**	**				
Moisture Variation (Wv) %	0.0	1.0				
Adjusted Moisture Variation %	**	**				
Hilf Density Ratio (%)	**101.5**	**101.0**				
Compaction Method	**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: **22-360-33**
Issue Number: 1
Date Issued: 30/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3309
Dates Tested: 16/11/2022 - 29/11/2022
Location: Gravity Trunk Sewer.Walloon

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S3309A	S3309B	
Test Number	162	163	
Date Tested	16/11/2022	16/11/2022	
Time Tested	01:00	01:05	
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	
Line / Offset	32/T1 - HB/T1	32/T1 - HB/T1	
Offset	4m Off 32/T1	7m Off 32/T1	
Layer / Reduced Level	3.8m Below F/L	3.3m Below F/L	
Thickness of Layer (mm)	200	200	
Soil Description	Silty CLAY	Silty CLAY	
Test Depth (mm)	175	175	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	1.98	2.00	
Field Moisture Content %	17.4	18.9	
Field Dry Density (FDD) t/m^3	1.69	1.68	
Peak Converted Wet Density t/m^3	1.93	2.00	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	1.0	0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**102.5**	**99.5**	
Compaction Method	**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: 22-360-34
Issue Number: 1
Date Issued: 30/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3332
Date Sampled: 17/11/2022
Dates Tested: 17/11/2022 - 29/11/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S3332A	S3332B	S3332C	S3332D	S3332E
Test Number	164	165	166	167	168
Date Tested	17/11/2022	17/11/2022	17/11/2022	17/11/2022	17/11/2022
Time Tested	10:00	10:05	10:10	10:15	10:20
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	HB/T1 - 33/T1	HB/T1 - 33/T1	HB/T1 - 33/T1	HB/T1 - 33/T1	HB/T1 - 33/T1
Offset	30m Off HB/T1	60m Off HB/T1	90m Off HB/T1	30m Off HB/T1	60m Off HB/T1
Layer / Reduced Level	5.9m Below F/L	5.0m Below F/L	4.1m Below F/L	5.9m Below F/L	5.0m Below F/L
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175
Sieve used to determine oversize (mm)	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	2.06	2.05	2.04	2.07	2.01
Field Moisture Content %	18.8	17.5	17.1	14.9	13.8
Field Dry Density (FDD) t/m^3	1.74	1.75	1.74	1.80	1.76
Peak Converted Wet Density t/m^3	2.03	1.99	2.03	1.94	1.98
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	3.0	2.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**101.5**	**103.0**	**100.5**	**107.0**	**101.5**
Compaction Method	**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: 22-360-34
Issue Number: 1
Date Issued: 30/11/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3332
Date Sampled: 17/11/2022
Dates Tested: 17/11/2022 - 29/11/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S3332F	S3332G	S3332H	S3332I	S3332J
Test Number	169	170	171	172	173
Date Tested	17/11/2022	17/11/2022	17/11/2022	17/11/2022	17/11/2022
Time Tested	10:25	10:30	10:35	10:40	10:45
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	HB/T1 - 33/T1	HB/T1 - 33/T1	HB/T1 - 33/T1	HB/T1 - 33/T1	HB/T1 - 33/T1
Offset	90m Off HB/T1	40m Off HB/T1	80m Off HB/T1	100m Off HB/T1	110m Off HB/T1
Layer / Reduced Level	4.1m Below F/L	3.6m Below F/L	3.1m Below F/L	2.6m Below F/L	2.1m Below F/L
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175
Sieve used to determine oversize (mm)	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	1.99	2.02	1.99	2.02	1.99
Field Moisture Content %	15.7	14.4	15.4	14.9	16.2
Field Dry Density (FDD) t/m^3	1.72	1.77	1.72	1.76	1.72
Peak Converted Wet Density t/m^3	1.93	1.94	2.01	1.98	1.97
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	0.5	2.5	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**103.0**	**104.5**	**99.0**	**102.0**	**101.0**
Compaction Method	**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: **22-360-35**
Issue Number: 1
Date Issued: 01/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3263
Date Sampled: 14/11/2022
Dates Tested: 14/11/2022 - 29/11/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On Site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3263A	S3263B	S3263C	S3263D	S3263E	S3263F
Test Number	150	151	152	153	154	155
Date Tested	14/11/2022	14/11/2022	14/11/2022	14/11/2022	14/11/2022	14/11/2022
Time Tested	08:00	08:05	08:20	08:25	08:30	08:35
Test Request #/Location	Sewer trench backfill	Sewer trench backfill	Sewer trench backfill	Sewer trench backfill	Sewer trench backfill	Sewer trench backfill
Line / Offset	MH 30/T1	MH 30/T1	MH 30/T1	MH 30/T1	MH 30/T1	MH 30/T1
Offset	0.5m Off MH 30/T1	0.3m Off MH 30/T1	0.2m Off MH 30/T1	0.4m Off MH 30/T1	0.2m Off MH 30/T1	0.3m Off MH 30/T1
Layer / Reduced Level	6.5m Below F/L	6m Below F/L	5.5m Below F/L	5m Below F/L	4.5m Below F/L	4m Below F/L
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)	175	175	175	175	175	175
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	2.05	2.02	2.14	2.13	2.08	2.05
Field Moisture Content %	19.2	20.5	16.3	14.3	17.3	16.2
Field Dry Density (FDD) t/m^3	1.72	1.68	1.84	1.86	1.77	1.76
Peak Converted Wet Density t/m^3	2.04	2.04	2.16	2.18	2.07	2.09
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.0	0.0	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**100.0**	**99.0**	**99.0**	**97.5**	**100.5**	**98.0**
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: **22-360-35**
Issue Number: 1
Date Issued: 01/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3263
Date Sampled: 14/11/2022
Dates Tested: 14/11/2022 - 29/11/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On Site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3263G	S3263H	S3263I	S3263J	S3263K	S3263L
Test Number	156	157	158	159	160	161
Date Tested	14/11/2022	14/11/2022	14/11/2022	14/11/2022	14/11/2022	14/11/2022
Time Tested	08:40	08:45	08:50	08:55	09:00	09:05
Test Request #/Location	Sewer trench backfill	Sewer trench backfill	Sewer trench backfill	Sewer trench backfill	Sewer trench backfill	Sewer trench backfill
Line / Offset	MH 31/T1	MH 31/T1	MH 31/T1	MH 31/T1	MH 31/T1	MH 31/T1
Offset	0.6m Off MH 30/T1	0.3m Off MH 31/T1	0.5m Off MH 31/T1	0.5m Off MH 31/T1	0.4m Off MH 31/T1	0.2m Off MH 31/T1
Layer / Reduced Level	6.4m Below F/L	5.9m Below F/L	5.4m Below F/L	4.9m Below F/L	4.4m Below F/L	3.9m Below F/L
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)	175	175	175	175	175	175
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	2.10	2.10	2.11	2.09	2.08	2.08
Field Moisture Content %	15.8	16.7	14.9	16.4	14.9	16.9
Field Dry Density (FDD) t/m^3	1.81	1.80	1.84	1.79	1.81	1.78
Peak Converted Wet Density t/m^3	2.09	2.07	2.14	2.12	2.09	2.13
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	0.5	0.5	0.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**100.5**	**101.0**	**98.5**	**98.5**	**100.0**	**98.0**
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: **22-360-36**
Issue Number: 1
Date Issued: 02/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3405
Date Sampled: 22/11/2022
Dates Tested: 22/11/2022 - 01/12/2022
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: Gravity Trunk Sewer,Walloom
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S3405A	S3405B	S3405C	S3405D	S3405E
Test Number	186	187	188	189	190
Date Tested	22/11/2022	22/11/2022	22/11/2022	22/11/2022	22/11/2022
Time Tested	10:00	10:05	10:10	10:15	10:20
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 33/T1	MH 33/T1	MH 33/T1	MH 33/T1	MH 33/T1
Offset	0.3m Off MH 33/T1	0.4m Off MH 33/T1	0.4m Off MH 33/T1	0.2m Off MH 33/T1	0.4m Off MH 33/T1
Layer / Reduced Level	5.8m Below F/L	5.3m Below F/L	4.8m Below F/L	4.3m Below F/L	3.8m Below F/L
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175
Sieve used to determine oversize (mm)	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	2.00	1.99	2.04	2.06	2.03
Field Moisture Content %	15.6	18.3	16.2	18.4	17.5
Field Dry Density (FDD) t/m^3	1.73	1.68	1.76	1.74	1.73
Peak Converted Wet Density t/m^3	2.02	2.06	2.09	2.06	1.97
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	0.0	0.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**98.5**	**96.5**	**98.0**	**100.0**	**103.0**
Compaction Method	**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: **22-360-36**
Issue Number: 1
Date Issued: 02/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3405
Date Sampled: 22/11/2022
Dates Tested: 22/11/2022 - 01/12/2022
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: Gravity Trunk Sewer,Walloom
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S3405F	S3405G	S3405H	S3405I	S3405J
Test Number	191	192	193	194	195
Date Tested	22/11/2022	22/11/2022	22/11/2022	22/11/2022	22/11/2022
Time Tested	10:25	10:30	10:35	10:40	10:45
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 33/T1	MH 34/T1	MH 34/T1	MH 34/T1	MH 34/T1
Offset	m Off MH 33/T1	0.5m Off MH 34/T1	0.5m Off MH 34/T1	0.3m Off MH 34/T1	0.4m Off MH 34/T1
Layer / Reduced Level	3.3m Below F/L	6.2m Below F/L	5.7m Below F/L	5.2m Below F/L	4.7m Below F/L
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175
Sieve used to determine oversize (mm)	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	2.01	2.03	2.03	1.99	2.02
Field Moisture Content %	17.8	17.9	17.8	18.4	18.1
Field Dry Density (FDD) t/m^3	1.71	1.72	1.72	1.68	1.71
Peak Converted Wet Density t/m^3	2.00	2.07	2.07	2.04	2.05
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	0.5	0.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**100.5**	**98.0**	**98.0**	**97.5**	**98.5**
Compaction Method	**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: **22-360-37**
Issue Number: 1
Date Issued: 06/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3648
Location: Gravity Trunk Sewer,Walloon

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: Mick Morrison

NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S3648A			
Location	23/T1			
Date Tested	05/12/2022			
Soil Description	Weathered Rock			
Reduced Level (mm)				
Moisture Condition	Moist			
Start Depth (mm)	-45			
0-100 blows/100 mm	1			
100-200 blows/100 mm	8			
200-300 blows/100 mm	6			
300-400 blows/100 mm	7			
400-500 blows/100 mm	10			
500-600 blows/100 mm	15			
600-700 blows/100 mm	14			
700-800 blows/100 mm	9			
800-900 blows/100 mm	8			
900-1000 blows/100 mm	8			
1000-1100 blows/100 mm	8			
1100-1200 blows/100 mm	12			
1200-1300 blows/100 mm	15			
1300-1400 blows/100 mm	15			
1400-1500 blows/100 mm	17			
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-38**
Issue Number: 1
Date Issued: 08/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3692
Location: Gravity Trunk Sewer,Walloon

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: Mick Morrison

NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S3692A			
Location	MH 24/T1			
Date Tested	07/12/2022			
Soil Description	Silty CLAY			
Reduced Level (mm)				
Moisture Condition	Moist			
Start Depth (mm)	-45			
0-100 blows/100 mm	2			
100-200 blows/100 mm	4			
200-300 blows/100 mm	4			
300-400 blows/100 mm	6			
400-500 blows/100 mm	5			
500-600 blows/100 mm	7			
600-700 blows/100 mm	5			
700-800 blows/100 mm	7			
800-900 blows/100 mm	7			
900-1000 blows/100 mm	9			
1000-1100 blows/100 mm	8			
1100-1200 blows/100 mm	13			
1200-1300 blows/100 mm	10			
1300-1400 blows/100 mm	15			
1400-1500 blows/100 mm	18			
Ground Water Level				
Remarks				

Material Test Report

Report Number: 22-360-39
Issue Number: 1
Date Issued: 09/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3393
Date Sampled: 21/11/2022
Dates Tested: 21/11/2022 - 02/12/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: Onsite

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3393A	S3393B	S3393C	S3393D	S3393E	S3393F
Test Number	174	175	176	177	178	179
Date Tested	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022
Time Tested	09:30	09:35	09:40	09:45	10:00	10:05
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	31/T1 - 32/T1	31/T1 - 32/T1	31/T1 - 32/T1	31/T1 - 32/T1	33/T1 - 34/T1	33/T1 - 34/T1
Offset	20m Off 31/T1	30m Off 31/T1	35m Off 31/T1	40m Off 31/T1	10m Off 31/T1	10m Off 33/T1
Layer / Reduced Level	3.0m Below Finish Level	2.5m Below Finish Level	2.0m Below Finish Level	1.5m Below Finish Level	6.0m Below Finish Level	5.1m Below Finish Level
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay
Test Depth (mm)	175	175	175	175	175	175
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	2.05	2.05	2.03	2.04	2.00	2.02
Field Moisture Content %	15.9	14.8	17.5	18.2	18.1	21.1
Field Dry Density (FDD) t/m^3	1.77	1.78	1.72	1.72	1.69	1.67
Peak Converted Wet Density t/m^3	2.14	2.03	1.96	1.96	1.96	1.97
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	-1.0	0.5	0.5	0.5	2.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**95.5**	**101.0**	**103.0**	**104.0**	**102.0**	**102.5**
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: **22-360-39**
Issue Number: 1
Date Issued: 09/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3393
Date Sampled: 21/11/2022
Dates Tested: 21/11/2022 - 02/12/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: Onsite

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3393G	S3393H	S3393I	S3393J	S3393K	S3393L
Test Number	180	181	182	183	184	185
Date Tested	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022	21/11/2022
Time Tested	10:10	10:15	10:20	10:25	10:30	10:35
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	33/T1 - 34/T1	33/T1 - 34/T1	33/T1 - 34/T1	33/T1 - 34/T1	33/T1 - 34/T1	33/T1 - 34/T1
Offset	20m Off 33/T1	40m Off 33/T1	60m Off 33/T1	70m Off 33/T1	10m Off 33/T1	30m Off 33/T1
Layer / Reduced Level	4.2m Below Finish Level	3.7m Below Finish Level	3.2m Below Finish Level	2.7m Below Finish Level	2.2m Below Finish Level	1.7m below Finish Level
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay
Test Depth (mm)	175	175	175	175	175	175
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	2.01	2.02	2.08	2.03	2.00	2.02
Field Moisture Content %	13.8	15.1	17.4	15.5	14.7	16.0
Field Dry Density (FDD) t/m^3	1.77	1.76	1.77	1.76	1.75	1.74
Peak Converted Wet Density t/m^3	1.95	2.02	2.06	2.00	1.98	1.96
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	2.5	3.0	-0.5	2.5	2.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**103.5**	**100.0**	**101.0**	**101.5**	**101.0**	**103.0**
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: 22-360-40
Issue Number: 1
Date Issued: 09/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3439
Date Sampled: 23/11/2022
Dates Tested: 23/11/2022 - 05/12/2022
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: Gravity Trunk Sewer
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S3439A	S3439B	S3439C	S3439D
Test Number	196	197	198	199
Date Tested	23/11/2022	23/11/2022	23/11/2022	23/11/2022
Time Tested	10:00	10:05	10:10	10:15
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 34/T1	MH 34/T1	33/T1 - 34/T1	33/T1 - 34/T1
Offset	0.3m Off MH 34/T1	0.3m Off MH 34/T1	40m Off 33/T1	40m Off 33/T1
Layer / Reduced Level	4.2m Below F/L	3.7m Below F/L	1.2m Below F/L	0.7m Below F/L
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.01	2.01	1.97	2.00
Field Moisture Content %	18.0	16.8	17.1	14.2
Field Dry Density (FDD) t/m^3	1.70	1.72	1.68	1.75
Peak Converted Wet Density t/m^3	2.01	1.94	2.01	1.93
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.0	0.5	0.5	3.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**100.0**	**103.5**	**98.0**	**103.5**
Compaction Method	**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: **22-360-40**
Issue Number: 1
Date Issued: 09/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3439
Date Sampled: 23/11/2022
Dates Tested: 23/11/2022 - 05/12/2022
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: Gravity Trunk Sewer
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S3439E	S3439F	S3439G	S3439H
Test Number	200	201	202	203
Date Tested	23/11/2022	23/11/2022	23/11/2022	23/11/2022
Time Tested	10:20	10:25	10:30	10:35
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	HB/T1 - 33/T1	HB/T1 - 33/T1	HB/T1 - 33/T1	HB/T1 - 32/T1
Offset	20m Off 32/T1	40m Off 32/T1	40m Off 32/T1	40m Off 31/T1
Layer / Reduced Level	2.8m Below F/L	2.3m Below F/L	1.8m Below F/L	1.3m Below F/L
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Sandy CLAY	Sandy CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.95	1.96	2.06	2.09
Field Moisture Content %	19.1	19.5	14.7	13.6
Field Dry Density (FDD) t/m^3	1.64	1.64	1.79	1.84
Peak Converted Wet Density t/m^3	2.00	1.93	2.09	2.05
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.0	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**97.5**	**101.5**	**98.5**	**101.5**
Compaction Method	**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: 22-360-41
Issue Number: 1
Date Issued: 10/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3486
Date Sampled: 24/11/2022
Dates Tested: 24/11/2022 - 05/12/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S3486A	S3486B	S3486C	S3486D
Test Number	204	205	206	207
Date Tested	24/11/2022	24/11/2022	24/11/2022	24/11/2022
Time Tested	10:00	10:05	10:10	10:15
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	33/T1 - 34/T1	32/T1 - HB/T1	32/T1 - HB/T1	32/T1 - HB/T1
Offset	10m Off 34/T1	3m Off 33/T1	6m Off 33/T1	2m Off HB/T1
Layer / Reduced Level	Finish Level	2.8m Below F/L	2.3m Below F/L	1.8m Below F/L
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.90	1.91	1.92	1.93
Field Moisture Content %	22.3	23.2	23.2	22.4
Field Dry Density (FDD) t/m^3	1.55	1.55	1.56	1.58
Peak Converted Wet Density t/m^3	1.88	1.97	1.97	1.97
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	-1.5	-1.0	-0.5	0.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**101.0**	**97.0**	**97.5**	**98.0**
Compaction Method	**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: **22-360-41**
Issue Number: 1
Date Issued: 10/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3486
Date Sampled: 24/11/2022
Dates Tested: 24/11/2022 - 05/12/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

Qualtest Laboratory Pty Ltd
Qualtest Laboratory Pty Limited
2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
Email: greg@qualtestgeo.com
Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S3486E	S3486F	S3486G	S3486H
Test Number	208	209	210	211
Date Tested	24/11/2022	24/11/2022	24/11/2022	24/11/2022
Time Tested	10:20	10:25	10:30	10:35
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	HB/T1 - 33/T1	HB/T1 - 33/T1	HB/T1 - 33/T1	31/T1 - 32/T1
Offset	30m Off 33/T1	40m Off 33/T1	50m Off 33/T1	40m Off 32/T1
Layer / Reduced Level	1.6m Below F/L	1.1m Below F/L	0.6m Below F/L	0.5m Below F/L
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.98	1.97	1.97	1.97
Field Moisture Content %	16.3	16.5	17.0	17.3
Field Dry Density (FDD) t/m^3	1.71	1.69	1.68	1.68
Peak Converted Wet Density t/m^3	1.96	2.00	2.02	2.04
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	-3.0	0.5	-0.5	0.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**101.0**	**98.5**	**97.5**	**96.5**
Compaction Method	**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: 22-360-42
Issue Number: 1
Date Issued: 10/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3511
Date Sampled: 25/11/2022
Dates Tested: 25/11/2022 - 07/12/2022
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: Gravity Trunk Sewer
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S3511A	S3511B	S3511C	S3511D	S3511E
Test Number	212	213	214	215	216
Date Tested	25/11/2022	25/11/2022	25/11/2022	25/11/2022	25/11/2022
Time Tested	09:50	09:55	10:00	10:05	10:10
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	33/T1 - 34/T1	HB/T1 - 32/T1	HB/T1 - 32/T1	HB/T1 - 32/T1	HB/T1 - 32/T1
Offset	10m Off 34/T1	3m Off 32/T1	6m Off 32/T1	9m Off 32/T1	11m Off 32/T1
Layer / Reduced Level	Finish Level	1.3m Below F/L	0.8m Below F/L	0.3m Below F/L	0.8m Below F/L
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175
Sieve used to determine oversize (mm)	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	2.04	2.06	1.94	1.92	1.82
Field Moisture Content %	14.1	15.2	26.8	17.3	17.3
Field Dry Density (FDD) t/m^3	1.79	1.79	1.53	1.64	1.55
Peak Converted Wet Density t/m^3	2.02	2.09	1.96	1.93	1.83
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	1.5	0.5	0.5	0.5	2.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**101.0**	**98.5**	**98.5**	**99.5**	**99.5**
Compaction Method	**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: 22-360-43
Issue Number: 1
Date Issued: 10/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3532
Date Sampled: 28/11/2022
Dates Tested: 28/11/2022 - 08/12/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3532A	S3532B	S3532C	S3532D	S3532E	S3532F
Test Number	217	218	219	220	221	222
Date Tested	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022
Time Tested	08:00	08:05	08:10	08:15	08:20	08:25
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 21/T1	MH 21/T1	MH 21/T1	MH 21/T1	MH 21/T1	MH 21/T1
Offset	0.3m Off MH 21/T1	0.2m Off MH 21/T1	0.4m Off MH 21/T1	0.6m Off MH 21/T1	0.3m Off MH 21/T1	0.4m Off MH 21/T1
Layer / Reduced Level	6.2m Below F/L	5.7m Below F/L	5.2m Below F/L	4.7 Below F/L	4.2m Below F/L	3.7m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	2.06	2.06	2.01	2.03	2.08	2.08
Field Moisture Content %	13.5	15.0	15.4	15.0	16.5	13.2
Field Dry Density (FDD) t/m^3	1.81	1.79	1.74	1.77	1.79	1.84
Peak Converted Wet Density t/m^3	2.01	2.09	2.05	2.04	2.13	2.11
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.0	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**102.5**	**98.5**	**98.0**	**100.0**	**97.5**	**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

Material Test Report

Report Number: **22-360-43**
Issue Number: 1
Date Issued: 10/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3532
Date Sampled: 28/11/2022
Dates Tested: 28/11/2022 - 08/12/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3532G	S3532H	S3532I	S3532J	S3532K	S3532L
Test Number	223	224	225	226	227	228
Date Tested	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022
Time Tested	08:30	08:35	08:40	08:45	09:00	09:05
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 22/T1	MH 22/T1	MH 22/T1	MH 22/T1	MH 22/T1	MH 22/T1
Offset	0.5m Off MH 22/T1	0.5m Off MH 22/T1	0.3m Off MH 22/T1	0.4m Off MH 22/T1	0.3m Off MH 22/T1	0.4m Off MH 22/T1
Layer / Reduced Level	5.3m Below F/L	4.8m Below F/L	4.3m Below F/L	3.8m Below F/L	3.3m Below F/L	2.8m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.85	1.84	2.01	2.03	2.03	2.00
Field Moisture Content %	12.1	17.2	18.9	17.3	17.5	17.4
Field Dry Density (FDD) t/m^3	1.65	1.57	1.69	1.73	1.73	1.71
Peak Converted Wet Density t/m^3	1.86	1.84	2.05	2.03	2.01	2.08
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	5.0	2.5	0.0	0.5	-0.5	0.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**99.5**	**100.0**	**98.0**	**100.5**	**101.0**	**96.0**
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: **22-360-43**
Issue Number: 1
Date Issued: 10/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3532
Date Sampled: 28/11/2022
Dates Tested: 28/11/2022 - 08/12/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3532M	S3532N	S3532O	S3532P	S3532Q	S3532R
Test Number	229	230	231	232	233	234
Date Tested	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022
Time Tested	09:10	09:15	09:20	09:25	09:30	09:35
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	21/T1 - 22/T1	21/T1 - 22/T1	21/T1 - 22/T1	22/T1 - 1/6	22/T1 - 1/6	22/T1 - 1/6
Offset	10m Off 21/T1	20m Off 21/T1	40m Off 21/T1	30m Off 22/T1	60m Off 22/T1	90m Off 22/T1
Layer / Reduced Level	5.1m Below F/L	4.2m Below F/L	3.3m Below F/L	4.3m Below F/L	3.4m Below F/L	2.5m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	2.04	2.07	2.04	2.04	2.03	2.03
Field Moisture Content %	17.7	17.3	16.0	16.7	18.4	17.2
Field Dry Density (FDD) t/m^3	1.74	1.77	1.76	1.75	1.71	1.74
Peak Converted Wet Density t/m^3	2.05	2.08	2.09	2.07	2.07	2.04
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.0	0.5	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**99.5**	**99.5**	**97.5**	**98.5**	**98.5**	**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: 22-360-43
Issue Number: 1
Date Issued: 10/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3532
Date Sampled: 28/11/2022
Dates Tested: 28/11/2022 - 08/12/2022
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

Qualtest Laboratory Pty Ltd
Qualtest Laboratory Pty Limited
2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
Email: greg@qualtestgeo.com
Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3532S	S3532T	S3532U	S3532V		
Test Number	235	236	237	238		
Date Tested	28/11/2022	28/11/2022	28/11/2022	28/11/2022		
Time Tested	10:00	10:05	10:10	10:15		
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill		
Line / Offset	31/T1 - 32/T1	HB/T1 - 33/T1	32/T1 - HB/T1	21/T1 - 22/T1		
Offset	20m Off 31/T1	20M Off 33/T1	3m Off HB/T1	5m Off 21/T1		
Layer / Reduced Level	Finish Level	Finish Level	Finish Level	2.8m Below F/L		
Thickness of Layer (mm)	200	200	200	200		
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY		
Test Depth (mm)	175	175	175	175		
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0		
Percentage of Wet Oversize (%)	0	0	0	0		
Field Wet Density (FWD) t/m^3	2.02	2.04	2.02	2.05		
Field Moisture Content %	17.9	19.1	16.1	16.5		
Field Dry Density (FDD) t/m^3	1.71	1.71	1.74	1.76		
Peak Converted Wet Density t/m^3	2.05	2.05	2.04	2.05		
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**		
Moisture Variation (Wv) %	0.5	0.5	0.5	0.0		
Adjusted Moisture Variation %	**	**	**	**		
Hilf Density Ratio (%)	**98.0**	**99.5**	**99.0**	**100.0**		
Compaction Method	**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: 22-360-44
Issue Number: 1
Date Issued: 12/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3664
Date Sampled: 06/12/2022
Dates Tested: 06/12/2022 - 09/12/2022
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: Gravity Trunk Sewer
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S3664A	S3664B	S3664C	S3664D	S3664E
Test Number	239	240	241	242	243
Date Tested	06/12/2022	06/12/2022	06/12/2022	06/12/2022	06/12/2022
Time Tested	10:00	10:05	10:10	10:15	10:20
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	21/T1 - 22/T1	21/T1 - 22/T1	22/T1 - 23/T1	22/T1 - 23/T1	22/T1 - 23/T1
Offset	20m Off 21/T1	40m Off 21/T1	20m Off 22/T1	40m Off 22/T1	60m Off 22/T1
Layer / Reduced Level	2.3m Below F/L	1.8m Below F/L	4.9m Below F/L	4.0m Below F/L	3.1m Below F/L
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175
Sieve used to determine oversize (mm)	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	1.94	1.98	1.96	1.99	2.02
Field Moisture Content %	16.3	15.6	17.2	17.2	15.5
Field Dry Density (FDD) t/m^3	1.67	1.71	1.68	1.70	1.75
Peak Converted Wet Density t/m^3	2.01	2.07	2.06	2.05	2.08
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.0	-0.5	0.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**96.5**	**95.5**	**95.5**	**97.0**	**97.5**
Compaction Method	**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: 22-360-44
Issue Number: 1
Date Issued: 12/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3664
Date Sampled: 06/12/2022
Dates Tested: 06/12/2022 - 09/12/2022
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: Gravity Trunk Sewer
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S3664F	S3664G	S3664H	S3664I	S3664J
Test Number	244	245	246	247	248
Date Tested	06/12/2022	06/12/2022	06/12/2022	06/12/2022	06/12/2022
Time Tested	10:25	10:30	10:35	10:40	10:45
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	22/T1 - 23/T1	23/T1 - 24/T1	30/T1 - 31/ T1	30/T1 - 31/ T1	30/T1 - 31/ T1
Offset	80m Off 22/T1	10m Off 23/T1	15m Off 30/T1	45m Off 30/T1	5m Off 31/T1
Layer / Reduced Level	2.6m Below F/L	3.3m Below F/L	1.5m Below F/L	1.0m Below F/L	0.5m Below F/L
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175
Sieve used to determine oversize (mm)	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	2.04	2.04	2.00	2.01	2.03
Field Moisture Content %	15.1	15.0	15.6	15.0	14.7
Field Dry Density (FDD) t/m^3	1.78	1.77	1.73	1.75	1.77
Peak Converted Wet Density t/m^3	2.06	2.10	2.09	2.08	2.08
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	0.0	0.0	0.0	0.0	0.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**99.0**	**97.0**	**95.5**	**96.5**	**97.5**
Compaction Method	**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: **22-360-45**
Issue Number: 1
Date Issued: 13/12/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3760
Location: Gravity Trunk Sewer

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: Mick Morrison

NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S3760A			
Location	Gravity Trunk Sewer,Walloon			
Date Tested	12/12/2022			
Soil Description				
Reduced Level (mm)				
Moisture Condition	Moist			
Start Depth (mm)	-45			
0-100 blows/100 mm	3			
100-200 blows/100 mm	3			
200-300 blows/100 mm	5			
300-400 blows/100 mm	8			
400-500 blows/100 mm	8			
500-600 blows/100 mm	8			
600-700 blows/100 mm	6			
700-800 blows/100 mm	6			
800-900 blows/100 mm	8			
900-1000 blows/100 mm	9			
1000-1100 blows/100 mm	13			
1100-1200 blows/100 mm	13			
1200-1300 blows/100 mm	9			
1300-1400 blows/100 mm	13			
1400-1500 blows/100 mm	16			
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-46**
Issue Number: 1
Date Issued: 13/01/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3759
Date Sampled: 12/12/2022
Dates Tested: 12/12/2022 - 13/01/2023
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: Gravity Trunk Sewer
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S3759A	S3759B	S3759C	S3759D
Test Number	259	260	261	262
Date Tested	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Time Tested	09:50	09:55	10:00	10:05
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	16/T1 - 17/T1	16/T1 - 17/T1	16/T1 - 17/T1	17/T1 - 18/T1
Offset	10m Off 16/T1	20m Off 16/T1	7m Off 16/T1	10m Off 17/T1
Layer / Reduced Level	1.2m Below F/L	0.7m Below F/L	Finish Level	1.9m Below F/L
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	0	0	0
Field Wet Density (FWD) t/m^3	1.98	2.00	2.00	2.01
Field Moisture Content %	13.4	20.0	20.9	22.2
Field Dry Density (FDD) t/m^3	1.75	1.66	1.65	1.64
Peak Converted Wet Density t/m^3	1.96	1.96	1.97	2.00
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.5	0.0	1.0	0.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**101.0**	**102.0**	**101.5**	**100.5**
Compaction Method	**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: **22-360-46**
Issue Number: 1
Date Issued: 13/01/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3759
Date Sampled: 12/12/2022
Dates Tested: 12/12/2022 - 13/01/2023
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: Gravity Trunk Sewer
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S3759E	S3759F	S3759G	S3759H
Test Number	263	264	265	266
Date Tested	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Time Tested	10:10	10:15	10:20	10:25
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	17/T1 - 18/T1	17/T1 - 18/T1	23/T1 - 24/T1	23/T1 - 24/T1
Offset	30m Off 17/T1	5m Off 18/T1	20m Off 23/T1	50m Off 23/T1
Layer / Reduced Level	1.4m Below F/L	0.9m Below F/L	3.3m Below F/L	2.4m Below F/L
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.02	2.03	2.00	2.02
Field Moisture Content %	18.2	20.6	21.0	18.7
Field Dry Density (FDD) t/m^3	1.71	1.69	1.66	1.70
Peak Converted Wet Density t/m^3	1.98	2.05	2.03	2.12
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	2.0	-0.5	2.0	-0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**102.0**	**99.0**	**99.0**	**95.0**
Compaction Method	**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: 22-360-47
Issue Number: 1
Date Issued: 13/01/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3690
Date Sampled: 07/12/2022
Dates Tested: 07/12/2022 - 12/01/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S3690A	S3690B	S3690C	S3690D	S3690E
Test Number	249	250	251	252	253
Date Tested	07/12/2022	07/12/2022	07/12/2022	07/12/2022	07/12/2022
Time Tested	09:45	09:50	09:55	10:00	10:05
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 1/6	MH 1/6	MH 1/6	MH 1/6	MH 1/6
Offset	0.5m Off MH 1/6	0.4m Off MH 1/6	0.3m Off MH 1/6	0.5m Off MH 1/6	0.3m Off MH 1/6
Layer / Reduced Level	4.5m Below F/L	4.0m Below F/L	3.5m Below F/L	3.0m Below F/L	2.5m Below F/L
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	**	**	**	**
Field Wet Density (FWD) t/m^3	2.02	2.02	2.00	1.99	1.99
Field Moisture Content %	16.9	22.5	21.4	19.5	22.4
Field Dry Density (FDD) t/m^3	1.73	1.65	1.65	1.66	1.63
Peak Converted Wet Density t/m^3	2.07	1.96	1.95	2.01	1.90
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	0.0	0.0	0.0	0.5	0.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**98.0**	**103.5**	**102.5**	**99.0**	**105.0**
Compaction Method	**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: **22-360-47**
Issue Number: 1
Date Issued: 13/01/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3690
Date Sampled: 07/12/2022
Dates Tested: 07/12/2022 - 12/01/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

Qualtest Laboratory Pty Ltd
Qualtest Laboratory Pty Limited
2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
Email: greg@qualtestgeo.com
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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S3690F	S3690G	S3690H	S3690I	S3690J
Test Number	254	255	256	257	258
Date Tested	07/12/2022	07/12/2022	07/12/2022	07/12/2022	07/12/2022
Time Tested	10:10	10:15	10:20	10:25	10:30
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 1/6	21/T1 - 22/T1	21/T1 - 22/T1	23/T1 - 24/T1	23/T1 - 24/T1
Offset	0.3m Off MH 1/6	15m Off 21/T1	25m Off 21/T1	40m OFF 23/T1	80m Off 23/T1
Layer / Reduced Level	2.0m Below F/L	1.3m Below F/L	0.8m Below F/L	2.4m Below F/L	1.5m Below F/L
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	**	**	**	**
Field Wet Density (FWD) t/m^3	2.02	1.94	1.95	1.96	1.99
Field Moisture Content %	24.0	20.8	20.5	21.2	21.9
Field Dry Density (FDD) t/m^3	1.63	1.61	1.62	1.62	1.63
Peak Converted Wet Density t/m^3	1.93	2.04	1.95	1.93	1.93
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	0.0	0.5	0.0	-0.5	-0.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**104.5**	**95.5**	**100.0**	**102.0**	**103.0**
Compaction Method	**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: **22-360-49**
Issue Number: 1
Date Issued: 19/01/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4086
Location: Gravity Trunk Sewer,Walloon (27/T1)

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: Mick Morrison

NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S4086A			
Location	Gravity Trunk Sewer			
Chainage (m)	MH 27/T1			
Location Offset (m)	0.8m Off Centre Of MH			
Offset from	CL			
Date Tested	17/01/2023			
Soil Description	Silty CLAY			
Reduced Level (mm)				
Moisture Condition	Wet			
Start Depth (mm)	-45			
0-100 blows/100 mm	1			
100-200 blows/100 mm	2			
200-300 blows/100 mm	3			
300-400 blows/100 mm	4			
400-500 blows/100 mm	14			
500-600 blows/100 mm	13			
600-700 blows/100 mm	R21			
700-800 blows/100 mm				
800-900 blows/100 mm				
900-1000 blows/100 mm				
Ground Water Level				
Remarks				

Material Test Report

Report Number: 22-360-50
Issue Number: 1
Date Issued: 20/01/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3908
Date Sampled: 20/12/2022
Dates Tested: 20/12/2022 - 19/01/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3908A	S3908B	S3908C	S3908D	S3908E	S3908F
Test Number	267	268	269	270	271	272
Date Tested	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Time Tested	10:00	10:10	10:15	10:20	10:25	10:30
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	21/T1 - 22/T1	22/T1 - 23/T1	22/T1 - 23/T1	22/T1 - 23/T1	22/T1 - 23/T1	22/T1 - 23/T1
Offset	10m Off 22/T1	10m Off 22/T1	25m Off 22/T1	50m Off 22/T1	5m Off 23/T1	22m Off 23/T1
Layer / Reduced Level	Finish Level	2.1m Below F/L	1.6m Below F/L	1.1m Below F/L	0.6m Below F/L	Finish Level
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	2.05	2.06	2.02	2.05	2.04	2.01
Field Moisture Content %	11.6	11.6	13.7	12.1	12.1	13.7
Field Dry Density (FDD) t/m^3	1.83	1.84	1.78	1.83	1.82	1.77
Peak Converted Wet Density t/m^3	1.98	2.00	2.01	2.04	2.04	2.01
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	3.0	3.0	3.0	2.5	2.5	2.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**103.5**	**103.0**	**100.5**	**100.0**	**100.5**	**99.5**
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: 22-360-50
Issue Number: 1
Date Issued: 20/01/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3908
Date Sampled: 20/12/2022
Dates Tested: 20/12/2022 - 19/01/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3908G	S3908H	S3908I	S3908J	S3908K	S3908L
Test Number	273	274	275	276	277	278
Date Tested	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Time Tested	10:35	10:40	10:45	10:50	10:55	11:00
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	23/T1 - 24/T1	23/T1 - 24/T1	23/T1 - 24/T1	23/T1 - 24/T1	24/T1 - 25/T1	24/T1 - 25/T1
Offset	5m Off 24/T1	20m Off 24/T1	27m Off 24/T1	53m Off 24/T1	5m Off 24/T1	5m Off 25T1
Layer / Reduced Level	1.5m Below F/L	1.0m Below F/L	0.5m Below F/L	Finish Level	3.5m Below F/L	2.6m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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
Field Wet Density (FWD) t/m^3	2.04	2.06	2.05	2.03	2.04	2.08
Field Moisture Content %	11.7	12.3	13.1	12.1	12.7	12.6
Field Dry Density (FDD) t/m^3	1.82	1.83	1.82	1.81	1.81	1.85
Peak Converted Wet Density t/m^3	2.05	2.07	2.07	2.08	2.05	2.10
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	3.0	2.5	2.5	2.0	2.5	3.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**99.5**	**99.5**	**99.5**	**97.5**	**100.0**	**99.0**
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: 22-360-50
Issue Number: 1
Date Issued: 20/01/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3908
Date Sampled: 20/12/2022
Dates Tested: 20/12/2022 - 19/01/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3908M	S3908N				
Test Number	279	280				
Date Tested	20/12/2022	20/12/2022				
Time Tested	11:05	11:10				
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill				
Line / Offset	24/T1 - 25/T1	24/T1 - 25/T1				
Offset	13m Off 24/T1	15m Off 25/T1				
Layer / Reduced Level	2.1m Below F/L	1.6m Below F/L				
Thickness of Layer (mm)	200	200				
Soil Description	Silty CLAY	Silty CLAY				
Test Depth (mm)	175	175				
Sieve used to determine oversize (mm)	19.0	19.0				
Percentage of Wet Oversize (%)	0	0				
Field Wet Density (FWD) t/m^3	1.95	1.95				
Field Moisture Content %	19.7	19.0				
Field Dry Density (FDD) t/m^3	1.63	1.64				
Peak Converted Wet Density t/m^3	1.96	1.94				
Adjusted Peak Converted Wet Density t/m^3	**	**				
Moisture Variation (Wv) %	2.5	3.5				
Adjusted Moisture Variation %	**	**				
Hilf Density Ratio (%)	**99.5**	**100.5**				
Compaction Method	**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: **22-360-51**
Issue Number: 1
Date Issued: 20/01/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4110
Location: Gravity Trunk Sewer,Walloon (MH 28/T1)

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: Mick Morrison

NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S4110A			
Location	Gravity Trunk Sewer			
Date Tested	19/01/2023			
Soil Description	Silty CLAY			
Reduced Level (mm)				
Moisture Condition	Moist			
Start Depth (mm)	-45			
0-100 blows/100 mm	1			
100-200 blows/100 mm	1			
200-300 blows/100 mm	3			
300-400 blows/100 mm	3			
400-500 blows/100 mm	5			
500-600 blows/100 mm	6			
600-700 blows/100 mm	7			
700-800 blows/100 mm	9			
800-900 blows/100 mm	11			
900-1000 blows/100 mm	16			
Ground Water Level				
Remarks				

Material Test Report

Report Number: 22-360-52
Issue Number: 1
Date Issued: 23/01/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3925
Date Sampled: 21/12/2022
Dates Tested: 21/12/2022 - 20/01/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3925A	S3925B	S3925C	S3925D	S3925E	S3925F
Test Number	281	282	283	284	285	286
Date Tested	21/12/2022	21/12/2022	21/12/2022	21/12/2022	21/12/2022	21/12/2022
Time Tested	06:40	06:45	06:50	06:55	07:00	07:05
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	17/T1 - 18/T1	17/T1 - 18/T1	MH 17/T1	MH 17/T1	MH 17/T1	MH 17/T1
Offset	0.5m Off 17/T1	15m OFF 18/T1	0.4m Off MH 17/T1	0.3m Off MH 17/T1	0.4m Off MH 17/T1	0.2m Off MH 17/T1
Layer / Reduced Level	0.4m Below F/L	Finish Level	5.1m Below F/L	4.6m Below F/L	4.1m Below F/L	3.6m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.97	1.97	1.99	1.94	2.00	2.00
Field Moisture Content %	20.8	21.2	23.5	22.8	21.5	19.8
Field Dry Density (FDD) t/m^3	1.63	1.62	1.61	1.58	1.65	1.67
Peak Converted Wet Density t/m^3	1.99	1.96	1.99	1.97	2.02	2.01
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.0	1.0	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**99.0**	**100.5**	**100.0**	**98.5**	**99.0**	**99.5**
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: 22-360-52
Issue Number: 1
Date Issued: 23/01/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3925
Date Sampled: 21/12/2022
Dates Tested: 21/12/2022 - 20/01/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3925G	S3925H	S3925I	S3925J	S3925K	S3925L
Test Number	287	288	289	290	291	292
Date Tested	21/12/2022	21/12/2022	21/12/2022	21/12/2022	21/12/2022	21/12/2022
Time Tested	07:10	07:15	07:20	07:25	07:30	07:35
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 17/T1	MH 17/T1	MH 18/T1	18/T1 - 19/T1	18/T1 - 19/T1	18/T1 - 19/T1
Offset	0.6m Off MH 17/T1	0.3m Off MH 17/T1	0.5m Off MH 18/T1	0.5m Off 19/T1	10m Off 19/T1	20m Off 19/T1
Layer / Reduced Level	3.1m Below F/L	2.6m Below F/L	4.6m Below F/L	3.1m Below F/L	2.2m Below F/L	1.7m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	2.01	1.99	2.03	2.02	2.01	2.00
Field Moisture Content %	20.4	21.1	21.8	20.4	20.4	21.4
Field Dry Density (FDD) t/m^3	1.67	1.65	1.67	1.68	1.67	1.65
Peak Converted Wet Density t/m^3	1.96	1.97	2.03	1.99	2.01	2.02
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	1.0	0.5	0.5	0.0	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**102.5**	**101.0**	**100.0**	**101.5**	**100.0**	**99.0**
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: 22-360-52
Issue Number: 1
Date Issued: 23/01/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 3925
Date Sampled: 21/12/2022
Dates Tested: 21/12/2022 - 20/01/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S3925M	S3925N	S3925O	S3925P	S3925Q	S3925R
Test Number	293	294	295	296	297	298
Date Tested	21/12/2022	21/12/2022	21/12/2022	21/12/2022	21/12/2022	21/12/2022
Time Tested	07:40	10:00	10:05	10:10	10:15	10:20
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	18/T1 - 19/T1	18/T1 - 19/T1	18/T1 - 19/T1	MH 18/T1	MH 18/T1	14/T1 15/T1
Offset	25m Off 19/T1	30m Off 19/T1	35m Off 19/T1	0.4m Off 18/T1	0.3m Off 18/T1	0.5m Off 15/T1
Layer / Reduced Level	1.2m Below F/L	0.7m Below F/L	Finish Level	4.1m Below F/L	3.6m Below F/L	3.6m Finish Level
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.93	1.96	1.94	1.96	1.94	1.95
Field Moisture Content %	21.8	21.9	21.6	21.4	23.1	22.0
Field Dry Density (FDD) t/m^3	1.59	1.61	1.60	1.62	1.57	1.60
Peak Converted Wet Density t/m^3	1.98	1.96	1.94	1.98	1.96	1.95
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	1.0	1.0	0.5	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**97.5**	**100.0**	**100.0**	**99.0**	**99.0**	**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: **22-360-53**
Issue Number: 1
Date Issued: 25/01/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4193
Location: Gravity Trunk Sewer

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: Mick Morrison

NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S4193A			
Location	Gravity Trunk Sewer			
Chainage (m)	MH 29			
Location Offset (m)	1m Off Centre			
Offset from	CL			
Date Tested	24/01/2023			
Soil Description	Silty CLAY			
Reduced Level (mm)				
Moisture Condition	Wet			
Start Depth (mm)	-45			
0-100 blows/100 mm	1			
100-200 blows/100 mm	0			
200-300 blows/100 mm	1			
300-400 blows/100 mm	1			
400-500 blows/100 mm	2			
500-600 blows/100 mm	1			
600-700 blows/100 mm	1			
700-800 blows/100 mm	2			
800-900 blows/100 mm	2			
900-1000 blows/100 mm	3			
1000-1100 blows/100 mm	1			
1100-1200 blows/100 mm	4			
1200-1300 blows/100 mm	4			
1300-1400 blows/100 mm	4			
1400-1500 blows/100 mm	5			
1500-1600 blows/100 mm	7			
1600-1700 blows/100 mm	7			
1700-1800 blows/100 mm	8			
1800-1900 blows/100 mm	11			
1900-2000 blows/100 mm	15			
Ground Water Level				
Remarks				

Material Test Report

Report Number: 22-360-54
Issue Number: 1
Date Issued: 01/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4073
Date Sampled: 17/01/2023
Dates Tested: 17/01/2023 - 31/01/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4073A	S4073B	S4073C	S4073D	S4073E	S4073F
Test Number	299	300	301	302	303	304
Date Tested	17/01/2023	17/01/2023	17/01/2023	17/01/2023	17/01/2023	17/01/2023
Time Tested	10:00	10:05	10:10	10:15	10:20	10:25
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 18/T1	MH 18/T1	MH 18/T1	MH 19/T1	MH 19/T1	MH 19/T1
Offset	0.4m Off 18/T1	0.3m Off 18/T1	0.2m Off 18/T1	0.4m Off 19/T1	0.3m Off 19/T1	0.4m Off 19/T1
Layer / Reduced Level	3.1m Below F/L	2.6m Below F/L	2.1m Below F/L	4.8m Below F/L	4.3m Below F/L	3.8m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty 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	1.97	1.97	2.00	1.94	1.99	1.98
Field Moisture Content %	17.8	18.3	18.1	17.7	17.1	17.9
Field Dry Density (FDD) t/m^3	1.67	1.66	1.69	1.65	1.70	1.68
Peak Converted Wet Density t/m^3	1.97	1.92	2.00	1.99	1.99	1.95
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	0.5	0.0	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**100.0**	**102.5**	**100.0**	**97.5**	**100.0**	**101.5**
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: 22-360-54
Issue Number: 1
Date Issued: 01/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4073
Date Sampled: 17/01/2023
Dates Tested: 17/01/2023 - 31/01/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4073G	S4073H	S4073I	S4073J	S4073K	S4073L
Test Number	305	306	307	308	309	310
Date Tested	17/01/2023	17/01/2023	17/01/2023	17/01/2023	17/01/2023	17/01/2023
Time Tested	10:30	10:35	10:40	10:45	10:50	10:55
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 19/T1	MH 19/T1	MH 19/T1	MH 23/T1	MH 23/T1	MH 23/T1
Offset	0.6m Off 19/T1	0.2m Off 19/T1	0.3m Off 19/T1	0.5m Off 23/T1	0.5m Off 23/T1	0.3m Off 23/T1
Layer / Reduced Level	3.3m Below F/L	2.8m Below F/L	2.3m Below F/L	3.1m Below F/L	2.6m Below F/L	2.1m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty 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	1.99	2.00	2.03	2.03	2.04	2.06
Field Moisture Content %	17.3	17.1	16.4	16.8	16.6	18.0
Field Dry Density (FDD) t/m^3	1.70	1.71	1.74	1.74	1.75	1.74
Peak Converted Wet Density t/m^3	2.01	1.99	2.02	2.01	2.00	2.07
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.0	0.0	0.5	0.5	1.0	0.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**99.0**	**100.5**	**100.5**	**101.0**	**102.0**	**99.0**
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: 22-360-54
Issue Number: 1
Date Issued: 01/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4073
Date Sampled: 17/01/2023
Dates Tested: 17/01/2023 - 31/01/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4073M	S4073N	S4073O	S4073P	S4073Q	S4073R
Test Number	311	312	313	314	315	316
Date Tested	17/01/2023	17/01/2023	17/01/2023	17/01/2023	17/01/2023	17/01/2023
Time Tested	11:00	11:05	11:10	11:15	11:20	11:25
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 23/T1	MH 23/T1	MH 23/T1	MH 24/T1	MH 24/T1	MH 24/T1
Offset	0.2m Off 23/T1	0.5m Off 23/T1	0.4m Off 23/T1	0.3m Off 24/T1	0.4m Off 24/T1	0.5m Off 24/T1
Layer / Reduced Level	1.6m Below F/L	1.1m Below F/L	0.6m Below F/L	4.8m Below F/L	4.3m Below F/L	3.8m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty 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	2.04	2.02	2.05	2.06	2.03	2.05
Field Moisture Content %	19.2	18.7	16.5	17.8	17.4	18.3
Field Dry Density (FDD) t/m^3	1.72	1.70	1.76	1.75	1.73	1.73
Peak Converted Wet Density t/m^3	2.01	2.01	2.03	2.06	2.03	2.06
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	1.0	0.5	0.5	1.0	0.0	0.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**102.0**	**101.0**	**101.0**	**100.0**	**100.0**	**99.5**
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: 22-360-54
Issue Number: 1
Date Issued: 01/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4073
Date Sampled: 17/01/2023
Dates Tested: 17/01/2023 - 31/01/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

Qualtest Laboratory Pty Ltd
Qualtest Laboratory Pty Limited
2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
Email: greg@qualtestgeo.com
Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4073S	S4073T	S4073U	S4073V		
Test Number	317	318	319	320		
Date Tested	17/01/2023	17/01/2023	17/01/2023	17/01/2023		
Time Tested	11:30	11:35	11:40	11:45		
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill		
Line / Offset	MH 24/T1	MH 24/T1	MH 24/T1	24/T1 - 25 T1		
Offset	0.2m Off 24/T1	0.4m Off 24/T1	0.3m Off 24/T1	5m Off 25/T1		
Layer / Reduced Level	3.3m Below F/L	2.8m Below F/L	2.3m Below F/L	1.1m below F/L		
Thickness of Layer (mm)	200	200	200	200		
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY		
Test Depth (mm)	150	150	150	150		
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0		
Percentage of Wet Oversize (%)	0	0	0	0		
Field Wet Density (FWD) t/m^3	2.04	2.06	2.04	2.06		
Field Moisture Content %	18.5	18.0	19.4	19.4		
Field Dry Density (FDD) t/m^3	1.72	1.75	1.71	1.72		
Peak Converted Wet Density t/m^3	2.07	2.06	2.06	2.07		
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**		
Moisture Variation (Wv) %	0.5	0.5	1.0	0.5		
Adjusted Moisture Variation %	**	**	**	**		
Hilf Density Ratio (%)	**98.5**	**100.0**	**99.0**	**99.0**		
Compaction Method	**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: **22-360-55**
Issue Number: 1
Date Issued: 08/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4359
Location: Gravity Trunk Sewer,Walloon

Qualtest Laboratory
Est. 1987

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

NATA
WORLD RECOGNISED ACCREDITATION

Approved Signatory: Mick Morrison

NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S4359A			
Location	MH 1/20			
Date Tested	07/02/2023			
Soil Description	Silty CLAY			
Reduced Level (mm)				
Moisture Condition	Dry			
Start Depth (mm)	-45			
0-100 blows/100 mm	11			
100-200 blows/100 mm	15			
200-300 blows/100 mm	14			
300-400 blows/100 mm	18			
400-500 blows/100 mm	R21			
Ground Water Level				
Remarks				

Material Test Report

Report Number: 22-360-56
Issue Number: 1
Date Issued: 17/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4112
Date Sampled: 19/01/2023
Dates Tested: 19/01/2023 - 16/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4112A	S4112B	S4112C	S4112D	S4112E	S4112F
Test Number	315	316	317	318	319	320
Date Tested	19/01/2023	19/01/2023	19/01/2023	19/01/2023	19/01/2023	19/01/2023
Time Tested	08:00	08:05	08:10	08:15	08:20	08:25
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	20/T1 - 21/T1	20/T1 - 21/T1	20/T1 - 21/T1	20/T1 - 21/T1	20/T1 - 21/T1	20/T1 - 21/T1
Offset	20m Off 20/T1	60m Off 20/T1	80m Off 20/T1	20m Off 20/T1	60m Off 20/T1	80m Off 20/T1
Layer / Reduced Level	4.4m Below F/L	3.5m Below F/L	2.6m Below F/L	4.4m Below F/L	3.5m Below F/L	2.6m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.96	1.95	1.97	1.98	2.01	2.02
Field Moisture Content %	18.5	16.1	17.9	17.1	17.6	19.4
Field Dry Density (FDD) t/m^3	1.65	1.68	1.67	1.69	1.71	1.69
Peak Converted Wet Density t/m^3	1.97	1.98	2.04	2.04	2.07	2.09
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	1.0	0.5	0.0	0.0	1.0	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**99.0**	**98.5**	**96.5**	**97.5**	**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: 22-360-56
Issue Number: 1
Date Issued: 17/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4112
Date Sampled: 19/01/2023
Dates Tested: 19/01/2023 - 16/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4112G	S4112H	S4112I	S4112J	S4112K	S4112L
Test Number	321	322	323	324	325	326
Date Tested	19/01/2023	19/01/2023	19/01/2023	19/01/2023	19/01/2023	19/01/2023
Time Tested	08:30	08:35	08:40	08:45	08:50	08:55
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	20/T1 - 21/T1	20/T1 - 21/T1	20/T1 - 21/T1	20/T1 - 21/T1	24/T1 - 25/T1	24/T1 - 25/T1
Offset	30m Off 20/T1	50m Off 20/T1	70m Off 20/T1	80m Off 20/T1	10m Off 24/T1	15m Off 24/T1
Layer / Reduced Level	2.0m Below F/L	1.5m Below F/L	0.5m Below F/L	Finish Level	0.6m Below F/L	Finish Level
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	2.01	2.00	1.99	1.98	1.97	1.93
Field Moisture Content %	19.4	20.0	19.7	19.4	19.3	20.7
Field Dry Density (FDD) t/m^3	1.68	1.67	1.66	1.66	1.65	1.60
Peak Converted Wet Density t/m^3	2.08	2.07	2.07	2.05	2.04	2.02
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	1.0	0.5	1.0	1.5	1.0	1.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**96.5**	**97.0**	**96.0**	**96.5**	**96.5**	**95.5**
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: **22-360-56**
Issue Number: 1
Date Issued: 17/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4112
Date Sampled: 19/01/2023
Dates Tested: 19/01/2023 - 16/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4112M	S4112N	S4112O	S4112P	S4112Q	S4112R
Test Number	327	328	329	330	331	332
Date Tested	19/01/2023	19/01/2023	19/01/2023	19/01/2023	19/01/2023	19/01/2023
Time Tested	09:00	09:05	09:10	01:00	10:05	01:10
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 25/T1	MH 25/T1	MH 25/T1	MH 25/T1	MH 25/T1	MH 25/T1
Offset	0.3m Off MH 25/T1	0.3m Off MH 25/T1	0.5m Off MH 25/T1	0.4m Off MH 25/T1	0.2m Off MH 25/T1	0.5m Off MH 25/T1
Layer / Reduced Level	5.8m Below F/L	5.3m Below F/L	4.8m Below F/L	4.3m Below F/L	3.8m Below F/L	3.3m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	2.05	2.03	2.05	1.93	1.99	2.03
Field Moisture Content %	20.0	19.6	17.5	20.6	20.1	18.8
Field Dry Density (FDD) t/m^3	1.71	1.70	1.75	1.60	1.66	1.71
Peak Converted Wet Density t/m^3	2.07	2.05	2.08	2.03	2.01	2.02
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	1.5	1.0	2.0	1.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**98.5**	**99.0**	**98.5**	**95.5**	**99.0**	**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: **22-360-56**
Issue Number: 1
Date Issued: 17/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4112
Date Sampled: 19/01/2023
Dates Tested: 19/01/2023 - 16/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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Email: greg@qualtestgeo.com

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ql-greg
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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4112S	S4112T	S4112U	S4112V	S4112W	S4112X
Test Number	333	334	335	336	337	338
Date Tested	19/01/2023	19/01/2023	19/01/2023	19/01/2023	19/01/2023	19/01/2023
Time Tested	10:15	10:20	10:25	10:30	11:10	11:15
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	25/T1 - 26/T1	25/T1 - 26/T1	25/T1 - 26/T1	25/T1 - 26/T1	25/T1 - 26/T1	25/T1 - 26/T1
Offset	20m Off 25/T1	40m Off 25/T1	90m Off 25/T1	60m Off 25/T1	10m Off 25/T1	90m Off 25/T1
Layer / Reduced Level	4.2m Below F/L	3.3m Below F/L	2.4m Below F/L	4.2m Below F/L	3.3m Below F/L	2.4m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	2.06	2.05	1.96	1.96	2.02	2.02
Field Moisture Content %	20.9	20.0	19.5	20.4	20.1	21.4
Field Dry Density (FDD) t/m^3	1.70	1.71	1.64	1.63	1.68	1.66
Peak Converted Wet Density t/m^3	2.07	1.96	2.03	2.02	2.05	1.95
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	1.0	2.0	0.5	1.0	0.5	2.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**99.5**	**104.5**	**96.5**	**97.0**	**98.0**	**103.0**
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: 22-360-56
Issue Number: 1
Date Issued: 17/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4112
Date Sampled: 19/01/2023
Dates Tested: 19/01/2023 - 16/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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ql-greg
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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4112Y	S4112Z	S4112AA	S4112AB	S4112AC	S4112AD
Test Number	339	340	341	342	343	344
Date Tested	19/01/2023	19/01/2023	19/01/2023	19/01/2023	19/01/2023	19/01/2023
Time Tested	11:20	11:25	13:00	13:05	13:10	13:15
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	26/T1 - 27/T1	26/T1 - 27/T1	26/T1 - 27/T1	26/T1 - 27/T1	26/T1 - 27/T1	27/T1 - 28/T1
Offset	20m Off 26/T1	40m Off 26/T1	60m Off 26/T1	10m Off 26/T1	30m Off 26/T1	10m Off 27/T1
Layer / Reduced Level	3.5m Below F/L	2.6m Below F/L	1.7m Below F/L	1.2m Below F/L	0.7m Below F/L	4.0m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	2.05	2.02	1.94	1.95	1.92	1.90
Field Moisture Content %	21.4	21.2	14.6	15.6	15.6	18.9
Field Dry Density (FDD) t/m^3	1.69	1.66	1.70	1.68	1.66	1.60
Peak Converted Wet Density t/m^3	1.99	2.02	1.99	1.96	1.95	1.92
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	1.5	-0.5	0.5	0.5	0.0	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**103.0**	**100.0**	**98.0**	**99.0**	**98.5**	**99.5**
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: 22-360-56
Issue Number: 1
Date Issued: 17/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4112
Date Sampled: 19/01/2023
Dates Tested: 19/01/2023 - 16/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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ql-greg

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Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4112AE	S4112AF				
Test Number	345	346				
Date Tested	19/01/2023	19/01/2023				
Time Tested	13:20	13:25				
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill				
Line / Offset	27/T1 - 28/T1	27/T1 - 28/T1				
Offset	20m Off 27/T1	40m Off 27/T1				
Layer / Reduced Level	3.1m Below F/L	2.2m Below F/L				
Thickness of Layer (mm)	200	200				
Soil Description	Silty CLAY	Silty CLAY				
Test Depth (mm)	175	175				
Sieve used to determine oversize (mm)	19.0	19.0				
Percentage of Wet Oversize (%)	0	0				
Field Wet Density (FWD) t/m^3	1.92	1.96				
Field Moisture Content %	16.4	16.5				
Field Dry Density (FDD) t/m^3	1.65	1.68				
Peak Converted Wet Density t/m^3	2.02	2.01				
Adjusted Peak Converted Wet Density t/m^3	**	**				
Moisture Variation (Wv) %	0.5	0.0				
Adjusted Moisture Variation %	**	**				
Hilf Density Ratio (%)	**95.5**	**97.5**				
Compaction Method	**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: **22-360-57**
Issue Number: 1
Date Issued: 17/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4297
Date Sampled: 02/02/2023
Dates Tested: 02/02/2023 - 14/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4297A	S4297B	S4297C	S4297D	S4297E	S4297F
Test Number	347	348	349	350	351	352
Date Tested	02/02/2023	02/02/2023	02/02/2023	02/02/2023	02/02/2023	02/02/2023
Time Tested	07:30	07:35	07:40	07:45	07:50	07:55
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 26/T1	MH 26/T1	MH 26/T1	MH 26/T1	MH 26/T1	MH 26/T1
Offset	0.3m Off MH 26/T1	0.3m Off MH 26/T1	0.5m Off MH 26/T1	0.4m Off MH 26/T1	0.4m Off MH 26/T1	0.4m Off MH 26/T1
Layer / Reduced Level	3.8m Below F/L	3.3m Below F/L	2.8m Below F/L	2.3m Below F/L	1.8m Below F/L	1.3m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.96	1.95	1.97	1.98	2.01	2.02
Field Moisture Content %	20.5	19.5	20.0	19.6	19.7	19.8
Field Dry Density (FDD) t/m^3	1.63	1.64	1.64	1.66	1.68	1.68
Peak Converted Wet Density t/m^3	2.01	2.03	1.96	2.00	2.05	2.04
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.0	0.5	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**97.5**	**96.5**	**101.0**	**99.0**	**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: **22-360-57**
Issue Number: 1
Date Issued: 17/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4297
Date Sampled: 02/02/2023
Dates Tested: 02/02/2023 - 14/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4297G	S4297H	S4297I	S4297J	S4297K	S4297L
Test Number	353	354	355	356	357	358
Date Tested	02/02/2023	02/02/2023	02/02/2023	02/02/2023	02/02/2023	02/02/2023
Time Tested	08:00	08:05	08:10	08:15	08:20	08:25
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 27T1	MH 27/T1	MH 27/T1	MH 27/T1	MH 27/T1	MH 27/T1
Offset	0.5m Off MH 27/T1	0.4m Off MH 27/T1	0.4m Off MH 27/T1	0.3m Off MH 27/T1	0.3m Off MH 27/T1	0.3m Off MH 27/T1
Layer / Reduced Level	4.6m Below F/L	4.1m Below F/L	3.6m Below F/L	3.1m Below F/L	2.6m Below F/L	2.1m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	2.01	2.00	1.97	1.98	1.97	1.93
Field Moisture Content %	19.5	19.4	21.3	21.0	20.9	20.6
Field Dry Density (FDD) t/m^3	1.68	1.68	1.62	1.64	1.63	1.60
Peak Converted Wet Density t/m^3	1.92	2.00	2.02	1.96	1.98	2.00
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.0	-0.5	0.0	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**104.5**	**100.0**	**97.5**	**101.0**	**99.5**	**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: 22-360-57
Issue Number: 1
Date Issued: 17/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4297
Date Sampled: 02/02/2023
Dates Tested: 02/02/2023 - 14/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4297M	S4297N	S4297O	S4297P	S4297Q	S4297R
Test Number	359	360	361	362	363	364
Date Tested	02/02/2023	02/02/2023	02/02/2023	02/02/2023	02/02/2023	02/02/2023
Time Tested	08:30	08:35	08:40	08:44	08:50	10:00
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 28/T1	MH 28/T1	MH 28/T1	MH 28/T1	MH 28/T1	MH 28/T1
Offset	0.4m Off MH 28/T1	0.4m Off MH 28/T1	0.6m Off MH 28/T1	0.3m Off MH 28/T1	0.3m Off MH 28/T1	0.6m Off MH 28/T1
Layer / Reduced Level	4.7m Below F/L	4.2m Below F/L	3.7m Below F/L	3.2m Below F/L	2.7m Below F/L	2.2m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	2.05	2.03	2.05	1.93	1.99	2.03
Field Moisture Content %	19.3	23.4	18.3	17.9	18.0	20.2
Field Dry Density (FDD) t/m^3	1.72	1.65	1.73	1.64	1.69	1.69
Peak Converted Wet Density t/m^3	2.03	2.04	2.05	2.06	2.03	1.99
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	1.5	1.0	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**101.0**	**99.5**	**100.0**	**94.0**	**98.0**	**101.5**
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: 22-360-57
Issue Number: 1
Date Issued: 17/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4297
Date Sampled: 02/02/2023
Dates Tested: 02/02/2023 - 14/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
Email: greg@qualtestgeo.com

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Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4297S	S4297T	S4297U	S4297V	S4297W	S4297X
Test Number	365	366	367	368	369	370
Date Tested	02/02/2023	02/02/2023	02/02/2023	02/02/2023	02/02/2023	02/02/2023
Time Tested	10:05	10:10	10:15	10:20	13:00	13:05
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 29/T1	MH 29/T1	MH 29/T1	MH 29/T1	MH 29/T1	MH 29/T1
Offset	0.5m Off 29/T1	0.6m Off 29/T1	0.3m Off 29/T1	0.3m Off 29/T1	0.2m Off 29/T1	0.5m Off 29/T1
Layer / Reduced Level	5.6m Below F/L	5.1m Below F/L	4.6m Below F/L	4.1m Below F/L	3.6m Below F/L	3.1m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	2.06	2.05	1.96	1.96	2.02	2.02
Field Moisture Content %	18.3	18.6	25.8	21.9	22.5	23.2
Field Dry Density (FDD) t/m^3	1.74	1.73	1.56	1.61	1.65	1.64
Peak Converted Wet Density t/m^3	2.00	2.03	1.94	1.98	2.00	1.99
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	0.5	-3.0	0.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**103.0**	**100.5**	**101.0**	**99.0**	**100.5**	**101.0**
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: **22-360-57**
Issue Number: 1
Date Issued: 17/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4297
Date Sampled: 02/02/2023
Dates Tested: 02/02/2023 - 14/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4297Y	S4297Z	S4297AA	S4297AB	S4297AC	S4297AD
Test Number	371	372	373	374	375	376
Date Tested	02/02/2023	02/02/2023	02/02/2023	02/02/2023	02/02/2023	02/02/2023
Time Tested	13:10	13:15	13:20	13:25	13:30	13:35
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	27/T1 - 28/T1	MH 28/T1 - 29/T1	28/T1 - 29/T1	28/T1 - 29/T1	28/T1 - 29/T1	28/T1 - 29/T1
Offset	45m Off 27/T1	10m Off 27/T1	20m Off 27/T1	40m Off 27/T1	60m Off 28/T1	80m Off 28/T1
Layer / Reduced Level	1.7m Below F/L	4.6m Below F/L	3.7m Below F/L	2.8m Below F/L	2.3m Below F/L	1.8m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	2.05	2.02	2.04	2.03	2.06	2.02
Field Moisture Content %	22.4	21.6	22.2	21.1	22.6	20.6
Field Dry Density (FDD) t/m^3	1.67	1.66	1.67	1.68	1.68	1.68
Peak Converted Wet Density t/m^3	2.00	1.96	2.10	2.11	2.06	2.02
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.0	1.0	0.0	0.5	0.0	0.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**102.5**	**102.5**	**97.5**	**96.5**	**99.5**	**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: 22-360-57
Issue Number: 1
Date Issued: 17/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4297
Date Sampled: 02/02/2023
Dates Tested: 02/02/2023 - 14/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4297AE	S4297AF	S4297AG	S4297AH	S4297AI	S4297AJ
Test Number	377	378	379	380	381	382
Date Tested	02/02/2023	02/02/2023	02/02/2023	02/02/2023	02/02/2023	02/02/2023
Time Tested	13:40	13:45	13:50	13:55	14:00	14:05
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	28/T1 - 29/T1	29/T1 - 30/T1	24/T1 - TP2/20	24/T1 - TP2/20	24/T1 - TP2/20	TP2/20 - 1/20
Offset	100m Off 28/T1	10m Off 29/T1	10m Off 24/T1	20m Off 24/T1	40m Off 24/T1	20m Off TP2/20
Layer / Reduced Level	1.3m Below F/L	5.4m Below F/L	1.1m Below F/L	0.6m Below F/L	Finish Level	1.8m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.94	1.95	1.92	1.90	1.92	1.96
Field Moisture Content %	21.0	24.3	19.8	23.4	23.8	23.1
Field Dry Density (FDD) t/m^3	1.61	1.57	1.60	1.54	1.55	1.59
Peak Converted Wet Density t/m^3	1.95	1.98	1.95	1.93	1.97	1.98
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	1.0	0.0	0.5	0.5	0.0	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**100.0**	**98.0**	**98.5**	**98.5**	**98.0**	**99.0**
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: 22-360-58
Issue Number: 1
Date Issued: 17/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4317
Date Sampled: 03/02/2023
Dates Tested: 03/02/2023 - 15/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S4317A	S4317B	S4317C	S4317D	S4317E
Test Number	383	384	385	386	387
Date Tested	03/02/2023	03/02/2023	03/02/2023	03/02/2023	03/02/2023
Time Tested	10:00	10:05	10:10	10:15	10:20
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	29/T1 - 30/T1	29/T1 - 30/T1	29/T1 - 30/T1	29/T1 - 30/T1	29/T1 - 30/T1
Offset	10m Off 29/T1	15m Off 29/T1	25m Off 29/T1	20m Off 29/T1	5m Off 29/T1
Layer / Reduced Level	4.5m Below F/L	3.6m Below F/L	3.1m Below F/L	2.6m Below F/L	2.1m Below F/L
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175
Sieve used to determine oversize (mm)	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	2.06	2.03	2.04	2.05	2.03
Field Moisture Content %	17.0	17.5	17.7	18.5	23.1
Field Dry Density (FDD) t/m^3	1.76	1.73	1.73	1.73	1.65
Peak Converted Wet Density t/m^3	2.08	2.08	2.08	2.09	2.07
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	0.0	0.0	0.0	-1.0	0.0
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**99.0**	**98.0**	**98.0**	**98.0**	**98.5**
Compaction Method	**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: **22-360-58**
Issue Number: 1
Date Issued: 17/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4317
Date Sampled: 03/02/2023
Dates Tested: 03/02/2023 - 15/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1					
Sample Number	S4317F	S4317G	S4317H	S4317I	S4317J
Test Number	388	389	390	391	392
Date Tested	03/02/2023	03/02/2023	03/02/2023	03/02/2023	03/02/2023
Time Tested	10:25	10:30	10:35	10:40	10:45
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	29/T1 - 30/T1	TP2/20 - 1/20	TP2/20 - 1/20	TP2/20 - 1/20	TP2/20 - 1/20
Offset	15m Off 29/T1	30m Off TP2/20	40m Off TP2/20	50m Off TP2/20	10m Off TP2/20
Layer / Reduced Level	1.6m Below F/L	3m Below F/L	1.3m Below F/L	0.8m Below F/L	0.3m Below F/L
Thickness of Layer (mm)	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175
Sieve used to determine oversize (mm)	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	2.02	1.92	1.97	1.96	1.95
Field Moisture Content %	19.1	23.7	22.0	19.6	18.6
Field Dry Density (FDD) t/m^3	1.70	1.55	1.62	1.64	1.65
Peak Converted Wet Density t/m^3	2.08	2.02	2.01	2.05	2.00
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.0	0.5	1.0	0.5
Adjusted Moisture Variation %	**	**	**	**	**
Hilf Density Ratio (%)	**97.0**	**95.0**	**98.0**	**96.0**	**97.5**
Compaction Method	**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: 22-360-59
Issue Number: 1
Date Issued: 17/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4391
Date Sampled: 08/02/2023
Dates Tested: 08/02/2023 - 10/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4391A	S4391B	S4391C	S4391D	S4391E	S4391F
Test Number	407	408	409	410	411	412
Date Tested	08/02/2023	08/02/2023	08/02/2023	08/02/2023	08/02/2023	08/02/2023
Time Tested	10:00	10:05	10:10	10:15	10:20	10:30
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	25/T1 - 26/T1	25/T1 - 26/T1	25/T1 - 26/T1	25/T1 - 26/T1	25/T1 - 26/T1	25/T1 - 26/T1
Offset	20m Off 27/T1	5m Off 27/T1	30m Off 27/T1	m Off 27/T1	50m Off 28/T1	30m Off 28/T1
Layer / Reduced Level	Finish Level	1.3m Below F/L	0.4m Below F/L	Finish Level	0.6m Below F/L	Finish Level
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.96	2.01	2.02	2.01	2.02	2.00
Field Moisture Content %	17.3	16.9	17.2	17.4	16.6	16.7
Field Dry Density (FDD) t/m^3	1.67	1.72	1.73	1.71	1.73	1.71
Peak Converted Wet Density t/m^3	2.01	1.99	2.04	2.01	2.02	2.01
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	1.5	-0.5	0.5	0.0	2.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**97.5**	**100.5**	**99.5**	**100.0**	**100.0**	**99.5**
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: 22-360-60
Issue Number: 1
Date Issued: 20/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4360
Date Sampled: 07/02/2023
Dates Tested: 07/02/2023 - 17/02/2023
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: Trunk Gravity Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: on-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4360A	S4360B	S4360C	S4360D	S4360E	S4360F
Test Number	393	394	395	396	397	398
Date Tested	07/02/2023	07/02/2023	07/02/2023	07/02/2023	07/02/2023	07/02/2023
Time Tested	10:00	10:05	10:10	10:15	10:20	10:25
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	22/T1 - 1/6	22/T1 - 1/6	22/T1 - 1/6	22/T1 - 1/6	22/T1 - 1/6	TP2/20 - 1/20
Offset	10m Off 22/T1	45m Off 22/T1	50m Off 22/T1	70m Off 22/T1	80m Off 22/T1	50m Off 1/20
Layer / Reduced Level	2.0m Below F/L	1.5m Below F/L	1.0m Below F/L	0.5m Below F/L	Finish Level	Finish Level
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	2.05	2.04	2.08	2.06	2.04	2.03
Field Moisture Content %	14.9	15.4	15.8	17.0	16.0	17.1
Field Dry Density (FDD) t/m^3	1.78	1.77	1.79	1.76	1.75	1.74
Peak Converted Wet Density t/m^3	2.07	2.00	2.13	2.04	2.10	2.00
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	0.5	0.0	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**99.0**	**102.5**	**97.5**	**100.5**	**97.0**	**101.5**
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: **22-360-60**
Issue Number: 1
Date Issued: 20/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4360
Date Sampled: 07/02/2023
Dates Tested: 07/02/2023 - 17/02/2023
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: Trunk Gravity Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: on-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4360G	S4360H	S4360I	S4360J	S4360K	S4360L
Test Number	399	400	401	402	403	404
Date Tested	07/02/2023	07/02/2023	07/02/2023	07/02/2023	07/02/2023	07/02/2023
Time Tested	10:30	10:35	10:40	10:45	10:50	13:00
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	25/T1 - 26/T1	25/T1 - 26/T1	25/T1 - 26/T1	25/T1 - 26/T1	25/T1 - 26/T1	25/T1 - 26/T1
Offset	25m Off 25/T	100m Off 25/T1	80m Off 25/T1	50m Off 25/T1	70m Off 25/T1	120m Off 25/T1
Layer / Reduced Level	1.4m Below F/L	0.9m Below F/L	0.4m Below F/L	Finish Level	1.4m Below F/L	0.9m Below F/L
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	2.03	2.06	1.95	1.97	1.95	1.94
Field Moisture Content %	15.1	16.6	17.0	16.6	16.8	16.4
Field Dry Density (FDD) t/m^3	1.76	1.76	1.67	1.69	1.67	1.66
Peak Converted Wet Density t/m^3	2.04	2.08	1.98	2.01	1.99	1.95
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	-0.5	0.0	0.0	0.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**99.0**	**99.0**	**98.5**	**98.0**	**98.0**	**99.5**
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: 22-360-60
Issue Number: 1
Date Issued: 20/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4360
Date Sampled: 07/02/2023
Dates Tested: 07/02/2023 - 17/02/2023
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: Trunk Gravity Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: on-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S4360M	S4360N				
Test Number	405	406				
Date Tested	07/02/2023	07/02/2023				
Time Tested	13:05	13:10				
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill				
Line / Offset	25/T1 - 26/T1	25/T1 - 26/T1				
Offset	130m Off 25/T1	140m Off 25/T1				
Layer / Reduced Level	0.4m Below F/L	Finish Level				
Thickness of Layer (mm)	200	200				
Soil Description	Silty CLAY	Silty CLAY				
Test Depth (mm)	175	175				
Sieve used to determine oversize (mm)	19.0	19.0				
Percentage of Wet Oversize (%)	0	0				
Field Wet Density (FWD) t/m^3	2.03	2.03				
Field Moisture Content %	16.8	16.1				
Field Dry Density (FDD) t/m^3	1.73	1.75				
Peak Converted Wet Density t/m^3	2.04	2.03				
Adjusted Peak Converted Wet Density t/m^3	**	**				
Moisture Variation (Wv) %	0.5	-1.0				
Adjusted Moisture Variation %	**	**				
Hilf Density Ratio (%)	**99.0**	**100.5**				
Compaction Method	**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: **22-360-61**
Issue Number: 1
Date Issued: 22/02/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project: 22-360 - LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4466
Location: Gravity Trunk Sewer,Walloon

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Dynamic Cone Penetrometer AS 1289 6.3.2				
Sample Number	S4466A			
Location	Gravity Trunk Sewer 20/T1			
Chainage (m)	20//T1			
Location Offset (m)	1m North Of Centre Of MH			
Offset from				
Date Tested	13/02/2023			
Soil Description	Silty CLAY			
Reduced Level (mm)				
Moisture Condition	Wet			
Start Depth (mm)	-45			
0-100 blows/100 mm	1			
100-200 blows/100 mm	1			
200-300 blows/100 mm	2			
300-400 blows/100 mm	2			
400-500 blows/100 mm	2			
500-600 blows/100 mm	1			
600-700 blows/100 mm	4			
700-800 blows/100 mm	4			
800-900 blows/100 mm	6			
900-1000 blows/100 mm	4			
1000-1100 blows/100 mm	5			
1100-1200 blows/100 mm	5			
1200-1300 blows/100 mm	5			
1300-1400 blows/100 mm	6			
1400-1500 blows/100 mm	6			
Ground Water Level				
Remarks				

Material Test Report

Report Number: **22-360-62**
Issue Number: 1
Date Issued: 07/03/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4564
Date Sampled: 20/02/2023
Dates Tested: 20/02/2023 - 27/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Gravity Trunk Sewer
Material Source: On-Site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S4564A	S4564B	S4564C
Test Number	413	414	415
Date Tested	20/02/2023	20/02/2023	20/02/2023
Time Tested	10:00	10:05	10:10
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	19/T1 - 20/T1	19/T1 - 20/T1	19/T1 - 20/T1
Offset	30m Off 19/T1	60m Off 19/T1	900m Off 19/T1
Layer / Reduced Level	4.3m Below F/L	3.4m Below F/L	2.5m Below F/L
Thickness of Layer (mm)	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m^3	1.98	1.98	1.98
Field Moisture Content %	13.5	13.5	13.4
Field Dry Density (FDD) t/m^3	1.74	1.75	1.75
Peak Converted Wet Density t/m^3	1.97	1.99	1.96
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**100.5**	**99.5**	**101.0**
Compaction Method	**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: **22-360-63**
Issue Number: 1
Date Issued: 07/03/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4601
Date Sampled: 22/02/2023
Dates Tested: 22/02/2023 - 27/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S4601A	S4601B	S4601C	S4601D
Test Number	416	417	418	419
Date Tested	22/02/2023	22/02/2023	22/02/2023	22/02/2023
Time Tested	10:00	10:05	10:10	10:15
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	19/T1 - 20/T1	19/T1 - 20/T1	19/T1 - 20/T1	19/T1 - 20/T1
Offset	10m Off 19/T1	40m Off 19/T1	70m Off 19/T1	100m Off 19/T1
Layer / Reduced Level	2m Below F/L	1.5m Below F/L	1m Below F/L	0.5m Below F/L
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.02	2.03	2.02	1.98
Field Moisture Content %	18.8	18.5	18.4	18.3
Field Dry Density (FDD) t/m^3	1.70	1.71	1.71	1.67
Peak Converted Wet Density t/m^3	1.99	2.07	2.09	1.99
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	1.0	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**101.0**	**98.0**	**97.0**	**99.5**
Compaction Method	**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: **22-360-63**
Issue Number: 1
Date Issued: 07/03/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4601
Date Sampled: 22/02/2023
Dates Tested: 22/02/2023 - 27/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S4601E	S4601F	S4601G	S4601H
Test Number	420	421	422	423
Date Tested	22/02/2023	22/02/2023	22/02/2023	22/02/2023
Time Tested	10:20	10:25	10:30	10:35
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	19/T1 - 20/T1	MH 20/T1	MH 20/T1	MH 20/T1
Offset	60m Off 19/T1	0.2m Off 20/T1	0.3m Off 20/T1	0.3m Off 20/T1
Layer / Reduced Level	Finish Level	5m Below F/L	4.5m Below F/L	4m Below F/L
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.01	2.01	1.98	1.97
Field Moisture Content %	19.4	18.7	17.3	18.5
Field Dry Density (FDD) t/m^3	1.68	1.70	1.69	1.66
Peak Converted Wet Density t/m^3	2.03	2.02	1.99	1.95
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**99.5**	**100.0**	**99.5**	**101.0**
Compaction Method	**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: **22-360-64**
Issue Number: 1
Date Issued: 07/03/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4627
Date Sampled: 23/02/2023
Dates Tested: 23/02/2023 - 28/02/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S4627A	S4627B	S4627C
Test Number	424	425	426
Date Tested	23/02/2023	23/02/2023	23/02/2023
Time Tested	10:00	10:10	10:15
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	19/T1 - 20/T1	19/T1 - 20/T1	19/T1 - 20/T1
Offset	m Off 19/T1	m Off 19/T1	m Off 19/T1
Layer / Reduced Level	m Below F/L	m Below F/L	m Below F/L
Thickness of Layer (mm)	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m^3	1.89	1.88	1.91
Field Moisture Content %	13.5	13.7	13.6
Field Dry Density (FDD) t/m^3	1.66	1.65	1.68
Peak Converted Wet Density t/m^3	1.90	1.90	1.93
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	3.0	3.0	3.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**99.0**	**99.0**	**99.0**
Compaction Method	**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: **22-360-65**
Issue Number: 1
Date Issued: 07/03/2023
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-360
Project Name: LEVEL ONE SUPERVISION
Project Location: WATERLEA TRUNK GRAVITY SEWER
Client Reference: 55301
Work Request: 4743
Date Sampled: 02/03/2023
Dates Tested: 02/03/2023 - 03/03/2023
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: Gravity Trunk Sewer,Walloon
Material: Sewer Trench Backfill
Material Source: On-site

Qualtest Laboratory Pty Ltd
Qualtest Laboratory Pty Limited
2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
Email: greg@qualtestgeo.com
Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S4743A	S4743B	S4743C
Test Number	427	428	429
Date Tested	02/03/2023	02/03/2023	02/03/2023
Time Tested	08:00	08:05	08:20
Test Request #/Location	Sewer Trench Backfill	Sewer Trench Backfill	Sewer Trench Backfill
Line / Offset	MH 20/T1	MH 20/T1	MH 20/T1
Offset	0.2m Off 20/T1	0.4m Off 20/T1	0.3m Off 20/T1
Layer / Reduced Level	3.5m Below F/L	3m Below F/L	2.5m Below F/L
Thickness of Layer (mm)	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m^3	1.92	1.92	1.92
Field Moisture Content %	22.7	23.2	22.6
Field Dry Density (FDD) t/m^3	1.56	1.56	1.56
Peak Converted Wet Density t/m^3	1.95	1.93	1.95
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	0.5	1.0	0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**98.0**	**99.5**	**98.5**
Compaction Method	**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: **22-196-1**
Issue Number: 1
Date Issued: 28/05/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-196
Project Name: TEMPORARY FISH PASSAGE
Project Location: WATERLEA TRUNK GRAVITY SEWER WALLOON
Client Reference: 55056
Work Request: 937
Dates Tested: 25/05/2022 - 26/05/2022
Location: Temporary Fish Passage Walloon

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S937A		
Test Number	1		
Date Tested	25/05/2022		
Time Tested	12:30		
Test Request #/Location	Temporary Fish Passage		
Easting	465372		
Northing	6945471		
Elevation (m)	RL: 44.88		
Layer / Reduced Level	Bund Wall Backfill		
Thickness of Layer (mm)	175		
Soil Description	Sandy CLAY		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	**		
Field Wet Density (FWD) t/m^3	2.00		
Field Moisture Content %	17.0		
Field Dry Density (FDD) t/m^3	1.71		
Peak Converted Wet Density t/m^3	2.00		
Adjusted Peak Converted Wet Density t/m^3	**		
Moisture Variation (Wv) %	1.0		
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: 22-196-2
Issue Number: 1
Date Issued: 31/05/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-196
Project Name: TEMPORARY FISH PASSAGE
Project Location: WATERLEA TRUNK GRAVITY SEWER WALLOON
Client Reference: 55056
Work Request: 944
Date Sampled: 26/05/2022 8:00
Dates Tested: 26/05/2022 - 30/05/2022
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: Temporary Fish Passage
Material: General Fill
Material Source: On Site

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

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Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S944A	S944B	S944C
Test Number	2	3	4
Date Tested	26/05/2022	26/05/2022	26/05/2022
Time Tested	09:30	09:40	09:50
Test Request #/Location	Temporary Fish Passage	Temporary Fish Passage	Temporary Fish Passage
Easting	465322.6	4653308.6	465295.0
Northing	6946486.2	6946494.8	6946502.9
Elevation (m)	RL: 45.52	RL: 45.78	RL: 45.96
Layer / Reduced Level	Embankment Fill	Embankment Fill	Embankment Fill
Thickness of Layer (mm)	175	175	175
Soil Description	Sandy CLAY	Sandy CLAY	Sandy CLAY
Test Depth (mm)	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	**	0
Field Wet Density (FWD) t/m^3	1.94	1.92	1.87
Field Moisture Content %	26.5	24.9	24.0
Field Dry Density (FDD) t/m^3	1.54	1.54	1.51
Peak Converted Wet Density t/m^3	2.01	1.97	1.97
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	-3.0	-2.0	-2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**97.0**	**98.0**	**95.0**
Compaction Method	**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: 22-196-3
Issue Number: 1
Date Issued: 31/05/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-196
Project Name: TEMPORARY FISH PASSAGE
Project Location: WATERLEA TRUNK GRAVITY SEWER WALLOON
Client Reference: 55056
Work Request: 951
Date Sampled: 27/05/2022 8:00
Dates Tested: 27/05/2022 - 30/05/2022
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: Temporary Fish Passage
Material: Bund Wall Backfill
Material Source: On Site

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S951A	S951B	
Test Number	5	6	
Date Tested	27/05/2022	27/05/2022	
Time Tested	09:40	08:20	
Test Request #/Location	Temporary Fish Passage	Temporary Fish Passage	
Easting	465245.6	464522.5	
Northing	6946532.3	6946542.1	
Elevation (m)	RL: 46.48	RL: 45.81	
Layer / Reduced Level	Bund Wall Backfill	Bund Wall Backfill	
Thickness of Layer (mm)	175	175	
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 (%)	**	**	
Field Wet Density (FWD) t/m^3	1.98	1.95	
Field Moisture Content %	22.0	20.5	
Field Dry Density (FDD) t/m^3	1.62	1.62	
Peak Converted Wet Density t/m^3	2.03	2.03	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	-1.5	0.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**97.0**	**96.0**	
Compaction Method	**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: 22-196-4
Issue Number: 1
Date Issued: 23/06/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-196
Project Name: TEMPORARY FISH PASSAGE
Project Location: WATERLEA TRUNK GRAVITY SEWER WALLOON
Client Reference: 55056
Work Request: 1207
Date Sampled: 14/06/2022
Dates Tested: 14/06/2022 - 15/06/2022
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: Temporary Fish Passage
Material: General Fill
Material Source: Onsite Cut

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S1207A	S1207B	S1207C	S1207D	S1207E	S1207F
Test Number	7	8	9	10	11	12
Date Tested	14/06/2022	14/06/2022	14/06/2022	14/06/2022	14/06/2022	14/06/2022
Time Tested	10:00	10:05	10:10	10:15	10:20	10:25
Test Request #/Location	Bund Wall Fill	Bund Wall Fill	Bund Wall Fill	Bund Wall Fill	Bund Wall Fill	Bund Wall Fill
Easting	465002.0	465011.4	465023.4	464962.1	464976.2	464989.6
Northing	6947386.0	6947400.0	6947417.3	6947321.0	6947349.9	6947368.5
Elevation (m)	53.87	53.94	53.98	53.43	53.57	53.73
Layer / Reduced Level	Final Level	Final Level	Final Level	Final Level	Final Level	Final Level
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Brown CLAY	Brown CLAY	Brown CLAY	Brown CLAY	Brown CLAY	Brown CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.82	1.79	1.77	1.88	1.76	1.86
Field Moisture Content %	20.3	23.3	23.6	24.4	18.5	25.4
Field Dry Density (FDD) t/m^3	1.51	1.45	1.43	1.51	1.48	1.48
Peak Converted Wet Density t/m^3	1.90	1.87	1.81	1.91	1.79	1.93
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	1.0	-2.0	1.0	0.0	1.0	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**96.0**	**96.0**	**97.5**	**98.0**	**98.5**	**96.0**
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: 22-196-5
Issue Number: 1
Date Issued: 23/06/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-196
Project Name: TEMPORARY FISH PASSAGE
Project Location: WATERLEA TRUNK GRAVITY SEWER WALLOON
Client Reference: 55056
Work Request: 1237
Date Sampled: 16/06/2022
Dates Tested: 16/06/2022 - 17/06/2022
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: Walloon,Temporary Fish Passage
Material: General Fill
Material Source: Onsite

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

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Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S1237A	S1237B	S1237C	S1237D
Test Number	13	14	15	16
Date Tested	16/06/2022	16/06/2022	16/06/2022	16/06/2022
Time Tested	09:20	09:25	09:30	09:35
Test Request #/Location	Bund Wall Fill	Bund Wall Fill	Bund Wall Fill	Bund Wall Fill
Easting	464994.6	464977.6	464959.7	464930.2
Northing	6947143.1	6947066.9	6947019.5	6946996.5
Layer / Reduced Level	Final Level	Final Level	Final Level	Final Level
Thickness of Layer (mm)	200	200	200	200
Soil Description	Brown CLAY	Brown CLAY	Brown CLAY	Brown CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.98	2.01	1.94	1.97
Field Moisture Content %	16.3	15.8	17.0	21.3
Field Dry Density (FDD) t/m^3	1.70	1.74	1.65	1.62
Peak Converted Wet Density t/m^3	2.06	2.02	1.89	1.97
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.5	1.0	3.0	1.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**96.0**	**99.5**	**102.5**	**99.5**
Compaction Method	**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: 22-196-6
Issue Number: 1
Date Issued: 23/06/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDEN LANE
Project Number: 22-196
Project Name: TEMPORARY FISH PASSAGE
Project Location: WATERLEA TRUNK GRAVITY SEWER WALLOON
Client Reference: 55056
Work Request: 1282
Date Sampled: 20/06/2022
Dates Tested: 20/06/2022 - 22/06/2022
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: Temporary Fish Passage,Walloon
Material: General Fill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S1282A	S1282B	S1282C	S1282D
Test Number	17	18	19	20
Date Tested	20/06/2022	20/06/2022	20/06/2022	20/06/2022
Time Tested	10:35	10:40	10:45	10:45
Test Request #/Location	Bund Wall Fill	Bund Wall Fill	Bund Wall Fill	Bund Wall Fill
Easting	465117.81	465123.29	465122.98	465122.18
Northing	6947519.42	6947540.14	6947560.10	6947592.43
Elevation (m)	53.54	53.71	53.85	54.18
Layer / Reduced Level	Final Level	Final Level	Final Level	Final Level
Thickness of Layer (mm)	200	200	200	200
Soil Description	Clay Brown	Clay Brown	Clay Brown	Clay Brown
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.95	1.94	1.95	1.95
Field Moisture Content %	21.9	22.1	24.1	19.3
Field Dry Density (FDD) t/m^3	1.60	1.59	1.57	1.63
Peak Converted Wet Density t/m^3	2.01	1.99	1.98	1.97
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	1.0	1.0	-2.0	1.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**97.0**	**98.0**	**98.5**	**99.0**
Compaction Method	**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: 22-372-1
Issue Number: 1
Date Issued: 02/09/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 2299
Date Sampled: 30/08/2022
Dates Tested: 30/08/2022 - 01/09/2022
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: Dawn Estate Stage 6B2
Material: Allotment Fill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S2299A	S2299B	S2299C	S2299D
Test Number	1	2	3	4
Date Tested	30/08/2022	30/08/2022	30/08/2022	30/08/2022
Time Tested	01:30	01:35	01:40	01:00
Test Request #/Location	Allotment Fill Lot 672	Allotment Fill Lot 673	Allotment Fill Lot 711	Allotment Fill Lot 710
Easting	6m Off South Boundary	8m Off Northern Boundary	8m Off North Boundary	6m Off North Boundary
Northing	10m Off East Boundary	6m Off East Boundary	0m Off West Boundary	3m Off East Boundary
Layer / Reduced Level	Final Level	Final Level	Final Level	Final Level
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.02	2.06	1.95	2.05
Field Moisture Content %	20.8	18.6	28.3	18.6
Field Dry Density (FDD) t/m^3	1.67	1.74	1.52	1.73
Peak Converted Wet Density t/m^3	2.02	2.03	1.93	1.92
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	1.0	3.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**100.5**	**101.5**	**101.5**	**106.5**
Compaction Method	**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: **22-372-2**
Issue Number: 1
Date Issued: 06/09/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 2328
Date Sampled: 01/09/2022
Dates Tested: 01/09/2022 - 05/09/2022
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: Dawn Estate Stage 6B3
Material: Allotment Fill
Material Source: on-site

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

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Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S2328A	S2328B	
Test Number	5	6	
Date Tested	01/09/2022	01/09/2022	
Time Tested	12:30	12:35	
Test Request #/Location	Allotment Fill Lot 675	Allotment Fill Lot 709	
Easting	5m Off South Boundary	2m Off South Boundary	
Northing	11m Off West Boundary	5m Off West Boundary	
Layer / Reduced Level	Final Level	Final Level	
Thickness of Layer (mm)	200	200	
Soil Description	Silty CLAY	Silty CLAY	
Test Depth (mm)	175	175	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	1.92	1.93	
Field Moisture Content %	19.0	19.2	
Field Dry Density (FDD) t/m^3	1.61	1.62	
Peak Converted Wet Density t/m^3	1.91	1.94	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	1.0	0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**100.5**	**99.5**	
Compaction Method	**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: 22-372-3
Issue Number: 1
Date Issued: 20/09/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 2428
Date Sampled: 08/09/2022
Dates Tested: 08/09/2022 - 19/09/2022
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: Dawn Estate Stage 6B3
Material: Allotment Fill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S2428A	S2428B	S2428C
Test Number	7	8	9
Date Tested	08/09/2022	08/09/2022	08/09/2022
Time Tested	10:00	10:05	10:10
Test Request #/Location	Allotment Fill Lot 713	Allotment Fill Lot 714	Allotment Fill Lot 715
Easting	5m Off East Boundary	6m Off East Boundary	7m Off East Boundary
Northing	6m Off North Boundary	7m Off South Boundary	4m Off North Boundary
Layer / Reduced Level	Finish Level	Finish Level	Finish Level
Thickness of Layer (mm)	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m^3	1.91	1.88	1.95
Field Moisture Content %	25.0	22.3	23.6
Field Dry Density (FDD) t/m^3	1.53	1.54	1.58
Peak Converted Wet Density t/m^3	1.96	1.94	1.98
Adjusted Peak Converted Wet Density t/m^3	**	**	**
Moisture Variation (Wv) %	-1.5	-0.5	0.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	**97.0**	**97.0**	**98.5**
Compaction Method	**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: **22-372-4**
Issue Number: 1
Date Issued: 26/09/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 2571
Date Sampled: 20/09/2022
Dates Tested: 20/09/2022 - 23/09/2022
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: Dawn Estate Stage 6B2 And 6B3
Material: General Fill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S2571A	S2571B	
Test Number	14	15	
Date Tested	20/09/2022	20/09/2022	
Time Tested	01:00	01:05	
Test Request #/Location	General Fill Lot 676	General Fill Lot 708	
Easting	4m Off South Boundary	4m Off North Boundary	
Northing	5m Off East Boundary	6m Off East Boundary	
Layer / Reduced Level	0.5m Below F/L	Finish Level	
Thickness of Layer (mm)	200	200	
Soil Description	Silty CLAY	Silty CLAY	
Test Depth (mm)	175	175	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	1.96	1.92	
Field Moisture Content %	24.3	25.6	
Field Dry Density (FDD) t/m^3	1.57	1.53	
Peak Converted Wet Density t/m^3	1.96	1.96	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	0.5	0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**100.0**	**98.5**	
Compaction Method	**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: **22-372-5**
Issue Number: 1
Date Issued: 28/09/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 2465
Date Sampled: 13/09/2022
Dates Tested: 13/09/2022 - 26/09/2022
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: Dawn Stage 6B2, 6B3 and Partial 6F
Material: Allotment Fill
Material Source: Onsite

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S2465A	S2465B	S2465C	S2465D
Test Number	10	11	12	13
Date Tested	13/09/2022	13/09/2022	13/09/2022	13/09/2022
Time Tested	10:12	10:15	10:22	10:27
Test Request #/Location	Lot 733 / Lot 734	Lot 732	Lot 730	Lot 717
Easting	On Boundary Line of Lot 733 & 734	6m from North Boundary	7m from South Boundary	6m from North Boundary
Northing	10m from front of Lot	5m from East Boundary	5m from West Boundary	5m from East Boundary
Layer / Reduced Level	Finish Level	Finish Level	Finish Level	Finish Level
Thickness of Layer (mm)	175	175	175	175
Soil Description	Silty Clay	Silty Clay	Silty Clay	Silty Clay
Test Depth (mm)	150	150	150	150
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.98	1.95	1.98	1.98
Field Moisture Content %	18.2	20.0	19.1	19.0
Field Dry Density (FDD) t/m^3	1.68	1.63	1.67	1.67
Peak Converted Wet Density t/m^3	1.94	1.96	1.90	1.97
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	1.0	-0.5	2.5	1.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**102.0**	**99.5**	**104.5**	**100.5**
Compaction Method	**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: **22-372-6**
Issue Number: 1
Date Issued: 28/09/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 2594
Date Sampled: 21/09/2022
Dates Tested: 21/09/2022 - 26/09/2022
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: Dawn Estate Stage 6B2-6B3,Walloon
Material: General Fill
Material Source: On-site

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

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Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	S2594A	S2594B	
Test Number	16	17	
Date Tested	21/09/2022	21/09/2022	
Time Tested	12:20	12:25	
Test Request #/Location	Lot 677	Lot 707	
Easting	6m Off West Boundary	4m Off North Boundary	
Northing	7m Off South Boundary	7m Off East Boundary	
Layer / Reduced Level	0.5m Below F/L	Finish Level	
Thickness of Layer (mm)	200	200	
Soil Description	Silty CLAY	Silty CLAY	
Test Depth (mm)	175	175	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Percentage of Dry Oversize (%) (AS1289.5.4.1)	**	**	
Field Wet Density (FWD) t/m^3	1.95	2.00	
Field Moisture Content %	23.3	20.2	
Field Dry Density (FDD) t/m^3	1.59	1.66	
Peak Converted Wet Density t/m^3	1.93	1.99	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Adj. Optimum Moisture Content % (AS1289.5.4.1)	**	**	
Adj. Field Moisture Content % (AS1289.5.4.1)	23.3	20.2	
Moisture Ratio % (AS1289.5.4.1)	97.0	98.0	
Adjusted Moisture Ratio % (AS1289.5.4.1)	**	**	
Moisture Variation (Wv) %	0.5	0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**101.5**	**100.0**	
Compaction Method	**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: **22-372-7**
Issue Number: 1
Date Issued: 10/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-372
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGES 6B2 & 6B3 - WALLOON
Client Reference: 55297
Work Request: 2655
Date Sampled: 28/09/2022
Dates Tested: 28/09/2022 - 05/10/2022
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: Dawn Estate Stage 6B2 & 6B3
Material: Allotment Fill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S2655A	S2655B	S2655C	S2655D
Test Number	18	19	20	21
Date Tested	28/09/2022	28/09/2022	28/09/2022	28/09/2022
Time Tested	12:00	12:05	12:10	12:15
Test Request #/Location	Allotment Fill Lot 706 & 678	Allotment Fill Lot 731 & 716	Allotment Fill Lot 728	Allotment Fill Lot 719
Easting	Boarder Between Lots 706 & 678	Boarder Between Lots 731 & 716	6m Off North Boundary	17m Off West Boundary
Northing	5m Off South Boarder	10m Off South Boarder	10m Off East Boundary	7m Off South Boundary
Layer / Reduced Level	Finish Level	Finish Level	Finish Level	Finish Level
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	1.96	1.94	1.91	1.95
Field Moisture Content %	20.2	22.6	24.5	24.4
Field Dry Density (FDD) t/m^3	1.63	1.59	1.53	1.57
Peak Converted Wet Density t/m^3	1.92	1.94	1.96	1.95
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**102.0**	**100.0**	**97.5**	**100.0**
Compaction Method	**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: 22-375-1
Issue Number: 1
Date Issued: 26/09/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-375
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGE 6F - WALLOON
Client Reference: 55297
Work Request: 2418
Date Sampled: 08/09/2022
Dates Tested: 08/09/2022 - 23/09/2022
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
Location: Dawn Estate Stage 6F
Material: General Fill
Material Source: On-site

Qualtest Laboratory Pty Ltd
Qualtest Laboratory Pty Limited
2 / 40 Boyland Ave Cooper Plains QLD 4108
Phone: 0417 011 515
Email: greg@qualtestgeo.com
Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S2418A	S2418B	S2418C	S2418D	S2418E	S2418F
Test Number	1	2	3	4	5	6
Date Tested	08/09/2022	08/09/2022	08/09/2022	08/09/2022	08/09/2022	08/09/2022
Time Tested	08:00	08:05	08:10	08:15	08:30	08:35
Test Request #/Location	General Fill	General Fill	General Fill	General Fill	General Fill	General Fill
Easting	465461.21	465437.02	465436.91	465458.34	465433.80	465431.44
Northing	6947394.69	6947398.58	6947414.00	6947409.08	694713.99	694733.43
Layer / Reduced Level	Finish Level	Finish Level	Finish Level	Finish Level	Finish Level	Finish Level
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.95	1.93	1.92	1.93	1.99	1.99
Field Moisture Content %	22.4	26.9	25.4	24.6	20.6	24.5
Field Dry Density (FDD) t/m^3	1.59	1.52	1.53	1.55	1.65	1.60
Peak Converted Wet Density t/m^3	1.94	1.94	1.96	1.96	1.99	1.98
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	-0.5	-0.5	-0.5	-0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**100.5**	**99.5**	**98.0**	**98.5**	**100.0**	**101.0**
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: **22-375-2**
Issue Number: 1
Date Issued: 21/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-375
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGE 6F - WALLOON
Client Reference: 55297
Work Request: 2742
Date Sampled: 06/10/2022
Dates Tested: 06/10/2022 - 20/10/2022
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: Dawn Estate Stage 6F
Material: General Fill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S2742A	S2742B	S2742C	S2742D	S2742E	S2742F
Test Number	7	8	9	10	11	12
Date Tested	06/10/2022	06/10/2022	06/10/2022	06/10/2022	06/10/2022	06/10/2022
Time Tested	10:00	10:05	10:10	10:15	10:20	10:25
Test Request #/Location	General Fill	General Fill	General Fill	General Fill	General Fill	General Fill
Easting	465472.9	465488.8	465450.5	465480.4	465479.0	465472.6
Northing	6947369.3	6947364.2	6947400.5	6947352.3	6947363.2	6947356.7
Elevation (m)	RL: 50.0	RL: 50.4	RL: 50.2	RL: 50.4	RL: 50.6	RL: 50.5
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.96	1.97	1.92	1.92	1.86	1.93
Field Moisture Content %	18.9	22.3	20.3	23.5	19.3	22.2
Field Dry Density (FDD) t/m^3	1.65	1.61	1.60	1.56	1.56	1.58
Peak Converted Wet Density t/m^3	1.99	2.02	1.99	2.01	1.95	2.00
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	-2.5	0.0	0.0	-2.0	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**98.5**	**97.5**	**96.5**	**95.5**	**95.5**	**97.0**
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: **22-375-2**
Issue Number: 1
Date Issued: 21/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-375
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGE 6F - WALLOON
Client Reference: 55297
Work Request: 2742
Date Sampled: 06/10/2022
Dates Tested: 06/10/2022 - 20/10/2022
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: Dawn Estate Stage 6F
Material: General Fill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S2742G	S2742H	S2742I	S2742J	S2742K	S2742L
Test Number	13	14	15	16	17	18
Date Tested	06/10/2022	06/10/2022	06/10/2022	06/10/2022	06/10/2022	06/10/2022
Time Tested	10:30	10:35	01:00	01:05	01:10	01:15
Test Request #/Location	General Fill	General Fill	General Fill	General Fill	General Fill	General Fill
Easting	465495.6	465486.1	465559.2	465577.3	465567.4	465549.1
Northing	6947357.1	6947344.2	6947347.6	6947344.8	6947331.9	6947337.4
Elevation (m)	RL: 50.3	RL: 50.5	RL: 51.2	RL: 51.0	RL: 50.8	RL: 50.9
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.95	1.93	2.00	2.02	2.03	2.01
Field Moisture Content %	21.8	16.7	21.9	17.7	18.6	19.1
Field Dry Density (FDD) t/m^3	1.60	1.65	1.64	1.71	1.71	1.69
Peak Converted Wet Density t/m^3	2.00	2.01	2.03	2.00	2.03	2.06
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	0.0	-0.5	-0.5	0.0	0.0	-2.0
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**97.5**	**96.0**	**99.0**	**100.5**	**100.0**	**97.5**
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: **22-375-2**
Issue Number: 1
Date Issued: 21/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-375
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGE 6F - WALLOON
Client Reference: 55297
Work Request: 2742
Date Sampled: 06/10/2022
Dates Tested: 06/10/2022 - 20/10/2022
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: Dawn Estate Stage 6F
Material: General Fill
Material Source: On-site

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

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Greg Gibson
ql-greg

NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S2742M	S2742N				
Test Number	19	20				
Date Tested	06/10/2022	06/10/2022				
Time Tested	01:20	01:25				
Test Request #/Location	General Fill	General Fill				
Easting	465578.1	465596.0				
Northing	6947366.7	6947363.7				
Elevation (m)	RL: 51.9	RL: 52.3				
Thickness of Layer (mm)	200	200				
Soil Description	Silty CLAY	Silty CLAY				
Test Depth (mm)	175	175				
Sieve used to determine oversize (mm)	19.0	19.0				
Percentage of Wet Oversize (%)	0	0				
Field Wet Density (FWD) t/m^3	1.97	1.98				
Field Moisture Content %	20.0	21.0				
Field Dry Density (FDD) t/m^3	1.64	1.63				
Peak Converted Wet Density t/m^3	2.07	2.04				
Adjusted Peak Converted Wet Density t/m^3	**	**				
Moisture Variation (Wv) %	1.0	-0.5				
Adjusted Moisture Variation %	**	**				
Hilf Density Ratio (%)	**95.0**	**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

Material Test Report

Report Number: 22-375-3
Issue Number: 1
Date Issued: 24/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-375
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGE 6F - WALLOON
Client Reference: 55297
Work Request: 2762
Date Sampled: 07/10/2022
Dates Tested: 07/10/2022 - 21/10/2022
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: Dawn Estate Stage 6F,Walloon
Material: General Fill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	S2762A	S2762B	S2762C	S2762D	S2762E	S2762F
Test Number	21	22	23	24	25	26
Date Tested	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022	07/10/2022
Time Tested	10:00	10:05	10:10	10:15	10:20	10:25
Test Request #/Location	General Fill	General Fill	General Fill	General Fill	General Fill	General Fill
Easting	465483.6	465475.7	465495.7	465576.6	465494.6	465501.9
Northing	6947374.5	6947344.6	6947339.8	6947330.9	6947333.8	6947352.2
Elevation (m)	50.6	50.6	50.8	50.7	50.8	51.0
Thickness of Layer (mm)	200	200	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175	175	175
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	1.91	1.94	1.98	2.00	1.95	1.92
Field Moisture Content %	19.3	22.0	21.9	22.4	21.8	20.4
Field Dry Density (FDD) t/m^3	1.60	1.59	1.63	1.63	1.60	1.59
Peak Converted Wet Density t/m^3	1.93	1.98	2.02	2.03	1.98	1.91
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**	**	**
Moisture Variation (Wv) %	1.5	0.5	0.5	1.0	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	**99.0**	**97.5**	**98.5**	**98.5**	**98.5**	**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: 22-375-4
Issue Number: 1
Date Issued: 24/10/2022
Client: CCA WINSLOW PTY LTD
1587 IPSWICH ROAD, ROCKLEA QLD 4106
Contact: HAYDN LANE
Project Number: 22-375
Project Name: RESIDENTIAL SUBDIVISION
Project Location: DAWN ESTATE - STAGE 6F - WALLOON
Client Reference: 55297
Work Request: 2791
Date Sampled: 10/10/2022
Dates Tested: 10/10/2022 - 21/10/2022
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: Dawn Estate Stage 6F
Material: General Fill
Material Source: On-site

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

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Approved Signatory: Rhys Mitchell
Field Technician
NATA Accredited Laboratory Number: 2316

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	S2791A	S2791B	S2791C	S2791D
Test Number	27	28	29	30
Date Tested	10/10/2022	10/10/2022	10/10/2022	10/10/2022
Time Tested	10:00	10:05	10:10	10:15
Test Request #/Location	General Fill	General Fill	General Fill	General Fill
Easting	465439.1	465433.7	465447.3	465438.3
Northing	6947392.6	6947381.6	6947366.3	6947364.5
Elevation (m)	51.2	51.0	51.5	51.4
Thickness of Layer (mm)	200	200	200	200
Soil Description	Silty CLAY	Silty CLAY	Silty CLAY	Silty CLAY
Test Depth (mm)	175	175	175	175
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m^3	2.04	2.04	1.97	1.98
Field Moisture Content %	19.8	19.2	19.6	19.2
Field Dry Density (FDD) t/m^3	1.70	1.71	1.65	1.66
Peak Converted Wet Density t/m^3	2.05	2.02	1.93	2.01
Adjusted Peak Converted Wet Density t/m^3	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	0.5	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	**99.5**	**100.5**	**102.0**	**98.0**
Compaction Method	**Standard**	**Standard**	**Standard**	**Standard**
Report Remarks	**	**	**	**

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