



CIVIL GEOTECHNICAL SERVICES
ABN 26 474 013 724
PO Box 678 Croydon Vic 3136
Telephone: 9723 0744 Facsimile: 9723 0799

23rd April 2021

Our Reference: 21184:NB933

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
AQUAREVO – STAGE 7B (LYNDHURST)

Please find attached our Report No's 21184/R001 – 21184/R004 which relate to the field density testing that was conducted within the filled allotments at the above subdivision. The level 1 inspections and associated field density commenced in March 2021 and was completed in April 2021.

The inspections and testing of the earthworks was undertaken in general accordance with the Level 1 requirements of AS 3798 - Guidelines on Earthworks for Commercial and Residential Developments.

The site inspection and testing was performed by experienced geotechnicians from this office. Any areas that were deemed unsatisfactory were reworked and retested under their supervision. The testing was performed to the relevant Australian Standards and the accompanying test reports carry NATA endorsement. The attached compaction results, which were located randomly throughout the fill profile, are considered to be representative of the bulk fill materials that were placed across the reported allotments by Winslow Constructors during the aforementioned period. The approximate locations of the field density tests can be seen on the attached plan (Figure 1).

We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Nick Brock

FIGURE 1





COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21184
Report No 21184/R001
Date Issued 21/04/2021

| | | | |
|----------|--|-------------|----------|
| Client | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | Tested by | SB |
| Project | AQUAREVO - STAGE 7B | Date tested | 17/03/21 |
| Location | LYNDHURST | Checked by | JHF |

| | | | | |
|---------|------------|-----------------|--------|-------------|
| Feature | EARTHWORKS | Layer thickness | 200 mm | Time: 13:30 |
|---------|------------|-----------------|--------|-------------|

Test procedure AS 1289.2.1.1 & 5.8.1

| Test No | 1 | 2 | - | - | - | - |
|-----------------------------|-------------------|-------------------|------|---|---|---|
| Location | REFER TO FIGURE 1 | REFER TO FIGURE 1 | | | | |
| Approximate depth below FSL | m | 0.6 | 0.4 | | | |
| Measurement depth | mm | 175 | 175 | - | - | - |
| Field wet density | t/m ³ | 1.86 | 1.85 | - | - | - |
| Field moisture content | % | 32.4 | 30.9 | - | - | - |

Test procedure AS 1289.5.7.1

| Test No | 1 | 2 | - | - | - | - |
|-------------------------------------|------------------|------|------|---|---|---|
| Compactive effort | Standard | | | | | |
| Oversize rock retained on sieve | mm | 19.0 | 19.0 | - | - | - |
| Percent of oversize material | wet | 0 | 0 | - | - | - |
| Peak Converted Wet Density | t/m ³ | 1.85 | 1.90 | - | - | - |
| Adjusted Peak Converted Wet Density | t/m ³ | - | - | - | - | - |
| Optimum Moisture Content | % | 30.0 | 29.0 | - | - | - |

| | | | | | | |
|--|----------|----------|---|---|---|---|
| Moisture Variation From Optimum Moisture Content | 2.5% wet | 2.0% wet | - | - | - | - |
|--|----------|----------|---|---|---|---|

| | | | | | | | |
|----------------------------|---|-------|------|---|---|---|---|
| Density Ratio (R_{HD}) | % | 101.0 | 97.0 | - | - | - | - |
|----------------------------|---|-------|------|---|---|---|---|

Material description

| |
|--------------------|
| No 1 - 2 Clay Fill |
|--------------------|

AVRLOT HILF V1.10 MAR 13



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

Accreditation No 9909

Justin Fry

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21184
Report No 21184/R002
Date Issued 21/04/2021

| | | | |
|----------|--|-------------|----------|
| Client | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | Tested by | SB |
| Project | AQUAREVO - STAGE 7B | Date tested | 18/03/21 |
| Location | LYNDHURST | Checked by | JHF |

| | | | | |
|---------|------------|-----------------|--------|-------------|
| Feature | EARTHWORKS | Layer thickness | 200 mm | Time: 08:30 |
|---------|------------|-----------------|--------|-------------|

Test procedure AS 1289.2.1.1 & 5.8.1

| Test No | | 3 | 4 | - | - | - | - |
|-----------------------------|------------------|-------------------|-------------------|---|---|---|---|
| Location | | REFER TO FIGURE 1 | REFER TO FIGURE 1 | | | | |
| Approximate depth below FSL | m | 0.2 | fsl | | | | |
| Measurement depth | mm | 175 | 175 | - | - | - | - |
| Field wet density | t/m ³ | 1.82 | 1.83 | - | - | - | - |
| Field moisture content | % | 36.6 | 33.6 | - | - | - | - |

Test procedure AS 1289.5.7.1

| Test No | | 3 | 4 | - | - | - | - |
|-------------------------------------|------------------|----------|------|---|---|---|---|
| Compactive effort | | Standard | | | | | |
| Oversize rock retained on sieve | mm | 19.0 | 19.0 | - | - | - | - |
| Percent of oversize material | wet | 0 | 0 | - | - | - | - |
| Peak Converted Wet Density | t/m ³ | 1.91 | 1.92 | - | - | - | - |
| Adjusted Peak Converted Wet Density | t/m ³ | - | - | - | - | - | - |
| Optimum Moisture Content | % | 34.0 | 31.0 | - | - | - | - |

| | | | | | | |
|--|----------|----------|---|---|---|---|
| Moisture Variation From Optimum Moisture Content | 2.5% wet | 2.5% wet | - | - | - | - |
|--|----------|----------|---|---|---|---|

| | | | | | | | |
|----------------------------|---|------|------|---|---|---|---|
| Density Ratio (R_{HD}) | % | 95.5 | 95.0 | - | - | - | - |
|----------------------------|---|------|------|---|---|---|---|

Material description

| |
|--------------------|
| No 3 - 4 Clay Fill |
|--------------------|

AVRLOT HILF V1.10 MAR 13



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COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21184
Report No 21184/R003
Date Issued 23/04/2021

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)
Project SQUAREVO - STAGE 7B
Location LYNDHURST

Tested by SB
Date tested 21/04/21
Checked by JHF

Feature EARTHWORKS

Layer thickness

200 mm

Time: 13:30

Test procedure AS 1289.2.1.1 & 5.8.1

| Test No | 5 | 6 | 7 | 8 | 9 | 10 |
|------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Location | REFER TO FIGURE 1 | REFER TO FIGURE 1 | REFER TO FIGURE 1 | REFER TO FIGURE 1 | REFER TO FIGURE 1 | REFER TO FIGURE 1 |
| Approximate depth below FSL | | | | | | |
| Measurement depth mm | 175 | 175 | 175 | 175 | 175 | 175 |
| Field wet density t/m ³ | 1.86 | 1.86 | 1.89 | 1.87 | 1.87 | 1.87 |
| Field moisture content % | 32.9 | 32.7 | 34.2 | 30.6 | 29.2 | 32.1 |

Test procedure AS 1289.5.7.1

| Test No | 5 | 6 | 7 | 8 | 9 | 10 |
|--|----------|------|------|------|------|------|
| Compactive effort | Standard | | | | | |
| Oversize rock retained on sieve mm | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 |
| Percent of oversize material wet | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Converted Wet Density t/m ³ | 1.89 | 1.90 | 1.95 | 1.91 | 1.92 | 1.91 |
| Adjusted Peak Converted Wet Density t/m ³ | - | - | - | - | - | - |
| Optimum Moisture Content % | 33.5 | 33.0 | 34.0 | 28.5 | 29.5 | 32.0 |

| | | | | | | |
|--|----------|----------|------|----------|------|------|
| Moisture Variation From Optimum Moisture Content | 0.5% dry | 0.5% dry | 0.0% | 2.0% wet | 0.0% | 0.0% |
|--|----------|----------|------|----------|------|------|

| | | | | | | | |
|----------------------------|---|------|------|------|------|------|------|
| Density Ratio (R_{HD}) | % | 98.5 | 98.0 | 97.0 | 98.0 | 97.5 | 98.0 |
|----------------------------|---|------|------|------|------|------|------|

Material description

No 5 - 10 Clay Fill

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COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21184
Report No 21184/R004
Date Issued 23/04/2021

| | | | |
|----------|--|-------------|----------|
| Client | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | Tested by | CGS |
| Project | AQUAREVO - STAGE 7B | Date tested | 21/04/21 |
| Location | LYNDHURST | Checked by | JHF |

| | | | | |
|---------|------------|-----------------|--------|-------------|
| Feature | EARTHWORKS | Layer thickness | 200 mm | Time: 14:30 |
|---------|------------|-----------------|--------|-------------|

Test procedure AS 1289.2.1.1 & 5.8.1

| Test No | 11 | 12 | 13 | 14 | 15 | 16 |
|------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Location | REFER TO FIGURE 1 | REFER TO FIGURE 1 | REFER TO FIGURE 1 | REFER TO FIGURE 1 | REFER TO FIGURE 1 | REFER TO FIGURE 1 |
| Approximate depth below FSL | | | | | | |
| Measurement depth mm | 175 | 175 | 175 | 175 | 175 | 175 |
| Field wet density t/m ³ | 1.91 | 1.89 | 1.90 | 1.89 | 1.90 | 1.91 |
| Field moisture content % | 32.0 | 33.6 | 29.4 | 33.1 | 33.7 | 28.6 |

Test procedure AS 1289.5.7.1

| Test No | 11 | 12 | 13 | 14 | 15 | 16 |
|--|----------|------|------|------|------|------|
| Compactive effort | Standard | | | | | |
| Oversize rock retained on sieve mm | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 |
| Percent of oversize material wet | 0 | 0 | 0 | 0 | 0 | 0 |
| Peak Converted Wet Density t/m ³ | 1.90 | 1.91 | 1.90 | 1.95 | 1.95 | 2.00 |
| Adjusted Peak Converted Wet Density t/m ³ | - | - | - | - | - | - |
| Optimum Moisture Content % | 31.5 | 33.5 | 29.5 | 32.0 | 32.5 | 28.5 |

| | | | | | | |
|--|----------|------|------|----------|----------|------|
| Moisture Variation From Optimum Moisture Content | 0.5% wet | 0.0% | 0.0% | 1.0% wet | 1.0% wet | 0.0% |
|--|----------|------|------|----------|----------|------|

| | | | | | | | |
|----------------------------|---|-------|------|-------|------|------|------|
| Density Ratio (R_{HD}) | % | 100.5 | 99.5 | 100.0 | 97.0 | 97.5 | 95.5 |
|----------------------------|---|-------|------|-------|------|------|------|

Material description

No 11 - 16 Clay Fill

AVRLOT HILF V1.10 MAR 13



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