



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

20th March 2019

Our Reference: 18409:NB456 Rev.1

Rokon Pty Ltd
1 / 75 River Street
RICHMOND VIC 3121

Dear Sirs/Madams,

RE: LEVEL 1 EARTHWORKS INSPECTION AND TESTING
RIVERWALK – STAGES 24 - 26 (WERRIBEE)

Please find attached our Report No's 18409/R001 to 18409/R128 which relate to the field density testing that was conducted at the filled allotments of the above subdivision. The level 1 inspections and associated field density testing commenced in July 2018 and were completed in February 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 inspections and testing was 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 filled allotments by Rokon 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 filled allotments by Rokon 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). We also confirm that an allowable bearing pressure of at least 100 kPa is available for strip and pad footings, edge and load bearing beams of raft slabs founding and watermains in the controlled fill materials.

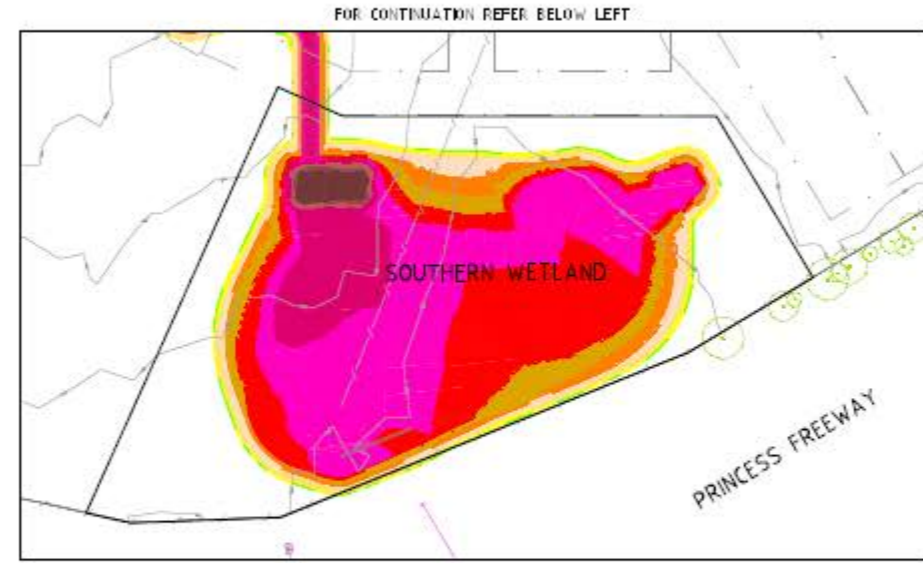
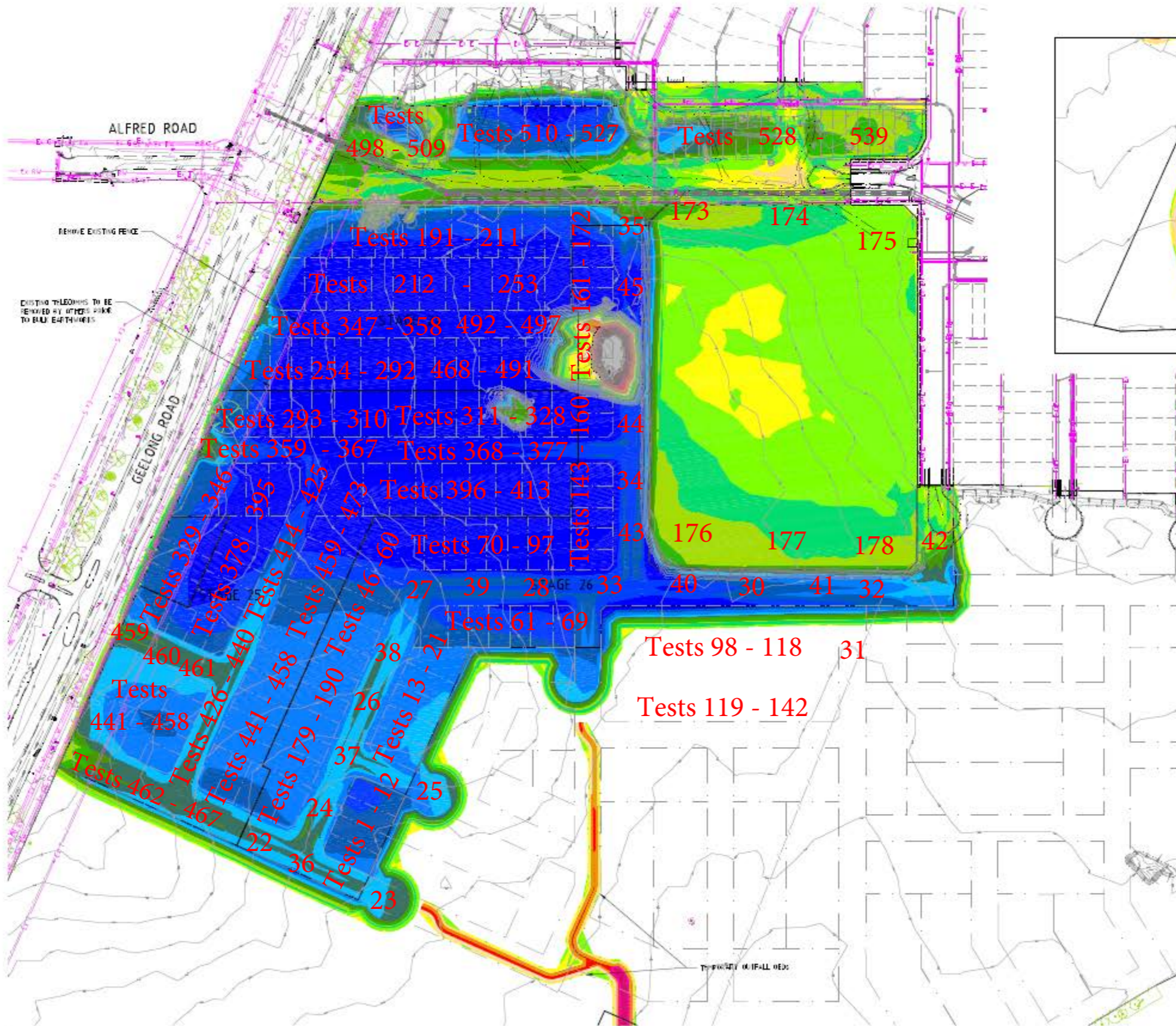
Please contact the undersigned if you require any additional information.

Civil Geotechnical Services

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

Nick Brock

FIGURE 1



INSET

Approximate field density test location

BULK EARTHWORKS ANALYSIS	
	TOTAL
TOTAL CUT	75,000 m ³
TOTAL FILL	214,000 m ³
TOTAL BALANCE	-139,000 m ³

NOTE:
ALL EX PIT & MH WITHIN NEW WORKS TO BE ADJUSTED TO MATCH NEW FINISHED SURFACE LEVELS

NOTE:
EXISTING TREES TO BE REMOVED AS PART OF BULK EARTHWORKS WORKS

DISCLAIMER:
THE CONTENTS OF ALL CONSTRUCTION ISSUE PLANS SHALL TAKE PRECEDENCE OVER ALL DIGITAL FILES ISSUED BY DCE TO THE CONTRACTOR AND IN PARTICULAR 3D ALIGNMENT STRINGS EXPORTED DIRECTLY FROM 3D CIVIL SOFTWARE. SHOULD ANY DISCREPANCIES BETWEEN CONSTRUCTION ISSUE PLANS AND DIGITAL FILES BE FOUND THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENT IMMEDIATELY.



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R001
 Date Issued 17/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by GW
 Date tested 12/07/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

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

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	1.97	1.94	1.93	-	-	-
Field moisture content	%	15.3	14.3	15.0	-	-	-

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	1.96	1.93	1.93	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	17.5	16.5	17.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD})	%	100.5	100.5	100.5	-	-	-
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Material description

No 1 - 3 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 18409
 Report No 18409/R002
 Date Issued 17/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by SB
 Date tested 13/07/18
 Checked by JHF

Client	ROKON (RICHMOND)	Tested by	SB
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	13/07/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:30
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	4	5	6	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	1.99	2.01	1.95	-	-	-
Field moisture content %	19.2	16.0	15.3	-	-	-

Test procedure AS 1289.5.7.1

Test No	4	5	6	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	1.98	2.00	1.97	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content %	21.5	18.5	18.0	-	-	-

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

No 4 - 6 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R003
 Date Issued 17/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by GW
 Date tested 17/07/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	<i>Layer thickness</i>	200 mm	<i>Time:</i> 13:39
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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 <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	1.93	1.87	1.90	-	-	-
Field moisture content %	14.7	14.4	15.2	-	-	-

Test procedure AS 1289.5.7.1

Test No	7	8	9	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	1.92	1.87	1.90	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content %	17.0	16.5	17.0	-	-	-

<i>Moisture Variation From Optimum Moisture Content</i>	2.5% dry	2.5% dry	2.0% dry	-	-	-
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Density Ratio (R_{HD}) %	100.5	100.5	100.0	-	-	-
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Material description

No 7 - 9 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R004
 Date Issued 20/08/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by GW
 Date tested 18/07/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature EARTHWORKS *Layer thickness* 200 mm *Time:* 14:01

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		10	11	12	-	-	-
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	2.00	1.99	1.95	-	-	-
Field moisture content	%	16.7	14.6	16.2	-	-	-

Test procedure AS 1289.5.7.1

Test No		10	11	12	-	-	-
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	2.01	2.00	2.00	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	16.5	12.0	16.0	-	-	-

Moisture Variation From Optimum Moisture Content	0.5% wet	2.5% wet	0.0%	-	-	-
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Density Ratio (R_{HD})	%	99.5	99.5	97.5	-	-	-
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Material description

No 10 - 12 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R005
 Date Issued 17/08/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by GW
 Date tested 19/07/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

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

Test procedure AS 1289.2.1.1 & 5.8.1

Test No	13	14	15	-	-	-
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	1.98	1.99	1.97	-	-	-
Field moisture content %	14.2	14.4	14.1	-	-	-

Test procedure AS 1289.5.7.1

Test No	13	14	15	-	-	-
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	2.01	2.00	2.00	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	17.0	16.5	16.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD}) %	98.5	99.5	98.5	-	-	-
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Material description

No 13 - 15 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R006
 Date Issued 17/08/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	GW
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	20/07/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:35
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	16	17	18	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	2.02	2.00	2.00	-	-	-
Field moisture content %	15.9	14.6	15.6	-	-	-

Test procedure AS 1289.5.7.1

Test No	16	17	18	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.00	2.01	2.00	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content %	18.5	16.5	18.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD})	%	101.0	99.5	100.0	-	-	-
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Material description

No 16 - 18 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R007
 Date Issued 09/08/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	21/07/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:03
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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 <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	1.96	2.02	1.98	-	-	-
Field moisture content <i>%</i>	18.2	16.8	15.8	-	-	-

Test procedure AS 1289.5.7.1

Test No	19	20	21	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.01	2.10	2.00	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	21.0	19.0	18.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD}) <i>%</i>	97.5	96.5	99.0	-	-	-
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Material description

No 19 - 21 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R008
 Date Issued 20/08/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by GW
 Date tested 23/07/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:00
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No		22	23	24	-	-	-
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	1.93	1.92	1.93	-	-	-
Field moisture content	%	12.2	12.7	12.6	-	-	-

Test procedure AS 1289.5.7.1

Test No		22	23	24	-	-	-
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	1.95	1.94	1.95	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	14.5	15.0	14.5	-	-	-

Moisture Variation From Optimum Moisture Content		2.5% dry	2.0% dry	2.0% dry	-	-	-
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Density Ratio (R_{HD})	%	99.0	99.0	99.0	-	-	-
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Material description

No 22 - 24 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 18409
 Report No 18409/R009
 Date Issued 17/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by GW
 Date tested 24/07/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	<i>Layer thickness</i>	200 mm	<i>Time:</i> 11:07
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	25	26	27	-	-	-
<i>Location</i>	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
<i>Approximate depth below FSL</i>						
<i>Measurement depth</i> mm	175	175	175	-	-	-
<i>Field wet density</i> t/m ³	2.01	2.00	1.99	-	-	-
<i>Field moisture content</i> %	11.3	9.3	11.4	-	-	-

Test procedure AS 1289.5.7.1

Test No	25	26	27	-	-	-
<i>Compactive effort</i>	Standard					
<i>Oversize rock retained on sieve</i> mm	19.0	19.0	19.0	-	-	-
<i>Percent of oversize material</i> wet	0	0	0	-	-	-
<i>Peak Converted Wet Density</i> t/m ³	2.01	1.99	1.98	-	-	-
<i>Adjusted Peak Converted Wet Density</i> t/m ³	-	-	-	-	-	-
<i>Optimum Moisture Content</i> %	13.5	11.0	14.0	-	-	-

<i>Moisture Variation From Optimum Moisture Content</i>	2.0% dry	2.0% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD}) %	99.5	100.5	100.5	-	-	-
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Material description

No 25 - 27 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 18409
 Report No 18409/R010
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by GW
 Date tested 25/07/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	<i>Layer thickness</i>	200 mm	<i>Time:</i> 10:55
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	28	29	30	-	-	-
<i>Location</i>	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
<i>Approximate depth below FSL</i>						
<i>Measurement depth</i> mm	175	175	175	-	-	-
<i>Field wet density</i> t/m ³	2.12	2.11	2.13	-	-	-
<i>Field moisture content</i> %	15.7	16.4	16.0	-	-	-

Test procedure AS 1289.5.7.1

Test No	28	29	30	-	-	-
<i>Compactive effort</i>	Standard					
<i>Oversize rock retained on sieve</i> mm	19.0	19.0	19.0	-	-	-
<i>Percent of oversize material</i> wet	0	0	0	-	-	-
<i>Peak Converted Wet Density</i> t/m ³	2.12	2.14	2.14	-	-	-
<i>Adjusted Peak Converted Wet Density</i> t/m ³	-	-	-	-	-	-
<i>Optimum Moisture Content</i> %	16.0	16.5	16.0	-	-	-

<i>Moisture Variation From Optimum Moisture Content</i>	0.0%	0.5% dry	0.0%	-	-	-
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Density Ratio (R_{HD}) %	100.0	99.0	99.5	-	-	-
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Material description

No 28 - 30 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 18409
 Report No 18409/R011
 Date Issued 17/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	GW
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	26/07/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:35
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	31	32	33	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	2.00	2.03	2.02	-	-	-
Field moisture content <i>%</i>	16.5	15.6	16.5	-	-	-

Test procedure AS 1289.5.7.1

Test No	31	32	33	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	1.99	2.02	2.02	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	18.5	18.0	18.5	-	-	-

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

No 31 - 33 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R012
 Date Issued 23/08/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by GW
 Date tested 27/07/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature EARTHWORKS *Layer thickness* 200 mm *Time:* 11:54

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		34	35	36	-	-	-
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	1.96	1.92	1.94	-	-	-
Field moisture content	%	15.6	16.1	16.6	-	-	-

Test procedure AS 1289.5.7.1

Test No		34	35	36	-	-	-
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	1.95	1.96	1.97	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	18.0	19.0	19.0	-	-	-

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

No 34 - 36 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R013
 Date Issued 17/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	GW
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	30/07/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:43
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No		37	38	39	-	-	-
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	1.91	1.95	1.90	-	-	-
Field moisture content	%	16.6	15.9	16.7	-	-	-

Test procedure AS 1289.5.7.1

Test No		37	38	39	-	-	-
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	1.92	1.94	1.90	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	18.5	18.5	19.5	-	-	-

Moisture Variation From Optimum Moisture Content		2.0% dry	2.5% dry	2.5% dry	-	-	-
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Density Ratio (R _{HD})	%	99.5	100.5	100.5	-	-	-
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Material description

No 37 - 39 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R014
 Date Issued 17/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	GW
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	07/08/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:18
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	40	41	42	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth	mm	175	175	175	-	-
Field wet density	t/m ³	2.02	2.03	2.03	-	-
Field moisture content	%	16.0	17.0	16.7	-	-

Test procedure AS 1289.5.7.1

Test No	40	41	42	-	-	-
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	2.03	2.05	2.04	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	18.0	17.5	18.5	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	0.5% dry	1.5% dry	-	-	-
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Density Ratio (R _{HD})	%	99.5	99.0	99.5	-	-
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Material description

No 40 - 42 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R015
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by GW
 Date tested 14/08/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	<i>Layer thickness</i>	200 mm	<i>Time:</i> 11:17
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	43	44	45	-	-	-
<i>Location</i>	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
<i>Approximate depth below FSL</i>						
<i>Measurement depth</i> mm	175	175	175	-	-	-
<i>Field wet density</i> t/m ³	2.21	2.23	2.23	-	-	-
<i>Field moisture content</i> %	12.9	13.1	12.4	-	-	-

Test procedure AS 1289.5.7.1

Test No	43	44	45	-	-	-
<i>Compactive effort</i>	Standard					
<i>Oversize rock retained on sieve</i> mm	19.0	19.0	19.0	-	-	-
<i>Percent of oversize material</i> wet	0	0	0	-	-	-
<i>Peak Converted Wet Density</i> t/m ³	2.23	2.28	2.27	-	-	-
<i>Adjusted Peak Converted Wet Density</i> t/m ³	-	-	-	-	-	-
<i>Optimum Moisture Content</i> %	13.5	13.5	12.0	-	-	-

<i>Moisture Variation From Optimum Moisture Content</i>	0.5% dry	0.0%	0.5% wet	-	-	-
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Density Ratio (R_{HD}) %	99.5	98.0	98.0	-	-	-
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Material description

No 43 - 45 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R016
 Date Issued 17/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	GW
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	15/08/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	13:52
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	46	47	48	-	-	-
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	2.22	2.20	2.17	-	-
Field moisture content	%	12.1	12.2	11.7	-	-

Test procedure AS 1289.5.7.1

Test No	46	47	48	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	-	-
Percent of oversize material	wet	1	0	0	-	-
Peak Converted Wet Density	t/m ³	2.18	2.19	2.17	-	-
Adjusted Peak Converted Wet Density	t/m ³	2.20	2.20	-	-	-
Optimum Moisture Content	%	14.5	15.0	14.0	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	-	-	-
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Density Ratio (R _{HD})	%	101.0	100.0	100.0	-	-
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Material description

No 46 - 48 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R017
 Date Issued 17/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	GW
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	16/08/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:53
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	49	50	51	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	2.15	2.13	2.11	-	-	-
Field moisture content %	13.0	13.9	12.1	-	-	-

Test procedure AS 1289.5.7.1

Test No	49	50	51	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.15	2.14	2.20	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content %	15.5	16.0	14.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.0% dry	-	-	-
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Density Ratio (R_{HD})	100.0	99.5	96.0	-	-	-
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Material description

No 49 - 51 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R018
 Date Issued 17/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	GW
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	17/08/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	14:35
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	52	53	54	-	-	-
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	1.99	2.00	2.00	-	-
Field moisture content	%	17.5	14.1	13.8	-	-

Test procedure AS 1289.5.7.1

Test No	52	53	54	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	-	-
Percent of oversize material	wet	4	9	2	-	-
Peak Converted Wet Density	t/m ³	2.07	2.06	2.09	-	-
Adjusted Peak Converted Wet Density	t/m ³	2.08	2.09	2.10	-	-
Optimum Moisture Content	%	18.0	15.0	14.5	-	-

Moisture Variation From Optimum Moisture Content	0.5% dry	1.0% dry	0.5% dry	-	-	-
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Density Ratio (R _{HD})	%	95.5	95.5	95.5	-	-
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Material description

No 52 - 54 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R019
 Date Issued 17/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 21/08/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:19
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No		55	56	57	-	-	-
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	2.03	1.96	2.02	-	-	-
Field moisture content	%	15.8	15.2	16.2	-	-	-

Test procedure AS 1289.5.7.1

Test No		55	56	57	-	-	-
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	2.03	1.95	2.02	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	17.0	17.0	18.0	-	-	-

Moisture Variation From Optimum Moisture Content		1.0% dry	1.5% dry	1.5% dry	-	-	-
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Density Ratio (R_{HD})	%	100.0	100.0	99.5	-	-	-
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Material description

No 55 - 57 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R020
 Date Issued 26/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by GW
 Date tested 24/08/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:15
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	58	59	60	-	-	-
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	2.04	2.03	2.01	-	-	-
Field moisture content %	23.5	20.8	20.8	-	-	-

Test procedure AS 1289.5.7.1

Test No	58	59	60	-	-	-
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	2.08	2.07	2.06	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	24.0	21.5	21.0	-	-	-

Moisture Variation From Optimum Moisture Content	0.5% dry	0.5% dry	0.5% dry	-	-	-
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Density Ratio (R_{HD})	%	98.0	98.0	97.5	-	-	-
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Material description

No 58 - 60 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R021
 Date Issued 17/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	25/08/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:22
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	61	62	63	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	1.95	1.98	1.96	-	-	-
Field moisture content <i>%</i>	20.0	19.3	15.7	-	-	-

Test procedure AS 1289.5.7.1

Test No	61	62	63	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	1.94	1.96	1.99	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	22.5	21.5	17.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.0% dry	-	-	-
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Density Ratio (R_{HD})	%	100.5	101.0	98.5	-	-	-
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Material description

No 61 - 63 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R022
 Date Issued 06/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	GW
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	04/09/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	12:25
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	64	65	66	-	-	-
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	1.89	1.90	1.90	-	-
Field moisture content	%	15.4	16.2	15.7	-	-

Test procedure AS 1289.5.7.1

Test No	64	65	66	-	-	-
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	1.89	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	17.0	19.0	18.0	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% dry	-	-	-
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Density Ratio (R _{HD})	%	99.5	100.0	100.5	-	-
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Material description

No 64 - 66 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R023
 Date Issued 17/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	GW
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	04/09/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:49
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	67	68	69	-	-	-
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	2.00	2.02	2.00	-	-
Field moisture content	%	16.7	16.9	13.4	-	-

Test procedure AS 1289.5.7.1

Test No	67	68	69	-	-	-
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	2.00	2.00	1.98	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	19.0	19.5	15.5	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.0% dry	-	-	-
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Density Ratio (R_{HD})	%	100.5	100.5	100.5	-	-	-
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Material description

No 67 - 69 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R024
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by GW
 Date tested 07/09/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:42
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No		70	71	72	73	74	75
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	1.90	1.91	1.91	2.05	2.06	2.06
Field moisture content	%	10.5	10.1	10.4	15.6	15.5	17.3

Test procedure AS 1289.5.7.1

Test No		70	71	72	73	74	75
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	1.94	1.94	1.93	2.09	2.06	2.12
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	11.0	10.5	10.5	18.0	16.0	19.0

Moisture Variation From Optimum Moisture Content	0.5% dry	0.5% dry	0.0%	2.5% dry	0.0%	1.5% dry
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Density Ratio (R_{HD})	%	98.0	98.0	99.0	98.0	99.5	97.5
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Material description

No 70 - 75 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 18409
 Report No 18409/R025
 Date Issued 15/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	GW
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	11/09/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:32
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	76	77	78	79	80	81
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	2.03	1.81	1.86	1.86	1.83	1.82
Field moisture content %	24.5	23.7	22.5	19.9	20.6	16.0

Test procedure AS 1289.5.7.1

Test No	76	77	78	79	80	81
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	2.08	1.82	1.87	1.91	1.85	1.84
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	27.5	26.0	25.0	22.0	22.5	18.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	2.0% dry	2.0% dry	2.0% dry
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Density Ratio (R _{HD}) %	97.5	99.5	99.5	97.5	99.5	99.0
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Material description

No 76 - 81 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R026
 Date Issued 23/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	GW
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	11/09/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:37
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	82	83	84	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	2.00	2.01	2.03	-	-	-
Field moisture content <i>%</i>	15.9	13.2	13.1	-	-	-

Test procedure AS 1289.5.7.1

Test No	82	83	84	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.01	2.02	2.04	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	18.5	15.5	15.5	-	-	-

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

No 82 - 84 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R027
 Date Issued 04/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by GW
 Date tested 17/09/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	<i>Layer thickness</i>	200 mm	<i>Time:</i> 07:57
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	85	86	87	88	-	-
Location	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	-	-
Field wet density <i>t/m³</i>	1.93	1.89	1.93	1.83	-	-
Field moisture content %	15.4	15.4	16.1	18.5	-	-

Test procedure AS 1289.5.7.1

Test No	85	86	87	88	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	19.0	-	-
Percent of oversize material <i>wet</i>	7	0	5	5	-	-
Peak Converted Wet Density <i>t/m³</i>	1.91	1.89	1.92	1.80	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	1.94	-	1.94	1.83	-	-
Optimum Moisture Content %	17.5	18.0	18.0	21.5	-	-

<i>Moisture Variation From Optimum Moisture Content</i>	2.0% dry	2.5% dry	2.0% dry	2.5% dry	-	-
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Density Ratio (R_{HD}) %	100.0	100.0	99.5	100.0	-	-
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Material description

No 85 - 88 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R028
 Date Issued 04/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	GW
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	18/09/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:04
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	89	90	91	92	93	94
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>	1.77	1.82	1.83	1.92	1.99	1.88
Field moisture content %	18.2	18.4	21.0	9.4	13.4	11.4

Test procedure AS 1289.5.7.1

Test No	89	90	91	92	93	94
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	37.5	19.0	19.0	19.0	19.0	19.0
Percent of oversize material <i>wet</i>	5	19	12	4	10	0
Peak Converted Wet Density <i>t/m³</i>	1.77	1.79	1.79	1.91	2.00	1.88
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	1.88	1.85	1.93	2.03	-
Optimum Moisture Content %	20.0	21.0	23.5	11.5	15.5	14.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.0% dry	2.5% dry	2.0% dry	2.5% dry
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Density Ratio (R_{HD})	%	99.5	97.0	99.5	99.5	98.5	99.5
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Material description

No 89 - 94 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R029
 Date Issued 23/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 26/09/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:54
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No		95	96	97	-	-	-
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	1.99	2.04	2.01	-	-	-
Field moisture content	%	9.2	8.8	10.8	-	-	-

Test procedure AS 1289.5.7.1

Test No		95	96	97	-	-	-
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	2.03	2.06	2.06	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	11.5	11.0	13.0	-	-	-

Moisture Variation From Optimum Moisture Content		2.5% dry	2.5% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD})	%	98.0	99.0	98.0	-	-	-
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Material description

No 95 - 97 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R030
 Date Issued 23/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	25/09/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:06
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	98	99	100	-	-	-
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	1.83	1.84	-	-
Field moisture content	%	8.7	8.4	9.8	-	-

Test procedure AS 1289.5.7.1

Test No	98	99	100	-	-	-
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	1.87	1.87	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	10.5	10.5	12.0	-	-

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

No 98 - 100 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R031
 Date Issued 23/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	26/09/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:30
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	101	102	103	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	2.20	2.20	2.14	-	-	-
Field moisture content %	9.1	9.4	8.7	-	-	-

Test procedure AS 1289.5.7.1

Test No	101	102	103	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.21	2.22	2.16	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content %	11.0	11.5	11.5	-	-	-

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

No 101 - 103 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R032
 Date Issued 23/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	27/09/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:30
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	104	105	106	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	2.13	2.11	2.12	-	-	-
Field moisture content <i>%</i>	9.8	7.8	8.3	-	-	-

Test procedure AS 1289.5.7.1

Test No	104	105	106	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.14	2.14	2.13	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	12.0	10.0	11.0	-	-	-

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

No 104 - 106 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R033
 Date Issued 12/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	03/09/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	10:55
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	107	108	109	-	-	-
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	2.18	2.19	2.20	-	-
Field moisture content	%	11.8	12.1	9.3	-	-

Test procedure AS 1289.5.7.1

Test No	107	108	109	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	-	-
Percent of oversize material	wet	5	2	5	-	-
Peak Converted Wet Density	t/m ³	2.26	2.29	2.24	-	-
Adjusted Peak Converted Wet Density	t/m ³	2.27	2.29	2.25	-	-
Optimum Moisture Content	%	10.0	9.5	8.5	-	-

Moisture Variation From Optimum Moisture Content	2.0% wet	2.5% wet	0.5% wet	-	-	-
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Density Ratio (R _{HD})	%	96.0	95.5	98.0	-	-
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Material description

No 107 - 109 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R034
 Date Issued 23/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 05/09/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	<i>Layer thickness</i>	200 mm	<i>Time:</i> 10:26
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	110	111	112	-	-	-
<i>Location</i>	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
<i>Approximate depth below FSL</i>						
<i>Measurement depth</i> mm	175	175	175	-	-	-
<i>Field wet density</i> t/m ³	2.08	2.07	2.09	-	-	-
<i>Field moisture content</i> %	11.3	10.0	10.2	-	-	-

Test procedure AS 1289.5.7.1

Test No	110	111	112	-	-	-
<i>Compactive effort</i>	Standard					
<i>Oversize rock retained on sieve</i> mm	19.0	19.0	19.0	-	-	-
<i>Percent of oversize material</i> wet	0	0	0	-	-	-
<i>Peak Converted Wet Density</i> t/m ³	2.11	2.09	2.12	-	-	-
<i>Adjusted Peak Converted Wet Density</i> t/m ³	-	-	-	-	-	-
<i>Optimum Moisture Content</i> %	9.5	7.5	8.0	-	-	-

<i>Moisture Variation From Optimum Moisture Content</i>	2.0% wet	2.5% wet	2.0% wet	-	-	-
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Density Ratio (R_{HD}) %	99.0	99.0	98.5	-	-	-
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Material description

No 110 - 112 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R035
 Date Issued 23/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 06/09/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:29
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<i>Test procedure AS 1289.2.1.1 & 5.8.1</i>						
Test No	113	114	115	-	-	-
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	2.11	2.11	2.12	-	-
Field moisture content	%	13.9	11.0	12.9	-	-
<i>Test procedure AS 1289.5.7.1</i>						
Test No	113	114	115	-	-	-
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	2.14	2.14	2.17	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	14.5	13.5	13.0	-	-
Moisture Variation From Optimum Moisture Content		0.5% dry	2.5% dry	0.0%	-	-
Density Ratio (R_{HD})	%	99.0	98.5	97.5	-	-
<i>Material description</i>						
No 113 - 115 Clay Fill						



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R036
 Date Issued 23/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 10/09/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	<i>Layer thickness</i>	200 mm	<i>Time:</i> 09:31
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	116	117	118	-	-	-
<i>Location</i>	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
<i>Approximate depth below FSL</i>						
<i>Measurement depth</i> mm	175	175	175	-	-	-
<i>Field wet density</i> t/m ³	2.08	2.07	2.04	-	-	-
<i>Field moisture content</i> %	13.5	14.0	11.8	-	-	-

Test procedure AS 1289.5.7.1

Test No	116	117	118	-	-	-
<i>Compactive effort</i>	Standard					
<i>Oversize rock retained on sieve</i> mm	19.0	19.0	19.0	-	-	-
<i>Percent of oversize material</i> wet	0	0	0	-	-	-
<i>Peak Converted Wet Density</i> t/m ³	2.12	2.10	2.07	-	-	-
<i>Adjusted Peak Converted Wet Density</i> t/m ³	-	-	-	-	-	-
<i>Optimum Moisture Content</i> %	13.5	14.0	13.0	-	-	-

<i>Moisture Variation From Optimum Moisture Content</i>	0.0%	0.0%	1.5% dry	-	-	-
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Density Ratio (R_{HD}) %	98.5	98.5	98.0	-	-	-
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Material description

No 116 - 118 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R037
 Date Issued 12/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 12/09/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature EARTHWORKS *Layer thickness* 200 mm *Time:* 12:34

Test procedure AS 1289.2.1.1 & 5.8.1

Test No		119	120	121	-	-	-
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	2.14	2.14	2.14	-	-	-
Field moisture content	%	10.5	12.4	11.5	-	-	-

Test procedure AS 1289.5.7.1

Test No		119	120	121	-	-	-
Compactive effort		Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	-	-	-
Percent of oversize material	wet	0	2	3	-	-	-
Peak Converted Wet Density	t/m ³	2.22	2.24	2.23	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	2.24	2.23	-	-	-
Optimum Moisture Content	%	11.0	10.5	11.5	-	-	-

Moisture Variation From Optimum Moisture Content	0.5% dry	2.0% wet	0.0%	-	-	-
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Density Ratio (R_{HD})	%	97.0	95.5	96.0	-	-	-
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Material description

No 119 - 121 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R038
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 13/09/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:36
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<i>Test procedure AS 1289.2.1.1 & 5.8.1</i>						
Test No		122	123	124	-	-
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	2.13	2.06	2.07	-	-
Field moisture content	%	11.7	10.9	8.5	-	-
<i>Test procedure AS 1289.5.7.1</i>						
Test No		122	123	124	-	-
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	2.12	2.08	2.09	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	9.5	10.5	8.5	-	-
Moisture Variation From Optimum Moisture Content		2.0% wet	0.5% wet	0.0%	-	-
Density Ratio (R_{HD})	%	100.5	99.0	99.5	-	-
<i>Material description</i>						
No 122 - 124 Clay Fill						



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R039
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 14/09/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:38
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No		125	126	127	-	-	-
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	2.11	2.08	2.13	-	-	-
Field moisture content	%	8.6	11.1	8.8	-	-	-

Test procedure AS 1289.5.7.1

Test No		125	126	127	-	-	-
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	2.13	2.10	2.17	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	8.5	11.0	9.0	-	-	-

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	0.0%	-	-	-
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Density Ratio (R_{HD})	%	98.5	99.5	98.0	-	-	-
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Material description

No 125 - 127 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R040
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 19/09/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:44
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No		128	129	130	-	-	-
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	2.12	2.13	2.09	-	-	-
Field moisture content	%	8.9	9.0	11.2	-	-	-

Test procedure AS 1289.5.7.1

Test No		128	129	130	-	-	-
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	2.15	2.17	2.12	-	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	8.0	8.5	10.5	-	-	-

Moisture Variation From Optimum Moisture Content		1.0% wet	0.5% wet	0.5% wet	-	-	-
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Density Ratio (R_{HD})	%	99.0	98.0	98.5	-	-	-
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Material description

No 128 - 130 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R041
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	20/09/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 15:46
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	131	132	133	134	135	136
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>	2.12	2.09	2.06	2.07	2.06	2.02
Field moisture content %	14.1	13.6	13.9	14.5	15.0	14.5

Test procedure AS 1289.5.7.1

Test No	131	132	133	134	135	136
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>	2.14	2.12	2.10	2.10	2.10	2.06
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content %	14.0	13.5	14.0	14.5	15.0	14.5

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
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Density Ratio (R_{HD})	%	99.5	98.5	98.5	98.5	98.0	98.0
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Material description

No 131 - 136 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R042
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	21/09/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:49
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	137	138	139	140	141	142
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
Field wet density	t/m ³	2.13	2.06	2.04	2.09	2.00
Field moisture content	%	13.9	14.9	14.0	14.1	12.4

Test procedure AS 1289.5.7.1

Test No	137	138	139	140	141	142
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	2.16	2.09	2.07	2.12	2.04
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	14.0	15.0	14.0	14.0	11.0

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	0.0%	0.0%	2.5% dry	2.5% wet
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Density Ratio (R _{HD})	%	98.5	98.5	98.5	98.5	98.0	99.0
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Material description

No 137 - 142 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R043
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 02/10/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	<i>Layer thickness</i>	200 mm	<i>Time:</i> 15:00
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	143	144	145	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	1.98	1.92	2.07	-	-	-
Field moisture content %	25.8	23.5	23.4	-	-	-

Test procedure AS 1289.5.7.1

Test No	143	144	145	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.01	1.95	2.12	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content %	28.0	25.5	26.0	-	-	-

<i>Moisture Variation From Optimum Moisture Content</i>	2.0% dry	1.5% dry	2.0% dry	-	-	-
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Density Ratio (R_{HD})	%	98.5	98.5	98.0	-	-	-
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Material description

No 143 - 145 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R044
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	03/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	13:51
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	146	147	148	-	-	-
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	1.90	1.92	-	-
Field moisture content	%	23.4	21.7	26.5	-	-

Test procedure AS 1289.5.7.1

Test No	146	147	148	-	-	-
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	1.92	1.94	1.94	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	23.5	22.0	26.5	-	-

Moisture Variation From Optimum Moisture Content	0.0%	0.5% dry	0.0%	-	-	-
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Density Ratio (R _{HD})	%	97.5	97.5	99.0	-	-
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Material description

No 146 - 148 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R045
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 04/10/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	<i>Layer thickness</i>	200 mm	<i>Time:</i> 13:52
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	149	150	151	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	1.82	1.82	1.91	-	-	-
Field moisture content %	16.1	18.2	14.0	-	-	-

Test procedure AS 1289.5.7.1

Test No	149	150	151	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	1.86	1.84	1.92	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content %	17.5	20.5	16.0	-	-	-

<i>Moisture Variation From Optimum Moisture Content</i>	1.5% dry	2.0% dry	2.0% dry	-	-	-
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Density Ratio (R_{HD}) %	98.0	99.0	99.5	-	-	-
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Material description

No 149 - 151 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 18409
 Report No 18409/R046
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	05/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:52
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	152	153	154	155	156	157
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>	1.92	1.94	2.01	2.01	1.96	1.97
Field moisture content %	16.0	12.6	16.7	13.2	14.4	14.5

Test procedure AS 1289.5.7.1

Test No	152	153	154	155	156	157
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>	1.95	1.95	2.03	2.06	2.00	2.00
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content %	17.5	14.5	19.0	15.5	16.0	16.0

Moisture Variation From Optimum Moisture Content	1.5% dry	2.0% dry	2.0% dry	2.5% dry	1.5% dry	1.5% dry
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Density Ratio (R_{HD})	%	98.5	99.5	99.5	97.5	98.5	98.5
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Material description

No 152 - 157 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R047
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	01/08/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	09:58
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	158	159	160	-	-	-
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	2.24	2.23	2.16	-	-
Field moisture content	%	30.5	25.0	18.7	-	-

Test procedure AS 1289.5.7.1

Test No	158	159	160	-	-	-
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	2.25	2.24	2.17	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	32.5	27.5	22.0	-	-

Moisture Variation From Optimum Moisture Content	1.5% dry	2.0% dry	2.5% dry	-	-	-
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Density Ratio (R _{HD})	%	100.0	99.5	99.5	-	-
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Material description

No 158 - 160 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R048
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 02/08/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 16:18
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	161	162	163	-	-	-
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	2.25	2.20	2.24	-	-	-
Field moisture content %	10.1	11.1	13.3	-	-	-

Test procedure AS 1289.5.7.1

Test No	161	162	163	-	-	-
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	2.25	2.25	2.28	-	-	-
Adjusted Peak Converted Wet Density t/m ³	-	-	-	-	-	-
Optimum Moisture Content %	12.0	13.5	15.5	-	-	-

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

No 161 - 163 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R049
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 03/08/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	<i>Layer thickness</i>	200 mm	<i>Time:</i> 11:21
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	164	165	166	-	-	-
<i>Location</i>	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
<i>Approximate depth below FSL</i>						
<i>Measurement depth</i> mm	175	175	175	-	-	-
<i>Field wet density</i> t/m ³	2.20	2.24	2.24	-	-	-
<i>Field moisture content</i> %	11.2	10.4	8.7	-	-	-

Test procedure AS 1289.5.7.1

Test No	164	165	166	-	-	-
<i>Compactive effort</i>	Standard					
<i>Oversize rock retained on sieve</i> mm	19.0	19.0	19.0	-	-	-
<i>Percent of oversize material</i> wet	0	0	0	-	-	-
<i>Peak Converted Wet Density</i> t/m ³	2.25	2.26	2.26	-	-	-
<i>Adjusted Peak Converted Wet Density</i> t/m ³	-	-	-	-	-	-
<i>Optimum Moisture Content</i> %	13.5	12.5	11.0	-	-	-

<i>Moisture Variation From Optimum Moisture Content</i>	2.0% dry	2.0% dry	2.0% dry	-	-	-
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Density Ratio (R_{HD}) %	98.0	99.5	99.0	-	-	-
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Material description

No 164 - 166 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R050
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	06/08/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	16:25
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	167	168	169	-	-	-
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	2.15	2.18	2.19	-	-
Field moisture content	%	11.9	13.1	12.8	-	-

Test procedure AS 1289.5.7.1

Test No	167	168	169	-	-	-
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	2.17	2.22	2.20	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	14.5	15.5	15.5	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	-	-	-
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Density Ratio (R _{HD})	%	99.0	98.5	99.5	-	-
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Material description

No 167 - 169 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R051
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 08/08/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	<i>Layer thickness</i>	200 mm	<i>Time:</i> 09:56
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	170	171	172	-	-	-
<i>Location</i>	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
<i>Approximate depth below FSL</i>						
<i>Measurement depth</i> mm	175	175	175	-	-	-
<i>Field wet density</i> t/m ³	2.01	2.14	2.13	-	-	-
<i>Field moisture content</i> %	10.8	9.9	10.1	-	-	-

Test procedure AS 1289.5.7.1

Test No	170	171	172	-	-	-
<i>Compactive effort</i>	Standard					
<i>Oversize rock retained on sieve</i> mm	19.0	19.0	19.0	-	-	-
<i>Percent of oversize material</i> wet	0	0	0	-	-	-
<i>Peak Converted Wet Density</i> t/m ³	2.05	2.16	2.19	-	-	-
<i>Adjusted Peak Converted Wet Density</i> t/m ³	-	-	-	-	-	-
<i>Optimum Moisture Content</i> %	13.0	12.0	12.5	-	-	-

<i>Moisture Variation From Optimum Moisture Content</i>	2.0% dry	2.0% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD}) %	98.0	99.0	97.5	-	-	-
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Material description

No 170 - 172 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R052
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 09/08/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:34
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	173	174	175	-	-	-
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	2.11	2.14	2.02	-	-
Field moisture content	%	10.6	10.3	9.6	-	-

Test procedure AS 1289.5.7.1

Test No	173	174	175	-	-	-
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	2.16	2.17	2.06	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	12.5	12.5	12.0	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.0% dry	-	-	-
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Density Ratio (R_{HD})	%	98.0	98.5	98.0	-	-
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Material description

No 173 - 175 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R053
 Date Issued 12/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 10/08/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:56
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	176	177	178	-	-	-
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	1.95	1.95	1.94	-	-
Field moisture content	%	11.3	10.7	11.1	-	-

Test procedure AS 1289.5.7.1

Test No	176	177	178	-	-	-
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	2.02	2.02	2.02	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	13.5	12.5	13.5	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD})	%	96.5	96.5	96.0	-	-
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Material description

No 176 - 178 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R054
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	13/08/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	10:56
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	179	180	181	-	-	-
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	1.99	2.00	2.01	-	-
Field moisture content	%	11.6	12.5	13.5	-	-

Test procedure AS 1289.5.7.1

Test No	179	180	181	-	-	-
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	2.04	2.05	2.04	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	14.5	15.0	15.5	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	-	-	-
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Density Ratio (R _{HD})	%	98.0	98.0	98.5	-	-
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Material description

No 179 - 181 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R055
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	06/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:56
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	182	183	184	-	-	-
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	2.00	2.02	1.87	-	-
Field moisture content	%	10.8	10.0	12.1	-	-

Test procedure AS 1289.5.7.1

Test No	182	183	184	-	-	-
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	2.03	2.05	1.91	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	12.5	12.5	14.5	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% dry	-	-	-
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Density Ratio (R _{HD})	%	98.5	98.5	98.0	-	-
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Material description

No 182 - 184 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R056
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 22/08/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	<i>Layer thickness</i>	200 mm	<i>Time:</i> 11:11
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	185	186	187	-	-	-
<i>Location</i>	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
<i>Approximate depth below FSL</i>						
<i>Measurement depth</i> mm	175	175	175	-	-	-
<i>Field wet density</i> t/m ³	2.09	1.89	1.97	-	-	-
<i>Field moisture content</i> %	13.1	10.6	15.3	-	-	-

Test procedure AS 1289.5.7.1

Test No	185	186	187	-	-	-
<i>Compactive effort</i>	Standard					
<i>Oversize rock retained on sieve</i> mm	19.0	19.0	19.0	-	-	-
<i>Percent of oversize material</i> wet	0	0	0	-	-	-
<i>Peak Converted Wet Density</i> t/m ³	2.14	1.94	2.00	-	-	-
<i>Adjusted Peak Converted Wet Density</i> t/m ³	-	-	-	-	-	-
<i>Optimum Moisture Content</i> %	13.0	11.5	15.5	-	-	-

<i>Moisture Variation From Optimum Moisture Content</i>	0.0%	1.0% dry	0.0%	-	-	-
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Density Ratio (R_{HD}) %	97.5	97.5	98.5	-	-	-
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Material description

No 185 - 187 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R057
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	23/08/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:11
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	188	189	190	-	-	-
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	2.06	2.03	1.94	-	-
Field moisture content	%	10.7	7.9	9.2	-	-

Test procedure AS 1289.5.7.1

Test No	188	189	190	-	-	-
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	2.09	2.08	1.95	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	12.5	10.0	11.0	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.0% dry	-	-	-
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Density Ratio (R _{HD})	%	98.5	98.0	99.5	-	-
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Material description

No 188 - 190 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R057
 Date Issued 25/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	08/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:56
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	191	192	193	-	-	-
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	2.02	1.99	1.92	-	-
Field moisture content	%	12.8	13.9	12.6	-	-

Test procedure AS 1289.5.7.1

Test No	191	192	193	-	-	-
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	2.07	2.06	1.99	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	15.5	16.0	15.0	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	-	-	-
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Density Ratio (R _{HD})	%	97.5	96.5	96.5	-	-
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Material description

No 191 - 193 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 Fz



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R059
 Date Issued 09/11/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	09/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:37
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	194	195	196	197	198	199
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>	2.02	2.03	2.00	1.85	1.87	1.85
Field moisture content <i>%</i>	13.1	17.2	14.7	15.9	26.9	10.1

Test procedure AS 1289.5.7.1

Test No	194	195	196	197	198	199
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>	2.05	2.08	2.04	1.90	1.91	1.89
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	16.0	19.5	17.0	18.0	29.0	12.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.0% dry	2.0% dry	2.0% dry	2.5% dry
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Density Ratio (R_{HD})	%	99.0	98.0	98.0	97.5	97.5	98.0
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Material description

No 194 - 199 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R060
 Date Issued 09/11/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	10/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:38
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	200	201	202	203	204	205
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>	1.85	1.85	1.86	1.85	1.85	1.88
Field moisture content <i>%</i>	13.3	15.7	17.1	18.8	23.8	33.2

Test procedure AS 1289.5.7.1

Test No	200	201	202	203	204	205
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>	1.88	1.89	1.88	1.91	1.86	1.90
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	11.5	14.0	18.5	21.0	26.5	36.5

Moisture Variation From Optimum Moisture Content	2.5% wet	2.0% wet	1.5% dry	2.0% dry	2.5% dry	2.5% dry
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Density Ratio (R_{HD})	%	98.5	98.0	99.5	97.0	99.5	99.0
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Material description

No 200 - 205 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R061
 Date Issued 13/11/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	11/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 14:19
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	206	207	208	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	2.01	1.91	1.97	-	-	-
Field moisture content <i>%</i>	18.6	20.3	27.1	-	-	-

Test procedure AS 1289.5.7.1

Test No	209	210	211	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.01	1.90	2.00	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	18.0	21.0	27.0	-	-	-

Moisture Variation From Optimum Moisture Content	1.0% wet	0.5% dry	0.0%	-	-	-
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Density Ratio (R_{HD})	%	100.5	100.5	98.5	-	-	-
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Material description

No 206 - 208 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R062
 Date Issued 14/11/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	12/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:39
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	209	210	211	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	1.87	1.97	1.96	-	-	-
Field moisture content <i>%</i>	15.7	16.2	17.6	-	-	-

Test procedure AS 1289.5.7.1

Test No	209	210	211	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	1.90	1.95	1.95	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	18.0	18.0	20.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD})	%	98.5	101.0	100.5	-	-	-
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Material description

No 209 - 211 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R063
 Date Issued 15/11/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	13/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:40
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	212	213	214	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	1.93	1.87	1.87	-	-	-
Field moisture content <i>%</i>	14.3	14.6	14.0	-	-	-

Test procedure AS 1289.5.7.1

Test No	212	213	214	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.01	1.90	1.91	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	17.0	17.5	16.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD})	%	96.0	98.5	98.5	-	-	-
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Material description

No 212 - 214 Clay Fill

AVRLOT HILF V1.10 MAR 13



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R064
 Date Issued 29/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 15/10/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	<i>Layer thickness</i>	200 mm	<i>Time:</i> 07:42
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	215	216	217	-	-	-
<i>Location</i>	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
<i>Approximate depth below FSL</i>						
<i>Measurement depth</i> mm	175	175	175	-	-	-
<i>Field wet density</i> t/m ³	2.09	1.94	2.10	-	-	-
<i>Field moisture content</i> %	10.7	10.6	10.7	-	-	-

Test procedure AS 1289.5.7.1

Test No	215	216	217	-	-	-
<i>Compactive effort</i>	Standard					
<i>Oversize rock retained on sieve</i> mm	19.0	19.0	19.0	-	-	-
<i>Percent of oversize material</i> wet	0	0	0	-	-	-
<i>Peak Converted Wet Density</i> t/m ³	2.15	2.05	2.15	-	-	-
<i>Adjusted Peak Converted Wet Density</i> t/m ³	-	-	-	-	-	-
<i>Optimum Moisture Content</i> %	12.5	12.5	13.0	-	-	-

<i>Moisture Variation From Optimum Moisture Content</i>	2.0% dry	2.0% dry	2.0% dry	-	-	-
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Density Ratio (R_{HD}) %	97.5	95.0	97.5	-	-	-
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Material description

No 215 - 217 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R065
 Date Issued 29/10/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Tested by BGG
 Date tested 16/10/18
 Checked by JHF

Client ROKON (RICHMOND)
 Project RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS
 Location WERRIBEE

Feature	EARTHWORKS	<i>Layer thickness</i>	200 mm	<i>Time:</i> 07:43
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	218	219	220	-	-	-
<i>Location</i>	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
<i>Approximate depth below FSL</i>						
<i>Measurement depth</i> mm	175	175	175	-	-	-
<i>Field wet density</i> t/m ³	2.12	2.16	2.11	-	-	-
<i>Field moisture content</i> %	11.1	11.4	11.5	-	-	-

Test procedure AS 1289.5.7.1

Test No	218	219	220	-	-	-
<i>Compactive effort</i>	Standard					
<i>Oversize rock retained on sieve</i> mm	19.0	19.0	19.0	-	-	-
<i>Percent of oversize material</i> wet	0	0	0	-	-	-
<i>Peak Converted Wet Density</i> t/m ³	2.20	2.20	2.20	-	-	-
<i>Adjusted Peak Converted Wet Density</i> t/m ³	-	-	-	-	-	-
<i>Optimum Moisture Content</i> %	13.0	13.5	14.0	-	-	-

<i>Moisture Variation From Optimum Moisture Content</i>	1.5% dry	2.0% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD}) %	96.5	98.0	96.0	-	-	-
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Material description

No 218 - 220 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R066
 Date Issued 15/11/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	18/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:09
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	221	222	223	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	1.84	1.93	2.19	-	-	-
Field moisture content <i>%</i>	15.2	11.3	11.7	-	-	-

Test procedure AS 1289.5.7.1

Test No	221	222	223	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	1.90	2.00	2.20	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	17.5	13.5	14.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	-	-	-
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Density Ratio (R_{HD})	%	97.0	96.5	99.5	-	-
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Material description

No 221 - 223 Clay Fill

AVRLOT HILF V1.10 MAR 13



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R067
 Date Issued 15/11/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	19/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:11
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	224	225	226	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	2.03	2.08	1.74	-	-	-
Field moisture content <i>%</i>	16.4	28.3	30.2	-	-	-

Test procedure AS 1289.5.7.1

Test No	224	225	226	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.10	2.10	1.80	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	18.5	30.5	32.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD})	%	96.5	99.0	96.5	-	-
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Material description

No 224 - 226 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R068
 Date Issued 13/11/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	22/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:48
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	227	228	229	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	2.10	2.04	2.06	-	-	-
Field moisture content <i>%</i>	18.5	20.9	19.1	-	-	-

Test procedure AS 1289.5.7.1

Test No	227	228	229	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.15	2.10	2.10	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	20.5	23.5	21.0	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.0% dry	-	-	-
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Density Ratio (R_{HD})	%	98.0	97.0	98.0	-	-	-
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Material description

No 227 - 229 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R069
 Date Issued 12/11/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	23/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	09:13
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	230	231	232	-	-	-
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	2.12	2.03	2.12	-	-
Field moisture content	%	12.0	12.5	11.5	-	-

Test procedure AS 1289.5.7.1

Test No	230	231	232	-	-	-
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	2.15	2.11	2.16	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	14.5	14.5	14.0	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	-	-	-
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Density Ratio (R _{HD})	%	98.5	96.5	98.5	-	-
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Material description

No 230 - 232 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R070
 Date Issued 12/11/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	24/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:34
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	233	234	235	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	1.93	1.94	2.03	-	-	-
Field moisture content <i>%</i>	22.3	20.5	16.4	-	-	-

Test procedure AS 1289.5.7.1

Test No	233	234	235	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.01	2.01	2.00	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	24.5	23.0	18.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.0% dry	-	-	-
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Density Ratio (R_{HD})	%	96.0	96.5	101.0	-	-	-
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Material description

No 233 - 235 Clay Fill

AVRLOT HILF V1.10 MAR 13



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R071
 Date Issued 12/11/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	25/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 08:39
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	236	237	238	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	1.96	1.93	1.92	-	-	-
Field moisture content <i>%</i>	18.2	15.8	14.9	-	-	-

Test procedure AS 1289.5.7.1

Test No	236	237	238	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.01	2.00	2.00	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	20.5	17.5	17.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD})	%	98.0	96.5	96.0	-	-	-
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Material description

No 236 - 238 Clay Fill

AVRLOT HILF V1.10 MAR 13



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R072
 Date Issued 12/11/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	26/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:03
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	239	240	241	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	1.99	1.88	2.00	-	-	-
Field moisture content <i>%</i>	21.0	10.7	14.6	-	-	-

Test procedure AS 1289.5.7.1

Test No	239	240	241	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.01	1.91	2.01	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	23.5	13.0	17.0	-	-	-

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

No 239 - 241 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R073
 Date Issued 13/11/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	30/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:07
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	242	243	244	-	-	-
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	1.94	2.00	2.01	-	-
Field moisture content	%	24.5	18.9	20.5	-	-

Test procedure AS 1289.5.7.1

Test No	242	243	244	-	-	-
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	1.95	2.00	2.00	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	27.5	21.5	22.5	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	-	-	-
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Density Ratio (R _{HD})	%	99.0	100.0	100.0	-	-
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Material description

No 242 - 244 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R074
 Date Issued 15/11/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	30/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:49
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	245	246	247	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	1.84	1.89	1.86	-	-	-
Field moisture content <i>%</i>	25.6	18.2	22.9	-	-	-

Test procedure AS 1289.5.7.1

Test No	245	246	247	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	1.90	1.90	1.91	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	28.5	20.5	25.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD})	%	96.5	99.0	97.5	-	-	-
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Material description

No 245 - 247 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R075
 Date Issued 04/01/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	31/10/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:52
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	248	249	250	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	1.96	2.11	2.01	-	-	-
Field moisture content <i>%</i>	22.5	21.9	22.1	-	-	-

Test procedure AS 1289.5.7.1

Test No	248	249	250	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.00	2.15	2.05	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	25.0	24.0	24.5	-	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	-	-	-
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Density Ratio (R_{HD})	%	97.5	98.0	98.0	-	-	-
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Material description

No 248 - 250 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R076
 Date Issued 11/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	01/11/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	09:54
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	251	252	253	-	-	-
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	2.01	2.04	2.03	-	-
Field moisture content	%	13.7	17.9	17.1	-	-

Test procedure AS 1289.5.7.1

Test No	251	252	253	-	-	-
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	2.03	2.09	2.07	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	16.0	20.0	19.0	-	-

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.0% dry	-	-	-
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Density Ratio (R _{HD})	%	98.5	97.5	98.5	-	-
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Material description

No 251 - 253 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R077
 Date Issued 11/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	02/11/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:54
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	254	255	256	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	2.05	2.12	2.15	-	-	-
Field moisture content <i>%</i>	11.2	11.8	14.6	-	-	-

Test procedure AS 1289.5.7.1

Test No	254	255	256	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.05	2.16	2.19	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	13.5	14.0	17.0	-	-	-

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

No 254 - 256 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fz



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R078
 Date Issued 07/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	09/11/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:12
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	257	258	259	260	261	262
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>	1.99	1.98	1.95	1.91	1.90	1.92
Field moisture content <i>%</i>	32.0	28.9	26.0	25.3	18.9	30.1

Test procedure AS 1289.5.7.1

Test No	257	258	259	260	261	262
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>	2.00	2.00	2.00	1.95	1.95	1.95
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	29.0	26.5	23.0	27.5	19.0	27.5

Moisture Variation From Optimum Moisture Content	2.5% wet	2.5% wet	2.5% wet	2.0% dry	0.0%	2.5% wet
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Density Ratio (R_{HD})	%	99.0	98.5	97.0	98.0	97.5	98.5
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Material description

No 257 - 262 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R079
 Date Issued 07/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	12/11/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:04
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	263	264	265	266	267	268
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>	2.12	2.15	2.11	2.19	2.19	2.20
Field moisture content <i>%</i>	25.1	22.8	18.7	21.9	25.2	24.6

Test procedure AS 1289.5.7.1

Test No	263	264	265	266	267	268
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>	2.20	2.21	2.16	2.20	2.21	2.20
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	23.0	20.0	17.0	19.5	22.5	22.0

Moisture Variation From Optimum Moisture Content	2.0% wet	2.5% wet	2.0% wet	2.5% wet	2.5% wet	2.5% wet
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Density Ratio (R_{HD})	%	96.5	97.5	98.0	99.5	99.5	100.0
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Material description

No 263 - 268 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R080
 Date Issued 13/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	13/11/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:00
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	269	270	271	272	273	274
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>	1.80	1.79	1.95	1.88	1.90	1.84
Field moisture content <i>%</i>	18.4	19.9	15.7	20.3	20.1	20.4

Test procedure AS 1289.5.7.1

Test No	269	270	271	272	273	274
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>	1.85	1.85	1.98	1.90	1.93	1.90
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	21.0	22.5	18.5	23.5	23.0	23.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	2.5% dry	2.0% dry	2.5% dry
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Density Ratio (R_{HD})	%	97.0	96.5	98.5	98.5	98.5	97.0
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Material description

No 269 - 274 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R081
 Date Issued 13/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	14/11/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:04
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	275	276	277	278	279	280
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>	1.81	1.84	1.82	1.83	1.73	1.86
Field moisture content %	20.0	18.3	19.1	13.4	12.1	11.7

Test procedure AS 1289.5.7.1

Test No	275	276	277	278	279	280
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>	1.85	1.89	1.87	1.87	1.80	1.91
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content %	22.5	21.0	21.5	15.5	14.0	14.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	2.0% dry	2.5% dry	2.5% dry
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Density Ratio (R_{HD})	%	98.5	97.0	97.0	98.5	96.0	97.5
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Material description

No 275 - 280 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R082
 Date Issued 13/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	15/11/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:17
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	281	282	283	284	285	286
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
Field wet density	t/m ³	1.91	1.88	1.87	2.01	2.07
Field moisture content	%	17.6	16.0	16.6	14.7	13.8

Test procedure AS 1289.5.7.1

Test No	281	282	283	284	285	286
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	1.93	1.94	1.92	2.03	2.10
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	20.5	18.5	19.5	17.5	16.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	2.5% dry	2.0% dry	2.0% dry
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Density Ratio (R _{HD})	%	99.0	97.0	97.5	99.0	98.5	98.5
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Material description

No 281 - 286 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R083
 Date Issued 14/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	16/11/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 09:19
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	287	288	289	290	291	292
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>	2.03	1.91	2.12	2.17	1.98	1.99
Field moisture content <i>%</i>	16.2	15.6	11.3	18.4	14.6	15.2

Test procedure AS 1289.5.7.1

Test No	287	288	289	290	291	292
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>	2.06	1.94	2.15	2.20	2.03	2.01
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	18.5	17.5	13.5	21.0	17.0	17.5

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

No 287 - 292 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R084
 Date Issued 11/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	19/11/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:22
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	293	294	295	296	297	298
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>	1.98	1.86	2.09	1.98	2.18	1.94
Field moisture content <i>%</i>	13.7	12.9	12.1	11.7	11.6	11.1

Test procedure AS 1289.5.7.1

Test No	293	294	295	296	297	298
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>	2.01	1.90	2.12	2.03	2.21	1.97
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	16.0	15.0	14.0	13.5	13.5	13.0

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

No 293 - 298 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R085
 Date Issued 11/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	20/11/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:21
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	299	300	301	302	303	304
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>	2.09	2.11	1.79	1.81	1.80	2.00
Field moisture content <i>%</i>	15.4	15.4	15.0	12.9	16.9	16.4

Test procedure AS 1289.5.7.1

Test No	299	300	301	302	303	304
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>	2.14	2.14	1.84	1.87	1.86	2.03
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	17.5	17.5	17.5	15.0	19.0	19.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	2.0% dry	2.5% dry	2.0% dry
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Density Ratio (R_{HD})	%	97.5	98.5	97.5	96.5	96.5	98.5
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Material description

No 299 - 304 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R086
 Date Issued 14/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	21/11/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:20
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	305	306	307	308	309	310
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>	1.71	1.64	1.70	1.74	1.70	1.66
Field moisture content <i>%</i>	26.3	26.9	15.6	23.8	26.6	28.6

Test procedure AS 1289.5.7.1

Test No	305	306	307	308	309	310
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>	1.74	1.71	1.77	1.79	1.79	1.73
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	29.0	29.0	17.5	26.0	29.0	30.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.0% dry	2.5% dry	2.5% dry	1.5% dry
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Density Ratio (R_{HD})	%	98.0	95.5	96.0	97.0	95.0	96.0
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Material description

No 305 - 310 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R087
 Date Issued 14/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	26/11/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:21
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	311	312	313	314	315	316
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>	1.80	1.75	1.78	1.76	1.78	1.78
Field moisture content <i>%</i>	26.6	25.9	23.1	25.2	23.9	26.5

Test procedure AS 1289.5.7.1

Test No	311	312	313	314	315	316
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>	1.83	1.82	1.81	1.83	1.88	1.83
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	29.5	28.5	26.0	28.0	27.0	29.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	2.5% dry	2.5% dry	2.5% dry
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Density Ratio (R_{HD})	%	98.5	96.0	98.0	96.0	95.0	97.0
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Material description

No 311 - 316 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R088
 Date Issued 14/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	26/11/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:15
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	317	318	319	320	321	322
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>	2.07	1.85	1.99	2.08	1.99	1.87
Field moisture content <i>%</i>	14.3	17.1	14.6	16.2	15.9	15.3

Test procedure AS 1289.5.7.1

Test No	317	318	319	320	321	322
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>	2.08	1.93	2.02	2.10	2.01	1.91
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	17.0	20.0	17.5	19.0	18.5	18.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% dry	2.0% dry	2.0% dry	2.5% dry
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Density Ratio (R_{HD})	%	99.0	96.0	98.5	99.5	99.0	97.5
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Material description

No 317 - 322 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R089
 Date Issued 14/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	28/11/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:17
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	323	324	325	326	327	328
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>	2.04	1.88	2.00	2.02	1.94	1.98
Field moisture content <i>%</i>	9.4	28.0	14.8	16.6	12.2	9.1

Test procedure AS 1289.5.7.1

Test No	323	324	325	326	327	328
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>	2.08	1.95	2.03	2.05	1.99	2.00
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	11.5	20.5	16.5	19.0	14.5	11.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	1.5% dry	2.5% dry	2.5% dry	2.5% dry
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Density Ratio (R_{HD})	%	98.0	96.5	99.0	98.5	97.0	99.0
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Material description

No 323 - 328 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R090
 Date Issued 13/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	06/12/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 16:46
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	329	330	331	332	333	334
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>	1.89	1.91	1.91	1.90	1.93	1.91
Field moisture content <i>%</i>	35.6	35.4	36.0	34.1	36.4	32.5

Test procedure AS 1289.5.7.1

Test No	329	330	331	332	333	334
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>	1.92	1.95	1.96	1.92	1.98	1.96
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	33.0	33.0	34.0	32.5	34.5	30.5

Moisture Variation From Optimum Moisture Content	2.5% wet	2.5% wet	2.0% wet	1.5% wet	2.0% wet	2.5% wet
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Density Ratio (R_{HD})	%	98.5	98.0	97.5	98.5	97.5	97.5
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Material description

No 329 - 334 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R091
 Date Issued 13/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	06/12/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 16:48
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	335	336	337	338	339	340
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>	1.92	1.89	1.88	1.85	1.90	1.91
Field moisture content <i>%</i>	30.3	33.1	35.3	29.9	35.2	32.3

Test procedure AS 1289.5.7.1

Test No	335	336	337	338	339	340
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>	1.94	1.93	1.91	1.91	1.93	1.93
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	28.5	31.0	33.5	28.0	33.0	30.5

Moisture Variation From Optimum Moisture Content	2.0% wet	2.0% wet	2.0% wet	2.0% wet	2.0% wet	2.0% wet
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Density Ratio (R_{HD})	%	99.0	98.0	98.5	97.0	98.0	99.0
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Material description

No 335 - 340 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R092
 Date Issued 11/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	06/12/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 16:51
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	341	342	343	344	345	346
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
Field wet density	t/m ³	1.86	1.91	1.92	1.92	1.89
Field moisture content	%	30.9	37.3	33.4	30.6	32.4

Test procedure AS 1289.5.7.1

Test No	341	342	343	344	345	346
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	1.88	1.95	1.95	1.96	1.93
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	28.5	34.5	30.5	28.0	30.0

Moisture Variation From Optimum Moisture Content	2.5% wet	2.5% wet	2.5% wet	2.5% wet	2.5% wet	2.5% wet
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Density Ratio (R _{HD})	%	99.0	98.0	98.5	98.0	98.0	98.5
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Material description

No 341 - 346 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R093
 Date Issued 07/01/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	08/12/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:28
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	347	348	349	350	351	352
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>	2.07	2.07	2.08	2.05	2.07	2.08
Field moisture content <i>%</i>	12.9	12.4	11.1	10.5	11.5	13.6

Test procedure AS 1289.5.7.1

Test No	347	348	349	350	351	352
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>	2.10	2.10	2.11	2.10	2.10	2.10
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	15.5	14.5	13.5	13.0	14.0	16.0

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

No 347 - 352 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R094
 Date Issued 04/01/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	04/12/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 16:56
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	353	354	355	356	357	358
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>	1.97	1.96	1.93	1.93	1.91	1.91
Field moisture content <i>%</i>	22.4	24.1	21.7	26.5	20.5	22.0

Test procedure AS 1289.5.7.1

Test No	353	354	355	356	357	358
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>	2.00	2.01	1.95	1.95	1.95	1.95
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	22.5	24.5	22.0	24.5	22.5	22.0

Moisture Variation From Optimum Moisture Content	0.5% dry	0.5% dry	0.0%	2.0% wet	2.0% dry	0.0%
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Density Ratio (R_{HD})	%	98.5	98.0	98.5	99.0	98.0	98.0
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Material description

No 353 - 358 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R095
 Date Issued 21/12/2018

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	05/12/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 18:25
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	359	360	361	362	363	364
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>	1.97	1.96	1.94	1.97	1.96	2.01
Field moisture content <i>%</i>	32.1	24.7	29.8	21.3	21.8	24.8

Test procedure AS 1289.5.7.1

Test No	359	360	361	362	363	364
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>	2.00	2.00	1.97	2.00	2.00	2.00
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	32.5	27.5	28.5	21.5	24.5	25.0

Moisture Variation From Optimum Moisture Content	0.0%	2.5% dry	1.0% wet	0.0%	2.5% dry	0.0%
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Density Ratio (R_{HD})	%	98.5	98.0	98.0	98.0	98.5	100.0
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Material description

No 359 - 364 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R096
 Date Issued 04/01/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	06/12/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 18:26
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	365	366	367	-	-	-
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	1.98	2.00	1.98	-	-
Field moisture content	%	19.9	18.5	24.3	-	-

Test procedure AS 1289.5.7.1

Test No	365	366	367	-	-	-
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	2.00	2.00	2.01	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	22.5	21.0	26.0	-	-

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	1.5% dry	-	-	-
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Density Ratio (R _{HD})	%	99.0	100.0	98.5	-	-
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Material description

No 365 - 367 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R097
 Date Issued 07/01/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	07/12/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 15:11
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	368	369	370	371	372	373
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>	1.98	2.07	2.02	2.02	1.98	2.01
Field moisture content <i>%</i>	17.9	18.1	28.3	21.9	17.0	26.0

Test procedure AS 1289.5.7.1

Test No	368	369	370	371	372	373
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>	2.00	2.10	2.05	2.05	2.00	2.05
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	18.0	18.5	25.5	22.0	16.5	26.0

Moisture Variation From Optimum Moisture Content	0.0%	0.0%	2.5% wet	0.0%	0.5% wet	0.0%
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Density Ratio (R_{HD})	%	99.5	98.5	98.5	98.0	99.0	98.0
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Material description

No 368 - 373 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R098
 Date Issued 11/01/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	08/12/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:00
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	374	375	376	377		
Location	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	
Field wet density	t/m ³	1.97	2.00	1.95	1.96	
Field moisture content	%	26.4	24.9	27.5	25.4	

Test procedure AS 1289.5.7.1

Test No	374	375	376	377		
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	
Percent of oversize material	wet	0	0	0	0	
Peak Converted Wet Density	t/m ³	2.01	2.03	1.97	1.99	
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	
Optimum Moisture Content	%	27.5	26.5	28.0	24.5	

Moisture Variation From Optimum Moisture Content	1.0% dry	1.5% dry	0.5% dry	1.0% wet		
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Density Ratio (R_{HD})	%	98.0	98.5	99.0	98.5	
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Material description

No 374 - 377 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R099
 Date Issued 11/01/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	10/12/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:35
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	378	379	380			
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	1.95	1.93	1.92		
Field moisture content	%	27.3	26.4	27.3		

Test procedure AS 1289.5.7.1

Test No	378	379	380			
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	2.01	1.99	1.98		
Adjusted Peak Converted Wet Density	t/m ³	-	-	-		
Optimum Moisture Content	%	28.5	28.0	26.5		

Moisture Variation From Optimum Moisture Content	1.0% dry	1.5% dry	1.0% wet			
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Density Ratio (R_{HD})	%	97.0	97.0	97.0		
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Material description

No 378 - 380 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R100
 Date Issued 18/01/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	11/12/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	15:40
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	381	382	383	-	-	-
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	1.96	1.98	1.96	-	-
Field moisture content	%	22.9	22.2	24.1	-	-

Test procedure AS 1289.5.7.1

Test No	381	382	383	-	-	-
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	2.01	2.01	2.00	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	24.5	23.0	26.0	-	-

Moisture Variation From Optimum Moisture Content	1.5% dry	1.0% dry	2.0% dry	-	-	-
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Density Ratio (R _{HD})	%	97.5	98.5	98.0	-	-
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Material description

No 381 - 383 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R101
 Date Issued 14/01/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	12/12/18
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 16:05
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	384	385	386			
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	1.94	1.99	1.97		
Field moisture content	%	27.1	23.8	29.3		

Test procedure AS 1289.5.7.1

Test No	384	385	386			
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	2.01	2.05	2.04		
Adjusted Peak Converted Wet Density	t/m ³	-	-	-		
Optimum Moisture Content	%	26.0	25.5	28.0		

Moisture Variation From Optimum Moisture Content	1.0% wet	1.5% dry	1.5% wet			
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Density Ratio (R_{HD})	%	96.5	97.0	96.5		
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Material description

No 384 - 386 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R102
 Date Issued 12/02/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	10/01/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 18:18
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	387	388	389	-	-	-
Location	REFER TO FIGURE 1	REFER TO FIGURE 1	REFER TO FIGURE 1			
Approximate depth below FSL						
Measurement depth <i>mm</i>	175	175	175	-	-	-
Field wet density <i>t/m³</i>	2.16	2.18	2.16	-	-	-
Field moisture content <i>%</i>	15.9	18.4	20.7	-	-	-

Test procedure AS 1289.5.7.1

Test No	387	388	389	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve <i>mm</i>	19.0	19.0	19.0	-	-	-
Percent of oversize material <i>wet</i>	0	0	0	-	-	-
Peak Converted Wet Density <i>t/m³</i>	2.18	2.19	2.17	-	-	-
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	16.5	19.5	21.5	-	-	-

Moisture Variation From Optimum Moisture Content	0.5% dry	1.0% dry	1.0% dry	-	-	-
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Density Ratio (R_{HD})	%	99.0	99.0	99.5	-	-	-
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Material description

No 387 - 389 Clay Fill

AVRLOT HILF V1.10 MAR 13



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R103
 Date Issued 12/02/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	11/01/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 16:25
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	390	391	392	393	394	395
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>	1.95	2.01	2.00	2.02	1.99	2.01
Field moisture content <i>%</i>	15.6	15.2	21.6	24.8	19.5	26.1

Test procedure AS 1289.5.7.1

Test No	390	391	392	393	394	395
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>	1.99	2.03	2.02	2.03	2.02	2.02
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	18.5	18.0	24.5	28.5	22.5	29.5

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

No 390 - 395 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R104
 Date Issued 05/02/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	12/01/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 16:43
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	396	397	398	399	400	401
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>	1.85	2.00	2.00	1.99	1.99	2.00
Field moisture content <i>%</i>	19.2	16.3	18.9	20.5	20.3	23.0

Test procedure AS 1289.5.7.1

Test No	396	397	398	399	400	401
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>	1.95	2.05	2.05	2.05	2.05	2.05
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	21.5	19.0	21.5	23.0	22.5	25.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	2.5% dry	2.0% dry	2.5% dry
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Density Ratio (R_{HD})	%	95.0	97.0	97.5	97.0	97.0	97.5
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Material description

No 396 - 401 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R105
 Date Issued 05/03/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	JB
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	14/01/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:00
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	402	403	404	405	406	407
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>	1.87	1.84	1.88	1.88	1.96	1.93
Field moisture content <i>%</i>	18.0	19.1	25.2	18.5	16.1	23.3

Test procedure AS 1289.5.7.1

Test No	402	403	404	405	406	407
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>	4	6	0	4	3	0
Peak Converted Wet Density <i>t/m³</i>	1.92	1.89	1.91	1.92	1.97	1.95
Adjusted Peak Converted Wet Density <i>t/m³</i>	1.93	1.91	-	1.93	1.99	-
Optimum Moisture Content <i>%</i>	20.5	21.5	28.0	21.0	18.5	23.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	2.0% dry	2.5% dry	0.0%
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Density Ratio (R_{HD})	%	96.5	96.0	98.5	97.0	98.5	98.5
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Material description

No 402 - 407 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 18409
 Report No 18409/R106
 Date Issued 05/03/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	JB
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	15/01/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:45
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	408	409	410	411	412	413
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>	1.82	1.73	1.78	1.97	1.95	1.93
Field moisture content <i>%</i>	21.1	19.4	21.4	22.9	25.8	25.4

Test procedure AS 1289.5.7.1

Test No	408	409	410	411	412	413
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	3	0	4	5	5
Peak Converted Wet Density <i>t/m³</i>	1.88	1.79	1.85	1.98	1.96	1.95
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	1.81	-	1.99	1.98	1.97
Optimum Moisture Content <i>%</i>	21.0	22.0	24.0	23.0	23.0	23.0

Moisture Variation From Optimum Moisture Content	0.0%	2.5% dry	2.5% dry	0.0%	2.5% wet	2.5% wet
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Density Ratio (R_{HD})	%	97.0	95.5	96.0	99.0	98.5	98.5
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Material description

No 408 - 413 Clay Fill

AVRLOT HILF V1.10 MAR 13



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R107
 Date Issued 05/03/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	WS
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	16/01/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:30
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	414	415	416	417	418	419
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
Field wet density	t/m ³	1.91	1.90	1.82	1.91	1.93
Field moisture content	%	23.4	21.9	23.1	28.9	18.3

Test procedure AS 1289.5.7.1

Test No	414	415	416	417	418	419
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	1.93	1.93	1.86	1.95	1.91
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	26.5	24.5	26.0	32.0	21.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.5% dry	2.5% dry	2.5% dry	2.5% dry
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Density Ratio (R _{HD})	%	99.0	98.5	98.0	98.0	98.5	99.5
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Material description

No 414 - 419 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R108
 Date Issued 07/02/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	WS
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	17/01/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:30
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	420	421	422	423	424	425
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>	2.15	2.12	2.04	1.99	1.90	1.90
Field moisture content <i>%</i>	15.5	19.9	14.2	16.7	22.9	21.3

Test procedure AS 1289.5.7.1

Test No	420	421	422	423	424	425
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>	2.17	2.17	2.07	2.02	1.93	1.94
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	18.0	22.5	16.5	19.0	21.0	24.0

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

No 420 - 425 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R109
 Date Issued 12/02/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	18/01/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 16:04
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	426	427	428	429	430	431
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>	2.16	2.18	2.08	2.17	2.17	2.17
Field moisture content <i>%</i>	13.8	12.1	12.3	11.0	12.1	11.3

Test procedure AS 1289.5.7.1

Test No	426	427	428	429	430	431
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>	2.16	2.18	2.11	2.18	2.18	2.18
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	16.5	14.5	15.0	13.5	14.5	13.5

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

No 426 - 431 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R110
 Date Issued 12/02/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	19/01/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 16:05
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	432	433	434	435	436	437
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>	2.04	2.10	2.16	2.15	2.09	2.01
Field moisture content <i>%</i>	11.1	12.5	11.5	11.8	10.2	10.6

Test procedure AS 1289.5.7.1

Test No	432	433	434	435	436	437
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>	2.08	2.11	2.16	2.17	2.12	2.05
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	14.0	15.0	14.0	14.5	13.0	13.5

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

No 432 - 437 Clay Fill

AVRLOT HILF V1.10 MAR 13



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R111
 Date Issued 12/02/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	21/01/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 16:06
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	438	439	440	-	-	-
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	1.96	1.98	1.93	-	-
Field moisture content	%	13.7	10.7	14.0	-	-

Test procedure AS 1289.5.7.1

Test No	438	439	440	-	-	-
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	-	-
Percent of oversize material	wet	3	3	2	-	-
Peak Converted Wet Density	t/m ³	1.95	1.98	1.92	-	-
Adjusted Peak Converted Wet Density	t/m ³	1.96	1.99	1.92	-	-
Optimum Moisture Content	%	16.5	13.0	16.0	-	-

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

No 438 - 440 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R112
 Date Issued 12/02/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	22/01/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 16:44
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	441	442	443	444	445	446	
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	
Field wet density	t/m ³	2.09	2.10	2.04	2.18	2.15	2.01
Field moisture content	%	24.1	22.6	25.5	26.4	26.6	25.9

Test procedure AS 1289.5.7.1

Test No	441	442	443	444	445	446	
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	2.12	2.12	2.07	2.19	2.16	2.06
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-	-
Optimum Moisture Content	%	27.0	25.5	28.5	29.5	29.5	29.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% dry	2.5% dry	2.5% dry	2.0% dry
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Density Ratio (R_{HD})	%	98.5	99.0	98.5	100.0	99.5	97.5
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Material description

No 441 - 446 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R113
 Date Issued 01/02/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	23/01/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 06:46
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	447	448	449	450	451	452
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
Field wet density	t/m ³	1.92	1.93	1.89	1.80	1.83
Field moisture content	%	18.6	15.6	17.8	20.6	18.8

Test procedure AS 1289.5.7.1

Test No	447	448	449	450	451	452
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	11	17	11	6	12
Peak Converted Wet Density	t/m ³	1.91	1.91	1.86	1.78	1.76
Adjusted Peak Converted Wet Density	t/m ³	1.95	1.97	1.91	1.81	1.82
Optimum Moisture Content	%	21.0	18.0	20.0	23.0	23.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	2.5% dry	2.5% dry	2.5% dry
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Density Ratio (R_{HD})	%	98.5	98.0	99.0	99.5	101.0	98.5
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Material description

No 447 - 452 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R114
 Date Issued 31/01/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	24/01/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 06:47
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	453	454	455	456	457	458
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
Field wet density	t/m ³	1.87	1.87	1.87	1.85	1.85
Field moisture content	%	14.1	14.6	14.4	13.9	14.2

Test procedure AS 1289.5.7.1

Test No	453	454	455	456	457	458
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	1	0	0	0	0
Peak Converted Wet Density	t/m ³	1.90	1.90	1.91	1.88	1.88
Adjusted Peak Converted Wet Density	t/m ³	1.91	-	-	-	-
Optimum Moisture Content	%	16.5	17.0	16.5	16.0	17.0

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

No 453 - 458 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R115
 Date Issued 05/02/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	29/01/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 18:23
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	459	460	461	462	463	464
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>	1.93	2.03	2.02	2.03	2.02	2.04
Field moisture content <i>%</i>	29.4	23.2	21.7	29.0	27.3	24.5

Test procedure AS 1289.5.7.1

Test No	459	460	461	462	463	464
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>	1.95	2.05	2.05	2.05	2.05	2.05
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	27.5	20.0	20.0	26.5	25.5	22.5

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

No 459 - 464 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R116
 Date Issued 05/02/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	30/01/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 18:24
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	465	466	467	-	-	-
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	2.03	2.04	2.03	-	-
Field moisture content	%	21.3	27.7	25.4	-	-

Test procedure AS 1289.5.7.1

Test No	465	466	467	-	-	-
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	2.06	2.05	2.05	-	-
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	19.5	25.5	23.0	-	-

Moisture Variation From Optimum Moisture Content	2.0% wet	2.0% wet	2.5% wet	-	-	-
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Density Ratio (R_{HD})	%	99.0	99.5	99.0	-	-
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Material description

No 465 - 467 Clay Fill



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Approved Signatory : Justin Fz



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R117
 Date Issued 05/03/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	JB
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	31/01/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:00
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	468	469	470	471	472	473
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>	1.81	1.87	1.88	1.87	1.85	1.89
Field moisture content <i>%</i>	29.7	34.2	31.3	28.5	27.4	27.5

Test procedure AS 1289.5.7.1

Test No	468	469	470	471	472	473
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	4	3	0	0	4
Peak Converted Wet Density <i>t/m³</i>	1.84	1.91	1.90	1.91	1.89	1.92
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	1.92	1.91	-	-	1.93
Optimum Moisture Content <i>%</i>	27.5	32.5	29.0	28.5	25.0	25.0

Moisture Variation From Optimum Moisture Content	2.5% wet	1.5% wet	2.0% wet	0.0%	2.5% wet	2.5% wet
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Density Ratio (R_{HD})	%	98.0	97.5	98.0	98.0	98.0	98.0
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Material description

No 468 - 473 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R118
 Date Issued 05/03/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	JB
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	07/02/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 12:01
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	474	475	476	477	478	479
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>	1.92	1.91	1.94	1.94	1.90	1.96
Field moisture content %	30.5	25.8	27.8	29.1	29.2	23.5

Test procedure AS 1289.5.7.1

Test No	474	475	476	477	478	479
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>	1.95	1.93	1.97	1.97	1.93	1.97
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content %	33.0	29.0	30.5	26.5	27.5	23.5

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	2.5% wet	1.5% wet	0.0%
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Density Ratio (R_{HD})	%	98.5	99.0	98.5	99.0	98.5	99.5
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Material description

No 474 - 479 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R119
 Date Issued 04/03/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	04/02/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:13
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	480	481	482	483	484	485
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
Field wet density	t/m ³	1.82	1.75	1.83	1.92	1.81
Field moisture content	%	28.1	26.4	21.3	26.8	27.3

Test procedure AS 1289.5.7.1

Test No	480	481	482	483	484	485
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	11	9	1	5	2
Peak Converted Wet Density	t/m ³	1.77	1.70	1.83	1.92	1.81
Adjusted Peak Converted Wet Density	t/m ³	1.82	1.74	1.84	1.94	1.82
Optimum Moisture Content	%	30.5	29.0	24.0	26.0	27.0

Moisture Variation From Optimum Moisture Content	2.0% dry	2.5% dry	2.5% dry	0.5% wet	2.5% dry	2.0% dry
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Density Ratio (R_{HD})	%	100.0	100.0	99.5	99.0	98.5	98.0
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Material description

No 480 - 485 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R120
 Date Issued 05/03/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	05/02/19
Location		Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 07:15
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	486	487	488	489	490	491
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
Field wet density	t/m ³	2.00	2.06	2.03	2.04	1.99
Field moisture content	%	19.0	18.9	19.8	19.4	19.2

Test procedure AS 1289.5.7.1

Test No	486	487	488	489	490	491
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	2.08	2.08	2.06	2.10	2.01
Adjusted Peak Converted Wet Density	t/m ³	-	-	-	-	-
Optimum Moisture Content	%	22.0	21.5	23.0	22.5	22.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.0% dry	2.5% dry	2.5% dry	2.0% dry	2.5% dry
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Density Ratio (R_{HD})	%	96.0	99.0	98.5	97.0	99.5	99.0
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Material description

No 486 - 491 Clay Fill



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R121
 Date Issued 05/03/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	06/02/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 18:03
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	492	493	494	495	496	497
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>	1.96	1.89	1.90	1.90	1.90	1.98
Field moisture content <i>%</i>	25.6	23.3	23.0	23.1	26.2	25.9

Test procedure AS 1289.5.7.1

Test No	492	493	494	495	496	497
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>	1.98	1.92	1.93	1.92	1.93	1.99
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	26.5	26.0	26.0	25.5	28.5	27.0

Moisture Variation From Optimum Moisture Content	1.0% dry	2.5% dry	2.5% dry	2.0% dry	2.0% dry	1.0% dry
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Density Ratio (R_{HD})	%	99.5	98.5	98.5	99.0	98.5	99.5
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Material description

No 492 - 497 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R122
 Date Issued 06/03/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	06/02/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 18:05
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	498	499	500	501	502	503
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>	1.96	1.90	1.95	1.99	1.96	1.96
Field moisture content <i>%</i>	30.0	23.6	27.1	23.1	27.5	23.2

Test procedure AS 1289.5.7.1

Test No	498	499	500	501	502	503
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>	1.98	1.96	1.96	2.00	1.99	1.98
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	31.5	26.5	24.5	23.0	27.5	25.5

Moisture Variation From Optimum Moisture Content	1.5% dry	2.5% dry	2.5% wet	0.0%	0.0%	2.5% dry
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Density Ratio (R_{HD})	%	99.0	97.0	99.5	99.5	99.0	99.0
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Material description

No 498 - 503 Clay Fill

AVRLOT HILF V1.10 MAR 13



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R123
 Date Issued 06/03/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	11/02/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 18:06
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	504	505	506	507	508	509
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>	1.99	1.87	1.96	1.96	1.96	1.98
Field moisture content <i>%</i>	22.4	24.2	23.6	25.2	26.8	23.2

Test procedure AS 1289.5.7.1

Test No	504	505	506	507	508	509
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>	2.01	1.94	1.97	1.97	1.97	1.99
Adjusted Peak Converted Wet Density <i>t/m³</i>	-	-	-	-	-	-
Optimum Moisture Content <i>%</i>	23.5	26.5	26.0	28.0	30.0	26.0

Moisture Variation From Optimum Moisture Content	1.0% dry	2.5% dry	2.5% dry	2.5% dry	2.5% dry	2.5% dry
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Density Ratio (R_{HD})	%	99.0	97.0	99.5	99.5	99.5	99.0
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Material description

No 504 - 509 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R124
 Date Issued 07/03/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	13/02/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:35
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	510	511	512	513	514	515
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
Field wet density	t/m ³	1.93	1.90	1.83	1.93	1.94
Field moisture content	%	23.3	18.1	23.4	27.7	15.6

Test procedure AS 1289.5.7.1

Test No	510	511	512	513	514	515
Compactive effort	Standard					
Oversize rock retained on sieve	mm	19.0	19.0	19.0	19.0	19.0
Percent of oversize material	wet	1	0	2	0	4
Peak Converted Wet Density	t/m ³	1.95	1.93	1.88	1.94	1.95
Adjusted Peak Converted Wet Density	t/m ³	1.96	-	1.89	-	1.97
Optimum Moisture Content	%	22.0	20.0	21.0	26.5	18.0

Moisture Variation From Optimum Moisture Content	1.5% wet	2.0% dry	2.5% wet	1.5% wet	2.0% dry	2.5% dry
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Density Ratio (R _{HD})	%	98.5	98.5	97.0	99.0	98.5	97.5
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Material description

No 510 - 515 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R125
 Date Issued 07/03/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	14/02/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time:	10:35
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	516	517	518	519	520	521
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
Field wet density	t/m ³	1.87	1.84	1.86	1.86	1.84
Field moisture content	%	20.6	21.5	16.0	19.6	21.3

Test procedure AS 1289.5.7.1

Test No	516	517	518	519	520	521
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	4	5	10	3
Peak Converted Wet Density	t/m ³	1.93	1.90	1.89	1.89	1.90
Adjusted Peak Converted Wet Density	t/m ³	-	1.92	1.91	1.93	1.92
Optimum Moisture Content	%	23.0	23.0	18.5	21.5	24.0

Moisture Variation From Optimum Moisture Content	2.5% dry	1.5% dry	2.5% dry	2.0% dry	2.5% dry	2.0% dry
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Density Ratio (R _{HD})	%	96.5	96.0	97.0	96.0	96.0	96.5
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Material description

No 516 - 521 Clay Fill

AVRLOT HILF V1.10 MAR 13



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Approved Signatory : Justin Fry



COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R126
 Date Issued 07/03/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BGG
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	15/02/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 10:35
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	522	523	524	525	526	527
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>	1.90	1.91	1.90	1.88	1.93	1.88
Field moisture content <i>%</i>	23.4	20.7	19.9	20.1	20.8	24.5

Test procedure AS 1289.5.7.1

Test No	522	523	524	525	526	527
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>	10	5	0	1	5	0
Peak Converted Wet Density <i>t/m³</i>	1.93	1.94	1.93	1.92	1.93	1.93
Adjusted Peak Converted Wet Density <i>t/m³</i>	1.96	1.96	-	1.93	1.95	-
Optimum Moisture Content <i>%</i>	25.5	22.5	22.5	22.0	23.0	26.5

Moisture Variation From Optimum Moisture Content	2.0% dry	2.0% dry	2.5% dry	2.0% dry	2.0% dry	2.0% dry
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Density Ratio (R_{HD})	%	97.0	97.5	98.5	97.5	98.5	97.5
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Material description

No 522 - 527 Clay Fill



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R127
 Date Issued 13/03/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BS
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	18/02/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 13:45
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	528	529	530	531	532	533
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>	1.80	1.87	1.89	1.80	1.86	1.86
Field moisture content <i>%</i>	22.9	21.2	19.9	21.3	19.8	20.6

Test procedure AS 1289.5.7.1

Test No	528	529	530	531	532	533
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>	8	6	3	5	8	0
Peak Converted Wet Density <i>t/m³</i>	1.83	1.92	1.93	1.86	1.90	1.87
Adjusted Peak Converted Wet Density <i>t/m³</i>	1.86	1.95	1.94	1.88	1.93	-
Optimum Moisture Content <i>%</i>	24.5	23.0	22.5	24.0	22.0	23.0

Moisture Variation From Optimum Moisture Content	1.5% dry	2.0% dry	2.5% dry	2.5% dry	2.0% dry	2.5% dry
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Density Ratio (R_{HD})	%	96.5	96.0	97.0	96.0	96.0	99.5
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Material description

No 528 - 533 Clay Fill

AVRLOT HILF V1.10 MAR 13



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COMPACTION ASSESSMENT

Job No 18409
 Report No 18409/R128
 Date Issued 07/03/2019

CIVIL GEOTECHNICAL SERVICES

6 - 8 Rose Avenue, Croydon 3136

Client	ROKON (RICHMOND)	Tested by	BS
Project	RIVERWALK - STAGE 24 - 26 BULK EARTHWORKS	Date tested	20/02/19
Location	WERRIBEE	Checked by	JHF

Feature	EARTHWORKS	Layer thickness	200 mm	Time: 11:28
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Test procedure AS 1289.2.1.1 & 5.8.1

Test No	534	535	536	537	538	539
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>	1.79	1.82	1.83	1.79	1.81	1.74
Field moisture content <i>%</i>	22.7	24.5	21.9	21.4	25.9	24.4

Test procedure AS 1289.5.7.1

Test No	534	535	536	537	538	539
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>	7	0	10	3	0	3
Peak Converted Wet Density <i>t/m³</i>	1.85	1.86	1.86	1.83	1.84	1.80
Adjusted Peak Converted Wet Density <i>t/m³</i>	1.88	-	1.90	1.84	-	1.82
Optimum Moisture Content <i>%</i>	25.0	27.0	24.0	23.5	28.5	27.0

Moisture Variation From Optimum Moisture Content	2.5% dry	2.5% dry	2.0% dry	2.0% dry	2.5% dry	2.5% dry
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Density Ratio (R_{HD})	%	95.5	98.0	96.5	97.0	98.0	95.5
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Material description

No 534 - 539 Clay Fill

AVRLOT HILF V1.10 MAR 13



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