



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

4th November 2021

Our Reference: 21261:NB1091

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs/Madams,

**RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
TRIJENA – STAGE 10 (MICKLEHAM)**

Please find attached our Report No 21261/R001 which relates 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 July 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).

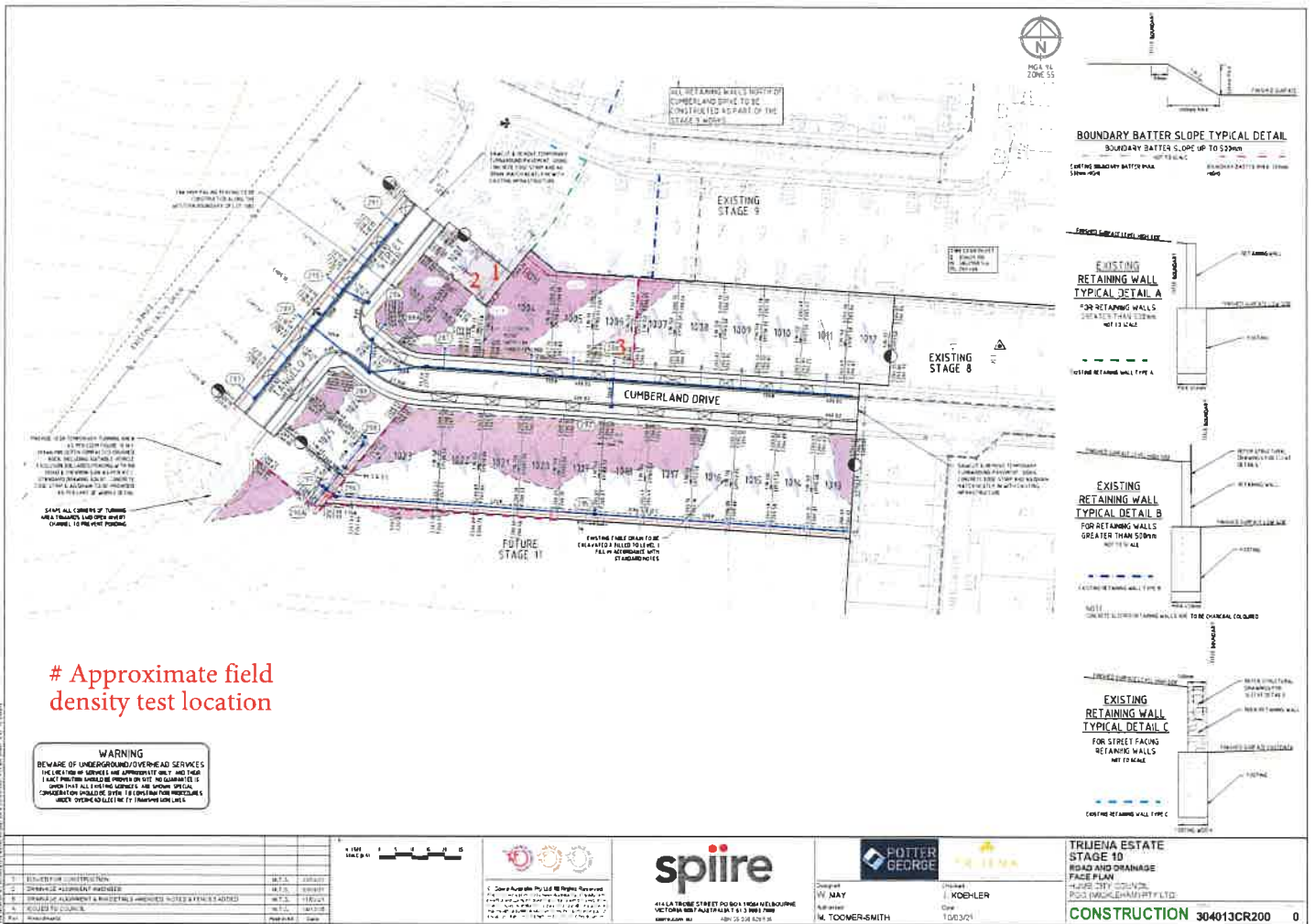
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

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

Nick Brock

FIGURE 1





COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 21261
Report No 21261/R001
Date Issued 22/09/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	TRIJENA - STAGE 10	Date tested	19/07/21
Location	MICKLEHAM	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:32
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	1	2	3	-	-	-
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	1.82	1.87	1.83	-	-
Field moisture content	%	23.8	22.0	25.5	-	-

Test procedure AS 1289.5.7.1

Test No	1	2	3	-	-	-
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	1.91	1.91	1.89	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	26.0	24.0	28.0	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.0% dry	-	-	-
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Density Ratio (R _{HD})	%	95.5	98.0	97.0	-	-
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Material description

No 1 - 3 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, Vic 3136

Job No 21498
Report No 21498/R001
Date Issued 23/09/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	TRIJENA - STAGE 10	Date tested	14/07/21
Location	MICKLEHAM	Checked by	JHF

Feature	CAPPING	Layer thickness	150 mm	Time:	10:10:36
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AS 12892.1.1 & 5.8.1						
Test No		1	2	3	4	5
Location		Cumberland Drive			Tangelo Street	
Chainage		120	170	220	50	100
Offset		1.8	1.8	1.8	1.8	1.8
		north of kerb	south of kerb	north of kerb	east of kerb	west of kerb
Approximate depth from F.S.L.	m					
Measurement depth	mm	125	125	125	125	125
Field wet density	t/m ³	2.25	2.24	2.23	2.22	2.23
Field dry density	t/m ³	2.10	2.09	2.05	2.06	2.05
Field moisture content	%	7.0	7.0	8.5	8.0	8.5
Laboratory Compaction AS 1289.5.1.1 & 5.4.2 Assigned Values (See Report No 40AMWQACH)						
Date of assignment		29/04/2021				
Material source and location		40mm Capping - MVQ, Donnybrook				
Compactive effort		STANDARD				
Maximum Dry Density	t/m ³	2.08				
Optimum Moisture Content	%	9.5				
Test procedure AS 1289.5.4.1						
Oversize rock retained on sieve	mm	37.5	37.5	37.5	37.5	37.5
Percent of oversize material	wet	-	-	-	-	-
Percent of oversize material	dry	-	-	-	-	-
Adjusted Maximum Dry Density	t/m ³	-	-	-	-	-
Adjusted Optimum Moisture Content	%	-	-	-	-	-
Moisture Variation From Optimum Moisture Content		2.0% dry	2.5% dry	0.5% dry	1.5% dry	0.5% dry
Moisture Ratio (R_m)	%	77.0	76.0	93.0	84.0	93.0
Density Ratio (R_D)	%	100.5	100.0	98.5	99.0	98.5

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COMPACTION ASSESSMENT

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

Job No 21498
Report No 21498/R002
Date Issued 04/04/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	TRIJENA - STAGE 10	Date tested	04/08/21
Location	MICKLEHAM	Checked by	JHF

Feature	CLASS 3	Layer thickness	100 mm	Time:	08:31:09
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AS 12892.1.1 & 5.8.1

Test No		6	7	8	9	10	
Location		Cumberland Drive			Tangelo Street		
	Chainage	120	170	220	50	100	
	Offset	1.8	1.8	1.8	1.8	1.8	
		south of kerb	north of kerb	south of kerb	west of kerb	east of kerb	
Approximate depth from F.S.L.	m						
Measurement depth	mm	75	75	75	75	75	
Field wet density	t/m ³	2.39	2.41	2.38	2.39	2.40	
Field dry density	t/m ³	2.28	2.29	2.26	2.27	2.27	
Field moisture content	%	5.0	5.5	5.0	5.0	6.0	

Laboratory Compaction AS 1289.5.2.1 & 5.4.2 Assigned Values (See Report No 203MVDCCM)

Date of assignment	22/07/2021
Material source and location	20mm Class 3 - MVQ, Donnybrook
Compactive effort	MODIFIED
Maximum Dry Density	t/m ³ 2.30
Optimum Moisture Content	% 7.0

Test procedure AS 1289.5.4.1

Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0	
Percent of oversize material	wet	-	-	-	-	-	
Percent of oversize material	dry	-	-	-	-	-	
Adjusted Maximum Dry Density	t/m ³	-	-	-	-	-	
Adjusted Optimum Moisture Content	%	-	-	-	-	-	

Moisture Variation From Optimum Moisture Content		2.0% dry	1.5% dry	2.0% dry	2.0% dry	1.0% dry	
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Moisture Ratio (R _m)	%	68.5	79.0	74.0	70.5	82.0	
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Density Ratio (R _D)	%	99.5	99.5	98.5	99.0	99.0	
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COMPACTION ASSESSMENT

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

Job No 21498
Report No 21498/R003
Date Issued 12/08/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	TRIJENA - STAGE 10	Date tested	12/08/21
Location	MICKLEHAM	Checked by	JHF

Feature	CLASS 2*	Layer thickness	130 mm	Time:	13:46:18
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AS 12892.1.1 & 5.8.1						
Test No		11	12	13	14	15
Location		Cumberland Drive			Tangelo Street	
	Chainage	120	170	220	50	100
	Offset	1.8	1.8	1.8	1.8	1.8
		south of kerb	north of kerb	south of kerb	west of kerb	east of kerb
Approximate depth from F.S.L.	m					
Measurement depth	mm	100	100	100	100	100
Field wet density	t/m ³	2.32	2.32	2.34	2.36	2.34
Field dry density	t/m ³	2.23	2.22	2.20	2.25	2.26
Field moisture content	%	4.5	5.0	6.0	5.0	3.5
Laboratory Compaction AS 1289.5.2.1 & 5.4.2 Assigned Values (See Report No 202MVDGM)						
Date of assignment		27/05/2021				
Material source and location		20mm Class 2 - MVQ, Donnybrook				
Compactive effort		MODIFIED				
Maximum Dry Density	t/m ³	2.32				
Optimum Moisture Content	%	7.5				
Test procedure AS 1289.5.4.1						
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	-	-	-	-	-
Percent of oversize material	dry	-	-	-	-	-
Adjusted Maximum Dry Density	t/m ³	-	-	-	-	-
Adjusted Optimum Moisture Content	%	-	-	-	-	-
Moisture Variation From Optimum Moisture Content		3.5% dry	2.5% dry	1.5% dry	2.5% dry	4.5% dry
Moisture Ratio (R_m)	%	56.0	64.0	79.0	65.5	44.0
Density Ratio (R_D)	%	96.0	95.5	95.0	97.0	97.5
* Retested in report 21498/R004						

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COMPACTION ASSESSMENT

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

Job No 21498
Report No 21498/R004
Date Issued 16/08/2021

Client	WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)	Tested by	AC
Project	TRIJENA - STAGE 10	Date tested	14/08/21
Location	MICKLEHAM	Checked by	JHF

Feature	CLASS 2	Layer thickness	130 mm	Time:	07:35:21
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AS 12892.1.1 & 5.8.1						
Test No		16	17	18	19	20
Location		Cumberland Drive			Tangelo Street	
	Chainage	120	170	220	50	100
	Offset	1.8	1.8	1.8	1.8	1.8
		south of kerb	north of kerb	south of kerb	west of kerb	east of kerb
Approximate depth from F.S.L.	m					
Measurement depth	mm	100	100	100	100	100
Field wet density	t/m ³	2.41	2.43	2.41	2.40	2.41
Field dry density	t/m ³	2.27	2.28	2.28	2.28	2.29
Field moisture content	%	6.0	6.5	5.5	5.0	5.0
Laboratory Compaction AS 1289.5.2.1 & 5.4.2 Assigned Values (See Report No 202MVDCM)						
Date of assignment		27/05/2021				
Material source and location		20mm Class 2 - MVQ, Donnybrook				
Compactive effort		MODIFIED				
Maximum Dry Density	t/m ³	2.32				
Optimum Moisture Content	%	7.5				
Test procedure AS 1289.5.4.1						
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	-	-	-	-	-
Percent of oversize material	dry	-	-	-	-	-
Adjusted Maximum Dry Density	t/m ³	-	-	-	-	-
Adjusted Optimum Moisture Content	%	-	-	-	-	-
Moisture Variation From Optimum Moisture Content		1.5% dry	1.5% dry	2.0% dry	2.5% dry	2.5% dry
Moisture Ratio (R_m)	%	81.5	82.5	75.0	68.5	67.0
Density Ratio (R_D)	%	98.0	98.5	98.0	98.5	98.5

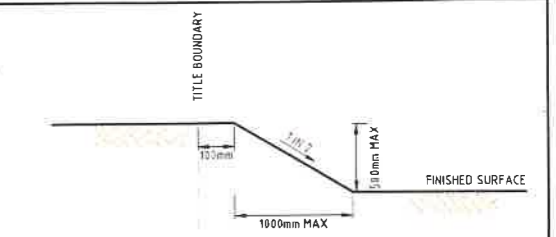
ASB1 ASSIGNED V1 13 MAR 19



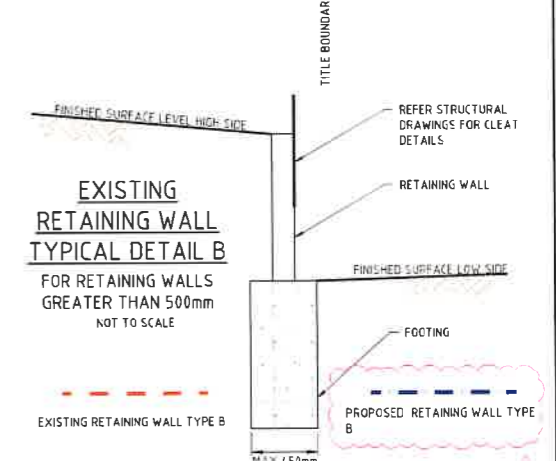
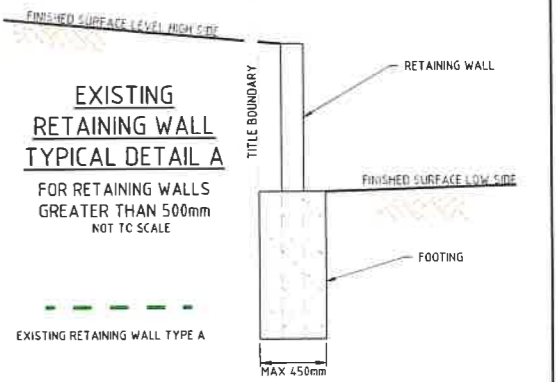
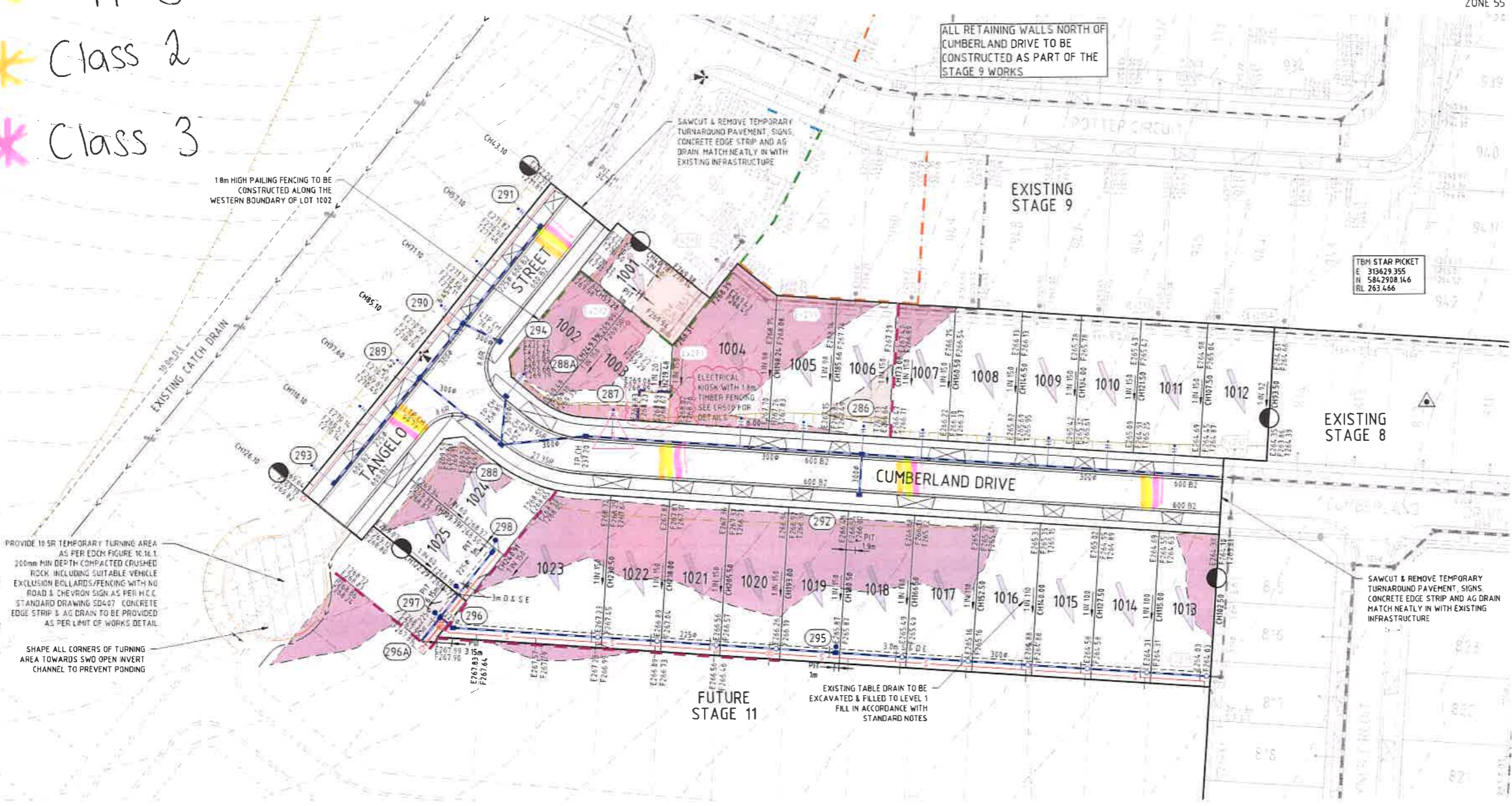
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Approved Signatory : Justin Fry

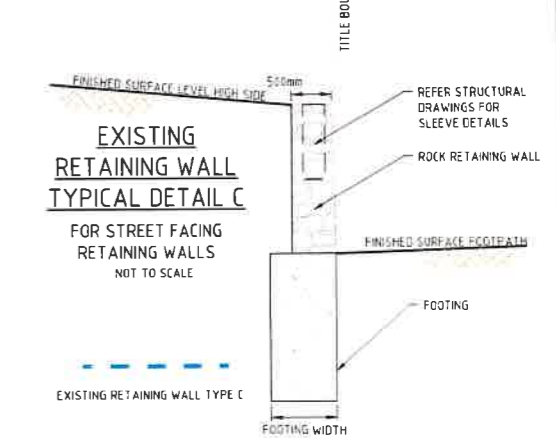
* Capping
 * Class 2
 * Class 3



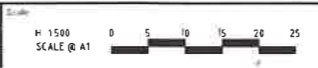
BOUNDARY BATTER SLOPE TYPICAL DETAIL
 BOUNDARY BATTER SLOPE UP TO 500mm
 NOT TO SCALE
 EXISTING BOUNDARY BATTER (MAX 500mm HIGH) BOUNDARY BATTER (MAX 500mm HIGH)



NOTE: CONCRETE SLEEPER RETAINING WALLS ARE TO BE CHARCOAL COLOURED



WARNING
 BEWARE OF UNDERGROUND/OVERHEAD SERVICES
 THE LOCATION OF SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.



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Designed
W. MAY
 Authorised
M. TOOMER-SMITH
 Checked
J. KOEHLER
 Date
10/03/21

TRIJENA ESTATE
STAGE 10
 ROAD AND DRAINAGE
 FACE PLAN
 HUME CITY COUNCIL
 PGG (MICKLEHAM) PTY LTD
CONSTRUCTION 304013CR200 1

File name: 21031013CR200-Stage 10-Road and Drainage Face Plan.dwg
 Date: 21/03/2021 10:31:33
 User: j.koehler
 Plot date: 02/03/2021 10:31:33
 Plot sheets: 2 of 15 Sheets

Rev	Amendments	Approved	Date
1	KIOSK AMENDED & RETAINING WALL ADDED	R.W.	02/09/21
0	ISSUED FOR CONSTRUCTION	M.T.S.	23/03/21
C	DRAINAGE ALIGNMENT AMENDED	M.T.S.	02/03/21
B	DRAINAGE ALIGNMENT & RW DETAILS AMENDED, NOTES & FENCES ADDED	M.T.S.	11/02/21
A	ISSUED TO COUNCIL	M.T.S.	14/12/20