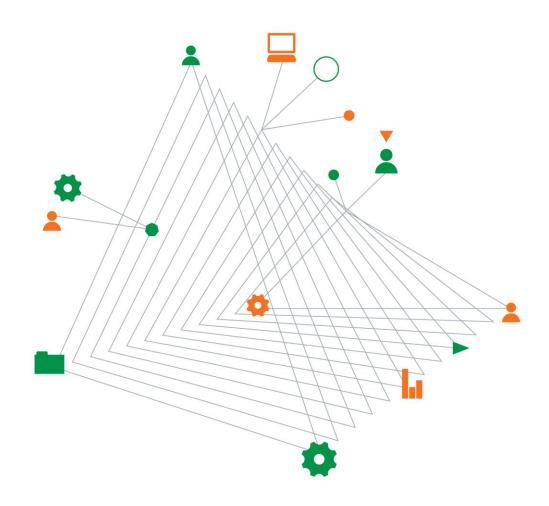


## Peet No. 1895 Pty Ltd

Level 1 Inspection and Testing, Bulk Earthworks Stage 3 and 4, Little Green Residential Precinct 1

### GEOTABTF09878AA-AG

29 September 2016



Experience comes to life when it is powered by expertise

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# Level 1 Inspection and Testing, Bulk Earthworks Stage 3 and 4, Little Green Residential Precinct 1

Prepared for Peet No. 1895 Pty Ltd

Prepared by

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29 September 2016

### **Document authorisation**

Our ref: GEOTABTF09878AA-AG

For and on behalf of Coffey

**Trevor Smith** 

JW Smile

Principal Engineering Geologist

## **Quality information**

### **Revision history**

Revision	Description	Date	Author	Reviewer	Signatory
1	Level 1 Report	01/09/2016	Shaun Price	Trevor Smith	Trevor Smith
2	Level 1 Report	29/09/2016	Shaun Price	Trevor Smith	Trevor Smith

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# **Table of contents**

Intro	ductionduction	1
Proje	ect Summary	1
Spec	cification/work instructions	1
Fill M	Material	2
Earth	hworks	3
5.1.	Subgrade assessment	3
5.2.	Fill construction	3
Surv	ey data and fill thickness	3
Testi	ing and results	4
Densi	ity Testing	4
7.2	Dynamic Cone Penetrometer testing	5
	7.1.1. Fill Pad 6 – Lot 310	5
	7.1.2. Fill Pad 7	5
State	ement of compliance	6
	Proje Spec Fill M Eart 5.1. 5.2. Surv Test Dens 7.2	Project Summary  Specification/work instructions  Fill Material  Earthworks  5.1. Subgrade assessment  5.2. Fill construction  Survey data and fill thickness  Testing and results  Density Testing  7.2 Dynamic Cone Penetrometer testing  7.1.1. Fill Pad 6 – Lot 310

### **Figures**

Figure 1 – Fill Area Plan, Field Density and DCP Test Locations

Figure 2 - Summary of Field Density Test Results

### **Appendices**

Appendix A - Laboratory Results (19 Pages)

Appendix B - "Little Green Residential Precinct 1 Stage 2" civil drawings and combination survey plan

Appendix C - Summary of imported fill material

### 1. Introduction

This report presents the results of the Level 1 Inspection and Testing for fill placement within Stage 3 & 4 of Little Green Residential Estate Precinct 1, Tarneit, undertaken by Coffey Geotechnics Pty Ltd (Coffey).

The works were commissioned by Mark Zammataro of Spiire Australia Pty Ltd on 2 July 2015.

The Project was commenced on behalf of Amex Corporation Pty Ltd. On 1 March 2015 ownership transferred to Peet No 1895 Pty Ltd, the change in ownership had no significant influence on level 1 activities.

# 2. Project Summary

Level 1 Inspection and Testing, as defined in AS3798-2007 "Guidelines on Earthworks for Commercial and Residential Development," provides for full time inspection of the construction of controlled fill and field and laboratory testing in accordance with AS1289 "Methods of Testing Soils for Engineering Purposes".

The Level 1 Inspection was undertaken by geotechnical professionals from Coffey over several periods between 27 July and 10 Sep in 2015, 17 and 18 May 2016, 20 June in 2016 and 26 August 2016.

The main contractor for the project was BMD Constructions Pty Ltd who in combination with their subcontractor Fleet Plant Hire, have conducted the bulk earthworks at the site. Coffey undertook the compaction control testing in their NATA accredited laboratory, as part of the Level 1 Inspection and Testing process.

This report is applicable to fill placed by BMD and Fleet Plant Hire within Stage 2 Bulk Earthworks of the Little Green Estate development in the areas shown in Figure 1. Figure 1 also identifies the filling areas of the engineered fill platforms.

This report does not include fill other than where mentioned in this report or any other fill that may be placed during this period or subsequent periods at or surrounding the subject site. Excluded works comprise trench backfill, footpaths, landscaping fill, placement of topsoil, roadway testing, sewer and stormwater channels backfills.

# 3. Specification/work instructions

The specification for the project was prepared by Spiire Australia Pty Ltd for Little Green Residential Estate Precinct 1 under reference number "301119 Little Green Bulk Earthworks – Rev B" dated 20 February 2015. A maximum compacted layer thickness of 200mm was to be followed for the project. However from 2 June, after discussions between Coffey, BMD and Spiire on 22 May 2015, a maximum compacted layer thickness of 300mm was allowed to accommodate for a desire to complete construction earlier. The extract of the specified requirements is provided in Appendix D and a short summary is provided below:

 All filling shall be to a level 150mm below the finished surface level shown and compacted as per AS3798-1998. Filling material is to be in accordance with the specification and to the satisfaction of council and the superintendent.

- Fill areas are to be stripped of topsoil, filled and replaced with topsoil, where required, to
  obtain the final levels shown on the drawings provided by Spiire under reference number
  "301119 Little Green Bulk Earthworks Rev B". Filling material is to be in accordance with the
  specification of AS3798-2007 and to the satisfaction of council and the superintendent.
- All filling on lots and within road reserves greater than 200mm is to be undertaken using level 1 supervision and completed in accordance with AS 3798-2007.
- Item 13 of the Specifications under reference "301119 Little Green Bulk Earthworks Rev B" dated 20 February 2015 notes that fill placed on allotment areas is to achieve the following specifications:
  - Maximum dry density of 98%;
  - o Minimum California Bearing Ratio (CBR) of 5%; and
  - Bearing pressure of 100kPa at less than 1.0m depth from finished surface level or bulk filling surface level and bearing pressure of 150kPa at greater than 1.0m depth from finished surface level or bulk surface level.

Email correspondence from Mark Zammataro of Spiire sent to Coffey and BMD 25 May 2015 indicated that the filling works were to achieve the following specifications:

- Layers not exceeding 200mm compacted thickness;
- Density ratio to be minimum 95% Standard;
- No CBR value requirement;
- Moisture variation to be within 3% of the optimum moisture condition (OMC); and
- Allowed rock size to be up to 130mm diameter, i.e. 2/3 of a layer.

Following further discussions between Mark Zammataro of Spiire and Sotir Stojcevski of Coffey, the specifications were altered to meet the following requirements:

- o A compacted layer thickness not exceeding 300mm;
- Maximum dry density of 95%; and
- Moisture variation to be within ±3% OMC.
- The contractor is to provide a clean fill certificate of the proposed imported fill for approval by Coffey's geotechnical engineer, prior to importation

### 4. Fill Material

Fill used for the construction of Stage 2 Bulk Earthworks comprised of imported soil from various sites around the Melbourne area. A spreadsheet indicating the source name and estimated volumes is attached in Appendix C. It is noted that Coffey's summary of imported fill material was derived from daily discussions held by the Level 1 GITA representative and Fleet Plant Hire site foreman. Environmental assessment of the imported materials is understood to have been conducted by the Contractor – BMD. A clean fill summary sheet is also attached in Appendix C as provided by BMD. The clean fill reports for the source locations are held by BMD.

Organic or deleterious matter and oversize materials that were observed within the imported fill were removed prior to placing the engineered fill platforms.

Coffey consider that the imported fill material was suitable for the construction of the engineered fill platforms.

### 5. Earthworks

The earthworks for this project included stripping of topsoil, proof rolling the subgrade and placement and compaction of fill to construct engineered fill platforms.

### 5.1. Subgrade assessment

The subgrade assessment was undertaken progressively throughout the works in stage 2 sections. The first subgrade section was assessed on 8 July 2015. Subgrade assessment was conducted following the removal of topsoil and before any fill was placed. In all areas the subgrade comprised natural clay of very stiff to hard consistency. No soft spots were observed during the subgrade proof rolling. Where organics and roots were observed, they were removed. A surveyor engaged by BMD undertook a survey of the subgrade levels following Coffey's assessment.

### 5.2. Fill construction

Fill material was placed generally in loose layers varying in thickness from 200mm to 350mm. Compacted layers were approximately 150mm to 300mm thick. All sourced fill was trucked in and spread with the blade of a compactor. A water cart and a pad foot roller were present onsite during works for moisture conditioning and compacting.

Coffey's Level 1 Inspector was on site on a full time basis during the placement, compaction and testing of the fill on the dates noted in Section 2 of this report. Coffey understands that Fleet Plant Hire and BMD did not place any fill within the platforms during the period that Coffey was absent from the site.

# 6. Survey data and fill thickness

BMD's appointed surveyor Jac Surveyors Pty Ltd (SMS) conducted a survey of stage 2 after stripping the topsoil and after the subgrade was approved for placement of fill. The stripped surface levels are provided in Appendix B of this report under reference "Stage 2 Strip Surface."

As there was no final survey of the finished surface, the stripped surface levels were compared with the survey plans of the design finished surface levels which can be found in Appendix B of this report under reference "Y02 003 301730 Little Green Stage 4 - R01-21 Rev 1 2016-05-12" & "301599 - R01-22 RevC," as Stage 3 and 4 of the civil drawings dated August 2015 and October 2015 respectively.

After overlaying the stripped surface levels with the finished surface levels, the fill thicknesses could be summarised, both found in Appendix B under reference "survey overlay" and "Table 1." It can be seen in "Table 1" that most of the Fill Pads are compliant with the maximum layer thickness outlined by the Project Specifications and AS3798 – 2007.

**Table 1: Layer Thickness Compliance** 

Fill Pad No.	Max. depth of Fill (m)	Recorded number of Layers	Complies with project specifications
1	0.942	4	YES
2	0.607	3	YES
3	0.918	3	YES
4	0.668	3	YES
5	0.539	2	YES
6	0.931	4	YES
7	1.02	2	NO

The survey shows that between 0.5m and 1.02m of fill was placed across the lots in Stage 2. Coffey observed the fill being placed between 1 and 4 layers in these areas across Stage 2 which resulted in maximum layer thickness of 300mm. We note that Fill Pad 7 was not compliant with these specifications, therefore additional testing was carried out as discussed in section 7.2.2 of this report. The produced layer thickness for Fill Pads 1 to 6 are in compliance with the specifications of AS 3798-2007 and within the specifications outlined in section 3 of this report.

# 7. Testing and results

## 7.1. Density Testing

Field density testing was undertaken progressively on the compacted fill. Testing was undertaken under the following frequencies:

- 1 test per material type per layer per 2500m<sup>2</sup> or 1 test per 500m<sup>3</sup> or 3 tests per lot whichever requires most tests in accordance with Type 1 Earthworks (large scale operations) as defined in Table 8.1 of the AS 3798-2007.
- 1 test per layer or 1 test per 200m³ distributed reasonably evenly throughout the fill depth or 1 test per residential lot whichever requires the most tests in accordance with Type 2 Earthworks (small scale operations) as defined in Table 8.1 of the AS 3798-2007.

The field density testing was conducted by Coffey's personnel on site. All laboratory testing was performed in Coffey's NATA accredited laboratory. A Hilf compaction test was performed for each field density test.

A total of 62 field density tests were performed during the earthworks in the locations as presented in Figure 1. Of the 62 tests, 10 did not meet the specified criteria and these areas were subsequently reworked and re-tested with the exception of test #3 which was passed based on further assessment as discussed in Section 7.2.1 of his report. Once retested, all test results met the specified dry density ratio criteria of 95% Standard and moisture variation of ±3% of the Optimum Moisture Content (OMC).

A summary of the test results obtained from the field density testing within the Stage 2 fill platforms are provided in a table presented as Figure 2. The laboratory test reports of the field density tests are presented in Appendix A.

## 7.2. Dynamic Cone Penetrometer testing

A DCP Test location plan is presented in Figure 1-F. Results of the DCP testing is presented in Table 2 "DCP test results" shown further down in this section.

### 7.2.1. Fill Pad 6, Lot 310

As discussed in section 7.1 of this report, further assessment with DCP testing was carried out to assist in assessing the engineered fill consistency in the area of Test #3 in lot 310. Geotechnical professionals from Coffey carried out 3 DCP tests within lot 310 on 26 August 2016 (grid reference; D2, E1 and E2 respectively).

### 7.2.2. Fill Pad 7

As discussed in section 6 of this report, further assessment was carried out to assist in assessing the engineered fill consistency within Fill Pad 7. Geotechnical professionals from Coffey carried out 4 DCP tests within Fill Pad 7 on 26 August 2016 between Lots 325 to 333 (grid reference; F1, F2, F3 and G2 respectively).

Table 2: DCP test results

DCP#	1	2	3	4	5	6	7
Grid Reference	D2	E1	E2	F1	F2	F3	G3
Depth below GL (m)			Blow coun	ts per 100mm pei	netration		
0.1	4	2	4	6	8	4	4
0.2	14	9	12	8	13	2	4
0.3	11	13	9	9	15	5	3
0.4	7	7	15	14	11	7	9
0.5	7	7	Refusal	20	11	7	10
0.6	7	7		9	9	Refusal	5
0.7	4	7		Refusal	11		4
0.8	6	7			17		9
0.9	6	7			Refusal		10
1.0	13	9					10
1.1	14	13					7
1.2	15	Refusal					10
1.3	Refusal						Refusal

Level 1 Inspection and Testing, Stage 2 Bulk Earthworks, Civil Stages 3 and 4 Little Green Residential Precinct 1

All the DCP tests were conducted from the finished fill surface to a target depth of 1.3m below the surface level or until refusal was encountered. Noting that topsoil to about 200mm thickness was present at the surface level at the time of testing.

Based on the DCP test results from 20 of July 2016 and 26 August 2016 by Coffey's geotechnical practitioners, it is our opinion that the fill in the assessed areas has been constructed in such a way to meet the intent of the specified project requirements.

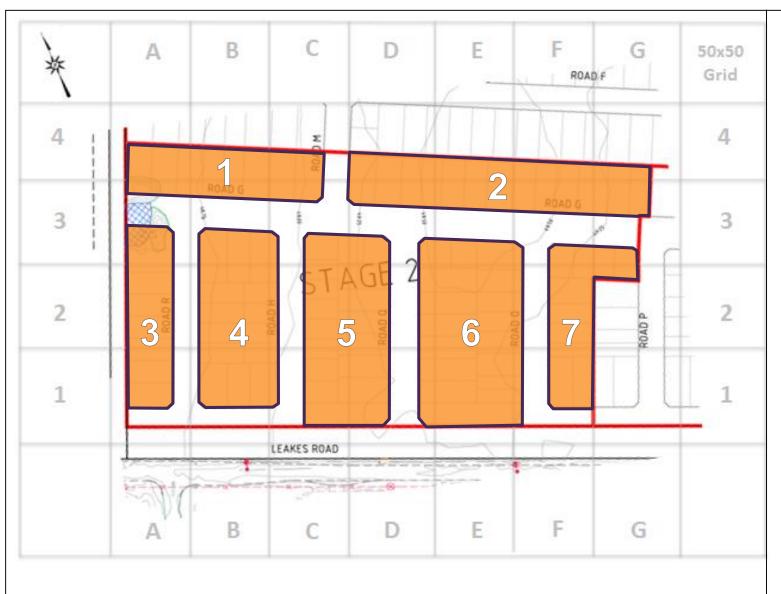
# 8. Statement of compliance

Coffey personnel have provided Level 1 inspection and testing services during the construction of the engineered fill area within Stage 2 as shown in Figure 1-A. A geotechnical professional from Coffey (Level 1 Inspector) was on site on a full time basis during subgrade preparation and fill placement, and observed the construction techniques adopted.

Based on observations made by Coffey's Level 1 Inspector and the results of field and laboratory tests, Coffey consider that the engineered fill area within Stage 2 constructed by BMD to the levels indicated in Section 5, as far as we have been able to determine, has been placed in general accordance with the intent of the specification.

# **Figures**

Figure 1- Fill Area Plan, Field Density and DCP Test Locations
Figure 2 - Summary of Field Density Test Results



#

Engineered Fill Pads

**Plan extracted from Design Plans** 

**Drawing No:** *301119* 

**Titled:** LITTLE GREEN BULK EARTHWORKS

- REV B

drawn	1.1.
approved	S.P.
date	26/08/2016
scale	NTS
original size	A4

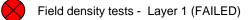
	CII
coffev	pro
A TETRA TECH COMPANY	title
	nro

client:		PEET NO 1895	PTY L1	ΓD	
project:		STAGE 2 – LE	EVEL 1		
		LITTLE GREEN	ESTA	ΓΕ	
title:		FILL AREA	PLAN		
project no:	GEOTA	BTF09878AA - AG	1	figure no:	FIGURE 1-A



#### Approximate location of:





**Plan extracted from Design Plans** 

**Drawing No:** *301119* 

**Titled:** LITTLE GREEN BULK EARTHWORKS

- REV B

drawn	ВР
approved	S.P.
date	30/08/2016
scale	NTS
original size	A4



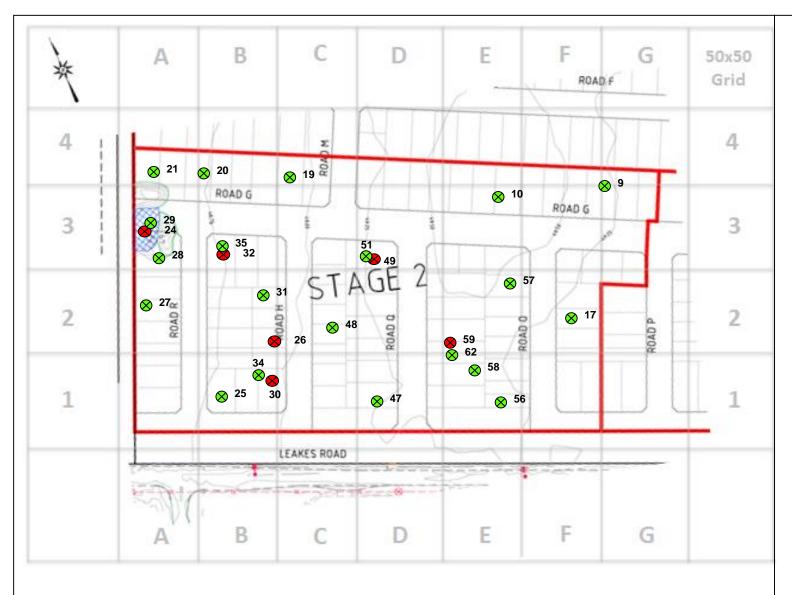
project no:

client:	PEET NO 1895 PTY LTD
project:	STAGE 2 – LEVEL 1
	LITTLE GREEN ESTATE
title:	FIELD DENSITY TEST LOCATIONS – LAYER 1

GEOTABTF09878AA - AG

figure no:

FIGURE 1-B



#### Approximate location of:



Field density tests - Layer 2 (FAILED)

Plan extracted from Design Plans

Drawing No: 301119

Titled: LITTLE GREEN BULK EARTHWORKS

- REV B

BP	drawn	
S.P.	approved	
30/08/2016	date	
NTS	scale	
A4	original size	

coffey *
A TETRA TECH COMPANY

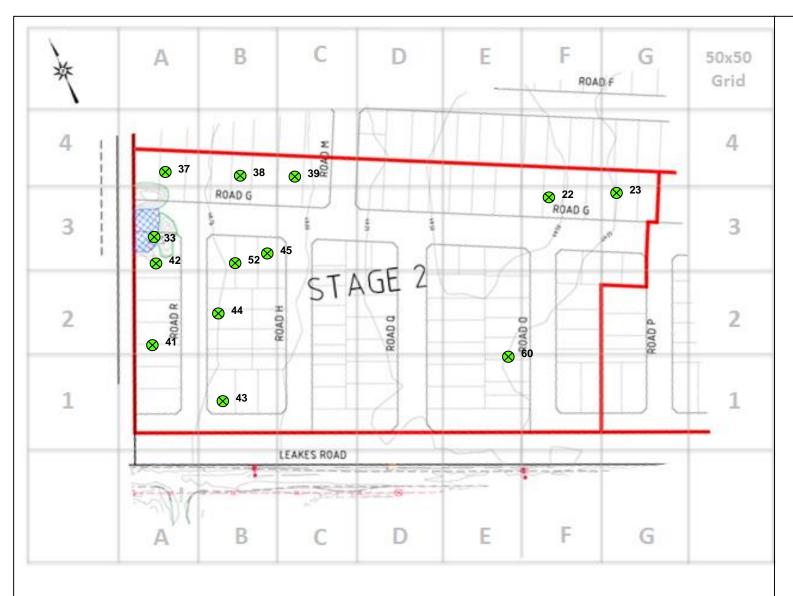
project no:

client:	PEET NO 1895 PTY LTD
project:	STAGE 2 – LEVEL 1 LITTLE GREEN ESTATE
title:	FIELD DENSITY TEST LOCATIONS – LAYER 2

GEOTABTF09878AA - AG

figure no:

FIGURE 1-C



#### Approximate location of:



Field density tests - Layer 3 (FAILED)

**Plan extracted from Design Plans** 

**Drawing No:** *301119* 

**Titled:** LITTLE GREEN BULK EARTHWORKS

- REV B

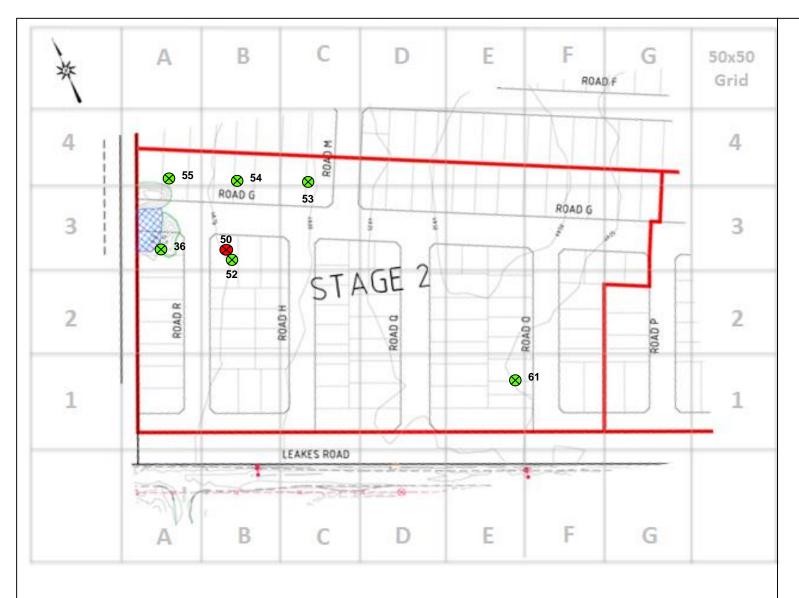
BP	drawn	
S.P.	approved	
30/08/2016	date	
NTS	scale	
A4	original size	

coffey *
A TETRA TECH COMPANY

client:		PEET NO 1895 PTY LTD						
project:		STAGE 2 – LEVE LITTLE GREEN ES						
title:	FIELD DENSITY TEST LOCATIONS – LAYER 3							
project no:	GEOTA	PTE00979 A A _ A C	figure no:	FIGURE 1-D				

FIGURE 1-D

GEOTABTF09878AA - AG



#### Approximate location of:



Field density tests - Layer 4 (FAILED)

**Plan extracted from Design Plans** 

**Drawing No:** *301119* 

**Titled:** LITTLE GREEN BULK EARTHWORKS

- REV B

drawn	ВР
approved	S.P.
date	30/08/2016
scale	NTS
original size	A4



client:	PEET NO 1895 PTY LTD						
project:	project: STAGE 2 – LEVEL 1						
LITTLE GREEN ESTATE							
title:	FIELD I	DENSITY TEST LOCAT	IONS – LAYE	ER 4			
project no:	GEOTA	BTE00978 A A - A C	figure no:	FIGURE 1-E			

FIGURE 1-E

GEOTABTF09878AA - AG



#### Approximate location of:



Dynamic Cone Penetrometer tests carried out 20 July 2016



Dynamic Cone Penetrometer tests carried out 26 August 2016

**Plan extracted from Design Plans** 

**Drawing No:** *301119* 

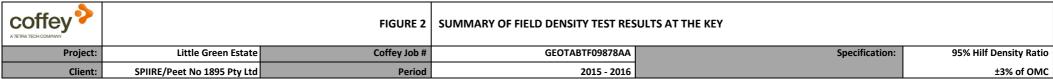
**Titled:** LITTLE GREEN BULK EARTHWORKS

- REV B

drawn	I.I.
approved	S.P.
date	30/08/2016
scale	NTS
original size	A4
	approved date scale original



client:		PEET NO 1895 PTY LTD						
project:	ect: STAGE 2 – LEVEL 1							
LITTLE GREEN ESTATE								
title:	title: DCP TEST LOCATIONS							
project no:	GEOTA	BTF09878AA - AG	·	figure no:	FIGURE 1-F			



	Client:	SPIIRE/Peet No 1895 Pty Lt	a			Period		2015 - 2016				±3% of OMC
Test	Retest	Day	Area	Layer	Field	Field	Hilf	Moisture	Moisture	Pass	Retest	Comment
1000	of Test	/	Grid	,	Wet	Moisture	Density	Ratio	Variation	1		(source)
		Date			Density	Content	Ratio		of OMC	Fail		(1111)
#	#			#	t/m3	%	%	%	%		#	
1		Wednesday, 29 July 2015	E1	1	1877.5	24.1	100.5	88.5	-3	PASS		
2		Wednesday, 29 July 2015	E1	1	1926.4	24.4	103.5	89	-3	PASS		
3		Thursday, 6 August 2015	E2	1	1755.4	25.5	94	88.5	-3	<sup>^1</sup> PASS	^1	Refer to Notes
4		Thursday, 6 August 2015	F2	1	1808.4	25.6	97.5	89.5	-3	PASS	1	.,
5		Thursday, 6 August 2015	F3	1	1917.9	23.3	100	100	OMC	PASS		
6		Thursday, 6 August 2015	D3	1	1986.3	23.1	102	90.5	-2.5	PASS		
7		Thursday, 6 August 2015	C4	1	1977.7	23.7	102	90	-2	PASS		
8		Thursday, 6 August 2015	A4	1	1917.5	19.5	96.5	99	OMC	PASS		
9		Monday, 10 August 2015	G3	2	1815.8	26	98.5	93.5	-2	PASS		
10		Monday, 10 August 2015	E3	2	1767.7	25.7	95.5	89.5	-2.5	PASS		
11		Tuesday, 11 August 2015	D1	1	1879.7	19.3	100.5	88	-3	PASS		
12		Tuesday, 11 August 2015	C2	1	1983	18.8	101	90.5	-2	PASS		
13		Tuesday, 11 August 2015	B1	1	1785.3	27.5	96	91.5	-2.5	PASS		
14		Tuesday, 11 August 2015	B2	1	1783	24.7	95.5	91	-2.5	PASS		
15		Tuesday, 11 August 2015	A2	1	1846.9	23.9	101	91	-2.5	PASS		
16		Tuesday, 11 August 2015	А3	1	1983.6	17.3	102.5	86	-3	PASS		
17		Tuesday, 11 August 2015	F2	2	2039	21	100.5	99	-0.5	PASS		
18	3	Tuesday, 11 August 2015	E2	1	2055.2	19.5	105.5	81.5	-4	FAIL	#40	
19		Thursday, 13 August 2015	C4	2	2112.6	19.8	103.5	90.5	-1.5	PASS		
20		Thursday, 13 August 2015	B4	2	1994.8	20.7	99.5	85.5	-2.5	PASS		
21		Friday, 14 August 2015	A4	2	1.84	27	99	93	-2	PASS		
22		Friday, 14 August 2015	F3	3	1.82	25	98	96	-1	PASS		
23		Friday, 14 August 2015	G3	3	2.03	24	103	98	-0.5	PASS		
24		Monday, 17 August 2015	A3	2	1.93	17	78.5	103	-4.5	FAIL	#28	
25		Monday, 17 August 2015	B1	2	2.02	19.5	98.5	96.5	-0.5	PASS		
26		Monday, 17 August 2015	B2	2	1.96	14.5	75	105	-4.5	FAIL	#30	
27		Monday, 17 August 2015	A2	2	1.86	19.5	86.5	96.5	-3	PASS		
28	24	Tuesday, 18 August 2015	A3	2	1.9	24.5	101	96	-1	PASS		
29		Tuesday, 18 August 2015	A2	2	2.03	13.5	101.5	82	-3	PASS		
30	26	Wednesday, 19 August 2015	B1	2	1.97	19	100.5	100.5	0	FAIL	#34	
31		Wednesday, 19 August 2015	B2	2	1.93	24.5	100.5	93.5	-1.5	PASS		
32		Wednesday, 19 August 2015	В3	2	1.97	22	91	98	-0.5	FAIL	#35	
33		Wednesday, 19 August 2015	A3	3	2	21.5	101	103.5	0.5	PASS		
34	30	Thursday, 20 August 2015	B1	2	2	16.5	95.5	97.5	-0.5	PASS		
35	32	Thursday, 20 August 2015	В3	2	2.03	18.5	97.5	97.5	-0.5	PASS		
36		Friday, 21 August 2015	A3	4	1.9	30	105	90.5	-3	PASS		
37		Friday, 21 August 2015	A4	3	1.88	25	103	94	-1.5	PASS		
38		Friday, 21 August 2015	B4	3	1.87	29	103	95	-1.5	PASS		
39		Friday, 21 August 2015	C4	3	1.89	20.5	103	92.5	-1.5	PASS		

GEOTABTF09878AA-AG 30 August 2016

40	18	Friday, 21 August 2015	E2	1	2.04	19.5	108.5	82.5	-4	FAIL	#46	
41		Friday, 21 August 2015	A2	3	2.01	19.5	103.5	88	-2.5	PASS		
42		Friday, 21 August 2015	А3	3	1.99	24.5	106.5	89.5	-2.5	PASS		
43		Tuesday, 25 August 2015	B1	3	1.97	22	100	91	-2	PASS		
44		Tuesday, 25 August 2015	B2	3	2.15	14	100	94.5	-1	PASS		
45		Tuesday, 25 August 2015	В3	3	2.23	12	105.5	94.5	-0.5	PASS		
46	40	Tuesday, 25 August 2015	E2	1	1.88	26.5	100	93	-2	PASS		
47		Tuesday, 1 September 2015	D1	2	1.91	18.5	100	85	-3	PASS		
48		Wednesday, 2 September 2015	C2	2	2.13	12	99.5	98.5	OMC	PASS		
49		Wednesday, 2 September 2015	D3	2	1.87	18	100	78	-5	FAIL	#51	
50		Wednesday, 2 September 2015	В3	4	1.81	25.5	94.5	119.5	4.5	FAIL	#52	
51	49	Friday, 4 September 2015	D3	2	1.84	24	98.5	90.5	-2.5	PASS		
52	50	Friday, 4 September 2015	В3	4	2.07	12	97.5	84.5	-2	PASS		
53		Wednesday, 9 September 2015	C4	4	1.92	24	102	91.5	-2	PASS		
54		Wednesday, 9 September 2015	B4	4	1.88	23	99	97	-0.5	PASS		
55		Wednesday, 9 September 2015	A4	4	1.91	23.5	98	94	-1.5	PASS		
56		Thursday, 10 September 2015	E1	2	2.1	19.5	106	97	-0.5	PASS		
57		Thursday, 10 September 2015	E2	2	2.02	21	101.5	98.5	-0.5	PASS		
58		Tuesday, 17 May 2016	E1	2	1.9	19.2	98.5	89.5	-2	PASS		
59		Tuesday, 17 May 2016	E2	2	1.9	19.4	101.5	80.5	-4.5	FAIL	#62	
60		Tuesday, 17 May 2016	E2	3	1.91	18.6	99.5	86	-3	PASS		
61		Wednesday, 18 May 2016	E1	4	1.88	23.7	95.5	94	-1.5	PASS		
62	59	Wednesday, 18 May 2016	E1	3	1.99	22.3	102.5	90	-2.5	PASS		

# Notes:

Due to Test compaction result being only 1% out of Specification and further assessment of the fill integrity via DCP testing of the area of the test, it was passed by the Project Manager.

GEOTABTF09878AA-AG 30 August 2016

Appendix A - Laboratory Results (19 Pages)



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067

ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

Report No: HDR:ABTM15W00761

Issue No: 1

# **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

SPIIRE/AMEX CORPORATION Principal:

INFOABTM00442AA Project No.:

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN: NATA WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards

Approved Signatory: Shaun Price

(Laboratory Manager)
NATA Accredited Laboratory Number:431

Date of Issue: 30/07/2015

Sample Details

Location: Little Green Estate, Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction -3% to +3% of OMC

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1

Sampling Method: Submitted by Client

Source: Imported

Material:

_		
Sample Data		
Sample ID	ABTM15S-02672	ABTM15S-02673
Field Sample ID	1	2
Client Sample ID	Grid E1 Layer 1	Grid E1 Layer 1
Time Tested	14:00	14:15
Location	Stage 2	Stage 2
	Grid E1	Grid E1
	Layer 1	Layer 1
Field and Laboratory Data		
Depth of Test (mm)	275	275
Depth of Layer (mm)	300	300
AS Sieve Size (mm)	19.0	19.0
Oversize Wet (%)	0	0
Field Moisture Content (%)	23.0	23.5
Field Wet Density (t/m³)	1.88	1.93
Field Dry Density (t/m³)	1.53	1.56
Peak Converted Wet Density* (t/m³)	1.87	1.86
Optimum Moisture Content (%)	26.0	26.5
Compactive Effort	Standard	Standard
Moisture Ratio (%)	88.5	89.0
Moisture Variation (%)	3.0 dry	3.0 dry
Hilf Density Ratio (%)	100.5	103.5
legend * adjusted for oversize material		



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067 ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

Report No: HDR:ABTM15W00784

Issue No: 1

# **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

Principal: SPIIRE/AMEX CORPORATION

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN:

NATA

WORLD RECOGNISED

ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Afticle Signature Chaus

Approved Signatory: Shaun Price

(Laboratory Manager)
NATA Accredited Laboratory Number:431

Date of Issue: 7/08/2015

Sample Details

Location: Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction -3 to +3 of OMC

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)

Source: Imported

Material:

Sample Data						
Sample ID	ABTM15S-02741	ABTM15S-02742	ABTM15S-02743	ABTM15S-02744	ABTM15S-02745	ABTM15S-02746
Field Sample ID	3	4	5	6	7	8
Date Tested	6/08/2015	6/08/2015	6/08/2015	6/08/2015	6/08/2015	6/08/2015
Time Tested	13:15	13:30	13:45	14:00	14:15	14:30
Location	Stage 2					
	Grid E2	Grid F2	Grid F3	Grid D3	Grid C4	Grid A4
	Layer 1					
Field and Laboratory Data						
Depth of Test (mm)	275	275	275	275	275	275
Depth of Layer (mm)	300	300	300	300	300	300
AS Sieve Size (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Oversize Wet (%)	7	0	0	9	6	11
Field Moisture Content (%)	24.0	25.0	20.5	26.0	21.0	20.5
Field Wet Density (t/m³)	1.76	1.81	1.92	1.99	1.98	1.92
Field Dry Density (t/m³)	1.42	1.44	1.59	1.58	1.64	1.59
Peak Converted Wet Density* (t/m³)	1.87	1.85	1.92	1.94	1.93	1.99
Optimum Moisture Content (%)	27.0	28.0	20.5	29.0	23.0	20.5
Compactive Effort	Standard	Standard	Standard	Standard	Standard	Standard
Moisture Ratio (%)	88.5	89.5	100.0	90.5	90.0	99.0
Moisture Variation (%)	3.0 dry	3.0 dry	0.0	2.5 dry	2.0 dry	0.0
Hilf Density Ratio (%)	94.0	97.5	100.0	102.0	102.0	96.5
legend * adjusted for oversize material						



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067 ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

Report No: HDR:ABTM15W00803

Issue No: 1

# **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

Principal: SPIIRE/AMEX CORPORATION

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN:



Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

K.B. Patel

Approved Signatory: Krushik Patel

(Senior Technician)

NATA Accredited Laboratory Number:431

Date of Issue: 11/08/2015

Sample Details

Location: Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction (as advised by client)

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1

Sampling Method: Submitted by client

Source: On Site Material: Insitu

Sample Data			
Sample ID	ABTM15S-02806	ABTM15S-02807	
Field Sample ID	00007	00008	
Client Sample ID	9	10	
Date Tested	10/08/2015	10/08/2015	
Time Tested	14:45	15:00	
Location	Grid G3	Grid E3	
	Layer 2	Layer 2	
Field and Laboratory Data			
Depth of Test (mm)	275	275	
AS Sieve Size (mm)	19.0	19.0	
Field Moisture Content (%)	27.5	24.5	
Field Wet Density (t/m³)	1.82	1.77	
Field Dry Density (t/m³)	1.42	1.42	
Peak Converted Wet Density* (t/m³)	1.85	1.85	
Optimum Moisture Content (%)	29.5	27.5	
Compactive Effort	Standard	Standard	
Moisture Ratio (%)	93.5	89.5	
Moisture Variation (%)	2.0 dry	2.5 dry	
Hilf Density Ratio (%)	98.5	95.5	
legend * adjusted for oversize material			



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067 ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

#### Report No: HDR:ABTM15W00808

Preliminary Report Issued - Issue No.:1 Issue No: 2

This report replaces all previous issues of report no 'HDR:ABTM15W00808'

# **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

Principal: SPIIRE/AMEX CORPORATION

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN:

NATA

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ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Approved Signatory: Shaun Price

(Laboratory Manager)
NATA Accredited Laboratory Number:431

Date of Issue: 12/08/2015

Sample Details

**Location:** Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction -3% to +3% of OMC

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1

Sampling Method: Submitted by Client

Source: Imported

Material:

0				
Sample Data				
Sample ID	ABTM15S-02814	ABTM15S-02815	ABTM15S-02816	ABTM15S-02817
Field Sample ID	11	12	13	14
Date Tested	11/08/2015	11/08/2015	11/08/2015	11/08/2015
Time Tested	13:45	14:00	14:15	14:30
Location	Stage 2	Stage 2	Stage 2	Stage 2
	Grid D1	Grid C2	Grid B1	Grid B2
	Layer 1	Layer 1	Layer 1	Layer 1
Field and Laboratory Data				
Depth of Test (mm)	275	275	275	275
Depth of Layer (mm)	300	300	300	300
AS Sieve Size (mm)	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0
Field Moisture Content (%)	22.0	22.5	27.5	26.5
Field Wet Density (t/m³)	1.88	1.98	1.79	1.78
Field Dry Density (t/m³)	1.54	1.62	1.40	1.41
Peak Converted Wet Density* (t/m³)	1.87	1.96	1.86	1.87
Optimum Moisture Content (%)	25.0	25.0	30.0	29.0
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Ratio (%)	88.0	90.5	91.5	91.0
Moisture Variation (%)	3.0 dry	2.0 dry	2.5 dry	2.5 dry
Hilf Density Ratio (%)	100.5	101.0	96.0	95.5
legend * adjusted for oversize material				



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067

ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

### Report No: HDR:ABTM15W00808

Preliminary Report Issued - Issue No.:1 Issue No: 2

This report replaces all previous issues of report no 'HDR:ABTM15W00808'.

# **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

SPIIRE/AMEX CORPORATION Principal:

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN: NATA WORLD RECOGNISED
ACCREDITATION

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The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards

Approved Signatory: Shaun Price

(Laboratory Manager)
NATA Accredited Laboratory Number:431

Date of Issue: 12/08/2015

Sample Details

Location: Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction -3% to +3% of OMC

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1

Sampling Method: Submitted by Client

Source: Imported

Material:

-				
Sample Data				
Sample ID	ABTM15S-02818	ABTM15S-02819	ABTM15S-02820	ABTM15S-02821
Field Sample ID	15	16	17	18
Date Tested	11/08/2015	11/08/2015	11/08/2015	11/08/2015
Time Tested	14:45	15:00	15:15	15:30
Location	Stage 2	Stage 2	Stage 2	Stage 2
	Grid A2	Grid A3	Grid F2	Grid E2
	Layer 1	Layer 1	Layer 1	Layer 1
		Dam Excavation		Re-Test of No 3
Field and Laboratory Data				
Depth of Test (mm)	275	275	275	275
Depth of Layer (mm)	300	300	300	300
AS Sieve Size (mm)	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0
Field Moisture Content (%)	27.0	17.5	23.5	17.5
Field Wet Density (t/m³)	1.85	1.98	2.04	2.06
Field Dry Density (t/m³)	1.45	1.68	1.65	1.75
Peak Converted Wet Density* (t/m³)	1.83	1.93	2.03	1.95
Optimum Moisture Content (%)	29.5	20.5	23.5	21.5
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Ratio (%)	91.0	86.0	99.0	81.5
Moisture Variation (%)	2.5 dry	3.0 dry	0.5 dry	4.0 dry
Hilf Density Ratio (%)	101.0	102.5	100.5	105.5
legend * adjusted for oversize material				



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067 ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

#### Report No: HDR:ABTM15W00816

Preliminary Report Issued - Issue No.:1 Issue No: 2

This report replaces all previous issues of report no 'HDR:ABTM15W00816'.

# **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

Principal: SPIIRE/AMEX CORPORATION

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN:

NATA

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ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

K.B. Patel

Approved Signatory: Krushik Patel

(Senior Technician)

NATA Accredited Laboratory Number:431

Date of Issue: 14/08/2015

Sample Details

**Location:** Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction -3% to +3% of OMC

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1

Sampling Method: Submitted by Client

Source: Imported

Material:

Sample Data		
Sample ID	ABTM15S-02857	ABTM15S-02858
Field Sample ID	19	20
Date Tested	13/08/2015	13/08/2015
Time Tested	14:30	14:45
Location	Stage 2	Stage 2
	Grid C4	Grid B4
	Layer 2	Layer 2
Field and Laboratory Data		
Depth of Test (mm)	275	275
Depth of Layer (mm)	300	300
AS Sieve Size (mm)	19.0	19.0
Oversize Wet (%)	0	10
Field Moisture Content (%)	16.5	16.5
Field Wet Density (t/m³)	2.11	1.99
Field Dry Density (t/m³)	1.81	1.71
Peak Converted Wet Density* (t/m³)	2.04	2.00
Optimum Moisture Content (%)	18.5	19.0
Compactive Effort	Standard	Standard
Moisture Ratio (%)	90.5	85.5
Moisture Variation (%)	1.5 dry	2.5 dry
Hilf Density Ratio (%)	103.5	99.5
legend * adjusted for oversize material		



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067 ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

Report No: HDR:ABTM15W00820

Issue No: 1

# **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

Principal: SPIIRE/AMEX CORPORATION

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN:

NATA
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ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

K.B. Patel

Approved Signatory: Krushik Patel

(Senior Technician)

NATA Accredited Laboratory Number:431

Date of Issue: 17/08/2015

Sample Details

Location: Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction -3% to +3% of OMC

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1

Sampling Method: Submitted by Client

Source: Imported

Material:

0I- D-1-			
Sample Data			
Sample ID	ABTM15S-02886	ABTM15S-02887	ABTM15S-02888
Field Sample ID	21	22	23
Date Tested	14/08/2015	14/08/2015	14/08/2015
Time Tested	14:05	14:30	15:05
Location	Stage 2	Stage 2	Stage 2
	Grid A4	Grid F3	Grid G3
	Layer 3	Layer 3	Layer 3
Field and Laboratory Data			
Depth of Test (mm)	275	275	275
Depth of Layer (mm)	300	300	300
AS Sieve Size (mm)	19.0	19.0	19.0
Oversize Wet (%)	0	0	8
Field Moisture Content (%)	27.0	25.0	24.0
Field Wet Density (t/m³)	1.84	1.82	2.03
Field Dry Density (t/m³)	1.45	1.46	1.63
Peak Converted Wet Density* (t/m³)	1.86	1.86	1.97
Optimum Moisture Content (%)	29.0	26.0	24.5
Compactive Effort	Standard	Standard	Standard
Moisture Ratio (%)	93.0	96.0	98.0
Moisture Variation (%)	2.0 dry	1.0 dry	0.5 dry
Hilf Density Ratio (%)	99.0	98.0	103.0
legend * adjusted for oversize material			



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067

ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

Report No: HDR:ABTM15W00827

Issue No: 1

# **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

SPIIRE/AMEX CORPORATION Principal:

INFOABTM00442AA Project No.:

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN: NATA WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards

Approved Signatory: Shaun Price

(Laboratory Manager)
NATA Accredited Laboratory Number:431

Date of Issue: 18/08/2015

Sample Details

Location: Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction -3% to +3%

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1

Sampling Method: Submitted by Client

Source: Imported

Material:

Sample Data				
Sample ID	ABTM15S-02909	ABTM15S-02910	ABTM15S-02911	ABTM15S-02912
Field Sample ID	00024	00025	00026	00027
Client Sample ID	Grid A3	Grid B1	Grid B2	Grid A2
Date Tested	17/08/2015	17/08/2015	17/08/2015	17/08/2015
Time Tested	14:01	14:30	14:48	15:10
Location	Grid A3	Grid B1	Grid B2	Grid A2
	Layer 2	Layer 2	Layer 2	Layer 2
Field and Laboratory Data				
Depth of Test (mm)	275	275	275	275
Depth of Layer (mm)	300	300	300	300
AS Sieve Size (mm)	19.0	19.0	19.0	19.0
Field Moisture Content (%)	17.0	19.5	14.5	19.5
Field Wet Density (t/m³)	1.93	2.02	1.96	1.86
Field Dry Density (t/m³)	1.65	1.70	1.72	1.56
Peak Converted Wet Density* (t/m³)	1.88	2.10	1.87	1.93
Optimum Moisture Content (%)	22.0	19.5	19.0	22.5
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Ratio (%)	78.5	98.5	75.0	86.5
Moisture Variation (%)	4.5 dry	0.5 dry	4.5 dry	3.0 dry
Hilf Density Ratio (%)	103.0	96.5	105.0	96.5
legend * adjusted for oversize material				



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067 ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

Report No: HDR:ABTM15W00835

Issue No: 1

# **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

Principal: SPIIRE/AMEX CORPORATION

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN:

NATA

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ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Australian/Hational standards.

Approved Signatory: Shaun Price

(Laboratory Manager)
NATA Accredited Laboratory Number:431

Date of Issue: 19/08/2015

Sample Details

**Location:** Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction -3% to +3% of OMC

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1

Sampling Method: Submitted by Client

Source: Imported

Material:

Sample Data		
Sample ID	ABTM15S-03009	ABTM15S-03010
Field Sample ID	28	29
Date Tested	18/08/2015	18/08/2015
Time Tested	15:10	15:20
Location	Stage 2	Stage 2
	Grid A3	Grid A2
	Layer 2	Layer 2
	Retest of No 24	
Field and Laboratory Data		
Depth of Test (mm)	275	275
Depth of Layer (mm)	300	300
AS Sieve Size (mm)	19.0	19.0
Oversize Wet (%)	0	7
Field Moisture Content (%)	24.5	13.5
Field Wet Density (t/m³)	1.90	2.03
Field Dry Density (t/m³)	1.53	1.79
Peak Converted Wet Density* (t/m³)	1.88	2.01
Optimum Moisture Content (%)	25.5	16.5
Compactive Effort	Standard	Standard
Moisture Ratio (%)	96.0	82.0
Moisture Variation (%)	1.0 dry	3.0 dry
Hilf Density Ratio (%)	101.0	101.5
legend * adjusted for oversize material		



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067

ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

Report No: HDR:ABTM15W00839

Issue No: 1

# **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

SPIIRE/AMEX CORPORATION Principal:

INFOABTM00442AA Project No.:

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN: NATA WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards

Approved Signatory: Shaun Price

(Laboratory Manager)
NATA Accredited Laboratory Number:431

Date of Issue: 20/08/2015

Sample Details

Location: Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction -3% to +3% of OMC

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1

Sampling Method: Submitted by Client

Source: Imported

Material:

Sample Data				
Sample ID	ABTM15S-03025	ABTM15S-03026	ABTM15S-03027	ABTM15S-03028
Field Sample ID	00030	00031	00032	00033
Client Sample ID	Grid B1	Grid B2	Grid B3	Grid A3
Date Tested	19/08/2015	19/08/2015	19/08/2015	19/08/2015
Time Tested	14:20	14:35	14:50	15:10
Location	Stage 2	Stage 2	Stage 2	Stage 2
	Grid B1	Grid B2	Grid B3	Grid A3
	Layer 2	Layer 2	Layer 2	Layer 3
	Retest of No 26			
Field and Laboratory Data				
Depth of Test (mm)	275	275	275	275
Depth of Layer (mm)	300	300	300	300
AS Sieve Size (mm)	19.0	19.0	19.0	19.0
Oversize Wet (%)	10	0	15	3
Field Moisture Content (%)	19.0	24.5	22.0	21.5
Field Wet Density (t/m³)	1.97	1.93	1.97	2.00
Field Dry Density (t/m³)	1.65	1.55	1.61	1.65
Peak Converted Wet Density* (t/m³)	2.09	1.92	2.16	1.99
Optimum Moisture Content (%)	19.0	26.0	22.5	20.5
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Ratio (%)	100.5	93.5	98.0	103.5
Moisture Variation (%)	0.0	1.5 dry	0.5 dry	0.5 wet
Hilf Density Ratio (%)	94.0	100.5	91.0	101.0
legend * adjusted for oversize material				



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067 ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

Report No: HDR:ABTM15W00848

Issue No: 1

# **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

Principal: SPIIRE/AMEX CORPORATION

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN:

NATA

WORLD RECOGNISED

ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Australian/Hational standards

Approved Signatory: Shaun Price

(Laboratory Manager)
NATA Accredited Laboratory Number:431

Date of Issue: 21/08/2015

Sample Details

**Location:** Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction -3% to +3% of OMC

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1

Sampling Method: Submitted by Client

Source: Imported

Material:

Sample Data		
Sample ID	ABTM15S-03059	ABTM15S-03060
Field Sample ID	00034	00035
Date Tested	20/08/2015	20/08/2015
Time Tested	14:30	14:40
Location	Stage 2	Stage 2
	Grid B1	Grid B3
	Layer 2	Layer 2
	Retest of No 30	Retest of No 32
Field and Laboratory Data		
Depth of Test (mm)	275	275
Depth of Layer (mm)	300	300
AS Sieve Size (mm)	19.0	19.0
Oversize Wet (%)	14	6
Field Moisture Content (%)	16.5	18.5
Field Wet Density (t/m³)	2.00	1.98
Field Dry Density (t/m³)	1.72	1.67
Peak Converted Wet Density* (t/m³)	2.10	2.03
Optimum Moisture Content (%)	17.0	19.0
Compactive Effort	Standard	Standard
Moisture Ratio (%)	97.5	97.5
Moisture Variation (%)	0.5 dry	0.5 dry
Hilf Density Ratio (%)	95.5	97.5
legend * adjusted for oversize material		



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067

ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

#### Report No: HDR:ABTM15W00852

Preliminary Report Issued - Issue No.:1 Issue No: 2

This report replaces all previous issues of report no 'HDR:ABTM15W00852'.

# **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

SPIIRE/AMEX CORPORATION Principal:

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN: NATA WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards

Approved Signatory: Shaun Price

(Laboratory Manager)
NATA Accredited Laboratory Number:431

Date of Issue: 24/08/2015

Sample Details

Location: Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction -3% to +3% of OMC

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1

Sampling Method: Submitted by Client

Source: Imported

Material:

Sample Data				
Sample ID	ABTM15S-03075	ABTM15S-03076	ABTM15S-03077	ABTM15S-03078
Field Sample ID	00036	00037	00038	00039
Date Tested	21/08/2015	21/08/2015	21/08/2015	21/08/2015
Time Tested	11:41	12:01	12:16	12:40
Location	Stage 2	Stage 2	Stage 2	Stage 2
	Grid A3	Grid A4	Grid B4	Grid C4
	Layer 4	Layer 3	Layer 3	Layer 3
Field and Laboratory Data				
Depth of Test (mm)	275	275	275	275
Depth of Layer (mm)	300	300	300	300
AS Sieve Size (mm)	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0
Field Moisture Content (%)	30.0	25.0	29.0	20.5
Field Wet Density (t/m³)	1.90	1.88	1.87	1.89
Field Dry Density (t/m³)	1.46	1.50	1.45	1.57
Peak Converted Wet Density* (t/m³)	1.81	1.82	1.81	1.83
Optimum Moisture Content (%)	33.0	26.5	30.5	22.0
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Ratio (%)	90.5	94.0	95.0	92.5
Moisture Variation (%)	3.0 dry	1.5 dry	1.5 dry	1.5 dry
Hilf Density Ratio (%)	105.0	103.0	103.0	103.0
legend * adjusted for oversize material				



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067

ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

#### Report No: HDR:ABTM15W00852

Preliminary Report Issued - Issue No.:1 Issue No: 2 This report replaces all previous issues of report no 'HDR:ABTM15W00852'.

# **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

SPIIRE/AMEX CORPORATION Principal:

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN: NATA WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards

Approved Signatory: Shaun Price

(Laboratory Manager)
NATA Accredited Laboratory Number:431

Date of Issue: 24/08/2015

Sample Details

Location: Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction -3% to +3% of OMC

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1

Sampling Method: Submitted by Client

Source: Imported

Material:

Sample Data			
Sample ID	ABTM15S-03079	ABTM15S-03080	ABTM15S-03081
-			
Field Sample ID	00040	00041	00042
Date Tested	21/08/2015	21/08/2015	21/08/2015
Time Tested	12:59		
Location	Stage 2	Stage 2	Stage 2
	Grid E2	Grid A2	Grid A3
	Layer 1	Layer 3	Layer 3
	Retest of No 18		
Field and Laboratory Data			
Depth of Test (mm)	275	275	275
Depth of Layer (mm)	300	300	300
AS Sieve Size (mm)	19.0	19.0	19.0
Oversize Wet (%)	0	0	7
Field Moisture Content (%)	19.5	19.5	24.5
Field Wet Density (t/m³)	2.04	2.01	1.99
Field Dry Density (t/m³)	1.71	1.68	1.59
Peak Converted Wet Density* (t/m³)	1.88	1.94	1.87
Optimum Moisture Content (%)	23.5	22.0	27.5
Compactive Effort	Standard	Standard	Standard
Moisture Ratio (%)	82.5	88.0	89.5
Moisture Variation (%)	4.0 dry	2.5 dry	2.5 dry
Hilf Density Ratio (%)	108.5	103.5	106.5
legend * adjusted for oversize material			



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067

ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

Report No: HDR:ABTM15W00865

Issue No: 1

# **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

SPIIRE/AMEX CORPORATION Principal:

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN: NATA WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards

Approved Signatory: Shaun Price

(Laboratory Manager)
NATA Accredited Laboratory Number:431

Date of Issue: 26/08/2015

Sample Details

Location: Little Green Estate Stage 2, VIC

**Client Request ID:** 

Specification Requirements: MINIMUM HILF DENSITY RATIO of 95% of Standard Compaction; ±3% of OMC (specified by client)

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1

Sampling Method: Submitted by client

Source: Imported

Material:

Sample Data				
Sample ID	ABTM15S-03110	ABTM15S-03111	ABTM15S-03112	ABTM15S-03113
Field Sample ID	00043	00044	00045	00046
Date Tested	25/08/2015	25/08/2015	25/08/2015	25/08/2015
Time Tested	11:30	11:45	11:50	12:00
Location	Grid B1	Grid B2	Grid B3	Grid E2
	Layer 3	Layer 3	Layer 3	Layer 1
				Re-test 40
Field and Laboratory Data				
Depth of Test (mm)	275	275	275	275
Depth of Layer (mm)	300	300	300	300
AS Sieve Size (mm)	19.0	19.0	19.0	19.0
Oversize Wet (%)	0	0	0	0
Field Moisture Content (%)	22.0	14.0	12.0	26.5
Field Wet Density (t/m³)	1.97	2.15	2.23	1.88
Field Dry Density (t/m³)	1.62	1.89	2.00	1.49
Peak Converted Wet Density* (t/m³)	1.97	2.15	2.12	1.88
Optimum Moisture Content (%)	24.0	14.5	12.5	28.5
Compactive Effort	Standard	Standard	Standard	Standard
Moisture Ratio (%)	91.0	94.5	94.5	93.0
Moisture Variation (%)	2.0 dry	1.0 dry	0.5 dry	2.0 dry
Hilf Density Ratio (%)	100.0	100.0	105.5	100.0
legend * adjusted for oversize material				



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067 ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

Report No: HDR:ABTM15W00892

Issue No: 1

# **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

Principal: SPIIRE/AMEX CORPORATION

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN:

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K.B. Patel

Approved Signatory: Krushik Patel

(Senior Technician)

NATA Accredited Laboratory Number:431

Date of Issue: 2/09/2015

Sample Details

Location: Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction -3% to +3% of OMC

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.2.1.1, AS 1289.5.7.1

Sampling Method: Submitted by Client

Source: Imported

Material:

Sample Data		
Sample ID	ABTM15S-03218	
Field Sample ID	00047	
Client Sample ID	Grid D1	
Date Tested	1/09/2015	
Time Tested	02:45	
Location	Grid D1 Layer 2	
Field and Laboratory Data		
Depth of Test (mm)	175	
Depth of Layer (mm)	200	
AS Sieve Size (mm)	19.0	
Oversize Wet (%)	7	
Field Moisture Content (%)	18.5	
Field Wet Density (t/m³)	1.91	
Field Dry Density (t/m³)	1.61	
Peak Converted Wet Density* (t/m³)	1.91	
Optimum Moisture Content (%)	21.5	
Compactive Effort	Standard	
Moisture Ratio (%)	85.0	
Moisture Variation (%)	3.0 dry	
Hilf Density Ratio (%)	100.0	
legend * adjusted for oversize material		



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067

ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

### Report No: HDR:ABTM15W00899

Preliminary Report Issued - Issue No.:1 Issue No: 2

This report replaces all previous issues of report no 'HDR:ABTM15W00899'.

# **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

SPIIRE/AMEX CORPORATION Principal:

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN:

Accredited for compliance with ISO/IEC 17025 The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards NATA Approved Signatory: Shaun Price WORLD RECOGNISED
ACCREDITATION

(Laboratory Manager)
NATA Accredited Laboratory Number:431

Date of Issue: 4/09/2015

Sample Details

Location: Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction (as advised by client)

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1

Sampling Method: Submitted by Client

Source: Imported

Material:

Sample Data			
Sample ID	ABTM15S-03253	ABTM15S-03254	ABTM15S-03255
Field Sample ID	00048	00049	00050
Date Tested	2/09/2015	2/09/2015	2/09/2015
Time Tested	13:45	14:00	14:15
Location	Grid C2	Grid D3	Grid B3
	Layer 2	Layer 2	Layer 4
Field and Laboratory Data			
Depth of Test (mm)	175	175	75
Depth of Layer (mm)	200	200	100
AS Sieve Size (mm)	19.0	19.0	19.0
Oversize Wet (%)	4	2	0
Field Moisture Content (%)	12.0	18.0	25.5
Field Wet Density (t/m³)	2.13	1.87	1.81
Field Dry Density (t/m³)	1.90	1.59	1.44
Peak Converted Wet Density* (t/m³)	2.14	1.88	1.92
Optimum Moisture Content (%)	12.5	23.0	21.0
Compactive Effort	Standard	Standard	Standard
Moisture Ratio (%)	98.5	78.0	119.5
Moisture Variation (%)	0.0	5.0 dry	4.5 wet
Hilf Density Ratio (%)	99.5	100.0	94.5
legend * adjusted for oversize material			



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067 ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

Report No: HDR:ABTM15W00904

Issue No: 1

#### **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

Principal: SPIIRE/AMEX CORPORATION

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN:



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K.B. Patel

Approved Signatory: Krushik Patel

(Senior Technician)

NATA Accredited Laboratory Number:431

Date of Issue: 5/09/2015

Sample Details

**Location:** Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction (as advised by client)

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1

Sampling Method: Submitted by client

Source: On Site Material: Insitu

Sample Data			
Sample ID	ABTM15S-03273	ABTM15S-03274	
Field Sample ID	00054	00055	
Client Sample ID	51	52	
Date Tested	4/09/2015	4/09/2015	
Location	Layer 2	Layer 4	
	Grid D3	Grid B3	
	Retest of 49	Retest of 50	
Field and Laboratory Data			
Depth of Test (mm)	175	175	
AS Sieve Size (mm)	19.0	19.0	
Field Moisture Content (%)	24.0	12.0	
Field Wet Density (t/m³)	1.84	2.07	
Field Dry Density (t/m³)	1.48	1.85	
Peak Converted Wet Density* (t/m³)	1.86	2.12	
Optimum Moisture Content (%)	26.5	14.0	
Compactive Effort	Standard	Standard	
Moisture Ratio (%)	90.5	84.5	
Moisture Variation (%)	2.5 dry	2.0 dry	
Hilf Density Ratio (%)	98.5	97.5	
legend * adjusted for oversize material			



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067

ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

#### Report No: HDR:ABTM15W00910

Preliminary Report Issued - Issue No.:1,1 This report replaces all previous issues of report no 'HDR:ABTM15W00910'.

#### **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

SPIIRE/AMEX CORPORATION Principal:

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN: NATA WORLD RECOGNISED
ACCREDITATION Accredited for compliance with ISO/IEC 17025

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Approved Signatory: Shaun Price

(Laboratory Manager)
NATA Accredited Laboratory Number:431

Date of Issue: 11/09/2015

Sample Details

Location: Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction -3% to +3% of OMC

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1

Sampling Method: Submitted by Client

Source: Imported

Material:

Sample Data			
Sample ID	ABTM15S-03300	ABTM15S-03301	ABTM15S-03302
Field Sample ID	00053	00054	00055
Client Sample ID	Grid C4	Grid B4	Grid A4
Date Tested	9/09/2015	9/09/2015	9/09/2015
Time Tested	14:00	14:15	14:30
Location	Grid C4	Grid B4	Grid A4
	Layer 4	Layer 4	Layer 4
Field and Laboratory Data			
Depth of Test (mm)	275	275	275
Depth of Layer (mm)	300	300	300
AS Sieve Size (mm)	19.0	19.0	19.0
Oversize Wet (%)	0	0	0
Field Moisture Content (%)	24.0	23.0	23.5
Field Wet Density (t/m³)	1.92	1.88	1.91
Field Dry Density (t/m³)	1.55	1.52	1.55
Peak Converted Wet Density* (t/m³)	1.88	1.89	1.95
Optimum Moisture Content (%)	26.0	24.0	25.0
Compactive Effort	Standard	Standard	Standard
Moisture Ratio (%)	91.5	97.0	94.0
Moisture Variation (%)	2.0 dry	0.5 dry	1.5 dry
Hilf Density Ratio (%)	102.0	99.0	98.0
legend * adjusted for oversize material			



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067

ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

Report No: HDR:ABTM15W00912

Issue No: 1

#### **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

P.O. Box 40 Kew VIC 3101

SPIIRE/AMEX CORPORATION Principal:

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN: NATA WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards

Approved Signatory: Shaun Price

(Laboratory Manager)
NATA Accredited Laboratory Number:431

Date of Issue: 11/09/2015

Sample Details

Location: Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction -3% to +3% of OMC

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1

Sampling Method: Submitted by Client

Source: Imported

Material:

Sample Data		
Sample ID	ABTM15S-03308	ABTM15S-03309
Field Sample ID	56	57
Date Tested	10/09/2015	10/09/2015
Time Tested	11:30	11:45
Location	Stage 2	Stage 2
	Grid E1	Grid E2
	Layer 2	Layer 2
Field and Laboratory Data		
Depth of Test (mm)	175	175
Depth of Layer (mm)	200	200
AS Sieve Size (mm)	19.0	19.0
Oversize Wet (%)	0	0
Field Moisture Content (%)	19.5	21.0
Field Wet Density (t/m³)	2.10	2.02
Field Dry Density (t/m³)	1.75	1.67
Peak Converted Wet Density* (t/m³)	1.98	1.99
Optimum Moisture Content (%)	20.0	21.5
Compactive Effort	Standard	Standard
Moisture Ratio (%)	97.0	98.5
Moisture Variation (%)	0.5 dry	0.5 dry
Hilf Density Ratio (%)	106.0	101.5
legend * adjusted for oversize material		



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067

ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

Report No: HDR:ABTM16W00725

Issue No: 1

#### **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

Level 1, 436 Johnston Street Abbotsford VIC 3101

SPIIRE/AMEX CORPORATION Principal:

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN: NATA WORLD RECOGNISED
ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

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Approved Signatory: Ketankumar Patel

(Senior Geotechnician)

NATA Accredited Laboratory Number:431

Date of Issue: 18/05/2016

Sample Details

Location: Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction, +-3% of OMC (as advised by

client)

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1. AS 1289.2.1.1 AS1289.1.2.1 Clause 6.4 (b) Sampling Method:

Source: Material:

0 1 5 (				
Sample Data				
Sample ID	ABTM16S-02463	ABTM16S-02464	ABTM16S-02484	
Field Sample ID	00058	00059	00060	
Date Tested	17/05/2016	17/05/2016	17/05/2016	
Location	Grid E1	Grid E2	Grid E2	
	Layer 2	Layer 2	Layer 3	
Field and Laboratory Data				
Depth of Test (mm)	175	175	175	
Depth of Layer (mm)	200	200	200	
AS Sieve Size (mm)	19.0	19.0	19.0	
Oversize Wet (%)	0	0	0	
Field Moisture Content (%)	19.2	19.4	18.6	
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	AS 1289.2.1.1	
Field Wet Density (t/m³)	1.90	1.90	1.91	
Field Dry Density (t/m³)	1.59	1.59	1.61	
Peak Converted Wet Density* (t/m³)	1.93	1.87	1.92	
Optimum Moisture Content (%)	21.5	24.0	21.5	
Compactive Effort	Standard	Standard	Standard	
Moisture Ratio (%)	89.5	80.5	86.0	
Moisture Variation (%)	2.0 dry	4.5 dry	3.0 dry	
Hilf Density Ratio (%)	98.5	101.5	99.5	
legend * adjusted for oversize material				



Coffey Testing Pty Ltd 3G Marine Parade Abbotsford VIC 3067 ABN 92 114 364 046 Phone: +61 3 8413 6900 Fax: +61 3 8413 6999

Report No: HDR:ABTM16W00737

Issue No: 1

#### **HILF Density Ratio Report**

Client: Coffey Geotechnics Pty Ltd (Abbotsford)

Level 1, 436 Johnston Street Abbotsford VIC 3101

Principal: SPIIRE/AMEX CORPORATION

Project No.: INFOABTM00442AA

Project Name: GEOTABTF09878AA - Little Green Estate Stage 2 - Level 1

Lot No.: TRN:

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ACCREDITATION

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The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

K.B. Patel

Approved Signatory: Krushik Patel

(Senior Technician)

NATA Accredited Laboratory Number:431

Date of Issue: 19/05/2016

Sample Details

Location: Little Green Estate Stage 2, VIC

Client Request ID:

Specification Requirements: MINIMUM HILF DENSITY RATIO OF 95% of Standard Compaction, +-3 OMC (as advised by client)

Field Test procedures: AS 1289.5.8.1

Laboratory Test procedures: AS 1289.5.7.1, AS 1289.2.1.1
Sampling Method: AS1289.1.2.1 Clause 6.4 (b)

Source: On Site

Material: General Fill

Sample Data			
Sample ID	ABTM16S-02519	ABTM16S-02520	
Field Sample ID	00061	00062	
Date Tested	18/05/2016	18/05/2016	
Time Tested	08:30	09:00	
Location	Layer 4	Layer 3	
	Grid E1	Grid E1	
Field and Laboratory Data			
AS Sieve Size (mm)	19.0	19.0	
Oversize Wet (%)	0	1	
Field Moisture Content (%)	23.7	22.3	
Field Moisture Content Method	AS 1289.2.1.1	AS 1289.2.1.1	
Field Wet Density (t/m³)	1.88	1.99	
Field Dry Density (t/m³)	1.52	1.63	
Peak Converted Wet Density* (t/m³)	1.97	1.94	
Optimum Moisture Content (%)	25.0	25.0	
Compactive Effort	Standard	Standard	
Moisture Ratio (%)	94.0	90.0	
Moisture Variation (%)	1.5 dry	2.5 dry	
Hilf Density Ratio (%)	95.5	102.5	
legend * adjusted for oversize material			

Appendix B - "Little Green Residential Precinct 1 Stage 2" civil drawings and combination survey plan

# DELFIRE INVESTMENTS LE GREEN

### GENERAL NOTES:

- ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUH AND ALL COORDINATES ARE TO MAP GRID OF AUSTRALIA (MGAI ZONE 55.
- ALL WORKS TO BE CARRED OUT IN ACCORDANCE WITH ASSIZE—1992 GENERAL COMPINIONS OF CONTRACT, FIRE ROAD, & DOMANGE SPECIAC, ADRA APPROVED HANDBALLY SPECIACY, TRONG AND STANDARD DAKAWINGS, AND TO THE AXITSFACTION OF THE SUPERINTENDENT AND THE MUNICIPAL ENGNEER OR HIS REPRESENTATIVE.
  - ROAD CHAINAGES REFER TO ROAD COTRELINES. CHAINAGES FOR INTERSECTIONS AND CUL.-DE-SACS REFER TO THE LIP OF KERB
- THE LOCATION OF EXCETING SERVICES SHOULD BE DETERMINED BY THE CONTRACTION PROBING TO CONTRACTION PROBING TO CHARLOCAL SERVICE ALTHORITES, ANY EXCEPTING SERVICE SCHOOL ON THESE DRAWINGS ARE OFFERED AS A GLODE CHAY AND ARE NOT GLARANITED AS CONRECT.
  - WHER REQUIRED ANY BUILDINGS, TROUGHS, FRIKES AND OTHER STRUCTURES ON SITE
    ARE TO BE FRONDED AS DRÉCTED BY THE CIGNER. THE COST OF REMOVAL IS TO BE
    MICLURED IN THE OVERALL KASTHWORKS PIGURE UNLESS A SPECIPIC ITEM FOR REMOVAL
    IS DENOTED IN THE SCHEDULE.
    - ALL EXCAVATED ROCK AND SURPLUS SPOIL TO BE REMOVED AND DISPOSED OFF STE UNLESS NOTED OTHERWISE.
- ALL FILING ON LOTS AND WITHIN ROAD RESERVES GREATER THAN 200mm IS TO BE UNDERTAINE VINGHIGHTER. LERBYNDING HAS ECOPILIZED IN ACCORDANCE WITH AS 1995-2007, FILL AREA ARE TO BE STREPPED OF TOPSOL, FILLED AND REPLACED WITH TOPSOL, INVEST REQUIRED) TO 08 TAIN THE FINAL LEVELS SHOWN ON THE DRAWNIGS.
  - FILLING MATERIAL IS TO BE IN ACCORDANCE WITH THE SPECFICATION, AS 3798-2897 & TO THE SATISFACTION OF COLNCIL, AND THE SUPERINTENDENT.
    - NO FILL OR STOCKPILING OF MATERIAL IS TO BE PLACED ON ANY RESERVE FOR PUBLIC OPEN SPACE UNLESS OTHERWISE DRECTED OR APPROVED BY THE SUPERINTENDENT. 10. ALL BATTERS SHALL BE 1 IN 6, UNLESS OTHERWISE SHOWN.
- TBH'S TO BE RE-ESTABLISHED BY THE LICENSED SURVEYOR IF FOUND TO BE HISSING AT THE COMPANCION WILL BE RESPONSIBLE FOR CARE AND MAINTENANCE OF TLAM'S THEREAFTER.

  - AT LEAST 3 DAYS PRIOR TO COMMENCING WORK ON EXCAVATIONS IN EXCESS OF USING DEP. A UNIDERCATIVE REWINSES SESTION OWNERSACE—THE CONTRACTIONS TO COMPLY WITH ADDRESSACE THE MINES FITREMASES REGILATION 1992, THE MINES ACT 1958 AND OCCUPATIONAL HEALTH AND SAFETY ACT 1952, 2004.
- ALL SERVICE TRENCHES UNDER DRIVENAYS, FOOTPATHS AND PARKING BAYS TO BE BACKFILED WITH CLASS Z CHUSHED ROCK, STRVICE TRENCHES LESS THAN TSONN BEHIND KEBB AND CHANNEL, OR PAYED TRENFEL AREAS, ARE ALSO TO BE BACKFILED WITH COPPACTED CLASS Z DOUGHED ROCK.
- where Redeated, Led Deptice Ages propersors and speaked for large melectronic banks of the properties and the speaked properties and the speaked speaked for the speaked speaked for the speaked speaked for the speaked speaked speaked for consententies for fullers. The first shall be about 18 to the speaked speaked for the speaked speaked speaked for the speaked speaked speaked for the speaked spe

SHEET NUMBER | SHEET DESCRIPTION | REVISION

SHEET LIST TABLE

- 16. NO BLASTING TO BE CARRIED OUT WITHIN THE MUNICIPALITY WITHOUT OBTAINING COUNCILS PERMISSION.
  - GAS AND WATER CONDUITS ARE TO BE, BSORME, CLASS 12 P.Y.C. SINGLE SERVICE BYOOME, CLASS 12 P.Y.C. DUAL SERVICE (DRINKING AND NON DRINKING WATER)
- WITH THE FOLLOWING MONING TOVER TO FINISHED SURFACE LEVELS: ROAD PAVEHENT 0.45m VERGE, FOOTPATHS 0.45m
- ALL SERVICE CONDUIT TRENCHES UNDER ROAD PAYEMENTS TO BE BACKFILLED IN ACCORDANCE WITH RELEVANT MANICPALITY OR ROAD AUTHORITY SPECIFICATION
- AAL. STORMWATR DRANS ARE TO BE CLASS "2" R.C. PIPES UNLESS OTHERWISE SHOWN. ALL R.C. JOHYS ARE TO BE RUBBER RING JOHYED (R.R.J.). AG/SUBSOIL DRAIN TO BE LAID BEHIND KERD WHERE REQUIRED IN ACCORDANCE WITH THE COUNCIL STANDARD DRAWINGS AND CONNECTED TO UNDERGROUND DRAWAGE.
- 21, CENTRELINES OF ALL EASEMENT DRAINS ARE OFFSET 12m OR 2.2m (WHERE DUTSIDE OF SEWEN FROM THE PROPERTY LINE UNLESS SHOWN OTHERWISE.
  - 22. WHERE CURVED PIPE ALLIGNEATTS ARE SHOWN ON THE FACE PLANS THEY ARE TO BE LAD PARTLET. TO THE MACKO FREED, EXCITY WHERE A RADIUS MAS BEIN RESPECTEDALTY MODIFACTED, CHRYED PRES ARE TO BE APPROVED BY COUNCE, AND IN ACCORDANCE WITH THE MANUFACTUREDS. SPECIFICATIONS.
    - WATER TAPPINGS TO BE LOCATED IN CENTRE OF ALLOTHENTS UNLESS OTHERWISE SHOWN.
      - 24. TELSTRA IS TO BE NOTIFED 7 DAYS PRIOR TO PLACEMENT OF CONCRETE WORKS.
- PAVEHENT DEPTHS MAY BE MODIFED AS DRECTED BY THE SUPERINTENDENT. PAVEHENT TO BE BOXED OUT TO MINIMUM DEPTH DENOTED, INSPECTED AND IF

- WHERE PAYENDYT IS CONSTRUCTED ON FILLING, FILL MATTROLL IS TO BE APPROVED BY THE SUPERINTENDENT AND COUNCIL. FILLING TO BE CONSTRUCTED IN LAYERS ISSUED THICK WITH COMPACTION ACHEVING 95% AUSTRALLAN STANDARD OBNSITY,

UNDERGROUND ELECTRICITY OVERHEAD ELECTRICITY & POLE

DOSTING WATER HAIN, VALVE AND HYDRANT SOSTING WATER RECYCLED

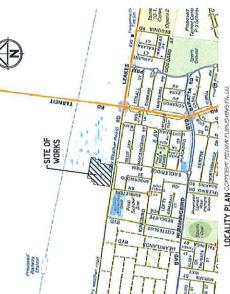
LEGEND

- WHEN PAVEMENT EXCAVATION IS IN ROCK, ALL LODGE MATERIAL (INCLUDING ROCKS AND CLAY) MUST BE REDIVED, THE SUB-GRADE HUST THEN BE REGULATED WITH COUNCI. APPROVED MATERIAL.
- LINEMARINA AND SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH AS THE-1 AND AS 1742-2 UNLESS NOTED OTHERWISE, STREET SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH COUNCY, STANDANDS.

ri

- ALL TEMPORARY WARNING SIGNS USED DURING CONSTRUCTION SHALL BE SUPPLIED AND MINITANED IN ACCORDANCE WITH AS 1742-3.
- 39. TACTLE GROUND SURFACE INDICATORS ARE TO BE INSTALLED IN ACCORDANCE WITH THE DISABILITY DISCRIMINATION ACT AND RELEVANT COUNCE STANDARD DRAWINGS.
- 31. CONTRACTOR TO PROVDE AN ENVIRONMENTAL MANAGEMENT PLAN INCLUDING SILT AND SEDIMENT RUNDEF PROTECTION ETC. PROPR TO THE COMMENCIMENT OF WORKS.
  - 32. ALL TREES AND SHRUBS ARE TO BE RETAMED UNLESS OTHERWISE SHOWN: IF ROAD AND DRAINGAC CONSTRUCTION RECESSITISTS THEIR REMOVAL, WRITTEN PERMISSION HUST BE DOTALINED FROM THE SUPERIFIEDENT. 33. THEES NOT SPECIPED FOR REMOVAL ARE TO BE PROTECTED WITH APPROPRIATE EXCLUSION FENCING PRIOR TO COMPENCEMENT OF ANY WORKS.
    - 34. THE CONTRACTOR IS REQUIRED TO GOTAM A PERHIT TO WORK FROM HELBOUNKE WATERS SURVELLANCE PRESENT A PERHIT OF THE CONTRACTOR IS REQUIRED TO ENGINE THAT THE PERMIT TO WORK IS KERT ID TO DATE ORD THE DURATTON WE THE CONTRACT.





FINISHED SURFACE LEVEL.
TOP/TOE OF BATTER LEVEL.
PROPOSED SIGN 4. POST
PROPOSED LIGHT 4. POLE IBY OTHERS)

SECRET TO U

TREET SIGN XOSTING PERHANENT SURVEY HARK

HED SURFACE CONTOUR MAJOR

FANGENT POINT ROAD CHAINAG

PASTING KERB & CHANNEL PASTING SURFACE CONTOU

EXISTING SURFACE LEVEL.
EXISTING FILL LEVEL.
EXISTING SIGN AND POST
EXISTING LIGHT & POLE

PROPOSED STORMWATER PIT NUMBER

PROPOSED FOOTPATH

PROPOSED DRIVEWAY

EXISTING CONCRETE VEHICLE CROSSING

X

EXISTING FOOTPATH EXISTING TRACK

OSED HOUSE DRAIN

EXISTING STORMWATER DRAIN & SIDE ENTRY PIT

ExtSb

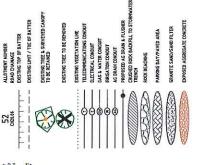
EXISTING HOUSE DRAIN EXISTING OPEN INVERT

STREET SIGN PROPOSED PERMANENT SURVEY MARK TEMPORARY BENCH MARK (TBM) PROPOSED BOLLARD

LIMIT / TOE OF BATTER

(B)

TOP OF BATTER



DSED SLEEPER RETAINING WALL

EXCAVATION GREATER THAN 2008

FILLING GREATER THAN 200mm

FUTURE STORMWATER DRAIN & PIT

PROTECTIVE TREE FENCIN

W ARNING
BEWARE OF HUDGREGOLUND/OFFEREAD SERVICES
THE LECKTING WE SERVICES ARE APPROXIME BUT AND THE REPORT OF PROME OF SERVICES AND THE REPORT OF PROME OF SERVICES AND THE SER

ELECTRICITY

GAS

POTABLE RECYCLED
WATER

SERVICE LOCATION TABLE ROAD NAME

| SECTION | CHARGE | SECTION | CHEEK | SECTION | CHEEK | SECTION | CHEEK | SECTION | CHEEK | C

TELECOMEMICATIONS AND ELECTRICITY CLOLES TO BE CONSTRE CAS AND WATER MAINS TO BE CONSTRUCTED IN A COPPLON TRE \* OFFSET FROM BACK OF KERB - OFFSET FROM BOUNDARY LINE TO OUTSIDE ROAD RESERVE





DELFIRE INVESTMENTS
WYNDHAM CITY COUNCIL
Rev C
Drg No 301599R01

					TON MG 85:1 S102/21/1 state	
			the name 101 9987-FS duet layout name 81-1	file location G1301301599ACAD	plotted by Simon Davies, plot date 1/12/2015 1:59 PM	Standard Drawing RDA1 - Version 20120911
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		BEVISED BRIGHTER AVENUE TRAFFIC CALMING DEVICES AND PIT SIZES		AMENDED IN ACCORDANCE WITH COUNCIL COMMENTS	ISSUED FOR APPROVAL	Rev Amendments
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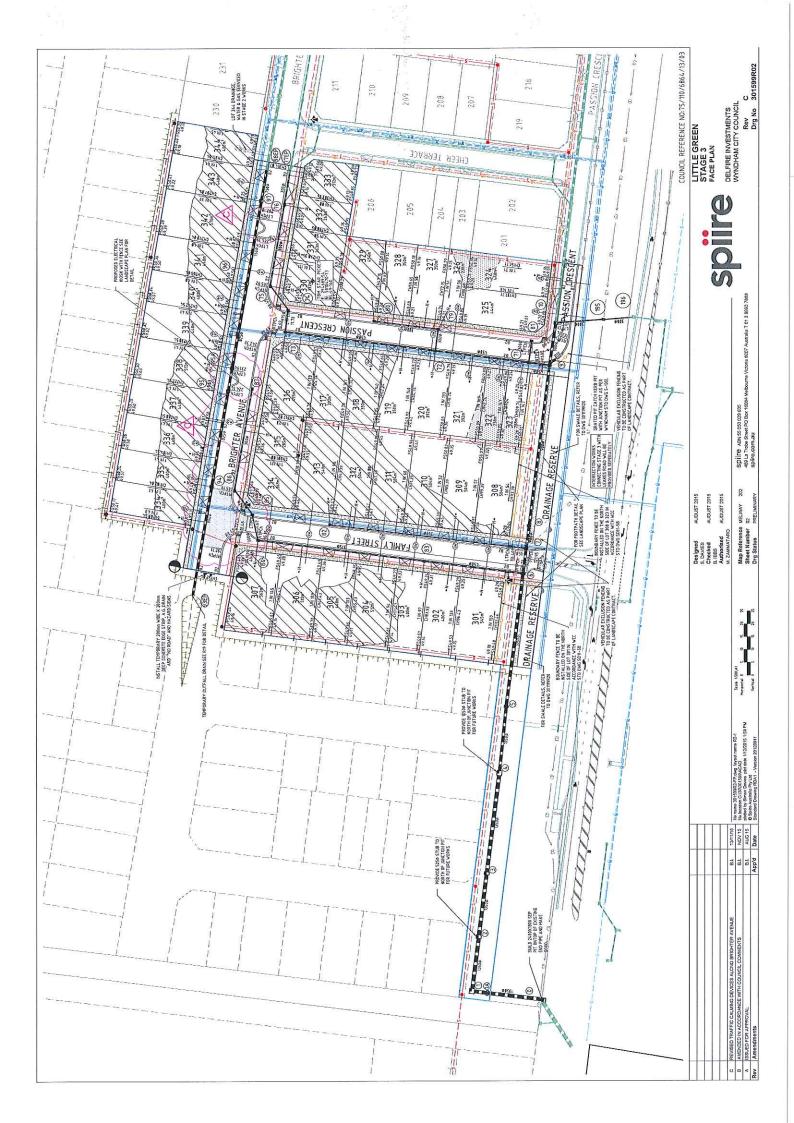
AUGUST 2015 AUGUST 2015 AUGUST 2018

TO SCALE

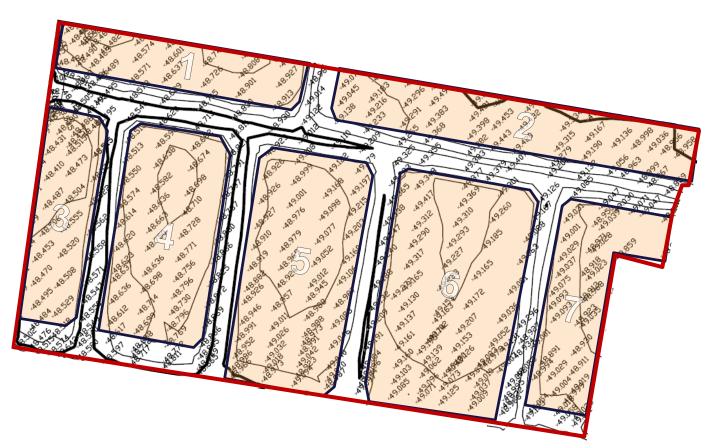
Map Reference MELWAY 202 Shoot Number 91 Drg Status PRELIMINARY

Splife ABN 55 050 029 635 489 La Trobe Street PO Box 16094 Velbourne Victoria 6007 Australia T 61 3 8993 7898 spliro,com.au

Spiire



#### Stage 2 – Stripped surface and as-built survey combination drawing



Source: Stage 1 – Stripped surface and asbuilt survey combination drawing was extracted and combined from CAD files provided by BMD

drawn	I.I.
approved	SP
date	30/08/2016
scale	NTS
original size	A4



project

client:	PEET NO 1895 PTY LTD
project:	STAGE 2 – LEVEL 1
	LITTLE GREEN ESTATE
title: STRIPPED	SURFACE AND ASBUILT SURVEY COMBINATION PLAN

GEOTABTF09878AA - AG

figure

## 1895 PTY GREEZ 4

LEGEND

OSED OVERHEAD ELECTRICITY & POU

ED SEWER AND MANHOLE ED SEWER RISING MAIN 'D CATCH DRAIN FIBRE CONDUIT

### GENERAL NOTES:

- L ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUH AND ALL COORDINATES ARE TO HAP GRID OF AUSTRALIA (HIGA) ZINE SS.
- 3. ALL WORKS TO BE CARREDO OUT IN ACCORDANCE WITH ASSIZE—1992 GENERAL CONDITIONS OF CONTRACT, THE ROUAD E DAMANGE SPECEFICATION, APPROVED MINIFFALTY SPECIFICATION, AND EXAMBLAD DAMANGE AND TO THE SATISFACTION OF THE SUPERINTENDENT AND THE MUNICIPAL ENGINEER OR HIS REPRESENTATIVE. ALL ENSTING SUBFACE LEVELS SHOWN ON THE ENGINEERING DEALWINGS HAVE BEEN METEROLATED FROM A DIGITAL TERRAIN MODEL. THESE LEVELS HAVE BEEN GSED AS THE BASIS FOR ALL ENGINEERING DESIGN AND DETERMINATION OF DUANTITIES AND ARE ACCURATE TO MITHIN ±0.5m.
- ROAD CHAMAGES REFER TO ROAD CENTRELNES, CHAINAGES FOR INTERSECTIONS AND CUL-DE-SACS REFER TO THE UP OF KERB
- THE LOCATINA OF EXISTIAG SERVICES SHOULD BE EXTERNIBLED BY THE CONTRACTOR PRIDES TO CORPEKTING ANY EXCAVATION BY CONTACTING ALL LOCAL SERVICE AUTHORITIES, ANY EXISTING SERVICES SHOWN ON THESE DIAWHIGS. ARE OFFERED AS A GUIDE ONLY AND ARE NOT GUARANTEED AS CORRECT.
- WHERE REQUIRED ANY BUILDINGS, TROUGHS, FENCES AND OTHER STRUCTURES ON SITE ARE TO BE REPOYED AS DRECTED BY THE CHOINEER, THE COST OF REPOYAL IS TO BE INCLUDED IN THE OFFRALL EARTHWORKS FIGURE UNLESS A SPECIFIC ITEM FOR REMOVAL IS DENOTED IN THE SCHEDULE.
- ALL EXCAVATED RICK AND SURPLUS SPOIL TO BE REMOVED AND DISPOSED OFF SITE UNLESS NOTED OTHERWISE.
- ALL FILLING ON LOT'S AND WITHIN ROAD RESERVES GREATER THAN 200mm IS TO BE UNDERTAKEN USING LEVEL TSUBERVISION AND BE COMPLETED IN ACCIDENACE HATH AS A 3793-4007, FILL LEAKS ARE TO BE SEMPENDED OF TOPSCHIE, FILLED AND REPULACID WITH TOPSCHIL INHIBER REQUIRED) TO OBTAIN THE FINAL LEVELS SHOWN ON THE DRAIMINGS.
- FILLING MATERIAL IS TO BE IN ACCORDANCE WITH THE SPECIFICATION, AS 3798–2807 & TO THE SATISFACTION OF COUNCIL AND THE SUPERINTENDENT.
- 10. ALL BATTERS SHALL BE 1 IN 6, UNLESS OTHERWISE SHOWN.
- NO FILL OR STOCKPILING OF MATERIAL IS TO BE PLACED ON ANY RESERVE FOR PUBLIC OPEN SPACE UNLESS OTHERWISE DIRECTED OR APPROVED BY THE SUPERMITENDENT.
- TBH'S TO BE RE-ESTABLISHED BY THE LICENSED SURVEYOR IF FOUND TO BE MISSING AT THE COMPRICEMENT OF CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR CARE AND HAINTENANCE OF T.B.M'S THERELATER.
- AT LEAST 3 DAYS PRIOR TO COMMENCING WORK ON EXCLASATIONS IN EXCESS OF 58m ofer, a natification form his? If each to warkslee the compaction is to compact with variouskee, the hines! Trickhies is required in the the the saction is the saction of the third war saction and the saction and ALL SERVIZE TRENCHES UNDER DEVERHAYS, FOOTPATHS AND PARROIG BAYS TO BE BACKFILLED WITH CLASS 2 CRUSIED BOCK SERVIZE TRENCHES LESS THAN 750mm BEHAD KEBB AND CHAWART, OR PAYD TRAFFIC AREAS ARE ALSO TO BE BACKFILLED WITH COMPACTED CLASS 2 CRUSHED ROOK.

SHEET LIST TABLE SHEET TITLE SHEET NUMBER

REVISION

- WELL-STATE OF LIVE AND THE STATE OF THE STAT
- NO BLASTING TO BE CARRED OUT WITHIN THE HUNICIPALITY WITHOUT OBTAINING COUNCILS PERMISSION.
- GAS AND WATER CONDUITS ARE TO BE,
  USOMM, CLASS 12 P.Y.C. DUAL SERVICE
  DYDOMM, CLASS 12 P.Y.C. DUAL SERVICE IDRINGING AND NON DRINGING WATER!
- WITH THE FOLLOWING MINIMON COVER TO FINISHED SURFACE LEVELS:
  ROAD PAYEMENT 0.80m
  VERGE, FOOTPATHS 0.45m
- 16. ALL SERVICE CONDUIT TRENCHES UNDER ROAD PAVEMENTS TO BE BACKFILLED IN ACCORDANCE WITH RELEVANT HUNICIPALITY OR ROAD AUTHORITY SPECIFICATION.
- AG/SUBSOIL DRAIN TO BE LAID BEHIND KERB WHERE REQUIRED IN ACCORDANCE WITH THE COUNCIL STANDARD DRAININGS AND CONNECTED TO UNDERGROUND DRAININGE.
- ALL STORMWATER DRAMS ARE TO BE CLASS '2' R.C. PIPES UNLESS OTHERWISE SHOWN ALL R.C. JOINT'S ARE TO BE RUBBER RING JOINTED (R.R.J.).
- CENTRELINES OF ALL EASEMENT DRAINS ARE OFFSET 10m OR 2.2m (WHERE OUTSIDE OF SEWER) FROM THE PROPERTY LINE UNLESS SHOWN OTHERWISE.
- WHERE CURVED PIPE ALIGNMENTS ARE SHOWN ON THE FACE PLANS THEY ARE TO BE LAUD PARALLE. TO THE BACK OF FORB. EXCEPT WHERE A RADIUS HAS SEEN SPELIFICALLY YNGWALFDE, CURVED DIPES ARE TO BE APPROVED BY COUNCIL AND IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.

SPARKE WAY

SPARKE WAY

FREED WAY I'MS WIDE ROAD SECTION W'S

FREED W'S

FREED WAY I'MS WIDE ROAD SECTION W'S

FREED W'S

FREED

GAS

ELECTRICITY

EXPOSED AGGREGATE CONCRETE

FILLING GREATER THAN 200mm FILLING GREATER THAN 300mm

OFFSET FROM BOUNDARY LINE TO OUTSIDE ROAD RESERVE

SERVICE LOCATION TABLE

ROAD NAME

- WATER TAPPINGS TO BE LOCATED IN CENTRE OF ALLOTHENTS UNLESS OTHERWISE SHOWN.
- PAVEMENT DEPTHS MAY BE MODRIED AS DIRECTED BY THE SUPERBITENDENT. PAVEMENT TO BE BOXED OUT TO MININOM DEPTH DENOTED, INSPECTED AND IF
- 24. TELSTRA IS TO BE NOTIFIED 7 DAYS PRIOR TO PLACEMENT OF CONCRETE WORKS.

- file name 301730R1-F3.tiop layout name R1-1 file location G100007300ACAD pbtted by Seren Davies pict date 11,02016 5.08 PM O Spire Australia Pty Ltd Standard Drawing RDA1 Verpion 20120911

NOT TO SCALE

Map Reference MELWAY 200 Sheet Number 01 Drg Status PRELIMINARY

202

Spiire ABN 55 050 029 635
469 La Trobe Street PO Sox 16084 Melbourne
spiire.com.au

OCT 2015 OCT 2015 OCT 2015

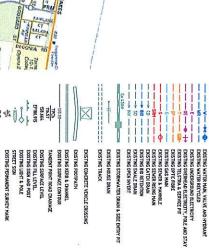
# SUBGRADE IS IN QUESTION, FURTHER TESTING CARRED OUT TO DETERMINE FINAL PAVENERT DEPTH.

- VARIER E-AVENDATI S CONSTRUCTED ON FILLING, FILL MATERIAL IS TO BE APPROVED BY THE SUPERNITEDIST AND OWNEL, PILLING TO BE CONSTRUCTED IN LATERS SSmm THICK WITH COMPACTION ACHIEVING 95% AUSTRALIAN STANDARD DESIGN.
- WHEN PAYENSIT EXCLATION IS IN ROCK, ALL LODGE MATERIAL INCLUDING ROCKS AND CLAY) MIST BE REMOVED. THE SUB-GRADE MIST THEM BE REGULATED WITH COUNCIL APPROVED MATERIAL.

Supposed Supposed

WORKS

- LNEMARKING AND SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH AS 1742-1 AND AS 1742-2 UNLESS NOTED OTHERWISE. STREET SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH COUNCIL STANDARDS.
- ALL TEMPORARY WARNING SIGHS USED DURING CONSTRUCTION SHALL BE SUPPLIED AND MAINTAINED IN ACCORDANCE WITH AS 1742-3.
- TACTILE GROUND SURFACE INDICATORS ARE TO BE INSTALLED IN ACCORDANCE WITH THE DISABILITY DISCRIMINATION ACT AND RELEVANT COUNCE, STANDARD DRAWNIGS,
- ALL TREES AND SHRUBS ARE TO BE RETAINED UNLESS OTHERWISE SHOWN IF ROAD AND DRAINAGE CONSTRUCTION METESSITIATES THEIR REHOVAL. WRITTEN PERMISSION MUST BE DISTAINED FROM THE SUPERNITEDIDEN. CONTRACTOR TO PROVIDE AN ENVIRONMENTAL MANAGEMENT PLAN INCLUDING SILT AND SECHENT RUNDET PROTECTION ETC. PRIOR TO THE COHMENCEMENT OF WORKS.
- TREES NOT SPECIFIED FOR REMOVAL ARE TO BE PROTECTED WITH APPROPRIATE EXCLUSION FENCING PROR TO CONNECKEMENT OF ANY WORKS.
- 34. THE CONTRACTOR IS REQUIRED TO OBTAM A "PERHIT TO WORK" FROM MELBOURNE WATER'S SURVEILLANCE OFFICER AT THE PRE-COMPROCEMENT MEETING. THE CONTRACTOR IS REQUIRED TO SEQUENCE THAT THE "PERHIT TO WORK IS KEPY UP TO DATE FOR THE DURATION OF THE CONTRACT.





LOCALITY PLAN COPYRIGHT HELWAY FUBLISHING FIV. LL

EXISTING VEGETATION LINE
TELECOMMUNICATIONS CONDUCT EXISTING TREE TO BE REMOVED





TOP OF BATTER

ROPOSED BOLLARD PROPOSED PERHANENT SURVEY HARK TEMPORARY BENCH MARK (TBM)

PROPOSED AG DRAIN & FLUSHER
CRUSHED ROCK BACKFILL TO STORMWATER
TRENCH GRANITIC SAND/SAND FILTER PARKING BAY/PAVED AREA

EXISTING SEWER & HANHOLE
EXISTING SEWER RISING HAIN
EXISTING SEATCH DRAIN
EXISTING BID RETENTION
EXISTING SVALE DRAIN
EXISTING SVALE DRAIN
EXISTING OPEN INVERT TANGENT POINT ROAD CHAINAGE
EXISTING SURFACE LEVEL
EXISTING FILL LEVEL
EXISTING SIGN AND POST EXISTING KERB & CHANNEL EXISTING SURFACE CONTOUR EXISTING CONCRETE VEHICLE CROSSING EXISTING STORMWATER DRAIN & SIDE ENTRY PIT EXISTING TREE & SURVEYED CANOPY TO BE RETAINED EXISTING UMIT / TOE OF BATTER EXISTING HOUSE DRAIN EXISTING PERMANENT SURVEY MARK EXISTING TOP OF BATTER LLOTHENT NUMBER XISTING LIGHT & POLE

SH2

FINISHED SURFACE CONTOUR MINOR KERB & CHANNEL + TYPE PROPOSED FOOTPATH

YTOE OF BATTER LEVEL

ROPOSED SIGN & POST ROPOSED LIGHT & POLE (BY OTHERS)

PROPOSED STORMWATER PIT NUMBER

OSED STORMWATER DRAIN & PIT OSED DRAINAGE DILET

ROPOSED DRIVEWAY

DOSTING FENCE
PROPOSED ESTATE FENCING
VEHICLE EXCLUSION FENCE
PROTECTIVE TREE FENCING
PUTURE STORNWATER DRAIN 4 PIT ROAD RESERVE LOT BOUNDARY EASEMENT SAW CUT PAVEMENT LIHIT / TOE OF BATTER
RIDGE / CHANGE OF GRADE
BATERSECTION SET-OUT POINT EXCAVATION GREATER THAN 200mm PROPOSED SLEEPER RETAINING WALL PROPOSED ROCK RETAINING WALL LIMIT OF WORKS MWC DRAIN & PIT LOT GRADE

BEWARE OF UNDERGROUND/VERHEAD SERVICES
THE LOATING & SENGES, SEL PRÉSIDENT DALY
AND TRAY DOLT POSTIONS ACLAS E PROPER MA
AND TRAY DOLT POSTIONS ACLAS E PROPE MA
AND TRAY DOLT POSTIONS ACLAS E PROPE MA
AND TRAY DOLT POSTIONS ACLAS E PROPE MA
AND TRAY DOLT POSTIONS ACCOUNTED TO THE MAN WARNING



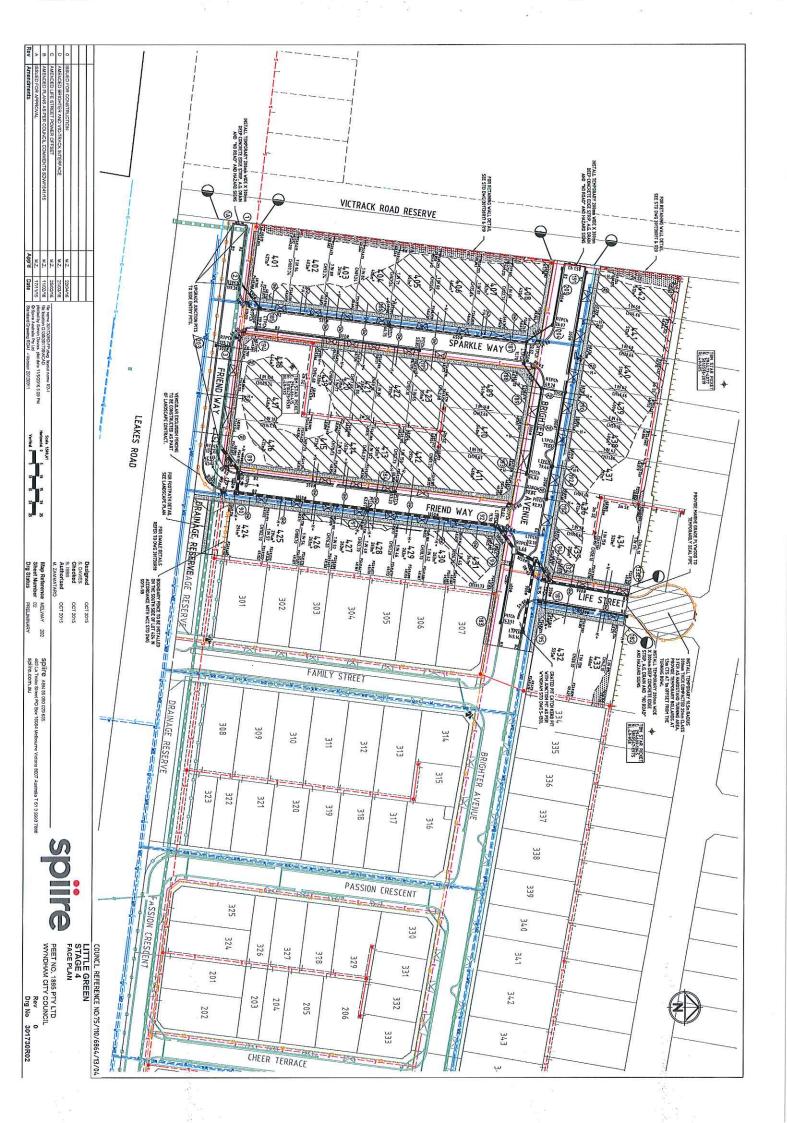
www.1100.com.au

STAGE 4 COUNCIL REFERENCE NO:75/110/6864/13/04

FACE SHEET

WYNDHAM CITY COUNCIL

Rev 1 Drg No 301730R01





#### GEOTABTF09878AA - LITTLE GREEN - IMPORT MATERIAL SUMMARY (DRAFT)

Fill source	Dates observed	Estimated volume (m3) by Coffey	Stage placed	Environmental report Geotech report	Comment
X	1/05/2015	x	x		
	2/05/2015				
X X	3/05/2015	x	x		
Werribee Plaza, Point Cook	4/05/2015	X	1		
Werribee Plaza, Point Cook, Trugania, Broadmedows, Tarneit	5/05/2015	2500-3000	1		
Epping, Werribee plaza, Point Cook, Truganina, Broadmedows, Tarneit	6/05/2015	2500-3000	1		
Epping, Werribee plaza, Point Cook, Truganina, Broadmedows, Tarneit x	7/05/2015 8/05/2015	X X	1		
Х	9/05/2015	x	1		
¥	10/05/2015	x	1		
Epping, Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, Preston	11/05/2015	×	1		
Epping, Wernbee Flaza, Foint Cook, Trugalina, Broadmedows, Tameit, Fleston	12/05/2015	×	1		
Epping, Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, Preston, Werribee Hospital	13/05/2015	2900	1		
X	14/05/2015	X	i		
	15/05/2015				
	16/05/2015				
Epping, Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, Preston, Werribee Hospital	17/05/2015	x	1		
x	18/05/2015	x	1		
Epping, Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, Preston, Werribee Hospital	19/05/2015	x	1		
X	20/05/2015	x	1		
Werribee Plaza, Point Cook	21/05/2015	1980	1		
Tarneit, Broadmeadows	22/05/2015	x	1		
T 100 1	23/05/2015				
Tarneit, Broadmeadows	24/05/2015	x	1		
Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, *BMD sources	25/05/2015	x	1		
Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, *BMD sources	26/05/2015	X	1		
Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, *BMD sources	27/05/2015	X	1		
Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, *BMD sources Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, *BMD sources	28/05/2015 29/05/2015	X X	1		
Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, BMD sources  Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, *BMD sources	30/05/2015	x x	1		
Wellibee Flaza, Fullit Cook, Hugalilla, Diodulliedows, Talliell, Divid Soulces	31/05/2015	*	'		
	1/06/2015				
X	2/06/2015	x	1		
Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, *BMD sources	3/06/2015	x	i		
Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, *BMD sources	4/06/2015	x	1		
	5/06/2015		•		
	6/06/2015				
	7/06/2015				
	8/06/2015				
	9/06/2015				
Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, *BMD sources	10/06/2015	x	1		
Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, *BMD sources	11/06/2015	X	1		
Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, *BMD sources	12/06/2015	x	1		
	13/06/2015				
W # 8 8 8 1 6 1 7 1 8 1 7 1 8 1 1 8 1 1 1 1 1 1 1 1 1	14/06/2015				
Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, *BMD sources	15/06/2015	x	1		
X v	16/06/2015	X	1		
X	17/06/2015 18/06/2015	x	1		
	19/06/2015				
	19/06/2015 20/06/2015				
	20/06/2015				
Werribee Plaza, Point Cook, Truganina, Broadmedows, Tarneit, *BMD sources	22/06/2015	x	1		
BMD roadworks (parallel road)	23/06/2015	×	1		
BMD roadworks (parallel road)	24/06/2015	x	1		
BMD roadworks (parallel road)	25/06/2015	x	1		
BMD roadworks (parallel road)	26/06/2015	x	1		
ч ,	27/06/2015				
	28/06/2015				
BMD roadworks (parallel road)	29/06/2015	x	1		
BMD roadworks (parallel road)	30/06/2015	x	1		
BMD roadworks (parallel road)	1/07/2015	x	1		
BMD roadworks (parallel road), local BMD project	2/07/2015	x	1		
BMD roadworks (parallel road), local BMD project	3/07/2015	x	1		
	4/07/2015				
	5/07/2015				
	6/07/2015				
PMD roadworks (parallal road) local PMD assist	7/07/2015		4		
BMD roadworks (parallel road), local BMD project	8/07/2015	x	1		

	0/07/0045		
BMD roadworks (parallel road), local BMD project	9/07/2015	x	1
BMD roadworks (parallel road), local BMD project	10/07/2015	x	1
	11/07/2015		
	12/07/2015		
	13/07/2015		
	14/07/2015		
	15/07/2015		
	16/07/2015		
	17/07/2015		
	18/07/2015		
	19/07/2015		
	20/07/2015		
	21/07/2015		
	22/07/2015		
	23/07/2015		
Wootten road (local BMD project)	24/07/2015	x	1 & 2
	25/07/2015	**	
	26/07/2015		
Wootten road (local BMD project)	27/07/2015	x	2
Wootten road (local BMD project)	28/07/2015	x	2
Wootten road (local BMD project)	29/07/2015	x	2
Ivanhoe. Ravenhall Prison	30/07/2015	1640	2
Х	31/07/2015	x	2
	1/08/2015		
	2/08/2015		
			_
X	3/08/2015	x	2
Werribee Plaza	4/08/2015	2520	2
			2
X	5/08/2015	x	
Werribee Plaza	6/08/2015	1970	2
Werribee Plaza	7/08/2015	2300	2
Wellber laza		2000	-
	8/08/2015		
	9/08/2015		
Werribee Plaza, Ivanhoe	10/08/2015	1700	2
Werribee Plaza, Ivanhoe	11/08/2015	200	2
Werribee Plaza, Ivanhoe	12/08/2015	920	2
Werribee Plaza, Ivanhoe, South Yarra (Landtrack)	13/08/2015	840	2
Werribee Plaza, Ivanhoe, South Yarra (Landtrack)	14/08/2015	940	2
	15/08/2015		
	16/08/2015		
Leakes roadworks	17/08/2015	1534.5	1 & 2
Leakes roadworks, Werribee Plaza, Essendon	18/08/2015	2163	1 & 2
Leakes roadworks, Werribee Plaza, Essendon			
	19/08/2015	2704	2
Leakes radworks, Werribee Plaza	20/08/2015	3721	2
Leakes roadworks, Ravenhall Prison	21/08/2015	2620	2
Ecarco rodoworko, Naverilair i noori		2020	-
	22/08/2015		
	23/08/2015		
Werribee Plaza, South Yarra (Landtrack)	24/08/2015	2530	
Werribee Plaza, Ivanhoe Prison		4220	2
	25/08/2015	1330	2
Glen Iris (Chappell street), Leakes roadworks		1330 1000	
Glen Iris (Chappell street), Leakes roadworks	25/08/2015 26/08/2015	1000	2 2
Glen Iris (Chappell street), Leakes roadworks	25/08/2015 26/08/2015 27/08/2015	1000 1000	2 2 2
	25/08/2015 26/08/2015 27/08/2015 28/08/2015	1000	2 2
Glen Iris (Chappell street), Leakes roadworks	25/08/2015 26/08/2015 27/08/2015	1000 1000	2 2 2
Glen Iris (Chappell street), Leakes roadworks	25/08/2015 26/08/2015 27/08/2015 28/08/2015 29/08/2015	1000 1000	2 2 2
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks	25/08/2015 26/08/2015 27/08/2015 28/08/2015 29/08/2015 30/08/2015	1000 1000 730	2 2 2 2
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks South Yarra, Ranvenshall Prison, Wooten road	25/08/2015 26/08/2015 27/08/2015 28/08/2015 29/08/2015 30/08/2015 31/08/2015	1000 1000 730	2 2 2 2 2
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks	25/08/2015 26/08/2015 27/08/2015 28/08/2015 29/08/2015 30/08/2015	1000 1000 730 780 1740	2 2 2 2
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 29/08/2015 30/08/2015 31/08/2015 1/09/2015	1000 1000 730 780 1740	2 2 2 2 2
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)	25/08/2015 26/08/2015 27/08/2015 28/08/2015 29/08/2015 30/08/2015 31/08/2015 1/09/2015 2/09/2015	1000 1000 730 780 1740 1430	2 2 2 2 2 2 2 2
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 30/08/2015 31/08/2015 1/09/2015 2/09/2015 3/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)	25/08/2015 26/08/2015 27/08/2015 28/08/2015 29/08/2015 30/08/2015 31/08/2015 1/09/2015 2/09/2015	1000 1000 730 780 1740 1430	2 2 2 2 2 2 2 2
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 29/08/2015 31/08/2015 31/08/2015 1/09/2015 2/09/2015 3/09/2015 4/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)	25/08/2015 26/08/2015 27/08/2015 28/08/2015 29/08/2015 30/08/2015 31/08/2015 1/09/2015 2/09/2015 3/09/2015 4/09/2015 5/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  X X	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 30/08/2015 31/08/2015 1/09/2015 2/09/2015 3/09/2015 4/09/2015 5/09/2015 6/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 30/08/2015 31/08/2015 31/08/2015 2/09/2015 3/09/2015 4/09/2015 5/09/2015 6/09/2015 7/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  X X	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 30/08/2015 31/08/2015 1/09/2015 2/09/2015 3/09/2015 4/09/2015 5/09/2015 6/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 30/08/2015 31/08/2015 1/09/2015 2/09/2015 3/09/2015 4/09/2015 5/09/2015 6/09/2015 7/09/2015 8/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 30/08/2015 31/08/2015 1/09/2015 2/09/2015 4/09/2015 5/09/2015 6/09/2015 7/09/2015 8/09/2015 8/09/2015 9/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 30/08/2015 31/08/2015 1/09/2015 2/09/2015 3/09/2015 4/09/2015 5/09/2015 6/09/2015 7/09/2015 8/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 30/08/2015 31/08/2015 31/08/2015 2/09/2015 3/09/2015 4/09/2015 6/09/2015 6/09/2015 7/09/2015 8/09/2015 9/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 30/08/2015 31/08/2015 31/08/2015 2/09/2015 3/09/2015 4/09/2015 5/09/2015 6/09/2015 7/09/2015 8/09/2015 9/09/2015 1/09/2015 1/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 30/08/2015 31/08/2015 1/09/2015 2/09/2015 4/09/2015 5/09/2015 6/09/2015 7/09/2015 8/09/2015 9/09/2015 10/09/2015 10/09/2015 11/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 30/08/2015 31/08/2015 31/08/2015 2/09/2015 3/09/2015 4/09/2015 5/09/2015 6/09/2015 7/09/2015 8/09/2015 9/09/2015 1/09/2015 1/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 30/08/2015 31/08/2015 31/08/2015 31/08/2015 3/09/2015 3/09/2015 4/09/2015 5/09/2015 6/09/2015 7/09/2015 9/09/2015 10/09/2015 11/09/2015 11/09/2015 12/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 30/08/2015 31/08/2015 1/09/2015 2/09/2015 3/09/2015 4/09/2015 6/09/2015 6/09/2015 7/09/2015 9/09/2015 1/09/2015 1/09/2015 1/09/2015 1/09/2015 1/09/2015 1/09/2015 1/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 28/08/2015 30/08/2015 31/08/2015 31/08/2015 30/9/2015 3/09/2015 4/09/2015 5/09/2015 6/09/2015 8/09/2015 9/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 26/08/2015 28/08/2015 28/08/2015 30/08/2015 30/08/2015 31/08/2015 31/08/2015 30/9/2015 30/9/2015 4/09/2015 5/09/2015 6/09/2015 7/09/2015 9/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 26/08/2015 28/08/2015 28/08/2015 30/08/2015 30/08/2015 31/08/2015 31/08/2015 30/9/2015 30/9/2015 4/09/2015 5/09/2015 6/09/2015 7/09/2015 9/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 26/08/2015 27/08/2015 28/08/2015 29/08/2015 30/08/2015 31/08/2015 31/09/2015 3/09/2015 3/09/2015 4/09/2015 6/09/2015 6/09/2015 7/09/2015 10/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 27/08/2015 28/08/2015 28/08/2015 28/08/2015 30/08/2015 31/08/2015 31/08/2015 3/09/2015 3/09/2015 3/09/2015 5/09/2015 5/09/2015 6/09/2015 9/09/2015 10/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 26/08/2015 27/08/2015 28/08/2015 29/08/2015 30/08/2015 31/08/2015 31/09/2015 3/09/2015 3/09/2015 4/09/2015 6/09/2015 6/09/2015 7/09/2015 10/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 26/08/2015 27/08/2015 28/08/2015 29/08/2015 30/08/2015 31/08/2015 31/08/2015 30/9/2015 30/9/2015 4/09/2015 5/09/2015 6/09/2015 6/09/2015 10/09/2015 11/09/2015 11/09/2015 11/09/2015 11/09/2015 12/09/2015 13/09/2015 13/09/2015 14/09/2015 15/09/2015 15/09/2015 15/09/2015 16/09/2015 16/09/2015 16/09/2015 16/09/2015 16/09/2015 16/09/2015 18/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 26/08/2015 27/08/2015 28/08/2015 29/08/2015 30/08/2015 31/08/2015 31/09/2015 3/09/2015 3/09/2015 5/09/2015 6/09/2015 6/09/2015 10/09/2015 10/09/2015 11/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 26/08/2015 28/08/2015 28/08/2015 30/08/2015 31/08/2015 31/08/2015 31/08/2015 3/09/2015 3/09/2015 4/09/2015 5/09/2015 6/09/2015 6/09/2015 10/09/2015 11/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x
Glen Iris (Chappell street), Leakes roadworks Glen Iris (Chappell street), Leakes roadworks  South Yarra, Ranvenshall Prison, Wooten road Werribee Plaza, Ravenhall Prison Werribee Plaza, South Yarra (Chapel street)  x x x	25/08/2015 26/08/2015 26/08/2015 27/08/2015 28/08/2015 29/08/2015 30/08/2015 31/08/2015 31/09/2015 3/09/2015 3/09/2015 5/09/2015 6/09/2015 6/09/2015 10/09/2015 10/09/2015 11/09/2015	1000 1000 730 780 1740 1430 x	2 2 2 2 2 2 2 2 x x

	23/09/2015		
X	24/09/2015	X	3
Ravenhall Prison	25/09/2015	1250	3
	26/09/2015		
	27/09/2015		
Ravenhall Prison	28/09/2015	1000	3
	29/09/2015		
Ravenhall Prison	30/09/2015	1500	3
Ravenhall Prison	1/10/2015	950	3
	2/10/2015		
	3/10/2015		
	4/10/2015		
	5/10/2015	450	
Caroline Springs	6/10/2015	150	3
Werribee, Caroline Springs	7/10/2015	210	3
St Albans, Caroline Springs,	8/10/2015	880	3
St Albans, Caroline Springs,	9/10/2015	820	3
St Albans, Werribee	10/10/2015	1500	3
	11/10/2015		
St Albans, Werribee	12/10/2015	1400	3
St Albans, Vinedex Sunshine	13/10/2015	650	3
St Albans, Vinedex Sunshine, Ravenhall Prison	14/10/2015	2300	3
St Albans, Werribee	15/10/2015	X	3
St Albans, Vinedex Sunshine	16/10/2015	X	3
	17/10/2015		
	18/10/2015		
X	19/10/2015	x	3
Vinedex Sunshine, St Albans	20/10/2015	160	3
Ravenhall Prison, St Albans	21/10/2015	2190	3
South Yarra, Ravenhall Prison, St Albans	22/10/2015	810	1 & 3
South Yarra, Ravenhall Prison	23/10/2015	550	1 & 3
South Farra, Naverillain Frison	24/10/2015	550	100
	25/10/2015		
South Yarra. Ravenhall Prison, Werribee	26/10/2015	1900	1 & 3
Coburg, South Melbourne, Werribee Plaza	27/10/2015	1150	1 & 3
Coburg, South Melbourne	28/10/2015	1150	1 & 3
Altona, South Melbourne, Werribee	29/10/2015	2020	1 & 3
Altona, Coburg, On-site (Stage 1 only)	30/10/2015	1040	1 & 3
3, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	31/10/2015		
	1/11/2015		
	2/11/2015		
	3/11/2015		
Coburg, South Melbourne, On-site (Stage 1 only)	4/11/2015	740	1 & 3
	5/11/2015		
	6/11/2015		
	7/11/2015		
	8/11/2015		
On-site (Stage 1 only)	9/11/2015		
St Albams, Coburg, South Melbourne, On-site (Stage 1 only)	10/11/2015	1380	1 & 3
On-site (Stage 1 only)	11/11/2015	1000	
On-site (Stage 1 only)	12/11/2015		
On-site (Stage 1 only)			
On-site (Stage 1 only)	13/11/2015		
	14/11/2015		
	15/11/2015		
Ravenhall Prison, Ivanhoe, Laverton, On-site (Stage 1 only)	16/11/2015	940	1 & 3
On-site (Stage 1 only)	17/11/2015		3
Ivanhoe, Ravenhall Prison,	18/11/2015		1 & 3
Melton, South Melbourne, Ravenhall Prison	19/11/2015	3000	3
Coburg, South Melbourne, Ravenhall Prison	20/11/2015	2880	3
obburg, coult moleculite, nutroinium i noon	21/11/2015	2000	· ·
	22/11/2015		
Coburg	23/11/2015	840	3
South Melbourne, Ravenhall Prison, on-site (Stage 1 only)	24/11/2015	940	1 & 3
South Melbourne, Ravenhall Prison, on-site (Stage 1 only)	25/11/2015	1340	1 & 3
South Melbourne, Ravenhall Prison, on-site (Stage 1 only)	26/11/2015	1840	1 & 3
Ravenhall Prison, Niddrie	27/11/2015	1680	3
Ravenhall Prison	28/11/2015	600	3
	29/11/2015		
Galvin Park, Ravenhall Prison	30/11/2015	2060	3 & 4
Ravenhall Prison	1/12/2015	1460	3 & 4
Coburg, Ravenhall Prison	2/12/2015	1810	3 & 4
South Yarra, St Albans	3/12/2015	1310	4
South Yarra, Ravenhall Prison	4/12/2015	1760	4
	5/12/2015		
	6/12/2015		

7/12/2015

South Yarra, St Albans	8/12/2015	1100	3 & 4
Werribee Plaza, St Albans, Coburg	9/12/2015	2370	4
Werribee Plaza, St Albans, Coburg	10/12/2015	1590	4
Coburg	11/12/2015	530	3 & 4
	12/12/2015		
Oaksan Ot Alkana	13/12/2015	000	
Coburg, St Albans	14/12/2015	630	4 3 & 4
Coburg, St Albans Ravenhall Prison, St Albans	15/12/2015 16/12/2015	230 1550	3 & 4
South Yarra, South Melbourne	17/12/2015	1580	4
Werribee Plaza, Essendon, South Melbourne, South Yarra, St Albans	18/12/2015	5160	4
Tromboo Fidea, Essonati, Saari Maisaano, Saari Fara, Stribano	19/12/2015	0.00	•
	20/12/2015		
Port Melbourne, South Yarra	21/12/2015	1950	4
Ravenhall Prison, South Melbourne	22/12/2015	2020	4
	23/12/2015		
	24/12/2015		
	25/12/2015		
	26/12/2015		
	27/12/2015		
	28/12/2015 29/12/2015		
	30/12/2015		
	31/12/2015		
	1/01/2016		
	2/01/2016		
	3/01/2016		
St Albans	4/01/2016	60	3 & 4
St Albans	5/01/2016	20	4
Coburg, St Albans	6/01/2016	790	3 & 4
Coburg	7/01/2016	1080	3 & 4
Coburg	8/01/2016	200	3 & 4
	9/01/2016		
Couth Malhauran	10/01/2016	420	4
South Melbourne South Melbourne	11/01/2016	430	4
South Melbourne	12/01/2016 13/01/2016	750 0	4
South Yarra, Werribee	14/01/2016	1120	4
Ravenhall Prison	15/01/2016	740	4
TOTAL TROUT	16/01/2016		·
	17/01/2016		
Ravenhall Prison, South Melbourne	18/01/2016	1050	4
Ravenhall Prison, South Melbourne, South Yarra, onsite BMD	19/01/2016	2210	4
	20/01/2016	0	
Ravenhall Prison, South Yarra, onsite BMD	21/01/2016	1350	4
Ravenhall Prison	22/01/2016	320	4
	23/01/2016		
	24/01/2016		
	25/01/2016 26/01/2016		
Ravenhall Prison, St. Albans	27/01/2016	2320	4
Itaverillali i Ilsofi, St. Albaris	28/01/2016	0	7
	29/01/2016	0	
	30/01/2016		
	31/01/2016		
	1/02/2016		
Essendon, South Melbourne, South Yarra	2/02/2016	1810	4
Onsite BMD, Werribee, South Melbourne	3/02/2016	1230	4
Onsite BMD, St. Albans, South Melbourne	4/02/2016	2990	4
Onsite BMD, St. Albans, Boral processed St. Albans	5/02/2016	1880	4
BMD onsite	6/02/2016	180	4
Onsite BMD, St. Albans, South Melbourne, Werribee, Essendon	8/02/2016 9/02/2016	1490	4
Offsite BMD, St. Albans, South Melbourne, Wernbee, Essendon		1490	4
	10/02/2016 11/02/2016		
Onsite BMD, St. Albans, South Melbourne, Essendon	12/02/2016	1240	4
Essendon, onsite BMD, St. Albans	15/02/2016	1120	4
Essendon Essendon	16/02/2016	1700	4
Essendon, St. Albans	17/02/2016	630	4
Onsite BMD	18/02/2016	350	4
Onsite BMD	19/02/2016	1640	4

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