78 Mornington Street
PO BOX 5298
NORTH GEELONG VIC 3215
Ph : (03) 52771900
email : geotestcivil@optusnet.com.au

GEOTEST
Civil Services

Material Testing and Laboratory Services for the Construction Industry

Mr Paul Kleijn
Drapers Civil Contracting Pty Ltd
PO Box 287
Belmont VIC 3216

16th June 2023
Ref : 7189

Dear Paul

,RE : SUPERVISION OF FILL PLACEMENT
ESTUARY ESTATE II – STAGE 1

I write with reference to your request for Geotest Civil Services to provide Level One supervision of the placement of fill to the above project.

I confirm that over the period 19th April 2023 to 28th April 2023, Geotest Civil Services performed Level One supervision and surveillance by routinely monitoring the level of compaction achieved during the course of the placement of fill to Lot No's 1608, 1609, 1610, 1611, 1612, 1613, 1636, 1637 and 1638 all of which required the placement of structural fill to a maximum of 500mm depth to achieve design level.

The supervision involved one of our experienced geotechnicians inspecting the stripped and cleared surface prior to fill placement commencing and then monitoring the placement of the fill within the site on the affected Lots.

Following stripping of topsoil, approval was given for fill placement to commence.

Fill for these Lots were sourced from the construction of a stormwater management basin within the site.

Verification of compliance of all fill was based on the compaction test results which were undertaken as each layer was completed.

The Level One supervision does not include placement of topsoil used to complete landscaping of the project.

Based on the results of our testing, and as far as we have been able to determine, we conclude that the filling placed within the filled area meets or exceeds the requirements of the specification, that is, 95% relative Standard compaction in accordance with Australian Standard 3798 – 2007 and the project specification.

Test results from the testing program are attached.

We trust that this information meets your requirements. Should you have any further queries in regards to the above, please do not hesitate to contact me on telephone 0418 525775.

Yours Sincerely

Rod Bennett
Geotest Civil Services

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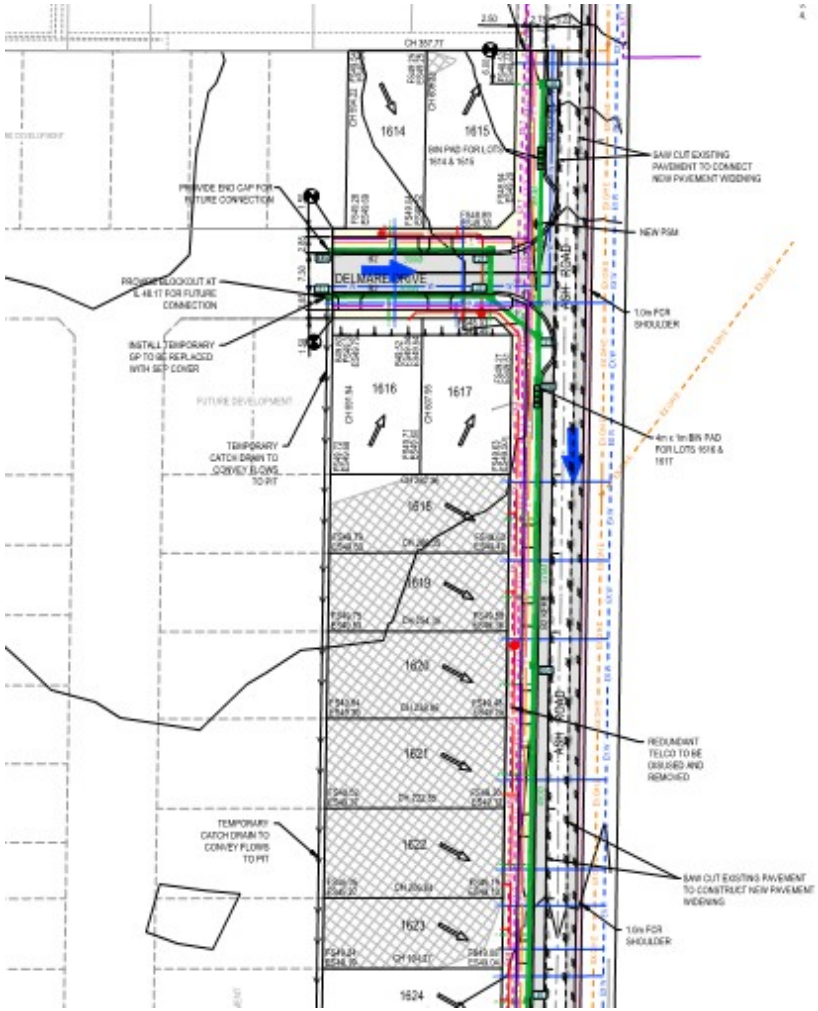

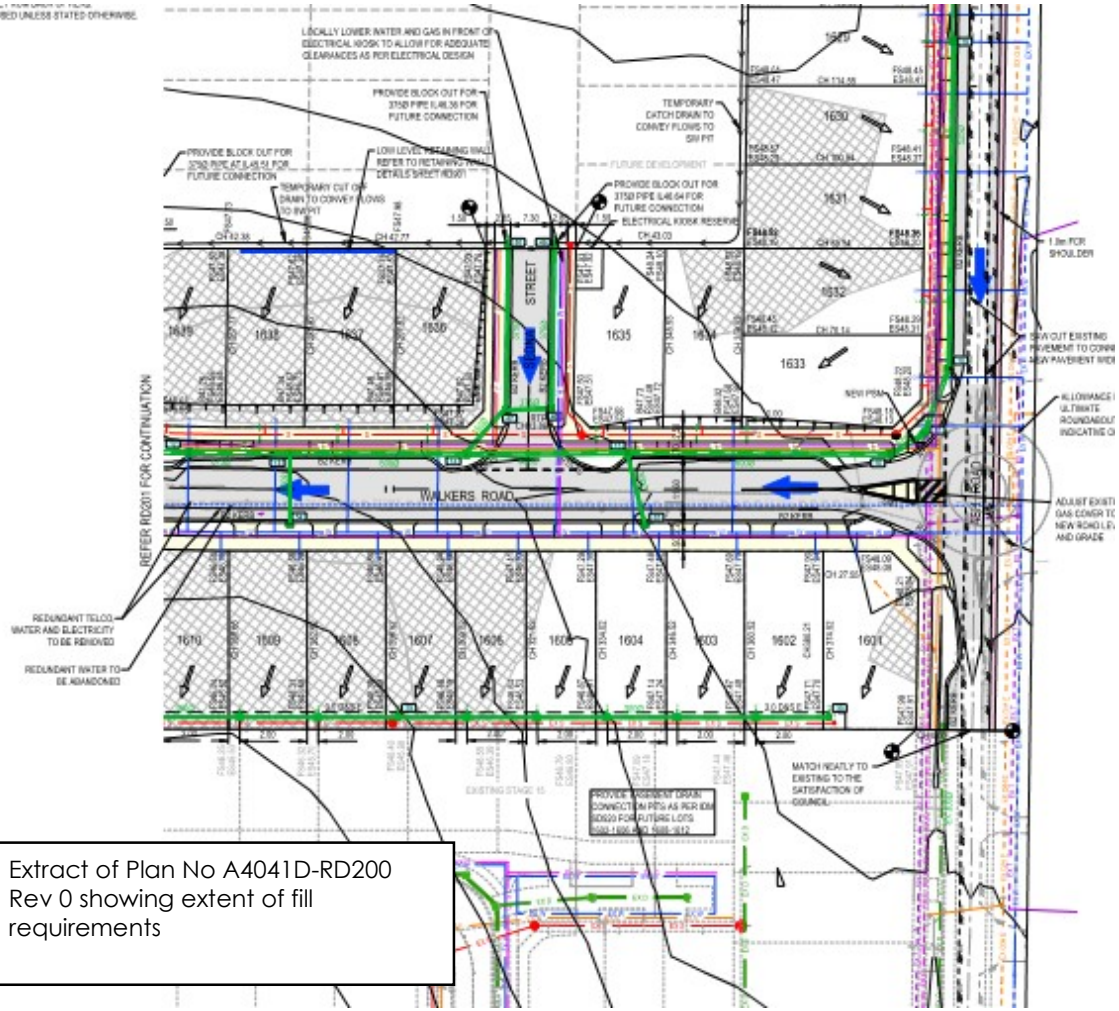

Extract of Plan No A4041D-RD200 Rev 0 showing extent of fill requirements

GEOTEST
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REPORT OF COMPACTION CONTROL (HILF RAPID METHOD)

Job No.: 7189/23/354

AS 1289 2.1.1, 5.7.1, 5.8.1 RC 316.00			Using Humboldt: 7819	Date field tested :	20/04/23
Compaction Report Ref. No.	7189/23/354		K Value : 0	Time :	14:30:00
Project: Estuary Estate II Stage 1					
Client : Drapers Civil Contracting Pty Ltd PO Box 287 Belmont VIC 3216					
Material:	Clay ex Site		Compactive effort:	Standard	
Sand used:	no	Standard count:	DS: 2810.7	MS:	408.6
Layer depth of	250 mm		Test depth of 225	mm	for 60 secs
Test Lot Bounds	NA	to NA		Client Ref:	

Site No.	1	2	3	4		
Location	Lot 1636 Layer 1 E278068 N5768880	Lot 1637 Layer 2 E278049 N5768862	Lot 1637 Layer 1 E278048 N5768860	Lot 1637 / 1638 Layer 1 E278045 N5768872		
wet density (t/m³)	2.10	1.95	1.95	1.95		
field mc%	21.7	21.5	20.2	26.7		
dry density (t/m³)	1.72	1.60	1.62	1.54		
pcwd (t/m³)	2.00	1.91	1.99	1.97		
omc (%)	22.0	24.0	20.0	26.0		
Oversize material retained on sieve…(mm)	19.0	19.0	19.0	19.0		
% wet oversize	0	3	0	0		
% dry oversize	0	3	0	0		
adjusted pcwd	2.00	1.93	1.99	1.97		
adjusted omc	21.9	23.7	20.4	26.5		
moisture variation (+ wet / - dry of omc)	0.0	-2.0	0.0	0.0		
moisture ratio (%)	99.1	90.7	99.0	100.8		
density ratio (%)	**105.0**	**101.0**	**98.0**	**99.0**		

Tested over period : 20/04/2023 to 28/04/2023

mean moisture ratio	97.4
mean density ratio	100.8

Sampling Method Used :

AS1289.1.2.1 Clause 6.4 – from layers in pavement or earthworks

Notes:

NATA
WORLD RECOGNISED ACCREDITATION

NATA Accredited Testing Facility : Accreditation Number : No 10664
Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: R.Bennett

Date: 28/04/2023

compactn.r.h 1/5/23

GEOTEST
Civil Services

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REPORT OF COMPACTION CONTROL (HILF RAPID METHOD)

Job No.: 7189/23/376

AS 1289 2.1.1, 5.7.1, 5.8.1 RC 316.00			Using Humboldt: 8639	Date field tested :	28/04/23
Compaction Report Ref. No.	7189/23/376		K Value : 0	Time :	9:55:00
Project: Estuary Estate II Stage 1					
Client : Drapers Civil Contracting Pty Ltd PO Box 287 Belmont VIC 3216					
Material:	Clay ex Site		Compactive effort:	Standard	
Sand used:	no	Standard count:	DS: 2777.8	MS:	334.1
Layer depth of	250 mm		Test depth of 225 mm		for 60 secs
Test Lot Bounds	NA	to	NA	Client Ref:	

Site No.	1	2	3			
Location	Lot 1610 Layer 2 E278008 N5768823	Lot 1610 Layer 1 E278013 N5768829	Lot 1612 Layer 1 E277987 N5768820			
wet density (t/m³)	2.00	2.06	2.08			
field mc%	20.7	20.3	20.5			
dry density (t/m³)	1.66	1.71	1.73			
pcwd (t/m³)	1.98	2.05	2.07			
omc (%)	23.0	20.0	21.0			
Oversize material retained on sieve…(mm)	19.0	19.0	19.0			
% wet oversize	0	0	0			
% dry oversize	0	0	0			
adjusted pcwd	1.98	2.05	2.07			
adjusted omc	23.0	20.4	20.5			
moisture variation (+ wet / - dry of omc)	-2.5	0.0	0.0			
moisture ratio (%)	90.0	99.5	100.0			
density ratio (%)	**101.0**	**100.5**	**100.5**			

Tested over period : 28/04/2023 to 05/05/2023

mean moisture ratio	96.5
mean density ratio	100.7

Sampling Method Used :

AS1289.1.2.1 Clause 6.4 – from layers in pavement or earthworks

Notes:

NATA
WORLD RECOGNISED ACCREDITATION

NATA Accredited Testing Facility : Accreditation Number : No 10664
Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: R.Bennett

Date: 5/05/2023

compactn.r.h 1/5/23