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

16th April 2020

Our Reference: 20048:SB012

Mirvac Pty Ltd
Level 5, Building Q3, 6 Riverside Quay,
SOUTHBANK VIC 3006

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
SMITHS LANE – STAGE 1, CLYDE NORTH

Please find attached our Report No's 20048/R001 to 20048/R010 that 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 January 2020 and was completed in April 2020.

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).

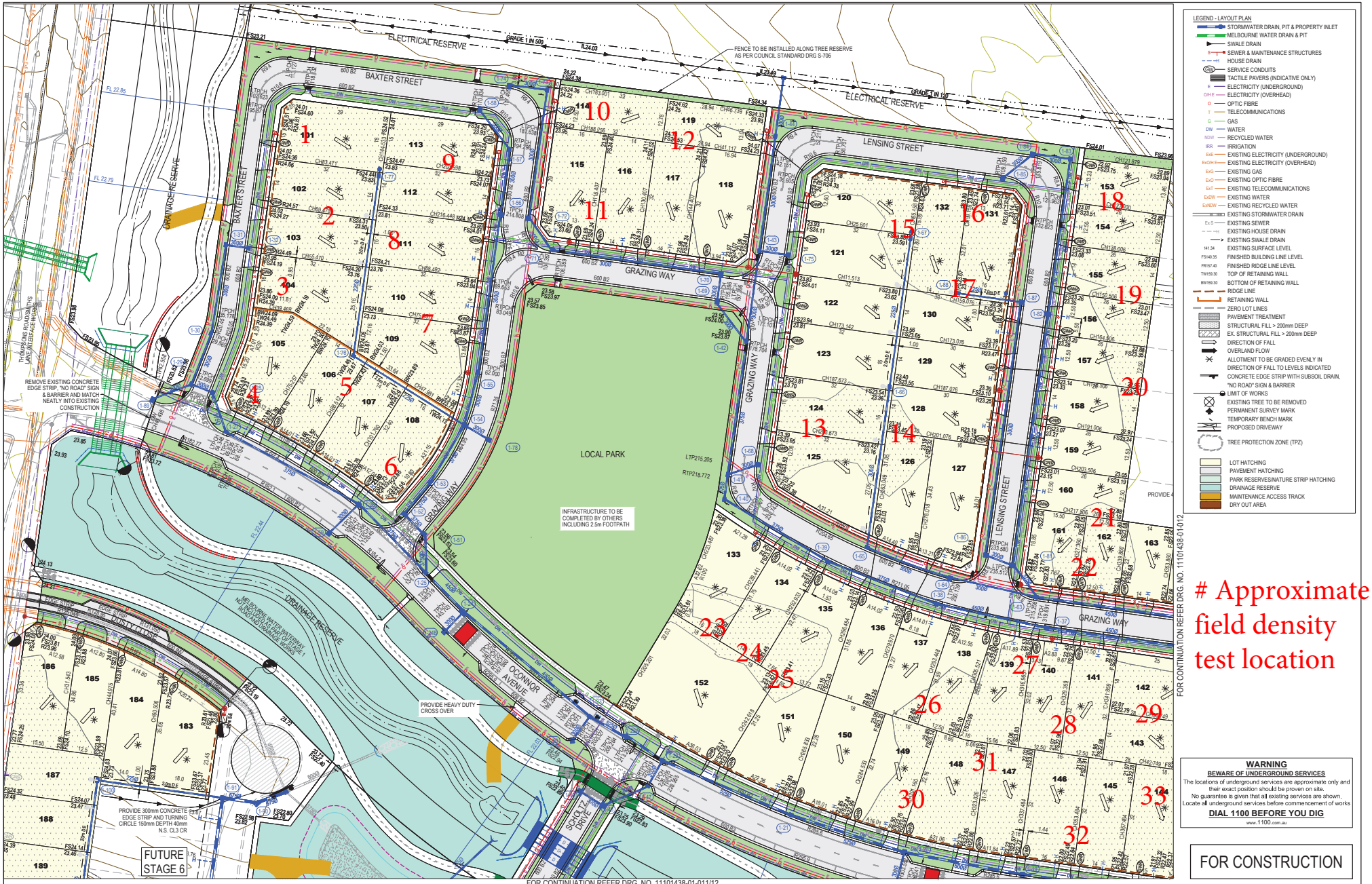
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Stephen Burns

FIGURE 1 (1 of 3)



Approximate field density test location

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.
Locate all underground services before commencement of works
DIAL 1100 BEFORE YOU DIG
www.1100.com.au

FOR CONSTRUCTION

A	ISSUED FOR CONSTRUCTION	13.12.19	M.F.J. L.M.
P1	ISSUED FOR INFORMATION	17.05.19	CL LM

SMITHS LANE
CLYDE NORTH

0 5 10 20 30 40 50

Designed C. LE Date 17.05.19
Drawn M.F.JAURIGUE
Approved L. MURRAY Date --
PS Number PS738244K

Beveridge Williams
development & environment consultants
1 Glenferrie Road
Malvern VIC 3144
ph: 03 9524 8888
www.beveridgewilliams.com.au

Project Details: SMITHS LANE
STAGE 01
CITY OF CASEY, SEng00192/19

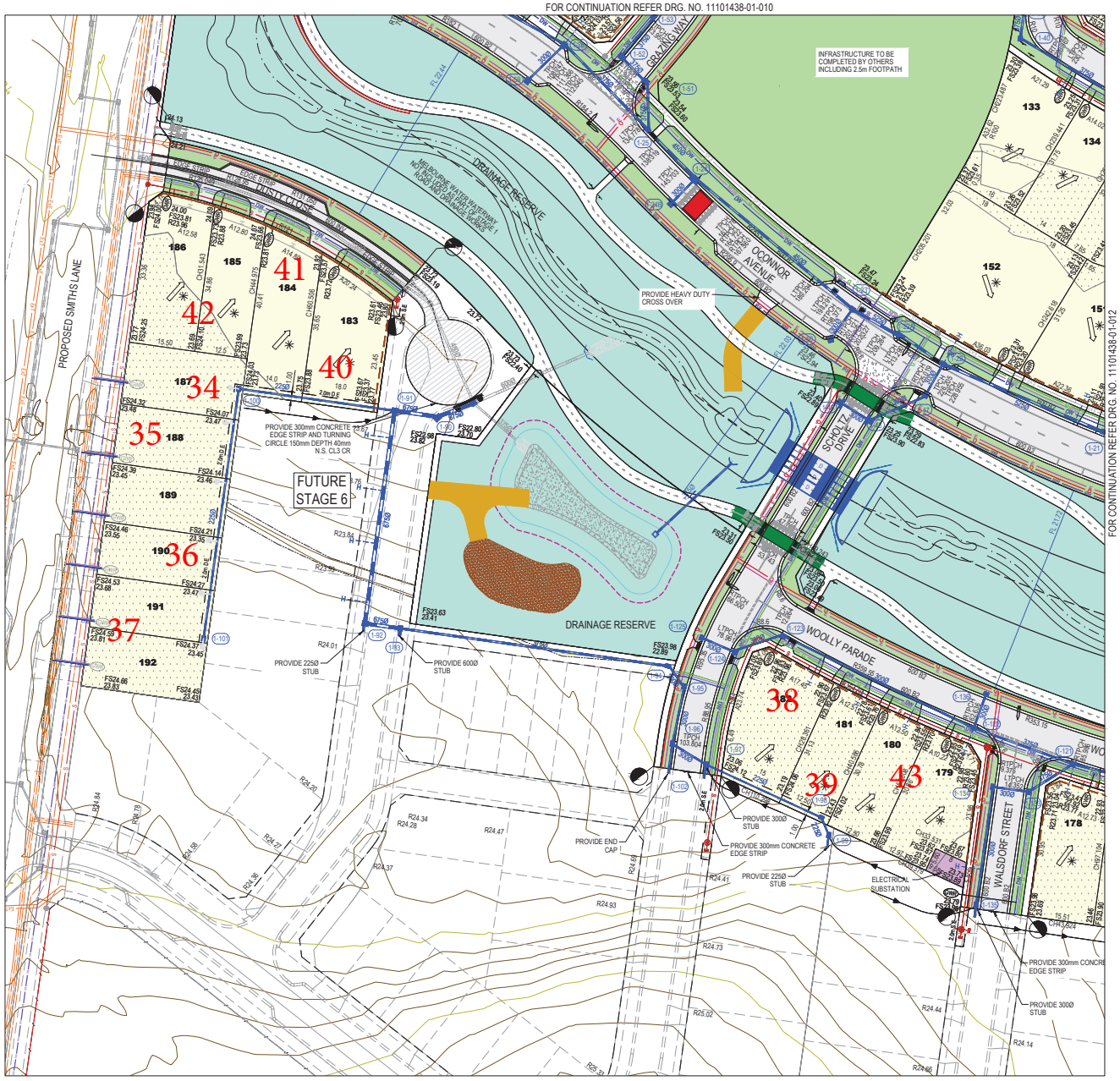
Drawing Title: LAYOUT PLAN
(SHEET 1 OF 6)

Sheet 05 of 71
Scale 1:500 @ A1

Project Ref	Stage No	Drawing No	Rev
1101438	01	010	A

K:\Jobs Data\1101438 110 Smiths Lane, Clyde (MIRVAC)_Eng\Stage 1\Drawings\1101438-01-010-LAY.dwg

FIGURE 1 (2 of 3)



ROAD LAYOUT TABLE						
ROAD NAME	RESERVE WIDTH (m)	ROAD WIDTH (m)			VERGE WIDTH (m)	
		LIP to LIP	INV to INV	BACK to BACK	NORTH/WEST	SOUTH/EAST
OCONNOR AVENUE	20.00	6.40 (10.30)	7.30 (11.20)	7.60 (11.50)	6.95 (5.00)	5.45 (3.50)
BAXTER STREET (13.00m)	13.00	6.40	7.30	7.60	2.95	4.35
BAXTER STREET (16.00m)	16.00	6.40	7.30	7.60	4.05/4.35	4.35/4.05
GRAZING WAY (14.50m)	14.50	6.40	7.30	7.60	4.35/2.55	2.55/4.35
GRAZING WAY (16.00m)	16.00	6.40	7.30	7.60	4.05	4.35
LENSING STREET (N/S)	16.00	6.40	7.30	7.60	4.05	4.35
CORBETT STREET	16.00	6.40	7.30	7.60	4.05	4.35
SCHOLTZ DRIVE	16.00	6.40	7.30	7.60	4.05	4.35
WOOLLY PARADE (14.50m)	14.50	6.40	7.30	7.60	2.55	4.35
WOOLLY PARADE (16.00m)	16.00	6.40	7.30	7.60	4.35	4.05
WALSDORF STREET	16.00	6.40	7.30	7.60	4.05	4.35
BRUHN STREET	16.00	6.40	7.30	7.60	4.05	4.35

NOTE: DIMENSIONS IN PARENTHESES INCLUDES PARKING LANE

SERVICE OFFSET TABLE

Location	Gas		ND - Water		Water		Electricity		Telecommunication		Sewer	
	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)	Side	Offset (m)
OCONNOR AVENUE	N	2.25	N	2.58	N	3.30	S	1.98	S	1.20	N	0.80
BAXTER STREET (13.00m)	E	2.25	E	2.70	E	3.20	W	1.25	W	0.50	E	1.00
BAXTER STREET (16.00m)	S/W	2.25	S/W	2.70	S/W	3.20	N/E	1.50/2.60	N/E	0.75/1.85	E/W	1.00
GRAZING WAY (14.50m)	N/E/W	2.25	N/E/W	2.70	N/E/W	3.20	S/E/W	1.25	S/E/W	0.50	N/E/W	1.00
GRAZING WAY (16.00m)	S	2.25	S	2.70	S	3.20	N	2.60	N	1.85	N/S	1.00
LENSING STREET (N/S)	S	2.25	S	2.70	S	3.20	N	1.50	N	0.75	S	1.00
LENSING STREET (W/E)	E/W	2.25	E/W	2.70	E/W	3.20	E/W	2.60	E/W	1.85	E/W	1.00
CORBETT STREET	E	2.25	E	2.70	E	3.20	W	2.60	W	1.85	E/W	1.00
SCHOLTZ DRIVE	E	2.25	E	2.70	E	3.20	W	2.60	W	1.85	E	1.00
WOOLLY PARADE (14.50m)	S	2.25	S	2.70	S	3.20	N	1.25	N	0.50	S	0.80
WOOLLY PARADE (16.00m)	W	2.25	W	2.70	W	3.20	E	2.60	E	1.85	-	-
WALSDORF STREET	E	2.25	E	2.70	E	3.20	W	2.60	W	1.85	W	1.00
BRUHN STREET	W	2.25	W	2.70	W	3.20	E	2.60	E	1.85	W	1.00

NOTE: STREET TREES ARE TO BE PLANTED IN THE CENTRE OF ALL NATURE STRIPS

LEGEND - LAYOUT PLAN

- STORMWATER DRAIN, PIT & PROPERTY INLET
- MELBOURNE WATER DRAIN & PIT
- SWALE DRAIN
- SEWER & MAINTENANCE STRUCTURES
- HOUSE DRAIN
- SERVICE CONDUITS
- TACTILE PAVERS (INDICATIVE ONLY)
- ELECTRICITY (UNDERGROUND)
- ELECTRICITY (OVERHEAD)
- OPTIC FIBRE
- TELECOMMUNICATIONS
- GAS
- WATER
- RECYCLED WATER
- IRRIGATION
- EXISTING ELECTRICITY (UNDERGROUND)
- EXISTING ELECTRICITY (OVERHEAD)
- EXISTING GAS
- EXISTING OPTIC FIBRE
- EXISTING TELECOMMUNICATIONS
- EXISTING WATER
- EXISTING RECYCLED WATER
- EXISTING STORMWATER DRAIN
- EXISTING SEWER
- EXISTING HOUSE DRAIN
- EXISTING SWALE DRAIN
- EXISTING SURFACE LEVEL
- FINISHED BUILDING LINE LEVEL
- FINISHED RIDGE LINE LEVEL
- TOP OF RETAINING WALL
- BOTTOM OF RETAINING WALL
- RIDGE LINE
- RETAINING WALL
- ZERO LOT LINES
- PAVEMENT TREATMENT
- STRUCTURAL FILL > 200mm DEEP
- EX. STRUCTURAL FILL > 200mm DEEP
- DIRECTION OF FALL
- OVERLAND FLOW
- ALLOTMENT TO BE GRADED EVENLY IN DIRECTION OF FALL TO LEVELS INDICATED
- CONCRETE EDGE STRIP WITH SUBSOIL DRAIN, "NO ROAD" SIGN & BARRIER
- LIMIT OF WORKS
- EXISTING TREE TO BE REMOVED
- PERMANENT SURVEY MARK
- TEMPORARY BENCH MARK
- PROPOSED DRIVEWAY
- TREE PROTECTION ZONE (TPZ)
- LOT HATCHING
- PAVEMENT HATCHING
- PARK RESERVES/NATURE STRIP HATCHING
- DRAINAGE RESERVE
- MAINTENANCE ACCESS TRACK
- DRY OUT AREA

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SMITHS LANE
CLYDE NORTH

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Project Details: SMITHS LANE
STAGE 01
CITY OF CASEY, SEng00192/19

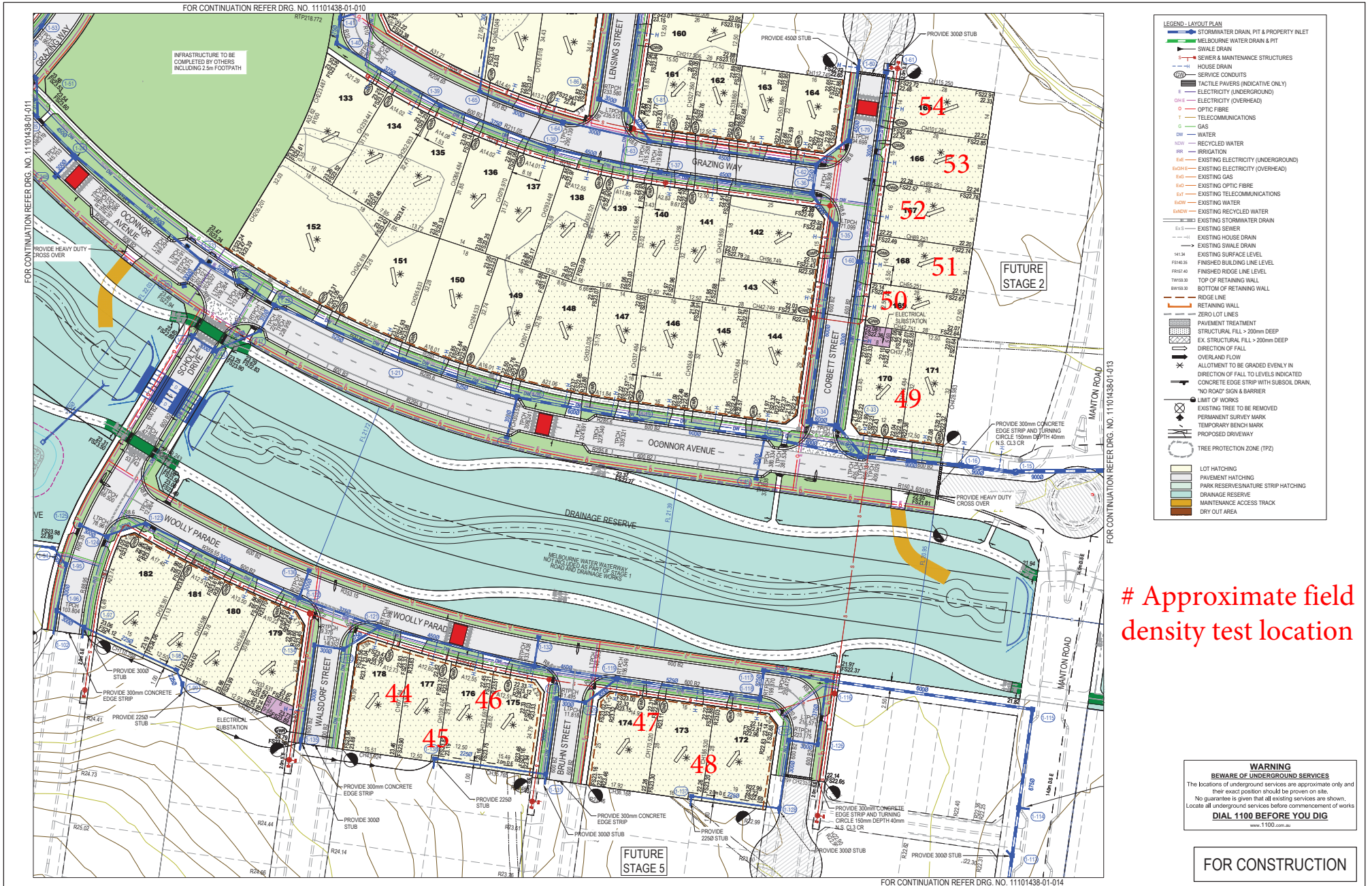
Drawing Title: LAYOUT PLAN
(SHEET 2 OF 6)

Sheet 06 of 71
Scale 1:500 @ A1

Project Ref	Stage No	Drawing No	Rev
1101438	01	011	A

K:\Jobs Data\1101438 110 Smiths Lane, Clyde (MIRVAC)_Eng\Stage 1\Drawings\1101438-01-010-LAY.dwg

FIGURE 1 (3 of 3)



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SMITHS LANE
CLYDE NORTH

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STAGE 01
CITY OF CASEY, SEng00192/19

Drawing Title: LAYOUT PLAN
(SHEET 3 OF 6)

Sheet 07 of 71
Scale 1:500 @ A1

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1101438	01	012	A

K:\Jobs Data\1101438 110 Smiths Lane, Clyde (MIRVAC)_Eng\Stage 1\Drawings\1101438-01-010-LAY.dwg

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	20048
		Report No	20048/R001
		Date Issued	19/02/2020
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	SMITHS LANE - STAGE 1	*Date tested*	07/02/20
Location	CLYDE NORTH	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 09:30

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/m³*	2.03	2.06	2.03	2.03	2.01	2.00
Field moisture content	*%*	14.5	14.0	17.5	15.2	16.8	16.7

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/m³*	2.07	2.07	2.05	2.04	2.04	2.04
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	12.5	12.5	15.5	13.5	14.5	15.5

Moisture Variation From Optimum Moisture Content		2.0% wet	2.0% wet	2.5% wet	2.0% wet	2.5% wet	1.5% wet
Density Ratio (R_{HD})	*%*	**98.5**	**100.0**	**99.0**	**99.5**	**98.5**	**98.0**

Material description

No 1 - 6 Clay Fill

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	20048
		Report No	20048/R002
		Date Issued	04/04/2020
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	SMITHS LANE - STAGE 1	*Date tested*	11/02/20
Location	CLYDE NORTH	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 10:30

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/m³*	2.01	2.00	2.04	2.07	1.98	1.94
Field moisture content	*%*	14.4	14.9	13.5	12.7	12.6	12.7

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/m³*	2.07	2.07	2.07	2.07	2.00	1.98
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	14.5	16.5	16.0	15.0	15.0	15.0

Moisture Variation From Optimum Moisture Content		0.0%	1.5% dry	2.5% dry	2.5% dry	2.0% dry	2.5% dry
Density Ratio (R_{HD})	*%*	**97.0**	**97.0**	**98.5**	**100.0**	**99.5**	**98.0**

Material description

No 7 - 12 Clay Fill

AVRLOT HILF V1.10 MAR 13

NATA

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

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	20048
		Report No	20048/R003
		Date Issued	04/04/2020
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	SMITHS LANE - STAGE 1	*Date tested*	12/02/20
Location	CLYDE NORTH	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 08:00

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**13**	**14**	**15**	**16**	**17**	**18**
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/m³*	1.96	2.00	1.91	1.89	2.00	2.01
Field moisture content	*%*	20.1	19.6	20.4	21.4	15.9	17.6

Test procedure AS 1289.5.7.1

Test No		13	14	15	16	17	18
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/m³*	2.01	2.04	1.91	1.95	2.02	2.01
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	17.5	17.0	18.5	20.5	16.0	16.0

Moisture Variation From Optimum Moisture Content	2.5% wet	2.5% wet	2.0% wet	0.5% wet	0.0%	1.5% wet

Density Ratio (R_{HD})	*%*	**97.5**	**98.0**	**99.5**	**97.0**	**99.0**	**99.5**

Material description

No 13 - 18 Clay Fill

AVRLOT HILF V1.10 MAR 13

NATA

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

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	20048
		Report No	20048/R004
		Date Issued	08/04/2020
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	SMITHS LANE - STAGE 1	*Date tested*	13/02/20
Location	CLYDE NORTH	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 12:00

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**19**	**20**	**21**	**-**	**-**	**-**
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/m³*	2.05	2.01	2.00	-	-	-
Field moisture content	*%*	17.6	19.2	17.0	-	-	-

Test procedure AS 1289.5.7.1

Test No		19	20	21	-	-	-
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/m³*	2.05	2.03	2.03	-	-	-
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	18.5	21.0	18.5	-	-	-

Moisture Variation From Optimum Moisture Content		1.0% dry	2.0% dry	1.5% dry	-	-	-

Density Ratio (R_{HD})	*%*	**100.0**	**99.0**	**98.5**	**-**	**-**	**-**

Material description

No 19 - 21 Clay Fill

AVRLOT HILF V1.10 MAR 13

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	20048
		Report No	20048/R005
		Date Issued	15/04/2020
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	SMITHS LANE - STAGE 1	*Date tested*	14/02/20
Location	CLYDE NORTH	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 11:00

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**22**	**23**	**24**	**25**	**26**	**27**
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/m³*	2.03	2.01	2.01	2.01	2.00	2.01
Field moisture content	*%*	19.0	17.8	17.9	16.4	19.1	19.1

Test procedure AS 1289.5.7.1

Test No		22	23	24	25	26	27
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/m³*	2.03	2.04	2.04	2.05	2.03	2.03
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	19.5	18.0	17.5	16.0	19.0	19.5

Moisture Variation From Optimum Moisture Content		0.5% dry	0.0%	0.5% wet	0.5% wet	0.0%	0.5% dry
Density Ratio (R_{HD})	*%*	**100.0**	**98.5**	**98.5**	**98.0**	**98.5**	**99.0**

Material description

No 22 - 27 Clay Fill

AVRLOT HILF V1.10 MAR 13

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	20048
		Report No	20048/R006
		Date Issued	15/04/2020
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	SMITHS LANE - STAGE 1	*Date tested*	24/02/20
Location	CLYDE NORTH	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 07:30

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**28**	**29**	**30**	**31**	**32**	**33**
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/m³*	2.03	2.00	1.97	1.96	1.96	1.98
Field moisture content	*%*	18.5	19.3	14.4	17.2	17.4	15.5

Test procedure AS 1289.5.7.1

Test No		28	29	30	31	32	33
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/m³*	2.07	2.05	1.99	1.98	1.97	2.01
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	16.5	19.0	16.0	17.0	17.5	17.0

Moisture Variation From Optimum Moisture Content	2.0% wet	0.5% wet	1.5% dry	0.0%	0.0%	1.5% dry

Density Ratio (R_{HD})	*%*	**98.5**	**97.5**	**98.5**	**99.0**	**100.0**	**98.5**

Material description

No 28 - 33 Clay Fill

AVRLOT HILF V1.10 MAR 13

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	20048
		Report No	20048/R007
		Date Issued	04/04/2020
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	SMITHS LANE - STAGE 1	*Date tested*	28/02/20
Location	CLYDE NORTH	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 10:30

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**34**	**35**	**36**	**37**	**38**	**39**
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/m³*	1.98	2.04	2.02	2.00	2.02	2.02
Field moisture content	*%*	19.4	20.2	22.4	19.8	17.3	18.9

Test procedure AS 1289.5.7.1

Test No		34	35	36	37	38	39
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/m³*	1.98	2.05	2.04	2.03	2.05	2.04
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	20.0	20.0	22.5	20.0	17.0	19.0

Moisture Variation From Optimum Moisture Content		0.5% dry	0.0%	0.0%	0.0%	0.0%	0.0%
Density Ratio (R_{HD})	*%*	**100.0**	**99.5**	**99.5**	**98.5**	**99.0**	**99.0**

Material description

No 34 - 39 Clay Fill

AVRLOT HILF V1.10 MAR 13

NATA

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

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES
6 - 8 Rose Avenue, Croydon, Vic 3136

		Job No	20048
		Report No	20048/R008
		Date Issued	03/04/2020
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	SB
Project	SMITHS LANE - STAGE 1	Date tested	30/03/20
Location	CLYDE NORTH	Checked by	JHF

Feature	**EARTHWORKS**	*Layer thickness*	200 mm	*Time:*	14:00:00

AS 12892.1.1 & 5.8.1

Test No		**40**	**41**	**42**			
Location		REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth from F.S.L.	*m*	-	-	-			
Measurement depth	*mm*	175	175	175			
Field wet density	*t/m³*	2.09	2.07	2.07			
Field dry density	*t/m³*	1.89	1.88	1.87			
Field moisture content	*%*	10.5	10.5	11.0			

Laboratory Compaction AS 1289.5.1.1

Date of compaction material sampled		02/04/20	02/04/20	02/04/20			
Location of material sampled		40	41	42			
Material source and location		Sand	Sand	Sand			
Oversize material retained on 19.0 mm		0	0	0			
Compactive effort		Standard	Standard	Standard			
Maximum Dry Density	*t/m³*	1.99	1.96	1.94			
Optimum Moisture Content	*%*	10.0	10.5	10.0			

Test procedure AS 1289.5.4.1

Oversize rock retained on sieve	*mm*	19.0	19.0	19.0			
Percent of oversize material	*wet*	-	-	-			
Percent of oversize material	*dry*	-	-	-			
Adjusted Maximum Dry Density	*t/m³*	-	-	-			
Adjusted Optimum Moisture Content	*%*	-	-	-			

Moisture Variation From Optimum Moisture Content		1.0% wet	0.0% dry	1.0% wet			
Moisture Ratio (R_m)	*%*	109.5	99.5	109.0			
Density Ratio (R_D)	*%*	**95.0**	**96.0**	**96.5**			

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	20048
		Report No	20048/R009
		Date Issued	15/04/2020
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	SMITHS LANE - STAGE 1	*Date tested*	14/04/20
Location	CLYDE NORTH	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 12:00

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**43**	**44**	**45**	**46**	**47**	**48**
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/m³*	1.98	2.02	2.06	2.04	1.97	1.99
Field moisture content	*%*	19.4	18.8	19.3	19.6	19.7	19.5

Test procedure AS 1289.5.7.1

Test No		43	44	45	46	47	48
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/m³*	2.00	2.05	2.10	2.10	2.00	2.00
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	17.0	16.5	17.5	17.0	17.0	17.5

Moisture Variation From Optimum Moisture Content		2.5% wet	2.5% wet	2.0% wet	2.5% wet	2.5% wet	2.0% wet
Density Ratio (R_{HD})	*%*	**99.0**	**98.5**	**98.0**	**97.5**	**98.5**	**99.0**

Material description

No 43 - 48 Clay Fill

AVRLOT HILF V1.10 MAR 13

Approved Signatory : Justin Fry

COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

		Job No	20048
		Report No	20048/R010
		Date Issued	16/04/2020
Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	*Tested by*	SB
Project	SMITHS LANE - STAGE 1	*Date tested*	15/04/20
Location	CLYDE NORTH	*Checked by*	JHF

Feature **EARTHWORKS** *Layer thickness* 200 mm *Time:* 13:00

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		**47**	**48**	**49**	**50**	**51**	**52**
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/m³*	1.98	1.97	2.02	2.02	2.03	1.98
Field moisture content	*%*	19.4	18.3	19.1	19.7	18.1	19.2

Test procedure AS 1289.5.7.1

Test No		47	48	49	50	51	52
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/m³*	2.00	2.00	2.05	2.10	2.10	2.00
Adjusted Peak Converted Wet Density	*t/m³*	-	-	-	-	-	-
Optimum Moisture Content	*%*	17.0	16.0	16.5	17.5	16.0	17.0

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

Density Ratio (R_{HD})	*%*	**99.0**	**98.5**	**98.5**	**96.0**	**96.5**	**99.0**

Material description

No 47 - 52 Clay Fill

AVRLOT HILF V1.10 MAR 13

Approved Signatory : Justin Fry