



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

20th June 2018

Our Reference: 18354:NB211

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
ASTON – STAGE 28 (CRAGIEBURN)

Please find attached our Report No's 18354/R001 to 18354/R002 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 was performed in October 2017.

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).

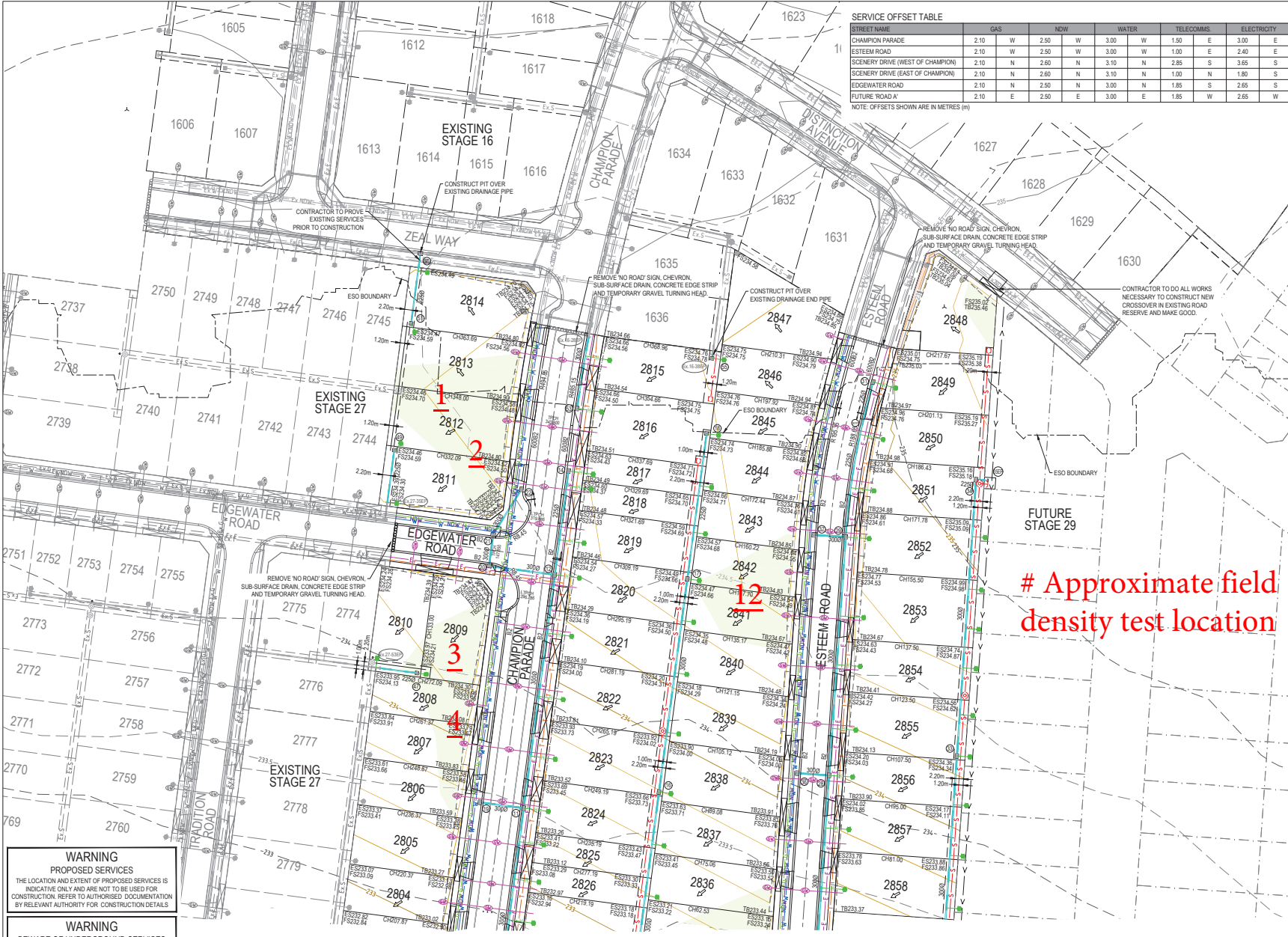
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

A handwritten signature in blue ink, appearing to read 'Nick Brock', is written over a light blue rectangular background.

Nick Brock

FIGURE 1



STREET NAME	GAS		NDW		WATER		TELECOMS		ELECTRICITY	
	W	E	W	E	W	E	W	E	W	E
CHAMPION PARADE	2.10		2.50		3.00		1.50		3.00	
ESTEEM ROAD	2.10		2.50		3.00		1.00		2.40	
OSCHERY DRIVE (WEST OF CHAMPION)	2.10		2.50		3.10		1.00		2.85	
OSCHERY DRIVE (EAST OF CHAMPION)	2.10		2.50		3.10		1.00		1.80	
EDGEWATER ROAD	2.10		2.50		3.00		1.85		2.55	
FUTURE ROAD A	2.10		2.50		3.00		1.85		2.65	

NOTE: OFFSETS SHOWN ARE IN METRES (M)

ROADWORKS LEGEND

- B2 KERB & CHANNEL - (AS NOTED)
- TRANSITION KERB
- PROPOSED DRIVEWAY CROSSING
- EXISTING CONSTRUCTION TO BE REMOVED
- NEW BATTER
- EXISTING STORMWATER DRAIN, PIT AND PROPERTY INLET
- OR
- STORMWATER DRAIN, PIT AND PROPERTY INLET
- SEWER, MAINTENANCE STRUCTURES AND PROPERTY CONNECTION
- SWALE DRAIN INVERT AND DIRECTION OF FLOW
- RIDGELINE / ESO LINE
- PERMANENT SURVEY MARK (PSM)
- TEMPORARY BENCH MARK (TBM)
- ES300.000 EXISTING SURFACE LEVEL
- FS300.000 FINISHED SURFACE LEVEL
- TS300.000 TOP OF RETAINING WALL LEVEL
- BS300.000 BOTTOM OF RETAINING WALL LEVEL
- TS300.000 TOP OF RETAINING WALL LEVEL
- BS300.000 BUILDING LINE LEVEL
- ES300.000 EXISTING SURFACE LEVEL
- FS300.000 FINISHED SURFACE LEVEL
- TS300.000 TOP OF RETAINING WALL LEVEL
- BS300.000 BOTTOM OF RETAINING WALL LEVEL
- STORMWATER PIT NO.
- TACTILE PAVERS
- UTILITIES CONDUIT
- STREET SIGN
- CONCRETE EDGE STRIP WITH SUBSOL DRAIN 'NO ROAD' SIGN & BARRIER
- PROPOSED RETAINING WALL
- 57.0 NEW FINISHED SURFACE CONTOUR
- 58.2 EXISTING SURFACE CONTOUR
- LIMIT OF WORKS
- PROPOSED ELECTRICITY
- PROPOSED GAS
- PROPOSED SEWER
- BRANCH SEWER
- PROPOSED TELECOMMUNICATIONS
- PROPOSED WATER
- PROPOSED NON-DRINKING WATER
- EXISTING ELECTRICITY
- EXISTING GAS
- EXISTING SEWER
- EXISTING TELECOMMUNICATIONS
- EXISTING WATER
- EXISTING NON-DRINKING WATER
- EXISTING TREE
- EXISTING TREE TO BE REMOVED

EARTHWORKS LEGEND

- DIRECTION OF FALL (LOT)
- LOT FILL (FILL GREATER THAN 200mm DEEP)
- LOT CUT (CUT GREATER THAN 200mm DEEP)

WARNING PROPOSED SERVICES
 THE LOCATION AND EXTENT OF PROPOSED SERVICES IS INDICATIVE ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION. REFER TO AUTHORISED DOCUMENTATION BY RELEVANT AUTHORITY FOR CONSTRUCTION DETAILS.

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.



REV	DESCRIPTION	BY	APP	DATE
A	PRELIMINARY ISSUE	AB	LG	08.11.15
B	DRIVWAYS RELOCATED FOR LOTS 2814 & 2815	DC	LG	15.01.17
C	PRELIMINARY ISSUE - COUNCIL COMMENTS	A.B	LG	07.04.17
D	CONSTRUCTION ISSUE	DC	LG	08.05.17
E	CONSTRUCTION ISSUE - TELECOMMUNICATIONS AMENDMENTS	DC	LG	21.08.17
F	CONSTRUCTION ISSUE - ELECTRICAL OFFSETS AMENDED	MD	LG	19.01.17



FOR CONTINUATION REFER TO DRAWING 102419-28-C101



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CLIENT
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TITLE
 LAYOUT PLAN
 SHEET 1 OF 2

PROJECT
 ASTON ESTATE
 STAGE 28
 HUME CITY COUNCIL

STATUS
 FOR CONSTRUCTION

DESIGNED	DRAWN	APPROVED	SCALE @	SHEET
LG	AB	AC	1:500	6 of 25
PROJECT NO: 102419-28			C100	02



DRAWN: S. GIBSON; CHECKED: M. HARRISON; DATE: 15/01/17; SCALE: 1:500 AT ORIGINAL SIZE

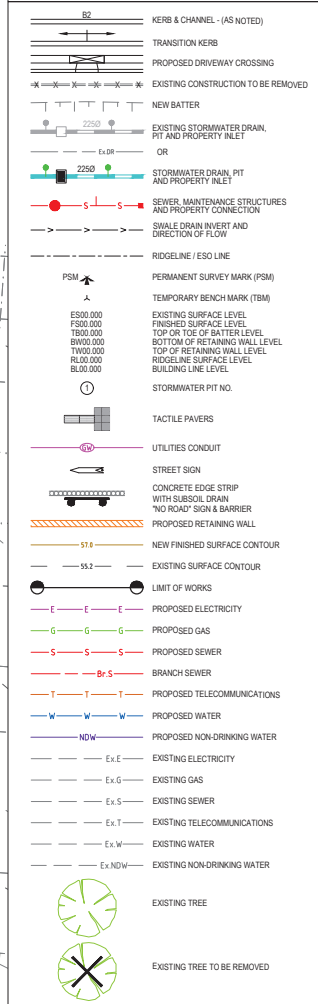
FIGURE 1

SERVICE OFFSET TABLE

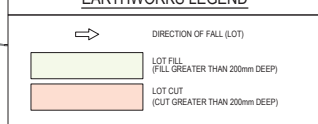
STREET NAME	GAS	NDW	WATER	TELECOMS.	ELECTRICITY
CHAMPION PARADE	2.10 W	2.50 W	3.00 W	1.50 E	3.00 E
ESTEEM ROAD	2.10 W	2.50 W	3.00 W	1.00 E	2.40 E
SCENERY DRIVE (WEST OF CHAMPION)	2.10 N	2.60 N	3.10 N	2.85 S	3.65 S
SCENERY DRIVE (EAST OF CHAMPION)	2.10 N	2.60 N	3.10 N	1.00 N	1.80 S
EDGEWATER ROAD	2.10 N	2.50 N	3.00 N	1.85 S	2.65 S
FUTURE 'ROAD A'	2.10 E	2.50 E	3.00 E	1.85 W	2.65 W

NOTE: OFFSETS SHOWN ARE IN METRES (m)

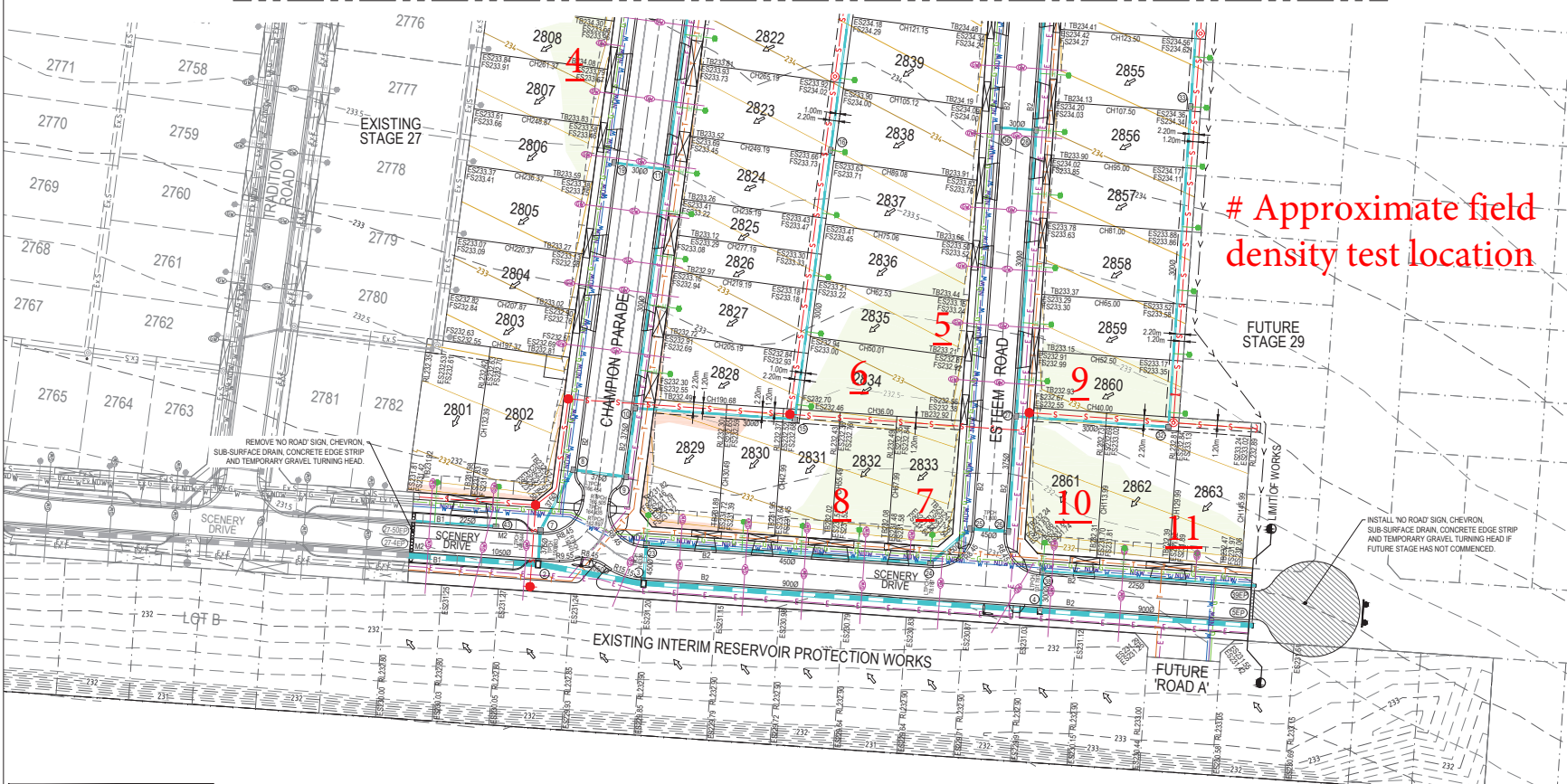
ROADWORKS LEGEND



EARTHWORKS LEGEND



FOR CONTINUATION REFER TO DRAWING 102419-28-C10



Approximate field density test location

WARNING
PROPOSED SERVICES
THE LOCATION AND EXTENT OF PROPOSED SERVICES IS INDICATIVE ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION. REFER TO AUTHORISED DOCUMENTATION BY RELEVANT AUTHORITY FOR CONSTRUCTION DETAILS.

WARNING
BEWARE OF UNDERGROUND SERVICES
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REV	DESCRIPTION	BY	APP	DATE
A	PRELIMINARY ISSUE	AB	LG	08.11.15
B	PRELIMINARY ISSUE - COUNCIL COMMENTS	AJB	LG	05.04.17
C	CONSTRUCTION ISSUE	DC	LG	08.05.17
D1	CONSTRUCTION ISSUE - TELECOMMUNICATIONS AMENDMENTS	DC	LG	21.08.17
D2	CONSTRUCTION ISSUE - ELECTRICAL OFFSETS AMENDED	MD	LG	19.07.17
D3	CONSTRUCTION ISSUE - GENERAL AMENDMENTS	MD	LG	13.09.17



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CLIENT
PEET LTD
Level 4, 380 St Kilda Road, Melbourne VIC 3004
TITLE
LAYOUT PLAN
SHEET 2 OF 2

PROJECT
ASTON ESTATE
STAGE 28
HUME CITY COUNCIL
STATUS
FOR CONSTRUCTION

DESIGNED	DRAWN	APPROVED	SCALE @ A1	SHEET
LG	AB	AC	SHOWN	7 of 25
PROJECT NO. 102419-28			DRAWING NO. C101	REV 03



COMPACTION ASSESSMENT

Job No 18354
 Report No 18354/R001
 Date Issued 20/06/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by AC
 Date tested 25/10/17
 Checked by JHF

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)
 Project ASTON - STAGE 28
 Location CRAGIEBURN

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:30
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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	175
Field wet density t/m ³	1.96	1.96	1.89	1.90	1.96	1.97
Field moisture content %	19.0	19.8	20.2	21.0	20.7	20.8

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	1.99	2.02	1.96	1.95	2.03	2.02
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	21.5	20.0	21.0	21.5	22.0	22.0

Moisture Variation From Optimum Moisture Content	1.5% dry	0.0%	1.0% dry	0.5% dry	1.5% dry	1.0% dry
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Density Ratio (R_{HD})	%	98.5	97.0	96.5	97.5	96.5	97.5
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Material description

No 1 - 6 Clay Fill



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/National standards. Accredited for compliance to ISO/IEC 17025. Accreditation No 9909

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18354
 Report No 18354/R002
 Date Issued 20/06/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by AC
 Date tested 26/10/17
 Checked by JHF

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)
 Project ASTON - STAGE 28
 Location CRAGIEBURN

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	1.96	1.91	1.95	1.92	1.94	1.90
Field moisture content	%	19.7	21.2	21.1	22.9	22.8	19.6

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	2.02	1.99	2.02	1.96	1.99	1.95
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	21.0	22.0	21.5	22.0	22.5	21.0

Moisture Variation From Optimum Moisture Content	1.5% dry	1.0% dry	0.5% dry	1.0% wet	0.5% wet	1.5% dry
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Density Ratio (R _{HD})	%	97.0	96.0	96.5	98.0	97.5	97.5
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Material description

No 7 - 12 Clay Fill



The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/National standards. Accredited for compliance to ISO/IEC 17025. Accreditation No 9909

Approved Signatory : Justin Fry