



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

16<sup>th</sup> December 2022

Our Reference: 22379:NB1429

Winslow Constructors Pty Ltd  
50 Barry Road  
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING  
CORNERSTONE – STAGE 19 (WYNDHAM VALE)**

Please find attached our Report No's 22379/R001 to 22379/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 May 2022 and was completed in October 2022.

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

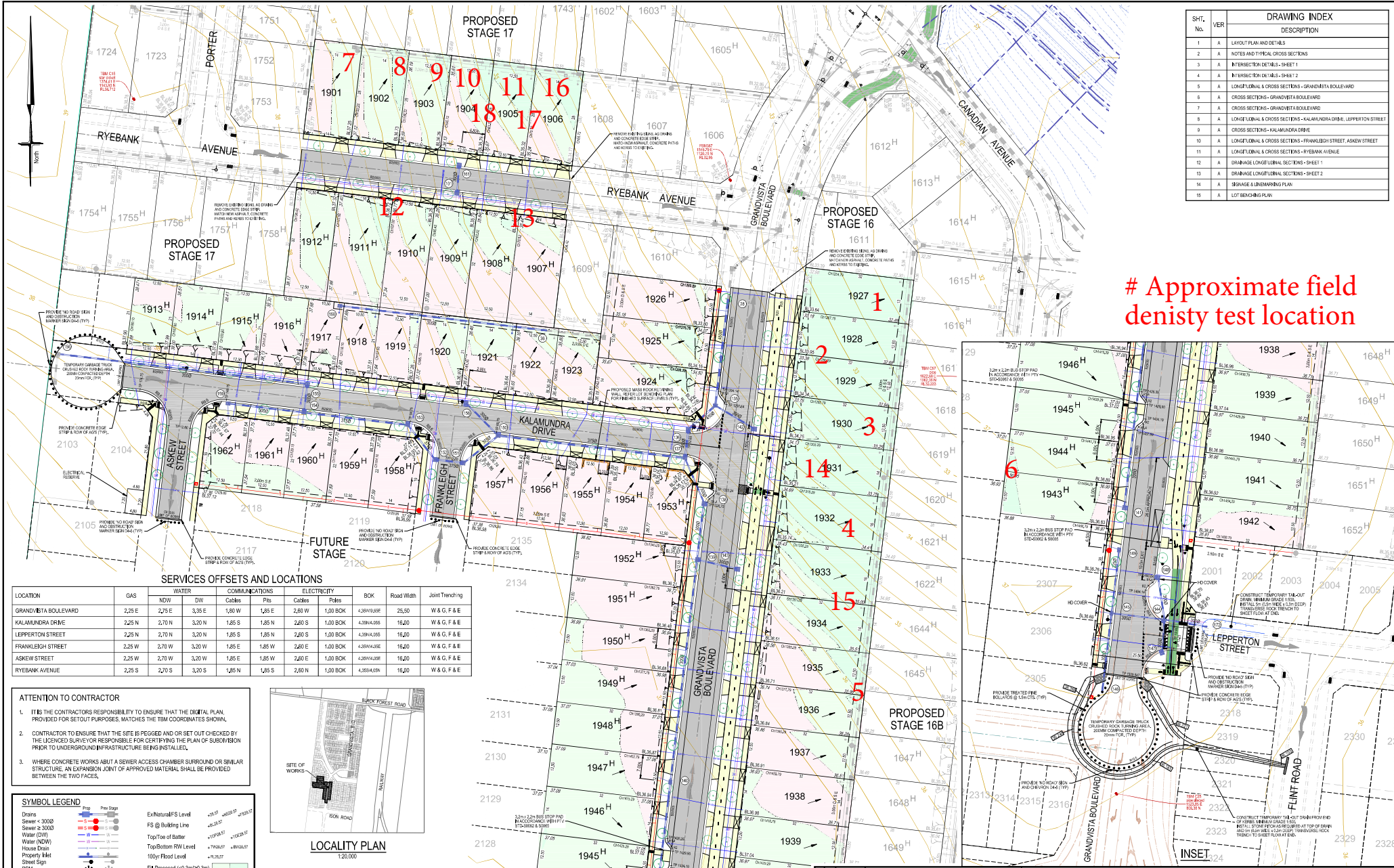
A handwritten signature in blue ink, appearing to read 'Nick Brock', is written over a faint circular stamp.

Nick Brock

# FIGURE 1

SHT. No.	VER	DESCRIPTION
1	A	LAYOUT PLAN AND DETAILS
2	A	NOTES AND TYPICAL CROSS SECTIONS
3	A	INTERSECTION DETAILS - SHEET 1
4	A	INTERSECTION DETAILS - SHEET 2
5	A	LONGITUDINAL CROSS SECTIONS - GRANDVISTA BOULEVARD
6	A	CROSS SECTIONS - GRANDVISTA BOULEVARD
7	A	CROSS SECTIONS - GRANDVISTA BOULEVARD
8	A	LONGITUDINAL CROSS SECTIONS - KALAMUNDRA DRIVE, LEPPERTON STREET
9	A	CROSS SECTIONS - KALAMUNDRA DRIVE
10	A	LONGITUDINAL CROSS SECTIONS - FRANKLEIGH STREET, ASKEW STREET
11	A	CROSS SECTIONS - FRANKLEIGH STREET
12	A	CROSS SECTIONS - FRANKLEIGH STREET
13	A	DRAINAGE LONGITUDINAL SECTIONS - SHEET 1
14	A	DRAINAGE LONGITUDINAL SECTIONS - SHEET 2
15	A	DRAINAGE LONGITUDINAL SECTIONS - SHEET 2
16	A	DRAINAGE LONGITUDINAL SECTIONS - SHEET 2
17	A	LOT BOUNDING PLAN

# Approximate field denisty test location



**SERVICES OFFSETS AND LOCATIONS**

LOCATION	GAS		WATER		COMMUNICATIONS		ELECTRICITY		BOK	Road Width	Joint Trenching
	NDW	DW	NDW	DW	Cables	Poles	Cables	Poles			
GRANDVISTA BOULEVARD	2,25 E	2,25 E	3,35 E	1,80 W	1,85 E	2,60 W	1,00 BOK	4,389/4,056	25,50	W & G, F & E	
KALAMUNDRA DRIVE	2,25 N	2,70 N	3,20 N	1,85 S	1,85 N	2,60 S	1,00 BOK	4,389/4,056	16,20	W & G, F & E	
LEPPERTON STREET	2,25 N	2,70 N	3,20 N	1,85 S	1,85 N	2,60 S	1,00 BOK	4,389/4,056	16,20	W & G, F & E	
FRANKLEIGH STREET	2,25 W	2,70 W	3,20 W	1,85 E	1,85 W	2,60 E	1,00 BOK	4,389/4,056	16,20	W & G, F & E	
ASKEW STREET	2,25 W	2,70 W	3,20 W	1,85 E	1,85 W	2,60 E	1,00 BOK	4,389/4,056	16,20	W & G, F & E	
RYEBANK AVENUE	2,25 S	2,70 S	3,20 S	1,85 N	1,85 S	2,60 N	1,00 BOK	4,388/4,056	16,20	W & G, F & E	

- 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 ABOUT A SEWER ACCESS CHAMBER SURROUND OR SIMILAR STRUCTURE, AN EXPANSION JOINT OF APPROVED MATERIAL SHALL BE PROVIDED BETWEEN THE TWO FACES.

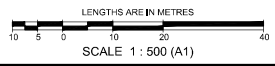


**SYMBOL LEGEND**

	Prop. Stage		Ex Natural FS Level
	Sewer <math>3000</math>		FS @ Building Line
	Sewer <math>2000</math>		Top of Batter
	Water (DW)		Top Bottom RW Level
	Water (NDW)		100y Flood Level
	House Drain		Fill Proposed (<math>0.2m/10.0m</math>)
	Property Plat		Cut Proposed
	Street Sign		Asphalt Surface Prop.
	PSM		Concrete Surface Prop. (Paving/Overlays/Sides)
	Round Pit Wall		Tree to Be Retained with Tree Protection Zone (TPZ)
	Sloper Pit Wall		Tree to Be Removed
	Conduits 50mm		
	Conduits 100mm		
	Street Tree without Passive Irrigation (Refer Detail)		
	Ex Drains		
	Ex Water DW/NDW		
	Ex Sewer/Gas		
	Ex Block/Falccom		

FOR CONTINUATION SEE INSET

PLAN 1510



**breese pitt dixon pty. ltd.**  
land surveyors civil engineers

1/19 calo street hawthorn east, 3123 telephone 8823 2300 fax no. 8823 2310

**CORNERSTONE ESTATE STAGE 19**  
LAYOUT PLAN AND DETAILS

MELWAY REF. 204-G-8  
SURVEY BPD  
DESIGN BPD  
DRAWN DG

MUNICIPALITY WYNDHAM  
REFERENCE 8890 E/19

DATE Jan'22 SHEET 1 OF 15

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# COMPACTION ASSESSMENT

Job No 22379  
 Report No 22379/R001  
 Date Issued 14/10/2022

## CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	WS
Project	CORNERSTONE - STAGE 19	Date tested	24/05/22
Location	WYNDHAM VALE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	08:15
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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
Field wet density	t/m <sup>3</sup>	1.66	1.74	1.74	1.83	1.79
Field moisture content	%	22.2	21.1	20.4	19.3	21.5

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
Percent of oversize material	wet	0	0	0	0	0
Peak Converted Wet Density	t/m <sup>3</sup>	1.74	1.78	1.79	1.89	1.84
Adjusted Peak Converted Wet Density	t/m <sup>3</sup>	-	-	-	-	-
Optimum Moisture Content	%	24.0	23.0	23.0	21.0	24.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	1.5% dry	2.5% dry	2.5% dry
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density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R <sub>HD</sub> )	%	95.5	98.0	97.0	97.0	97.5	98.0
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Material description

No 1 - 6 Clay Fill
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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 22379  
 Report No 22379/R002  
 Date Issued 06/06/2022

## CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AG
Project	CORNERSTONE - STAGE 19	Date tested	25/05/22
Location	WYNDHAM VALE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:00
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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	
Field wet density	t/m <sup>3</sup>	2.06	2.01	2.03	1.80	1.79	1.87
Field moisture content	%	23.1	19.8	24.5	28.0	24.8	26.2

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	
Percent of oversize material	wet	0	0	0	0	0	
Peak Converted Wet Density	t/m <sup>3</sup>	2.08	2.05	2.06	1.89	1.81	1.87
Adjusted Peak Converted Wet Density	t/m <sup>3</sup>	-	-	-	-	-	
Optimum Moisture Content	%	25.0	22.0	26.5	29.5	27.0	29.0

Moisture Variation From Optimum Moisture Content	1.5% dry	2.0% dry	2.0% dry	1.5% dry	2.0% dry	2.5% dry
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density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio ( R <sub>HD</sub> )	%	99.0	98.5	98.5	95.5	99.0	100.0
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Material description

No 7 - 12 Clay Fill
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AVRLOT HILF V1.10 MAR 13



NATA Accredited Laboratory No 9909  
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 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry





# COMPACTION ASSESSMENT

Job No 22379  
 Report No 22379/R003  
 Date Issued 03/06/2022

## CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	WS
Project	CORNERSTONE - STAGE 19	Date tested	25/05/22
Location	WYNDHAM VALE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	10:00
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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 <sup>3</sup>	1.65	1.67	1.75	-	-
Field moisture content	%	27.6	29.4	29.2	-	-

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 <sup>3</sup>	1.74	1.75	1.80	-	-
Adjusted Peak Converted Wet Density	t/m <sup>3</sup>	-	-	-	-	-
Optimum Moisture Content	%	30.0	31.5	32.0	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	-	-	-
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density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio (R <sub>HD</sub> )	%	95.0	95.5	97.0	-	-
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Material description

No 13 - 15 Clay Fill
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AVRLOT HILF V1.10 MAR 13



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 ISO/IEC 17025 - Testing

Approved Signatory : Justin Fry



# COMPACTION ASSESSMENT

Job No 22379  
 Report No 22379/R004  
 Date Issued 14/10/2022

## CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	CORNERSTONE - STAGE 19	Date tested	03/10/22
Location	WYNDHAM VALE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:57
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### 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 <sup>3</sup>	2.06	2.03	2.05	-	-
Field moisture content	%	26.5	19.1	18.7	-	-

### 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 <sup>3</sup>	2.10	2.13	2.13	-	-
Adjusted Peak Converted Wet Density	t/m <sup>3</sup>	-	-	-	-	-
Optimum Moisture Content	%	28.5	21.0	20.5	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.0% dry	-	-	-
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density and moisture ratio results relate only to the soil to the depth of test and not to the full depth of the layer

Density Ratio ( R <sub>HD</sub> )	%	98.0	95.5	96.5	-	-
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### Material description

No 16 - 18 Clay Fill
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AVRLOT HILF V1.10 MAR 13



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

Approved Signatory : Justin Fry