



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

8th May 2019

Our Reference: 18795:NB487

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
ASPIRE – STAGE 22 (PLUMPTON)

Please find attached our Report No's 18795/R001 to 18795/R003 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 December 2018 and was completed in March 2019.

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 circular stamp.

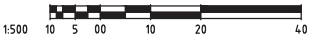
Nick Brock

FIGURE 1 (1 of 2)

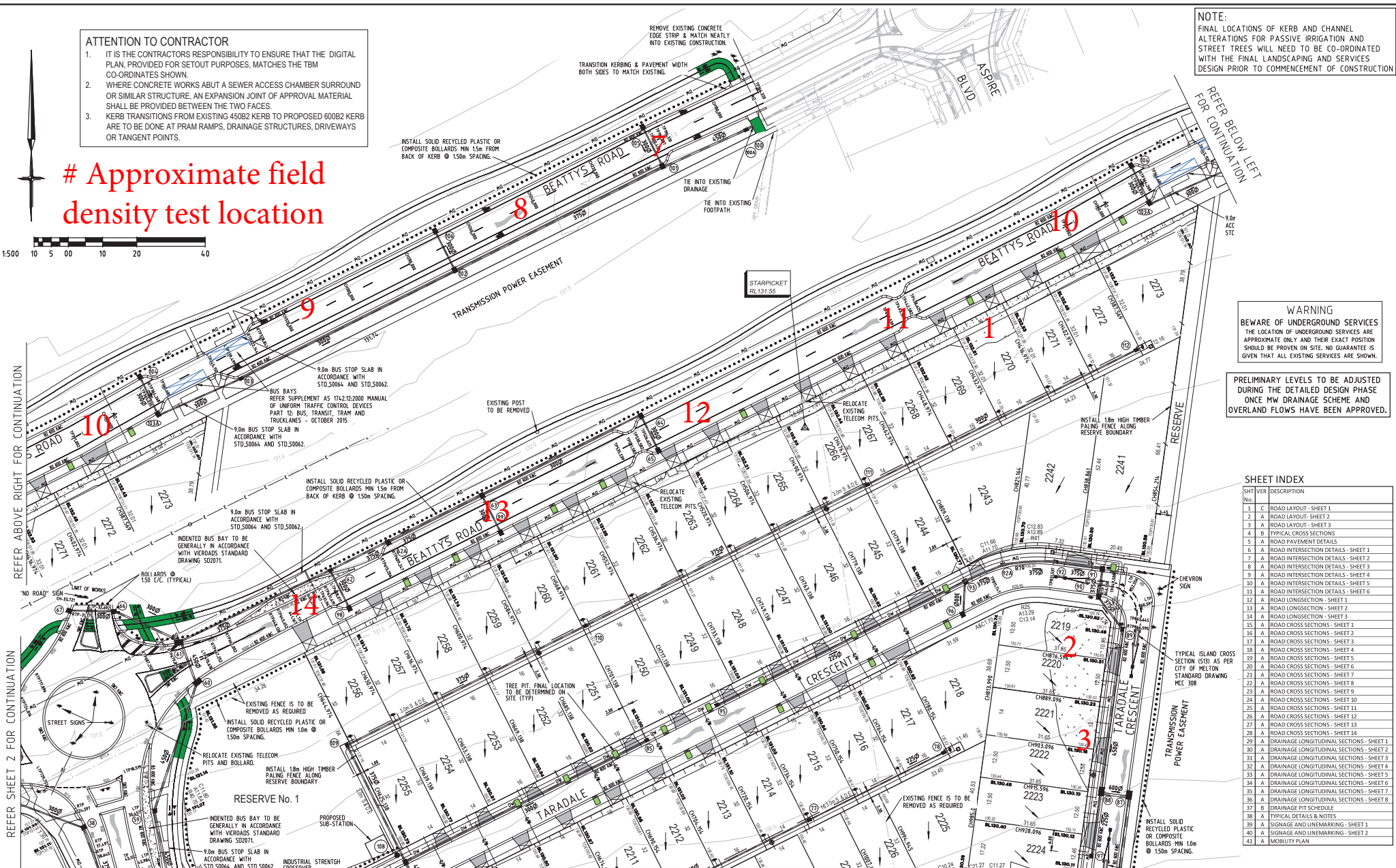
ATTENTION TO CONTRACTOR

- IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE DIGITAL PLAN, PROVIDED FOR SETOUT PURPOSES, MATCHES THE TBM CO-ORDINATES SHOWN.
- WHERE CONCRETE WORKS ABOUT A SEWER ACCESS CHAMBER SURROUND OR SIMILAR STRUCTURE, AN EXPANSION JOINT OF APPROVAL MATERIAL SHALL BE PROVIDED BETWEEN THE TWO FACES.
- KERB TRANSITIONS FROM EXISTING 450B2 KERB TO PROPOSED 600B2 KERB ARE TO BE DONE AT FRAM RAMPS, DRAINAGE STRUCTURES, DRIVEWAYS OR TANGENT POINTS.

Approximate field density test location



NOTE:
FINAL LOCATIONS OF KERB AND CHANNEL ALTERATIONS FOR PASSIVE IRRIGATION AND STREET TREES WILL NEED TO BE CO-ORDINATED WITH THE FINAL LANDSCAPING AND SERVICES DESIGN PRIOR TO COMMENCEMENT OF CONSTRUCTION



WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATION 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.

PRELIMINARY LEVELS TO BE ADJUSTED
DURING THE DETAILED DESIGN PHASE
ONCE FLOW DRAINAGE SCHEME AND OVERLAND FWS HAVE BEEN APPROVED.

SHEET INDEX

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2	A ROAD LAYOUT - SHEET 2
3	A ROAD LAYOUT - SHEET 3
4	B TYPICAL CROSS SECTIONS
5	A ROAD PAVEMENT DETAILS
6	A ROAD INTERSECTION DETAILS - SHEET 1
7	A ROAD INTERSECTION DETAILS - SHEET 2
8	A ROAD INTERSECTION DETAILS - SHEET 3
9	A ROAD INTERSECTION DETAILS - SHEET 4
10	A ROAD INTERSECTION DETAILS - SHEET 5
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12	A ROAD LONGSECTION - SHEET 1
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21	A ROAD CROSS SECTIONS - SHEET 7
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24	A ROAD CROSS SECTIONS - SHEET 10
25	A ROAD CROSS SECTIONS - SHEET 11
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27	A ROAD CROSS SECTIONS - SHEET 13
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29	A DRAINAGE LONGITUDINAL SECTIONS - SHEET 1
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33	A DRAINAGE LONGITUDINAL SECTIONS - SHEET 5
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38	A TYPICAL DETAILS & NOTES
39	A SIGNAGE AND UNIFORMITY - SHEET 1
40	A SIGNAGE AND UNIFORMITY - SHEET 2
41	A MOBILITY PLAN

SERVICE OFFSETS AND LOCATION TABLE

ROAD NAME	RESERVE WIDTH	WATER DW	GAS DW	ELECTRICITY				TELECOMMUNICATIONS		BOK	
				POLE SIDE	OFFSET	U/G CABLE SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET
BEATTYS ROAD	10.00	3.60 S	3.00 S	N	1.00	S	2.50	S	2.25	VARIABLES	VARIABLES
MAMIC BOULEVARD	31.50	3.10 W	2.25 W	E	1.00	E	2.50	E	1.50	9.35 E	4.35 W
TARADALE CRESCENT (16.0m ROAD RESERVE)	16.00	2.60 N	2.10 N	S	1.00	S	2.30	S	1.80	4.05 N	4.05 S
TARADALE CRESCENT (15.3m ROAD RESERVE)	15.30	2.60 W	2.10 W	E	1.00	E	2.10	E	1.40	3.35 E	4.05 W
FAIRMONT CRESCENT	16.00	2.60 N	2.10 N	S	1.00	S	2.30	S	1.80	4.05 N	4.05 S

NOTE: * OFFSET FROM BACK OF KERB

PLAN SCALE 1:500

SYMBOL LEGEND

Drains	Temporary Bench Mark (TBM)	25.57
Sewer <300	Ex/Natural/FS Level	26.57
Sewer >300	FS @ Building Line	26.57
Water	Top/Toe of Batter	700.057 / 700.057
House Drain	Top Ret. Wall Level	700.57
Property Inlet	Fill Prop/Ex (0.2m-0.5m depth)	
Street Sign	Fill Prop/Ex (0-0.2m depth)	
PSM	Out Prop/Ex (0-0.2m depth)	
Retaining Wall	Threshold Treatment	
Conduits 50mm		
Conduits 100mm		
Ex Gas/Elect/Net		
Proposed Tree Pits		

REV	DATE	REMARKS
12.11.18		SHEET INDEX REVISED
24.10.18		SHEET INDEX REVISED
15.10.18		CONSTRUCTION ISSUE

breese pitt dixon pty. ltd.
land surveyors civil engineers

MELWAY REF. 354 C12
SURVEY BPD
DESIGN JGB
DRAWN IMW
CHECKED TBA

ASPIRE ESTATE
STAGE 22
ROAD LAYOUT - SHEET 1

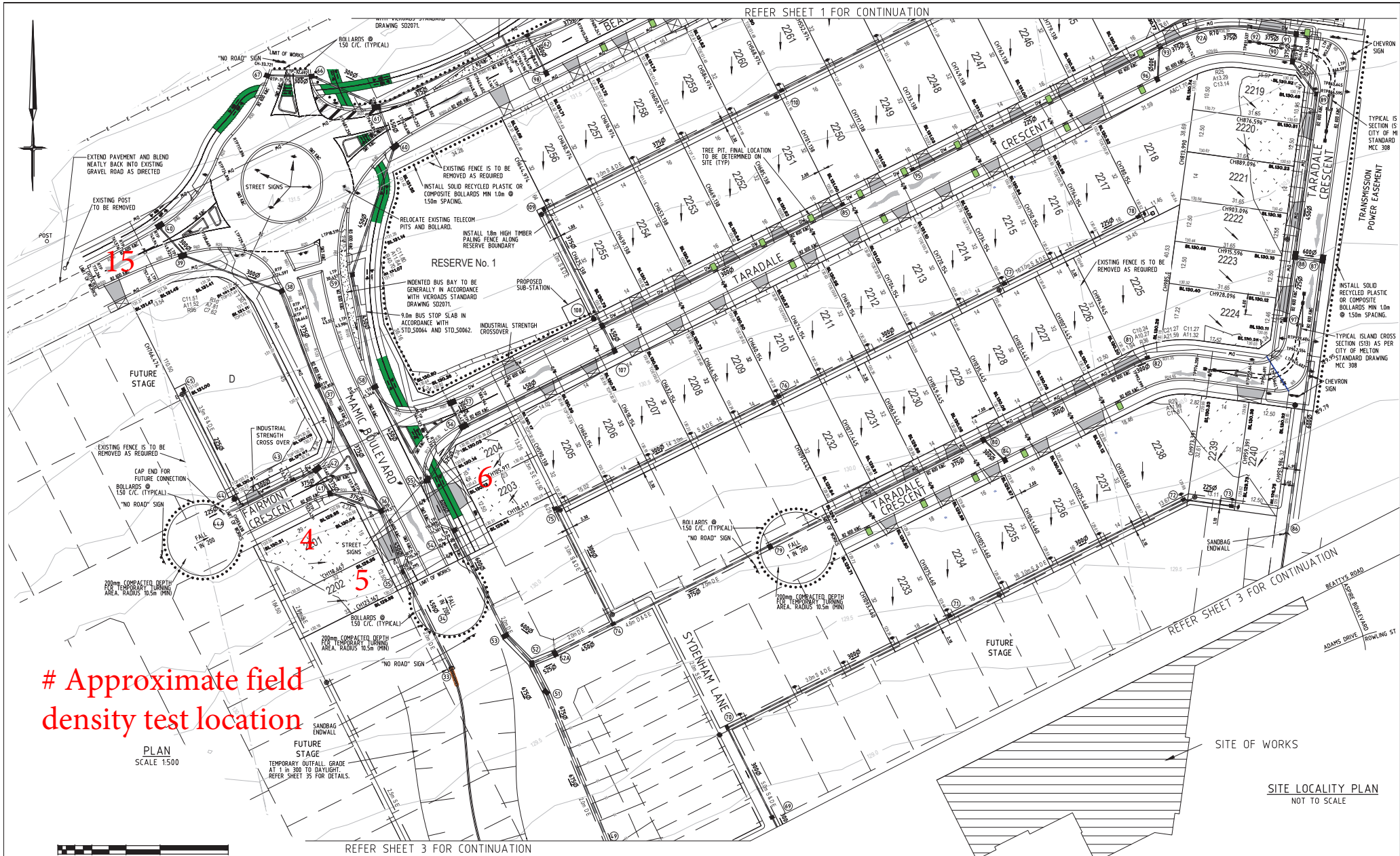
1/19 coto street hawthorn east, 3123 telephone 8823 2300 fax no. 8823 2310

MELTON
REFERENCE 8226 E/22

SCALE AS SHOWN DATUM AHD DATE APRIL '18 SHEET 01 OF 41 C

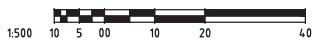
FIGURE 1 (2 of 2)

REFER SHEET 1 FOR CONTINUATION



Approximate field density test location

PLAN SCALE 1:500
 FUTURE STAGE TEMPORARY OUTFALL GRADE AT 1 IN 200 TO DAYLIGHT. REFER SHEET 35 FOR DETAILS.



REFER SHEET 3 FOR CONTINUATION

REFER SHEET 3 FOR CONTINUATION
 SITE OF WORKS
 SITE LOCALITY PLAN NOT TO SCALE

PRELIMINARY LEVELS TO BE ADJUSTED DURING THE DETAILED DESIGN PHASE ONCE MW DRAINAGE SCHEME AND OVERLAND FLOWS HAVE BEEN APPROVED.

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SYMBOL LEGEND

Drains	Temporary Bench Mark (TBM)
Sewer <300	Ex/Natural/FS Level
Sewer >300	FS @ Building Line
Water	Top./Toe of Batter
House Drain	Top Ret. Wall Level
Property Inlet	Fill Prop/Ex (0.2m-0.5m depth)
Street Sign	Fill Prop/Ex (>0.5m depth)
FSM	Out Prop/Ex (>0.2m depth)
Retaining Wall	Threshold Treatment
Proposed Tree Pits	

NO.	DATE	CONSTRUCTION ISSUE	REMARKS
A	15.10.18	CONSTRUCTION ISSUE	

breese pitt dixon pty. ltd.
 land surveyors civil engineers

MELWAY REF. 354 C12
 SURVEY BPD
 DESIGN JGB
 DRAWN IMW
 CHECKED TBA

**ASPIRE ESTATE
 STAGE 22
 ROAD LAYOUT - SHEET 2**

MANCIPALITY MELTON
 REFERENCE 8226 E/22
 SCALE AS SHOWN DATUM AHD DATE APRIL '18 SHEET 02 OF 41 A

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



COMPACTION ASSESSMENT

Job No 18795
 Report No 18795/R001
 Date Issued 08/05/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BS
Project	ASPIRE - STAGE 22	Date tested	03/12/18
Location	PLUMPTON	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	250 mm	Time: 13:01
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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 <i>mm</i>	150	150	150	150	150	150
Field wet density <i>t/m³</i>	1.77	1.78	1.79	1.76	1.73	1.74
Field moisture content <i>%</i>	19.7	18.1	18.6	26.9	18.7	18.3

Test procedure AS 1289.5.7.1

Test No	1	2	3	4	5	6
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize material <i>wet</i>	0	0	0	0	0	0
Peak Converted Wet Density <i>t/m³</i>	1.80	1.85	1.85	1.80	1.80	1.80
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	21.5	20.0	20.5	29.5	20.5	20.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.0% dry	2.5% dry	2.0% dry	2.0% dry
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Density Ratio (R_{HD})	%	98.0	96.5	97.0	97.5	96.5	97.0
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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 18795
 Report No 18795/R002
 Date Issued 08/05/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BGG
Project	ASPIRE - STAGE 22	Date tested	21/03/19
Location	PLUMPTON	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 16:41
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	7	8	9	-	-	-
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	1.87	1.87	1.87	-	-
Field moisture content	%	31.7	31.3	29.6	-	-

Test procedure AS 1289.5.7.1

Test No	7	8	9	-	-	-
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	1.90	1.90	1.90	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	31.5	31.0	28.5	-	-

Moisture Variation From Optimum Moisture Content	0.0%	0.5% wet	1.0% wet	-	-	-
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Density Ratio (R _{HD})	%	98.0	98.0	98.0	-	-
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Material description

No 7 - 9 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 18795
 Report No 18795/R003
 Date Issued 08/05/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	BGG
Project	ASPIRE - STAGE 22	Date tested	22/03/19
Location	PLUMPTON	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 16:37
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	10	11	12	13	14	15
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 <i>mm</i>	175	175	175	175	175	175
Field wet density <i>t/m³</i>	1.88	1.81	1.86	1.83	1.88	1.85
Field moisture content <i>%</i>	29.1	29.0	27.1	27.6	28.2	30.5

Test procedure AS 1289.5.7.1

Test No	10	11	12	13	14	15
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	19.0	19.0	19.0
Percent of oversize material <i>wet</i>	0	0	0	0	0	0
Peak Converted Wet Density <i>t/m³</i>	1.87	1.83	1.90	1.84	1.89	1.88
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	31.0	31.0	29.5	30.0	30.5	33.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	2.5% dry	2.0% dry	2.5% dry
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Density Ratio (R_{HD})	%	100.5	99.0	98.0	100.0	99.5	98.5
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Material description

No 10 - 15 Clay Fill

AVRLOT HILF V1.10 MAR 13



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