



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

28th October 2021

Our Reference: 21534:NB1060

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
CREEKSTONE – STAGE 20 (TARNEIT)

Please find attached our Report No's 21534/R001 to 21534/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 testing commenced in August 2021 and was completed in October 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).

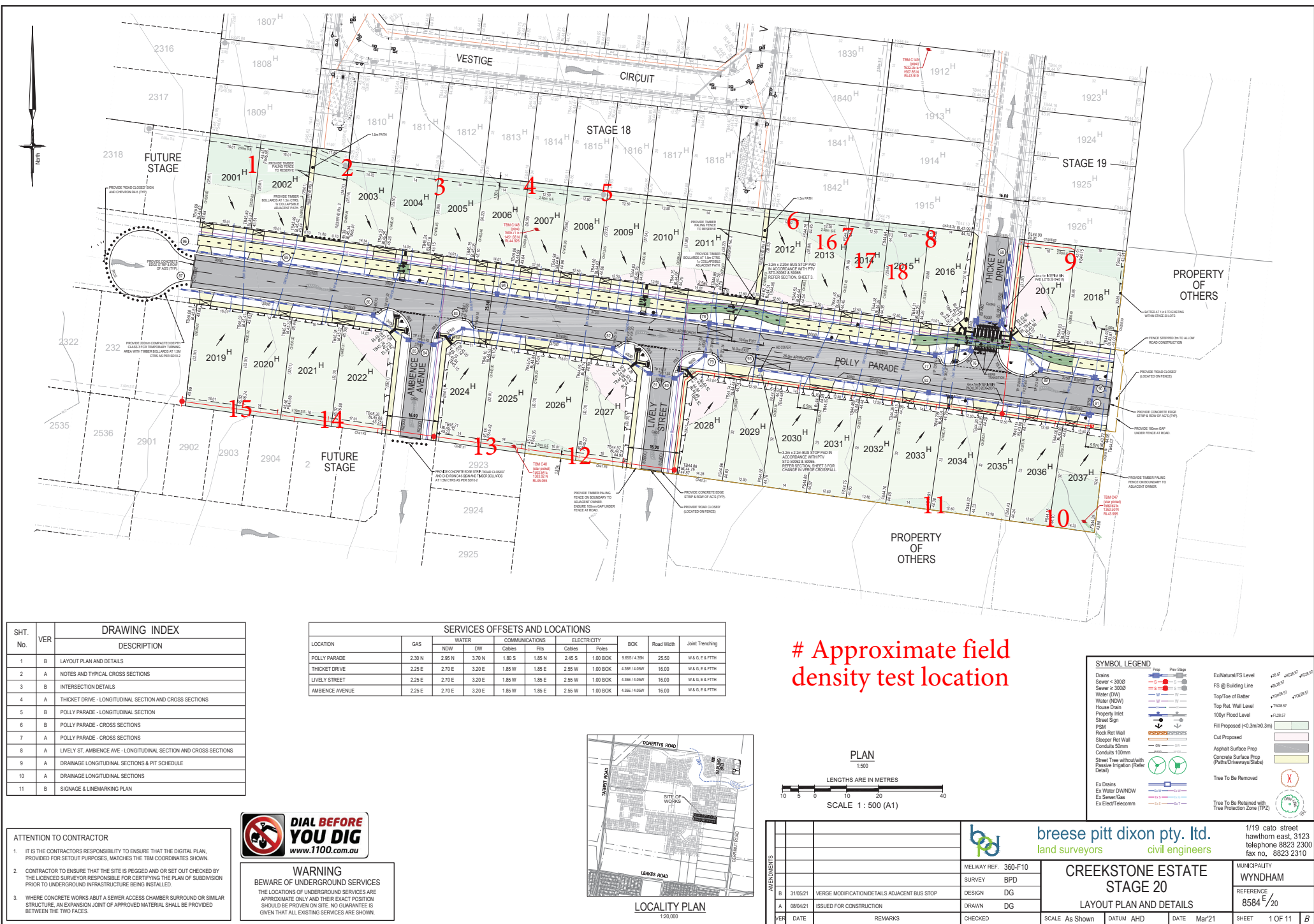
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

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 21534
Report No 21534/R001
Date Issued 15/09/2021

| | | | |
|----------|--|-------------|----------|
| Client | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | Tested by | JB |
| Project | CREEKSTONE - STAGE 20 | Date tested | 11/08/21 |
| Location | TARNEIT | Checked by | JHF |

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

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 | 1.91 | 1.96 | 1.96 | 1.98 | 1.96 | 1.93 |
| Field moisture content % | 20.1 | 24.4 | 23.5 | 21.1 | 28.9 | 18.9 |

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 | 1.95 | 2.01 | 2.03 | 2.03 | 2.00 | 2.02 |
| Adjusted Peak Converted Wet Density t/m ³ | - | - | - | - | - | - |
| Optimum Moisture Content % | 20.5 | 25.0 | 23.5 | 21.5 | 29.0 | 21.5 |

| | | | | | | |
|--|----------|----------|------|------|------|----------|
| Moisture Variation From Optimum Moisture Content | 0.5% dry | 0.5% dry | 0.0% | 0.0% | 0.0% | 2.5% dry |
|--|----------|----------|------|------|------|----------|

| | | | | | | | |
|----------------------------|---|------|------|------|------|------|------|
| Density Ratio (R_{HD}) | % | 98.0 | 97.5 | 96.5 | 97.5 | 98.0 | 95.5 |
|----------------------------|---|------|------|------|------|------|------|

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

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21534
Report No 21534/R002
Date Issued 15/09/2021

| | | | |
|----------|--|-------------|----------|
| Client | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | Tested by | JB |
| Project | CREEKSTONE - STAGE 20 | Date tested | 12/08/21 |
| Location | TARNEIT | Checked by | JHF |

| | | | | |
|---------|------------|-----------------|--------|-------------|
| Feature | EARTHWORKS | Layer thickness | 200 mm | Time: 09:30 |
|---------|------------|-----------------|--------|-------------|

Test procedure AS 1289.2.1.1 & 5.8.1

| Test No | 7 | 8 | 9 | 10 | 11 | 12 |
|------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 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 | 1.95 | 1.88 | 1.91 | 1.94 | 1.89 | 1.89 |
| Field moisture content % | 25.7 | 19.5 | 26.0 | 28.5 | 19.5 | 20.4 |

Test procedure AS 1289.5.7.1

| Test No | 7 | 8 | 9 | 10 | 11 | 12 |
|--|----------|------|------|------|------|------|
| 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 | 2.00 | 1.93 | 1.96 | 1.96 | 1.94 | 1.96 |
| Adjusted Peak Converted Wet Density t/m ³ | - | - | - | - | - | - |
| Optimum Moisture Content % | 26.0 | 22.0 | 26.5 | 29.0 | 21.0 | 23.0 |

| | | | | | | |
|--|----------|----------|------|------|----------|----------|
| Moisture Variation From Optimum Moisture Content | 0.5% dry | 2.5% dry | 0.0% | 0.0% | 1.5% dry | 2.5% dry |
|--|----------|----------|------|------|----------|----------|

| | | | | | | | |
|----------------------------|---|------|------|------|------|------|------|
| Density Ratio (R_{HD}) | % | 97.5 | 97.5 | 97.5 | 98.5 | 97.0 | 96.0 |
|----------------------------|---|------|------|------|------|------|------|

Material description

| |
|---------------------|
| No 7 - 12 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 21534
Report No 21534/R003
Date Issued 15/09/2021

| | | | |
|----------|--|-------------|----------|
| Client | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | Tested by | JB |
| Project | CREEKSTONE - STAGE 20 | Date tested | 13/08/21 |
| Location | TARNEIT | Checked by | JHF |

| | | | | |
|---------|------------|-----------------|--------|-------------|
| Feature | EARTHWORKS | Layer thickness | 200 mm | Time: 10:30 |
|---------|------------|-----------------|--------|-------------|

Test procedure AS 1289.2.1.1 & 5.8.1

| Test No | 13 | 14 | 15 | - | - | - |
|------------------------------------|-------------------|-------------------|-------------------|---|---|---|
| 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 | 1.95 | 1.94 | 1.97 | - | - | - |
| Field moisture content % | 18.2 | 22.1 | 25.2 | - | - | - |

Test procedure AS 1289.5.7.1

| Test No | 13 | 14 | 15 | - | - | - |
|--|----------|------|------|---|---|---|
| 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 | 2.01 | 1.97 | 2.02 | - | - | - |
| Adjusted Peak Converted Wet Density t/m ³ | - | - | - | - | - | - |
| Optimum Moisture Content % | 19.0 | 22.5 | 25.5 | - | - | - |

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

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

Material description

No 13 - 15 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 21534
Report No 21534/R004
Date Issued 28/10/2021

| | | | |
|----------|--|-------------|----------|
| Client | WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD) | Tested by | JB |
| Project | CREEKSTONE - STAGE 20 | Date tested | 22/10/21 |
| Location | TARNEIT | Checked by | JHF |

| | | | | |
|---------|------------|-----------------|--------|-------------|
| Feature | EARTHWORKS | Layer thickness | 200 mm | Time: 10:00 |
|---------|------------|-----------------|--------|-------------|

Test procedure AS 1289.2.1.1 & 5.8.1

| Test No | 16 | 17 | 18 | - | - | - |
|------------------------------------|-------------------|-------------------|-------------------|---|---|---|
| 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 | 1.96 | 1.97 | 1.92 | - | - | - |
| Field moisture content % | 25.1 | 27.2 | 33.8 | - | - | - |

Test procedure AS 1289.5.7.1

| Test No | 16 | 17 | 18 | - | - | - |
|--|----------|------|------|---|---|---|
| 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 | 2.00 | 2.02 | 1.98 | - | - | - |
| Adjusted Peak Converted Wet Density t/m ³ | - | - | - | - | - | - |
| Optimum Moisture Content % | 27.0 | 25.0 | 31.5 | - | - | - |

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

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

Material description

No 16 - 18 Clay Fill

AVRLOT HILF V1.10 MAR 13



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