25th May 2022

Ref No: 1053_SEE Civil_Level 1_Flagstone City Stage 5I

REPORT ON LEVEL 1

EARTHWORKS INSPECTION AND TESTING

PROJECT: **FLAGSTONE CITY STAGE 5I**

CONTRACTOR: **SEE CIVIL PTY LTD**

ASCT Brisbane South, 4/31 Tradelink Road Hillcrest QLD 4118 Ph: 07 3800 7314 email: Brisbane.south@asct.com.au

TABLE OF CONTENTS

1 INTRODUCTION

1.0 GENERAL

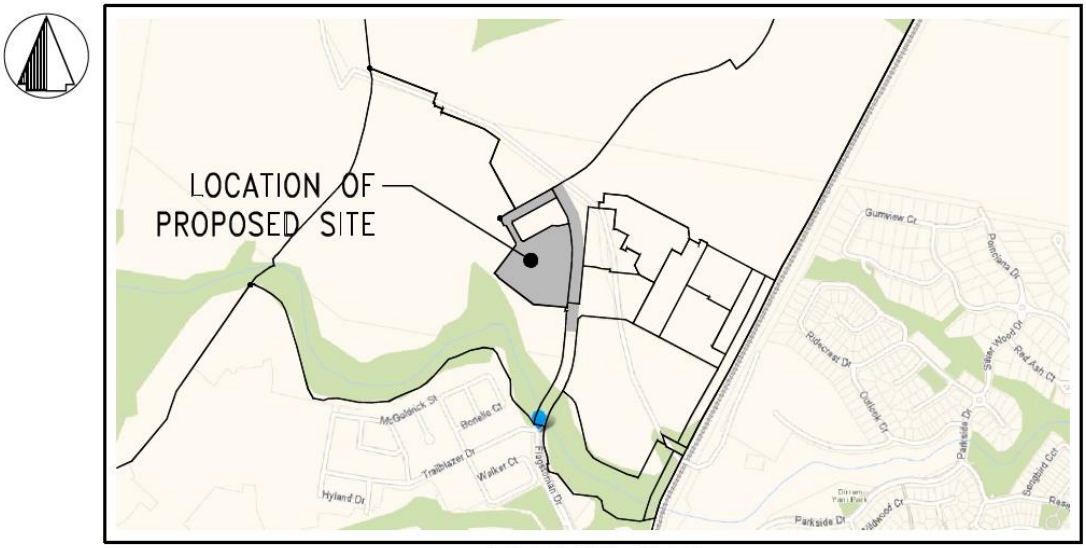
Australian Soil and Concrete Testing was commissioned by SEE Civil Pty Ltd to provide earthworks inspection and testing services on a 'Level 1' basis in accordance with Clause 8.2 of AS 3798-2007 *'Guidelines on Earthworks for Commercial and Residential Developments'.*

The fill placed on the development between 9/09/2021 and 16/11/2021 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 5I site is a 58 lot residential subdivision.

Drawing showing the Site Location.



LOCALITY PLAN
NOT TO SCALE

2 WORKS AND SPECIFICATIONS

The earthworks generally comprised of Level 1 filling placed across the site and leveling and trimming of allotments. 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).

3 PREVIOUS EARTHWORKS

Earthworks have previously been carried out at the site. The previous earthworks were carried out between the 03/02/2020 and 21/05/2021. The Level 1 inspection and testing services were carried out by ASCT Brisbane South and is detailed our report, **Reference No: 664_SEE Civil_Flagstone City Stage 2 Bulk Earthworks_Level 1** dated 24th June 2021.

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
- Adequate benching into existing slopes/batters

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

Test No	Test Date	Test Location			Test Level	Density Ratio %
55259	9/09/2021	Level 1 Fill	E: 34358.79	N: 74118.375	RL: 45.020	101.0
55260	9/09/2021	Level 1 Fill	E: 34343.046	N: 74120.152	RL: 44.572	100.5
55261	9/09/2021	Level 1 Fill	E: 34334.216	N: 74110.989	RL: 44.991	100.0
55262	9/09/2021	Level 1 Fill	E: 34321.513	N: 74114.826	RL: 44.956	98.5
55263	9/09/2021	Level 1 Fill	E: 35070.496	N: 79189.990	RL: 52.248	100.0
55264	9/09/2021	Level 1 Fill	E: 35043.505	N: 74188.002	RL: 52.814	99.0
55265	9/09/2021	Level 1 Fill	E: 35019.486	N: 74183.864	RL: 53.310	100.0
55266	9/09/2021	Level 1 Fill	E: 35000.699	N: 74179.083	RL: 53.739	98.0
55350	10/09/2021	Level 1 Fill	E: 34359.750	N: 74104.181	RL: 44.459	97.0
55351	10/09/2021	Level 1 Fill	E: 34346.037	N: 74098.094	RL: 44.449	97.5
55352	10/09/2021	Level 1 Fill	E: 34328.412	N: 74089.892	RL: 44.343	96.5
55353	10/09/2021	Level 1 Fill	E: 34337.743	N: 74081.918	RL: 44.318	97.0
58180	15/11/2021	Level 1 Fill	From North East Corner	7m South, 12m West	Finish Level	97.0
58181	15/11/2021	Level 1 Fill	From North East Corner	10m South, 15m West	Finish Level	97.5
58182	15/11/2021	Level 1 Fill	From North East Corner	3m South, 5m West	Finish Level	97.5
58183	15/11/2021	Level 1 Fill	From North East Corner	12m South, 17m West	Finish Level	97.5
58184	15/11/2021	Level 1 Fill	From North East Corner	5m South, 10m West	Finish Level	97.0

No. of Tests: 17 **Mean: 98.3 %**

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 9/09/2021 and 16/11/2021 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.

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

Yours faithfully

Jason Mckenna
Laboratory Manager
ASCT Brisbane South

Appendix A
Test Reports

AUSTRALIAN SOIL AND CONCRETE TESTING
A.S.C.T.

ASCT Brisbane South
Postal: PO Box 1232 Park Ridge QLD 4125
Laboratory: 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. 28 608 830 306

Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**1**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	21/09/2021
Project:	Flagstone Stage 5 Bulk Earthworks	Project No:	1053
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	-

Sample Information & Location

Sample Number:		**55259**	**55260**	**55261**	**55262**	**55263**
Field Test Number:		-	-	-	-	-
Date - Field Tested:		9/09/2021	9/09/2021	9/09/2021	9/09/2021	9/09/2021
Time - Field Tested:		1400	1405	1410	1415	1420
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34358.79	E: 34343.046	E: 34334.216	E: 34321.513	E: 35070.496
Position/Offset/Northing:	(m)	N: 74118.375	N: 74120.152	N: 74110.989	N: 74114.826	N: 79189.990
Level/Layer/R.L.		RL: 45.020	RL: 44.572	RL: 44.991	RL: 44.956	RL: 52.248
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.20	2.21	2.21	2.16	2.20
Field Dry Density:	(t/m^3)	2.04	2.05	2.05	2.01	2.03
Retained Oversize (Wet basis):	(%)	12% on 19.0mm	8% on 19.0mm	8% on 19.0mm	10% on 19.0mm	8% 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:	(%)	7.5	8.0	8.0	7.5	8.0
Adjusted Lab OMC:	(%)	9.5	9.7	9.9	9.0	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)	2.16	2.19	2.19	2.18	2.19
Adjusted Lab Max CWD:	(t/m^3)	2.18	2.20	2.21	2.19	2.20
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2.0% Dryer than OMC**	**2% Dryer than OMC**	**1% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**81.0**	**80.0**	**79.0**	**85.5**	**82.0**
Density Ratio	(%)	**101.0**	**100.5**	**100.0**	**98.5**	**100.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.2**	8	99.56	0.90	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 14/09/2021

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

AUSTRALIAN SOIL AND CONCRETE TESTING

ASCT Brisbane South
Postal: PO Box 1232 Park Ridge QLD 4125
Laboratory: 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. 28 608 830 306

Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**1**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	21/09/2021
Project:	Flagstone Stage 5 Bulk Earthworks	Project No:	1053
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	-

Sample Information & Location

Sample Number:		**55264**	**55265**	**55266**	**-**	**-**
Field Test Number:		-	-	-	-	-
Date - Field Tested:		9/09/2021	9/09/2021	9/09/2021	-	-
Time - Field Tested:		1425	1430	1435	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E: 35043.505	E: 35019.486	E: 35000.699	-	-
Position/Offset/Northing:	(m)	N: 74188.002	N: 74183.864	N: 74179.083	-	-
Level/Layer/R.L.		RL: 52.814	RL: 53.310	RL: 53.739	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.18	2.19	2.17	-	-
Field Dry Density:	(t/m^3)	2.02	2.03	2.02	-	-
Retained Oversize (Wet basis):	(%)	6% on 19.0mm	6% on 19.0mm	8% 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:	(%)	8.0	8.0	7.5	-	-
Adjusted Lab OMC:	(%)	9.3	10.1	9.1	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.19	2.18	2.20	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.20	2.19	2.21	-	-
Compactive Effort:		Standard	Standard	Standard	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**-**	**-**
Moisture Ratio	(%)	**84.0**	**77.5**	**84.5**	**-**	**-**
Density Ratio	(%)	**99.0**	**100.0**	**98.0**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.2**	8	99.56	0.90	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 14/09/2021

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

AUSTRALIAN SOIL AND CONCRETE TESTING
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A.B.N. 28 608 830 306

Compaction Control Test Report (Nuclear Gauge & Hilf)

Page: 1 of 1

Client:	See Civil Pty Ltd	Report No:	**2**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	22/09/2021
Project:	Flagstone Stage 5 Bulk Earthworks	Project No:	1053
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	-

Sample Information & Location

Sample Number:		**55350**	**55351**	**55352**	**55353**	**-**
Field Test Number:		-	-	-	-	-
Date - Field Tested:		10/09/2021	10/09/2021	10/09/2021	10/09/2021	-
Time - Field Tested:		1400	1405	1410	1415	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	
Location/Chainage/Easting:	(m)	E: 34359.750	E: 34346.037	E: 34328.412	E: 34337.743	-
Position/Offset/Northing:	(m)	N: 74104.181	N: 74098.094	N: 74089.892	N: 74081.918	-
Level/Layer/R.L.		RL: 44.459	RL: 44.449	RL: 44.343	RL: 44.318	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.11	2.14	2.10	2.12	-
Field Dry Density:	(t/m^3)	1.91	1.93	1.87	1.90	-
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	9% on 19.0mm	8% on 19.0mm	9% 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:	(%)	10.5	11.0	12.0	11.5	-
Adjusted Lab OMC:	(%)	11.3	10.1	11.5	11.0	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-
Lab Max Converted Wet Density:	(t/m^3)	2.17	2.18	2.15	2.17	-
Adjusted Lab Max CWD:	(t/m^3)	2.18	2.19	2.17	2.18	-
Compactive Effort:		Standard	Standard	Standard	Standard	-

Relative Compaction & Moisture

Moisture Variation	(%)	**0.5% Dryer than OMC**	**0.5% Wetter than OMC**	**0.5% Wetter than OMC**	**0.5% Wetter than OMC**	**-**
Moisture Ratio	(%)	**95.0**	**106.5**	**105.0**	**104.0**	**-**
Density Ratio	(%)	**97.0**	**97.5**	**96.5**	**97.0**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.8**	4	97.00	0.29	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 15/09/2021

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

AUSTRALIAN SOIL AND CONCRETE TESTING
A.S.C.T.

ASCT Brisbane South
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Compaction Control Test Report (Nuclear Gauge & Hilf)

Page: 1 of 1

Client:	See Civil Pty Ltd	Report No:	**3**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	22/11/2021
Project:	Flagstone Stage 5 Bulk Earthworks	Project No:	1053
Component:	Level 1 Fill	Test Request:	
Lot Number:		ITP/PCP:	

Sample Information & Location

Sample Number:		**58180**	**58181**	**58182**	**58183**	**58184**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		15/11/2021	15/11/2021	15/11/2021	15/11/2021	15/11/2021
Time - Field Tested:		1400	1405	1410	1415	1420
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Lot 2483	Lot 2482	Lot 2481	Lot 2480	Lot 2479
Location/Chainage/Easting:	(m)	From North East Corner	From North East Corner	From North East Corner	From North East Corner	From North East Corner
Position/Offset/Northing:	(m)	7m South, 12m West	10m South, 15m West	3m South, 5m West	12m South, 17m West	5m South, 10m West
Level/Layer/R.L.		Finish Level	Finish Level	Finish Level	Finish Level	Finish Level
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.12	2.10	2.10	2.07	2.11
Field Dry Density:	(t/m^3)	1.87	1.84	1.84	1.81	1.85
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	3% on 19.0mm	2% on 19.0mm	2% on 19.0mm	2% 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:	(%)	13.0	14.0	14.0	14.5	14.0
Adjusted Lab OMC:	(%)	12.2	13.1	13.1	13.8	12.9
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)	2.17	2.14	2.15	2.12	2.16
Adjusted Lab Max CWD:	(t/m^3)	2.18	2.15	2.15	2.13	2.17
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1% Wetter than OMC**	**1% Wetter than OMC**	**0.5% Wetter than OMC**	**0.5% Wetter than OMC**	**1% Wetter than OMC**
Moisture Ratio	(%)	**108.5**	**107.0**	**105.0**	**104.0**	**108.0**
Density Ratio	(%)	**97.0**	**97.5**	**97.5**	**97.5**	**97.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.2**	5	97.28	0.13	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 17/11/2021

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

Appendix B
Individual Lot Reports

ASCT Brisbane South
PO Box 1232
PARK RIDGE QLD 4125
ABN: 28 608 830 306
ACN: 608 830 306
Mobile: 0437 776 582 or 0439 776 589
Email: **brisbane.south@asct.com.au**
Web: **www.asct.com.au**

25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2458

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2458 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2458** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

Jason Mckenna
Laboratory Manager

ASCT Brisbane South
jason.mckenna@asct.com.au

ASCT Brisbane South
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Mobile: 0437 776 582 or 0439 776 589
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Web: **www.asct.com.au**

25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2459

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2459 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2459** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2460

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2460 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2460** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2461

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2461 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2461** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2462

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2462 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2462** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2463

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2463 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2463** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2464

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2464 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2464** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2465

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2465 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2465** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2466

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2466 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2466** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2467

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2467 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2467** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2468

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2468 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2468** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2469

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2469 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2469** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2470

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2470 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2470** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2471

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2471 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2471** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2472

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2472 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2472** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2473

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2473 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2473** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2474

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2474 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2474** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2475

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

LOT 2475 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2475** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2476

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2476 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2476** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2477

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2477 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2477** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2478

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2478 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2478** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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Email: **brisbane.south@asct.com.au**
Web: **www.asct.com.au**

25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2479

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2479 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2479** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

Jason Mckenna
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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2480

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2480 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2480** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2481

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2481 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2481** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2482

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2482 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2482** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2483

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2483 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2483** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2484

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2484 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2484** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2485

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2485 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2485** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2486

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2486 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2486** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2487

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2487 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2487** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2488

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2488 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2488** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2489

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2489 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2489** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2490

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2490 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2490** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2491

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2491 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2491** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2492

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2492 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2492** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2493

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2493 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2493** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2494

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2494 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2494** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2495

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

LOT 2495 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2495** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2496

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2496 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2496** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2498

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2498 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2498** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2499

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2499 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2499** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2500

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2500 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2500** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2506

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2506 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2506** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2507

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2507 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2507** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2508

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2508 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2508** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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Web: www.asct.com.au

25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2509

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2509 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2509** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2510

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2510 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2510** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2511

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2511 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2511** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

Jason Mckenna
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Web: **www.asct.com.au**

25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2512

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2512 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2512** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2513

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2513 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2513** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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Web: www.asct.com.au

25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2514

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2514 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2514** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2515

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2515 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2515** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

Jason Mckenna
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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2516

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2516 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2516** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

Jason Mckenna
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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2517

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2517 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2517** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2518

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2518 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2518** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2519

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2519 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2519** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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25th May 2022
Ref No: Flagstone City Stage 5I_Lot 2520

SEE Civil Pty Ltd
108 Siganto Drive
Helensvale QLD 4210

CERTIFICATE OF CONTROLLED LEVEL 1 FILLING

LOT 2520 – FLAGSTONE CITY STAGE 5I

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 the requirements of AS 3798-2007 *'Guidelines on earthworks for commercial and residential developments'.*

Fill was placed on the allotment between 09/09/2021 and 16/11/2021.

Based on the observations made by Australian Soil and Concrete Testing and the test results obtained during construction the structural fill placed on allotment **2520** 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: **1053_SEE Civil_Level 1_Flagstone City Stage 5I.**

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

Yours faithfully

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Appendix C
Previous Earthworks Report

24th June 2021

Ref No: 664_SEE Civil_Flagstone City Stage 2 Bulk Earthworks_Level 1

REPORT ON LEVEL 1

EARTHWORKS INSPECTION AND TESTING

PROJECT: **FLAGSTONE CITY STAGE 2 BULK EARTHWORKS**

CONTRACTOR: **SEE CIVIL PTY LTD**

ASCT Brisbane South, 4/31 Tradelink Road Hillcrest QLD 4118 Ph: 07 3800 7314 email: Brisbane.south@asct.com.au

TABLE OF CONTENTS

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'.*

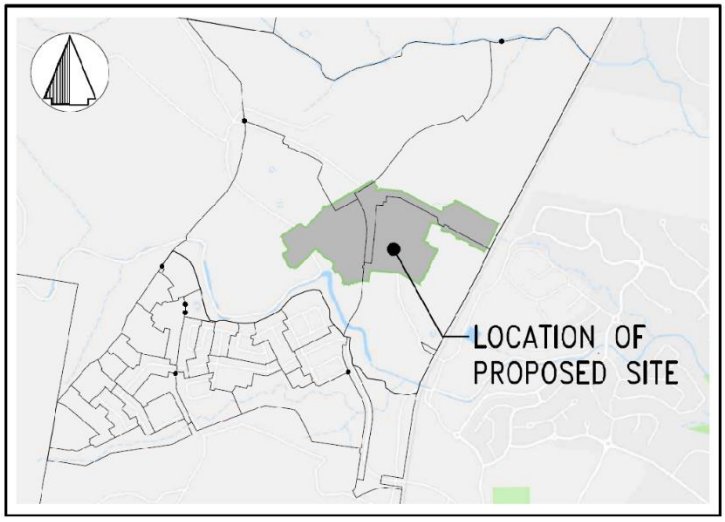
The fill placed on the development between 03/02/2020 and 21/05/2021 as detailed in this report is considered to be controlled Fill as defined in AS2870 – 2011 *'Residential Slabs & Footings'*.

This report covers all the bulk structural fill placed on the Stage 2 Bulk Earthworks Site which includes sub stages 2D, 2E, 2F, 2G, 2H, 2I, 2J, 2K, 3M, 3N, 5I, 5J, 5K, 5N, 5O & 5P. Individual Lot reports will be issued separately for each of these sub stages.

1.1 SITE DESCRIPTION

The site is located at the Flagstone City Residential Estate off Flagstonian Drive in Queensland. The Stage 2 Bulk Earthworks site is a 288 lot residential subdivision.

Drawing showing the Site Location.



LOCALITY PLAN
NOT TO SCALE

2 WORKS AND SPECIFICATIONS

The earthworks generally comprised of Level 1 filling placed across the site. Filling was conducted by using site won materials. A crushing machine was used to break up oversized sandstone boulders into a suitable material to be used for structural filling. The fill materials were placed in layers not exceeding 200mm and moisture conditioned as required. Pad foot rollers and compactors 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).

3 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
- Adequate benching into existing slopes/batters

4 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, 5.7.1 & 2.1.1).

SUMMARY OF FIELD DENSITY TEST RESULTS

SAMPLE NO	SAMPLE DATE	SAMPLE LOCATION			LEVEL OF TEST	DENSITY RATIO %
34034	26/02/2020	Bulk Earthworks	E:34646.06	N:73922.56	RL:48.33	98.0
34035	26/02/2020	Bulk Earthworks	E:34619.03	N:73936.14	RL:47.87	101.5

34036	26/02/2020	Bulk Earthworks	E:34633.69	N:73958.09	RL:49.09	100.5
34037	26/02/2020	Bulk Earthworks	E:34613.13	N:73967.10	RL:48.60	97.5
34038	26/02/2020	Bulk Earthworks	E:34641.81	N:73980.63	RL:50.19	97.0
34039	26/02/2020	Bulk Earthworks	E:34607.42	N:73981.67	RL:48.87	96.0
34040	26/02/2020	Bulk Earthworks	E:34610.14	N:74007.5	RL:49.61	100.5
34041	26/02/2020	Bulk Earthworks	E:34605.29	N:74015.6	RL:49.41	99.0
34106	27/02/2020	Bulk Earthworks	E:34651.7	N:73932.75	RL:49.66	101.0
34107	27/02/2020	Bulk Earthworks	E:34618.29	N:73921.3	RL:47.97	96.5
34108	27/02/2020	Bulk Earthworks	E:34636.67	N:73946.98	RL:49.98	99.0
34109	27/02/2020	Bulk Earthworks	E:34619.31	N:73952.62	RL:49.01	101.5
34110	27/02/2020	Bulk Earthworks	E:34653.71	N:73978.76	RL:51.01	102.0
34111	27/02/2020	Bulk Earthworks	E:34638.16	N:74023.49	RL:51.99	100.5
34112	27/02/2020	Bulk Earthworks	E:34618.59	N:74010.7	RL:50.76	98.5
34113	27/02/2020	Bulk Earthworks	E:34622.9	N:74019.6	RL:50.99	99.5
34317	2/03/2020	Bulk Earthworks	E:34631.99	N:73864.27	RL:46.28	100.5
34318	2/03/2020	Bulk Earthworks	E:34619.24	N:73856.68	RL:46.15	97.0
34319	2/03/2020	Bulk Earthworks	E:34615.74	N:73934.75	RL:48.58	98.5
34320	2/03/2020	Bulk Earthworks	E:34608.1	N:73954.17	RL:49.05	100.0
34321	2/03/2020	Bulk Earthworks	E:34607.54	N:74001.34	RL:50.67	100.5
34322	2/03/2020	Bulk Earthworks	E:34596.46	N:73993.02	RL:50.31	99.0
34323	2/03/2020	Bulk Earthworks	E:34618.94	N:73994.3	RL:49.89	96.0
34324	2/03/2020	Bulk Earthworks	E:34659.61	N:74012.7	RL:52.30	100.0
34325	2/03/2020	Bulk Earthworks	E:34641.27	N:73956.37	RL:49.85	97.5
34326	2/03/2020	Bulk Earthworks	E:34653.95	N:73974.38	RL:51.43	98.0
34327	2/03/2020	Bulk Earthworks	E:34651.78	N:73936.04	RL:50.52	98.0
34328	2/03/2020	Bulk Earthworks	E:34636.28	N:73922.58	RL:49.24	97.5
34621	6/03/2020	Bulk Earthworks	E:34683.81	N:73852.74	RL:50.94	99.5
34622	6/03/2020	Bulk Earthworks	E:34671.80	N:73834.25	RL:48.80	96.5
34623	6/03/2020	Bulk Earthworks	E:34655.70	N:73795.16	RL:47.45	99.5
34624	6/03/2020	Bulk Earthworks	E:34638.81	N:73804.35	RL:46.57	102.0
34625	6/03/2020	Bulk Earthworks	E:34646.69	N:73841.46	RL:47.40	102.5
34626	6/03/2020	Bulk Earthworks	E:34540.72	N:73907.36	RL:39.78	102.0
34627	6/03/2020	Bulk Earthworks	E:34496.55	N:73919.52	RL:39.75	102.5
34628	6/03/2020	Bulk Earthworks	E:34583.01	N:74023.62	RL:49.55	99.0
34629	6/03/2020	Bulk Earthworks	E:34607.20	N:74026.09	RL:50.88	97.0
34630	6/03/2020	Bulk Earthworks	E:34621.20	N:74024.90	RL:50.03	96.5
34832	12/03/2020	Bulk Earthworks	E:34577.28	N:73994.94	RL:47.24	97.0
34833	12/03/2020	Bulk Earthworks	E:34568.75	N:74003.88	RL:47.40	100.0
34834	12/03/2020	Bulk Earthworks	E:34555.48	N:74007.47	RL:47.52	98.0
34835	12/03/2020	Bulk Earthworks	E:34574.29	N:74021.6	RL:48.86	100.5

34866	13/03/2020	Bulk Earthworks	E:34567.6	N:73978.5	RL:45.54	101.5
34867	13/03/2020	Bulk Earthworks	E:34554.5	N:73989.36	RL:46.11	97.5
34868	13/03/2020	Bulk Earthworks	E:34550.2	N:73991.9	RL:46.01	99.0
34869	13/03/2020	Bulk Earthworks	E:34618.55	N:74037.2	RL:52.18	100.0
34870	13/03/2020	Bulk Earthworks	E:345612.95	N:74030.6	RL:51.75	101.0
34871	13/03/2020	Bulk Earthworks	E:34669.25	N:73861.53	RL:50.44	99.0
34872	13/03/2020	Bulk Earthworks	E:34658.66	N:73839.62	RL:48.94	97.5
34873	13/03/2020	Bulk Earthworks	E:34664.71	N:73813.08	RL:48.81	99.0
34953	16/03/2020	Bulk Earthworks	E:34509.25	N:74011.2	RL:46.02	99.0
34954	16/03/2020	Bulk Earthworks	E:34530.1	N:74005.3	RL:46.40	97.5
34955	16/03/2020	Bulk Earthworks	E:34512.46	N:73997.2	RL:44.99	98.0
34956	16/03/2020	Bulk Earthworks	E:34531.72	N:73972.74	RL:43.23	97.0
34957	16/03/2020	Bulk Earthworks	E:34521.37	N:73986.25	RL:44.16	98.0
34958	16/03/2020	Bulk Earthworks	E:34675.31	N:73846.35	RL:50.49	99.5
34959	16/03/2020	Bulk Earthworks	E:34661.45	N:73820.71	RL:49.07	96.5
34960	16/03/2020	Bulk Earthworks	E:34644.26	N:73810.92	RL:47.96	97.5
34961	16/03/2020	Bulk Earthworks	E:34642.04	N:73832.10	RL:47.80	96.5
34962	16/03/2020	Bulk Earthworks	E:34651.29	N:73857.77	RL:48.78	98.0
34963	16/03/2020	Bulk Earthworks	E:34358.99	N:73861.12	RL:40.75	100.5
35149	17/03/2020	Bulk Earthworks	E: 34643.51	N: 73857.5	RL: 49.11	98.5
35150	17/03/2020	Bulk Earthworks	E: 34608.09	N: 73863.87	RL: 47.02	97.5
35151	17/03/2020	Bulk Earthworks	E: 34583.7	N: 73843.11	RL: 44.50	100.0
35152	17/03/2020	Bulk Earthworks	E: 34602.66	N: 73818.23	RL: 45.58	97.0
35153	17/03/2020	Bulk Earthworks	E: 34627.01	N: 73821.86	RL: 47.67	98.0
35154	17/03/2020	Bulk Earthworks	E: 34489.52	N: 74017.04	RL: 45.64	98.5
35155	17/03/2020	Bulk Earthworks	E: 34494.37	N: 74033.83	RL: 46.93	97.5
35156	17/03/2020	Bulk Earthworks	E: 34487.1	N: 74003.4	RL: 44.42	97.5
35157	17/03/2020	Bulk Earthworks	E: 34487.59	N: 74022.47	RL: 45.86	95.5
35158	17/03/2020	Bulk Earthworks	E: 34499.13	N: 74038.62	RL: 47.37	95.5
35160	18/03/2020	Bulk Earthworks	E:34628.91	N: 73795.37	RL: 47.21	98.0
35161	18/03/2020	Bulk Earthworks	E: 34627.40	N: 73814.99	RL: 47.51	98.5
35162	18/03/2020	Bulk Earthworks	E: 34628.25	N: 73853.59	RL: 47.58	99.5
35163	18/03/2020	Bulk Earthworks	E: 34639.84	N: 73853.59	RL: 48.83	97.0
35164	18/03/2020	Bulk Earthworks	E: 34582.79	N: 74009.54	RL: 49.23	100.0
35165	18/03/2020	Bulk Earthworks	E: 34561.80	N: 74024.55	RL: 49.47	100.5
35166	18/03/2020	Bulk Earthworks	E: 34583.95	N: 73998.24	RL: 48.53	100.0
35377	19/03/2020	Bulk Earthworks	E: 34604.95	N: 73860.30	RL: 47.66	102.5
35378	19/03/2020	Bulk Earthworks	E: 34614.09	N: 73849.89	RL: 47.81	99.0
35379	19/03/2020	Bulk Earthworks	E: 34652.66	N: 73850.64	RL: 49.35	101.5
35380	19/03/2020	Bulk Earthworks	E: 34638.40	N: 73848.54	RL: 48.57	99.5

35381	19/03/2020	Bulk Earthworks	E: 34625.25	N: 73896.22	RL: 48.62	99.5
35382	19/03/2020	Bulk Earthworks	E: 34640.33	N: 73902.11	RL: 49.13	97.5
35383	19/03/2020	Bulk Earthworks	E: 34634.95	N: 73908.00	RL: 48.84	99.5
35384	19/03/2020	Bulk Earthworks	E: 34631.51	N: 73987.81	RL: 50.39	101.0
35385	19/03/2020	Bulk Earthworks	E: 34612.12	N: 73975.78	RL: 49.01	102.5
35386	20/03/2020	Bulk Earthworks	E: 34741.68	N: 73984.86	RL: 54.78	96.0
35387	20/03/2020	Bulk Earthworks	E: 34737.56	N: 73951.25	RL: 54.18	99.5
35388	20/03/2020	Bulk Earthworks	E: 34735.76	N: 73922.61	RL: 53.52	103.5
35389	20/03/2020	Bulk Earthworks	E:34730.54	N: 73887.71	RL: 52.44	102.0
35390	20/03/2020	Bulk Earthworks	E: 34572.77	N: 74052.32	RL: 52.14	95.5
35451	23/03/2020	Bulk Earthworks	E: 34530.51	N: 74033.66	RL: 48.77	101.0
35452	23/03/2020	Bulk Earthworks	E: 34540.71	N: 74012.76	RL: 48.32	96.0
35453	23/03/2020	Bulk Earthworks	E: 34550.08	N: 74001.59	RL: 47.75	100.0
35455	24/03/2020	Bulk Earthworks	E: 35116.25	N: 74096.97	RL: 49.45	97.5
35456	24/03/2020	Bulk Earthworks	E: 35108.32	N: 74118.88	RL: 49.55	101.0
35457	24/03/2020	Bulk Earthworks	E: 35138.40	N: 74099.06	RL: 48.91	96.0
35458	24/03/2020	Bulk Earthworks	E: 35164.18	N: 74074.18	RL: 48.36	102.0
35459	24/03/2020	Bulk Earthworks	E: 35185.52	N: 74056.54	RL: 47.37	99.5
35460	24/03/2020	Bulk Earthworks	E: 35125.69	N: 74083.16	RL: 49.76	97.5
35461	24/03/2020	Bulk Earthworks	E: 35159.61	N: 74109.63	RL: 49.84	96.0
35524	25/03/2020	Bulk Earthworks	E: 34544.46	N: 74032.59	RL: 48.79	98.0
35525	25/03/2020	Bulk Earthworks	E: 34541.38	N: 74027.03	RL: 48.50	97.5
35526	25/03/2020	Bulk Earthworks	E: 34530.00	N: 74036.69	RL: 48.66	101.0
35527	25/03/2020	Bulk Earthworks	E: 34527.15	N: 74027.44	RL: 48.17	99.5
35528	25/03/2020	Bulk Earthworks	E: 34516.10	N: 74038.24	RL: 48.57	98.5
35703	30/03/2020	Bulk Earthworks	E:34482.72	N:73983.61	RL:43.48	100.5
35704	30/03/2020	Bulk Earthworks	E:34504.58	N:73987.88	RL:44.88	100.5
35705	30/03/2020	Bulk Earthworks	E:34529.56	N:73978.21	RL:44.91	102.0
35715	27/03/2020	Bulk Earthworks	E:34503.56	N: 73998.9	RL: 44.97	96.0
35716	27/03/2020	Bulk Earthworks	E: 34489.97	N: 74008.33	RL: 45.21	97.5
35717	27/03/2020	Bulk Earthworks	E: 34496.54	N: 74025.34	RL: 47.03	96.5
35718	27/03/2020	Bulk Earthworks	E: 34489.64	N: 74035.89	RL: 47.63	99.0
35719	27/03/2020	Bulk Earthworks	E: 34486.51	N: 74056.48	RL: 48.38	101.5
43223	14/10/2020	Bulk Earthworks	E: 34417.26	N: 73960.26	RL: 42.22	95.5
43224	14/10/2020	Bulk Earthworks	E: 34404.96	N: 73974.09	RL: 42.30	100.0
43225	14/10/2020	Bulk Earthworks	E: 34399.49	N: 73970.72	RL: 42.05	96.5
43226	14/10/2020	Bulk Earthworks	E: 34411.92	N: 73889.36	RL: 40.71	95.0
43227	14/10/2020	Bulk Earthworks	E: 34402.56	N: 73898.55	RL: 40.83	98.0
43228	14/10/2020	Bulk Earthworks	E: 34422.63	N: 73909.60	RL: 40.92	99.0
43276	15/10/2020	Bulk Earthworks	E: 34732.80	N: 73873.36	RL: 53.14	95.5

43277	15/10/2020	Bulk Earthworks	E: 34726.29	N: 73889.38	RL: 52.97	95.5
43278	15/10/2020	Bulk Earthworks	E: 34735.57	N: 73906.22	RL: 52.94	97.0
43279	15/10/2020	Bulk Earthworks	E: 34755.09	N: 74101.28	-	100.0
43280	15/10/2020	Bulk Earthworks	E: 34769.36	N: 74113.27	-	100.0
43294	16/10/2020	Bulk Earthworks	E: 34405.43	N: 73889.07	FL	98.0
43295	16/10/2020	Bulk Earthworks	E: 34401.95	N: 73920.74	FL	101.5
43296	16/10/2020	Bulk Earthworks	E: 34394.61	N: 73944.57	FL	104.0
43297	16/10/2020	Bulk Earthworks	E: 34412.84	N: 73973.01	RL: 42.30	102.0
43298	16/10/2020	Bulk Earthworks	E: 34432.09	N: 73986.24	RL: 42.16	98.0
43299	16/10/2020	Bulk Earthworks	E: 34403.23	N: 73965.40	RL: 42.48	98.0
43305	19/10/2020	Bulk Earthworks	E: 34408.06	N: 73960.48	RL: 43.29	97.5
43306	19/10/2020	Bulk Earthworks	E: 34414.90	N: 73991.24	RL: 43.86	101.0
43307	19/10/2020	Bulk Earthworks	E: 34448.32	N: 73985.39	RL: 44.02	101.0
43361	20/10/2020	Bulk Earthworks	E: 34419.51	N: 73971.89	RL: 44.15	100.5
43362	20/10/2020	Bulk Earthworks	E: 34429.04	N: 73990.83	RL: 44.29	100.5
43363	20/10/2020	Bulk Earthworks	E: 34406.22	N: 73966.46	RL: 44.37	100.5
43364	20/10/2020	Bulk Earthworks	E: 34422.61	N: 73971.73	RL: 44.11	100.5
43365	20/10/2020	Bulk Earthworks	E: 34431.96	N: 73975.55	RL: 43.95	100.5
43424	21/10/2020	Bulk Earthworks	E: 34758.91	N: 74090.33	RL: 54.92	96.0
43425	21/10/2020	Bulk Earthworks	E: 34775.93	N: 74096.24	RL: 55.25	98.5
43426	21/10/2020	Bulk Earthworks	E: 34764.27	N: 74101.80	RL: 54.79	98.0
43427	21/10/2020	Bulk Earthworks	E: 34792.04	N: 74108.47	RL: 55.09	99.0
43428	21/10/2020	Bulk Earthworks	E: 34767.50	N: 74104.88	RL: 55.02	99.0
43429	21/10/2020	Bulk Earthworks	E: 34783.19	N: 74119.72	RL: 55.47	97.0
43450	22/10/2020	Bulk Earthworks	E: 34757.22	N: 73924.66	RL: 55.24	96.0
43451	22/10/2020	Bulk Earthworks	E: 34765.52	N: 73945.08	RL: 55.20	97.0
43452	22/10/2020	Bulk Earthworks	E: 34761.29	N: 73958.25	RL: 55.58	97.0
43453	22/10/2020	Bulk Earthworks	E: 34769.18	N: 73967.13	RL: 55.69	100.0
43468	23/10/2020	Bulk Earthworks	E: 34629.29	N: 74162.63	RL: 57.59	97.0
43469	23/10/2020	Bulk Earthworks	E: 34664.23	N: 74157.66	RL: 58.77	97.5
43470	23/10/2020	Bulk Earthworks	E: 34646.47	N: 74144.92	RL: 58.45	97.5
43471	23/10/2020	Bulk Earthworks	E: 34650.58	N: 74134.33	RL: 58.50	99.5
43472	23/10/2020	Bulk Earthworks	E: 34672.59	N: 74146.76	RL: 58.86	96.5
43499	26/10/2020	Bulk Earthworks	E: 34525.01	N: 73932.22	RL: 41.22	100.0
43500	26/10/2020	Bulk Earthworks	E: 34535.34	N: 73942.67	RL: 41.60	96.5
43501	26/10/2020	Bulk Earthworks	E: 34541.06	N: 73951.51	RL: 41.41	96.5
43502	26/10/2020	Bulk Earthworks	E: 34549.92	N: 37960.46	RL: 41.28	99.5
43503	26/10/2020	Bulk Earthworks	E: 34540.31	N: 73948.27	RL: 41.04	97.0
43511	27/10/2020	Bulk Earthworks	E: 34595.08	N: 74127.32	RL: 57.04	98.0
43512	27/10/2020	Bulk Earthworks	E: 34582.67	N: 74148.49	RL: 57.21	98.0

43513	27/10/2020	Bulk Earthworks	E: 34596.40	N: 74157.28	RL: 57.00	98.5
43514	27/10/2020	Bulk Earthworks	E: 34599.24	N: 74139.93	RL: 57.39	100.5
43515	27/10/2020	Bulk Earthworks	E: 34626.07	N: 74130.91	RL: 57.26	101.0
43550	28/10/2020	Bulk Earthworks	E: 34648.27	N: 74166.49	RL: 56.32	103.0
43551	28/10/2020	Bulk Earthworks	E: 34651.62	N: 74159.03	RL: 56.27	102.0
43552	28/10/2020	Bulk Earthworks	E: 34633.49	N: 74147.81	RL: 56.69	102.0
43553	28/10/2020	Bulk Earthworks	E: 34642.66	N: 74141.81	RL: 56.52	102.0
43554	28/10/2020	Bulk Earthworks	E: 34675.22	N: 74144.43	RL: 57.74	101.0
43561	30/10/2020	Bulk Earthworks	E: 34688.52	N: 74123.71	RL: 58.01	96.5
43562	30/10/2020	Bulk Earthworks	E: 34696.96	N: 74170.74	RL: 59.22	97.5
43563	30/10/2020	Bulk Earthworks	E: 34671.81	N: 74158.91	RL: 59.39	100.5
43564	30/10/2020	Bulk Earthworks	E: 34662.36	N: 74153.38	RL: 59.11	98.5
43565	30/10/2020	Bulk Earthworks	E: 34639.42	N: 74164.00	RL: 58.80	97.5
43566	30/10/2020	Bulk Earthworks	E: 34647.21	N: 74138.65	RL: 58.68	99.5
43567	30/10/2020	Bulk Earthworks	E: 34642.19	N: 74127.54	RL: 58.59	101.5
43568	30/10/2020	Bulk Earthworks	E: 34648.58	N: 74130.84	RL: 58.20	100.5
43569	30/10/2020	Bulk Earthworks	E: 34684.29	N: 74122.36	RL: 58.09	98.5
43570	30/10/2020	Bulk Earthworks	E: 34672.03	N: 74128.67	RL: 58.14	96.0
43584	2/11/2020	Bulk Earthworks	E: 34573.09	N: 73888.46	RL: 42.42	100.0
43585	2/11/2020	Bulk Earthworks	E: 34566.53	N: 37895.62	RL: 42.52	97.0
43586	2/11/2020	Bulk Earthworks	E: 34553.98	N: 73904.47	RL: 42.19	101.5
43587	2/11/2020	Bulk Earthworks	E: 34538.60	N: 73928.39	RL: 42.21	101.5
43588	2/11/2020	Bulk Earthworks	E: 34530.24	N: 73939.86	RL: 42.30	97.0
43589	2/11/2020	Bulk Earthworks	E: 34525.41	N: 73911.11	RL: 41.96	100.5
43590	2/11/2020	Bulk Earthworks	E: 34561.28	N: 73922.39	RL: 42.09	101.0
43591	2/11/2020	Bulk Earthworks	E: 34555.52	N: 73944.48	RL: 42.38	98.5
43608	3/11/2020	Bulk Earthworks	E: 34519.94	N: 74031.28	RL: 48.61	100.5
43609	3/11/2020	Bulk Earthworks	E: 34510.07	N: 74035.22	RL: 48.23	102.0
43610	3/11/2020	Bulk Earthworks	E: 34525.56	N: 74042.33	RL: 49.39	102.0
43611	3/11/2020	Bulk Earthworks	E: 34538.45	N: 74052.06	RL: 49.80	102.0
43612	3/11/2020	Bulk Earthworks	E: 34544.92	N: 74036.49	RL: 50.63	102.0
43613	3/11/2020	Bulk Earthworks	E: 34554.73	N: 74027.66	RL: 51.19	100.0
43674	4/11/2020	Bulk Earthworks	E: 34382.41	N: 73964.09	RL: 46.55	100.0
43675	4/11/2020	Bulk Earthworks	E: 34396.30	N: 73971.74	RL: 46.24	102.0
43676	4/11/2020	Bulk Earthworks	E: 34410.67	N: 73979.42	RL: 45.92	99.0
43677	4/11/2020	Bulk Earthworks	E: 34419.91	N: 73987.49	RL: 45.11	99.0
43678	4/11/2020	Bulk Earthworks	E: 34392.04	N: 73996.38	RL: 46.60	101.0
43679	4/11/2020	Bulk Earthworks	E: 34408.26	N: 74105.24	RL: 45.04	101.0
43709	5/11/2020	Bulk Earthworks	E: 34560.08	N: 73868.45	RL: 42.56	99.0
43710	5/11/2020	Bulk Earthworks	E: 34567.59	N: 73875.51	RL: 42.94	98.5

43711	5/11/2020	Bulk Earthworks	E: 34555.80	N: 73884.63	RL: 43.14	1000.0
43712	5/11/2020	Bulk Earthworks	E: 34562.45	N: 73889.28	RL: 42.84	99.0
43713	5/11/2020	Bulk Earthworks	E: 34574.37	N: 73899.75	RL: 43.39	99.5
43714	5/11/2020	Bulk Earthworks	E: 34568.71	N: 73909.26	RL: 43.55	99.5
43715	5/11/2020	Bulk Earthworks	E: 34552.71	N: 73917.55	RL: 43.60	100.0
43716	5/11/2020	Bulk Earthworks	E: 34559.24	N: 73922.38	RL: 43.26	100.5
43723	6/11/2020	Bulk Earthworks	E: 34368.28	N: 73440.63	FL	100.5
43724	6/11/2020	Bulk Earthworks	E: 34375.19	N: 73436.48	FL	97.5
43725	6/11/2020	Bulk Earthworks	E: 34381.18	N: 73422.74	FL	98.0
43726	6/11/2020	Bulk Earthworks	E: 34394.11	N: 73416.51	FL	99.0
43727	6/11/2020	Bulk Earthworks	E: 34407.47	N: 73421.80	FL	99.5
43728	6/11/2020	Bulk Earthworks	E: 34422.32	N: 73431.84	FL	97.5
43776	9/11/2020	Bulk Earthworks	E: 34528.92	N: 74048.82	RL: 49.44	101.0
43777	9/11/2020	Bulk Earthworks	E: 34515.32	N: 74063.92	RL: 49.50	102.0
43778	9/11/2020	Bulk Earthworks	E: 34998.75	N: 74053.62	RL: 49.21	100.5
43779	9/11/2020	Bulk Earthworks	E: 34507.10	N: 74039.37	RL: 48.50	100.5
43780	9/11/2020	Bulk Earthworks	E: 34519.89	N: 74026.10	RL: 48.14	99.5
43781	9/11/2020	Bulk Earthworks	E: 34510.05	N: 74018.40	RL: 47.48	99.5
43782	9/11/2020	Bulk Earthworks	E: 34486.50	N: 74032.21	RL: 47.04	101.5
43783	9/11/2020	Bulk Earthworks	E: 34471.82	N: 74017.59	RL: 45.32	101.5
43804	10/11/2020	Bulk Earthworks	E: 34723.88	N: 74160.80	RL: 57.93	100.0
43805	10/11/2020	Bulk Earthworks	E: 34745.12	N: 74140.08	RL: 59.11	102.0
43806	10/11/2020	Bulk Earthworks	E: 34764.97	N: 74130.60	RL: 58.65	99.0
43807	10/11/2020	Bulk Earthworks	E: 34776.25	N: 74116.83	RL: 58.24	99.5
43808	10/11/2020	Bulk Earthworks	E: 34760.73	N: 74107.44	RL: 57.84	101.5
43809	10/11/2020	Bulk Earthworks	E: 34754.55	N: 74095.65	RL: 57.52	100.5
43905	11/11/2020	Bulk Earthworks	E: 34645.87	N: 74163.28	FL	100.5
43906	11/11/2020	Bulk Earthworks	E: 34608.53	N: 74142.34	FL	100.5
43907	11/11/2020	Bulk Earthworks	E: 34570.88	N: 74121.31	FL	103.0
43908	11/11/2020	Bulk Earthworks	E: 34555.35	N: 74085.63	FL	103.0
43909	11/11/2020	Bulk Earthworks	E: 34563.21	N: 74070.75	FL	100.0
43910	11/11/2020	Bulk Earthworks	E: 34568.31	N: 74052.36	FL	100.5
43911	12/11/2020	Bulk Earthworks	E: 34756.20	N: 73875.26	FL	102.0
43912	12/11/2020	Bulk Earthworks	E: 34740.10	N: 73892.75	FL	98.5
43913	12/11/2020	Bulk Earthworks	E: 34750.65	N: 73907.33	FL	100.5
43914	12/11/2020	Bulk Earthworks	E: 34745.53	N: 73939.31	FL	101.5
43915	12/11/2020	Bulk Earthworks	E: 34749.88	N: 74010.55	FL	101.5
43916	12/11/2020	Bulk Earthworks	E: 34753.29	N: 74057.83	FL	99.0
43917	13/11/2020	Bulk Earthworks	E: 34744.83	N: 73883.25	FL	99.5
43918	13/11/2020	Bulk Earthworks	E: 34751.04	N: 73898.46	FL	101.5

43919	13/11/2020	Bulk Earthworks	E: 34745.96	N: 73911.37	FL	99.0
43920	13/11/2020	Bulk Earthworks	E: 34752.45	N: 73921.24	FL	99.0
43921	13/11/2020	Bulk Earthworks	E: 34749.27	N: 73955.19	FL	100.0
43922	13/11/2020	Bulk Earthworks	E: 34755.68	N: 73982.63	FL	100.0
43960	16/11/2020	Bulk Earthworks	E: 35217.07	N: 74072.29	RL: 45.18	95.5
43961	16/11/2020	Bulk Earthworks	E: 35212.86	N: 74075.63	RL: 45.42	95.5
43962	16/11/2020	Bulk Earthworks	E: 35207.91	N: 74081.92	RL: 45.93	96.5
43963	16/11/2020	Bulk Earthworks	E: 35198.73	N: 74087.36	RL: 46.59	98.5
43964	16/11/2020	Bulk Earthworks	E: 35191.47	N: 74096.43	RL: 46.47	98.0
43965	16/11/2020	Bulk Earthworks	E: 35185.11	N: 74101.94	RL: 46.64	96.5
43966	16/11/2020	Bulk Earthworks	E: 35284.65	N: 74035.34	RL: 44.89	96.5
43967	16/11/2020	Bulk Earthworks	E: 35274.96	N: 74056.08	RL: 44.62	96.5
43968	16/11/2020	Bulk Earthworks	E: 35260.34	N: 74052.71	RL: 44.65	97.5
43969	16/11/2020	Bulk Earthworks	E: 35241.07	N: 74045.29	RL: 44.76	98.0
43996	17/11/2020	Bulk Earthworks	E: 35237.09	N: 74007.82	RL: 45.03	99.0
43997	17/11/2020	Bulk Earthworks	E: 35244.16	N: 74012.64	RL: 45.15	98.5
43998	17/11/2020	Bulk Earthworks	E: 35252.88	N: 74030.17	RL: 45.22	96.0
43999	17/11/2020	Bulk Earthworks	E: 35241.04	N: 74041.28	RL: 45.23	96.5
44000	17/11/2020	Bulk Earthworks	E: 35268.93	N: 74048.39	RL: 44.97	97.5
44001	17/11/2020	Bulk Earthworks	E: 35280.71	N: 74056.43	RL: 45.36	96.0
44002	17/11/2020	Bulk Earthworks	E: 35246.24	N: 74068.79	RL: 45.40	96.0
44069	18/11/2020	Bulk Earthworks	E: 35222.45	N: 74080.27	RL: 46.05	97.0
44070	18/11/2020	Bulk Earthworks	E: 35226.94	N: 74075.39	RL: 46.29	96.5
44071	18/11/2020	Bulk Earthworks	E: 35233.71	N: 74059.39	RL: 45.67	96.5
44072	18/11/2020	Bulk Earthworks	E: 35236.84	N: 74046.80	RL: 45.95	96.5
44073	18/11/2020	Bulk Earthworks	E: 35244.11	N: 74032.46	RL 46.82	97.5
44074	18/11/2020	Bulk Earthworks	E: 35250.29	N: 74020.67	RL: 46.15	97.5
44081	20/11/2020	Bulk Earthworks	E: 35233.09	N: 74026.74	RL: 45.55	97.0
44082	20/11/2020	Bulk Earthworks	E: 35226.64	N: 74033.38	RL: 45.51	96.5
44083	20/11/2020	Bulk Earthworks	E: 35220.14	N: 74039.28	RL: 45.63	99.0
44084	20/11/2020	Bulk Earthworks	E: 35213.07	N: 74060.38	RL: 45.71	95.5
44085	20/11/2020	Bulk Earthworks	E: 35207.94	N: 74065.00	RL: 45.89	96.5
44086	20/11/2020	Bulk Earthworks	E: 35200.67	N: 74062.49	RL: 46.28	100.5
44143	23/11/2020	Bulk Earthworks	E: 35238.92	N: 73925.73	RL: 46.39	95.5
44144	23/11/2020	Bulk Earthworks	E: 35234.08	N: 73933.47	RL: 46.24	95.5
44145	23/11/2020	Bulk Earthworks	E: 35226.44	N: 73941.93	RL: 45.88	98.0
44146	23/11/2020	Bulk Earthworks	E: 35221.28	N: 73949.24	RL: 45.94	95.5
44147	23/11/2020	Bulk Earthworks	E: 35235.83	N: 73960.07	RL: 46.04	97.0
44148	23/11/2020	Bulk Earthworks	E: 35240.67	N: 73928.42	RL: 46.76	97.5
44149	23/11/2020	Bulk Earthworks	E: 35235.71	N: 73935.90	RL: 46.49	96.0

44150	23/11/2020	Bulk Earthworks	E: 35228.36	N: 73947.19	RL: 46.40	96.5
44151	23/11/2020	Bulk Earthworks	E: 35233.61	N: 73958.84	RL: 46.49	97.5
44152	23/11/2020	Bulk Earthworks	E: 35224.09	N: 73969.43	RL: 46.28	97.0
44230	24/11/2020	Bulk Earthworks	E: 35233.79	N: 73929.62	RL: 46.69	95.5
44231	24/11/2020	Bulk Earthworks	E: 35220.36	N: 73938.48	RL: 46.72	95.5
44232	24/11/2020	Bulk Earthworks	E: 35216.07	N: 73945.49	RL: 46.25	95.5
44233	24/11/2020	Bulk Earthworks	E: 35206.93	N: 73958.70	RL: 46.49	97.0
44234	24/11/2020	Bulk Earthworks	E: 35111.73	N: 74138.24	RL: 49.06	101.5
44235	24/11/2020	Bulk Earthworks	E: 35116.60	N: 74141.85	RL: 48.13	95.5
44236	24/11/2020	Bulk Earthworks	E: 35115.52	N: 74144.36	RL: 48.54	96.0
44237	24/11/2020	Bulk Earthworks	E: 35119.88	N: 74147.41	RL: 48.73	96.0
44246	25/11/2020	Bulk Earthworks	E: 35248.59	N: 73964.36	RL: 46.92	100.0
44247	25/11/2020	Bulk Earthworks	E: 35242.83	N: 73970.02	RL: 46.99	98.0
44248	25/11/2020	Bulk Earthworks	E: 35245.48	N: 73977.87	RL: 46.59	97.0
44249	25/11/2020	Bulk Earthworks	E: 35237.95	N: 73989.62	RL: 46.82	96.5
44250	25/11/2020	Bulk Earthworks	E: 35110.74	N: 74130.39	RL: 49.94	100.5
44251	25/11/2020	Bulk Earthworks	E: 35115.93	N: 74136.52	RL: 49.86	98.0
44252	25/11/2020	Bulk Earthworks	E: 35119.39	N: 74142.48	RL: 50.27	100.5
44253	25/11/2020	Bulk Earthworks	E: 35118.27	N: 74145.83	RL: 50.73	98.5
44300	26/11/2020	Bulk Earthworks	E: 35115.28	N: 74141.03	FL	95.0
44301	26/11/2020	Bulk Earthworks	E: 35219.26	N: 74077.23	FL	95.5
44302	26/11/2020	Bulk Earthworks	E: 35287.62	N: 74033.84	FL	96.5
44303	26/11/2020	Bulk Earthworks	E: 35236.44	N: 74012.39	FL	95.0
44304	26/11/2020	Bulk Earthworks	E: 35231.97	N: 73934.97	FL	97.5
44305	26/11/2020	Bulk Earthworks	E: 54962.03	N: 74101.28	-	98.5
44306	26/11/2020	Bulk Earthworks	E: 54970.80	N: 74111.49	-	98.0
44307	26/11/2020	Bulk Earthworks	E: 54974.27	N: 74115.62	-	98.0
44357	27/11/2020	Bulk Earthworks	E: 34951.09	N: 74088.43	FL - 0.8m	97.5
44358	27/11/2020	Bulk Earthworks	E: 34963.54	N: 74095.83	FL - 1.2m	95.5
44359	27/11/2020	Bulk Earthworks	E: 34971.42	N: 74102.52	FL - 0.9m	95.0
44360	27/11/2020	Bulk Earthworks	E: 34986.19	N: 74109.38	FL - 1.0m	95.5
44361	27/11/2020	Bulk Earthworks	E: 34992.17	N: 74118.24	FL - 0.8m	97.0
44470	30/11/2020	Bulk Earthworks	E: 35099.82	N: 74093.26	RL: 47.77	102.0
44471	30/11/2020	Bulk Earthworks	E: 35104.43	N: 74095.19	RL: 49.04	102.0
44472	30/11/2020	Bulk Earthworks	E: 35109.67	N: 74099.06	RL: 48.62	101.0
44473	30/11/2020	Bulk Earthworks	E: 35092.70	N: 74088.44	RL: 48.49	100.5
44474	30/11/2020	Bulk Earthworks	E: 35122.38	N: 74104.93	RL: 48.93	100.5
44475	1/12/2020	Bulk Earthworks	E: 34951.29	N: 74118.27	FL - 0.4m	95.0
44476	1/12/2020	Bulk Earthworks	E: 34960.28	N: 74111.74	FL - 0.5m	97.5
44477	1/12/2020	Bulk Earthworks	E: 34968.55	N: 73096.39	FL - 0.3m	97.5

44478	1/12/2020	Bulk Earthworks	E: 34975.62	N: 73090.04	FL - 0.6m	100.0
44479	1/12/2020	Bulk Earthworks	E: 35199.63	N: 74088.38	FL - 0.2m	99.5
44480	1/12/2020	Bulk Earthworks	E: 35182.95	N: 74092.86	FL	97.5
44481	1/12/2020	Bulk Earthworks	E: 35170.11	N: 74095.38	FL	97.0
44482	1/12/2020	Bulk Earthworks	E: 35149.84	N: 74101.94	FL	96.5
44483	2/12/2020	Bulk Earthworks	E: 34422.67	N: 73960.39	FL - 0.8m	95.0
44484	2/12/2020	Bulk Earthworks	E: 34428.51	N: 73968.28	FL - 0.9m	97.0
44485	2/12/2020	Bulk Earthworks	E: 34434.58	N: 73975.23	FL - 0.6m	99.0
44486	2/12/2020	Bulk Earthworks	E: 34430.97	N: 73980.04	FL - 0.8m	97.5
44487	2/12/2020	Bulk Earthworks	E: 34426.64	N: 73972.46	FL - 0.5m	98.0
44488	2/12/2020	Bulk Earthworks	E: 34419.82	N: 73955.43	FL - 0.6m	99.5
44538	3/12/2020	Bulk Earthworks	E: 34394.39	N: 73960.48	FL - 0.2m	100.5
44539	3/12/2020	Bulk Earthworks	E: 34399.38	N: 73966.21	FL	97.0
44540	3/12/2020	Bulk Earthworks	E: 34390.32	N: 73963.83	FL - 0.3m	96.0
44541	3/12/2020	Bulk Earthworks	E: 34406.49	N: 73971.44	FL	101.0
44542	3/12/2020	Bulk Earthworks	E: 34412.72	N: 73979.92	FL - 0.5m	96.0
44543	3/12/2020	Bulk Earthworks	E: 34417.24	N: 73975.44	FL	97.5
44585	4/12/2020	Bulk Earthworks	E: 34441.09	N: 73455.75	FL	99.5
44586	4/12/2020	Bulk Earthworks	E: 34435.34	N: 73451.81	FL	99.0
44587	4/12/2020	Bulk Earthworks	E: 34420.39	N: 73442.81	FL	98.5
44588	4/12/2020	Bulk Earthworks	E: 34430.26	N: 73434.84	FL	99.0
44589	7/12/2020	Bulk Earthworks	E: 34544.26	N: 73832.55	RL: 43.55	95.5
44590	7/12/2020	Bulk Earthworks	E: 34555.72	N: 73839.59	RL: 43.62	98.5
44591	7/12/2020	Bulk Earthworks	E: 34550.48	N: 73847.21	RL: 43.40	100.5
44592	7/12/2020	Bulk Earthworks	E: 34561.17	N: 73855.11	RL: 43.29	97.5
44593	7/12/2020	Bulk Earthworks	E: 34569.63	N: 73864.46	RL: 43.51	96.5
44621	8/12/2020	Bulk Earthworks	E: 34575.94	N: 73895.24	RL: 43.85	100.5
44622	8/12/2020	Bulk Earthworks	E: 34582.52	N: 73909.66	RL: 43.74	104.0
44623	8/12/2020	Bulk Earthworks	E: 34561.81	N: 73928.40	RL: 43.63	96.0
44624	8/12/2020	Bulk Earthworks	E: 34570.06	N: 73941.86	RL: 43.80	99.0
44625	8/12/2020	Bulk Earthworks	E: 34545.52	N: 73958.42	RL: 43.49	98.0
44626	8/12/2020	Bulk Earthworks	E: 34566.38	N: 73899.47	RL: 43.89	97.5
44627	8/12/2020	Bulk Earthworks	E: 34585.90	N: 73924.80	RL: 43.95	99.0
44628	8/12/2020	Bulk Earthworks	E: 34593.64	N: 73931.51	RL: 43.86	100.5
44629	8/12/2020	Bulk Earthworks	E: 34552.69	N: 73951.34	RL: 43.92	96.5
44630	8/12/2020	Bulk Earthworks	E: 34538.72	N: 73967.44	RL: 43.68	98.5
44683	9/12/2020	Bulk Earthworks	E: 34569.23	N: 73900.77	RL: 43.97	100.0
44684	9/12/2020	Bulk Earthworks	E: 34581.21	N: 73915.28	RL: 43.92	99.0
44685	9/12/2020	Bulk Earthworks	E: 34566.74	N: 73938.38	RL: 44.10	99.0
44686	9/12/2020	Bulk Earthworks	E: 34555.80	N: 73953.41	RL: 44.01	100.5

44687	9/12/2020	Bulk Earthworks	E: 34529.60	N: 73969.52	RL: 43.75	96.0
44688	9/12/2020	Bulk Earthworks	E: 34585.96	N: 73887.11	RL: 44.21	98.5
44689	9/12/2020	Bulk Earthworks	E: 34580.18	N: 73898.25	RL: 43.95	102.0
44690	9/12/2020	Bulk Earthworks	E: 34569.69	N: 73915.82	RL: 43.82	99.0
44691	9/12/2020	Bulk Earthworks	E: 34577.36	N: 73931.19	RL: 44.09	101.0
44692	9/12/2020	Bulk Earthworks	E: 34592.83	N: 73937.63	RL: 44.08	97.0
44752	10/12/2020	Bulk Earthworks	E: 34541.05	N: 73966.24	RL: 44.41	100.5
44753	10/12/2020	Bulk Earthworks	E: 34522.79	N: 73960.08	RL: 44.71	96.5
44754	10/12/2020	Bulk Earthworks	E: 34531.63	N: 73952.47	RL: 44.52	96.5
44755	10/12/2020	Bulk Earthworks	E: 34519.82	N: 73940.84	RL: 43.94	97.0
44756	10/12/2020	Bulk Earthworks	E: 34527.93	N: 73922.17	RL: 44.66	97.0
44757	10/12/2020	Bulk Earthworks	E: 34555.07	N: 73931.04	RL: 44.88	97.0
44758	10/12/2020	Bulk Earthworks	E: 34546.28	N: 73926.85	RL: 44.80	99.0
44759	10/12/2020	Bulk Earthworks	E: 34562.91	N: 73913.47	RL: 44.92	98.5
44760	10/12/2020	Bulk Earthworks	E: 34552.11	N: 73919.00	RL: 45.12	95.5
44761	10/12/2020	Bulk Earthworks	E: 34536.27	N: 73899.14	RL: 45.00	98.0
44826	11/12/2020	Bulk Earthworks	E: 34569.48	N: 73893.37	RL: 45.12	98.0
44827	11/12/2020	Bulk Earthworks	E: 34577.81	N: 73902.94	RL: 45.19	101.0
44828	11/12/2020	Bulk Earthworks	E: 34581.17	N: 73917.26	RL: 44.97	97.5
44829	11/12/2020	Bulk Earthworks	E: 34588.12	N: 73929.31	RL: 44.93	97.5
44830	11/12/2020	Bulk Earthworks	E: 34565.73	N: 73937.45	RL: 45.04	97.0
44831	11/12/2020	Bulk Earthworks	E: 34553.49	N: 73940.86	RL: 45.19	101.0
44832	11/12/2020	Bulk Earthworks	E: 34562.09	N: 73948.21	RL 45.08	97.5
44833	11/12/2020	Bulk Earthworks	E: 34571.60	N: 73957.42	RL: 45.15	98.5
44834	11/12/2020	Bulk Earthworks	E: 34579.01	N: 73966.83	RL: 45.06	102.0
45031	12/01/2021	Bulk Earthworks	E: 34612.64	N: 74038.77	FL	98.5
45032	12/01/2021	Bulk Earthworks	E: 34601.78	N: 74022.20	FL	96.0
45033	12/01/2021	Bulk Earthworks	E: 34592.18	N: 74013.80	FL	99.5
45034	12/01/2021	Bulk Earthworks	E: 34574.71	N: 74019.19	FL	101.0
45035	12/01/2021	Bulk Earthworks	E: 34565.09	N: 74007.96	FL	98.5
45036	12/01/2021	Bulk Earthworks	E: 34572.77	N: 73991.80	FL	99.5
45037	12/01/2021	Bulk Earthworks	E: 34551.15	N: 73997.67	FL	100.0
45046	12/01/2021	Bulk Earthworks	E: 34590.53	N: 73884.28	RL: 45.58	100.0
45047	12/01/2021	Bulk Earthworks	E: 34535.32	N: 73897.96	RL: 45.91	98.0
45048	12/01/2021	Bulk Earthworks	E: 34556.33	N: 73914.84	RL: 46.04	98.0
45049	12/01/2021	Bulk Earthworks	E: 34582.72	N: 73936.91	RL: 45.37	97.5
45050	12/01/2021	Bulk Earthworks	E: 34593.80	N: 73955.43	RL: 45.71	99.5
45051	12/01/2021	Bulk Earthworks	E: 34599.96	N: 73965.74	RL: 46.00	100.0
45083	14/01/2021	Lot 972	9m off Front Boundary	6m off Left Boundary	FL	97.5

45084	14/01/2021	Lot 977	11m off Front Boundary	2m off Left Boundary	FL	96.0
45085	14/01/2021	Lot 978	5m off Front Boundary	6m off Right Boundary	FL	96.5
45086	14/01/2021	Lot 1048	9m off Front Boundary	7m off Right Boundary	FL	98.5
45087	14/01/2021	Lot 979	8m off Front Boundary	3m off Left Boundary	FL	102.5
45088	14/01/2021	Lot 980	14m off Front Boundary	6m off Left Boundary	FL	103.5
45089	14/01/2021	Lot 981	5m off Front Boundary	4m off Left Boundary	FL	97.5
45090	14/01/2021	Lot 960	9m off Front Boundary	5m off Right Boundary	FL	101.0
45151	15/01/2021	Lot 982	10m off Front Boundary	3m off Right Boundary	FL	100.0
45152	15/01/2021	Lot 971	9m off Front Boundary	4m off Left Boundary	FL	96.5
45153	15/01/2021	Lot 970	12m off Front Boundary	9m off Left Boundary	FL	99.0
45154	15/01/2021	Lot 969	11m off Front Boundary	4m off Right Boundary	FL	103.0
45155	15/01/2021	Lot 968	7m off Front Boundary	7m off Left Boundary	FL	99.0
45156	18/01/2021	Lot 983	9m off Front Boundary	5m off Left Boundary	FL	98.0
45157	18/01/2021	Lot 966	14m off Front Boundary	7m off Left Boundary	FL	99.5
45158	18/01/2021	Lot 967	10m off Front Boundary	3m off Right Boundary	FL	99.5
45159	18/01/2021	Lot 958	10m off Front Boundary	5m off Left Boundary	FL	98.0
45160	18/01/2021	Lot 959	5m off Front Boundary	9m off Right Boundary	FL	102.5
45668	2/02/2021	Lot 902	5m off Front Boundary	9m off Left Boundary	FL	99.5
45669	2/02/2021	Lot 903	2m off Front Boundary	8m off Left Boundary	FL	101.5
45670	2/02/2021	Lot 904	4m off Front Boundary	6m off Right Boundary	FL	99.0
45671	2/02/2021	Lot 905	3m off Front Boundary	9m off Left Boundary	FL	100.5
45672	2/02/2021	Lot 906	6m off Front Boundary	6m off Right Boundary	FL	99.5

45673	2/02/2021	Lot 907	11m off Back Boundary	3m off Left Boundary	FL	101.0
45674	2/02/2021	Lot 998	12m off Back Boundary	4m off Left Boundary	FL	97.0
45675	2/02/2021	Lot 964	3m off Front Boundary	6m off Right Boundary	FL	102.0
45676	2/02/2021	Lot 963	5m off Front Boundary	9m off Right Boundary	FL	99.0
45677	2/02/2021	Lot 962	4m off Front Boundary	4m off Right Boundary	FL	101.5
45678	2/02/2021	Lot 961	3m off Front Boundary	7m off Right Boundary	FL	97.0
45679	2/02/2021	Lot 957	6m off Front Boundary	8m off Left Boundary	FL	97.5
45680	2/02/2021	Lot 1030	11m off Back Boundary	4m off Left Boundary	FL	102.0
45681	2/02/2021	Lot 1029	14m off Back Boundary	7m off Left Boundary	FL	101.5
45682	2/02/2021	Lot 1028	9m off Back Boundary	2m off Left Boundary	FL	95.5
45683	2/02/2021	Lot 1027	5m off Front Boundary	5m off Right Boundary	FL	99.0
45684	2/02/2021	Lot 1026	3m off Front Boundary	6m off Left Boundary	FL	98.5
45685	2/02/2021	Lot 1025	13m off Back Boundary	8m off Right Boundary	FL	97.5
45686	2/02/2021	Lot 1024	2m off Front Boundary	9m off Right Boundary	FL	96.5
45687	2/02/2021	Lot 1023	6m off Front Boundary	7m off Left Boundary	FL	95.5
49461	21/05/2021	Bulk Earthworks	E: 34370.997	N: 74085.804	RL: 45.478	100.5
49462	21/05/2021	Bulk Earthworks	E: 34426.746	N: 74066.184	RL: 45.722	100.0
49463	21/05/2021	Bulk Earthworks	E: 34349.804	N: 74059.388	RL: 45.080	100.5
49464	21/05/2021	Bulk Earthworks	E: 34353.941	N: 74065.474	RL: 45.027	101.0
49465	21/05/2021	Bulk Earthworks	E: 34407.971	N: 74078.119	RL: 45.645	100.5
49466	21/05/2021	Bulk Earthworks	E: 34386.832	N: 74093.531	RL: 45.819	101.0

No. of Tests: 444 Mean: 100.8 %

5 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 03/02/2020 and 21/05/2021 is considered to have been carried out in general accordance with AS 3798-2007 *'Guidelines on Earthworks for Commercial and Residential Developments'.*

6 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.

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

Yours faithfully

Jason Mckenna
Laboratory Manager

ASCT Brisbane South

Appendix A
Cut Fill Drawings

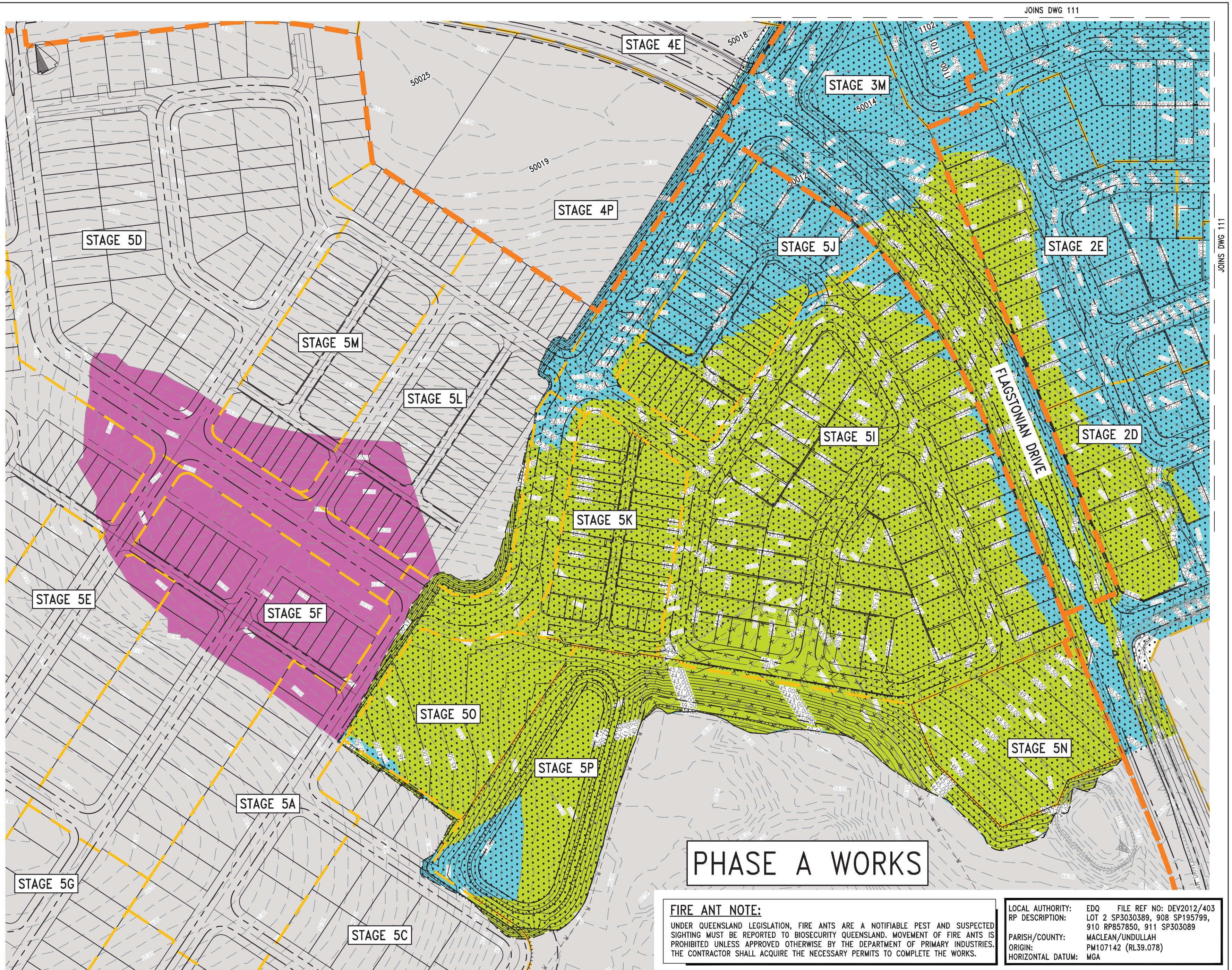
EARTHWORKS NOTES

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
- ADDITIONAL FILL AREA
- FUTURE STAGES (NOT IN CURRENT STAGE WORKS)
- PHASE A WORKS
- PHASE B WORKS
- STAGE BDY

NOTE:
FILLING IN ADDITIONAL FILL AREA ONLY TO OCCUR UPON DIRECTION OF SUPERINTENDENT.



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: EDQ FILE REF NO: DEV2012/403
RP DESCRIPTION: LOT 2 SP3030389, 908 SP195799, 910 RP857850, 911 SP303089
PARISH/COUNTY: MACLEAN/UNDULLAH
ORIGIN: PM107142 (RL39.078)
HORIZONTAL DATUM: MGA

REV	DESCRIPTION	BY	SIDR	DATE
A	ORIGINAL ISSUE	LH	JH	06.03.19
B	DRAWING UPDATED	LH	JH	03.06.19
C	PHASE A - PRECONSTRUCTION CERTIFICATION	SW	JH	06.09.19
D	EARTHWORKS UPDATED	SW	RB	07.01.20

10 0 10 20 30 40 50m
1 : 1000 (FULL SIZE A1)

veris
BRISBANE (07) 3666 4700 PROSERPINE (07) 4945 1722
MACKAY (07) 4951 2911 CAIRNS (07) 4051 6722
veris.com.au
ACN 604 671 374
Queensland Surveying Pty Ltd t/a Veris

NAME:
RPEQ:
Approved by, for and on behalf of Meinhardt

dlcs ISO 9001 certified

Meinhardt Urban Pty Ltd
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Postal PO Box 2293, Southport QLD 4215
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info@meinhardtgroup.com
http://www.meinhardtgroup.com

MEINHARDT

CLIENT: PEET FLAGSTONE CITY Pty. Ltd.

PROJECT: FLAGSTONE CITY - STAGE 2 BULK EARTHWORKS
ECONOMIC DEVELOPMENT QUEENSLAND

TITLE: EARTHWORKS CUT AND FILL PLAN SHEET 1 OF 2

STATUS: CONSTRUCTION

DESIGNED	DRAWN	APPROVED	DATE	SCALE @ A1	SHEET
NM	LH	JH	06.03.19	1:1000	1 OF 2

PROJECT No	DRAWING No	REV
119953	S2-110	D

NOTES

1. FOR EARTHWORKS NOTES & DETAILS REFER DRAWING 110.

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
- FUTURE STAGES (NOT IN CURRENT STAGE WORKS)
- 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:	EDQ FILE REF NO: DEV2012/403
RP DESCRIPTION:	LOT 2 SP3030389, 908 SP195799, 910 RP857850, 911 SP303089
PARISH/COUNTY:	MACLEAN/UNDULLAH
ORIGIN:	PM107142 (RL39.078)
HORIZONTAL DATUM:	MGA

REV	DESCRIPTION	BY	SIDR	DATE
A	ORIGINAL ISSUE	LH	JH	06.03.19
B	DRAWING UPDATED	LH	JH	03.06.19
C	PHASE A - PRECONSTRUCTION CERTIFICATION	SW	JH	06.09.19
D	EARTHWORKS UPDATED	SW	RB	07.01.20

10 0 10 20 30 40 50m
1 : 1000 (FULL SIZE A1)

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BRISBANE (07) 3666 4700 PROSERPINE (07) 4945 1722
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Queensland Surveying Pty Ltd t/a Veris

NAME:
RPEQ:

Approved by, for and on behalf of Meinhardt

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info@meinhardtgroup.com
http://www.meinhardtgroup.com

MEINHARDT

CLIENT: PEET FLAGSTONE CITY Pty. Ltd.

PROJECT: FLAGSTONE CITY - STAGE 2 BULK EARTHWORKS
ECONOMIC DEVELOPMENT QUEENSLAND

TITLE: EARTHWORKS CUT AND FILL PLAN SHEET 2 OF 2

STATUS: CONSTRUCTION

DESIGNED	DRAWN	APPROVED	DATE	SCALE @ A1	SHEET
NM	LH	JH	06.03.19	1:1000	2 OF 2

PROJECT No	DRAWING No	REV
119953	S2-111	D

Appendix B
Test Reports

AUSTRALIAN SOIL AND CONCRETE TESTING
A.S.C.T.

ASCT Brisbane South
PO Box 1232 Park Ridge QLD 4125
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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)

Client:	See Civil Pty Ltd	Report No:	**12**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	4/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks - Level 1	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**34034**	**34035**	**34036**	**34037**	**34038**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		26/02/2020	26/02/2020	26/02/2020	26/02/2020	26/02/2020
Time - Field Tested:		0945	0955	1000	1005	1010
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		Proposed Stage 5I	Proposed Stage 5I	Proposed Stage 5I	Proposed Stage 5I	Proposed Stage 5I
Location/Chainage/Easting:	(m)	E:34646.06	E:34619.03	E:34633.69	E:34613.13	E:34641.81
Position/Offset/Northing:	(m)	N:73922.56	N:73936.14	N:73958.09	N:73967.10	N:73980.63
Level/Layer/R.L.		RL:48.33	RL:47.87	RL:49.09	RL:48.60	RL:50.19
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.07	1.98	2.10	2.06	2.12
Field Dry Density:	(t/m^3)	1.91	1.71	1.89	1.85	1.93
Retained Oversize (Wet basis):	(%)	4% on 19.0mm	0% on 19.0mm	3% on 19.0mm	6% on 19.0mm	4% on 19.0mm
Material Description:		Sandy Clay	-	-	-	-
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:	(%)	8.5	16.0	11.0	11.0	10.0
Adjusted Lab OMC:	(%)	10.0	17.8	13.0	12.9	12.2
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)	2.11	1.96	2.07	2.08	2.18
Adjusted Lab Max CWD:	(t/m^3)	2.12	1.96	2.09	2.10	2.19
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**85.0**	**89.0**	**86.5**	**84.5**	**83.0**
Density Ratio	(%)	**98.0**	**101.5**	**100.5**	**97.5**	**97.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.8**	8	98.75	1.99	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 29/02/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results of the tests included in this document are traceable to Australian/national standards.
Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

AUSTRALIAN SOIL AND CONCRETE TESTING
A.S.C.T.

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)

Client:	See Civil Pty Ltd	Report No:	**12**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	4/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks - Level 1	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**34039**	**34040**	**34041**	**-**	**-**
Field Test Number:		6	7	8	-	-
Date - Field Tested:		26/02/2020	26/02/2020	26/02/2020	-	-
Time - Field Tested:		1015	1020	1025	-	-
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		Proposed Stage 5I	Proposed Stage 5I	Proposed Stage 5I	-	-
Location/Chainage/Easting:	(m)	E:34607.42	E:34610.14	E:34605.29	-	-
Position/Offset/Northing:	(m)	N:73981.67	N:74007.5	N:74015.6	-	-
Level/Layer/R.L.		RL:48.87	RL:49.61	RL:49.41	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.07	2.02	2.01	-	-
Field Dry Density:	(t/m^3)	1.88	1.74	1.75	-	-
Retained Oversize (Wet basis):	(%)	6% on 19.0mm	0% on 19.0mm	6% 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:	(%)	10.0	16.0	14.5	-	-
Adjusted Lab OMC:	(%)	12.0	18.2	16.3	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.14	2.00	2.00	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.16	2.00	2.03	-	-
Compactive Effort:		Standard	Standard	Standard	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**2% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**-**	**-**
Moisture Ratio	(%)	**83.5**	**88.0**	**89.0**	**-**	**-**
Density Ratio	(%)	**96.0**	**100.5**	**99.0**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.8**	8	98.75	1.99	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 29/02/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results of the tests included in this document are traceable to Australian/national standards.
Accreditation number: 19902

AUSTRALIAN SOIL AND CONCRETE TESTING
A.S.C.T.

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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)

Client:	See Civil Pty Ltd	Report No:	**13**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	4/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks Allotment Fill - Level 1	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**34106**	**34107**	**34108**	**34109**	**34110**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		27/02/2020	27/02/2020	27/02/2020	27/02/2020	27/02/2020
Time - Field Tested:		1000	1010	1020	1030	1040
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		Proposed Stage 5I	Proposed Stage 5I	Proposed Stage 5I	Proposed Stage 5I	Proposed Stage 5I
Location/Chainage/Easting:	(m)	E:34651.7	E:34618.29	E:34636.67	E:34619.31	E:34653.71
Position/Offset/Northing:	(m)	N:73932.75	N:73921.3	N:73946.98	N:73952.62	N:73978.76
Level/Layer/R.L.		RL:49.66	RL:47.97	RL:49.98	RL:49.01	RL:51.01
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	1.97	1.95	2.10	2.07	2.05
Field Dry Density:	(t/m^3)	1.68	1.72	1.94	1.91	1.76
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	2% on 19.0mm	2% on 19.0mm	2% on 19.0mm	2% on 19.0mm
Material Description:		Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay
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:	(%)	17.5	13.0	8.0	8.5	16.0
Adjusted Lab OMC:	(%)	19.1	15.2	9.9	10.6	18.3
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)	1.95	2.01	2.11	2.04	2.00
Adjusted Lab Max CWD:	(t/m^3)	1.96	2.01	2.12	2.04	2.01
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2.0% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**91.5**	**86.5**	**80.5**	**81.5**	**88.5**
Density Ratio	(%)	**101.0**	**96.5**	**99.0**	**101.5**	**102.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.9**	8	99.75	1.79	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 29/02/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results of the tests included in this document are traceable to Australian/national standards.
Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

AUSTRALIAN SOIL AND CONCRETE TESTING
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Mobile: 0437 776 582
A.B.N. 73 193 500 470

Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**13**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	4/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks Allotment Fill - Level 1	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**34111**	**34112**	**34113**	**-**	**-**
Field Test Number:		6	7	8	-	-
Date - Field Tested:		27/02/2020	27/02/2020	27/02/2020	-	-
Time - Field Tested:		1050	1100	1110	-	-
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		Proposed Stage 5I	Proposed Stage 5I	Proposed Stage 5I	-	-
Location/Chainage/Easting:	(m)	E:34638.16	E:34618.59	E:34622.9	-	-
Position/Offset/Northing:	(m)	N:74023.49	N:74010.7	N:74019.6	-	-
Level/Layer/R.L.		RL:51.99	RL:50.76	RL:50.99	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.10	2.06	2.11	-	-
Field Dry Density:	(t/m^3)	1.93	1.90	1.93	-	-
Retained Oversize (Wet basis):	(%)	3% on 19.0mm	2% on 19.0mm	3% on 19.0mm	-	-
Material Description:		Sandy Clay	Sandy Clay	Sandy Clay	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-	-
Field Moisture Content:	(%)	9.0	8.0	9.0	-	-
Adjusted Lab OMC:	(%)	11.1	9.7	10.8	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.08	2.09	2.11	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.09	2.09	2.12	-	-
Compactive Effort:		Standard	Standard	Standard	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**-**	**-**
Moisture Ratio	(%)	**81.5**	**84.5**	**84.0**	**-**	**-**
Density Ratio	(%)	**100.5**	**98.5**	**99.5**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.9**	8	99.75	1.79	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 29/02/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results of the tests included in this document are traceable to Australian/national standards.
Accreditation number: 19902

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**14**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	4/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks Allotment Fill - Level 1	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**34317**	**34318**	**34319**	**34320**	**34321**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		2/03/2020	2/03/2020	2/03/2020	2/03/2020	2/03/2020
Time - Field Tested:		0940	0945	0950	0955	1000
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E:34631.99	E:34619.24	E:34615.74	E:34608.1	E:34607.54
Position/Offset/Northing:	(m)	N:73864.27	N:73856.68	N:73934.75	N:73954.17	N:74001.34
Level/Layer/R.L.		RL:46.28	RL:46.15	RL:48.58	RL:49.05	RL:50.67
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.02	2.08	2.08	2.19	2.21
Field Dry Density:	(t/m^3)	1.76	1.86	1.82	2.00	2.01
Retained Oversize (Wet basis):	(%)	0% on 19.0mm	7% on 19.0mm	2% on 19.0mm	2% on 19.0mm	13% on 19.0mm
Material Description:		Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay
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:	(%)	15.0	12.0	14.0	9.5	10.0
Adjusted Lab OMC:	(%)	16.8	13.9	14.3	11.3	11.9
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)	2.01	2.12	2.11	2.18	2.15
Adjusted Lab Max CWD:	(t/m^3)	2.01	2.15	2.12	2.19	2.20
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**2.0% Dryer than OMC**	**At OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**89.0**	**85.5**	**99.0**	**84.5**	**82.5**
Density Ratio	(%)	**100.5**	**97.0**	**98.5**	**100.0**	**100.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.0**	12	98.57	1.45	0.370
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), , AS 1289.1.2.1, Cl 6.5.1 (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 02/03/2020 to 03/03/2020

NATA

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Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**14**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	4/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks Allotment Fill - Level 1	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**34322**	**34323**	**34324**	**34325**	**34326**
Field Test Number:		6	7	8	9	10
Date - Field Tested:		2/03/2020	2/03/2020	2/03/2020	2/03/2020	2/03/2020
Time - Field Tested:		1005	1010	1020	1030	1040
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E:34596.46	E:34618.94	E:34659.61	E:34641.27	E:34653.95
Position/Offset/Northing:	(m)	N:73993.02	N:73994.3	N:74012.7	N:73956.37	N:73974.38
Level/Layer/R.L.		RL:50.31	RL:49.89	RL:52.30	RL:49.85	RL:51.43
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.09	2.06	2.10	2.10	2.15
Field Dry Density:	(t/m^3)	1.91	1.85	1.88	1.92	1.95
Retained Oversize (Wet basis):	(%)	8% on 19.0mm	8% on 19.0mm	3% on 19.0mm	5% on 19.0mm	5% on 19.0mm
Material Description:		Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay
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:	(%)	9.5	11.0	11.0	9.0	10.5
Adjusted Lab OMC:	(%)	11.1	12.8	12.8	11.3	12.4
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)	2.09	2.11	2.09	2.14	2.19
Adjusted Lab Max CWD:	(t/m^3)	2.11	2.14	2.10	2.15	2.20
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**85.5**	**86.0**	**88.0**	**81.5**	**84.0**
Density Ratio	(%)	**99.0**	**96.0**	**100.0**	**97.5**	**98.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.0**	12	98.57	1.45	0.370
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), , AS 1289.1.2.1, Cl 6.5.1 (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 02/03/2020 to 03/03/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**14**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	4/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks Allotment Fill - Level 1	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**34327**	**34328**	-	-	-
Field Test Number:		11	12	-	-	-
Date - Field Tested:		2/03/2020	2/03/2020	-	-	-
Time - Field Tested:		1050	1100	-	-	-
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E:34651.78	E:34636.28	-	-	-
Position/Offset/Northing:	(m)	N:73936.04	N:73922.58	-	-	-
Level/Layer/R.L.		RL:50.52	RL:49.24	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.10	2.12	-	-	-
Field Dry Density:	(t/m^3)	1.92	1.94	-	-	-
Retained Oversize (Wet basis):	(%)	3% on 19.0mm	8% on 19.0mm	-	-	-
Material Description:		Sandy Clay	Sandy Clay	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-	-	-
Field Moisture Content:	(%)	9.0	9.0	-	-	-
Adjusted Lab OMC:	(%)	10.6	10.8	-	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.12	2.15	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.13	2.17	-	-	-
Compactive Effort:		Standard	Standard	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	-	-	-
Moisture Ratio	(%)	**83.5**	**84.0**	-	-	-
Density Ratio	(%)	**98.0**	**97.5**	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.0**	12	98.57	1.45	0.370
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), , AS 1289.1.2.1, Cl 6.5.1 (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 02/03/2020 to 03/03/2020

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**15**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	11/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks Allotment Fill - Level 1	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**34621**	**34622**	**34623**	**34624**	**34625**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		6/03/2020	6/03/2020	6/03/2020	6/03/2020	6/03/2020
Time - Field Tested:		1345	1350	1355	1400	1410
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E:34683.81	E:34671.80	E:34655.70	E:34638.81	E:34646.69
Position/Offset/Northing:	(m)	N:73852.74	N:73834.25	N:73795.16	N:73804.35	N:73841.46
Level/Layer/R.L.		RL:50.94	RL:48.80	RL:47.45	RL:46.57	RL:47.40
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.08	2.02	2.23	2.26	2.23
Field Dry Density:	(t/m^3)	1.88	1.84	2.04	2.09	2.06
Retained Oversize (Wet basis):	(%)	14% on 19.0mm	9% on 19.0mm	9% on 19.0mm	15% on 19.0mm	2% on 19.0mm
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay
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	10.0	9.5	8.0	8.5
Adjusted Lab OMC:	(%)	11.9	12.2	11.3	10.1	9.8
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)	2.03	2.07	2.22	2.16	2.18
Adjusted Lab Max CWD:	(t/m^3)	2.08	2.10	2.24	2.21	2.18
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**86.0**	**82.0**	**84.5**	**79.5**	**85.5**
Density Ratio	(%)	**99.5**	**96.5**	**99.5**	**102.0**	**102.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.7**	10	99.70	2.43	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 09/03/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**15**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	11/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks Allotment Fill - Level 1	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**34626**	**34627**	**34628**	**34629**	**34630**
Field Test Number:		6	7	8	9	10
Date - Field Tested:		6/03/2020	6/03/2020	6/03/2020	6/03/2020	6/03/2020
Time - Field Tested:		1415	1420	1425	1430	1435
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E:34540.72	E:34496.55	E:34583.01	E:34607.20	E:34621.20
Position/Offset/Northing:	(m)	N:73907.36	N:73919.52	N:74023.62	N:74026.09	N:74024.90
Level/Layer/R.L.		RL:39.78	RL:39.75	RL:49.55	RL:50.88	RL:50.03
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.20	2.24	2.18	2.15	2.11
Field Dry Density:	(t/m^3)	2.03	2.07	2.01	2.00	1.91
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	3% on 19.0mm	13% on 19.0mm	8% on 19.0mm	16% on 19.0mm
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay
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:	(%)	8.0	8.0	8.5	8.0	10.5
Adjusted Lab OMC:	(%)	10.2	9.9	9.9	9.3	12.5
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)	2.15	2.18	2.18	2.19	2.14
Adjusted Lab Max CWD:	(t/m^3)	2.15	2.19	2.20	2.22	2.19
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**81.0**	**81.5**	**84.5**	**84.0**	**83.0**
Density Ratio	(%)	**102.0**	**102.5**	**99.0**	**97.0**	**96.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.7**	10	99.70	2.43	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 09/03/2020

NATA

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Accreditation number: 19902

AUSTRALIAN SOIL AND CONCRETE TESTING
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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**17**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks Allotment Fill - Level 1	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**34832**	**34833**	**34834**	**34835**	**-**
Field Test Number:		1	2	3	4	-
Date - Field Tested:		12/03/2020	12/03/2020	12/03/2020	12/03/2020	-
Time - Field Tested:		1000	1010	1020	1030	-
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	
Location/Chainage/Easting:	(m)	E:34577.28	E:34568.75	E:34555.48	E:34574.29	-
Position/Offset/Northing:	(m)	N:73994.94	N:74003.88	N:74007.47	N:74021.6	-
Level/Layer/R.L.		RL:47.24	RL:47.40	RL:47.52	RL:48.86	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.13	2.17	2.15	2.09	-
Field Dry Density:	(t/m^3)	1.86	2.01	1.96	1.88	-
Retained Oversize (Wet basis):	(%)	10% on 19.0mm	8% on 19.0mm	11% on 19.0mm	8% on 19.0mm	-
Material Description:		Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay	-
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:	(%)	14.5	8.0	10.0	11.5	-
Adjusted Lab OMC:	(%)	14.0	10.3	12.2	13.4	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-
Lab Max Converted Wet Density:	(t/m^3)	2.15	2.15	2.16	2.05	-
Adjusted Lab Max CWD:	(t/m^3)	2.18	2.17	2.20	2.08	-
Compactive Effort:		Standard	Standard	Standard	Standard	-

Relative Compaction & Moisture

Moisture Variation	(%)	**0.5% Wetter than OMC**	**2.0% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**-**
Moisture Ratio	(%)	**103.5**	**80.0**	**83.0**	**84.0**	**-**
Density Ratio	(%)	**97.5**	**100.0**	**98.0**	**100.5**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.1**	4	99.03	1.49	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 12/03/2020 to 14/03/2020

NATA

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Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**18**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks - Level 1	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**34866**	**34867**	**34868**	**34869**	**34870**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		13/03/2020	13/03/2020	13/03/2020	13/03/2020	13/03/2020
Time - Field Tested:		0930	0940	0950	1000	1010
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		#N/A	#N/A	#N/A	#N/A	#N/A
Location/Chainage/Easting:	(m)	E:34567.6	E:34554.5	E:34550.2	E:34618.55	E:345612.95
Position/Offset/Northing:	(m)	N:73978.5	N:73989.36	N:73991.9	N:74037.2	N:74030.6
Level/Layer/R.L.		RL:45.54	RL:46.11	RL:46.01	RL:52.18	RL:51.75
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.24	2.13	2.07	2.19	2.20
Field Dry Density:	(t/m^3)	2.07	1.97	1.91	1.98	2.00
Retained Oversize (Wet basis):	(%)	4% on 19.0mm	6% on 19.0mm	7% on 19.0mm	6% on 19.0mm	8% on 19.0mm
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay
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:	(%)	8.5	8.5	8.0	10.0	10.0
Adjusted Lab OMC:	(%)	10.1	10.1	10.0	11.7	9.1
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)	2.20	2.18	2.06	2.16	2.15
Adjusted Lab Max CWD:	(t/m^3)	2.21	2.19	2.09	2.18	2.18
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**1% Wetter than OMC**
Moisture Ratio	(%)	**84.0**	**85.0**	**81.5**	**87.0**	**111.0**
Density Ratio	(%)	**101.5**	**97.5**	**99.0**	**100.0**	**101.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.7**	8	99.38	1.49	0.453
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), , - (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 14/02/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**18**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks - Level 1	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**34871**	**34872**	**34873**	**-**	**-**
Field Test Number:		6	7	8	-	-
Date - Field Tested:		13/03/2020	13/03/2020	13/03/2020	-	-
Time - Field Tested:		1020	1030	1040	-	-
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		#N/A	#N/A	#N/A	-	-
Location/Chainage/Easting:	(m)	E:34669.25	E:34658.66	E:34664.71	-	-
Position/Offset/Northing:	(m)	N:73861.53	N:73839.62	N:73813.08	-	-
Level/Layer/R.L.		RL:50.44	RL:48.94	RL:48.81	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.14	2.09	2.10	-	-
Field Dry Density:	(t/m^3)	1.90	1.88	1.90	-	-
Retained Oversize (Wet basis):	(%)	10% on 19.0mm	10% on 19.0mm	9% on 19.0mm	-	-
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-	-
Field Moisture Content:	(%)	12.5	11.0	10.5	-	-
Adjusted Lab OMC:	(%)	12.2	12.5	12.0	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.13	2.10	2.09	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.16	2.13	2.12	-	-
Compactive Effort:		Standard	Standard	Standard	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**At OMC**	**1.5% Dryer than OMC**	**1% Dryer than OMC**	**-**	**-**
Moisture Ratio	(%)	**102.0**	**87.5**	**89.0**	**-**	**-**
Density Ratio	(%)	**99.0**	**97.5**	**99.0**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.7**	8	99.38	1.49	0.453
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), , - (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 14/02/2020

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**19**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	23/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks - Level 1	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**34953**	**34954**	**34955**	**34956**	**34957**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		16/03/2020	16/03/2020	16/03/2020	16/03/2020	16/03/2020
Time - Field Tested:		0945	0955	1000	1010	1015
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E:34509.25	E:34530.1	E:34512.46	E:34531.72	E:34521.37
Position/Offset/Northing:	(m)	N:74011.2	N:74005.3	N:73997.2	N:73972.74	N:73986.25
Level/Layer/R.L.		RL:46.02	RL:46.40	RL:44.99	RL:43.23	RL:44.16
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.16	2.08	2.13	2.08	2.13
Field Dry Density:	(t/m^3)	2.01	1.91	1.93	1.87	1.93
Retained Oversize (Wet basis):	(%)	5% on 19.0mm	16% on 19.0mm	12% on 19.0mm	8% on 19.0mm	12% on 19.0mm
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay
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:	(%)	7.5	9.0	10.5	11.0	10.5
Adjusted Lab OMC:	(%)	9.4	11.3	11.7	13.1	12.0
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)	2.17	2.08	2.13	2.11	2.14
Adjusted Lab Max CWD:	(t/m^3)	2.19	2.14	2.17	2.14	2.18
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**2.0% Dryer than OMC**	**1% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**79.5**	**80.5**	**89.5**	**84.0**	**86.0**
Density Ratio	(%)	**99.0**	**97.5**	**98.0**	**97.0**	**98.0**

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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling),

Remarks Regarding the Lot.

Laboratory testing 20/03/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**19**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	23/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks - Level 1	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**34958**	**34959**	**34960**	**34961**	**34962**
Field Test Number:		6	7	8	9	10
Date - Field Tested:		16/03/2020	16/03/2020	16/03/2020	16/03/2020	16/03/2020
Time - Field Tested:		1020	1030	1040	1050	1100
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E:34675.31	E:34661.45	E:34644.26	E:34642.04	E:34651.29
Position/Offset/Northing:	(m)	N:73846.35	N:73820.71	N:73810.92	N:73832.10	N:73857.77
Level/Layer/R.L.		RL:50.49	RL:49.07	RL:47.96	RL:47.80	RL:48.78
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.11	1.90	2.11	2.11	2.03
Field Dry Density:	(t/m^3)	1.85	1.63	1.92	1.88	1.83
Retained Oversize (Wet basis):	(%)	3% on 19.0mm	0% on 19.0mm	9% on 19.0mm	8% on 19.0mm	5% on 19.0mm
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay
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:	(%)	14.0	16.5	10.0	12.0	10.5
Adjusted Lab OMC:	(%)	14.1	18.2	10.1	11.5	12.7
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)	2.12	1.98	2.14	2.16	2.04
Adjusted Lab Max CWD:	(t/m^3)	2.13	1.98	2.16	2.18	2.06
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**At OMC**	**1.5% Dryer than OMC**	**At OMC**	**0.5% Wetter than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**101.0**	**90.5**	**100.0**	**103.0**	**83.5**
Density Ratio	(%)	**99.5**	**96.5**	**97.5**	**96.5**	**98.0**

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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling),

Remarks Regarding the Lot.

Laboratory testing 20/03/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**20**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	23/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks - Level 1	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**34963**	-	-	-	-
Field Test Number:		1	-	-	-	-
Date - Field Tested:		16/03/2020	-	-	-	-
Time - Field Tested:		1400	-	-	-	-
Material Source / Type:		Onsite - General Fill				
Remarks / Notes:						
Control Line:		Eastern Basin				
Location/Chainage/Easting:	(m)	E:34358.99	-	-	-	-
Position/Offset/Northing:	(m)	N:73861.12	-	-	-	-
Level/Layer/R.L.		RL:40.75	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.02	-	-	-	-
Field Dry Density:	(t/m^3)	1.70	-	-	-	-
Retained Oversize (Wet basis):	(%)	4% on 19.0mm	-	-	-	-
Material Description:		Sandy Clay	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	18.5	-	-	-	-
Adjusted Lab OMC:	(%)	18.1	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	1.99	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.01	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**0.5% Wetter than OMC**	-	-	-	-
Moisture Ratio	(%)	**102.0**	-	-	-	-
Density Ratio	(%)	**100.5**	-	-	-	-

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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling),

Remarks Regarding the Lot.

Laboratory testing 21/02/2020 to 21/03/2020

NATA

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Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**22**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	25/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**35160**	**35161**	**35162**	**35163**	**35164**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		18/03/2020	18/03/2020	18/03/2020	18/03/2020	18/03/2020
Time - Field Tested:		1000	1005	1010	1015	1020
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E:34628.91	E: 34627.40	E: 34628.25	E: 34639.84	E: 34582.79
Position/Offset/Northing:	(m)	N: 73795.37	N: 73814.99	N: 73853.59	N: 73853.59	N: 74009.54
Level/Layer/R.L.		RL: 47.21	RL: 47.51	RL: 47.58	RL: 48.83	RL: 49.23
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.17	2.17	2.16	2.07	2.11
Field Dry Density:	(t/m^3)	2.03	2.00	2.01	1.90	1.93
Retained Oversize (Wet basis):	(%)	12% on 19.0mm	8% on 19.0mm	2% on 19.0mm	11% on 19.0mm	9% on 19.0mm
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay
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:	(%)	7.0	8.5	7.0	8.5	9.5
Adjusted Lab OMC:	(%)	9.0	10.7	9.0	10.6	11.6
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)	2.17	2.18	2.16	2.09	2.08
Adjusted Lab Max CWD:	(t/m^3)	2.21	2.20	2.16	2.13	2.11
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**2.0% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**76.5**	**79.5**	**78.5**	**80.5**	**82.0**
Density Ratio	(%)	**98.0**	**98.5**	**99.5**	**97.0**	**100.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.5**	7	99.10	1.15	0.484
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 21/03/2020

NATA

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Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**22**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	25/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**35165**	**35166**	**-**	**-**	**-**
Field Test Number:		6	7	-	-	-
Date - Field Tested:		18/03/2020	18/03/2020	-	-	-
Time - Field Tested:		1025	1030	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34561.80	E: 34583.95	-	-	-
Position/Offset/Northing:	(m)	N: 74024.55	N: 73998.24	-	-	-
Level/Layer/R.L.		RL: 49.47	RL: 48.53	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.07	2.08	-	-	-
Field Dry Density:	(t/m^3)	1.84	1.82	-	-	-
Retained Oversize (Wet basis):	(%)	8% on 19.0mm	10% on 19.0mm	-	-	-
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-	-	-
Field Moisture Content:	(%)	12.5	14.5	-	-	-
Adjusted Lab OMC:	(%)	14.4	16.7	-	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.04	2.04	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.07	2.08	-	-	-
Compactive Effort:		Standard	Standard	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**-**	**-**	**-**
Moisture Ratio	(%)	**87.5**	**87.0**	**-**	**-**	**-**
Density Ratio	(%)	**100.5**	**100.0**	**-**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.5**	7	99.10	1.15	0.484
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 21/03/2020

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**24**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	25/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**35149**	**35150**	**35151**	**35152**	**35153**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		17/03/2020	17/03/2020	17/03/2020	17/03/2020	17/03/2020
Time - Field Tested:		1000	1005	1010	1015	1020
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34643.51	E: 34608.09	E: 34583.7	E: 34602.66	E: 34627.01
Position/Offset/Northing:	(m)	N: 73857.5	N: 73863.87	N: 73843.11	N: 73818.23	N: 73821.86
Level/Layer/R.L.		RL: 49.11	RL: 47.02	RL: 44.50	RL: 45.58	RL: 47.67
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.10	2.08	2.19	2.10	2.08
Field Dry Density:	(t/m^3)	1.90	1.86	2.00	1.86	1.89
Retained Oversize (Wet basis):	(%)	7% on 19.0mm	7% on 19.0mm	8% on 19.0mm	9% on 19.0mm	10% on 19.0mm
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay
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	12.0	9.5	13.0	10.5
Adjusted Lab OMC:	(%)	11.7	13.7	11.4	14.5	12.1
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)	2.10	2.12	2.16	2.14	2.09
Adjusted Lab Max CWD:	(t/m^3)	2.12	2.14	2.18	2.16	2.13
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**86.0**	**89.5**	**83.5**	**89.0**	**85.5**
Density Ratio	(%)	**98.5**	**97.5**	**100.0**	**97.0**	**98.0**

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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling),

Remarks Regarding the Lot.

Laboratory testing 21/03/2020 to 23/03/2020

NATA

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Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**24**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	25/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**35154**	**35155**	**35156**	**35157**	**35158**
Field Test Number:		6	7	8	9	10
Date - Field Tested:		17/03/2020	17/03/2020	17/03/2020	17/03/2020	17/03/2020
Time - Field Tested:		1025	1030	1035	1040	1045
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34489.52	E: 34494.37	E: 34487.1	E: 34487.59	E: 34499.13
Position/Offset/Northing:	(m)	N: 74017.04	N: 74033.83	N: 74003.4	N: 74022.47	N: 74038.62
Level/Layer/R.L.		RL: 45.64	RL: 46.93	RL: 44.42	RL: 45.86	RL: 47.37
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.19	2.07	2.03	2.09	2.07
Field Dry Density:	(t/m^3)	2.00	1.87	1.80	1.89	1.90
Retained Oversize (Wet basis):	(%)	5% on 19.0mm	12% on 19.0mm	9% on 19.0mm	11% on 19.0mm	14% on 19.0mm
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay
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	11.0	12.5	10.5	9.0
Adjusted Lab OMC:	(%)	10.8	13.0	14.2	11.9	10.5
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)	2.22	2.08	2.05	2.16	2.13
Adjusted Lab Max CWD:	(t/m^3)	2.23	2.12	2.08	2.19	2.17
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**85.0**	**84.0**	**87.5**	**88.0**	**85.5**
Density Ratio	(%)	**98.5**	**97.5**	**97.5**	**95.5**	**95.5**

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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling),

Remarks Regarding the Lot.

Laboratory testing 21/03/2020 to 23/03/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**25**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	30/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks	Test Request:	
Lot Number:		ITP/PCP:	

Sample Information & Location

Sample Number:		**35377**	**35378**	**35379**	**35380**	**35381**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		19/03/2020	19/03/2020	19/03/2020	19/03/2020	19/03/2020
Time - Field Tested:		1000	1005	1010	1015	1020
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34604.95	E: 34614.09	E: 34652.66	E: 34638.40	E: 34625.25
Position/Offset/Northing:	(m)	N: 73860.30	N: 73849.89	N: 73850.64	N: 73848.54	N: 73896.22
Level/Layer/R.L.		RL: 47.66	RL: 47.81	RL: 49.35	RL: 48.57	RL: 48.62
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.17	2.10	2.19	2.08	2.06
Field Dry Density:	(t/m^3)	1.96	1.94	1.98	1.86	1.81
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	5% on 19.0mm	1% on 19.0mm	2% on 19.0mm	4% on 19.0mm
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay
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:	(%)	10.5	8.0	10.5	12.0	14.0
Adjusted Lab OMC:	(%)	12.5	9.9	12.2	14.0	16.5
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)	2.11	2.11	2.15	2.08	2.05
Adjusted Lab Max CWD:	(t/m^3)	2.12	2.13	2.15	2.09	2.06
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**2.5% Dryer than OMC**
Moisture Ratio	(%)	**84.0**	**82.5**	**86.5**	**85.5**	**85.0**
Density Ratio	(%)	**102.5**	**99.0**	**101.5**	**99.5**	**99.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.5**	9	100.21	1.70	0.427
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 24/03/2020 to 25/03/2020

NATA

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Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**25**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	30/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks	Test Request:	
Lot Number:		ITP/PCP:	

Sample Information & Location

Sample Number:		**35382**	**35383**	**35384**	**35385**	**-**
Field Test Number:		6	7	8	9	-
Date - Field Tested:		19/03/2020	19/03/2020	19/03/2020	19/03/2020	-
Time - Field Tested:		1025	1030	1035	1040	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		0	0	0	0	-
Location/Chainage/Easting:	(m)	E: 34640.33	E: 34634.95	E: 34631.51	E: 34612.12	-
Position/Offset/Northing:	(m)	N: 73902.11	N: 73908.00	N: 73987.81	N: 73975.78	-
Level/Layer/R.L.		RL: 49.13	RL: 48.84	RL: 50.39	RL: 49.01	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.10	1.92	2.20	2.21	-
Field Dry Density:	(t/m^3)	1.91	1.67	1.95	2.03	-
Retained Oversize (Wet basis):	(%)	7% on 19.0mm	5% on 19.0mm	11% on 19.0mm	7% on 19.0mm	-
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	-
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:	(%)	10.5	14.5	12.5	9.0	-
Adjusted Lab OMC:	(%)	12.4	16.3	12.6	10.3	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-
Lab Max Converted Wet Density:	(t/m^3)	2.15	1.91	2.15	2.13	-
Adjusted Lab Max CWD:	(t/m^3)	2.16	1.93	2.18	2.15	-
Compactive Effort:		Standard	Standard	Standard	Standard	-

Relative Compaction & Moisture

Moisture Variation	(%)	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**At OMC**	**1.5% Dryer than OMC**	**-**
Moisture Ratio	(%)	**84.0**	**90.0**	**99.0**	**86.5**	**-**
Density Ratio	(%)	**97.5**	**99.5**	**101.0**	**102.5**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.5**	9	100.21	1.70	0.427
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 24/03/2020 to 25/03/2020

NATA

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Accreditation number: 19902

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**26**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	30/03/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks	Test Request:	
Lot Number:		ITP/PCP:	

Sample Information & Location

Sample Number:		**35386**	**35387**	**35388**	**35389**	**35390**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		20/03/2020	20/03/2020	20/03/2020	20/03/2020	20/03/2020
Time - Field Tested:		0945	0955	1010	1015	1020
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34741.68	E: 34737.56	E: 34735.76	E:34730.54	E: 34572.77
Position/Offset/Northing:	(m)	N: 73984.86	N: 73951.25	N: 73922.61	N: 73887.71	N: 74052.32
Level/Layer/R.L.		RL: 54.78	RL: 54.18	RL: 53.52	RL: 52.44	RL: 52.14
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.15	2.18	2.17	2.08	1.94
Field Dry Density:	(t/m^3)	2.02	2.04	1.88	1.78	1.76
Retained Oversize (Wet basis):	(%)	7% on 19.0mm	5% on 19.0mm	9% on 19.0mm	4% on 19.0mm	2% on 19.0mm
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay
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:	(%)	6.0	7.0	15.5	16.5	10.0
Adjusted Lab OMC:	(%)	7.9	8.8	17.1	18.7	12.0
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)	2.23	2.18	2.07	2.03	2.02
Adjusted Lab Max CWD:	(t/m^3)	2.24	2.20	2.10	2.04	2.03
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**76.0**	**78.0**	**90.5**	**89.0**	**85.5**
Density Ratio	(%)	**96.0**	**99.5**	**103.5**	**102.0**	**95.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.2**	5	99.16	3.47	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 24/03/2020 to 26/03/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results of the tests included in this document are traceable to Australian/national standards.
Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**27**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	2/04/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks	Test Request:	
Lot Number:		ITP/PCP:	

Sample Information & Location

Sample Number:		**35451**	**35452**	**35453**	**-**	**-**
Field Test Number:		1	2	3	-	-
Date - Field Tested:		23/03/2020	23/03/2020	23/03/2020	-	-
Time - Field Tested:		1000	1005	1010	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		-	-	-		
Location/Chainage/Easting:	(m)	E: 34530.51	E: 34540.71	E: 34550.08	-	-
Position/Offset/Northing:	(m)	N: 74033.66	N: 74012.76	N: 74001.59	-	-
Level/Layer/R.L.		RL: 48.77	RL: 48.32	RL: 47.75	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.17	2.04	2.15	-	-
Field Dry Density:	(t/m^3)	2.01	1.87	1.98	-	-
Retained Oversize (Wet basis):	(%)	7% on 19.0mm	5% on 19.0mm	10% on 19.0mm	-	-
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-	-
Field Moisture Content:	(%)	8.0	9.0	8.0	-	-
Adjusted Lab OMC:	(%)	9.7	10.5	9.8	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.13	2.11	2.11	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.15	2.13	2.14	-	-
Compactive Effort:		Standard	Standard	Standard	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**-**	**-**
Moisture Ratio	(%)	**83.5**	**86.5**	**83.5**	**-**	**-**
Density Ratio	(%)	**101.0**	**96.0**	**100.0**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.0**	3	99.00	2.71	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 30/03/2020 to 01/04/2020

NATA

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Accreditation number: 19902

Approved By: A.Lenkeit
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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**28**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	2/04/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks	Test Request:	
Lot Number:		ITP/PCP:	

Sample Information & Location

Sample Number:		**35455**	**35456**	**35457**	**35458**	**35459**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		24/03/2020	24/03/2020	24/03/2020	24/03/2020	24/03/2020
Time - Field Tested:		1000	1005	1010	1015	1020
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E: 35116.25	E: 35108.32	E: 35138.40	E: 35164.18	E: 35185.52
Position/Offset/Northing:	(m)	N: 74096.97	N: 74118.88	N: 74099.06	N: 74074.18	N: 74056.54
Level/Layer/R.L.		RL: 49.45	RL: 49.55	RL: 48.91	RL: 48.36	RL: 47.37
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.06	2.00	1.98	2.02	1.97
Field Dry Density:	(t/m^3)	1.85	1.73	1.80	1.75	1.71
Retained Oversize (Wet basis):	(%)	4% on 19.0mm	5% on 19.0mm	6% on 19.0mm	5% on 19.0mm	5% on 19.0mm
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay
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:	(%)	11.5	15.5	10.0	16.0	15.5
Adjusted Lab OMC:	(%)	13.3	17.1	12.3	17.6	17.4
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)	2.10	1.95	2.03	1.97	1.96
Adjusted Lab Max CWD:	(t/m^3)	2.11	1.97	2.06	1.99	1.98
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**85.5**	**90.5**	**82.0**	**89.5**	**89.5**
Density Ratio	(%)	**97.5**	**101.0**	**96.0**	**102.0**	**99.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.4**	7	98.53	2.37	0.484
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 30/03/2020 to 31/03/2020

NATA

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Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**28**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	2/04/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks	Test Request:	
Lot Number:		ITP/PCP:	

Sample Information & Location

Sample Number:		**35460**	**35461**	**-**	**-**	**-**
Field Test Number:		6	7	-	-	-
Date - Field Tested:		24/03/2020	24/03/2020	-	-	-
Time - Field Tested:		1025	1030	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		0	0	-	-	-
Location/Chainage/Easting:	(m)	E: 35125.69	E: 35159.61	-	-	-
Position/Offset/Northing:	(m)	N: 74083.16	N: 74109.63	-	-	-
Level/Layer/R.L.		RL: 49.76	RL: 49.84	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.13	2.13	-	-	-
Field Dry Density:	(t/m^3)	1.88	1.91	-	-	-
Retained Oversize (Wet basis):	(%)	7% on 19.0mm	10% on 19.0mm	-	-	-
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-	-	-
Field Moisture Content:	(%)	13.5	11.5	-	-	-
Adjusted Lab OMC:	(%)	12.9	13.1	-	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.17	2.19	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.19	2.22	-	-	-
Compactive Effort:		Standard	Standard	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**0.5% Wetter than OMC**	**1.5% Dryer than OMC**	**-**	**-**	**-**
Moisture Ratio	(%)	**104.5**	**88.0**	**-**	**-**	**-**
Density Ratio	(%)	**97.5**	**96.0**	**-**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.4**	7	98.53	2.37	0.484
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 30/03/2020 to 31/03/2020

NATA

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Accreditation number: 19902

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**29**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	3/04/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks	Test Request:	
Lot Number:		ITP/PCP:	

Sample Information & Location

Sample Number:		**35524**	**35525**	**35526**	**35527**	**35528**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		25/03/2020	25/03/2020	25/03/2020	25/03/2020	25/03/2020
Time - Field Tested:		1000	1005	1010	1015	1020
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34544.46	E: 34541.38	E: 34530.00	E: 34527.15	E: 34516.10
Position/Offset/Northing:	(m)	N: 74032.59	N: 74027.03	N: 74036.69	N: 74027.44	N: 74038.24
Level/Layer/R.L.		RL: 48.79	RL: 48.50	RL: 48.66	RL: 48.17	RL: 48.57
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.16	2.14	2.08	2.06	2.16
Field Dry Density:	(t/m^3)	1.98	1.96	1.92	1.89	1.99
Retained Oversize (Wet basis):	(%)	13% on 19.0mm	9% on 19.0mm	5% on 19.0mm	5% on 19.0mm	5% 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:	(%)	9.0	9.0	8.5	9.0	8.0
Adjusted Lab OMC:	(%)	9.0	8.8	10.5	11.1	8.6
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)	2.19	2.18	2.04	2.06	2.18
Adjusted Lab Max CWD:	(t/m^3)	2.21	2.19	2.06	2.07	2.19
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**At OMC**	**At OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**0.5% Dryer than OMC**
Moisture Ratio	(%)	**100.0**	**100.0**	**80.5**	**80.5**	**95.0**
Density Ratio	(%)	**98.0**	**97.5**	**101.0**	**99.5**	**98.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.2**	5	98.96	1.38	0.572
Maximum (%)		**-**	-	-	-	-
Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*98*	**85.4**	5	91.16	10.03	0.572
Maximum (%)	*102*	**96.9**	5	91.16	10.03	0.572

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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 02/04/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**30**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	6/04/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks - Level 1	Test Request:	
Lot Number:		ITP/PCP:	

Sample Information & Location

Sample Number:		**35703**	**35704**	**35705**	**-**	**-**
Field Test Number:		1	2	3	-	-
Date - Field Tested:		30/03/2020	30/03/2020	30/03/2020	-	-
Time - Field Tested:		1000	1010	1020	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		-	-	-		
Location/Chainage/Easting:	(m)	E:34482.72	E:34504.58	E:34529.56	-	-
Position/Offset/Northing:	(m)	N:73983.61	N:73987.88	N:73978.21	-	-
Level/Layer/R.L.		RL:43.48	RL:44.88	RL:44.91	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.13	2.18	2.22	-	-
Field Dry Density:	(t/m^3)	1.98	2.04	2.07	-	-
Retained Oversize (Wet basis):	(%)	3% on 19.0mm	11% on 19.0mm	4% on 19.0mm	-	-
Material Description:		Crushed Sandstone	Crushed Sandstone	Crushed Sandstone	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-	-
Field Moisture Content:	(%)	7.5	7.0	7.0	-	-
Adjusted Lab OMC:	(%)	9.3	9.0	8.9	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.11	2.14	2.17	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.12	2.17	2.18	-	-
Compactive Effort:		Standard	Standard	Standard	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**2.0% Dryer than OMC**	**2% Dryer than OMC**	**-**	**-**
Moisture Ratio	(%)	**80.5**	**77.5**	**79.5**	**-**	**-**
Density Ratio	(%)	**100.5**	**100.5**	**102.0**	**-**	**-**

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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling),

Remarks Regarding the Lot.

Laboratory testing 04/04/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results of the tests included in this document are traceable to Australian/national standards.
Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

AUSTRALIAN SOIL AND CONCRETE TESTING
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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**31**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	8/04/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks - Level 1	Test Request:	
Lot Number:		ITP/PCP:	

Sample Information & Location

Sample Number:		**35715**	**35716**	**35717**	**35718**	**35719**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		27/03/2020	27/03/2020	27/03/2020	27/03/2020	27/03/2020
Time - Field Tested:		1000	1005	1010	1015	1020
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E:34503.56	E: 34489.97	E: 34496.54	E: 34489.64	E: 34486.51
Position/Offset/Northing:	(m)	N: 73998.9	N: 74008.33	N: 74025.34	N: 74035.89	N: 74056.48
Level/Layer/R.L.		RL: 44.97	RL: 45.21	RL: 47.03	RL: 47.63	RL: 48.38
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.02	2.04	2.03	2.12	2.13
Field Dry Density:	(t/m^3)	1.87	1.87	1.87	1.89	1.86
Retained Oversize (Wet basis):	(%)	5% on 19.0mm	8% on 19.0mm	4% on 19.0mm	6% on 19.0mm	5% on 19.0mm
Material Description:		Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay	Gravelly Sandy Clay
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:	(%)	8.0	9.0	9.0	12.0	14.5
Adjusted Lab OMC:	(%)	9.5	10.5	10.7	13.9	13.8
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)	2.09	2.07	2.10	2.13	2.08
Adjusted Lab Max CWD:	(t/m^3)	2.11	2.09	2.11	2.15	2.10
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**0.5% Wetter than OMC**
Moisture Ratio	(%)	**84.0**	**86.5**	**84.0**	**88.0**	**105.0**
Density Ratio	(%)	**96.0**	**97.5**	**96.5**	**99.0**	**101.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.8**	5	98.06	2.18	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 06/04/2020

NATA

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Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

AUSTRALIAN SOIL AND CONCRETE TESTING
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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**32**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/10/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43223**	**43224**	**43225**	**43226**	**43227**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		14/10/2020	14/10/2020	14/10/2020	14/10/2020	14/10/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 50	Stage 50	Stage 50	Stage 5P	Stage 5P
Location/Chainage/Easting:	(m)	E: 34417.26	E: 34404.96	E: 34399.49	E: 34411.92	E: 34402.56
Position/Offset/Northing:	(m)	N: 73960.26	N: 73974.09	N: 73970.72	N: 73889.36	N: 73898.55
Level/Layer/R.L.		RL: 42.22	RL: 42.30	RL: 42.05	RL: 40.71	RL: 40.83
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.07	2.20	2.04	2.09	2.14
Field Dry Density:	(t/m^3)	1.86	2.01	1.86	1.89	2.00
Retained Oversize (Wet basis):	(%)	6% on 19.0mm	6% on 19.0mm	9% on 19.0mm	9% on 19.0mm	8% 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:	(%)	11.0	9.0	9.5	11.0	7.0
Adjusted Lab OMC:	(%)	11.6	9.3	11.4	10.5	9.5
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)	2.15	2.19	2.09	2.18	2.17
Adjusted Lab Max CWD:	(t/m^3)	2.16	2.19	2.11	2.20	2.18
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**0.5% Dryer than OMC**	**At OMC**	**2% Dryer than OMC**	**0.5% Wetter than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**96.0**	**97.5**	**82.5**	**103.0**	**76.5**
Density Ratio	(%)	**95.5**	**100.0**	**96.5**	**95.0**	**98.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.4**	6	97.45	1.96	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 16/10/2020

NATA

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Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**32**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/10/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43228**	-	-	-	-
Field Test Number:		6	-	-	-	-
Date - Field Tested:		14/10/2020	-	-	-	-
Time - Field Tested:		PM	-	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5P	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34422.63	-	-	-	-
Position/Offset/Northing:	(m)	N: 73909.60	-	-	-	-
Level/Layer/R.L.		RL: 40.92	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.13	-	-	-	-
Field Dry Density:	(t/m^3)	1.95	-	-	-	-
Retained Oversize (Wet basis):	(%)	8% on 19.0mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	9.5	-	-	-	-
Adjusted Lab OMC:	(%)	10.0	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.14	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.15	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**0.5% Dryer than OMC**	-	-	-	-
Moisture Ratio	(%)	**95.5**	-	-	-	-
Density Ratio	(%)	**99.0**	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.4**	6	97.45	1.96	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**33**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/10/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43276**	**43277**	**43278**	**43279**	**43280**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		15/10/2020	15/10/2020	15/10/2020	15/10/2020	15/10/2020
Time - Field Tested:		AM	AM	AM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 2D	Stage 2D	Stage 2D	Stage 2E	Stage 2E
Location/Chainage/Easting:	(m)	E: 34732.80	E: 34726.29	E: 34735.57	E: 34755.09	E: 34769.36
Position/Offset/Northing:	(m)	N: 73873.36	N: 73889.38	N: 73906.22	N: 74101.28	N: 74113.27
Level/Layer/R.L.		RL: 53.14	RL: 52.97	RL: 52.94	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	1.94	1.97	2.01	2.16	2.15
Field Dry Density:	(t/m^3)	1.74	1.79	1.82	1.99	1.97
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:		-	-	-	-	-
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:	(%)	11.5	10.5	10.5	8.5	9.0
Adjusted Lab OMC:	(%)	13.6	12.1	12.5	10.4	10.9
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)	2.04	2.07	2.07	2.16	2.15
Adjusted Lab Max CWD:	(t/m^3)	2.04	2.07	2.07	2.16	2.15
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**2.0% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**84.5**	**84.5**	**86.0**	**81.0**	**82.0**
Density Ratio	(%)	**95.5**	**95.5**	**97.0**	**100.0**	**100.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.3**	5	97.58	2.30	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 16/10/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**34**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	21/10/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43294**	**43295**	**43296**	**43297**	**43298**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		16/10/2020	16/10/2020	16/10/2020	16/10/2020	16/10/2020
Time - Field Tested:		AM	AM	AM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5P	Stage 5P	Stage 5P	Stage 50	Stage 50
Location/Chainage/Easting:	(m)	E: 34405.43	E: 34401.95	E: 34394.61	E: 34412.84	E: 34432.09
Position/Offset/Northing:	(m)	N: 73889.07	N: 73920.74	N: 73944.57	N: 73973.01	N: 73986.24
Level/Layer/R.L.		FL	FL	FL	RL: 42.30	RL: 42.16
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.06	2.13	2.16	2.11	2.05
Field Dry Density:	(t/m^3)	1.92	1.97	2.00	1.96	1.89
Retained Oversize (Wet basis):	(%)	7% on 19.0mm	7% on 19.0mm	0% on 19.0mm	0% on 19.0mm	5% 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:	(%)	8.0	8.0	7.5	7.5	8.5
Adjusted Lab OMC:	(%)	9.6	9.7	9.0	9.3	10.5
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)	2.09	2.08	2.08	2.07	2.08
Adjusted Lab Max CWD:	(t/m^3)	2.11	2.09	2.08	2.07	2.09
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**81.0**	**81.0**	**85.5**	**81.5**	**80.5**
Density Ratio	(%)	**98.0**	**101.5**	**104.0**	**102.0**	**98.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.0**	6	100.28	2.53	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 20/10/2020

NATA

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A.B.N. 73 193 500 470

Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**34**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	21/10/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43299**	-	-	-	-
Field Test Number:		6	-	-	-	-
Date - Field Tested:		16/10/2020	-	-	-	-
Time - Field Tested:		PM	-	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 50	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34403.23	-	-	-	-
Position/Offset/Northing:	(m)	N: 73965.40	-	-	-	-
Level/Layer/R.L.		RL: 42.48	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.08	-	-	-	-
Field Dry Density:	(t/m^3)	1.94	-	-	-	-
Retained Oversize (Wet basis):	(%)	5% on 19.0mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	7.0	-	-	-	-
Adjusted Lab OMC:	(%)	9.0	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.11	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.12	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**2% Dryer than OMC**	-	-	-	-
Moisture Ratio	(%)	**77.5**	-	-	-	-
Density Ratio	(%)	**98.0**	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.0**	6	100.28	2.53	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 20/10/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

AUSTRALIAN SOIL AND CONCRETE TESTING
A.S.C.T.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**35**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	22/10/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43305**	**43306**	**43307**	**-**	**-**
Field Test Number:		1	2	3	-	-
Date - Field Tested:		19/10/2020	19/10/2020	19/10/2020	-	-
Time - Field Tested:		AM	AM	AM	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 50	Stage 50	Stage 50		
Location/Chainage/Easting:	(m)	E: 34408.06	E: 34414.90	E: 34448.32	-	-
Position/Offset/Northing:	(m)	N: 73960.48	N: 73991.24	N: 73985.39	-	-
Level/Layer/R.L.		RL: 43.29	RL: 43.86	RL: 44.02	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.05	2.16	2.14	-	-
Field Dry Density:	(t/m^3)	1.87	1.97	1.97	-	-
Retained Oversize (Wet basis):	(%)	6% on 19.0mm	6% on 19.0mm	6% 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:	(%)	9.5	9.5	9.0	-	-
Adjusted Lab OMC:	(%)	11.0	11.3	10.6	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.09	2.12	2.11	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.11	2.14	2.13	-	-
Compactive Effort:		Standard	Standard	Standard	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**-**	**-**
Moisture Ratio	(%)	**85.0**	**84.5**	**84.5**	**-**	**-**
Density Ratio	(%)	**97.5**	**101.0**	**101.0**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.2**	3	99.77	2.15	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 21/10/2020

NATA

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Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**36**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	23/10/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43361**	**43362**	**43363**	**43364**	**43365**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		20/10/2020	20/10/2020	20/10/2020	20/10/2020	20/10/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 50	Stage 50	Stage 50	Stage 50	Stage 50
Location/Chainage/Easting:	(m)	E: 34419.51	E: 34429.04	E: 34406.22	E: 34422.61	E: 34431.96
Position/Offset/Northing:	(m)	N: 73971.89	N: 73990.83	N: 73966.46	N: 73971.73	N: 73975.55
Level/Layer/R.L.		RL: 44.15	RL: 44.29	RL: 44.37	RL: 44.11	RL: 43.95
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.08	2.13	2.14	2.06	2.11
Field Dry Density:	(t/m^3)	1.94	1.99	1.99	1.92	1.97
Retained Oversize (Wet basis):	(%)	6% on 19.0mm	6% on 19.0mm	6% 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:	(%)	7.5	7.5	7.5	7.5	7.0
Adjusted Lab OMC:	(%)	9.6	9.1	9.2	9.1	8.9
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)	2.05	2.10	2.11	2.05	2.09
Adjusted Lab Max CWD:	(t/m^3)	2.07	2.12	2.13	2.05	2.09
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**2.0% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**78.5**	**80.0**	**80.0**	**80.0**	**79.5**
Density Ratio	(%)	**100.5**	**100.5**	**100.5**	**100.5**	**100.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**100.5**	5	100.58	0.13	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 22/10/2020

NATA

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Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**37**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	27/10/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43424**	**43425**	**43426**	**43427**	**43428**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		21/10/2020	21/10/2020	21/10/2020	21/10/2020	21/10/2020
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 2E	Stage 2E	Stage 2E	Stage 2E	Stage 2E
Location/Chainage/Easting:	(m)	E: 34758.91	E: 34775.93	E: 34764.27	E: 34792.04	E: 34767.50
Position/Offset/Northing:	(m)	N: 74090.33	N: 74096.24	N: 74101.80	N: 74108.47	N: 74104.88
Level/Layer/R.L.		RL: 54.92	RL: 55.25	RL: 54.79	RL: 55.09	RL: 55.02
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	1.89	1.92	1.94	1.92	1.95
Field Dry Density:	(t/m^3)	1.71	1.74	1.76	1.75	1.79
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:		-	-	-	-	-
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:	(%)	10.5	10.0	10.0	9.5	9.0
Adjusted Lab OMC:	(%)	12.1	12.0	11.7	11.1	10.8
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)	1.97	1.95	1.99	1.94	1.97
Adjusted Lab Max CWD:	(t/m^3)	1.97	1.95	1.99	1.94	1.97
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**87.0**	**85.5**	**86.0**	**85.5**	**82.0**
Density Ratio	(%)	**96.0**	**98.5**	**98.0**	**99.0**	**99.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.2**	6	97.85	1.19	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), , T100(AS1289.1.2.1, Cl 6.4b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 26/10/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**37**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	27/10/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43429**	-	-	-	-
Field Test Number:		6	-	-	-	-
Date - Field Tested:		21/10/2020	-	-	-	-
Time - Field Tested:		AM	-	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 2E	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34783.19	-	-	-	-
Position/Offset/Northing:	(m)	N: 74119.72	-	-	-	-
Level/Layer/R.L.		RL: 55.47	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	1.92	-	-	-	-
Field Dry Density:	(t/m^3)	1.77	-	-	-	-
Retained Oversize (Wet basis):	(%)	0% on 19.0mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	8.5	-	-	-	-
Adjusted Lab OMC:	(%)	9.9	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	1.98	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	1.98	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	-	-	-	-
Moisture Ratio	(%)	**84.5**	-	-	-	-
Density Ratio	(%)	**97.0**	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.2**	6	97.85	1.19	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), , T100(AS1289.1.2.1, Cl 6.4b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 26/10/2020

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**38**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	28/10/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43450**	**43451**	**43452**	**43453**	**-**
Field Test Number:		1	2	3	4	-
Date - Field Tested:		22/10/2020	22/10/2020	22/10/2020	22/10/2020	-
Time - Field Tested:		AM	AM	AM	AM	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 2D/2E	Stage 2D/2E	Stage 2D/2E	Stage 2D/2E	
Location/Chainage/Easting:	(m)	E: 34757.22	E: 34765.52	E: 34761.29	E: 34769.18	-
Position/Offset/Northing:	(m)	N: 73924.66	N: 73945.08	N: 73958.25	N: 73967.13	-
Level/Layer/R.L.		RL: 55.24	RL: 55.20	RL: 55.58	RL: 55.69	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.06	2.05	2.07	2.16	-
Field Dry Density:	(t/m^3)	1.88	1.87	1.91	1.99	-
Retained Oversize (Wet basis):	(%)	4% on 19.0mm	4% on 19.0mm	9% on 19.0mm	8% 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:	(%)	9.5	9.5	8.5	8.5	-
Adjusted Lab OMC:	(%)	11.7	11.5	10.5	10.3	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-
Lab Max Converted Wet Density:	(t/m^3)	2.13	2.10	2.11	2.15	-
Adjusted Lab Max CWD:	(t/m^3)	2.14	2.11	2.13	2.16	-
Compactive Effort:		Standard	Standard	Standard	Standard	-

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**2.0% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**-**
Moisture Ratio	(%)	**81.5**	**82.0**	**80.5**	**81.0**	**-**
Density Ratio	(%)	**96.0**	**97.0**	**97.0**	**100.0**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.4**	4	97.43	1.61	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 27/10/2020

NATA

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Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**39**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	28/10/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43468**	**43469**	**43470**	**43471**	**43472**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		23/10/2020	23/10/2020	23/10/2020	23/10/2020	23/10/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I/5J	Stage 5I/5J	Stage 5I/5J	Stage 5I/5J	Stage 5I/5J
Location/Chainage/Easting:	(m)	E: 34629.29	E: 34664.23	E: 34646.47	E: 34650.58	E: 34672.59
Position/Offset/Northing:	(m)	N: 74162.63	N: 74157.66	N: 74144.92	N: 74134.33	N: 74146.76
Level/Layer/R.L.		RL: 57.59	RL: 58.77	RL: 58.45	RL: 58.50	RL: 58.86
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.05	2.08	2.08	2.16	2.09
Field Dry Density:	(t/m^3)	1.90	1.91	1.92	1.98	1.93
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:		-	-	-	-	-
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:	(%)	7.5	9.0	8.5	9.0	8.5
Adjusted Lab OMC:	(%)	9.8	10.6	10.2	10.6	9.8
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)	2.12	2.13	2.13	2.17	2.17
Adjusted Lab Max CWD:	(t/m^3)	2.12	2.13	2.13	2.17	2.17
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**79.0**	**84.5**	**83.0**	**85.5**	**85.5**
Density Ratio	(%)	**97.0**	**97.5**	**97.5**	**99.5**	**96.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.0**	5	97.66	1.23	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 27/10/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**40**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	28/10/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43499**	**43500**	**43501**	**43502**	**43503**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		26/10/2020	26/10/2020	26/10/2020	26/10/2020	26/10/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I/5J	Stage 5I/5J	Stage 5I/5J	Stage 5I/5J	Stage 5I/5J
Location/Chainage/Easting:	(m)	E: 34525.01	E: 34535.34	E: 34541.06	E: 34549.92	E: 34540.31
Position/Offset/Northing:	(m)	N: 73932.22	N: 73942.67	N: 73951.51	N: 37960.46	N: 73948.27
Level/Layer/R.L.		RL: 41.22	RL: 41.60	RL: 41.41	RL: 41.28	RL: 41.04
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.12	2.10	2.06	2.15	2.07
Field Dry Density:	(t/m^3)	1.97	1.95	1.91	1.99	1.91
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:		-	-	-	-	-
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:	(%)	8.0	7.5	8.0	8.0	8.0
Adjusted Lab OMC:	(%)	9.7	9.3	9.6	9.4	9.4
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)	2.13	2.18	2.13	2.16	2.13
Adjusted Lab Max CWD:	(t/m^3)	2.13	2.18	2.13	2.16	2.13
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**83.0**	**82.5**	**82.0**	**85.0**	**86.0**
Density Ratio	(%)	**100.0**	**96.5**	**96.5**	**99.5**	**97.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.9**	5	97.90	1.66	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 27/10/2020

NATA

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Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**41**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	30/10/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43511**	**43512**	**43513**	**43514**	**43515**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		27/10/2020	27/10/2020	27/10/2020	27/10/2020	27/10/2020
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I/5J	Stage 5I/5J	Stage 5I/5J	Stage 5I/5J	Stage 5I/5J
Location/Chainage/Easting:	(m)	E: 34595.08	E: 34582.67	E: 34596.40	E: 34599.24	E: 34626.07
Position/Offset/Northing:	(m)	N: 74127.32	N: 74148.49	N: 74157.28	N: 74139.93	N: 74130.91
Level/Layer/R.L.		RL: 57.04	RL: 57.21	RL: 57.00	RL: 57.39	RL: 57.26
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.07	2.03	2.07	2.13	2.12
Field Dry Density:	(t/m^3)	1.87	1.81	1.87	1.96	1.93
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:		-	-	-	-	-
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:	(%)	10.5	12.0	10.5	9.0	9.5
Adjusted Lab OMC:	(%)	10.5	11.2	10.2	8.6	9.8
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)	2.10	2.07	2.09	2.12	2.10
Adjusted Lab Max CWD:	(t/m^3)	2.10	2.07	2.09	2.12	2.10
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**At OMC**	**1% Wetter than OMC**	**At OMC**	**0.5% Wetter than OMC**	**At OMC**
Moisture Ratio	(%)	**102.0**	**107.0**	**101.0**	**106.5**	**99.0**
Density Ratio	(%)	**98.5**	**98.0**	**98.5**	**100.5**	**101.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.5**	5	99.32	1.38	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 28/10/2020

NATA

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Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**42**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	3/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43550**	**43551**	**43552**	**43553**	**43554**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		28/10/2020	28/10/2020	28/10/2020	28/10/2020	28/10/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5J	Stage 5J	Stage 5J	Stage 5J	Stage 5J
Location/Chainage/Easting:	(m)	E: 34648.27	E: 34651.62	E: 34633.49	E: 34642.66	E: 34675.22
Position/Offset/Northing:	(m)	N: 74166.49	N: 74159.03	N: 74147.81	N: 74141.81	N: 74144.43
Level/Layer/R.L.		RL: 56.32	RL: 56.27	RL: 56.69	RL: 56.52	RL: 57.74
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.22	2.19	2.17	2.18	2.15
Field Dry Density:	(t/m^3)	2.07	2.04	2.02	2.04	2.01
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:		-	-	-	-	-
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:	(%)	7.0	7.0	7.0	7.0	7.0
Adjusted Lab OMC:	(%)	9.3	9.0	9.1	9.0	9.2
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)	2.16	2.14	2.13	2.14	2.13
Adjusted Lab Max CWD:	(t/m^3)	2.16	2.14	2.13	2.14	2.13
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**2.0% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**78.0**	**77.5**	**79.0**	**77.5**	**78.0**
Density Ratio	(%)	**103.0**	**102.0**	**102.0**	**102.0**	**101.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**101.7**	5	102.12	0.68	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 02/11/2020 to 03/11/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**43**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	4/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43561**	**43562**	**43563**	**43564**	**43565**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		30/10/2020	30/10/2020	30/10/2020	30/10/2020	30/10/2020
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5J	Stage 5J	Stage 5J	Stage 5J	Stage 5J
Location/Chainage/Easting:	(m)	E: 34688.52	E: 34696.96	E: 34671.81	E: 34662.36	E: 34639.42
Position/Offset/Northing:	(m)	N: 74123.71	N: 74170.74	N: 74158.91	N: 74153.38	N: 74164.00
Level/Layer/R.L.		RL: 58.01	RL: 59.22	RL: 59.39	RL: 59.11	RL: 58.80
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.04	2.11	2.17	2.11	2.11
Field Dry Density:	(t/m^3)	1.90	1.96	2.02	1.97	1.95
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:		-	-	-	-	-
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:	(%)	7.5	7.5	7.5	7.5	8.0
Adjusted Lab OMC:	(%)	9.7	9.9	9.6	9.5	9.5
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)	2.12	2.17	2.17	2.15	2.16
Adjusted Lab Max CWD:	(t/m^3)	2.12	2.17	2.17	2.15	2.16
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**2.0% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**79.0**	**78.0**	**81.0**	**77.5**	**86.5**
Density Ratio	(%)	**96.5**	**97.5**	**100.5**	**98.5**	**97.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.9**	10	98.60	1.81	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 02/11/2020 to 03/11/2020

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**43**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	4/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43566**	**43567**	**43568**	**43569**	**43570**
Field Test Number:		6	7	8	9	10
Date - Field Tested:		30/10/2020	30/10/2020	30/10/2020	30/10/2020	30/10/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5J	Stage 5J	Stage 5J	Stage 5J	Stage 5J
Location/Chainage/Easting:	(m)	E: 34647.21	E: 34642.19	E: 34648.58	E: 34684.29	E: 34672.03
Position/Offset/Northing:	(m)	N: 74138.65	N: 74127.54	N: 74130.84	N: 74122.36	N: 74128.67
Level/Layer/R.L.		RL: 58.68	RL: 58.59	RL: 58.20	RL: 58.09	RL: 58.14
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.15	2.17	2.16	2.07	2.09
Field Dry Density:	(t/m^3)	1.99	1.99	1.98	1.86	1.88
Retained Oversize (Wet basis):	(%)	0% on 19.0mm	3% 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:	(%)	8.0	9.0	9.0	11.5	11.5
Adjusted Lab OMC:	(%)	9.7	11.0	11.0	13.0	12.8
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)	2.16	2.13	2.15	2.11	2.17
Adjusted Lab Max CWD:	(t/m^3)	2.16	2.14	2.15	2.11	2.17
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**81.0**	**80.0**	**82.0**	**89.0**	**88.0**
Density Ratio	(%)	**99.5**	**101.5**	**100.5**	**98.5**	**96.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.9**	10	98.60	1.81	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 02/11/2020 to 03/11/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**44**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	13/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43584**	**43585**	**43586**	**43587**	**43588**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		2/11/2020	2/11/2020	2/11/2020	2/11/2020	2/11/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	Stage 5I	Stage 5I	Stage 5I	Stage 5I
Location/Chainage/Easting:	(m)	E: 34573.09	E: 34566.53	E: 34553.98	E: 34538.60	E: 34530.24
Position/Offset/Northing:	(m)	N: 73888.46	N: 37895.62	N: 73904.47	N: 73928.39	N: 73939.86
Level/Layer/R.L.		RL: 42.42	RL: 42.52	RL: 42.19	RL: 42.21	RL: 42.30
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.12	2.07	2.17	2.14	2.09
Field Dry Density:	(t/m^3)	1.95	1.91	2.01	2.00	1.92
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:		-	-	-	-	-
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	8.5	8.0	7.5	8.5
Adjusted Lab OMC:	(%)	10.4	10.0	10.0	9.2	10.6
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)	2.12	2.13	2.13	2.11	2.15
Adjusted Lab Max CWD:	(t/m^3)	2.12	2.13	2.13	2.11	2.15
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**84.5**	**85.0**	**79.5**	**80.0**	**81.5**
Density Ratio	(%)	**100.0**	**97.0**	**101.5**	**101.5**	**97.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.8**	8	99.69	1.86	0.453
Maximum (%)		**-**	-	-	-	-
Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*-2*	**81.5**	8	82.38	2.00	0.453
Maximum (%)	*2*	**83.3**	8	82.38	2.00	0.453

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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 08/11/2020 to 12/11/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

AUSTRALIAN SOIL AND CONCRETE TESTING
A.S.C.T.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**44**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	13/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43589**	**43590**	**43591**	**-**	**-**
Field Test Number:		6	7	8	-	-
Date - Field Tested:		2/11/2020	2/11/2020	2/11/2020	-	-
Time - Field Tested:		PM	PM	PM	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	Stage 5I	Stage 5I	-	-
Location/Chainage/Easting:	(m)	E: 34525.41	E: 34561.28	E: 34555.52	-	-
Position/Offset/Northing:	(m)	N: 73911.11	N: 73922.39	N: 73944.48	-	-
Level/Layer/R.L.		RL: 41.96	RL: 42.09	RL: 42.38	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.13	2.17	2.09	-	-
Field Dry Density:	(t/m^3)	1.95	1.98	1.92	-	-
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:	(%)	9.5	9.5	9.0	-	-
Adjusted Lab OMC:	(%)	11.5	11.2	10.5	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.12	2.14	2.13	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.12	2.14	2.13	-	-
Compactive Effort:		Standard	Standard	Standard	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**2% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**-**	**-**
Moisture Ratio	(%)	**82.0**	**82.5**	**84.5**	**-**	**-**
Density Ratio	(%)	**100.5**	**101.0**	**98.5**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.8**	8	99.69	1.86	0.453
Maximum (%)		**-**	-	-	-	-
Specified Moisture Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*-2*	**81.5**	8	82.38	2.00	0.453
Maximum (%)	*2*	**83.3**	8	82.38	2.00	0.453

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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 08/11/2020 to 12/11/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**45**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	13/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43608**	**43609**	**43610**	**43611**	**43612**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		3/11/2020	3/11/2020	3/11/2020	3/11/2020	3/11/2020
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5K	Stage 5K	Stage 5K	Stage 5K	Stage 5K
Location/Chainage/Easting:	(m)	E: 34519.94	E: 34510.07	E: 34525.56	E: 34538.45	E: 34544.92
Position/Offset/Northing:	(m)	N: 74031.28	N: 74035.22	N: 74042.33	N: 74052.06	N: 74036.49
Level/Layer/R.L.		RL: 48.61	RL: 48.23	RL: 49.39	RL: 49.80	RL: 50.63
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.09	2.10	2.14	2.11	2.15
Field Dry Density:	(t/m^3)	1.93	1.93	1.96	1.93	1.99
Retained Oversize (Wet basis):	(%)	0% on 19.0mm	0% on 19.0mm	1% 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:	(%)	8.5	8.5	9.5	9.5	8.0
Adjusted Lab OMC:	(%)	10.3	10.1	11.3	10.9	10.2
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	2.06	2.11	2.07	2.11
Adjusted Lab Max CWD:	(t/m^3)	2.08	2.06	2.11	2.07	2.11
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**80.0**	**84.0**	**82.5**	**85.0**	**80.0**
Density Ratio	(%)	**100.5**	**102.0**	**102.0**	**102.0**	**102.0**

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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 11/11/2020

NATA

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Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**45**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	13/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43613**	-	-	-	-
Field Test Number:		6	-	-	-	-
Date - Field Tested:		3/11/2020	-	-	-	-
Time - Field Tested:		AM	-	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5K	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34554.73	-	-	-	-
Position/Offset/Northing:	(m)	N: 74027.66	-	-	-	-
Level/Layer/R.L.		RL: 51.19	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.09	-	-	-	-
Field Dry Density:	(t/m^3)	1.93	-	-	-	-
Retained Oversize (Wet basis):	(%)	0% on 19.0mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	8.0	-	-	-	-
Adjusted Lab OMC:	(%)	9.9	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.09	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.09	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	-	-	-	-
Moisture Ratio	(%)	**83.5**	-	-	-	-
Density Ratio	(%)	**100.0**	-	-	-	-

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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 11/11/2020

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**46**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	16/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43674**	**43675**	**43676**	**43677**	**43678**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		4/11/2020	4/11/2020	4/11/2020	4/11/2020	4/11/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 50	Stage 50	Stage 50	Stage 50	Stage 50
Location/Chainage/Easting:	(m)	E: 34382.41	E: 34396.30	E: 34410.67	E: 34419.91	E: 34392.04
Position/Offset/Northing:	(m)	N: 73964.09	N: 73971.74	N: 73979.42	N: 73987.49	N: 73996.38
Level/Layer/R.L.		RL: 46.55	RL: 46.24	RL: 45.92	RL: 45.11	RL: 46.60
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.11	2.14	2.06	2.07	2.16
Field Dry Density:	(t/m^3)	1.95	1.98	1.91	1.91	1.99
Retained Oversize (Wet basis):	(%)	4% on 19.0mm	5% on 19.0mm	4% on 19.0mm	3% on 19.0mm	3% 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:	(%)	8.5	8.0	8.0	8.0	9.0
Adjusted Lab OMC:	(%)	10.2	9.6	9.3	9.6	10.4
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)	2.11	2.09	2.07	2.08	2.13
Adjusted Lab Max CWD:	(t/m^3)	2.12	2.10	2.08	2.09	2.14
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**83.0**	**84.0**	**84.0**	**83.0**	**85.5**
Density Ratio	(%)	**100.0**	**102.0**	**99.0**	**99.0**	**101.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.6**	6	100.27	1.24	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 13/11/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**46**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	16/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43679**	-	-	-	-
Field Test Number:		6	-	-	-	-
Date - Field Tested:		4/11/2020	-	-	-	-
Time - Field Tested:		PM	-	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 50	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34408.26	-	-	-	-
Position/Offset/Northing:	(m)	N: 74105.24	-	-	-	-
Level/Layer/R.L.		RL: 45.04	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.14	-	-	-	-
Field Dry Density:	(t/m^3)	1.97	-	-	-	-
Retained Oversize (Wet basis):	(%)	5% on 19.0mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	8.5	-	-	-	-
Adjusted Lab OMC:	(%)	10.1	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.11	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.12	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	-	-	-	-
Moisture Ratio	(%)	**85.0**	-	-	-	-
Density Ratio	(%)	**101.0**	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.6**	6	100.27	1.24	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 13/11/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**47**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	16/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43709**	**43710**	**43711**	**43712**	**43713**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		5/11/2020	5/11/2020	5/11/2020	5/11/2020	5/11/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	Stage 5I	Stage 5I	Stage 5I	Stage 5I
Location/Chainage/Easting:	(m)	E: 34560.08	E: 34567.59	E: 34555.80	E: 34562.45	E: 34574.37
Position/Offset/Northing:	(m)	N: 73868.45	N: 73875.51	N: 73884.63	N: 73889.28	N: 73899.75
Level/Layer/R.L.		RL: 42.56	RL: 42.94	RL: 43.14	RL: 42.84	RL: 43.39
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.03	2.05	2.11	2.07	2.05
Field Dry Density:	(t/m^3)	1.86	1.87	1.93	1.90	1.89
Retained Oversize (Wet basis):	(%)	3% on 19.0mm	4% on 19.0mm	2% on 19.0mm	2% on 19.0mm	3% 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:	(%)	9.0	9.5	9.5	9.0	8.5
Adjusted Lab OMC:	(%)	10.8	11.1	10.8	10.7	10.3
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)	2.05	2.07	2.10	2.08	2.06
Adjusted Lab Max CWD:	(t/m^3)	2.05	2.08	2.11	2.09	2.07
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**84.0**	**84.5**	**86.0**	**84.0**	**84.0**
Density Ratio	(%)	**99.0**	**98.5**	**100.0**	**99.0**	**99.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.1**	8	99.43	0.65	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 13/11/2020

NATA

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Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**47**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	16/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43714**	**43715**	**43716**	**-**	**-**
Field Test Number:		6	7	8	-	-
Date - Field Tested:		5/11/2020	5/11/2020	5/11/2020	-	-
Time - Field Tested:		PM	PM	PM	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	Stage 5I	Stage 5I	-	-
Location/Chainage/Easting:	(m)	E: 34568.71	E: 34552.71	E: 34559.24	-	-
Position/Offset/Northing:	(m)	N: 73909.26	N: 73917.55	N: 73922.38	-	-
Level/Layer/R.L.		RL: 43.55	RL: 43.60	RL: 43.26	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.10	2.08	2.13	-	-
Field Dry Density:	(t/m^3)	1.91	1.92	1.98	-	-
Retained Oversize (Wet basis):	(%)	3% on 19.0mm	5% on 19.0mm	4% 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:	(%)	10.0	8.0	7.5	-	-
Adjusted Lab OMC:	(%)	11.4	10.0	9.1	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.10	2.07	2.12	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.10	2.08	2.13	-	-
Compactive Effort:		Standard	Standard	Standard	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**-**	**-**
Moisture Ratio	(%)	**85.5**	**80.5**	**84.5**	**-**	**-**
Density Ratio	(%)	**99.5**	**100.0**	**100.5**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.1**	8	99.43	0.65	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**48**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	16/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43723**	**43724**	**43725**	**43726**	**43727**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		4/11/2020	4/11/2020	4/11/2020	4/11/2020	4/11/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 50	Stage 50	Stage 50	Stage 50	Stage 50
Location/Chainage/Easting:	(m)	E: 34368.28	E: 34375.19	E: 34381.18	E: 34394.11	E: 34407.47
Position/Offset/Northing:	(m)	N: 73440.63	N: 73436.48	N: 73422.74	N: 73416.51	N: 73421.80
Level/Layer/R.L.		FL	FL	FL	FL	FL
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.17	2.07	2.06	2.13	2.15
Field Dry Density:	(t/m^3)	2.02	1.91	1.90	1.98	1.98
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	5% on 19.0mm	5% on 19.0mm	4% on 19.0mm	5% 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:	(%)	7.5	8.0	8.0	7.5	8.5
Adjusted Lab OMC:	(%)	9.0	9.6	10.0	9.0	10.0
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)	2.15	2.10	2.08	2.14	2.15
Adjusted Lab Max CWD:	(t/m^3)	2.16	2.12	2.10	2.15	2.16
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**82.0**	**84.5**	**81.5**	**83.5**	**82.5**
Density Ratio	(%)	**100.5**	**97.5**	**98.0**	**99.0**	**99.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.1**	6	98.77	1.22	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**48**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	16/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43728**	-	-	-	-
Field Test Number:		6	-	-	-	-
Date - Field Tested:		4/11/2020	-	-	-	-
Time - Field Tested:		PM	-	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 50	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34422.32	-	-	-	-
Position/Offset/Northing:	(m)	N: 73431.84	-	-	-	-
Level/Layer/R.L.		FL	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.10	-	-	-	-
Field Dry Density:	(t/m^3)	1.94	-	-	-	-
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	8.0	-	-	-	-
Adjusted Lab OMC:	(%)	9.8	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.15	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.16	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**2% Dryer than OMC**	-	-	-	-
Moisture Ratio	(%)	**81.5**	-	-	-	-
Density Ratio	(%)	**97.5**	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.1**	6	98.77	1.22	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**49**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	17/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43776**	**43777**	**43778**	**43779**	**43780**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		9/11/2020	9/11/2020	9/11/2020	9/11/2020	9/11/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5K/5J	Stage 5K/5J	Stage 5K/5J	Stage 5K/5J	Stage 5K/5J
Location/Chainage/Easting:	(m)	E: 34528.92	E: 34515.32	E: 34998.75	E: 34507.10	E: 34519.89
Position/Offset/Northing:	(m)	N: 74048.82	N: 74063.92	N: 74053.62	N: 74039.37	N: 74026.10
Level/Layer/R.L.		RL: 49.44	RL: 49.50	RL: 49.21	RL: 48.50	RL: 48.14
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.13	2.11	2.06	2.05	2.08
Field Dry Density:	(t/m^3)	1.97	1.95	1.89	1.89	1.94
Retained Oversize (Wet basis):	(%)	5% on 19.0mm	5% on 19.0mm	2% on 19.0mm	5% on 19.0mm	3% 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:	(%)	8.0	8.5	9.0	8.5	7.5
Adjusted Lab OMC:	(%)	9.7	10.3	10.6	10.3	9.4
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)	2.09	2.06	2.04	2.02	2.09
Adjusted Lab Max CWD:	(t/m^3)	2.10	2.08	2.05	2.04	2.09
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**83.5**	**82.0**	**85.5**	**82.0**	**80.5**
Density Ratio	(%)	**101.0**	**102.0**	**100.5**	**100.5**	**99.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**100.3**	8	100.69	0.88	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 14/11/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**49**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	17/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43781**	**43782**	**43783**	**-**	**-**
Field Test Number:		6	7	8	-	-
Date - Field Tested:		9/11/2020	9/11/2020	9/11/2020	-	-
Time - Field Tested:		PM	PM	PM	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5K/5J	Stage 5K/5J	Stage 5K/5J	-	-
Location/Chainage/Easting:	(m)	E: 34510.05	E: 34486.50	E: 34471.82	-	-
Position/Offset/Northing:	(m)	N: 74018.40	N: 74032.21	N: 74017.59	-	-
Level/Layer/R.L.		RL: 47.48	RL: 47.04	RL: 45.32	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.06	2.15	2.11	-	-
Field Dry Density:	(t/m^3)	1.90	1.98	1.94	-	-
Retained Oversize (Wet basis):	(%)	5% on 19.0mm	4% on 19.0mm	3% 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:	(%)	8.0	8.5	9.0	-	-
Adjusted Lab OMC:	(%)	9.8	10.2	10.5	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.06	2.11	2.08	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.07	2.12	2.09	-	-
Compactive Effort:		Standard	Standard	Standard	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**-**	**-**
Moisture Ratio	(%)	**83.5**	**83.0**	**83.5**	**-**	**-**
Density Ratio	(%)	**99.5**	**101.5**	**101.5**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**100.3**	8	100.69	0.88	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 14/11/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

AUSTRALIAN SOIL AND CONCRETE TESTING
A.S.C.T.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**50**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	17/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43804**	**43805**	**43806**	**43807**	**43808**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		4/11/2020	4/11/2020	4/11/2020	4/11/2020	4/11/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On SIte - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I/5J	Stage 5I/5J	Stage 5I/5J	Stage 5I/5J	Stage 5I/5J
Location/Chainage/Easting:	(m)	E: 34723.88	E: 34745.12	E: 34764.97	E: 34776.25	E: 34760.73
Position/Offset/Northing:	(m)	N: 74160.80	N: 74140.08	N: 74130.60	N: 74116.83	N: 74107.44
Level/Layer/R.L.		RL: 57.93	RL: 59.11	RL: 58.65	RL: 58.24	RL: 57.84
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.11	2.17	2.06	2.09	2.13
Field Dry Density:	(t/m^3)	1.93	1.98	1.88	1.91	1.95
Retained Oversize (Wet basis):	(%)	4% on 19.0mm	4% on 19.0mm	3% on 19.0mm	4% on 19.0mm	5% 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:	(%)	9.5	9.5	9.5	9.0	9.5
Adjusted Lab OMC:	(%)	10.8	10.9	11.4	10.9	11.2
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)	2.10	2.11	2.07	2.09	2.09
Adjusted Lab Max CWD:	(t/m^3)	2.10	2.12	2.08	2.10	2.10
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**87.0**	**87.0**	**85.5**	**83.0**	**85.5**
Density Ratio	(%)	**100.0**	**102.0**	**99.0**	**99.5**	**101.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.9**	6	100.48	1.17	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 11/11/2020 to 15/11/2020

NATA

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Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**50**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	17/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43809**	-	-	-	-
Field Test Number:		6	-	-	-	-
Date - Field Tested:		4/11/2020	-	-	-	-
Time - Field Tested:		PM	-	-	-	-
Material Source / Type:		On SIte - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I/5J	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34754.55	-	-	-	-
Position/Offset/Northing:	(m)	N: 74095.65	-	-	-	-
Level/Layer/R.L.		RL: 57.52	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.10	-	-	-	-
Field Dry Density:	(t/m^3)	1.93	-	-	-	-
Retained Oversize (Wet basis):	(%)	3% on 19.0mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	9.0	-	-	-	-
Adjusted Lab OMC:	(%)	11.2	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.08	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.09	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**2% Dryer than OMC**	-	-	-	-
Moisture Ratio	(%)	**82.5**	-	-	-	-
Density Ratio	(%)	**100.5**	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.9**	6	100.48	1.17	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 11/11/2020 to 15/11/2020

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**51**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43905**	**43906**	**43907**	**43908**	**43909**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5K	Stage 5K	Stage 5K	Stage 5K	Stage 5K
Location/Chainage/Easting:	(m)	E: 34645.87	E: 34608.53	E: 34570.88	E: 34555.35	E: 34563.21
Position/Offset/Northing:	(m)	N: 74163.28	N: 74142.34	N: 74121.31	N: 74085.63	N: 74070.75
Level/Layer/R.L.		FL	FL	FL	FL	FL
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.08	2.10	2.18	2.15	2.08
Field Dry Density:	(t/m^3)	1.91	1.91	2.01	2.00	1.93
Retained Oversize (Wet basis):	(%)	3% on 19.0mm	2% on 19.0mm	3% on 19.0mm	4% on 19.0mm	5% 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:	(%)	9.0	9.5	8.5	8.0	8.0
Adjusted Lab OMC:	(%)	10.8	10.9	10.1	9.6	9.7
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)	2.06	2.08	2.10	2.08	2.06
Adjusted Lab Max CWD:	(t/m^3)	2.07	2.09	2.11	2.09	2.08
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**84.0**	**87.0**	**82.0**	**83.0**	**83.5**
Density Ratio	(%)	**100.5**	**100.5**	**103.0**	**103.0**	**100.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**100.5**	6	101.27	1.39	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 16/11/2020

NATA

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Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**51**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43910**	-	-	-	-
Field Test Number:		6	-	-	-	-
Date - Field Tested:		11/11/2020	-	-	-	-
Time - Field Tested:		AM	-	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5K	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34568.31	-	-	-	-
Position/Offset/Northing:	(m)	N: 74052.36	-	-	-	-
Level/Layer/R.L.		FL	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.06	-	-	-	-
Field Dry Density:	(t/m^3)	1.90	-	-	-	-
Retained Oversize (Wet basis):	(%)	5% on 19.0mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	8.5	-	-	-	-
Adjusted Lab OMC:	(%)	10.2	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.04	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.05	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	-	-	-	-
Moisture Ratio	(%)	**85.0**	-	-	-	-
Density Ratio	(%)	**100.5**	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**100.5**	6	101.27	1.39	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**52**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43911**	**43912**	**43913**	**43914**	**43915**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 2D/2E	Stage 2D/2E	Stage 2D/2E	Stage 2D/2E	Stage 2D/2E
Location/Chainage/Easting:	(m)	E: 34756.20	E: 34740.10	E: 34750.65	E: 34745.53	E: 34749.88
Position/Offset/Northing:	(m)	N: 73875.26	N: 73892.75	N: 73907.33	N: 73939.31	N: 74010.55
Level/Layer/R.L.		FL	FL	FL	FL	FL
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.11	2.05	2.06	2.12	2.08
Field Dry Density:	(t/m^3)	1.93	1.89	1.89	1.95	1.93
Retained Oversize (Wet basis):	(%)	4% on 19.0mm	4% on 19.0mm	3% on 19.0mm	3% on 19.0mm	6% 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:	(%)	9.0	8.5	9.0	8.5	8.0
Adjusted Lab OMC:	(%)	10.6	10.3	10.5	10.4	9.8
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)	2.05	2.06	2.04	2.08	2.03
Adjusted Lab Max CWD:	(t/m^3)	2.07	2.07	2.05	2.08	2.05
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**84.5**	**82.0**	**83.5**	**82.5**	**83.5**
Density Ratio	(%)	**102.0**	**98.5**	**100.5**	**101.5**	**101.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.8**	6	100.55	1.37	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 16/11/2020

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**52**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43916**	-	-	-	-
Field Test Number:		6	-	-	-	-
Date - Field Tested:		12/11/2020	-	-	-	-
Time - Field Tested:		PM	-	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 2D/2E	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34753.29	-	-	-	-
Position/Offset/Northing:	(m)	N: 74057.83	-	-	-	-
Level/Layer/R.L.		FL	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.09	-	-	-	-
Field Dry Density:	(t/m^3)	1.93	-	-	-	-
Retained Oversize (Wet basis):	(%)	7% on 19.0mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	8.5	-	-	-	-
Adjusted Lab OMC:	(%)	9.9	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.09	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.11	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	-	-	-	-
Moisture Ratio	(%)	**86.0**	-	-	-	-
Density Ratio	(%)	**99.0**	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.8**	6	100.55	1.37	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 16/11/2020

NATA

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Accreditation number: 19902

AUSTRALIAN SOIL AND CONCRETE TESTING
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ASCT Brisbane South
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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**53**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43917**	**43918**	**43919**	**43920**	**43921**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		13/11/2020	13/11/2020	13/11/2020	13/11/2020	13/11/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 2D/2E	Stage 2D/2E	Stage 2D/2E	Stage 2D/2E	Stage 2D/2E
Location/Chainage/Easting:	(m)	E: 34744.83	E: 34751.04	E: 34745.96	E: 34752.45	E: 34749.27
Position/Offset/Northing:	(m)	N: 73883.25	N: 73898.46	N: 73911.37	N: 73921.24	N: 73955.19
Level/Layer/R.L.		FL	FL	FL	FL	FL
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.08	2.14	2.12	2.09	2.14
Field Dry Density:	(t/m^3)	1.92	1.98	1.94	1.92	1.96
Retained Oversize (Wet basis):	(%)	3% on 19.0mm	3% on 19.0mm	6% on 19.0mm	6% on 19.0mm	3% 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:	(%)	8.5	8.0	9.0	8.5	9.0
Adjusted Lab OMC:	(%)	10.0	9.5	10.6	10.6	10.4
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	2.10	2.12	2.09	2.13
Adjusted Lab Max CWD:	(t/m^3)	2.09	2.11	2.14	2.11	2.14
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**82.5**	**84.0**	**85.5**	**82.5**	**84.5**
Density Ratio	(%)	**99.5**	**101.5**	**99.0**	**99.0**	**100.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.2**	6	99.72	0.95	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 16/11/2020

NATA

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Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

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A.S.C.T.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**53**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43922**	-	-	-	-
Field Test Number:		6	-	-	-	-
Date - Field Tested:		13/11/2020	-	-	-	-
Time - Field Tested:		PM	-	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 2D/2E	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34755.68	-	-	-	-
Position/Offset/Northing:	(m)	N: 73982.63	-	-	-	-
Level/Layer/R.L.		FL	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.10	-	-	-	-
Field Dry Density:	(t/m^3)	1.94	-	-	-	-
Retained Oversize (Wet basis):	(%)	6% on 19.0mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	8.5	-	-	-	-
Adjusted Lab OMC:	(%)	10.2	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.08	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.10	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**2% Dryer than OMC**	-	-	-	-
Moisture Ratio	(%)	**82.0**	-	-	-	-
Density Ratio	(%)	**100.0**	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.2**	6	99.72	0.95	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**54**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43960**	**43961**	**43962**	**43963**	**43964**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		16/11/2020	16/11/2020	16/11/2020	16/11/2020	16/11/2020
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	Stage 3N	Stage 3N	Stage 3N	Stage 3N
Location/Chainage/Easting:	(m)	E: 35217.07	E: 35212.86	E: 35207.91	E: 35198.73	E: 35191.47
Position/Offset/Northing:	(m)	N: 74072.29	N: 74075.63	N: 74081.92	N: 74087.36	N: 74096.43
Level/Layer/R.L.		RL: 45.18	RL: 45.42	RL: 45.93	RL: 46.59	RL: 46.47
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.02	2.05	2.04	2.11	2.15
Field Dry Density:	(t/m^3)	1.87	1.89	1.87	1.94	1.96
Retained Oversize (Wet basis):	(%)	4% on 19.0mm	4% on 19.0mm	4% on 19.0mm	4% on 19.0mm	4% 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:	(%)	8.5	8.5	9.0	9.0	9.5
Adjusted Lab OMC:	(%)	9.8	10.0	10.8	10.9	11.2
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)	2.11	2.14	2.10	2.14	2.18
Adjusted Lab Max CWD:	(t/m^3)	2.12	2.15	2.11	2.15	2.19
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**85.5**	**86.0**	**85.0**	**83.0**	**83.5**
Density Ratio	(%)	**95.5**	**95.5**	**96.5**	**98.5**	**98.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.4**	10	96.86	1.12	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 17/11/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**54**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43965**	**43966**	**43967**	**43968**	**43969**
Field Test Number:		6	7	8	9	10
Date - Field Tested:		16/11/2020	16/11/2020	16/11/2020	16/11/2020	16/11/2020
Time - Field Tested:		AM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	Stage 3N	Stage 3N	Stage 3N	Stage 3N
Location/Chainage/Easting:	(m)	E: 35185.11	E: 35284.65	E: 35274.96	E: 35260.34	E: 35241.07
Position/Offset/Northing:	(m)	N: 74101.94	N: 74035.34	N: 74056.08	N: 74052.71	N: 74045.29
Level/Layer/R.L.		RL: 46.64	RL: 44.89	RL: 44.62	RL: 44.65	RL: 44.76
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.06	2.04	2.07	2.07	2.12
Field Dry Density:	(t/m^3)	1.90	1.87	1.91	1.90	1.96
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	2% on 19.0mm	5% on 19.0mm	3% on 19.0mm	4% 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:	(%)	9.0	9.0	8.0	9.0	8.5
Adjusted Lab OMC:	(%)	10.5	11.0	9.9	10.8	10.3
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)	2.13	2.11	2.13	2.12	2.16
Adjusted Lab Max CWD:	(t/m^3)	2.13	2.12	2.14	2.12	2.17
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**83.5**	**84.0**	**82.5**	**84.0**	**83.0**
Density Ratio	(%)	**96.5**	**96.5**	**96.5**	**97.5**	**98.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.4**	10	96.86	1.12	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 17/11/2020

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**55**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	23/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**43996**	**43997**	**43998**	**43999**	**44000**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	Stage 3N	Stage 3N	Stage 3N	Stage 3N
Location/Chainage/Easting:	(m)	E: 35237.09	E: 35244.16	E: 35252.88	E: 35241.04	E: 35268.93
Position/Offset/Northing:	(m)	N: 74007.82	N: 74012.64	N: 74030.17	N: 74041.28	N: 74048.39
Level/Layer/R.L.		RL: 45.03	RL: 45.15	RL: 45.22	RL: 45.23	RL: 44.97
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.14	2.10	2.04	2.06	2.12
Field Dry Density:	(t/m^3)	1.98	1.94	1.88	1.89	1.96
Retained Oversize (Wet basis):	(%)	4% on 19.0mm	3% on 19.0mm	3% on 19.0mm	3% on 19.0mm	4% 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:	(%)	8.5	8.0	8.5	9.0	8.0
Adjusted Lab OMC:	(%)	10.1	10.2	10.6	10.9	10.0
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)	2.17	2.14	2.12	2.13	2.17
Adjusted Lab Max CWD:	(t/m^3)	2.17	2.14	2.12	2.13	2.17
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**2.0% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**82.0**	**80.0**	**80.5**	**81.0**	**81.5**
Density Ratio	(%)	**99.0**	**98.5**	**96.0**	**96.5**	**97.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.5**	7	97.04	1.16	0.484
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 20/11/2020

NATA

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Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**55**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	23/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44001**	**44002**	**-**	**-**	**-**
Field Test Number:		6	7	-	-	-
Date - Field Tested:		17/11/2020	17/11/2020	-	-	-
Time - Field Tested:		PM	PM	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	Stage 3N	-	-	-
Location/Chainage/Easting:	(m)	E: 35280.71	E: 35246.24	-	-	-
Position/Offset/Northing:	(m)	N: 74056.43	N: 74068.79	-	-	-
Level/Layer/R.L.		RL: 45.36	RL: 45.40	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.07	2.09	-	-	-
Field Dry Density:	(t/m^3)	1.91	1.92	-	-	-
Retained Oversize (Wet basis):	(%)	4% on 19.0mm	3% on 19.0mm	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-	-	-
Field Moisture Content:	(%)	8.0	9.0	-	-	-
Adjusted Lab OMC:	(%)	10.2	10.6	-	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.15	2.17	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.15	2.17	-	-	-
Compactive Effort:		Standard	Standard	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**2% Dryer than OMC**	**2% Dryer than OMC**	**-**	**-**	**-**
Moisture Ratio	(%)	**81.0**	**82.5**	**-**	**-**	**-**
Density Ratio	(%)	**96.0**	**96.0**	**-**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.5**	7	97.04	1.16	0.484
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 20/11/2020

NATA

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Accreditation number: 19902

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**56**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	25/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44069**	**44070**	**44071**	**44072**	**44073**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	Stage 3N	Stage 3N	Stage 3N	Stage 3N
Location/Chainage/Easting:	(m)	E: 35222.45	E: 35226.94	E: 35233.71	E: 35236.84	E: 35244.11
Position/Offset/Northing:	(m)	N: 74080.27	N: 74075.39	N: 74059.39	N: 74046.80	N: 74032.46
Level/Layer/R.L.		RL: 46.05	RL: 46.29	RL: 45.67	RL: 45.95	RL 46.82
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.05	2.07	2.07	2.05	2.10
Field Dry Density:	(t/m^3)	1.88	1.90	1.90	1.87	1.92
Retained Oversize (Wet basis):	(%)	0% on 19.0mm	0% on 19.0mm	0% on 19.0mm	0% on 19.0mm	2% 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:	(%)	9.0	9.0	9.0	9.5	9.0
Adjusted Lab OMC:	(%)	10.9	10.5	10.4	11.3	10.8
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)	2.12	2.14	2.15	2.12	2.15
Adjusted Lab Max CWD:	(t/m^3)	2.12	2.14	2.15	2.12	2.15
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**84.0**	**86.5**	**86.5**	**85.5**	**85.0**
Density Ratio	(%)	**97.0**	**96.5**	**96.5**	**96.5**	**97.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.6**	6	96.90	0.50	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 23/11/2020 to 24/11/2020

NATA

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Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**56**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	25/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44074**	-	-	-	-
Field Test Number:		6	-	-	-	-
Date - Field Tested:		18/11/2020	-	-	-	-
Time - Field Tested:		PM	-	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	-	-	-	-
Location/Chainage/Easting:	(m)	E: 35250.29	-	-	-	-
Position/Offset/Northing:	(m)	N: 74020.67	-	-	-	-
Level/Layer/R.L.		RL: 46.15	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.12	-	-	-	-
Field Dry Density:	(t/m^3)	1.93	-	-	-	-
Retained Oversize (Wet basis):	(%)	3% on 19.0mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	9.5	-	-	-	-
Adjusted Lab OMC:	(%)	11.1	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.16	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.17	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	-	-	-	-
Moisture Ratio	(%)	**84.5**	-	-	-	-
Density Ratio	(%)	**97.5**	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.6**	6	96.90	0.50	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**57**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	25/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44081**	**44082**	**44083**	**44084**	**44085**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		20/11/2020	20/11/2020	20/11/2020	20/11/2020	20/11/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	Stage 3N	Stage 3N	Stage 3N	Stage 3N
Location/Chainage/Easting:	(m)	E: 35233.09	E: 35226.64	E: 35220.14	E: 35213.07	E: 35207.94
Position/Offset/Northing:	(m)	N: 74026.74	N: 74033.38	N: 74039.28	N: 74060.38	N: 74065.00
Level/Layer/R.L.		RL: 45.55	RL: 45.51	RL: 45.63	RL: 45.71	RL: 45.89
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.08	2.05	2.16	2.04	2.07
Field Dry Density:	(t/m^3)	1.89	1.86	1.98	1.87	1.89
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	0% on 19.0mm	3% 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	10.5	9.0	9.5	9.5
Adjusted Lab OMC:	(%)	11.2	12.0	10.5	11.1	10.9
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)	2.14	2.12	2.18	2.13	2.14
Adjusted Lab Max CWD:	(t/m^3)	2.14	2.12	2.18	2.13	2.14
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**87.5**	**87.0**	**84.5**	**84.5**	**87.0**
Density Ratio	(%)	**97.0**	**96.5**	**99.0**	**95.5**	**96.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.6**	6	97.55	1.80	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**57**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	25/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44086**	-	-	-	-
Field Test Number:		6	-	-	-	-
Date - Field Tested:		20/11/2020	-	-	-	-
Time - Field Tested:		PM	-	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	-	-	-	-
Location/Chainage/Easting:	(m)	E: 35200.67	-	-	-	-
Position/Offset/Northing:	(m)	N: 74062.49	-	-	-	-
Level/Layer/R.L.		RL: 46.28	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.18	-	-	-	-
Field Dry Density:	(t/m^3)	2.00	-	-	-	-
Retained Oversize (Wet basis):	(%)	3% on 19.0mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	9.5	-	-	-	-
Adjusted Lab OMC:	(%)	10.9	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.17	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.17	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	-	-	-	-
Moisture Ratio	(%)	**86.0**	-	-	-	-
Density Ratio	(%)	**100.5**	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.6**	6	97.55	1.80	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**58**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	25/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44143**	**44144**	**44145**	**44146**	**44147**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		23/11/2020	23/11/2020	23/11/2020	23/11/2020	23/11/2020
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	Stage 3N	Stage 3N	Stage 3N	Stage 3N
Location/Chainage/Easting:	(m)	E: 35238.92	E: 35234.08	E: 35226.44	E: 35221.28	E: 35235.83
Position/Offset/Northing:	(m)	N: 73925.73	N: 73933.47	N: 73941.93	N: 73949.24	N: 73960.07
Level/Layer/R.L.		RL: 46.39	RL: 46.24	RL: 45.88	RL: 45.94	RL: 46.04
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.07	2.04	2.15	2.02	2.09
Field Dry Density:	(t/m^3)	1.91	1.88	1.97	1.85	1.90
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	0% on 19.0mm	4% 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:	(%)	8.5	8.5	9.0	9.0	10.0
Adjusted Lab OMC:	(%)	10.1	10.4	10.6	10.6	11.6
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)	2.16	2.14	2.19	2.12	2.15
Adjusted Lab Max CWD:	(t/m^3)	2.17	2.14	2.19	2.12	2.15
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**86.0**	**83.5**	**86.5**	**85.5**	**87.5**
Density Ratio	(%)	**95.5**	**95.5**	**98.0**	**95.5**	**97.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.3**	10	96.66	1.00	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 24/11/2020

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**58**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	25/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44148**	**44149**	**44150**	**44151**	**44152**
Field Test Number:		6	7	8	9	10
Date - Field Tested:		23/11/2020	23/11/2020	23/11/2020	23/11/2020	23/11/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	Stage 3N	Stage 3N	Stage 3N	Stage 3N
Location/Chainage/Easting:	(m)	E: 35240.67	E: 35235.71	E: 35228.36	E: 35233.61	E: 35224.09
Position/Offset/Northing:	(m)	N: 73928.42	N: 73935.90	N: 73947.19	N: 73958.84	N: 73969.43
Level/Layer/R.L.		RL: 46.76	RL: 46.49	RL: 46.40	RL: 46.49	RL: 46.28
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.15	2.08	2.05	2.09	2.10
Field Dry Density:	(t/m^3)	1.98	1.88	1.85	1.91	1.92
Retained Oversize (Wet basis):	(%)	3% on 19.0mm	0% on 19.0mm	0% on 19.0mm	0% on 19.0mm	2% 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:	(%)	8.5	10.5	11.0	9.5	9.5
Adjusted Lab OMC:	(%)	9.9	11.7	12.5	11.2	11.2
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)	2.19	2.16	2.13	2.15	2.16
Adjusted Lab Max CWD:	(t/m^3)	2.20	2.16	2.13	2.15	2.16
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**86.0**	**88.0**	**87.5**	**86.5**	**85.5**
Density Ratio	(%)	**97.5**	**96.0**	**96.5**	**97.5**	**97.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.3**	10	96.66	1.00	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 24/11/2020

NATA

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Accreditation number: 19902

AUSTRALIAN SOIL AND CONCRETE TESTING
A.S.C.T.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**59**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	30/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44230**	**44231**	**44232**	**44233**	**44234**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		24/11/2020	24/11/2020	24/11/2020	24/11/2020	24/11/2020
Time - Field Tested:		AM	AM	AM	AM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	Stage 3N	Stage 3N	Stage 3N	Stage 3N
Location/Chainage/Easting:	(m)	E: 35233.79	E: 35220.36	E: 35216.07	E: 35206.93	E: 35111.73
Position/Offset/Northing:	(m)	N: 73929.62	N: 73938.48	N: 73945.49	N: 73958.70	N: 74138.24
Level/Layer/R.L.		RL: 46.69	RL: 46.72	RL: 46.25	RL: 46.49	RL: 49.06
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.06	2.06	2.10	2.12	2.15
Field Dry Density:	(t/m^3)	1.89	1.89	1.91	1.94	1.97
Retained Oversize (Wet basis):	(%)	0% on 19.0mm	0% on 19.0mm	0% on 19.0mm	1% on 19.0mm	2% 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:	(%)	9.0	9.0	10.0	9.5	9.0
Adjusted Lab OMC:	(%)	10.7	10.4	11.2	10.8	10.7
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)	2.16	2.16	2.19	2.19	2.12
Adjusted Lab Max CWD:	(t/m^3)	2.16	2.16	2.19	2.19	2.12
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**83.0**	**86.5**	**87.5**	**87.0**	**85.5**
Density Ratio	(%)	**95.5**	**95.5**	**95.5**	**97.0**	**101.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**95.7**	8	96.69	2.10	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 24/11/2020 to 27/11/2020

NATA

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Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

AUSTRALIAN SOIL AND CONCRETE TESTING
A.S.C.T.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**59**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	30/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44235**	**44236**	**44237**	**-**	**-**
Field Test Number:		6	7	8	-	-
Date - Field Tested:		24/11/2020	24/11/2020	24/11/2020	-	-
Time - Field Tested:		PM	PM	PM	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	Stage 3N	Stage 3N	-	-
Location/Chainage/Easting:	(m)	E: 35116.60	E: 35115.52	E: 35119.88	-	-
Position/Offset/Northing:	(m)	N: 74141.85	N: 74144.36	N: 74147.41	-	-
Level/Layer/R.L.		RL: 48.13	RL: 48.54	RL: 48.73	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.05	2.03	2.07	-	-
Field Dry Density:	(t/m^3)	1.88	1.86	1.90	-	-
Retained Oversize (Wet basis):	(%)	0% on 19.0mm	0% on 19.0mm	1% 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:	(%)	9.0	9.0	8.5	-	-
Adjusted Lab OMC:	(%)	10.6	10.7	10.6	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.14	2.11	2.15	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.14	2.11	2.15	-	-
Compactive Effort:		Standard	Standard	Standard	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**-**	**-**
Moisture Ratio	(%)	**85.5**	**83.5**	**81.5**	**-**	**-**
Density Ratio	(%)	**95.5**	**96.0**	**96.0**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**95.7**	8	96.69	2.10	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 24/11/2020 to 27/11/2020

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**60**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	30/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44246**	**44247**	**44248**	**44249**	**44250**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		25/11/2020	25/11/2020	25/11/2020	25/11/2020	25/11/2020
Time - Field Tested:		AM	AM	AM	AM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	Stage 3N	Stage 3N	Stage 3N	Stage 3N
Location/Chainage/Easting:	(m)	E: 35248.59	E: 35242.83	E: 35245.48	E: 35237.95	E: 35110.74
Position/Offset/Northing:	(m)	N: 73964.36	N: 73970.02	N: 73977.87	N: 73989.62	N: 74130.39
Level/Layer/R.L.		RL: 46.92	RL: 46.99	RL: 46.59	RL: 46.82	RL: 49.94
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.14	2.09	2.06	2.09	2.17
Field Dry Density:	(t/m^3)	1.99	1.94	1.91	1.93	2.00
Retained Oversize (Wet basis):	(%)	8% on 19.0mm	0% on 19.0mm	0% on 19.0mm	9% 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:	(%)	7.5	8.0	7.5	8.5	8.5
Adjusted Lab OMC:	(%)	9.4	9.7	9.5	10.3	10.3
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)	2.13	2.14	2.13	2.14	2.17
Adjusted Lab Max CWD:	(t/m^3)	2.14	2.14	2.13	2.16	2.17
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**2.0% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**78.5**	**80.0**	**79.5**	**81.0**	**83.0**
Density Ratio	(%)	**100.0**	**98.0**	**97.0**	**96.5**	**100.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.8**	8	98.53	1.53	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 27/11/2020

NATA

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Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**60**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	30/11/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44251**	**44252**	**44253**	**-**	**-**
Field Test Number:		6	7	8	-	-
Date - Field Tested:		25/11/2020	25/11/2020	25/11/2020	-	-
Time - Field Tested:		PM	PM	PM	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	Stage 3N	Stage 3N	-	-
Location/Chainage/Easting:	(m)	E: 35115.93	E: 35119.39	E: 35118.27	-	-
Position/Offset/Northing:	(m)	N: 74136.52	N: 74142.48	N: 74145.83	-	-
Level/Layer/R.L.		RL: 49.86	RL: 50.27	RL: 50.73	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.14	2.14	2.07	-	-
Field Dry Density:	(t/m^3)	1.97	1.99	1.91	-	-
Retained Oversize (Wet basis):	(%)	0% on 19.0mm	10% 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:	(%)	8.0	7.5	8.5	-	-
Adjusted Lab OMC:	(%)	10.2	9.6	10.2	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.18	2.11	2.10	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.18	2.13	2.10	-	-
Compactive Effort:		Standard	Standard	Standard	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**2% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**-**	**-**
Moisture Ratio	(%)	**81.0**	**78.5**	**82.0**	**-**	**-**
Density Ratio	(%)	**98.0**	**100.5**	**98.5**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.8**	8	98.53	1.53	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 27/11/2020

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**61**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	2/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44300**	**44301**	**44302**	**44303**	**44304**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		26/11/2020	26/11/2020	26/11/2020	26/11/2020	26/11/2020
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	Stage 3N	Stage 3N	Stage 3N	Stage 3N
Location/Chainage/Easting:	(m)	E: 35115.28	E: 35219.26	E: 35287.62	E: 35236.44	E: 35231.97
Position/Offset/Northing:	(m)	N: 74141.03	N: 74077.23	N: 74033.84	N: 74012.39	N: 73934.97
Level/Layer/R.L.		FL	FL	FL	FL	FL
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.00	2.04	2.06	2.01	2.09
Field Dry Density:	(t/m^3)	1.83	1.87	1.88	1.85	1.89
Retained Oversize (Wet basis):	(%)	0% on 19.0mm	0% on 19.0mm	1% 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:	(%)	9.5	9.0	9.0	9.0	10.5
Adjusted Lab OMC:	(%)	11.2	10.6	10.6	10.7	12.0
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)	2.10	2.14	2.13	2.11	2.15
Adjusted Lab Max CWD:	(t/m^3)	2.10	2.14	2.13	2.11	2.15
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**83.5**	**83.5**	**86.5**	**83.5**	**86.0**
Density Ratio	(%)	**95.0**	**95.5**	**96.5**	**95.0**	**97.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.1**	8	96.76	1.36	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 27/11/2020 to 28/11/2020

NATA

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Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**61**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	2/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44305**	**44306**	**44307**	**-**	**-**
Field Test Number:		6	7	8	-	-
Date - Field Tested:		26/11/2020	26/11/2020	26/11/2020	-	-
Time - Field Tested:		PM	PM	PM	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 2G	Stage 2G	Stage 2G	-	-
Location/Chainage/Easting:	(m)	E: 54962.03	E: 54970.80	E: 54974.27	-	-
Position/Offset/Northing:	(m)	N: 74101.28	N: 74111.49	N: 74115.62	-	-
Level/Layer/R.L.		-	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.13	2.12	2.07	-	-
Field Dry Density:	(t/m^3)	1.95	1.95	1.90	-	-
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	3% 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:	(%)	9.5	9.0	9.5	-	-
Adjusted Lab OMC:	(%)	10.9	10.3	11.0	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.16	2.16	2.12	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.16	2.17	2.12	-	-
Compactive Effort:		Standard	Standard	Standard	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**-**	**-**
Moisture Ratio	(%)	**86.0**	**86.5**	**85.0**	**-**	**-**
Density Ratio	(%)	**98.5**	**98.0**	**98.0**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.1**	8	96.76	1.36	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 27/11/2020 to 28/11/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

AUSTRALIAN SOIL AND CONCRETE TESTING
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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**62**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	3/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 FIll	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44357**	**44358**	**44359**	**44360**	**44361**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		27/11/2020	27/11/2020	27/11/2020	27/11/2020	27/11/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 2G	Stage 2G	Stage 2G	Stage 2G	Stage 2G
Location/Chainage/Easting:	(m)	E: 34951.09	E: 34963.54	E: 34971.42	E: 34986.19	E: 34992.17
Position/Offset/Northing:	(m)	N: 74088.43	N: 74095.83	N: 74102.52	N: 74109.38	N: 74118.24
Level/Layer/R.L.		-	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.08	2.02	1.99	2.04	2.08
Field Dry Density:	(t/m^3)	1.91	1.87	1.83	1.87	1.91
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:		-	-	-	-	-
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	8.0	9.0	9.0	9.0
Adjusted Lab OMC:	(%)	10.5	9.5	10.9	10.4	11.0
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)	2.13	2.12	2.10	2.13	2.14
Adjusted Lab Max CWD:	(t/m^3)	2.13	2.12	2.10	2.13	2.14
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**84.5**	**85.5**	**81.0**	**85.5**	**83.0**
Density Ratio	(%)	**97.5**	**95.5**	**95.0**	**95.5**	**97.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**95.6**	5	96.20	1.12	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 01/12/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

AUSTRALIAN SOIL AND CONCRETE TESTING
A.S.C.T.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**63**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	8/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44470**	**44471**	**44472**	**44473**	**44474**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		30/11/2020	30/11/2020	30/11/2020	30/11/2020	30/11/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	Stage 3N	Stage 3N	Stage 3N	Stage 3N
Location/Chainage/Easting:	(m)	E: 35099.82	E: 35104.43	E: 35109.67	E: 35092.70	E: 35122.38
Position/Offset/Northing:	(m)	N: 74093.26	N: 74095.19	N: 74099.06	N: 74088.44	N: 74104.93
Level/Layer/R.L.		RL: 47.77	RL: 49.04	RL: 48.62	RL: 48.49	RL: 48.93
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.17	2.19	2.14	2.15	2.14
Field Dry Density:	(t/m^3)	1.98	2.02	1.94	1.97	1.95
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:		-	-	-	-	-
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	8.5	10.0	9.5	9.5
Adjusted Lab OMC:	(%)	11.5	10.3	11.7	11.2	11.4
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)	2.13	2.15	2.12	2.15	2.13
Adjusted Lab Max CWD:	(t/m^3)	2.13	2.15	2.12	2.15	2.13
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**85.5**	**83.0**	**87.0**	**85.5**	**85.5**
Density Ratio	(%)	**102.0**	**102.0**	**101.0**	**100.5**	**100.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**100.7**	5	101.16	0.80	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 03/12/2020 to 04/12/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

AUSTRALIAN SOIL AND CONCRETE TESTING
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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**64**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	8/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44475**	**44476**	**44477**	**44478**	**44479**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		1/12/2020	1/12/2020	1/12/2020	1/12/2020	1/12/2020
Time - Field Tested:		AM	AM	AM	AM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 2G	Stage 2G	Stage 2G	Stage 2G	Stage 3N
Location/Chainage/Easting:	(m)	E: 34951.29	E: 34960.28	E: 34968.55	E: 34975.62	E: 35199.63
Position/Offset/Northing:	(m)	N: 74118.27	N: 74111.74	N: 73096.39	N: 73090.04	N: 74088.38
Level/Layer/R.L.		FL - 0.4m	FL - 0.5m	FL - 0.3m	FL - 0.6m	FL - 0.2m
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.01	2.05	2.05	2.15	2.10
Field Dry Density:	(t/m^3)	1.85	1.87	1.86	1.94	1.90
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:		-	-	-	-	-
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:	(%)	8.5	10.0	10.5	10.5	10.5
Adjusted Lab OMC:	(%)	10.2	11.6	12.1	11.8	12.1
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)	2.11	2.11	2.10	2.15	2.12
Adjusted Lab Max CWD:	(t/m^3)	2.11	2.11	2.10	2.15	2.12
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**83.0**	**87.5**	**85.5**	**88.0**	**88.0**
Density Ratio	(%)	**95.0**	**97.5**	**97.5**	**100.0**	**99.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.8**	8	97.49	1.53	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 03/12/2020 to 08/12/2020

NATA

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Approved By: A.Lenkeit
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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**64**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	8/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44480**	**44481**	**44482**	**-**	**-**
Field Test Number:		6	7	8	-	-
Date - Field Tested:		1/12/2020	1/12/2020	1/12/2020	-	-
Time - Field Tested:		PM	PM	PM	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 3N	Stage 3N	Stage 3N	-	-
Location/Chainage/Easting:	(m)	E: 35182.95	E: 35170.11	E: 35149.84	-	-
Position/Offset/Northing:	(m)	N: 74092.86	N: 74095.38	N: 74101.94	-	-
Level/Layer/R.L.		FL	FL	FL	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.08	2.03	2.03	-	-
Field Dry Density:	(t/m^3)	1.92	1.86	1.86	-	-
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:	(%)	8.5	9.0	9.5	-	-
Adjusted Lab OMC:	(%)	10.0	10.8	11.0	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.14	2.09	2.11	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.14	2.09	2.11	-	-
Compactive Effort:		Standard	Standard	Standard	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**-**	**-**
Moisture Ratio	(%)	**84.0**	**85.0**	**85.0**	**-**	**-**
Density Ratio	(%)	**97.5**	**97.0**	**96.5**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.8**	8	97.49	1.53	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 03/12/2020 to 08/12/2020

NATA

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Accreditation number: 19902

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**65**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	8/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44483**	**44484**	**44485**	**44486**	**44487**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		2/12/2020	2/12/2020	2/12/2020	2/12/2020	2/12/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5O	Stage 5O	Stage 5O	Stage 5O	Stage 5O
Location/Chainage/Easting:	(m)	E: 34422.67	E: 34428.51	E: 34434.58	E: 34430.97	E: 34426.64
Position/Offset/Northing:	(m)	N: 73960.39	N: 73968.28	N: 73975.23	N: 73980.04	N: 73972.46
Level/Layer/R.L.		FL - 0.8m	FL - 0.9m	FL - 0.6m	FL - 0.8m	FL - 0.5m
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.03	2.07	2.10	2.07	2.09
Field Dry Density:	(t/m^3)	1.87	1.89	1.94	1.91	1.91
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:		-	-	-	-	-
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:	(%)	8.5	9.5	8.0	8.5	9.5
Adjusted Lab OMC:	(%)	10.5	11.5	9.9	10.7	11.4
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)	2.13	2.14	2.12	2.13	2.13
Adjusted Lab Max CWD:	(t/m^3)	2.13	2.14	2.12	2.13	2.13
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**2.0% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**79.5**	**84.0**	**81.5**	**80.5**	**82.5**
Density Ratio	(%)	**95.0**	**97.0**	**99.0**	**97.5**	**98.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.9**	6	97.67	1.51	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 04/12/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

AUSTRALIAN SOIL AND CONCRETE TESTING
A.S.C.T.

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

Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**65**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	8/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44488**	-	-	-	-
Field Test Number:		6	-	-	-	-
Date - Field Tested:		2/12/2020	-	-	-	-
Time - Field Tested:		PM	-	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5O	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34419.82	-	-	-	-
Position/Offset/Northing:	(m)	N: 73955.43	-	-	-	-
Level/Layer/R.L.		FL - 0.6m	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.12	-	-	-	-
Field Dry Density:	(t/m^3)	1.94	-	-	-	-
Retained Oversize (Wet basis):	(%)	0% on 19.0mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	9.5	-	-	-	-
Adjusted Lab OMC:	(%)	11.8	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.14	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.14	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**2.5% 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 (%)	*95*	**96.9**	6	97.67	1.51	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 04/12/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**66**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	10/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44538**	**44539**	**44540**	**44541**	**44542**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		3/12/2020	3/12/2020	3/12/2020	3/12/2020	3/12/2020
Time - Field Tested:		AM	AM	AM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5O	Stage 5O	Stage 5O	Stage 5O	Stage 5O
Location/Chainage/Easting:	(m)	E: 34394.39	E: 34399.38	E: 34390.32	E: 34406.49	E: 34412.72
Position/Offset/Northing:	(m)	N: 73960.48	N: 73966.21	N: 73963.83	N: 73971.44	N: 73979.92
Level/Layer/R.L.		FL - 0.2m	FL	FL - 0.3m	FL	FL - 0.5m
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.13	2.04	2.00	2.18	2.02
Field Dry Density:	(t/m^3)	1.96	1.90	1.83	1.99	1.88
Retained Oversize (Wet basis):	(%)	4% on 19.0mm	7% on 19.0mm	6% on 19.0mm	4% on 19.0mm	6% 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:	(%)	9.0	7.5	9.5	9.5	7.5
Adjusted Lab OMC:	(%)	10.7	9.0	10.9	11.3	9.1
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)	2.11	2.08	2.07	2.14	2.08
Adjusted Lab Max CWD:	(t/m^3)	2.12	2.10	2.08	2.15	2.10
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**85.0**	**83.5**	**85.0**	**84.5**	**81.0**
Density Ratio	(%)	**100.5**	**97.0**	**96.0**	**101.0**	**96.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.9**	6	98.03	2.20	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 04/12/2020 to 05/12/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**66**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	10/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44543**	-	-	-	-
Field Test Number:		6	-	-	-	-
Date - Field Tested:		3/12/2020	-	-	-	-
Time - Field Tested:		PM	-	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5O	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34417.24	-	-	-	-
Position/Offset/Northing:	(m)	N: 73975.44	-	-	-	-
Level/Layer/R.L.		FL	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.05	-	-	-	-
Field Dry Density:	(t/m^3)	1.91	-	-	-	-
Retained Oversize (Wet basis):	(%)	3% on 19.0mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	7.0	-	-	-	-
Adjusted Lab OMC:	(%)	8.7	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.10	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.11	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	-	-	-	-
Moisture Ratio	(%)	**83.0**	-	-	-	-
Density Ratio	(%)	**97.5**	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.9**	6	98.03	2.20	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**67**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	10/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44585**	**44586**	**44587**	**44588**	**-**
Field Test Number:		1	2	3	4	-
Date - Field Tested:		4/12/2020	4/12/2020	4/12/2020	4/12/2020	-
Time - Field Tested:		AM	AM	AM	AM	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5O	Stage 5O	Stage 5O	Stage 5O	
Location/Chainage/Easting:	(m)	E: 34441.09	E: 34435.34	E: 34420.39	E: 34430.26	-
Position/Offset/Northing:	(m)	N: 73455.75	N: 73451.81	N: 73442.81	N: 73434.84	-
Level/Layer/R.L.		FL	FL	FL	FL	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.09	2.10	2.12	2.07	-
Field Dry Density:	(t/m^3)	1.93	1.88	1.93	1.86	-
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	5% on 19.0mm	4% on 19.0mm	4% 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:	(%)	8.5	11.5	10.0	11.0	-
Adjusted Lab OMC:	(%)	9.7	13.2	12.1	12.6	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-
Lab Max Converted Wet Density:	(t/m^3)	2.09	2.11	2.15	2.07	-
Adjusted Lab Max CWD:	(t/m^3)	2.10	2.12	2.16	2.09	-
Compactive Effort:		Standard	Standard	Standard	Standard	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**-**
Moisture Ratio	(%)	**85.5**	**87.5**	**84.5**	**86.0**	**-**
Density Ratio	(%)	**99.5**	**99.0**	**98.5**	**99.0**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.7**	4	99.03	0.54	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 05/12/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**68**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	10/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44589**	**44590**	**44591**	**44592**	**44593**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		7/12/2020	7/12/2020	7/12/2020	7/12/2020	7/12/2020
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	Stage 5I	Stage 5I	Stage 5I	Stage 5I
Location/Chainage/Easting:	(m)	E: 34544.26	E: 34555.72	E: 34550.48	E: 34561.17	E: 34569.63
Position/Offset/Northing:	(m)	N: 73832.55	N: 73839.59	N: 73847.21	N: 73855.11	N: 73864.46
Level/Layer/R.L.		RL: 43.55	RL: 43.62	RL: 43.40	RL: 43.29	RL: 43.51
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	1.99	2.06	2.13	2.04	2.06
Field Dry Density:	(t/m^3)	1.82	1.90	1.96	1.89	1.91
Retained Oversize (Wet basis):	(%)	6% on 19.0mm	2% on 19.0mm	4% on 19.0mm	5% on 19.0mm	3% 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:	(%)	9.0	8.5	9.0	8.0	7.5
Adjusted Lab OMC:	(%)	10.7	10.4	10.3	10.1	9.0
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)	2.07	2.09	2.11	2.08	2.13
Adjusted Lab Max CWD:	(t/m^3)	2.09	2.10	2.12	2.10	2.13
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**85.5**	**83.5**	**85.0**	**81.0**	**83.5**
Density Ratio	(%)	**95.5**	**98.5**	**100.5**	**97.5**	**96.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.5**	5	97.60	1.94	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 09/12/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**69**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	15/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44621**	**44622**	**44623**	**44624**	**44625**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		8/12/2020	8/12/2020	8/12/2020	8/12/2020	8/12/2020
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On SIte - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	Stage 5I	Stage 5I	Stage 5I	Stage 5I
Location/Chainage/Easting:	(m)	E: 34575.94	E: 34582.52	E: 34561.81	E: 34570.06	E: 34545.52
Position/Offset/Northing:	(m)	N: 73895.24	N: 73909.66	N: 73928.40	N: 73941.86	N: 73958.42
Level/Layer/R.L.		RL: 43.85	RL: 43.74	RL: 43.63	RL: 43.80	RL: 43.49
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.14	2.19	1.99	2.12	2.05
Field Dry Density:	(t/m^3)	1.95	2.02	1.82	1.93	1.87
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:		-	-	-	-	-
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	9.0	9.5	9.5	10.0
Adjusted Lab OMC:	(%)	10.4	9.8	10.4	10.0	10.2
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)	2.13	2.11	2.07	2.14	2.10
Adjusted Lab Max CWD:	(t/m^3)	2.13	2.11	2.07	2.14	2.10
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**0.5% Dryer than OMC**	**1.0% Dryer than OMC**	**1% Dryer than OMC**	**0.5% Dryer than OMC**	**0.5% Dryer than OMC**
Moisture Ratio	(%)	**93.5**	**91.0**	**91.5**	**95.5**	**97.0**
Density Ratio	(%)	**100.5**	**104.0**	**96.0**	**99.0**	**98.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.0**	10	98.91	2.32	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 09/12/2020 to 10/12/2020

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Approved Signatory

AUSTRALIAN SOIL AND CONCRETE TESTING
A.S.C.T.

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

Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**69**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	15/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44626**	**44627**	**44628**	**44629**	**44630**
Field Test Number:		6	7	8	9	10
Date - Field Tested:		8/12/2020	8/12/2020	8/12/2020	8/12/2020	8/12/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On SIte - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	Stage 5I	Stage 5I	Stage 5I	Stage 5I
Location/Chainage/Easting:	(m)	E: 34566.38	E: 34585.90	E: 34593.64	E: 34552.69	E: 34538.72
Position/Offset/Northing:	(m)	N: 73899.47	N: 73924.80	N: 73931.51	N: 73951.34	N: 73967.44
Level/Layer/R.L.		RL: 43.89	RL: 43.95	RL: 43.86	RL: 43.92	RL: 43.68
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.09	2.15	2.14	2.03	2.11
Field Dry Density:	(t/m^3)	1.89	1.93	1.92	1.84	1.92
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:		-	-	-	-	-
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:	(%)	10.5	11.0	12.0	10.5	10.0
Adjusted Lab OMC:	(%)	10.1	10.6	10.9	11.1	10.7
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)	2.15	2.17	2.14	2.11	2.15
Adjusted Lab Max CWD:	(t/m^3)	2.15	2.17	2.14	2.11	2.15
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**0.5% Wetter than OMC**	**0.5% Wetter than OMC**	**1% Wetter than OMC**	**0.5% Dryer than OMC**	**1% Dryer than OMC**
Moisture Ratio	(%)	**103.5**	**104.0**	**108.0**	**96.0**	**92.0**
Density Ratio	(%)	**97.5**	**99.0**	**100.5**	**96.5**	**98.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.0**	10	98.91	2.32	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 09/12/2020 to 10/12/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**70**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	15/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44683**	**44684**	**44685**	**44686**	**44687**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		9/12/2020	9/12/2020	9/12/2020	9/12/2020	9/12/2020
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On SIte - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	Stage 5I	Stage 5I	Stage 5I	Stage 5I
Location/Chainage/Easting:	(m)	E: 34569.23	E: 34581.21	E: 34566.74	E: 34555.80	E: 34529.60
Position/Offset/Northing:	(m)	N: 73900.77	N: 73915.28	N: 73938.38	N: 73953.41	N: 73969.52
Level/Layer/R.L.		RL: 43.97	RL: 43.92	RL: 44.10	RL: 44.01	RL: 43.75
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.09	2.10	2.08	2.14	2.01
Field Dry Density:	(t/m^3)	1.88	1.89	1.88	1.92	1.84
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:		-	-	-	-	-
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:	(%)	11.0	11.0	10.5	11.0	9.5
Adjusted Lab OMC:	(%)	10.7	10.5	10.9	11.3	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)	2.09	2.12	2.10	2.13	2.10
Adjusted Lab Max CWD:	(t/m^3)	2.09	2.12	2.10	2.13	2.10
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**0.5% Wetter than OMC**	**At OMC**	**At OMC**	**At OMC**	**0.5% Dryer than OMC**
Moisture Ratio	(%)	**104.0**	**102.0**	**99.0**	**99.0**	**94.5**
Density Ratio	(%)	**100.0**	**99.0**	**99.0**	**100.5**	**96.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.5**	10	99.19	1.79	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 09/12/2020 to 11/12/2020

NATA

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Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**70**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	15/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44688**	**44689**	**44690**	**44691**	**44692**
Field Test Number:		6	7	8	9	10
Date - Field Tested:		9/12/2020	9/12/2020	9/12/2020	9/12/2020	9/12/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On SIte - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	Stage 5I	Stage 5I	Stage 5I	Stage 5I
Location/Chainage/Easting:	(m)	E: 34585.96	E: 34580.18	E: 34569.69	E: 34577.36	E: 34592.83
Position/Offset/Northing:	(m)	N: 73887.11	N: 73898.25	N: 73915.82	N: 73931.19	N: 73937.63
Level/Layer/R.L.		RL: 44.21	RL: 43.95	RL: 43.82	RL: 44.09	RL: 44.08
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.11	2.15	2.11	2.13	2.03
Field Dry Density:	(t/m^3)	1.90	1.94	1.95	1.92	1.83
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:		-	-	-	-	-
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:	(%)	11.5	10.5	8.5	10.5	11.0
Adjusted Lab OMC:	(%)	11.3	10.8	10.6	11.1	10.3
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)	2.14	2.11	2.13	2.10	2.09
Adjusted Lab Max CWD:	(t/m^3)	2.14	2.11	2.13	2.10	2.09
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**At OMC**	**At OMC**	**2% Dryer than OMC**	**0.5% Dryer than OMC**	**1% Wetter than OMC**
Moisture Ratio	(%)	**100.0**	**99.0**	**79.5**	**96.0**	**107.5**
Density Ratio	(%)	**98.5**	**102.0**	**99.0**	**101.0**	**97.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.5**	10	99.19	1.79	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**71**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	15/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44752**	**44753**	**44754**	**44755**	**44756**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		10/12/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On SIte - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	Stage 5I	Stage 5I	Stage 5I	Stage 5I
Location/Chainage/Easting:	(m)	E: 34541.05	E: 34522.79	E: 34531.63	E: 34519.82	E: 34527.93
Position/Offset/Northing:	(m)	N: 73966.24	N: 73960.08	N: 73952.47	N: 73940.84	N: 73922.17
Level/Layer/R.L.		RL: 44.41	RL: 44.71	RL: 44.52	RL: 43.94	RL: 44.66
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.15	2.02	2.02	2.06	2.06
Field Dry Density:	(t/m^3)	1.96	1.85	1.83	1.90	1.87
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:		-	-	-	-	-
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:	(%)	9.5	9.5	10.5	8.5	10.0
Adjusted Lab OMC:	(%)	10.4	10.1	10.0	10.4	10.6
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)	2.14	2.10	2.09	2.12	2.12
Adjusted Lab Max CWD:	(t/m^3)	2.14	2.10	2.09	2.12	2.12
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**0.5% Dryer than OMC**	**1.0% Dryer than OMC**	**0.5% Wetter than OMC**	**2% Dryer than OMC**	**0.5% Dryer than OMC**
Moisture Ratio	(%)	**93.5**	**92.5**	**104.5**	**80.0**	**95.0**
Density Ratio	(%)	**100.5**	**96.5**	**96.5**	**97.0**	**97.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.9**	10	97.51	1.48	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 11/12/2020 to 14/12/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**71**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	15/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44757**	**44758**	**44759**	**44760**	**44761**
Field Test Number:		6	7	8	9	10
Date - Field Tested:		10/12/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On SIte - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	Stage 5I	Stage 5I	Stage 5I	Stage 5I
Location/Chainage/Easting:	(m)	E: 34555.07	E: 34546.28	E: 34562.91	E: 34552.11	E: 34536.27
Position/Offset/Northing:	(m)	N: 73931.04	N: 73926.85	N: 73913.47	N: 73919.00	N: 73899.14
Level/Layer/R.L.		RL: 44.88	RL: 44.80	RL: 44.92	RL: 45.12	RL: 45.00
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.01	2.08	2.12	2.00	2.05
Field Dry Density:	(t/m^3)	1.81	1.89	1.94	1.84	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:		-	-	-	-	-
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:	(%)	11.0	10.0	9.0	8.5	9.5
Adjusted Lab OMC:	(%)	11.4	10.6	11.0	10.6	10.0
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)	2.07	2.10	2.15	2.09	2.10
Adjusted Lab Max CWD:	(t/m^3)	2.07	2.10	2.15	2.09	2.10
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**0.5% Dryer than OMC**	**0.5% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**0.5% Dryer than OMC**
Moisture Ratio	(%)	**95.0**	**94.0**	**82.0**	**80.5**	**93.5**
Density Ratio	(%)	**97.0**	**99.0**	**98.5**	**95.5**	**98.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**96.9**	10	97.51	1.48	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 11/12/2020 to 14/12/2020

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**72**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	15/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44826**	**44827**	**44828**	**44829**	**44830**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		11/12/2020	11/12/2020	11/12/2020	11/12/2020	11/12/2020
Time - Field Tested:		AM	AM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	Stage 5I	Stage 5I	Stage 5I	Stage 5I
Location/Chainage/Easting:	(m)	E: 34569.48	E: 34577.81	E: 34581.17	E: 34588.12	E: 34565.73
Position/Offset/Northing:	(m)	N: 73893.37	N: 73902.94	N: 73917.26	N: 73929.31	N: 73937.45
Level/Layer/R.L.		RL: 45.12	RL: 45.19	RL: 44.97	RL: 44.93	RL: 45.04
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.05	2.13	2.02	2.08	2.09
Field Dry Density:	(t/m^3)	1.83	1.95	1.85	1.92	1.90
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:		-	-	-	-	-
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:	(%)	12.0	9.0	9.5	8.0	10.0
Adjusted Lab OMC:	(%)	11.3	10.9	10.3	10.4	10.5
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)	2.10	2.11	2.08	2.13	2.15
Adjusted Lab Max CWD:	(t/m^3)	2.10	2.11	2.08	2.13	2.15
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**0.5% Wetter than OMC**	**2.0% Dryer than OMC**	**1% Dryer than OMC**	**2% Dryer than OMC**	**0.5% Dryer than OMC**
Moisture Ratio	(%)	**106.0**	**83.0**	**92.5**	**79.0**	**95.0**
Density Ratio	(%)	**98.0**	**101.0**	**97.5**	**97.5**	**97.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.1**	9	98.94	1.90	0.427
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 14/12/2020 to 15/12/2020

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

AUSTRALIAN SOIL AND CONCRETE TESTING
A.S.C.T.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**72**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	15/12/2020
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**44831**	**44832**	**44833**	**44834**	**-**
Field Test Number:		6	7	8	9	-
Date - Field Tested:		11/12/2020	11/12/2020	11/12/2020	11/12/2020	-
Time - Field Tested:		PM	PM	PM	PM	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	Stage 5I	Stage 5I	Stage 5I	-
Location/Chainage/Easting:	(m)	E: 34553.49	E: 34562.09	E: 34571.60	E: 34579.01	-
Position/Offset/Northing:	(m)	N: 73940.86	N: 73948.21	N: 73957.42	N: 73966.83	-
Level/Layer/R.L.		RL: 45.19	RL 45.08	RL: 45.15	RL: 45.06	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.16	2.05	2.09	2.16	-
Field Dry Density:	(t/m^3)	2.00	1.83	1.94	1.97	-
Retained Oversize (Wet basis):	(%)	0% 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	-
Field Moisture Content:	(%)	8.0	11.5	8.0	9.0	-
Adjusted Lab OMC:	(%)	10.4	11.3	10.1	11.1	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-
Lab Max Converted Wet Density:	(t/m^3)	2.14	2.09	2.13	2.11	-
Adjusted Lab Max CWD:	(t/m^3)	2.14	2.09	2.13	2.11	-
Compactive Effort:		Standard	Standard	Standard	Standard	-

Relative Compaction & Moisture

Moisture Variation	(%)	**2% Dryer than OMC**	**0.5% Wetter than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**-**
Moisture Ratio	(%)	**79.0**	**103.0**	**80.0**	**83.5**	**-**
Density Ratio	(%)	**101.0**	**97.5**	**98.5**	**102.0**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.1**	9	98.94	1.90	0.427
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 14/12/2020 to 15/12/2020

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**73**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	15/01/2021
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	
Lot Number:		ITP/PCP:	

Sample Information & Location

Sample Number:		**45031**	**45032**	**45033**	**45034**	**45035**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On SIte - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	Stage 5I	Stage 5I	Stage 5I	Stage 5I
Location/Chainage/Easting:	(m)	E: 34612.64	E: 34601.78	E: 34592.18	E: 34574.71	E: 34565.09
Position/Offset/Northing:	(m)	N: 74038.77	N: 74022.20	N: 74013.80	N: 74019.19	N: 74007.96
Level/Layer/R.L.		FL	FL	FL	FL	FL
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.11	2.01	2.11	2.16	2.08
Field Dry Density:	(t/m^3)	1.93	1.83	1.93	1.96	1.90
Retained Oversize (Wet basis):	(%)	1% on 19.0mm	0% on 19.0mm	1% on 19.0mm	2% on 19.0mm	1% 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:	(%)	9.0	9.5	9.0	10.5	9.5
Adjusted Lab OMC:	(%)	10.7	11.3	10.7	12.4	11.3
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)	2.13	2.09	2.12	2.13	2.11
Adjusted Lab Max CWD:	(t/m^3)	2.14	2.09	2.13	2.14	2.12
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**85.5**	**83.5**	**85.0**	**85.5**	**82.5**
Density Ratio	(%)	**98.5**	**96.0**	**99.5**	**101.0**	**98.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.2**	7	99.01	1.66	0.484
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 14/01/2021 to 15/01/2021

NATA

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Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**73**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	15/01/2021
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	
Lot Number:		ITP/PCP:	

Sample Information & Location

Sample Number:		**45036**	**45037**	**-**	**-**	**-**
Field Test Number:		6	7	-	-	-
Date - Field Tested:		12/01/2021	12/01/2021	-	-	-
Time - Field Tested:		PM	PM	-	-	-
Material Source / Type:		On SIte - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	Stage 5I	-	-	-
Location/Chainage/Easting:	(m)	E: 34572.77	E: 34551.15	-	-	-
Position/Offset/Northing:	(m)	N: 73991.80	N: 73997.67	-	-	-
Level/Layer/R.L.		FL	FL	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.09	2.16	-	-	-
Field Dry Density:	(t/m^3)	1.93	1.99	-	-	-
Retained Oversize (Wet basis):	(%)	1% on 19.0mm	2% on 19.0mm	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	AS1289.2.1.1 - Oven	-	-	-
Field Moisture Content:	(%)	8.5	8.5	-	-	-
Adjusted Lab OMC:	(%)	10.3	10.2	-	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.10	2.15	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.10	2.15	-	-	-
Compactive Effort:		Standard	Standard	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**-**	**-**	**-**
Moisture Ratio	(%)	**83.0**	**84.0**	**-**	**-**	**-**
Density Ratio	(%)	**99.5**	**100.0**	**-**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.2**	7	99.01	1.66	0.484
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**74**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	15/01/2021
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**45046**	**45047**	**45048**	**45049**	**45050**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	Stage 5I	Stage 5I	Stage 5I	Stage 5I
Location/Chainage/Easting:	(m)	E: 34590.53	E: 34535.32	E: 34556.33	E: 34582.72	E: 34593.80
Position/Offset/Northing:	(m)	N: 73884.28	N: 73897.96	N: 73914.84	N: 73936.91	N: 73955.43
Level/Layer/R.L.		RL: 45.58	RL: 45.91	RL: 46.04	RL: 45.37	RL: 45.71
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.14	2.08	2.09	2.05	2.13
Field Dry Density:	(t/m^3)	1.96	1.90	1.92	1.85	1.92
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	1% on 19.0mm	1% on 19.0mm	0% on 19.0mm	1% 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:	(%)	9.5	9.5	8.5	11.0	11.0
Adjusted Lab OMC:	(%)	11.2	11.0	10.5	12.3	12.5
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)	2.14	2.12	2.13	2.10	2.14
Adjusted Lab Max CWD:	(t/m^3)	2.15	2.12	2.13	2.10	2.14
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**2.0% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**84.5**	**84.0**	**81.5**	**87.5**	**88.5**
Density Ratio	(%)	**100.0**	**98.0**	**98.0**	**97.5**	**99.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.2**	6	98.73	1.06	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 14/01/2021

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**74**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	15/01/2021
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**45051**	-	-	-	-
Field Test Number:		6	-	-	-	-
Date - Field Tested:		13/01/2021	-	-	-	-
Time - Field Tested:		PM	-	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Stage 5I	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34599.96	-	-	-	-
Position/Offset/Northing:	(m)	N: 73965.74	-	-	-	-
Level/Layer/R.L.		RL: 46.00	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.16	-	-	-	-
Field Dry Density:	(t/m^3)	1.95	-	-	-	-
Retained Oversize (Wet basis):	(%)	1% on 19.0mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	10.5	-	-	-	-
Adjusted Lab OMC:	(%)	12.1	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.16	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.16	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	-	-	-	-
Moisture Ratio	(%)	**88.0**	-	-	-	-
Density Ratio	(%)	**100.0**	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.2**	6	98.73	1.06	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**75**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/01/2021
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**45083**	**45084**	**45085**	**45086**	**45087**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
Time - Field Tested:		AM	AM	AM	AM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Lot 972	Lot 977	Lot 978	Lot 1048	Lot 979
Location/Chainage/Easting:	(m)	9m off Front Boundary	11m off Front Boundary	5m off Front Boundary	9m off Front Boundary	8m off Front Boundary
Position/Offset/Northing:	(m)	6m off Left Boundary	2m off Left Boundary	6m off Right Boundary	7m off Right Boundary	3m off Left Boundary
Level/Layer/R.L.		FL	FL	FL	FL	FL
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.05	2.08	1.99	2.03	2.15
Field Dry Density:	(t/m^3)	1.88	1.89	1.81	1.84	1.95
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:		-	-	-	-	-
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	10.0	10.5	10.0	10.5
Adjusted Lab OMC:	(%)	10.9	10.3	12.3	11.9	11.9
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)	2.10	2.16	2.06	2.06	2.10
Adjusted Lab Max CWD:	(t/m^3)	2.10	2.16	2.06	2.06	2.10
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**0.5% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**83.0**	**97.0**	**84.0**	**83.5**	**87.0**
Density Ratio	(%)	**97.5**	**96.0**	**96.5**	**98.5**	**102.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.8**	8	99.04	2.81	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 14/01/2021 to 15/01/2021

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

AUSTRALIAN SOIL AND CONCRETE TESTING

ASCT Brisbane South
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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**75**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/01/2021
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**45088**	**45089**	**45090**	**-**	**-**
Field Test Number:		6	7	8	-	-
Date - Field Tested:		14/01/2021	14/01/2021	14/01/2021	-	-
Time - Field Tested:		PM	PM	PM	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Lot 980	Lot 981	Lot 960	-	-
Location/Chainage/Easting:	(m)	14m off Front Boundary	5m off Front Boundary	9m off Front Boundary	-	-
Position/Offset/Northing:	(m)	6m off Left Boundary	4m off Left Boundary	5m off Right Boundary	-	-
Level/Layer/R.L.		FL	FL	FL	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.16	2.07	2.11	-	-
Field Dry Density:	(t/m^3)	1.93	1.89	1.89	-	-
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:	(%)	12.0	9.5	11.5	-	-
Adjusted Lab OMC:	(%)	12.1	11.7	11.8	-	-
Fraction Tested:		Passing 19.0mm	Passing 19.0mm	Passing 19.0mm	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.09	2.13	2.09	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.09	2.13	2.09	-	-
Compactive Effort:		Standard	Standard	Standard	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**At OMC**	**2% Dryer than OMC**	**0.5% Dryer than OMC**	**-**	**-**
Moisture Ratio	(%)	**98.0**	**82.0**	**96.0**	**-**	**-**
Density Ratio	(%)	**103.5**	**97.5**	**101.0**	**-**	**-**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.8**	8	99.04	2.81	0.453
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 14/01/2021 to 15/01/2021

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

AUSTRALIAN SOIL AND CONCRETE TESTING
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Compaction Control Test Report (Nuclear Gauge & Hilf)

Page: 1 of 1

Client:	See Civil Pty Ltd	Report No:	**76**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/01/2021
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**45151**	**45152**	**45153**	**45154**	**45155**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
Time - Field Tested:		PM	PM	PM	PM	PM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Lot 982	Lot 971	Lot 970	Lot 969	Lot 968
Location/Chainage/Easting:	(m)	10m off Front Boundary	9m off Front Boundary	12m off Front Boundary	11m off Front Boundary	7m off Front Boundary
Position/Offset/Northing:	(m)	3m off Right Boundary	4m off Left Boundary	9m off Left Boundary	4m off Right Boundary	7m off Left Boundary
Level/Layer/R.L.		FL	FL	FL	FL	FL
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.11	2.00	2.07	2.17	2.04
Field Dry Density:	(t/m^3)	1.91	1.80	1.87	1.98	1.84
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:		-	-	-	-	-
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:	(%)	10.5	11.0	11.0	9.5	11.0
Adjusted Lab OMC:	(%)	12.2	12.5	12.6	11.6	12.6
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)	2.11	2.07	2.10	2.11	2.05
Adjusted Lab Max CWD:	(t/m^3)	2.11	2.07	2.10	2.11	2.05
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**87.5**	**87.5**	**87.0**	**83.0**	**86.0**
Density Ratio	(%)	**100.0**	**96.5**	**99.0**	**103.0**	**99.0**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.2**	5	99.56	2.33	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 15/01/2021 to 18/01/2021

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**77**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	19/01/2021
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**45156**	**45157**	**45158**	**45159**	**45160**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		18/01/2021	18/01/2021	18/01/2021	18/01/2021	18/01/2021
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Lot 983	Lot 966	Lot 967	Lot 958	Lot 959
Location/Chainage/Easting:	(m)	10m off Front Boundary	9m off Front Boundary	12m off Front Boundary	11m off Front Boundary	7m off Front Boundary
Position/Offset/Northing:	(m)	3m off Right Boundary	4m off Left Boundary	9m off Left Boundary	4m off Right Boundary	7m off Left Boundary
Level/Layer/R.L.		FL	FL	FL	FL	FL
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.03	2.07	2.11	2.08	2.16
Field Dry Density:	(t/m^3)	1.86	1.88	1.89	1.86	1.94
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:		-	-	-	-	-
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:	(%)	8.5	10.0	11.0	12.0	11.0
Adjusted Lab OMC:	(%)	10.6	11.3	12.1	12.2	11.7
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)	2.07	2.08	2.12	2.12	2.11
Adjusted Lab Max CWD:	(t/m^3)	2.07	2.08	2.12	2.12	2.11
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**1% Dryer than OMC**	**At OMC**	**1% Dryer than OMC**
Moisture Ratio	(%)	**81.5**	**87.5**	**92.5**	**99.0**	**93.5**
Density Ratio	(%)	**98.0**	**99.5**	**99.5**	**98.0**	**102.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**98.5**	5	99.46	1.76	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 18/01/2021 to 19/01/2021

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**78**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	5/02/2021
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**45668**	**45669**	**45670**	**45671**	**45672**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		2/02/2021	2/02/2021	2/02/2021	2/02/2021	2/02/2021
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Lot 902	Lot 903	Lot 904	Lot 905	Lot 906
Location/Chainage/Easting:	(m)	5m off Front Boundary	2m off Front Boundary	4m off Front Boundary	3m off Front Boundary	6m off Front Boundary
Position/Offset/Northing:	(m)	9m off Left Boundary	8m off Left Boundary	6m off Right Boundary	9m off Left Boundary	6m off Right Boundary
Level/Layer/R.L.		FL	FL	FL	FL	FL
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.12	2.15	2.08	2.15	2.10
Field Dry Density:	(t/m^3)	1.93	1.92	1.89	1.97	1.90
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	2% on 19.0mm	4% on 19.0mm	2% on 19.0mm	3% 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:	(%)	9.5	11.5	10.0	9.0	10.5
Adjusted Lab OMC:	(%)	11.1	13.7	11.4	10.5	12.0
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)	2.12	2.11	2.09	2.14	2.10
Adjusted Lab Max CWD:	(t/m^3)	2.13	2.12	2.10	2.15	2.11
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**
Moisture Ratio	(%)	**86.0**	**85.5**	**87.5**	**86.5**	**87.0**
Density Ratio	(%)	**99.5**	**101.5**	**99.0**	**100.5**	**99.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.4**	10	100.02	1.47	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 03/02/2021

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**78**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	5/02/2021
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**45673**	**45674**	**45675**	**45676**	**45677**
Field Test Number:		6	7	8	9	10
Date - Field Tested:		2/02/2021	2/02/2021	2/02/2021	2/02/2021	2/02/2021
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Lot 907	Lot 998	Lot 964	Lot 963	Lot 962
Location/Chainage/Easting:	(m)	11m off Back Boundary	12m off Back Boundary	3m off Front Boundary	5m off Front Boundary	4m off Front Boundary
Position/Offset/Northing:	(m)	3m off Left Boundary	4m off Left Boundary	6m off Right Boundary	9m off Right Boundary	4m off Right Boundary
Level/Layer/R.L.		FL	FL	FL	FL	FL
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.16	2.01	2.11	2.06	2.15
Field Dry Density:	(t/m^3)	1.98	1.80	1.93	1.89	1.94
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	2% on 19.0mm	3% on 19.0mm	2% on 19.0mm	3% 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:	(%)	9.5	12.0	9.5	9.0	11.0
Adjusted Lab OMC:	(%)	11.0	13.5	11.1	10.4	12.7
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)	2.14	2.07	2.06	2.08	2.11
Adjusted Lab Max CWD:	(t/m^3)	2.14	2.08	2.07	2.08	2.12
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**86.0**	**87.5**	**84.0**	**84.5**	**85.0**
Density Ratio	(%)	**101.0**	**97.0**	**102.0**	**99.0**	**101.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**99.4**	10	100.02	1.47	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 03/02/2021

NATA

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**79**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	8/02/2021
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**45678**	**45679**	**45680**	**45681**	**45682**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		2/02/2021	2/02/2021	2/02/2021	2/02/2021	2/02/2021
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Lot 961	Lot 957	Lot 1030	Lot 1029	Lot 1028
Location/Chainage/Easting:	(m)	3m off Front Boundary	6m off Front Boundary	11m off Back Boundary	14m off Back Boundary	9m off Back Boundary
Position/Offset/Northing:	(m)	7m off Right Boundary	8m off Left Boundary	4m off Left Boundary	7m off Left Boundary	2m off Left Boundary
Level/Layer/R.L.		FL	FL	FL	FL	FL
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.00	2.01	2.15	2.12	2.02
Field Dry Density:	(t/m^3)	1.80	1.83	1.97	1.92	1.84
Retained Oversize (Wet basis):	(%)	3% on 19.0mm	2% on 19.0mm	3% on 19.0mm	4% on 19.0mm	3% 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:	(%)	11.0	10.0	9.5	10.5	9.5
Adjusted Lab OMC:	(%)	12.5	12.0	11.1	12.5	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)	2.05	2.06	2.11	2.08	2.10
Adjusted Lab Max CWD:	(t/m^3)	2.06	2.06	2.12	2.09	2.11
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**2.0% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**88.5**	**84.5**	**87.0**	**85.0**	**82.5**
Density Ratio	(%)	**97.0**	**97.5**	**102.0**	**101.5**	**95.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.1**	10	97.96	2.20	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 03/02/2021 to 04/02/2021

NATA

Accredited for compliance with ISO/IEC 17025 - Testing. The results relate only to the items sampled/tested.

Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

AUSTRALIAN SOIL AND CONCRETE TESTING

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**79**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	8/02/2021
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Level 1 Fill	Test Request:	-
Lot Number:	-	ITP/PCP:	

Sample Information & Location

Sample Number:		**45683**	**45684**	**45685**	**45686**	**45687**
Field Test Number:		6	7	8	9	10
Date - Field Tested:		2/02/2021	2/02/2021	2/02/2021	2/02/2021	2/02/2021
Time - Field Tested:		AM	AM	AM	AM	AM
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		Lot 1027	Lot 1026	Lot 1025	Lot 1024	Lot 1023
Location/Chainage/Easting:	(m)	5m off Front Boundary	3m off Front Boundary	13m off Back Boundary	2m off Front Boundary	6m off Front Boundary
Position/Offset/Northing:	(m)	5m off Right Boundary	6m off Left Boundary	8m off Right Boundary	9m off Right Boundary	7m off Left Boundary
Level/Layer/R.L.		FL	FL	FL	FL	FL
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.17	2.16	2.11	2.09	2.00
Field Dry Density:	(t/m^3)	1.96	1.98	1.92	1.90	1.82
Retained Oversize (Wet basis):	(%)	2% on 19.0mm	1% on 19.0mm	3% on 19.0mm	3% on 19.0mm	4% 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:	(%)	10.5	8.5	10.0	10.0	10.0
Adjusted Lab OMC:	(%)	12.4	10.4	11.5	11.7	12.1
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)	2.19	2.19	2.16	2.16	2.08
Adjusted Lab Max CWD:	(t/m^3)	2.20	2.19	2.17	2.17	2.09
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**1.5% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**	**1.5% Dryer than OMC**	**2% Dryer than OMC**
Moisture Ratio	(%)	**86.5**	**84.5**	**85.0**	**87.5**	**81.0**
Density Ratio	(%)	**99.0**	**98.5**	**97.5**	**96.5**	**95.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**97.1**	10	97.96	2.20	0.405
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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 03/02/2021 to 04/02/2021

NATA

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Accreditation number: 19902

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**80**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	1/06/2021
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks	Test Request:	-
Lot Number:	-	ITP/PCP:	-

Sample Information & Location

Sample Number:		**49461**	**49462**	**49463**	**49464**	**49465**
Field Test Number:		1	2	3	4	5
Date - Field Tested:		21/05/2021	21/05/2021	21/05/2021	21/05/2021	21/05/2021
Time - Field Tested:		1400	1405	1410	1415	1420
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		-	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34370.997	E: 34426.746	E: 34349.804	E: 34353.941	E: 34407.971
Position/Offset/Northing:	(m)	N: 74085.804	N: 74066.184	N: 74059.388	N: 74065.474	N: 74078.119
Level/Layer/R.L.		RL: 45.478	RL: 45.722	RL: 45.080	RL: 45.027	RL: 45.645
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	150	150	150	150

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.17	2.16	2.16	2.19	2.19
Field Dry Density:	(t/m^3)	1.93	1.90	1.93	1.96	1.95
Retained Oversize (Wet basis):	(%)	1% on 19.0mm	1% on 19.0mm	2% on 19.0mm	1% on 19.0mm	1% 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:	(%)	12.0	13.5	12.0	11.5	12.0
Adjusted Lab OMC:	(%)	12.3	12.7	12.1	12.9	12.1
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)	2.16	2.16	2.15	2.16	2.17
Adjusted Lab Max CWD:	(t/m^3)	2.16	2.16	2.15	2.16	2.17
Compactive Effort:		Standard	Standard	Standard	Standard	Standard

Relative Compaction & Moisture

Moisture Variation	(%)	**At OMC**	**1% Wetter than OMC**	**At OMC**	**1% Dryer than OMC**	**At OMC**
Moisture Ratio	(%)	**99.0**	**107.0**	**100.0**	**90.5**	**101.0**
Density Ratio	(%)	**100.5**	**100.0**	**100.5**	**101.0**	**100.5**

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**100.3**	6	100.57	0.48	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 24/05/2021 to 25/05/2021

NATA

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Accreditation number: 19902

Approved By: A.Lenkeit
Approved Signatory

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Compaction Control Test Report (Nuclear Gauge & Hilf)

Client:	See Civil Pty Ltd	Report No:	**80**
Client Address:	108 Siganto Drive, Helensvale QLD 4210	Report Date:	1/06/2021
Project:	Flagstone City - Stage 2 Bulk Earthworks	Project No:	664
Component:	Bulk Earthworks	Test Request:	-
Lot Number:	-	ITP/PCP:	-

Sample Information & Location

Sample Number:		**49466**	-	-	-	-
Field Test Number:		6	-	-	-	-
Date - Field Tested:		21/05/2021	-	-	-	-
Time - Field Tested:		1425	-	-	-	-
Material Source / Type:		On Site - General Fill				
Remarks / Notes:						
Control Line:		0	-	-	-	-
Location/Chainage/Easting:	(m)	E: 34386.832	-	-	-	-
Position/Offset/Northing:	(m)	N: 74093.531	-	-	-	-
Level/Layer/R.L.		RL: 45.819	-	-	-	-
Layer Depth:	(mm)	-	-	-	-	-
Depth Tested:	(mm)	150	-	-	-	-

Field & Laboratory Results

Field Wet Density:	(t/m^3)	2.17	-	-	-	-
Field Dry Density:	(t/m^3)	1.94	-	-	-	-
Retained Oversize (Wet basis):	(%)	1% on 19.0mm	-	-	-	-
Material Description:		-	-	-	-	-
Moisture Content Method:		AS1289.2.1.1 - Oven	-	-	-	-
Field Moisture Content:	(%)	12.0	-	-	-	-
Adjusted Lab OMC:	(%)	11.5	-	-	-	-
Fraction Tested:		Passing 19.0mm	-	-	-	-
Lab Max Converted Wet Density:	(t/m^3)	2.15	-	-	-	-
Adjusted Lab Max CWD:	(t/m^3)	2.16	-	-	-	-
Compactive Effort:		Standard	-	-	-	-

Relative Compaction & Moisture

Moisture Variation	(%)	**0.5% Wetter than OMC**	-	-	-	-
Moisture Ratio	(%)	**103.0**	-	-	-	-
Density Ratio	(%)	**101.0**	-	-	-	-

Specified Density Ratio		Characteristic Value	Number of Tests	Mean	Standard Deviation	Constant k
Minimum (%)	*95*	**100.3**	6	100.57	0.48	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), , AS 1289.1.2.1, Cl 6.4(b) (Sampling), CV calculations derived from Austroads NTR-09 publication (Not Included in Nata endosrement)

Remarks Regarding the Lot.

Laboratory testing 24/05/2021 to 25/05/2021

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