



21st May 2018

Ref No: 338_SEE Civil_Level 1

REPORT ON LEVEL 1

EARTHWORKS INSPECTION AND TESTING



PROJECT: **FLAGSTONE CITY STAGE 1U**

CONTRACTOR: **SEE CIVIL PTY LTD**

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1 INTRODUCTION

1.0 GENERAL

Australian Soil and Concrete Testing was commissioned by SEE Civil Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with Clause 8.2 of AS 3798-2007 '*Guidelines on Earthworks for Commercial and Residential Developments*'.

The fill placed on the development between 12/02/18 and 03/05/18 as detailed in this report is considered to be controlled Fill as defined in AS2870 – 2011 '*Residential Slabs & Footings*'.

1.1 SITE DESCRIPTION

The site is located at the Flagstone City Residential Estate off Flagstonian Drive in Queensland. The Stage 1U site is a 30 lot residential subdivision.



Drawing showing the Site Location.

2 WORKS AND SPECIFICATIONS

The earthworks generally comprised of Level 1 filling placed across the site. Filling was conducted by using site won materials. The fill materials were placed in layers not exceeding 200mm and moisture conditioned as required. Pad foot rollers were then utilized to compact the fill until the required density specifications were achieved.

Filling was carried out in accordance with AS3798-2007 '*Guidelines on Earthworks for Commercial and Residential Developments*' and with the project specification prepared for the project.

The specification requirements were that all fill was to be placed and compacted in layers to a density ratio of not less than 95% of the maximum dry density as determined by AS1289.5.4.1 (Standard Compaction).

We have included in Appendix A drawings showing the extent of filling carried out at the site covered by this report.

3 PREVIOUS EARTHWORKS

Earthworks have previously been carried out at the site by others. The earthworks were carried out between the 23rd of June 2017 and the 8th of February 2018. The Level 1 inspection and testing services were carried out by Morrison Geotechnic on the previous filling and is detailed in the Morrison Geotechnic report, **Reference No: 12981** dated **7th February 2018**.

4 FILL FOUNDATION

The stripped surfaces of proposed fill areas were inspected and proof rolled prior to placement of fill. In general, the proof rolling was carried out with the equipment used to compact the fill and water truck. Compliance of the fill foundation and approval to commence filling was on the basis of:

- adequate removal of topsoil and organics
- adequate removal of soft compressible soils
- soundness (minimum deflection) under proof rolling

5 COMPLIANCE TESTING

Test locations were randomly selected by the Geotechnical Testing Authority (GTA) Australian Soil and Concrete Testing. Compaction control tests were carried out at regular intervals throughout the placement of fill in accordance with the minimum test frequency recommendations included in the specifications. The table below summarises the test results. The test locations were not professionally surveyed and should be considered approximate.

All field density tests carried out on the structural fill meet the minimum specification requirements of 95% Standard Compaction (AS 1289 5.8.1, 5.1.1, 5.7.1 & 2.1.1).

SUMMARY OF FIELD DENSITY TEST RESULTS

Sample No	Date of Test	Description			Level	Density Ratio
11414	12/02/2018	Level 1 - Lot Fill	E:33741.2	N:73576.6	RL:50.0	102.0%
11415	12/02/2018	Level 1 - Lot Fill	E:33761.2	N:73589.2	RL:49.6	102.5%
11416	12/02/2018	Level 1 - Lot Fill	E:33750.4	N:73592.3	RL:50.2	100.0%
11417	12/02/2018	Level 1 - Lot Fill	E:33739.4	N:73561.4	RL:49.2	102.5%
11418	12/02/2018	Level 1 - Lot Fill	E:33727.3	N:73510.2	RL:56.96	98.5%
11419	12/02/2018	Level 1 - Lot Fill	E:33735.1	N:73512.1	RL:57.01	102.0%
11491	14/02/2018	Level 1 - Lot Fill	E:33866.5	N:73717.9	RL:44.6	100.0%
11492	14/02/2018	Level 1 - Lot Fill	E:33871.9	N:73718.2	RL:45.2	100.5%
11493	14/02/2018	Level 1 - Lot Fill	E:33851.4	N:73707.3	RL:45.3	99.5%
11494	14/02/2018	Level 1 - Lot Fill	E:33852.9	N:73709.8	RL:43.6	100.0%
11495	14/02/2018	Level 1 - Lot Fill	E:33850.6	N:73715.9	RL:43.2	99.5%
11526	15/02/2018	Level 1 - Lot Fill	E:33775.3	N:73674.6	RL:45.1	98.5%
11527	15/02/2018	Level 1 - Lot Fill	E:33797.3	N:73683.6	RL:44.6	101.5%
11577	16/02/2018	Level 1 - Lot Fill	E:33793.4	N:73485.9	RL:60.6	95.0%
11578	16/02/2018	Level 1 - Lot Fill	E:33794.1	N:73491.0	RL:59.9	97.0%
11579	16/02/2018	Level 1 - Lot Fill	E:33798.9	N:73514.1	RL:58.7	99.5%
11580	16/02/2018	Level 1 - Lot Fill	E:33801.1	N:73527.9	RL:57.8	99.0%
11588	17/02/2018	Level 1 - Lot Fill	E:33797.3	N:73542.1	RL:56.9	96.5%
11589	17/02/2018	Level 1 - Lot Fill	E:33798.3	N:73553.4	RL:55.8	96.0%
11616	19/02/2018	Level 1 - Lot Fill	E:33783.4	N:73678.2	RL:45.6	96.5%
11690	20/02/2018	Level 1 - Lot Fill	E:33815.4	N:73696.1	RL:45.2	100.5%
11691	20/02/2018	Level 1 - Lot Fill	E:33797.1	N:73694.7	RL:44.9	101.5%
11692	20/02/2018	Level 1 - Lot Fill	E:33707.2	N:73553.4	RL:53.9	98.5%
11693	20/02/2018	Level 1 - Lot Fill	E:33737.5	N:73546.1	RL:54.1	96.5%
11694	20/02/2018	Level 1 - Lot Fill	E:33746.6	N:73645.2	RL:47.0	96.0%
11695	20/02/2018	Level 1 - Lot Fill	E:33766.8	N:73672.9	RL:46.3	96.5%
11719	21/02/2018	Level 1 - Lot Fill	E:33845.6	N:73707.1	RL:45.9	100.5%
11720	21/02/2018	Level 1 - Lot Fill	E:33772.4	N:73670.9	RL:46.9	101.5%
11721	21/02/2018	Level 1 - Lot Fill	E:33757.9	N:73653.5	RL:47.3	98.5%
11733	22/02/2018	Level 1 - Lot Fill	E:33749.2	N:73568.6	RL:52.2	101.0%
11734	22/02/2018	Level 1 - Lot Fill	E:33736.7	N:73593.6	RL:50.7	96.0%
11824	1/03/2018	Level 1 - Lot Fill	E:33678.8	N:73568.9	RL:50.7	100.5%
11825	1/03/2018	Level 1 - Lot Fill	E:33762.9	N:73606.3	RL:48.3	96.5%

13754	3/05/2018	Level 1 - Lot Fill	E:33840.7	N:73689.4	RL:43.5	99.5%
13820	4/05/2018	Level 1 - Lot Fill	E:33840.2	N:73688.7	RL:44.8	101.0%
13821	4/05/2018	Level 1 - Lot Fill	E:33845.1	N:73689.4	RL:45.1	97.0%
13991	12/05/2018	Level 1 - Lot Fill	E:33785.2	N:73682.6	RL:46.6	100.5%
13992	12/05/2018	Level 1 - Lot Fill	E:33801.4	N:73684.9	RL:46.3	100.5%

No. of Tests: 38 Mean: 99.2 %

6 CONCLUSION

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction, as far as we have been able to determine, the structural fill placed between the 12/02/18 and 03/05/18 is considered to have been carried out in general accordance with AS 3798-2007 '*Guidelines on Earthworks for Commercial and Residential Developments*'.

7 LIMITATIONS

Unless otherwise stated in this report, this report does not include: Backfill behind retaining structures, Backfill to service trenches, Road Pavements, Any Topsoil placed on the site, Slope Stability or Site Drainage.

We have included in Appendix A, a drawing showing the surveyed levels at the site prior to any filling covered by this report, all existing fill on the site below these levels is not covered by this report.

Please do not hesitate to contact me if you have any queries.

Yours faithfully



Jason McKenna
Laboratory Manager

ASCT Brisbane South

Appendix A

Contour Map of Handover Surface & Cut Fill Drawings



EARTHWORKS NOTES

1. REFER DRAWING 001 FOR GENERAL NOTES.
2. ALL DESIGN LEVELS AND CONTOURS SHOWN ARE FINISHED SURFACE LEVELS AND INCLUDE A 150mm ALLOWANCE FOR TOPSOIL.
3. ALL DIMENSIONS ON THE JOB ARE IN METRES UNLESS SHOWN OTHERWISE.
4. NOTWITHSTANDING THE LIMITS OF CUTTING AND FILLING SHOWN ON THE DRAWINGS, THE ACTUAL LIMITS SHALL BE DETERMINED ON SITE BY THE SUPERINTENDENT DURING CONSTRUCTION. SIMILARLY, FINISHED SURFACE CONTOURS FOR ALLOTMENTS MAY BE ADJUSTED BY A WRITTEN DIRECTION OF THE SUPERINTENDENT DURING CONSTRUCTION (REFER JOB SPECIFICATION).
5. ALL STRUCTURAL FILL MATERIAL PLACED SHALL BE COMPACTED TO THE FOLLOWING MINIMUM DENSITY IN ACCORDANCE WITH THE PROJECT SPECIFICATION
: 65% DENSITY INDEX FOR NON-COHESIVE MATERIAL
: 95% FOR COHESIVE MATERIALS
6. THE CONTRACTOR IS TO ENSURE THAT NO PONDING OCCURS DURING CONSTRUCTION AND IN THE FINAL PROFILE.
7. SITE EARTHWORKS SHALL GENERALLY BE CARRIED OUT IN ACCORDANCE WITH AS 3798-2007.
8. ANY UNSUITABLE MATERIAL ENCOUNTERED DURING EARTHWORKS AS DEFINED IN AS 3798-2007 SHALL BE REMOVED & REPLACED. THE SUPERINTENDENT SHALL BE NOTIFIED PRIOR TO EXCAVATING ANY UNSUITABLE MATERIAL.
9. SWALE INVERTS SHALL BE GRADED TO DRAIN FREELY TO ASSOCIATED FIELD INLETS, ALL SWALES ARE TO BE TOPSOILED AND TURFED
10. ALL BATTERS BETWEEN 1:4 & 1:6 ARE TO BE FULLY TURFED TO PREVENT SCOUR & EROSION. ANY BATTER 1:4 & 1:3 TO BE HEAVILY LANDSCAPED & ANY BATTERS STEEPER THEN 1:3 ARE UNDESIRABLE.
11. ALL EARTHWORKS DRAWINGS ARE TO BE READ IN CONJUNCTION WITH APPROVED VEGETATION MANAGEMENT PLANS AND APPROVALS.
12. REFER TO APPROVED VEGETATION MANAGEMENT PLANS PREPARED BY SAUNDERS HAVILL GROUP, FOR CLEARING STAGES AND PROCESS.

LEGEND

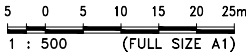
- NOMINAL KERB LINE
- EXISTING KERB LINE
- TOP OF BATTER
- TOE OF BATTER
- 12.0 FINISHED SURFACE CONTOURS
- 12.0 EXISTING SURFACE CONTOURS
- FILL AREAS
- CUT AREAS
- STAGE BDY

FIRE ANT NOTE:

UNDER QUEENSLAND LEGISLATION, FIRE ANTS ARE A NOTIFIABLE PEST AND SUSPECTED SIGHTING MUST BE REPORTED TO BIOSECURITY QUEENSLAND. MOVEMENT OF FIRE ANTS IS PROHIBITED UNLESS APPROVED OTHERWISE BY THE DEPARTMENT OF PRIMARY INDUSTRIES. THE CONTRACTOR SHALL ACQUIRE THE NECESSARY PERMITS TO COMPLETE THE WORKS.

LOCAL AUTHORITY: ECONOMIC DEVELOPMENT QUEENSLAND
EDQ FILE REF NO: DEV2012/402
RP DESCRIPTION: LOT 908 RP819216
PARISH/COUNTY: MACLEAN/UNDULLAH
ORIGIN: PM107142 (RL39.078)
HORIZONTAL DATUM: MGA

REV	DESCRIPTION	BY	APP	DATE
A	ORIGINAL ISSUE	LH	JH	15.09.17
B	ISSUED FOR TENDER	LH	JH	21.09.17
C	NOTES UPDATED	LH	JH	30.11.17
D	ROAD NAMES UPDATED	LH	JH	19.01.18



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RPEQ 5023

Approved by, for and on behalf of Bradlees

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AS/NZS ISO 9001:2008
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CLIENT	PEET FLAGSTONE CITY PTY. LTD.
TITLE	EARTHWORKS CUT AND FILL PLAN SHEET 1 OF 2

PROJECT	FLAGSTONE CITY - STAGE 1U
STATUS	ECONOMIC DEVELOPMENT QUEENSLAND
ISSUED FOR CONSTRUCTION	
DESIGNED	NM
DRAWN	LH
APPROVED	JH
DATE	15.09.17
SCALE @ A1	1:500
SHEET	1 OF 1
PROJECT No	118228
DRAWING No	C1-S1U-CIL-110
REV	D



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LEGEND

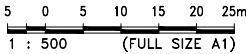
- NOMINAL KERB LINE
- EXISTING KERB LINE
- TOP OF BATTER
- TOE OF BATTER
- FINISHED SURFACE CONTOURS
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- CUT AREAS
- STAGE BDY

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LOCAL AUTHORITY: ECONOMIC DEVELOPMENT QUEENSLAND
EDQ FILE REF NO: DEV2012/402
RP DESCRIPTION: LOT 908 RP819216
PARISH/COUNTY: MACLEAN/UNDULLAH
ORIGIN: PM107142 (RL39.078)
HORIZONTAL DATUM: MGA

REV	DESCRIPTION	BY	APP	DATE
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B	ISSUED FOR TENDER	LH	JH	21.09.17
C	NOTES UPDATED	LH	JH	30.11.17
D	ROAD NAMES UPDATED	LH	JH	19.01.18



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CLIENT	PEET FLAGSTONE CITY PTY. LTD.
TITLE	EARTHWORKS CUT AND FILL PLAN SHEET 2 OF 2

PROJECT	FLAGSTONE CITY - STAGE 1U
STATUS	ECONOMIC DEVELOPMENT QUEENSLAND ISSUED FOR CONSTRUCTION
DESIGNED	NM
DRAWN	LH
APPROVED	JH
DATE	15.09.17
SCALE @ A1	1:500
SHEET	1 OF 1
PROJECT No	118228
DRAWING No	C1-S1U-CIL-111
REV	D

Appendix B Test Reports



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Compaction Control Test Report (Nuclear Gauge & MDD)

Page: 1 of 1

Client:	See Civil Pty Ltd	Report No:	1
Client Address:	24A Ozone Street, Tweed Heads, NSW, 2486	Report Date:	16/02/2018
Project:	Flagstone Stage 1U	Project No:	338
Component:	Stage 1U - Lot Filling	Test Request:	-
Lot Number:	-	ITP/PCP:	N/A

Sample Information & Location

Sample Number:		11414	11415	11416	11417	-
Field Test Number:		11414	11415	11416	11417	-
Date - Field Tested:		12/02/2018	12/02/2018	12/02/2018	12/02/2018	-
Time - Field Tested:		12:30	12:45	12:50	13:00	-
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E:33741.2	E:33761.2	E:33750.4	E:33739.4	-
Position/Offset/Northing:	(m)	N:73576.6	N:73589.2	N:73592.3	N:73561.4	-
Level/Layer/R.L.		RL:50.0	RL:49.6	RL:50.2	RL:49.2	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	-

Field & Laboratory Results

Field Wet Density:	(t/m ³)	2.26	2.29	2.23	2.29	-
Field Dry Density:	(t/m ³)	2.06	2.09	2.04	2.08	-
Retained Oversize (Wet basis):	(%)	8% on 37.5mm	8% on 37.5mm	7% on 37.5mm	6% on 37.5mm	-
Retained Oversize (Dry basis):	(%)	8% on 37.5mm	9% on 37.5mm	8% on 37.5mm	7% on 37.5mm	-
Moisture Content Method - AS1289:		.2.1.1 - Oven	.2.1.1 - Oven	.2.1.1 - Oven	.2.1.1 - Oven	-
Field Moisture Content:	(%)	9.5	10.0	9.5	10.0	-
Adjusted Lab OMC:	(%)	11.5	11.0	11.5	12.0	-
Fraction Tested:		Passing 37.5mm	Passing 37.5mm	Passing 37.5mm	Passing 37.5mm	-
Lab Maximum Dry Density (MDD):	(t/m ³)	1.97	1.99	1.99	1.99	-
Adjusted Lab MDD:	(t/m ³)	2.01	2.04	2.03	2.03	-
Report & Date of Lab Reference Density Test:		-				

Relative Compaction & Moisture

Moisture Ratio	(%)	85.5	89.5	82.5	85.5	-
Moisture Variation	(%)	1.5 Dry of OMC	1.0 Dry of OMC	2.0 Dry of OMC	1.5 Dry of OMC	-
Density Ratio	(%)	102.0	102.5	100.0	102.5	-

Characteristic Values of the Lot.

CV calculations derived from Austroads NTR-09 publication

Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	-	-	-	-	-	-
Maximum (%)	-	-	-	-	-	-
Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	95	101.0	4	101.75	1.19	0.640
Maximum (%)	-	-	-	-	-	-

Test Methods Used.

AS 1289 1.2.1 6.4(b) (Disturbed Sampling), AS1289.1.1 (Prep), AS1289.5.8.1 (Nuclear Gauge, Direct Transmission), AS1289.5.4.1 (Dry Density Ratio, Moisture Variation & Ratio), AS1289.5.1.1 (MDD Standard Effort)

Remarks Regarding the Lot.



Accredited for compliance with ISO/IEC 17025 - Testing. The results of the tests included in this document are traceable to Australian/national standards.

NATA Accreditation number: 19902

Approved By:

A. Lenkeit
 Approved Signatory

Workbook: WB100, Rev 3 - 4/10/2017



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A.B.N. 73 193 500 470

Compaction Control Test Report (Nuclear Gauge & MDD)

Page: 1 of 1

Client:	See Civil Pty Ltd	Report No:	2
Client Address:	24A Ozone Street, Tweed Heads, NSW, 2486	Report Date:	16/02/2018
Project:	Flagstone Stage 1U	Project No:	338
Component:	Stage 1U - Lot Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	N/A

Sample Information & Location

Sample Number:		11418	11419	-	-	-
Field Test Number:		11418	11419	-	-	-
Date - Field Tested:		12/02/2018	12/02/2018	-	-	-
Time - Field Tested:		10:30	10:45	-	-	-
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E:33727.3	E:33735.1	-	-	-
Position/Offset/Northing:	(m)	N:73510.2	N:73512.1	-	-	-
Level/Layer/R.L.		RL:56.96	RL:57.01	-	-	-
Layer Depth:	(mm)	150	150	-	-	-
Depth Tested:	(mm)	150	150	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m ³)	2.13	2.18	-	-	-
Field Dry Density:	(t/m ³)	1.93	1.98	-	-	-
Retained Oversize (Wet basis):	(%)	10% on 19.0mm	7% on 19.0mm	-	-	-
Retained Oversize (Dry basis):	(%)	11% on 19.0mm	8% on 19.0mm	-	-	-
Moisture Content Method - AS1289:		.2.1.1 - Oven	.2.1.1 - Oven	-	-	-
Field Moisture Content:	(%)	10.0	10.5	-	-	-
Adjusted Lab OMC:	(%)	10.0	10.5	-	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	-	-	-
Lab Maximum Dry Density (MDD):	(t/m ³)	1.91	1.90	-	-	-
Adjusted Lab MDD:	(t/m ³)	1.96	1.94	-	-	-
Report & Date of Lab Reference Density Test:		-				

Relative Compaction & Moisture

Moisture Ratio	(%)	96.5	97.5	-	-	-
Moisture Variation	(%)	0.5 Dry of OMC	0.5 Dry of OMC	-	-	-
Density Ratio	(%)	98.5	102.0	-	-	-

Characteristic Values of the Lot. CV calculations derived from Austroads NTR-09 publication

Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	-	-	-	-	-	-
Maximum (%)	-	-	-	-	-	-
Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	95	98.0	2	100.25	2.47	0.905
Maximum (%)	-	-	-	-	-	-

Test Methods Used.

AS 1289 1.2.1 6.4(b) (Disturbed Sampling), AS1289.1.1 (Prep), AS1289.5.8.1 (Nuclear Gauge, Direct Transmission), AS1289.5.4.1 (Dry Density Ratio, Moisture Variation & Ratio), AS1289.5.1.1 (MDD Standard Effort)

Remarks Regarding the Lot.



Accredited for compliance with ISO/IEC 17025 - Testing. The results of the tests included in this document are traceable to Australian/national standards.

NATA Accreditation number: 19902

Approved By:

A. Lenkeit
 Approved Signatory

Workbook: WB100, Rev 3 - 4/10/2017

**ASCT Brisbane South**PO Box 1232 Park Ridge QLD 4125
4/31 Tradelink Road Hillcrest Q 4118**Telephone:** 0437 776 582
E-Mail: brisbane.south@asct.com.au
Mobile: 0437 776 582
A.B.N. 73 193 500 470**Compaction Control Test Report (Nuclear Gauge & Hilf)**

Page: 1 of 1

Client:	See Civil Pty Ltd	Report No:	3
Client Address:	24A Ozone Street, Tweed Heads, NSW, 2486	Report Date:	19/02/2018
Project:	Flagstone Stage 1U	Project No:	338
Component:	Level 1 Fill - Stage 1U	Test Request:	-
Lot Number:	-	ITP/PCP:	N/A

Sample Information & Location

Sample Number:	11526	11527	-	-	-
Field Test Number:	11526	11527	-	-	-
Date - Field Tested:	15/02/2018	15/02/2018	-	-	-
Time - Field Tested:	8:30	8:35	-	-	-
Material Source / Type:	Onsite - General Fill				
Remarks / Notes:					
Control Line:	-	-			
Location/Chainage/Easting:	(m) E:33775.3	E:33797.3	-	-	-
Position/Offset/Northing:	(m) N:73674.6	N:73683.6	-	-	-
Level/Layer/R.L.	RL:45.1	RL:44.6	-	-	-
Layer Depth:	(mm) -	-	-	-	-
Depth Tested:	(mm) 150	150	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m ³)	2.02	2.27	-	-	-
Field Dry Density:	(t/m ³)	1.84	2.08	-	-	-
Retained Oversize (Wet basis):	(%)	3% on 37.5mm	3% on 37.5mm	-	-	-
Material Description:		Sandy Gravelly Clay	Silty Sandy Gravel	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-	-	-
Field Moisture Content:	(%)	10.0	9.0	-	-	-
Adjusted Lab OMC:	(%)	12.1	8.8	-	-	-
Fraction Tested:		Passing 37.5mm	Passing 37.5mm	-	-	-
Lab Max Converted Wet Density:	(t/m ³)	2.05	2.23	-	-	-
Adjusted Lab Max CWD:	(t/m ³)	2.05	2.24	-	-	-
Compactive Effort:		Standard	Standard	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	2.0% Dryer than OMC	At OMC	-	-	-
Moisture Ratio	(%)	81.0	100.0	-	-	-
Density Ratio	(%)	98.5	101.5	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	95	98.1	2	99.90	1.98	0.905
Maximum (%)		-	-	-	-	-
Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)		-	-	-	-	-
Maximum (%)		-	-	-	-	-

Test Methods Used.

AS1289.1.1 (Prep), AS1289.5.4.1 - (Dry Density Ratio, Moisture Variation & Ratio), AS1289.5.7.1 - (Hilf Density/Moisture Ratio (Rapid Method)), AS1289.5.8.1 (Nuclear Gauge, Direct Transmission), AS1289.1.4.2 (Selection of Test Site - Stratified Random), AS 1289 1.2.1 6.4(b), CV calculations derived from Austroads NTR-09 publication

Remarks Regarding the Lot.

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Accredited for compliance with ISO/IEC 17025 - Testing. The results of the tests included in this document are traceable to Australian/national standards.

NATA Accreditation number: 19902

Approved By:

J. McKenna
Approved Signatory

Workbook: WB101, Rev 2 - 20/09/2017

**ASCT Brisbane South**PO Box 1232 Park Ridge QLD 4125
4/31 Tradelink Road Hillcrest Q 4118**Telephone:** 0437 776 582**E-Mail:** brisbane.south@asct.com.au**Mobile:** 0437 776 582**A.B.N.** 73 193 500 470**Compaction Control Test Report (Nuclear Gauge & Hilf)**

Page: 1 of 1

Client: See Civil Pty Ltd
Client Address: 24A Ozone Street, Tweed Heads, NSW, 2486
Project: Flagstone Stage 1U
Component: Stage 1U - Lot Filling
Lot Number: -Report No: 4
Report Date: 20/02/2018
Project No: 338
Test Request: -
ITP/PCP: N/A**Sample Information & Location**

Sample Number:		11491	11492	11493	11494	11495
Field Test Number:		11491	11492	11493	11494	11495
Date - Field Tested:		14/02/2018	-	-	-	-
Time - Field Tested:		14:00	14:10	14:20	14:30	14:40
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E:33866.5	E:33871.9	E:33851.4	E:33852.9	E:33850.6
Position/Offset/Northing:	(m)	N:73717.9	N:73718.2	N:73707.3	N:73709.8	N:73715.9
Level/Layer/R.L.		RL:44.6	RL:45.2	RL:45.3	RL:43.6	RL:43.2
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m ³)	2.08	2.08	2.05	2.09	2.07
Field Dry Density:	(t/m ³)	1.90	1.90	1.88	1.91	1.88
Retained Oversize (Wet basis):	(%)	0% on 19.0mm	0% on 19.0mm	0% on 19.0mm	0% on 19.0mm	0% on 19.0mm
Material Description:		Clayey Sand	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven
Field Moisture Content:	(%)	9.0	9.5	9.5	9.5	10.5
Adjusted Lab OMC:	(%)	10.6	10.6	10.5	10.8	11.8
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	Passing 19.0mm
Lab Max Converted Wet Density:	(t/m ³)	2.08	2.07	2.06	2.09	2.09
Adjusted Lab Max CWD:	(t/m ³)	2.08	2.07	2.06	2.09	2.09
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	1.5% Drier than OMC	1.0% Drier than OMC	1% Drier than OMC	1.5% Drier than OMC	1.5% Drier than OMC
Moisture Ratio	(%)	85.5	90.5	90.5	86.0	88.0
Density Ratio	(%)	100.0	100.5	99.5	100.0	99.5

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	95	99.5	5	99.78	0.42	0.572
Maximum (%)		-	-	-	-	-
Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)		-	-	-	-	-
Maximum (%)		-	-	-	-	-

Test Methods Used.

AS1289.1.1 (Prep), AS1289.5.4.1 - (Dry Density Ratio, Moisture Variation & Ratio), AS1289.5.7.1 - (Hilf Density/Moisture Ratio (Rapid Method)), AS1289.5.8.1 (Nuclear Gauge, Direct Transmission), AS1289.1.4.2 (Selection of Test Site - Stratified Random), AS 1289 1.2.1 6.4(b), CV calculations derived from Austroads NTR-09 publication

Remarks Regarding the Lot.

Accredited for compliance with ISO/IEC 17025 - Testing. The results of the tests included in this document are traceable to Australian/national standards.

NATA Accreditation number: 19902

Approved By:

A. Lenkeit
Approved Signatory

Workbook: WB101, Rev 2 - 20/09/2017

**ASCT Brisbane South**PO Box 1232 Park Ridge QLD 4125
4/31 Tradelink Road Hillcrest Q 4118**Telephone:** 0437 776 582**E-Mail:** brisbane.south@asct.com.au**Mobile:** 0437 776 582**A.B.N.** 73 193 500 470**Compaction Control Test Report (Nuclear Gauge & Hilf)**

Page: 1 of 1

Client:	See Civil Pty Ltd	Report No:	5
Client Address:	24A Ozone Street, Tweed Heads, NSW, 2486	Report Date:	21/02/2018
Project:	Flagstone Stage 1U	Project No:	338
Component:	Level 1 - Lot Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	N/A

Sample Information & Location

Sample Number:	11577	11578	11579	11580	-
Field Test Number:	11577	11578	11579	11580	-
Date - Field Tested:	16/02/2018	16/02/2018	16/02/2018	16/02/2018	-
Time - Field Tested:	10:05	10:10	10:20	10:25	-
Material Source / Type:	Onsite - General Fill				
Remarks / Notes:					
Control Line:	Lots 639-644	Lots 639-644	Lots 639-644	Lots 639-644	
Location/Chainage/Easting: (m)	E: 33793.4	E: 33794.1	E: 33798.9	E: 33801.1	-
Position/Offset/Northing: (m)	N: 73485.9	N: 73491.0	N: 73514.1	N: 73527.9	-
Level/Layer/R.L.	RL: 60.6	RL: 59.9	RL: 58.7	RL: 57.8	-
Layer Depth: (mm)	-	-	-	-	-
Depth Tested: (mm)	150	150	150	150	-

Field & Laboratory Results

Field Wet Density: (t/m ³)	2.10	2.21	2.16	2.19	-
Field Dry Density: (t/m ³)	1.94	2.06	1.97	1.99	-
Retained Oversize (Wet basis): (%)	7% on 37.5mm	17% on 37.5mm	6% on 19.0mm	7% on 19.0mm	-
Material Description:	-	-	-	-	-
Moisture Content Method:	AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-
Field Moisture Content: (%)	8.0	7.5	9.5	9.5	-
Adjusted Lab OMC: (%)	8.5	6.4	10.1	10.2	-
Fraction Tested:	Passing 37.5mm	Passing 37.5mm	Passing 19.0mm	Passing 19.0mm	-
Lab Max Converted Wet Density: (t/m ³)	2.20	2.24	2.15	2.19	-
Adjusted Lab Max CWD: (t/m ³)	2.21	2.27	2.17	2.21	-
Compactive Effort:	Standard	Standard	Standard	Standard	-

Relative Compaction & Moisture

Moisture Variation (%)	0.5% Dryer than OMC	1% Wetter than OMC	0.5% Dryer than OMC	0.5% Dryer than OMC	-
Moisture Ratio (%)	96.0	115.0	96.5	95.5	-
Density Ratio (%)	95.0	97.0	99.5	99.0	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	95	96.4	4	97.73	2.05	0.640
Maximum (%)		-	-	-	-	-
Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)		-	-	-	-	-
Maximum (%)		-	-	-	-	-

Test Methods Used.

AS1289.1.1 (Prep), AS1289.5.4.1 - (Dry Density Ratio, Moisture Variation & Ratio), AS1289.5.7.1 - (Hilf Density/Moisture Ratio (Rapid Method)), AS1289.5.8.1 (Nuclear Gauge, Direct Transmission), AS1289.1.4.2 (Selection of Test Site - Stratified Random), AS 1289 1.2.1 6.4(b), CV calculations derived from Austroads NTR-09 publication

Remarks Regarding the Lot.

Accredited for compliance with ISO/IEC 17025 - Testing. The results of the tests included in this document are traceable to Australian/national standards.

NATA Accreditation number: 19902

Approved By:

A. Lenkeit
Approved Signatory

Workbook: WB101, Rev 2 - 20/09/2017



ASCT Brisbane South
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A.B.N. 73 193 500 470

Compaction Control Test Report (Nuclear Gauge & Hilf)

Page: 1 of 1

Client:	See Civil Pty Ltd	Report No:	6
Client Address:	24A Ozone Street, Tweed Heads, NSW, 2486	Report Date:	22/02/2018
Project:	Flagstone Stage 1U	Project No:	338
Component:	Level 1 - Lot Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	N/A

Sample Information & Location

Sample Number:	11588	11589	-	-	-
Field Test Number:	11588	11589	-	-	-
Date - Field Tested:	17/02/2018	17/02/2018	-	-	-
Time - Field Tested:	8:30	8:35	-	-	-
Material Source / Type:	Onsite - General Fill				
Remarks / Notes:					
Control Line:	Lots 645-646	Lots 645-646			
Location/Chainage/Easting: (m)	E: 33797.3	E: 33798.3	-	-	-
Position/Offset/Northing: (m)	N: 73542.1	N: 73553.4	-	-	-
Level/Layer/R.L.	RL: 56.9	RL: 55.8	-	-	-
Layer Depth: (mm)	150	150	-	-	-
Depth Tested: (mm)	150	150	-	-	-

Field & Laboratory Results

Field Wet Density: (t/m ³)	2.12	2.12	-	-	-
Field Dry Density: (t/m ³)	1.93	1.94	-	-	-
Retained Oversize (Wet basis): (%)	9% on 37.5mm	7% on 37.5mm	-	-	-
Material Description:	Silty Gravelly Clay	Silty Gravelly Clay	-	-	-
Moisture Content Method:	AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-	-	-
Field Moisture Content: (%)	9.5	9.5	-	-	-
Adjusted Lab OMC: (%)	10.1	9.2	-	-	-
Fraction Tested:	Passing 37.5mm	Passing 37.5mm	-	-	-
Lab Max Converted Wet Density: (t/m ³)	2.18	2.19	-	-	-
Adjusted Lab Max CWD: (t/m ³)	2.20	2.20	-	-	-
Compactive Effort:	Standard	Standard	-	-	-

Relative Compaction & Moisture

Moisture Variation (%)	0.5% Drier than OMC	At OMC	-	-	-
Moisture Ratio (%)	96.5	102.5	-	-	-
Density Ratio (%)	96.5	96.0	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	95	96.1	2	96.20	0.14	0.905
Maximum (%)		-	-	-	-	-
Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)		-	-	-	-	-
Maximum (%)		-	-	-	-	-

Test Methods Used.

AS1289.1.1 (Prep), AS1289.5.4.1 - (Dry Density Ratio, Moisture Variation & Ratio), AS1289.5.7.1 - (Hilf Density/Moisture Ratio (Rapid Method)), AS1289.5.8.1 (Nuclear Gauge, Direct Transmission), AS1289.1.4.2 (Selection of Test Site - Stratified Random), AS 1289 1.2.1 6.4(b), CV calculations derived from Austroads NTR-09 publication

Remarks Regarding the Lot.



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NATA Accreditation number: 19902

Approved By:

A. Lenkeit
 Approved Signatory

Workbook: WB101, Rev 2 - 20/09/2017

**ASCT Brisbane South**PO Box 1232 Park Ridge QLD 4125
4/31 Tradelink Road Hillcrest Q 4118**Telephone:** 0437 776 582**E-Mail:** brisbane.south@asct.com.au**Mobile:** 0437 776 582**A.B.N.** 73 193 500 470**Compaction Control Test Report (Nuclear Gauge & Hilf)**

Page: 1 of 2

Client: See Civil Pty Ltd
Client Address: 24A Ozone Street, Tweed Heads, NSW, 2486
Project: Flagstone Stage 1U
Component: Level 1 - Earthworks
Lot Number: -Report No: 7
Report Date: 23/02/2018
Project No: 338
Test Request: -
ITP/PCP: N/A**Sample Information & Location**

Sample Number:		11690	11691	11692	11693	11694
Field Test Number:		11690	11691	11692	11693	11694
Date - Field Tested:		20/02/2018	20/02/2018	20/02/2018	20/02/2018	20/02/2018
Time - Field Tested:		7:30	7:45	10:00	10:30	14:00
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E:33815.4	E:33797.1	E:33707.2	E:33737.5	E:33746.6
Position/Offset/Northing:	(m)	N: 73696.1	N: 73694.7	N: 73553.4	N: 73546.1	N: 73645.2
Level/Layer/R.L.		RL:45.2	RL:44.9	RL:53.9	RL:54.1	RL:47.0
Layer Depth:	(mm)	150	150	150	150	150
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m ³)	2.24	2.24	2.11	2.12	2.04
Field Dry Density:	(t/m ³)	2.04	2.04	1.93	1.92	1.86
Retained Oversize (Wet basis):	(%)	6% on 19.0mm	6% on 19.0mm	0% on 19.0mm	0% on 19.0mm	0% on 19.0mm
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven
Field Moisture Content:	(%)	10.0	9.5	9.5	10.0	9.5
Adjusted Lab OMC:	(%)	11.2	11.7	11.2	11.0	10.1
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	Passing 19.0mm
Lab Max Converted Wet Density:	(t/m ³)	2.21	2.19	2.14	2.20	2.12
Adjusted Lab Max CWD:	(t/m ³)	2.23	2.20	2.14	2.20	2.12
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	1.0% Dryer than OMC	2.0% Dryer than OMC	2% Dryer than OMC	1% Dryer than OMC	0.5% Dryer than OMC
Moisture Ratio	(%)	88.5	83.0	84.5	93.0	93.5
Density Ratio	(%)	100.5	101.5	98.5	96.5	96.0

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	95	97.0	6	98.22	2.34	0.523
Maximum (%)		-	-	-	-	-
Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)		-	-	-	-	-
Maximum (%)		-	-	-	-	-

Test Methods Used.

AS1289.1.1 (Prep), AS1289.5.4.1 - (Dry Density Ratio, Moisture Variation & Ratio), AS1289.5.7.1 - (Hilf Density/Moisture Ratio (Rapid Method)), AS1289.5.8.1 (Nuclear Gauge, Direct Transmission), AS1289.1.4.2 (Selection of Test Site - Stratified Random), AS 1289 1.2.1 6.4(b), CV calculations derived from Austroads NTR-09 publication

Remarks Regarding the Lot.

Accredited for compliance with ISO/IEC 17025 - Testing. The results of the tests included in this document are traceable to Australian/national standards.

NATA Accreditation number: 19902

Approved By:

A. Lenkeit
Approved Signatory

Workbook: WB101, Rev 2 - 20/09/2017



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A.B.N. 73 193 500 470

Compaction Control Test Report (Nuclear Gauge & Hilf)

Page: 2 of 2

Client: See Civil Pty Ltd
 Client Address: 24A Ozone Street, Tweed Heads, NSW, 2486
 Project: Flagstone Stage 1U
 Component: Level 1 - Earthworks
 Lot Number: -

Report No: 7
 Report Date: 23/02/2018
 Project No: 338
 Test Request: -
 ITP/PCP: N/A

Sample Information & Location

Sample Number:	11695	-	-	-	-
Field Test Number:	11695	-	-	-	-
Date - Field Tested:	20/02/2018	-	-	-	-
Time - Field Tested:	14:10	-	-	-	-
Material Source / Type:	Onsite - General Fill				
Remarks / Notes:					
Control Line:	-	-	-	-	-
Location/Chainage/Easting: (m)	E:33766.8	-	-	-	-
Position/Offset/Northing: (m)	N:33766.8	-	-	-	-
Level/Layer/R.L.	RL:46.3	-	-	-	-
Layer Depth: (mm)	150	-	-	-	-
Depth Tested: (mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density: (t/m ³)	2.05	-	-	-	-
Field Dry Density: (t/m ³)	1.83	-	-	-	-
Retained Oversize (Wet basis): (%)	0% on 19.0mm	-	-	-	-
Material Description:	-	-	-	-	-
Moisture Content Method:	AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content: (%)	12.0	-	-	-	-
Adjusted Lab OMC: (%)	12.0	-	-	-	-
Fraction Tested:	Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density: (t/m ³)	2.12	-	-	-	-
Adjusted Lab Max CWD: (t/m ³)	2.12	-	-	-	-
Compactive Effort:	Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation (%)	At OMC	-	-	-	-
Moisture Ratio (%)	99.0	-	-	-	-
Density Ratio (%)	96.5	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	95	97.0	6	98.22	2.34	0.523
Maximum (%)		-	-	-	-	-
Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)		-	-	-	-	-
Maximum (%)		-	-	-	-	-

Test Methods Used.

AS1289.1.1 (Prep), AS1289.5.4.1 - (Dry Density Ratio, Moisture Variation & Ratio), AS1289.5.7.1 - (Hilf Density/Moisture Ratio (Rapid Method)), AS1289.5.8.1 (Nuclear Gauge, Direct Transmission), AS1289.1.4.2 (Selection of Test Site - Stratified Random), AS 1289 1.2.1 6.4(b), CV calculations derived from Austroads NTR-09 publication

Remarks Regarding the Lot.



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NATA Accreditation number: 19902



ASCT Brisbane South
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A.B.N. 73 193 500 470

Compaction Control Test Report (Nuclear Gauge & Hilf)

Page: 1 of 1

Client:	See Civil Pty Ltd	Report No:	8
Client Address:	24A Ozone Street, Tweed Heads, NSW, 2486	Report Date:	23/02/2018
Project:	Flagstone Stage 1U	Project No:	338
Component:	Stage 1U - Level 1	Test Request:	-
Lot Number:	-	ITP/PCP:	N/A

Sample Information & Location

Sample Number:		11616	-	-	-	-
Field Test Number:		11616	-	-	-	-
Date - Field Tested:		19/02/2018	-	-	-	-
Time - Field Tested:		10:30	-	-	-	-
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		-				
Location/Chainage/Easting:	(m)	N:73678.2	-	-	-	-
Position/Offset/Northing:	(m)	E: 33783.4	-	-	-	-
Level/Layer/R.L.		RL: 45.6	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m ³)	2.17	-	-	-	-
Field Dry Density:	(t/m ³)	1.93	-	-	-	-
Retained Oversize (Wet basis):	(%)	11% on 37.5mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	12.0	-	-	-	-
Adjusted Lab OMC:	(%)	12.6	-	-	-	-
Fraction Tested:		Passing 37.5mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m ³)	2.22	-	-	-	-
Adjusted Lab Max CWD:	(t/m ³)	2.25	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	0.5% Drier than OMC	-	-	-	-
Moisture Ratio	(%)	96.5	-	-	-	-
Density Ratio	(%)	96.5	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)		-	-	-	-	-
Maximum (%)		-	-	-	-	-
Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)		-	-	-	-	-
Maximum (%)		-	-	-	-	-

Test Methods Used.

AS1289.1.1 (Prep), AS1289.5.4.1 - (Dry Density Ratio, Moisture Variation & Ratio), AS1289.5.7.1 - (Hilf Density/Moisture Ratio (Rapid Method)), AS1289.5.8.1 (Nuclear Gauge, Direct Transmission), AS1289.1.4.2 (Selection of Test Site - Stratified Random), AS 1289 1.2.1 6.4(b), CV calculations derived from Austroads NTR-09 publication

Remarks Regarding the Lot.



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Approved By:

A. Lenkeit
 Approved Signatory

Workbook: WB101, Rev 2 - 20/09/2017



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Compaction Control Test Report (Nuclear Gauge & Hilf)

Page: 1 of 1

Client:	See Civil Pty Ltd	Report No:	9
Client Address:	24A Ozone Street, Tweed Heads, NSW, 2486	Report Date:	28/02/2018
Project:	Flagstone Stage 1U	Project No:	338
Component:	Level 1 - Lot Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	N/A

Sample Information & Location

Sample Number:		11719	11720	11721	-	-
Field Test Number:		11719	11720	11721	-	-
Date - Field Tested:		21/02/2018	21/02/2018	21/02/2018	-	-
Time - Field Tested:		-	-	-	-	-
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		-	-	-		
Location/Chainage/Easting:	(m)	E:33845.6	E:33772.4	E:33757.9	-	-
Position/Offset/Northing:	(m)	N:73707.1	N:73670.9	N:73653.5	-	-
Level/Layer/R.L.		RL:45.9	RL:46.9	RL:47.3	-	-
Layer Depth:	(mm)	150	150	150	-	-
Depth Tested:	(mm)	150	150	150	-	-

Field & Laboratory Results

Field Wet Density:	(t/m ³)	2.15	2.16	2.02	-	-
Field Dry Density:	(t/m ³)	1.94	1.97	1.85	-	-
Retained Oversize (Wet basis):	(%)	0% on 19.0mm	0% on 19.0mm	0% on 19.0mm	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-	-
Field Moisture Content:	(%)	10.5	9.5	9.0	-	-
Adjusted Lab OMC:	(%)	11.9	11.3	11.0	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-	-
Lab Max Converted Wet Density:	(t/m ³)	2.14	2.13	2.05	-	-
Adjusted Lab Max CWD:	(t/m ³)	2.14	2.13	2.05	-	-
Compactive Effort:		Standard	Standard	Standard	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	1.5% Dryer than OMC	2.0% Dryer than OMC	2% Dryer than OMC	-	-
Moisture Ratio	(%)	89.0	84.5	83.0	-	-
Density Ratio	(%)	100.5	101.5	98.5	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	95	99.0	3	100.20	1.61	0.739
Maximum (%)		-	-	-	-	-
Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)		-	-	-	-	-
Maximum (%)		-	-	-	-	-

Test Methods Used.

AS1289.1.1 (Prep), AS1289.5.4.1 - (Dry Density Ratio, Moisture Variation & Ratio), AS1289.5.7.1 - (Hilf Density/Moisture Ratio (Rapid Method)), AS1289.5.8.1 (Nuclear Gauge, Direct Transmission), AS1289.1.4.2 (Selection of Test Site - Stratified Random), AS 1289 1.2.1 6.4(b), CV calculations derived from Austroads NTR-09 publication

Remarks Regarding the Lot.



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Compaction Control Test Report (Nuclear Gauge & Hilf)

Page: 1 of 1

Client:	See Civil Pty Ltd	Report No:	10
Client Address:	24A Ozone Street, Tweed Heads, NSW, 2486	Report Date:	28/02/2018
Project:	Flagstone Stage 1U	Project No:	338
Component:	Level 1 - Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	N/A

Sample Information & Location

Sample Number:		11733	11734	-	-	-
Field Test Number:		11733	11734	-	-	-
Date - Field Tested:		22/02/2018	22/02/2018	-	-	-
Time - Field Tested:		14:00	14:10	-	-	-
Material Source / Type:		Onsite - Level 1 Fill				
Remarks / Notes:						
Control Line:		Fill Area	Fill Area			
Location/Chainage/Easting:	(m)	E:33749.2	E:33736.7	-	-	-
Position/Offset/Northing:	(m)	N:73568.6	N:73593.6	-	-	-
Level/Layer/R.L.		RL:52.2	RL:50.7	-	-	-
Layer Depth:	(mm)	150	150	-	-	-
Depth Tested:	(mm)	150	150	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m ³)	2.15	2.02	-	-	-
Field Dry Density:	(t/m ³)	1.95	1.85	-	-	-
Retained Oversize (Wet basis):	(%)	4% on 19.0mm	5% on 19.0mm	-	-	-
Material Description:		Gravelly Clayey Sand	Gravelly Clayey Sand	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-	-	-
Field Moisture Content:	(%)	10.0	9.5	-	-	-
Adjusted Lab OMC:	(%)	11.9	11.2	-	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	-	-	-
Lab Max Converted Wet Density:	(t/m ³)	2.11	2.09	-	-	-
Adjusted Lab Max CWD:	(t/m ³)	2.13	2.11	-	-	-
Compactive Effort:		Standard	Standard	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	2.0% Dryer than OMC	1.5% Dryer than OMC	-	-	-
Moisture Ratio	(%)	82.5	85.5	-	-	-
Density Ratio	(%)	101.0	96.0	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	95	95.3	2	98.45	3.46	0.905
Maximum (%)		-	-	-	-	-
Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)		-	-	-	-	-
Maximum (%)		-	-	-	-	-

Test Methods Used.

AS1289.1.1 (Prep), AS1289.5.4.1 - (Dry Density Ratio, Moisture Variation & Ratio), AS1289.5.7.1 - (Hilf Density/Moisture Ratio (Rapid Method)), AS1289.5.8.1 (Nuclear Gauge, Direct Transmission), AS1289.1.4.2 (Selection of Test Site - Stratified Random), AS 1289 1.2.1 6.4(b), CV calculations derived from Austroads NTR-09 publication

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Page: 1 of 1

Client:	See Civil Pty Ltd	Report No:	13
Client Address:	24A Ozone Street, Tweed Heads, NSW, 2486	Report Date:	5/03/2018
Project:	Flagstone Stage 1U	Project No:	338
Component:	Level 1 - Geotechnical Supervision	Test Request:	-
Lot Number:	-	ITP/PCP:	N/A

Sample Information & Location

Sample Number:		11824	11825	-	-	-
Field Test Number:		11824	11825	-	-	-
Date - Field Tested:		1/03/2018	1/03/2018	-	-	-
Time - Field Tested:		8:00	8:10	-	-	-
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		Bulk Earthworks	Bulk Earthworks			
Location/Chainage/Easting:	(m)	E: 33678.8	E: 33762.9	-	-	-
Position/Offset/Northing:	(m)	N: 73568.9	N: 73606.3	-	-	-
Level/Layer/R.L.		RL: 50.7	RL: 48.3	-	-	-
Layer Depth:	(mm)	200	200	-	-	-
Depth Tested:	(mm)	150	150	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m ³)	2.09	2.02	-	-	-
Field Dry Density:	(t/m ³)	1.88	1.82	-	-	-
Retained Oversize (Wet basis):	(%)	4% on 19.0mm	10% on 19.0mm	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-	-	-
Field Moisture Content:	(%)	11.0	11.0	-	-	-
Adjusted Lab OMC:	(%)	11.7	13.4	-	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	-	-	-
Lab Max Converted Wet Density:	(t/m ³)	2.07	2.07	-	-	-
Adjusted Lab Max CWD:	(t/m ³)	2.07	2.09	-	-	-
Compactive Effort:		Standard	Standard	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	1.0% Dryer than OMC	2.0% Dryer than OMC	-	-	-
Moisture Ratio	(%)	93.5	83.5	-	-	-
Density Ratio	(%)	100.5	96.5	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	95	96.1	2	98.70	2.83	0.905
Maximum (%)		-	-	-	-	-
Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)		-	-	-	-	-
Maximum (%)		-	-	-	-	-

Test Methods Used.

AS1289.1.1 (Prep), AS1289.5.4.1 - (Dry Density Ratio, Moisture Variation & Ratio), AS1289.5.7.1 - (Hilf Density/Moisture Ratio (Rapid Method)), AS1289.5.8.1 (Nuclear Gauge, Direct Transmission), AS1289.1.4.2 (Selection of Test Site - Stratified Random), AS 1289 1.2.1 6.4(b), CV calculations derived from Austroads NTR-09 publication

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Page: 1 of 1

Client:	See Civil Pty Ltd	Report No:	48
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	21/05/2018
Project:	Flagstone Stage 1U	Project No:	338
Component:	Fill Below Subgrade - Elizabeth Drive	Test Request:	-
Lot Number:	-	ITP/PCP:	N/A

Sample Information & Location

Sample Number:		13991	13992	-	-	-
Field Test Number:		13991	13992	-	-	-
Date - Field Tested:		12/05/2018	12/05/2018	-	-	-
Time - Field Tested:		11:00	11:10	-	-	-
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		-	-			
Location/Chainage/Easting:	(m)	E:33785.2	E:33801.4	-	-	-
Position/Offset/Northing:	(m)	N:73682.6	N:73684.9	-	-	-
Level/Layer/R.L.		RL:46.6	RL:46.3	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m ³)	2.12	2.09	-	-	-
Field Dry Density:	(t/m ³)	1.92	1.88	-	-	-
Retained Oversize (Wet basis):	(%)	0% on 19.0mm	0% on 19.0mm	-	-	-
Material Description:		Sandstone	Sandstone	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-	-	-
Field Moisture Content:	(%)	10.5	11.0	-	-	-
Adjusted Lab OMC:	(%)	11.7	12.6	-	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	-	-	-
Lab Max Converted Wet Density:	(t/m ³)	2.11	2.08	-	-	-
Adjusted Lab Max CWD:	(t/m ³)	2.11	2.08	-	-	-
Compactive Effort:		Standard	Standard	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	1.5% Drier than OMC	1.5% Drier than OMC	-	-	-
Moisture Ratio	(%)	88.0	87.0	-	-	-
Density Ratio	(%)	100.5	100.5	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	100	100.4	2	100.45	0.07	0.905
Maximum (%)		-	-	-	-	-
Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)		-	-	-	-	-
Maximum (%)		-	-	-	-	-

Test Methods Used.

AS1289.1.1 (Prep), AS1289.5.4.1 - (Dry Density Ratio, Moisture Variation & Ratio), AS1289.5.7.1 - (Hilf Density/Moisture Ratio (Rapid Method)), AS1289.5.8.1 (Nuclear Gauge, Direct Transmission), AS1289.1.4.2 (Selection of Test Site - Stratified Random), AS 1289 1.2.1 6.4(b), CV calculations derived from Austroads NTR-09 publication

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Page: 1 of 1

Client:	See Civil Pty Ltd	Report No:	59
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	9/05/2018
Project:	Flagstone Stage 1U	Project No:	338
Component:	Replacement Fill under Pit 24.1	Test Request:	-
Lot Number:	-	ITP/PCP:	N/A

Sample Information & Location

Sample Number:		13754	-	-	-	-
Field Test Number:		13754	-	-	-	-
Date - Field Tested:		3/05/2018	-	-	-	-
Time - Field Tested:		13:30	-	-	-	-
Material Source / Type:		Onsite - Gravelly Sandstone				
Remarks / Notes:						
Control Line:		-				
Location/Chainage/Easting:	(m)	E:33840.7	-	-	-	-
Position/Offset/Northing:	(m)	N:73689.4	-	-	-	-
Level/Layer/R.L.		RL:43.5	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m ³)	2.05	-	-	-	-
Field Dry Density:	(t/m ³)	1.88	-	-	-	-
Retained Oversize (Wet basis):	(%)	0% on 19.0mm	-	-	-	-
Material Description:		Clayey Sandstone	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	9.0	-	-	-	-
Adjusted Lab OMC:	(%)	11.1	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m ³)	2.06	-	-	-	-
Adjusted Lab Max CWD:	(t/m ³)	2.06	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	2.0% Dryer than OMC	-	-	-	-
Moisture Ratio	(%)	80.5	-	-	-	-
Density Ratio	(%)	99.5	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)		-	-	-	-	-
Maximum (%)		-	-	-	-	-
Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)		-	-	-	-	-
Maximum (%)		-	-	-	-	-

Test Methods Used.

AS1289.1.1 (Prep), AS1289.5.4.1 - (Dry Density Ratio, Moisture Variation & Ratio), AS1289.5.7.1 - (Hilf Density/Moisture Ratio (Rapid Method)), AS1289.5.8.1 (Nuclear Gauge, Direct Transmission), AS1289.1.4.2 (Selection of Test Site - Stratified Random), AS 1289 1.2.1 6.4(b), CV calculations derived from Austroads NTR-09 publication

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Page: 1 of 1

Client:	See Civil Pty Ltd	Report No:	60
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	10/05/2018
Project:	Flagstone Stage 1U	Project No:	338
Component:	Replacement Fill under Pit 24.1	Test Request:	-
Lot Number:	-	ITP/PCP:	N/A

Sample Information & Location

Sample Number:		13820	13821	-	-	-
Field Test Number:		13820	13821	-	-	-
Date - Field Tested:		4/05/2018	4/05/2018	-	-	-
Time - Field Tested:		8:00	8:10	-	-	-
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		-	-			
Location/Chainage/Easting:	(m)	E:33840.2	E:33845.1	-	-	-
Position/Offset/Northing:	(m)	N:73688.7	N:73689.4	-	-	-
Level/Layer/R.L.		RL:44.8	RL:45.1	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m ³)	2.07	2.10	-	-	-
Field Dry Density:	(t/m ³)	1.88	1.89	-	-	-
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	4% on 19.0mm	-	-	-
Material Description:		Gravelly Clayey Sandstone	Gravelly Clayey Sandstone	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-	-	-
Field Moisture Content:	(%)	10.5	10.5	-	-	-
Adjusted Lab OMC:	(%)	12.2	12.3	-	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	-	-	-
Lab Max Converted Wet Density:	(t/m ³)	2.05	2.15	-	-	-
Adjusted Lab Max CWD:	(t/m ³)	2.05	2.16	-	-	-
Compactive Effort:		Standard	Standard	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	2.0% Drier than OMC	1.5% Drier than OMC	-	-	-
Moisture Ratio	(%)	84.5	85.5	-	-	-
Density Ratio	(%)	101.0	97.0	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	95	96.5	2	98.90	2.69	0.905
Maximum (%)		-	-	-	-	-
Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)		-	-	-	-	-
Maximum (%)		-	-	-	-	-

Test Methods Used.

AS1289.1.1 (Prep), AS1289.5.4.1 - (Dry Density Ratio, Moisture Variation & Ratio), AS1289.5.7.1 - (Hilf Density/Moisture Ratio (Rapid Method)), AS1289.5.8.1 (Nuclear Gauge, Direct Transmission), AS1289.1.4.2 (Selection of Test Site - Stratified Random), AS 1289 1.2.1 6.4(b), CV calculations derived from Austroads NTR-09 publication

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Appendix C

Individual Lot Reports



ASCT Brisbane South

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Park Ridge, QLD 4125

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ABN: 73 193 500 470

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 560

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 560 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **560** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 561

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 561 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **561** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 591

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 591 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **591** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 592

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 592 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **592** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 593

SEE Civil Pty Ltd
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CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 593 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **593** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 594

SEE Civil Pty Ltd
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Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 594 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **594** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 595

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 595 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **595** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 612

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 612 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **612** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 613

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 613 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **613** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 617

SEE Civil Pty Ltd
108 Siganto Drive
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CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 617 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **617** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 618

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 618 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **618** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 619

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 619 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **619** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 620

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 620 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **620** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 621

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 621 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **621** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 622

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 622 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **622** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 623

SEE Civil Pty Ltd
108 Siganto Drive
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CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 623 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **623** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 632

SEE Civil Pty Ltd
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CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 632 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **632** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 633

SEE Civil Pty Ltd
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Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 633 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **633** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 634

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 634 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **634** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 636

SEE Civil Pty Ltd
108 Siganto Drive
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CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 636 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **636** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 637

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 637 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **637** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 638

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 638 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **638** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 639

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 639 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **639** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 640

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 640 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **640** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 641

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 641 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **641** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 642

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 642 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **642** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

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Ref No: 338_SEE Civil_Level 1_Lot 643

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING**LOT 643 – FLAGSTONE CITY STAGE 1U**

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **643** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 644

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 644 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **644** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 645

SEE Civil Pty Ltd
108 Siganto Drive
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CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 645 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 '*Guidelines on earthworks for commercial and residential developments*'.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **645** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 '*Residential Slabs & Footings*'.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 646

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 646 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **646** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

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21st May 2018

Ref No: 338_SEE Civil_Level 1_Lot 647

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 647 – FLAGSTONE CITY STAGE 1U

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **647** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

Yours faithfully

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Ref No: 338_SEE Civil_Level 1_Lot 90005

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING**LOT 90005 – FLAGSTONE CITY STAGE 1U**

Australian Soil and Concrete Testing was commissioned by Civcorp Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'*.

Fill was placed on the allotment between 12/02/18 and 03/05/18.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **90005** is considered to have been carried out in general accordance with AS3798-2007 and is considered to be Controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

Full details of the inspection and testing conducted is included in our report ref no: **338_SEE Civil_Level 1**
Dated 21st May 2018.

Please do not hesitate to contact me if you have any queries.

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