



CIVIL GEOTECHNICAL SERVICES
ABN 26 474 013 724
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18th July 2013

Our Reference: 13038:JHF708

Winslow Constructors Pty Ltd
50 Barry Road
CAMPBELLFIELD VIC 3061

Dear Sirs,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
ESTUARY ESTATE ESTATE (STAGE 10) – LEOPOLD

Please find attached our Report Nos 13038/R001 to 13038/R002 that relate to the field density testing that was conducted within the filled allotments and backfilled dam at the above subdivision. The level 1 inspections and associated field density testing was performed in early February 2013.

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 inspections and testing were performed by an experienced geotechnician 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).

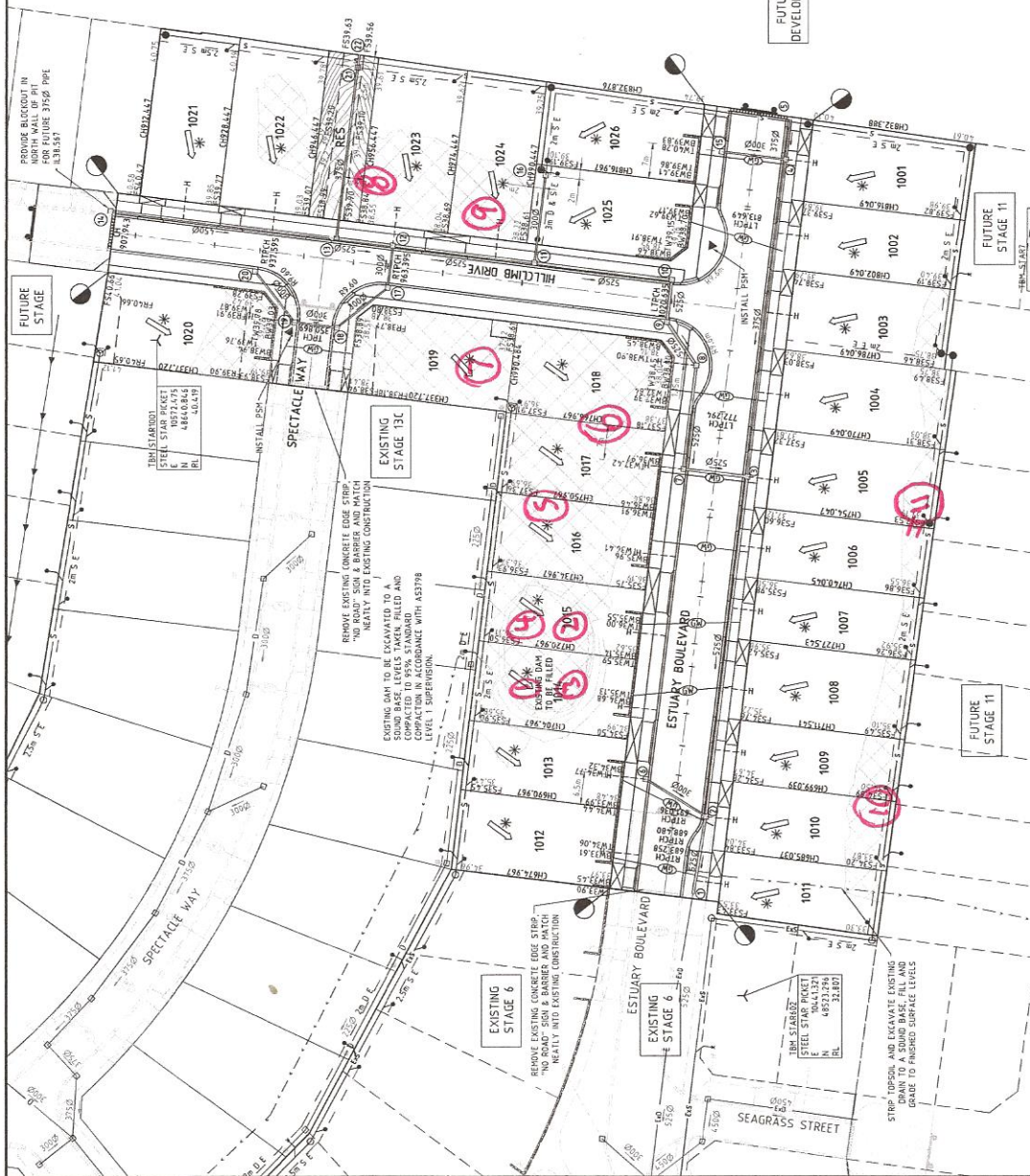
We are of the view that the bulk fill materials that have been placed across the reported allotments by Winslow Constructors during the aforementioned period can be considered as having been placed in a controlled manner to a minimum density ratio of 95% (standard compactive effort).

Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

Justin Fry

FIGURE 1



LEGEND - FUNCTIONAL LAYOUT PLAN

—	EXISTING UTILITY UNDERGROUND
—	TELSTRA
—	WATER
—	STORMWATER DRAIN, PIT & PROPERTY INLET
—	SWALE DRAIN
—	PERMANENT STRUCTURES
—	HOUSE DRAIN
—	SERVICE (CONDUITS)
—	TACTILE PAVEMENT
—	EXISTING ELECTRICITY (UNDERGROUND)
—	EXISTING ELECTRICITY (OVERHEAD)
—	EXISTING GAS
—	EXISTING TELSTRA
—	EXISTING WATER
—	EXISTING STORMWATER DRAIN
—	EXISTING SEWER
—	EXISTING SWALE DRAIN
—	EXISTING SWALE DRAIN
—	ZERO LOT LINES
—	PAYMENT TREATMENT
—	DIRECTION OF FLOW
—	DIRECTION OF FLOW TO BE GRADED EVENLY IN
—	DIRECTION OF FLOW TO BE GRADED EVENLY IN
—	CONCRETE EDGE STRIP WITH SUBSOIL DRAIN
—	'NO ROAD' SIGN & BARRIER
—	LIMIT OF WORKS
—	EXISTING TREE TO BE REMOVED

LOT BENCHING AND GENERAL GRADING NOTES
 1. LOT 1019 & 1020 TO BE BENCHED GENERALLY IN ACCORDANCE WITH TYPICAL SECTION. FALL ALONG BUILDING ENVELOPE OF 1.8m.
 2. REMAINING LOTS WILL BE RETAINED WHERE POSSIBLE TO MAINTAIN EXISTING DRIVEWAY LOTS IDENTIFIED WITH AN ASTERISK WILL REMAIN IN PLACE TO MAINTAIN REQUIRED LONGITUDINAL FALL (COUNCIL STANDARD 1 IN 100) CROSS FALL 1.8m MAXIMUM.

APPROXIMATE
FIELD DENSITY
LOCATION

SERVICE OFFSET SCHEDULE

ROAD NAME	GAS		WATER		ELECTRICITY		TELSTRA	
	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)
ESTUARY BOULEVARD	SOUTH	2.70	SOUTH	2.70	NORTH	3.40	NORTH	2.80
	NORTH	2.70	NORTH	2.70	SOUTH	1.70	SOUTH	2.30
SPECTACLE WAY	SOUTH	2.70	SOUTH	2.70	NORTH	3.40	NORTH	2.80
	NORTH	2.70	NORTH	2.70	SOUTH	1.70	SOUTH	2.30

ROAD LAYOUT TABLE

ROAD NAME	RESERVE WIDTH (m)	ROAD WIDTH (m)		BACK TO BACK	KERB TYPE		VERGE WIDTH (m)
		LIP TO LIP	NEW TO NEW		NTH/WEST	STH/EAST	
ESTUARY BOULEVARD NO PARKING	22.00	6.40	7.00	7.30	B2	B2	7.35
	22.00	11.00	11.60	11.90	B2	B2	5.65
HILLING DRIVE	16.00	6.40	7.20	7.50	B2	B2	4.25
	16.00	6.40	7.20	7.50	B2	B2	4.25
SPECTACLE WAY	16.00	6.40	7.20	7.50	B2	B2	4.25
	16.00	6.40	7.20	7.50	B2	B2	4.25

CUT AREAS
 FILLS AREAS
 TOPSOIL STRIP
 CUT AREA AND REGRAD TOPSOIL TO A 1:5000 SLOPE

LINE
 LEVELS
 ELEVATION



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 13038
Report No 13038/R001
Date Issued 21/02/13
Tested by JWM
Date tested 07/02/13
Checked by JHF

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)
Project ESTUARY - STAGE 10
Location LEOPOLD

Feature EARTHWORKS

Layer thickness 200 mm

Time: 10:30

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/m ³	2.17	1.90	1.90	2.08	2.10	2.11
Field moisture content %	12.9	6.7	9.8	11.4	12.9	11.9

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	2.03	1.98	1.99	1.95	1.92	1.99
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	16.0	13.0	14.0	17.5	18.5	16.5

Moisture Variation From Optimum Moisture Content	3.0% dry	6.5% dry	4.5% dry	6.0% dry	6.0% dry	4.5% dry
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Density Ratio (R_{HD})	%	107.0	96.0	95.5	106.5	109.5	106.0
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Material description

No 1 - 6 Clay Fill

A581HILF V1.10 OCT 09



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with ISO/IEC 17025

Accreditation No 9909

Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Job No 13038
Report No 13038/R002
Date Issued 21/02/13
Tested by JWM
Date tested 07/02/13
Checked by JHF

Client WINSLOW CONSTRUCTORS PTY LTD (CAMPBELLFIELD)
Project ESTUARY - STAGE 10
Location LEOPOLD

Feature EARTHWORKS

Layer thickness 200 mm

Time: 10:46

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	7	8	9	10	11	-
Location	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	-
Field wet density t/m ³	2.04	2.13	1.92	1.96	1.95	-
Field moisture content %	13.7	13.4	20.1	20.8	12.3	-

Test procedure AS 1289.5.7.1

Test No	7	8	9	10	11	-
Compactive effort	Standard					
Oversize rock retained on sieve mm	19.0	19.0	19.0	19.0	19.0	-
Percent of oversize material wet	0	0	0	0	0	-
Peak Converted Wet Density t/m ³	1.98	1.98	2.01	2.04	2.04	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	18.0	18.0	19.5	20.0	15.0	-

Moisture Variation From Optimum Moisture Content	4.0% dry	4.5% dry	0.5% wet	0.5% wet	3.0% dry	-
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Density Ratio (R_{HD})	%	103.0	107.5	96.0	96.0	95.5	-
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Material description

No 7 - 11 Clay Fill

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