



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

17th December 2021

Our Reference: 21374:NB1123

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
CORNERSTONE – STAGE 18 (WYNDHAM VALE)**

Please find attached our Report No's 21374/R001 to 21374/R005 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 testing commenced in May 2021 and was completed in August 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).

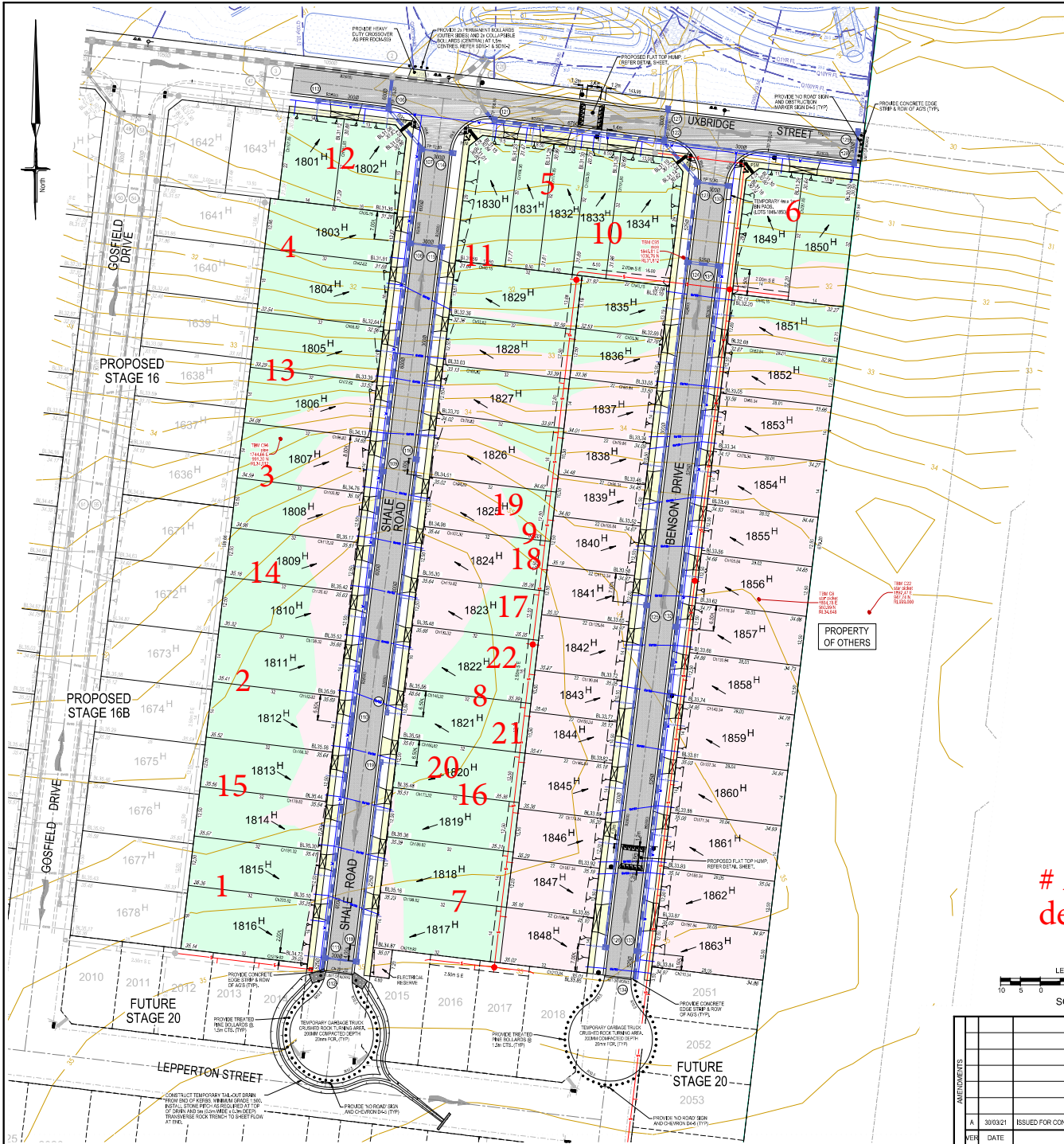
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

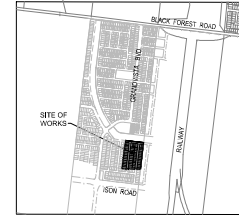
A handwritten signature in blue ink, appearing to read 'Nick Brock', is written over a faint circular stamp.

Nick Brock

FIGURE 1



| LOCATION | GAS | | WATER | | COMMUNICATIONS | | ELECTRICITY | | Road Width | Joint Trenching |
|-----------------|--------|--------|--------|--------|----------------|--------|-------------|------------|------------|-----------------|
| | NDW | DW | Chdles | Pils | Chdles | Pils | Chdles | Pils | | |
| UXBRIDGE STREET | 2,25 S | 2,70 S | 3,20 S | 0,65 N | 1,85 S | 1,40 N | 1,00 BOX | 4,350/20N | 14,50 | W & G, F & E |
| SHALE ROAD | 2,25 W | 2,70 W | 3,20 W | 1,85 E | 1,85 W | 2,60 N | 1,00 BOX | 4,350/10NE | 16,00 | W & G, F & E |
| BENSON DRIVE | 2,25 E | 2,70 E | 3,20 E | 1,85 W | 1,85 E | 2,60 W | 1,00 BOX | 4,350/42W | 16,00 | W & G, F & E |



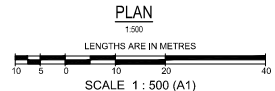
| SHT. No. | VER. | DESCRIPTION |
|----------|------|---|
| 1 | A | LAYOUT PLAN AND DETAILS |
| 2 | A | NOTES AND TYPICAL CROSS SECTIONS |
| 3 | A | INTERSECTION DETAILS |
| 4 | A | LONGITUDINAL & CROSS SECTIONS - UXBRIDGE STREET |
| 5 | A | LONGITUDINAL & CROSS SECTIONS - SHALE ROAD |
| 6 | A | CROSS SECTIONS - SHALE ROAD |
| 7 | A | LONGITUDINAL & CROSS SECTIONS - BENSON DRIVE |
| 8 | A | CROSS SECTIONS - BENSON DRIVE |
| 9 | A | DRAINAGE LONGITUDINAL SECTIONS - SHEET 1 |
| 10 | A | DRAINAGE LONGITUDINAL SECTIONS - SHEET 2 |
| 11 | A | DRAINAGE LONGITUDINAL SECTIONS - SHEET 3 |
| 12 | A | DRAINAGE LONGITUDINAL SECTIONS - SHEET 4 |
| 13 | A | SEWAGE & LINEDRAINING PLAN |
| 14 | A | LOT BENCHING PLAN |



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

- ATTENTION TO CONTRACTOR**
- IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE DIGITAL PLAN, PROVIDED FOR SETOUT PURPOSES, MATCHES THE TBM COORDINATES SHOWN.
 - CONTRACTOR TO ENSURE THAT THE SITE IS PEGGED AND OR SET OUT CHECKED BY THE LICENSED SURVEYOR RESPONSIBLE FOR CERTIFYING THE PLAN OF SUBDIVISION PRIOR TO UNDERGROUND INFRASTRUCTURE BEING INSTALLED.
 - WHERE CONCRETE WORKS ABUT A SEWER ACCESS CHAMBER SURROUND OR SIMILAR STRUCTURE, AN EXPANSION JOINT OF APPROVED MATERIAL SHALL BE PROVIDED BETWEEN THE TWO FACES.

Approximate field density test location



| SYMBOL LEGEND | |
|---|---|
| Drains | Ex/Natural/F'S Level |
| Sewer < 300Ø | FS @ Building Line |
| Sewer > 300Ø | Top/Ten of Batter |
| Water (DW) | Top Ret. Wall Level |
| Water (NDW) | 100y' Flood Level |
| House Drain | Fill Proposed (<0.3m/20.3m) |
| Property Inlet | Cut Proposed |
| Street Sign | Asphalt Surface Prop |
| PSM | Concrete Surface Prop |
| Rock Ret Wall | Paths/Driveways/Slabs |
| Sloper Ret Wall | Tree To Be Removed |
| Conduits 50mm | Tree To Be Retained with Tree Protection Zone (TPZ) |
| Conduits 100mm | |
| Street Trees without/with Passive Irrigation (Refer Detail) | |
| Ex Drains | |
| Ex Water/DRAIN/W | |
| Ex Sewer/Gas | |
| Ex Elec/Telecomm | |

| | | |
|--|---------|---|
| breese pitt dixon pt. ltd. land surveyors civil engineers | | 1/19 cato street hawthorn east, 3123 telephone 8823 2300 fax no. 8823 2310 |
| MELWAY REF. 204-G-8 SURVEY BPD DESIGN BPD DRAWN DG | | MUNICIPALITY WYNDHAM REFERENCE 8890 E/18 |
| CORNERSTONE ESTATE STAGE 18 LAYOUT PLAN AND DETAILS | | SCALE: As Shown DATUM: AHD DATE: Mar'21 |
| SHEET NO. 1 OF 14 | CHECKED | A |

T:\projects\BPD\4890 Cornerstone CAD\Drawings\Stage 18\BPD_EH_RFI_DET.dwg (B3)



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21374
Report No 21374/R001
Date Issued 06/09/2021

| | | | |
|----------|--|-------------|----------|
| Client | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | Tested by | WS |
| Project | CORNERSTONE - STAGE 18 | Date tested | 26/05/21 |
| Location | WERRIBEE | Checked by | JHF |

| | | | | |
|---------|------------|-----------------|--------|-------------|
| Feature | EARTHWORKS | Layer thickness | 200 mm | Time: 07:30 |
|---------|------------|-----------------|--------|-------------|

Test procedure AS 1289.2.1.1 & 5.8.1

| Test No | | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 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 | 1.67 | 1.70 | 1.79 | 1.96 | 1.74 | 1.77 |
| Field moisture content | % | 24.4 | 22.9 | 32.1 | 31.5 | 27.2 | 27.7 |

Test procedure AS 1289.5.7.1

| Test No | | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------------------------|------------------|----------|------|------|------|------|------|
| 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 | 1.75 | 1.78 | 1.84 | 2.05 | 1.80 | 1.81 |
| Adjusted Peak Converted Wet Density | t/m ³ | - | - | - | - | - | - |
| Optimum Moisture Content | % | 24.0 | 21.5 | 34.0 | 30.5 | 29.5 | 30.0 |

| | | | | | | |
|--|----------|----------|----------|----------|----------|----------|
| Moisture Variation From Optimum Moisture Content | 0.5% wet | 1.5% wet | 2.0% dry | 1.0% wet | 2.5% dry | 2.0% dry |
|--|----------|----------|----------|----------|----------|----------|

| | | | | | | | |
|-----------------------------------|---|------|------|------|------|------|------|
| Density Ratio (R _{HD}) | % | 95.5 | 95.0 | 97.5 | 96.0 | 96.5 | 98.0 |
|-----------------------------------|---|------|------|------|------|------|------|

Material description

| |
|--------------------|
| No 1 - 6 Clay Fill |
|--------------------|

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
Accredited for compliance with
ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 21374
 Report No 21374/R002
 Date Issued 08/06/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

| | | | |
|----------|--|-------------|----------|
| Client | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | Tested by | WS |
| Project | CORNERSTONE - STAGE 18 | Date tested | 27/05/21 |
| Location | WERRIBEE | Checked by | JHF |

| | | | | | |
|---------|------------|-----------------|--------|-------|-------|
| Feature | EARTHWORKS | Layer thickness | 200 mm | Time: | 07:15 |
|---------|------------|-----------------|--------|-------|-------|

Test procedure AS 1289.2.1.1 & 5.8.1

| Test No | | 7 | 8 | 9 | 10 | - | - |
|-----------------------------|------------------|-------------------|-------------------|-------------------|-------------------|---|---|
| Location | | 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 | - | - |
| Field wet density | t/m ³ | 1.80 | 1.82 | 1.89 | 1.81 | - | - |
| Field moisture content | % | 29.4 | 26.6 | 25.0 | 27.9 | - | - |

Test procedure AS 1289.5.7.1

| Test No | | 7 | 8 | 9 | 10 | - | - |
|-------------------------------------|------------------|----------|------|------|------|---|---|
| Compactive effort | | Standard | | | | | |
| Oversize rock retained on sieve | mm | 19.0 | 19.0 | 19.0 | 19.0 | - | - |
| Percent of oversize material | wet | 0 | 0 | 0 | 0 | - | - |
| Peak Converted Wet Density | t/m ³ | 1.81 | 1.84 | 1.89 | 1.86 | - | - |
| Adjusted Peak Converted Wet Density | t/m ³ | - | - | - | - | - | - |
| Optimum Moisture Content | % | 31.5 | 29.5 | 26.5 | 29.5 | - | - |

| | | | | | | | |
|--|--|----------|----------|----------|----------|---|---|
| Moisture Variation From Optimum Moisture Content | | 1.5% dry | 2.5% dry | 1.5% dry | 1.5% dry | - | - |
|--|--|----------|----------|----------|----------|---|---|

| | | | | | | | |
|-----------------------------------|---|------|------|------|------|---|---|
| Density Ratio (R _{HD}) | % | 99.5 | 99.0 | 99.5 | 98.0 | - | - |
|-----------------------------------|---|------|------|------|------|---|---|

Material description

| |
|---------------------|
| No 7 - 10 Clay Fill |
|---------------------|

AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909
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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 21374
 Report No 21374/R003
 Date Issued 06/09/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

| | | | |
|----------|--|-------------|----------|
| Client | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | Tested by | BS |
| Project | CORNERSTONE - STAGE 18 | Date tested | 28/05/21 |
| Location | WYNDHAM VALE | Checked by | JHF |

| | | | | |
|---------|------------|-----------------|--------|-------------|
| Feature | EARTHWORKS | Layer thickness | 200 mm | Time: 12:15 |
|---------|------------|-----------------|--------|-------------|

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 |
| Field wet density | t/m ³ | 1.84 | 1.84 | 1.74 | 1.81 | 1.84 |
| Field moisture content | % | 25.4 | 31.2 | 31.6 | 27.7 | 27.3 |

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 |
| Percent of oversize material | wet | 0 | 0 | 0 | 0 | 0 |
| Peak Converted Wet Density | t/m ³ | 1.89 | 1.87 | 1.79 | 1.86 | 1.87 |
| Adjusted Peak Converted Wet Density | t/m ³ | - | - | - | - | - |
| Optimum Moisture Content | % | 27.0 | 34.0 | 34.0 | 27.0 | 25.0 |

| | | | | | | |
|--|----------|----------|----------|----------|----------|----------|
| Moisture Variation From Optimum Moisture Content | 1.5% dry | 2.5% dry | 2.5% dry | 0.5% wet | 2.0% wet | 2.5% wet |
|--|----------|----------|----------|----------|----------|----------|

| | | | | | | | |
|-----------------------------------|---|------|------|------|------|------|------|
| Density Ratio (R _{HD}) | % | 97.0 | 98.5 | 97.0 | 97.5 | 97.0 | 98.5 |
|-----------------------------------|---|------|------|------|------|------|------|

Material description

| |
|----------------------|
| No 11 - 16 Clay Fill |
|----------------------|

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21374
Report No 21374/R004
Date Issued 06/08/2021

| | | | |
|----------|--|-------------|----------|
| Client | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | Tested by | BGG |
| Project | CORNERSTONE - STAGE 18 | Date tested | 30/07/21 |
| Location | WYNDHAM VALE | Checked by | JHF |

| | | | | | |
|---------|------------|-----------------|--------|-------|-------|
| Feature | EARTHWORKS | Layer thickness | 200 mm | Time: | 12:05 |
|---------|------------|-----------------|--------|-------|-------|

Test procedure AS 1289.2.1.1 & 5.8.1

| Test No | 17 | 18 | 19 | - | - | - |
|-----------------------------|-------------------|-------------------|-------------------|------|---|---|
| Location | REFER TO FIGURE 1 | REFER TO FIGURE 1 | REFER TO FIGURE 1 | | | |
| Approximate depth below FSL | | | | | | |
| Measurement depth | mm | 175 | 175 | 175 | - | - |
| Field wet density | t/m ³ | 1.92 | 2.00 | 1.82 | - | - |
| Field moisture content | % | 22.5 | 15.8 | 17.7 | - | - |

Test procedure AS 1289.5.7.1

| Test No | 17 | 18 | 19 | - | - | - |
|-------------------------------------|------------------|------|------|------|---|---|
| Compactive effort | Standard | | | | | |
| Oversize rock retained on sieve | mm | 19.0 | 19.0 | 19.0 | - | - |
| Percent of oversize material | wet | 0 | 0 | 0 | - | - |
| Peak Converted Wet Density | t/m ³ | 2.03 | 2.10 | 1.82 | - | - |
| Adjusted Peak Converted Wet Density | t/m ³ | - | - | - | - | - |
| Optimum Moisture Content | % | 20.5 | 16.0 | 19.5 | - | - |

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

| | | | | | | |
|-----------------------------------|---|------|------|-------|---|---|
| Density Ratio (R _{HD}) | % | 95.0 | 95.5 | 100.0 | - | - |
|-----------------------------------|---|------|------|-------|---|---|

Material description

| |
|----------------------|
| No 17 - 19 Clay Fill |
|----------------------|

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 21374
 Report No 21374/R005
 Date Issued 28/08/2021

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

| | | | |
|----------|--|-------------|----------|
| Client | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | Tested by | BGG |
| Project | CORNERSTONE - STAGE 18 | Date tested | 02/08/21 |
| Location | WYNDHAM VALE | Checked by | JHF |

| | | | | | |
|---------|------------|-----------------|--------|-------|-------|
| Feature | EARTHWORKS | Layer thickness | 200 mm | Time: | 08:55 |
|---------|------------|-----------------|--------|-------|-------|

Test procedure AS 1289.2.1.1 & 5.8.1

| Test No | 20 | 21 | 22 | - | - | - |
|-----------------------------|-------------------|-------------------|-------------------|------|---|---|
| Location | REFER TO FIGURE 1 | REFER TO FIGURE 1 | REFER TO FIGURE 1 | | | |
| Approximate depth below FSL | | | | | | |
| Measurement depth | mm | 175 | 175 | 175 | - | - |
| Field wet density | t/m ³ | 1.97 | 1.99 | 1.95 | - | - |
| Field moisture content | % | 17.8 | 18.2 | 17.1 | - | - |

Test procedure AS 1289.5.7.1

| Test No | 20 | 21 | 22 | - | - | - |
|-------------------------------------|------------------|------|------|------|---|---|
| Compactive effort | Standard | | | | | |
| Oversize rock retained on sieve | mm | 19.0 | 19.0 | 19.0 | - | - |
| Percent of oversize material | wet | 0 | 0 | 0 | - | - |
| Peak Converted Wet Density | t/m ³ | 2.05 | 2.06 | 2.04 | - | - |
| Adjusted Peak Converted Wet Density | t/m ³ | - | - | - | - | - |
| Optimum Moisture Content | % | 19.0 | 18.5 | 18.5 | - | - |

| | | | | | | |
|--|----------|----------|----------|---|---|---|
| Moisture Variation From Optimum Moisture Content | 1.0% dry | 0.5% dry | 1.5% dry | - | - | - |
|--|----------|----------|----------|---|---|---|

| | | | | | | |
|-----------------------------------|---|------|------|------|---|---|
| Density Ratio (R _{HD}) | % | 96.0 | 96.5 | 95.5 | - | - |
|-----------------------------------|---|------|------|------|---|---|

Material description

| |
|----------------------|
| No 20 - 22 Clay Fill |
|----------------------|

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry