

**WORKS
INSPECTION &
TESTING
Bulk Earthworks**

**PROPOSED
RESIDENTIAL
DEVELOPMENT**

87 Koplick Road

PARK RIDGE

JOB NO: P1925 comp01



Prepared for CCA Winslow
01st April 2021

Document Information

Prepared for CCA Winslow
 Project Name Proposed Residential Development – 87 Kolick Road

Job Number P1925
 Date 01st April 2021

Document Control

Document Control - This Document Is:- ORIGINAL COPY

| Report ID | Date | Author | Reviewer | | | |
|---|------------|--------------|------------|-------------------------------------|--------------------------|-------------------------------------|
| P1925 comp 01 | 01/04/2021 | Wayne Gorman | WG | Mathew Ketchup | | MK |
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Contact : Wayne Gorman
wayne.gorman@constructionsciences.net
 1 Fox Road
 Acacia Ridge QLD 4110

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INTRODUCTION

Construction Sciences was commissioned by **CCA Winslow** to carry out the geotechnical inspection and testing required for the proposed development at 87 Koplick Road – Park Ridge, which was carried out between 01st May and 26th November 2020.

SCOPE OF WORKS

The Earthworks on this development was monitored in accordance with the scope of our commission as follows:-

Level 1 : Bulk earthworks stripping and filling was inspected and tested on a Level 1 basis, in accordance with AS 3798-2007.

Scope of Level 1 responsibility: ***“The primary objective of Level 1 Inspection and Testing is for the geotechnical inspection and testing authority (GITA) to be able to express an opinion on the compliance of the work. The GITA is responsible for ensuring that the inspection and testing is sufficient for this purpose.***

The GITA needs to have competent personnel on site at all times while earthwork operations are undertaken. Such operations include the following:

- (a) Completion of removal of topsoil.***
- (b) Placing of imported or cut material.***
- (c) Compaction and adding/removal of moisture.***
- (d) Trenching and backfilling, where applicable.***
- (e) Test rolling.***
- (f) Testing.***

The superintendent should agree on a suitable inspection and testing plan prior to the commencement of the works”.

reference AS3798 – Section 8.2

SPECIFICATION REQUIREMENTS

Earthworks on this development was inspected and tested in accordance with the specification of the design engineer, **PEAKURBAN Development Engineers & Advisors** and to the specifications of the local authority, **Logan City Council**.

The following table is a summary of the basic compaction and quality requirements for the project.

Testing procedures used to confirm that these requirements were met were all in accordance with Australian Standard test methods

| SPECIFICATIONS | |
|------------------------------------|--|
| <i>Item</i> | <i>Minimum Compaction Requirement</i> |
| <i>Bulk Earthworks Fill</i> | <i>95% Wet Density Ratio - Standard</i> |

SITE WORKS - BULK EARTHWORKS

General : Full time site inspection was maintained in accordance with Level 1 requirements whilst earthworks were carried out on this development. Fill areas included residential allotments, roads and embankments.

The areas to be filled were stripped and proof rolled in accordance with the specification requirements. Areas displaying instability were generally excavated until competent conditions were encountered. Benching was provided on slopes where filling was to be placed.

The natural ground in the areas of filling generally comprised gravelly to sandy CLAYS and clayey to gravelly SANDS.

The material used in the bulk earthworks filling was sourced from site cutting to design levels.

Compaction Control Testing : Compaction control testing via the nuclear densometer method was carried out at regular intervals throughout the placement of fill, in accordance with the minimum test frequency recommendations included in AS3798 "Guidelines on Earthworks for Commercial and Residential Developments".

All test results are included in Appendix A. A summary of the test results is included as Table 1. A total of 33 field density tests were carried out throughout the earthworks. The average wet density ratio was recorded to be 99.26%. The maximum wet density ratio was 101.5% and minimum was 95.5%.

CONCLUSION

We confirm that:

- (a) Our representative was in full time site attendance whilst bulk earthworks filling was in progress between 01st May and 26th November 2020 at 87 Koplick Road – Park Ridge.
- (b) Pre – fill ground preparation was carried out in accordance with the specifications and site instruction given.
- (c) The structural filling placed to design levels during the term of our engagement on a "Level 1" basis can be termed "controlled filling".
- (d) The results of the compaction control testing indicate that the fill placed during the term of our site attendance, was compacted to at least the minimum specified wet density ratio.
- (e) All test results pertaining to the development are included within appendix A of this report.



WAYNE GORMAN
LABORATORY MANAGER
Construction Sciences



| | |
|------------|------------------------|
| CLIENT: | CCA Winslow |
| PROJECT: | 87 Koplick Road |
| TEST ITEM: | SITE PHOTOS |

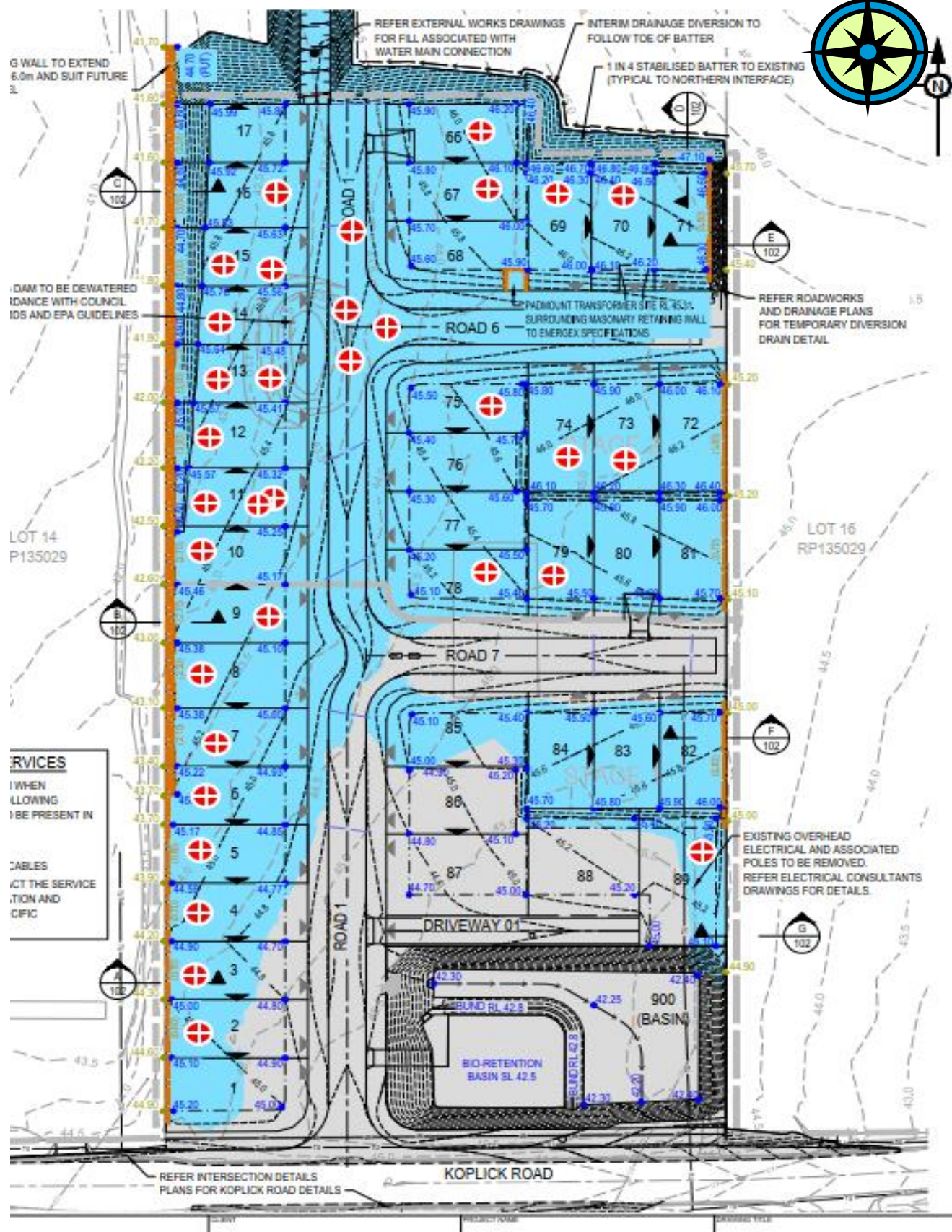
| | |
|--------------|-------------------|
| JOB No.: | P 1925 |
| SKETCH No.: | SK 1 |
| DATE ISSUED: | 01/04/2021 |



| | |
|---------------------------------|--------------------------------|
| CLIENT: CCA Winslow | JOB No.: P 1925 |
| PROJECT: 87 Koplick Road | SKETCH No.: SK 2 |
| TEST ITEM: SITE PHOTOS | DATE ISSUED: 01/04/2021 |



| | |
|---------------------------------|--------------------------------|
| CLIENT: CCA Winslow | JOB No.: P 1925 |
| PROJECT: 87 Koplick Road | SKETCH No.: SK 3 |
| TEST ITEM: SITE PHOTOS | DATE ISSUED: 01/04/2021 |



Denotes Approximate Density Location

| | | |
|--|------------------------------------|--------------------------------|
| | CLIENT: CCA Winslow | JOB No.: P 1925 |
| | PROJECT: 87 Koplick Road | SKETCH No.: SK 4 |
| | TEST ITEM: DENSITY LOCATION | DATE ISSUED: 01/04/2021 |

APPENDIX

A

BULK EARTHWORKS
FILL



| | |
|---------------------|--|
| Client: CCA Winslow | Project: 1979/P/1925 - 87 Koplick Road |
|---------------------|--|

| Sample Client Reference | Sample Number | Sample Date/Time | Source | Material | Easting | Northing | RL | Allotment | Wet Density Ratio | Moisture Variation |
|-------------------------|---------------|------------------------|-------------|-----------|---------|-----------|-----------------|-----------|-------------------|--------------------|
| EW-01 | 1979/S/132723 | 1/05/2020 10:32:00 AM | On-Site | Bulk Fill | 508024 | 6933889 | 41.86 | 14 | 97.5 | 2.0 |
| EW-02 | 1979/S/132724 | 1/05/2020 10:38:00 AM | On-Site | Bulk Fill | 508034 | 6933900 | 41.97 | 15 | 95.5 | 2.0 |
| EW-03 | 1979/S/132860 | 5/05/2020 12:56:00 PM | On-Site | Bulk Fill | 508044 | 6933940 | 42.37 | 13 | 98.0 | 2.0 |
| EW-04 | 1979/S/132861 | 5/05/2020 1:52:00 PM | On-Site | Bulk Fill | 508030 | 6933918 | 42.28 | 11 | 98.5 | 2.0 |
| EW-05 | 1979/S/132942 | 6/05/2020 1:04:00 PM | On-Site | Bulk Fill | 508071 | 6933857 | 45.46 | 79 | 100.5 | 2.0 |
| EW-06 | 1979/S/132943 | 6/05/2020 1:12:00 PM | On-Site | Bulk Fill | 508058 | 6933847 | 45.07 | 78 | 99.0 | 2.0 |
| EW-07 | 1979/S/133255 | 8/05/2020 12:50:00 PM | On-Site | Bulk Fill | 508005 | 6933810 | 25.0 | LOT7 | 99.5 | 0.0 |
| EW-08 | 1979/S/133256 | 8/05/2020 1:00:00 PM | On-Site | Bulk Fill | 508006 | 6933822 | 25.2 | LOT8 | 102.5 | 0.5 |
| EW-09 | 1979/S/133257 | 8/05/2020 1:10:00 PM | On-Site | Bulk Fill | 508012 | 6933839 | 25.0 | LOT9 | 100.0 | 0.0 |
| EW-10 | 1979/S/134395 | 26/05/2020 11:40:00 AM | Cut to Fill | Bulk Fill | Lot 89 | E: 508097 | N: 6933763 | RL 45.152 | 101.5 | 2.0 |
| EW-11 | 1979/S/134396 | 26/05/2020 12:10:00 PM | Cut to Fill | Bulk Fill | Lot 4 | E: 507997 | N: 6933781 | RL 44.854 | 99.5 | -0.5 |
| EW-12 | 1979/S/134397 | 26/05/2020 12:22:00 PM | Cut to Fill | Bulk Fill | Lot 5 | E: 508003 | N: 6933794 | RL 44.865 | 103.5 | 1.5 |
| EW-13 | 1979/S/134398 | 26/05/2020 12:37:00 PM | Cut to Fill | Bulk Fill | Lot 6 | E: 508007 | N: 6933812 | RL 44.989 | 100.0 | 2.0 |
| EW-14 | 1979/S/134399 | 26/05/2020 1:15:00 PM | Cut to Fill | Bulk Fill | Lot 2 | E: 507988 | N: 6933756 | RL 44.936 | 98.5 | -0.5 |
| EW-15 | 1979/S/134400 | 26/05/2020 1:33:00 PM | Cut to Fill | Bulk Fill | Lot 3 | E: 507992 | N: 6933771 | RL 44.842 | 100.0 | 0.0 |
| EW-16 | 1979/S/134504 | 27/05/2020 11:43:00 AM | Imported | Bulk Fill | Lot 10 | E: 508015 | N: 6933857 | RL 44.973 | 99.5 | 1.5 |
| EW-17 | 1979/S/134505 | 27/05/2020 11:56:00 AM | Imported | Bulk Fill | Lot 12 | E: 508021 | N: 6933888 | RL 44.371 | 100.0 | 1.5 |
| EW-18 | 1979/S/134506 | 27/05/2020 12:15:00 PM | Imported | Bulk Fill | Lot 15 | E: 508023 | N: 6933928 | RL 44.364 | 99.5 | 1.5 |
| EW-19 | 1979/S/134611 | 28/05/2020 1:55:00 PM | Imported | Bulk Fill | Lot 11 | E: 508019 | N: 6933863 | RL 45.142 | 98.5 | 1.5 |
| EW-20 | 1979/S/134612 | 28/05/2020 2:08:00 PM | Imported | Bulk Fill | Lot 13 | E: 508028 | N: 6933897 | RL 44.934 | 100.0 | 2.0 |
| EW-21 | 1979/S/134613 | 28/05/2020 2:21:00 PM | Imported | Bulk Fill | Lot 16 | E: 508032 | N: 6933939 | RL 44.872 | 100.0 | 1.5 |
| EW-22 | 1979/S/134843 | 29/05/2020 12:22:00 PM | Imported | Bulk Fill | Lot 70 | E: 508104 | N: 6933915 | RL 45.604 | 96.5 | 1.5 |
| EW-23 | 1979/S/134844 | 29/05/2020 12:35:00 PM | Imported | Bulk Fill | Lot 69 | E: 508093 | N: 6933926 | RL 45.662 | 99.5 | 1.5 |
| EW-24 | 1979/S/134845 | 29/05/2020 12:54:00 PM | Imported | Bulk Fill | Lot 66 | E: 508075 | N: 6933939 | RL 44.886 | 99.0 | 1.5 |
| EW-25 | 1979/S/134846 | 29/05/2020 1:08:00 PM | Imported | Bulk Fill | Lot 67 | E: 508072 | N: 6933929 | RL 45.082 | 101.0 | 1.5 |
| EW-26 | 1979/S/134847 | 29/05/2020 1:24:00 PM | Imported | Bulk Fill | Lot 75 | E: 508069 | N: 6933882 | RL 45.166 | 96.5 | 2.0 |
| EW-27 | 1979/S/134848 | 29/05/2020 1:40:00 PM | Imported | Bulk Fill | Lot 74 | E: 508086 | N: 6933884 | RL 45.395 | 99.5 | 1.5 |
| EW-28 | 1979/S/134849 | 29/05/2020 1:53:00 PM | Imported | Bulk Fill | Lot 73 | E: 508098 | N: 6933881 | RL 45.273 | 97.0 | 2.0 |
| EW-29 | 1979/S/134932 | 1/06/2020 11:46:00 AM | Imported | Bulk Fill | Road 6 | Ch 10 | 2.0m Right | RL 44.54 | 100.0 | 1.5 |
| EW-30 | 1979/S/134933 | 1/06/2020 12:24:00 PM | Imported | Bulk Fill | Road 1 | Ch 205 | 1.5m Left | RL 44.44 | 99.5 | 1.5 |
| EW-31 | 1979/S/134934 | 1/06/2020 12:56:00 PM | Imported | Bulk Fill | Road 1 | Ch 190 | C/L | RL 44.49 | 100.5 | 2.0 |
| EW-32 | 1979/S/134935 | 1/06/2020 1:12:00 PM | Imported | Bulk Fill | Road 1 | Ch 180 | 0.5m Left | RL 44.41 | 99.5 | 1.5 |
| EW-33 | 1979/S/147114 | 26/11/2020 1:05:00 PM | On-Site | Bulk Fill | 508009 | 6933878 | -1.5m Below F/L | Lot 11 | 95.5 | 0.5 |

TABLE 1



WET DENSITY RATIO REPORT

| | |
|---|---|
| Client: CCA Winslow Client Address: 1587 Ipswich Road, Rocklea Project: 87 Koplick Road Location: Chambers Flat Component: Bulk Earthworks Area Description: Stage 6 | Report Number: 1979/R/48414-1 Project Number: 1979/P/1925 Lot Number: - Internal Test Request: 1979/T/26378 Client Reference/s: WR2504 Report Date / Page: 15/05/2020 Page 1 of 1 |
|---|---|

| | |
|-------------------------|--|
| Test Procedures: | AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1 |
|-------------------------|--|

| Sample Number | 1979/S/132723 | 1979/S/132724 | | |
|---|----------------------|----------------------|--|--|
| ID / Client ID | EW-01 | EW-02 | | |
| Lot Number | - | - | | |
| Date / Time Tested | 1/05/2020 10:32 | 1/05/2020 10:38 | | |
| Material Source | On-Site | On-Site | | |
| Material Type | Bulk Fill | Bulk Fill | | |
| Sampling Method | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b | | |
| Depths: Test / Nom / Actual (mm) | 175 / 200 / 200 | 175 / 200 / 200 | | |
| Standard or Modified | Standard | Standard | | |
| Easting: m | 508024 | 508034 | | |
| Northing m | 6933889 | 6933900 | | |
| RL: m | 41.86 | 41.97 | | |
| Allotment: | 14 | 15 | | |
| Test Fraction (mm) | < 19.0 mm | < 19.0 mm | | |
| Sample Oversize (%) | 0 | 0 | | |
| Compaction Sample Number | 1979/S/132723 | 1979/S/132724 | | |
| Sample Description | Clayey SAND, Brown | Clayey SAND, Brown | | |
| Moisture Test Results: | | | | |
| Field Moisture Content (%) | 12.5 | 12.6 | | |
| Adjusted / Moisture Variation (%) | 2.0 | 2.0 | | |
| Optimum Moisture Content (%) | 14.5 | 14.5 | | |
| Moisture Variation from OMC | (Drier than OMC) | (Drier than OMC) | | |
| Moisture Ratio (%) | 87.0 | 86.5 | | |
| Density Test Results: | | | | |
| Field Wet Density (t/m ³) | 2.11 | 2.02 | | |
| Adj/Peak Conv Wet Density (t/m ³) | 2.17 | 2.11 | | |
| Density Ratio Required (%) | 95 | 95 | | |
| Hilf Density Ratio (%) | 97.5 | 95.5 | | |

| |
|---------|
| Remarks |
|---------|

| | | |
|--|--|--|
|  | <p style="text-align: center; font-size: small;">The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing</p> <p>Accreditation Number: 1986 Corporate Site Number: 1979</p> |  Approved Signatory: Dean Stimpson Form ID: W5ASRep Rev 2 |
|--|--|--|



WET DENSITY RATIO REPORT

| | |
|--|---|
| Client: CCA Winslow Client Address: 1587 Ipswich Road, Rocklea Project: 87 Koplick Road Location: Chambers Flat Component: Bulk Earthworks Area Description: Level 1 Fill | Report Number: 1979/R/48548-1 Project Number: 1979/P/1925 Lot Number: - Internal Test Request: 1979/T/26398 Client Reference/s: WR2505 Report Date / Page: 20/05/2020 Page 1 of 1 |
|--|---|

| | |
|-------------------------|--|
| Test Procedures: | AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1 |
|-------------------------|--|

| Sample Number | 1979/S/132860 | 1979/S/132861 | | |
|---|----------------------|----------------------|--|--|
| ID / Client ID | EW-03 | EW-04 | | |
| Lot Number | - | - | | |
| Date / Time Tested | 5/05/2020 12:56 | 5/05/2020 13:52 | | |
| Material Source | On-Site | On-Site | | |
| Material Type | Bulk Fill | Bulk Fill | | |
| Sampling Method | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b | | |
| Depths: Test / Nom / Actual (mm) | 175 / 200 / 200 | 175 / 200 / 200 | | |
| Standard or Modified | Standard | Standard | | |
| Easting: m | 508044 | 508030 | | |
| Northing m | 6933940 | 6933918 | | |
| RL: m | 42.37 | 42.28 | | |
| Allotment: | 13 | 11 | | |
| Test Fraction (mm) | < 19.0 mm | < 19.0 mm | | |
| Sample Oversize (%) | 0 | 0 | | |
| Compaction Sample Number | 1979/S/132860 | 1979/S/132861 | | |
| Sample Description | Brown Clayey sand | Brown clayey sand | | |
| Moisture Test Results: | | | | |
| Field Moisture Content (%) | 11.2 | 13.1 | | |
| Adjusted / Moisture Variation (%) | 2.0 | 2.0 | | |
| Optimum Moisture Content (%) | 13.0 | 15.0 | | |
| Moisture Variation from OMC | (Drier than OMC) | (Drier than OMC) | | |
| Moisture Ratio (%) | 85.0 | 87.0 | | |
| Density Test Results: | | | | |
| Field Wet Density (t/m ³) | 2.10 | 2.11 | | |
| Adj/Peak Conv Wet Density (t/m ³) | 2.14 | 2.14 | | |
| Density Ratio Required (%) | 95 | 95 | | |
| Hilf Density Ratio (%) | 98.0 | 98.5 | | |

| |
|---------|
| Remarks |
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| | | |
|--|--|---|
|  | The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing |  Approved Signatory: Wayne Gorman Form ID: W5ASRep Rev 2 |
| | Accreditation Number: 1986 Corporate Site Number: 1979 | |



WET DENSITY RATIO REPORT

| | |
|--|---|
| Client: CCA Winslow Client Address: 1587 Ipswich Road, Rocklea Project: 87 Koplick Road Location: Chambers Flat Component: Bulk Earthworks Area Description: Level 1 Fill | Report Number: 1979/R/48524-1 Project Number: 1979/P/1925 Lot Number: - Internal Test Request: 1979/T/26410 Client Reference/s: WR2506 Report Date / Page: 19/05/2020 Page 1 of 1 |
|--|---|

| | |
|-------------------------|--|
| Test Procedures: | AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1 |
|-------------------------|--|

| Sample Number | 1979/S/132942 | 1979/S/132943 | | |
|---|----------------------|----------------------|--|--|
| ID / Client ID | EW-05 | EW-06 | | |
| Lot Number | - | - | | |
| Date / Time Tested | 6/05/2020 13:04 | 6/05/2020 13:12 | | |
| Material Source | On-Site | On-Site | | |
| Material Type | Bulk Fill | Bulk Fill | | |
| Sampling Method | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b | | |
| Depths: Test / Nom / Actual (mm) | 175 / 200 / 200 | 175 / 200 / 200 | | |
| Standard or Modified | Standard | Standard | | |
| Easting: m | 508071 | 508058 | | |
| Northing m | 6933857 | 6933847 | | |
| RL: m | 45.46 | 45.07 | | |
| Allotment: | 79 | 78 | | |
| Test Fraction (mm) | < 19.0 mm | < 19.0 mm | | |
| Sample Oversize (%) | 0 | 0 | | |
| Compaction Sample Number | 1979/S/132942 | 1979/S/132943 | | |
| Sample Description | Clay, Sand - orange | clay sand - orange | | |
| Moisture Test Results: | | | | |
| Field Moisture Content (%) | 9.5 | 11.8 | | |
| Adjusted / Moisture Variation (%) | 2.0 | 2.0 | | |
| Optimum Moisture Content (%) | 11.5 | 14.0 | | |
| Moisture Variation from OMC | (Drier than OMC) | (Drier than OMC) | | |
| Moisture Ratio (%) | 81.0 | 84.5 | | |
| Density Test Results: | | | | |
| Field Wet Density (t/m ³) | 2.17 | 2.09 | | |
| Adj/Peak Conv Wet Density (t/m ³) | 2.16 | 2.11 | | |
| Density Ratio Required (%) | 95 | 95 | | |
| Hilf Density Ratio (%) | 100.5 | 99.0 | | |

| |
|---------|
| Remarks |
|---------|

| | | |
|--|--|---|
|  | The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing |  Approved Signatory: Wayne Gorman Form ID: W5ASRep Rev 2 |
| | Accreditation Number: 1986 Corporate Site Number: 1979 | |



WET DENSITY RATIO REPORT

| | |
|---|---|
| Client: CCA Winslow Client Address: 1587 Ipswich Road, Rocklea Project: 87 Koplick Road Location: Chambers Flat Component: Bulk fill Area Description: LOT 7,8,9 | Report Number: 1979/R/48546-1 Project Number: 1979/P/1925 Lot Number: - Internal Test Request: 1979/T/26464 Client Reference/s: 8/5/20 Report Date / Page: 20/05/2020 Page 1 of 1 |
|---|---|

| | |
|-------------------------|--|
| Test Procedures: | AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1 |
|-------------------------|--|

| Sample Number | 1979/S/133255 | 1979/S/133256 | 1979/S/133257 | |
|---|----------------------|----------------------|----------------------|--|
| ID / Client ID | - | - | - | |
| Lot Number | - | - | - | |
| Date / Time Tested | 8/05/2020 12:50 | 8/05/2020 13:00 | 8/05/2020 13:10 | |
| Material Source | On-Site | On-Site | On-Site | |
| Material Type | Bulk Fill | Bulk Fill | Bulk Fill | |
| Sampling Method | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b | |
| Depths: Test / Nom / Actual (mm) | 225 / 250 / 250 | 225 / 250 / 250 | 225 / 250 / 250 | |
| Standard or Modified | Standard | Standard | Standard | |
| Easting m | 508005 | 508006 | 508012 | |
| Northing m | 6933810 | 6933822 | 6933839 | |
| RL m | 25.0 | 25.2 | 25.0 | |
| | LOT7 | LOT8 | LOT9 | |
| Test Fraction (mm) | < 19.0 mm | < 19.0 mm | < 19.0 mm | |
| Sample Oversize (%) | 0 | 0 | 0 | |
| Compaction Sample Number | 1979/S/133255 | 1979/S/133256 | 1979/S/133257 | |
| Sample Description | sandy clay orange | sandy clay orange | sandy clay orange | |
| Moisture Test Results: | | | | |
| Field Moisture Content (%) | 12.6 | 9.1 | 8.1 | |
| Adjusted / Moisture Variation (%) | 0.0 | 0.5 | 0.0 | |
| Optimum Moisture Content (%) | 13.0 | 9.5 | 8.5 | |
| Moisture Variation from OMC | (Drier than OMC) | (Drier than OMC) | (Drier than OMC) | |
| Moisture Ratio (%) | 98.5 | 97.0 | 97.5 | |
| Density Test Results: | | | | |
| Field Wet Density (t/m ³) | 2.11 | 2.18 | 2.11 | |
| Adj/Peak Conv Wet Density (t/m ³) | 2.11 | 2.13 | 2.12 | |
| Density Ratio Required (%) | 95 | 95 | 95 | |
| Hilf Density Ratio (%) | 99.5 | 102.5 | 100.0 | |

| |
|---------|
| Remarks |
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| | | |
|--|--|---|
|  | <p style="text-align: center; font-size: small;">The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing</p> <p>Accreditation Number: 1986 Corporate Site Number: 1979</p> |  Approved Signatory: Wayne Gorman Form ID: W5ASRep Rev 2 |
|--|--|---|



WET DENSITY RATIO REPORT

| | |
|---|---|
| Client: CCA Winslow Client Address: 1587 Ipswich Road, Rocklea Project: 87 Koplick Road Location: Chambers Flat Component: Bulk Fill Area Description: Allotment | Report Number: 1979/R/49269-1 Project Number: 1979/P/1925 Lot Number: - Internal Test Request: 1979/T/26731 Client Reference/s: Earthworks Report Date / Page: 19/06/2020 Page 1 of 2 |
|---|---|

| | |
|-------------------------|--|
| Test Procedures: | AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1 |
|-------------------------|--|

| Sample Number | 1979/S/134395 | 1979/S/134396 | 1979/S/134397 | 1979/S/134398 |
|---|---------------------------------------|--|-------------------------------------|---------------------------------------|
| ID / Client ID | EW-10 | EW-11 | EW-12 | EW-13 |
| Lot Number | - | - | - | - |
| Date / Time Tested | 26/05/2020 11:40 | 26/05/2020 12:10 | 26/05/2020 12:22 | 26/05/2020 12:37 |
| Material Source | Cut to Fill | Cut to Fill | Cut to Fill | Cut to Fill |
| Material Type | Bulk Fill | Bulk Fill | Bulk Fill | Bulk Fill |
| Sampling Method | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b |
| Depths: Test / Nom / Actual (mm) | 200 / - / - | 200 / - / - | 200 / - / - | 200 / - / - |
| Standard or Modified | Standard | Standard | Standard | Standard |
| Location | Lot 89 | Lot 4 | Lot 5 | Lot 6 |
| Level | E: 508097 N: 6933763 | E: 507997 N: 6933781 | E: 508003 N: 6933794 | E: 508007 N: 6933812 |
| Test Fraction (mm) | RL 45.152 | RL 44.854 | RL 44.865 | RL 44.989 |
| Sample Oversize (%) | < 19.0 mm | < 19.0 mm | < 19.0 mm | < 19.0 mm |
| Compaction Sample Number | 0 | 0 | 0 | 0 |
| Sample Description | 1979/S/134395 gravel, sand - bro3n | 1979/S/134396 gravel, sand - yellow | 1979/S/134397 clayey sand orange | 1979/S/134398 Gravelly SAND, Brown |
| Moisture Test Results: | | | | |
| Field Moisture Content (%) | 4.8 | 6.2 | 6.3 | 5.1 |
| Adjusted / Moisture Variation (%) | 2.0 | -0.5 | 1.5 | 2.0 |
| Optimum Moisture Content (%) | 6.5 | 5.5 | 8.0 | 7.0 |
| Moisture Variation from OMC | (Drier than OMC) | (Wetter than OMC) | (Drier than OMC) | (Drier than OMC) |
| Moisture Ratio (%) | 72.5 | 110.5 | 81.0 | 74.0 |
| Density Test Results: | | | | |
| Field Wet Density (t/m ³) | 2.22 | 2.11 | 2.15 | 2.13 |
| Adj/Peak Conv Wet Density (t/m ³) | 2.20 | 2.12 | 2.08 | 2.13 |
| Density Ratio Required (%) | 95 | 95 | 95 | 95 |
| Hilf Density Ratio (%) | 101.5 | 99.5 | 103.5 | 100.0 |

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| Remarks |
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|  | The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing |  Approved Signatory: Matthew Ketchup Form ID: W5ASRep Rev 2 |
| | Accreditation Number: 1986 Corporate Site Number: 1979 | |



WET DENSITY RATIO REPORT

| | |
|--|---|
| Client: CCA Winslow | Report Number: 1979/R/49269-1 |
| Client Address: 1587 Ipswich Road, Rocklea | Project Number: 1979/P/1925 |
| Project: 87 Koplick Road | Lot Number: - |
| Location: Chambers Flat | Internal Test Request: 1979/T/26731 |
| Component: Bulk Fill | Client Reference/s: Earthworks |
| Area Description: Allotment | Report Date / Page: 19/06/2020 Page 2 of 2 |

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| Test Procedures: | AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1 |
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| Sample Number | 1979/S/134399 | 1979/S/134400 | |
|---|----------------------|----------------------|--|
| ID / Client ID | EW-14 | EW-15 | |
| Lot Number | - | - | |
| Date / Time Tested | 26/05/2020 13:15 | 26/05/2020 13:33 | |
| Material Source | Cut to Fill | Cut to Fill | |
| Material Type | Bulk Fill | Bulk Fill | |
| Sampling Method | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b | |
| Depths: Test / Nom / Actual (mm) | 200 / - / - | 200 / - / - | |
| Standard or Modified | Standard | Standard | |
| Location | Lot 2 | Lot 3 | |
| | E: 507988 | E: 507992 | |
| | N: 6933756 | N: 6933771 | |
| Level | RL 44.936 | RL 44.842 | |
| Test Fraction (mm) | < 19.0 mm | < 19.0 mm | |
| Sample Oversize (%) | 0 | 0 | |
| Compaction Sample Number | 1979/S/134399 | 1979/S/134400 | |
| Sample Description | gravel, sand - brown | gravel, sand - brown | |
| Moisture Test Results: | | | |
| Field Moisture Content (%) | 4.2 | 4.8 | |
| Adjusted / Moisture Variation (%) | -0.5 | 0.0 | |
| Optimum Moisture Content (%) | 4.0 | 4.5 | |
| Moisture Variation from OMC | (Wetter than OMC) | (Wetter than OMC) | |
| Moisture Ratio (%) | 110.5 | 104.5 | |
| Density Test Results: | | | |
| Field Wet Density (t/m ³) | 2.11 | 2.09 | |
| Adj/Peak Conv Wet Density (t/m ³) | 2.14 | 2.09 | |
| Density Ratio Required (%) | 95 | 95 | |
| Hilf Density Ratio (%) | 98.5 | 100.0 | |

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|  | <p style="text-align: center;">The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing</p> <p>Accreditation Number: 1986 Corporate Site Number: 1979</p> |  Approved Signatory: Matthew Ketchup Form ID: W5ASRep Rev 2 |
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WET DENSITY RATIO REPORT

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|--|---|
| Client: CCA Winslow | Report Number: 1979/R/49271-1 |
| Client Address: 1587 Ipswich Road, Rocklea | Project Number: 1979/P/1925 |
| Project: 87 Koplick Road | Lot Number: - |
| Location: Chambers Flat | Internal Test Request: 1979/T/26756 |
| Component: Bulk Fill | Client Reference/s: Earthworks |
| Area Description: Allotment | Report Date / Page: 19/06/2020 Page 1 of 1 |

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| Test Procedures: | AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1 |
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| Sample Number | 1979/S/134504 | 1979/S/134505 | 1979/S/134506 |
|---|----------------------|----------------------|----------------------|
| ID / Client ID | EW-16 | EW-17 | EW-18 |
| Lot Number | - | - | - |
| Date / Time Tested | 27/05/2020 11:43 | 27/05/2020 11:56 | 27/05/2020 12:15 |
| Material Source | Imported | Imported | Imported |
| Material Type | Bulk Fill | Bulk Fill | Bulk Fill |
| Sampling Method | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b |
| Depths: Test / Nom / Actual (mm) | 200 / - / - | 200 / - / - | 200 / - / - |
| Standard or Modified | Standard | Standard | Standard |
| Location | Lot 10 | Lot 12 | Lot 15 |
| | E: 508015 | E: 508021 | E: 508023 |
| | N: 6933857 | N: 6933888 | N: 6933928 |
| Level | RL 44.973 | RL 44.371 | RL 44.364 |
| Test Fraction (mm) | < 19.0 mm | < 19.0 mm | < 19.0 mm |
| Sample Oversize (%) | 0 | 0 | 0 |
| Compaction Sample Number | 1979/S/134504 | 1979/S/134505 | 1979/S/134506 |
| Sample Description | Sandy CLAY, Brown | Sandy CLAY, Brown | Sandy CLAY, Brown |
| Moisture Test Results: | | | |
| Field Moisture Content (%) | 16.2 | 17.3 | 16.7 |
| Adjusted / Moisture Variation (%) | 1.5 | 1.5 | 1.5 |
| Optimum Moisture Content (%) | 18.0 | 19.0 | 18.5 |
| Moisture Variation from OMC | (Drier than OMC) | (Drier than OMC) | (Drier than OMC) |
| Moisture Ratio (%) | 90.5 | 92.0 | 91.5 |
| Density Test Results: | | | |
| Field Wet Density (t/m ³) | 2.02 | 2.01 | 2.08 |
| Adj/Peak Conv Wet Density (t/m ³) | 2.03 | 2.01 | 2.09 |
| Density Ratio Required (%) | 95 | 95 | 95 |
| Hilf Density Ratio (%) | 99.5 | 100.0 | 99.5 |

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|  | <p style="text-align: center;">The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing</p> <p>Accreditation Number: 1986 Corporate Site Number: 1979</p> |  Approved Signatory: Matthew Ketchup Form ID: W5ASRep Rev 2 |
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WET DENSITY RATIO REPORT

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|--|---|
| Client: CCA Winslow | Report Number: 1979/R/49272-1 |
| Client Address: 1587 Ipswich Road, Rocklea | Project Number: 1979/P/1925 |
| Project: 87 Koplick Road | Lot Number: - |
| Location: Chambers Flat | Internal Test Request: 1979/T/26756 |
| Component: Bulk Fill | Client Reference/s: Earthworks |
| Area Description: Allotment | Report Date / Page: 19/06/2020 Page 1 of 1 |

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| Test Procedures: | AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1 |
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| Sample Number | 1979/S/134611 | 1979/S/134612 | 1979/S/134613 | |
|---|----------------------|----------------------|----------------------|--|
| ID / Client ID | EW-19 | EW-20 | EW-21 | |
| Lot Number | - | - | - | |
| Date / Time Tested | 28/05/2020 13:55 | 28/05/2020 14:08 | 28/05/2020 14:21 | |
| Material Source | Imported | Imported | Imported | |
| Material Type | Bulk Fill | Bulk Fill | Bulk Fill | |
| Sampling Method | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b | |
| Depths: Test / Nom / Actual (mm) | 200 / - / - | 200 / - / - | 200 / - / - | |
| Standard or Modified | Standard | Standard | Standard | |
| Location | Lot 11 | Lot 13 | Lot 16 | |
| | E: 508019 | E: 508028 | E: 508032 | |
| | N: 6933863 | N: 6933897 | N: 6933939 | |
| Level | RL 45.142 | RL 44.934 | RL 44.872 | |
| Test Fraction (mm) | < 19.0 mm | < 19.0 mm | < 19.0 mm | |
| Sample Oversize (%) | 0 | 0 | 0 | |
| Compaction Sample Number | 1979/S/134611 | 1979/S/134612 | 1979/S/134613 | |
| Sample Description | Sandy Clay Brown | Sandy Clay Brown | Sandy Clay Brown | |
| Moisture Test Results: | | | | |
| Field Moisture Content (%) | 18.2 | 15.9 | 17.6 | |
| Adjusted / Moisture Variation (%) | 1.5 | 2.0 | 1.5 | |
| Optimum Moisture Content (%) | 20.0 | 18.0 | 19.5 | |
| Moisture Variation from OMC | (Drier than OMC) | (Drier than OMC) | (Drier than OMC) | |
| Moisture Ratio (%) | 91.0 | 89.0 | 90.5 | |
| Density Test Results: | | | | |
| Field Wet Density (t/m ³) | 2.04 | 2.02 | 2.06 | |
| Adj/Peak Conv Wet Density (t/m ³) | 2.06 | 2.01 | 2.06 | |
| Density Ratio Required (%) | 95 | 95 | 95 | |
| Hilf Density Ratio (%) | 98.5 | 100.0 | 100.0 | |

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| Remarks |
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|  | <p style="text-align: center; font-size: small;">The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing</p> <p>Accreditation Number: 1986 Corporate Site Number: 1979</p> |  Approved Signatory: Matthew Ketchup Form ID: W5ASRep Rev 2 |
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WET DENSITY RATIO REPORT

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|--|---|
| Client: CCA Winslow | Report Number: 1979/R/49273-1 |
| Client Address: 1587 Ipswich Road, Rocklea | Project Number: 1979/P/1925 |
| Project: 87 Koplick Road | Lot Number: - |
| Location: Chambers Flat | Internal Test Request: 1979/T/26756 |
| Component: Bulk Fill | Client Reference/s: Earthworks |
| Area Description: Allotment | Report Date / Page: 19/06/2020 Page 1 of 2 |

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| Test Procedures: | AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1 |
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| Sample Number | 1979/S/134843 | 1979/S/134844 | 1979/S/134845 | 1979/S/134846 |
|---|----------------------|----------------------|----------------------|----------------------|
| ID / Client ID | EW-22 | EW-23 | EW-24 | EW-25 |
| Lot Number | - | - | - | - |
| Date / Time Tested | 29/05/2020 12:22 | 29/05/2020 12:35 | 29/05/2020 12:54 | 29/05/2020 13:08 |
| Material Source | Imported | Imported | Imported | Imported |
| Material Type | Bulk Fill | Bulk Fill | Bulk Fill | Bulk Fill |
| Sampling Method | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b |
| Depths: Test / Nom / Actual (mm) | 200 / - / - | 200 / - / - | 200 / - / - | 200 / - / - |
| Standard or Modified | Standard | Standard | Standard | Standard |
| Location | Lot 70 | Lot 69 | Lot 66 | Lot 67 |
| | E: 508104 | E: 508093 | E: 508075 | E: 508072 |
| | N: 6933915 | N: 6933926 | N: 6933939 | N: 6933929 |
| Level | RL 45.604 | RL 45.662 | RL 44.886 | RL 45.082 |
| Test Fraction (mm) | < 19.0 mm | < 19.0 mm | < 19.0 mm | < 19.0 mm |
| Sample Oversize (%) | 0 | 0 | 0 | 0 |
| Compaction Sample Number | 1979/S/134843 | 1979/S/134844 | 1979/S/134845 | 1979/S/134846 |
| Sample Description | Silty Clay Brown | Clayey Sand, Brown | Sandy Clay Brown | Silty Clay Brown |
| Moisture Test Results: | | | | |
| Field Moisture Content (%) | 17.7 | 15.7 | 17.7 | 15.1 |
| Adjusted / Moisture Variation (%) | 1.5 | 1.5 | 1.5 | 1.5 |
| Optimum Moisture Content (%) | 19.5 | 17.5 | 19.5 | 17.0 |
| Moisture Variation from OMC | (Drier than OMC) | (Drier than OMC) | (Drier than OMC) | (Drier than OMC) |
| Moisture Ratio (%) | 91.5 | 91.0 | 91.0 | 90.0 |
| Density Test Results: | | | | |
| Field Wet Density (t/m ³) | 1.91 | 2.01 | 2.02 | 2.06 |
| Adj/Peak Conv Wet Density (t/m ³) | 1.98 | 2.02 | 2.04 | 2.04 |
| Density Ratio Required (%) | 95 | 95 | 95 | 95 |
| Hilf Density Ratio (%) | 96.5 | 99.5 | 99.0 | 101.0 |

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WET DENSITY RATIO REPORT

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|--|---|
| Client: CCA Winslow | Report Number: 1979/R/49273-1 |
| Client Address: 1587 Ipswich Road, Rocklea | Project Number: 1979/P/1925 |
| Project: 87 Koplick Road | Lot Number: - |
| Location: Chambers Flat | Internal Test Request: 1979/T/26756 |
| Component: Bulk Fill | Client Reference/s: Earthworks |
| Area Description: Allotment | Report Date / Page: 19/06/2020 Page 2 of 2 |

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| Test Procedures: | AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1 |
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| Sample Number | 1979/S/134847 | 1979/S/134848 | 1979/S/134849 |
|---|----------------------|----------------------|----------------------|
| ID / Client ID | EW-26 | EW-27 | EW-28 |
| Lot Number | - | - | - |
| Date / Time Tested | 29/05/2020 13:24 | 29/05/2020 13:40 | 29/05/2020 13:53 |
| Material Source | Imported | Imported | Imported |
| Material Type | Bulk Fill | Bulk Fill | Bulk Fill |
| Sampling Method | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b |
| Depths: Test / Nom / Actual (mm) | 200 / - / - | 200 / - / - | 200 / - / - |
| Standard or Modified | Standard | Standard | Standard |
| Location | Lot 75 | Lot 74 | Lot 73 |
| | E: 508069 | E: 508086 | E: 508098 |
| | N: 6933882 | N: 6933884 | N: 6933881 |
| Level | RL 45.166 | RL 45.395 | RL 45.273 |
| Test Fraction (mm) | < 19.0 mm | < 19.0 mm | < 19.0 mm |
| Sample Oversize (%) | 0 | 0 | 0 |
| Compaction Sample Number | 1979/S/134847 | 1979/S/134848 | 1979/S/134849 |
| Sample Description | Silty Clay Brown | Silty Clay Brown | Silty Clay Brown |
| Moisture Test Results: | | | |
| Field Moisture Content (%) | 16.4 | 12.6 | 13.6 |
| Adjusted / Moisture Variation (%) | 2.0 | 1.5 | 2.0 |
| Optimum Moisture Content (%) | 18.5 | 14.0 | 15.5 |
| Moisture Variation from OMC | (Drier than OMC) | (Drier than OMC) | (Drier than OMC) |
| Moisture Ratio (%) | 89.5 | 88.5 | 87.0 |
| Density Test Results: | | | |
| Field Wet Density (t/m ³) | 1.96 | 2.04 | 1.98 |
| Adj/Peak Conv Wet Density (t/m ³) | 2.03 | 2.04 | 2.03 |
| Density Ratio Required (%) | 95 | 95 | 95 |
| Hilf Density Ratio (%) | 96.5 | 99.5 | 97.0 |

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|  | <p style="text-align: center;">The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing</p> <p>Accreditation Number: 1986 Corporate Site Number: 1979</p> |  Approved Signatory: Matthew Ketchup Form ID: W5ASRep Rev 2 |
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WET DENSITY RATIO REPORT

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|---|---|
| Client: CCA Winslow Client Address: 1587 Ipswich Road, Rocklea Project: 87 Koplick Road Location: Chambers Flat Component: Bulk Fill Area Description: Allotment | Report Number: 1979/R/49274-1 Project Number: 1979/P/1925 Lot Number: - Internal Test Request: 1979/T/26756 Client Reference/s: Earthworks Report Date / Page: 19/06/2020 Page 1 of 1 |
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| Test Procedures: | AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1 |
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| Sample Number | 1979/S/134932 | 1979/S/134933 | 1979/S/134934 | 1979/S/134935 |
|---|-------------------------------|-------------------------------|-------------------------|-------------------------------|
| ID / Client ID | EW-29 | EW-30 | EW-31 | EW-32 |
| Lot Number | - | - | - | - |
| Date / Time Tested | 1/06/2020 11:46 | 1/06/2020 12:24 | 1/06/2020 12:56 | 1/06/2020 13:12 |
| Material Source | Imported | Imported | Imported | Imported |
| Material Type | Bulk Fill | Bulk Fill | Bulk Fill | Bulk Fill |
| Sampling Method | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b | AS1289.1.2.1 Cl 6.4b |
| Depths: Test / Nom / Actual (mm) | 200 / - / - | 200 / - / - | 200 / - / - | 200 / - / - |
| Standard or Modified | Standard | Standard | Standard | Standard |
| Location | Road 6 Ch 10 2.0m Right | Road 1 Ch 205 1.5m Left | Road 1 Ch 190 C/L | Road 1 Ch 180 0.5m Left |
| Level | RL 44.54 | RL 44.44 | RL 44.49 | RL 44.41 |
| Test Fraction (mm) | < 19.0 mm | < 19.0 mm | < 19.0 mm | < 19.0 mm |
| Sample Oversize (%) | 0 | 0 | 0 | 0 |
| Compaction Sample Number | 1979/S/134932 | 1979/S/134933 | 1979/S/134934 | 1979/S/134935 |
| Sample Description | Silty Sand Brown | Silty Sand Brown | Silty Sand Brown | Silty Sand Brown |
| Moisture Test Results: | | | | |
| Field Moisture Content (%) | 11.2 | 10.7 | 11.7 | 12.4 |
| Adjusted / Moisture Variation (%) | 1.5 | 1.5 | 2.0 | 1.5 |
| Optimum Moisture Content (%) | 13.0 | 12.5 | 13.5 | 14.0 |
| Moisture Variation from OMC | (Drier than OMC) | (Drier than OMC) | (Drier than OMC) | (Drier than OMC) |
| Moisture Ratio (%) | 87.0 | 86.5 | 86.5 | 88.0 |
| Density Test Results: | | | | |
| Field Wet Density (t/m ³) | 2.17 | 2.15 | 2.18 | 2.08 |
| Adj/Peak Conv Wet Density (t/m ³) | 2.16 | 2.16 | 2.17 | 2.10 |
| Density Ratio Required (%) | 95 | 95 | 95 | 95 |
| Hilf Density Ratio (%) | 100.0 | 99.5 | 100.5 | 99.5 |

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|  | <p style="text-align: center; font-size: small;">The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards. Accredited for compliance with ISO/IEC 17025 - Testing</p> <p>Accreditation Number: 1986 Corporate Site Number: 1979</p> |  Approved Signatory: Matthew Ketchup Form ID: W5ASRep Rev 2 |
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WET DENSITY RATIO REPORT

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|---|--|
| Client: CCA Winslow Client Address: 1587 Ipswich Road, Rocklea Project: 87 Koplick Road Location: Chambers Flat Component: Bulk Earthworks Area Description: Retaining Wall Backfill | Report Number: 1979/R/53916-1 Project Number: 1979/P/1925 Lot Number: 26/11 Internal Test Request: 1979/T/29032 Client Reference/s: Bulk Earthworks Report Date / Page: 14/12/2020 Page 1 of 1 |
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| Test Procedures: | AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1 |
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| Sample Number | 1979/S/147114 | | |
| ID / Client ID | EW-33 | | |
| Lot Number | 26/11 | | |
| Date / Time Tested | 26/11/2020 13:05 | | |
| Material Source | On-Site | | |
| Material Type | Bulk Fill | | |
| Sampling Method | AS1289.1.2.1 CI 6.4b | | |
| Depths: Test / Nom / Actual (mm) | 175 / 200 / 200 | | |
| Standard or Modified | Standard | | |
| Easting: m | 508009 | | |
| Northing m | 6933878 | | |
| RL: m | -1.5m Below F/L | | |
| Allotment: | Lot 11 | | |
| Test Fraction (mm) | < 19.0 mm | | |
| Sample Oversize (%) | 0 | | |
| Compaction Sample Number | 1979/S/147114 | | |
| Sample Description | Insitu | | |
| Moisture Test Results: | | | |
| Field Moisture Content (%) | 10.1 | | |
| Adjusted / Moisture Variation (%) | 0.5 | | |
| Optimum Moisture Content (%) | 10.5 | | |
| Moisture Variation from OMC | (Drier than OMC) | | |
| Moisture Ratio (%) | 96.0 | | |
| Density Test Results: | | | |
| Field Wet Density (t/m ³) | 1.95 | | |
| Adj/Peak Conv Wet Density (t/m ³) | 2.04 | | |
| Density Ratio Required (%) | 95 | | |
| Hilf Density Ratio (%) | 95.5 | | |

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| Accredited for compliance with ISO/IEC 17025 – Testing |  | |
|  | Accreditation Number: 1986 Corporate Site Number: 1979 | Approved Signatory: Dean Stimpson Form ID: W5ASRep Rev 2 |

Contact

1 Fox Road
Acacia Ridge, QLD 4110

Telephone: (07) 3320 8500
Facsimile: (07) 3320 8599

brisbane@constructionsciences.net
www.constructionsciences.net