WORKS INSPECTION & TESTING

Bulk Earthworks

PROPOSED RESIDENTIAL DEVELOPMENT

72 Acacia Road Karawatha

JOB NO: P1900 comp01

Prepared for Shadforths Civil Contractors

15th January 2021

Construction Sciences

Document Information

Prepared for Shadforths Civil Contractors

Project Name Proposed Residential Development – 72 Acacia Road, Karawatha

Job Number P1900

Date 15th January 2021

Document Control

Document Control - This Document Is:- ORIGINAL [x] COPY [ ]

Report ID	Date	Author		Reviewer			
P1900 comp 01	**15/01/2021**	**Wayne Gorman**	WG	**Mathew Ketchup**			MK
Distributed to:				**No.**	**Original**	**Copy**	**Electronic**
Shadforths Civil Contractors				1	[x]		[x]
Construction Sciences - Archives				1	[x]		[x]

Contact : Wayne Gorman

wayne.gorman@constructionsciences.net

1 Fox Road

Acacia Ridge QLD 4110

Table of Contents

Appendices

Construction Sciences

INTRODUCTION

Construction Sciences was commissioned by **Shadforths Civil Contractors** to carry out the geotechnical inspection and testing required for the proposed development at 72 Acacia Road, Karawatha, which was carried out between 17th March and 20th July 2020.

SCOPE OF WORKS

The Earthworks on this development was monitored in accordance with the scope of our commission as follows:-

Level 1 : Bulk earthworks stripping and filling was inspected and tested on a Level 1 basis, in accordance with AS 3798-2007.

Scope of Level 1 responsibility: ***"The primary objective of Level 1 Inspection and Testing is for the geotechnical inspection and testing authority (GITA) to be able to express an opinion on the compliance of the work. The GITA is responsible for ensuring that the inspection and testing is sufficient for this purpose.***

The GITA needs to have competent personnel on site at all times while earthwork operations are undertaken. Such operations include the following:

(a) Completion of removal of topsoil.
(b) Placing of imported or cut material.
(c) Compaction and adding/removal of moisture.
(d) Trenching and backfilling, where applicable.
(e) Test rolling.
(f) Testing.

The superintendent should agree on a suitable inspection and testing plan prior to the commencement of the works".

reference AS3798 – Section 8.2

SPECIFICATION REQUIREMENTS

Earthworks on this development was inspected and tested in accordance with the specification of the design engineer, **CLA Consultants, Civil Engineers** and to the specifications of the local authority, **Brisbane City Council.**

The following table is a summary of the basic compaction and quality requirements for the project.

Testing procedures used to confirm that these requirements were met were all in accordance with Australian Standard test methods

SPECIFICATIONS	
Item	***Minimum Compaction Requirement***
Bulk Earthworks Fill	*95% Wet Density Ratio - Standard*

SITE WORKS - BULK EARTHWORKS

General : Full time site inspection was maintained in accordance with Level 1 requirements whilst earthworks were carried out on this development. Fill areas included residential allotments, roads and embankments.

The areas to be filled were stripped and proof rolled in accordance with the specification requirements. Areas displaying instability were generally excavated until competent conditions were encountered. Benching was provided on slopes where filling was to be placed.

The natural ground in the areas of filling generally comprised gravelly to silty and sandy CLAYS, brown/grey mottled orange and red and clayey SANDS, light grey/grey mottled orange.

The material used in the bulk earthworks filling was sourced from site cutting to design levels.

Compaction Control Testing : Compaction control testing via the nuclear densometer method was carried out at regular intervals throughout the placement of fill, in accordance with the minimum test frequency recommendations included in AS3798 “Guidelines on Earthworks for Commercial and Residential Developments”.

All test results are included in Appendix A. A summary of the test results is included as Table 1 & Table 2. A total of 45 field density tests were carried out throughout the earthworks. The average wet density ratio was recorded to be 99.6%. The maximum wet density ratio was 106.5% and minimum was 95%.

CONCLUSION

We confirm that:

(a) Our representative was in full time site attendance whilst bulk earthworks filling was in progress between 17th March and 20th July 2020 at 72 Acacia Road, Karawatha.

(b) Pre – fill ground preparation was carried out in accordance with the specifications and site instruction given.

(c) The structural filling placed to design levels during the term of our engagement on a “Level 1” basis can be termed “controlled filling”.

(d) The results of the compaction control testing indicate that the fill placed during the term of our site attendance, was compacted to at least the minimum specified wet density ratio.

(e) All test results pertaining to the development are included within appendix A of this report.

WAYNE GORMAN

LABORATORY MANAGER
Construction Sciences

Construction Sciences	CLIENT:	**SHADFORTHS CIVIL CONTRACTORS**	JOB No.: **P 1900**
	PROJECT:	**72 ACACIA RODA, KARAWATHA**	SKETCH No.: **SK 1**
	TEST ITEM:	**SITE PHOTOS**	DATE ISSUED: **03/07/2020**

Construction Sciences	CLIENT:	**SHADFORTHS CIVIL CONTRACTORS**	JOB No.: **P 1900**
	PROJECT:	**72 ACACIA RODA, KARAWATHA**	SKETCH No.: **SK 2**
	TEST ITEM:	**SITE PHOTOS**	DATE ISSUED: **03/07/2020**

Construction Sciences	CLIENT:	**SHADFORTHS CIVIL CONTRACTORS**	JOB No.: **P 1900**
	PROJECT:	**72 ACACIA RODA, KARAWATHA**	SKETCH No.: **SK 3**
	TEST ITEM:	**SITE PHOTOS**	DATE ISSUED: **03/07/2020**

Client: Shadforths Civil Contractors

Project: 1979/P/1900 - 72 Acacia Road

Sample Client Reference	Sample Number	Sample Date/Time	Source	Material	Easting	Northing	RL	Allotment	Wet Density Ratio	Moisture Variation
EW-01	1979/S/129116	17/03/2020 10:10:00 AM	On-Site	Bulk Fill	477.00	493.50	37.49	48	96.5	2.0
EW-02	1979/S/129117	17/03/2020 10:20:00 AM	On-Site	Bulk Fill	263.80	259.68	37.62	48	99.5	0.0
EW-12	1979/S/129416	23/03/2020 12:30:00 PM	On-Site	Bulk Fill	458.6	308.8	37.56	43	101.5	1.0
EW-13	1979/S/129417	23/03/2020 12:45:00 PM	On-Site	Bulk Fill	452.51	303.52	37.26	43	103.0	-0.5
EW-21	1979/S/130064	31/03/2020 9:35:00 AM	On-Site	Bulk Fill	349.73	321.46	38.81	7	100.0	0.0
EW-22	1979/S/130065	31/03/2020 9:50:00 AM	On-Site	Bulk Fill	444.20	340.80	36.89	38	99.5	0.5
EW-18	1979/S/129811	27/03/2020 10:15:00 AM	On-Site	Bulk Fill	316.88	388.36	36.82	27	96.0	-2.0
EW-19	1979/S/129812	27/03/2020 10:25:00 AM	On-Site	Bulk Fill	318.73	372.55	37.50	28	105.0	2.0
EW-20	1979/S/129813	27/03/2020 10:38:00 AM	On-Site	Bulk Fill	369.68	399.68	36.44	29	102.5	1.5
EW-23	1979/S/130381	3/04/2020 10:00:00 AM	On-Site	Bulk Fill	263.21	577.31	38.96	64	96.0	2.5
EW-14	1979/S/129587	25/03/2020 10:45:00 AM	On-Site	Bulk Fill	444.09	328.01	37.3	42	98.0	1.5
EW-15	1979/S/129588	25/03/2020 10:55:00 AM	On-Site	Bulk Fill	470.99	322.04	37.4	42	97.0	0.0
EW-16	1979/S/129589	25/03/2020 10:58:00 AM	On-Site	Bulk Fill	483.0	307.0	37.87	43	102.0	0.0
EW-17	1979/S/129590	25/03/2020 11:09:00 AM	On-Site	Bulk Fill	497.89	292.7	38.38	43	100.5	-2.0
EW-24	1979/S/130579	6/04/2020 11:40:00 AM	On-Site	Bulk Fill	242.44	571.57	39.54	65	97.0	2.0
EW-25	1979/S/130761	8/04/2020 10:52:00 AM	On-Site	Bulk Fill	260.75	566.01	39.53	66	99.0	0.0
EW-26	1979/S/130762	8/04/2020 11:02:00 AM	On-Site	Bulk Fill	256.74	531.30	39.68	67	97.0	0.0
EW-27	1979/S/131033	14/04/2020 10:02:00 AM	On-Site	Bulk Fill	246.22	511.15	40.05	69	102.5	0.0
EW-28	1979/S/131034	14/04/2020 10:15:00 AM	On-Site	Bulk Fill	259.42	525.50	40.58	70	99.0	0.0
EW-29	1979/S/131035	14/04/2020 10:45:00 AM	On-Site	Bulk Fill	509148	6944582	F/L	Culvert 1	97.5	0.0
EW-30	1979/S/131717	21/04/2020 9:35:00 AM	On-Site	Bulk Fill	509231	6944568	35.0	30	101.0	2.0
EW-10	1979/S/129319	20/03/2020 10:00:00 AM	On-Site	Bulk Fill	466.07	309.62	32.09	43	98.5	0.5
EW-11	1979/S/129320	20/03/2020 10:10:00 AM	On-Site	Bulk Fill	466.71	308.45	36.45	43	99.0	0.5
EW-33	1979/S/136543	24/06/2020 8:15:00 AM	On-Site	Bulk Fill	389.89	370.58	34.62	33	95.5	2.5
EW-34	1979/S/136544	24/06/2020 8:28:00 AM	On-Site	Bulk Fill	383.23	380.55	34.71	34	97.0	0.0
EW-41	1979/S/138447	17/07/2020 2:03:00 PM	On-Site	Bulk Fill	509151	6944512	FL	1	103.5	2.0
EW-07	1979/S/129266	19/03/2020 10:20:00 AM	On-Site	Bulk Fill	538.57	255.83	37.65	48	97.0	1.5
EW-08	1979/S/129267	19/03/2020 10:32:00 AM	On-Site	Bulk Fill	531.90	258.92	37.96	48	101.5	2.0
EW-09	1979/S/129268	19/03/2020 10:40:00 AM	On-Site	Bulk Fill	587.24	267.77	38.29	48	102.0	0.5
EW-03	1979/S/129207	18/03/2020 1:50:00 PM	On-Site	Bulk Fill	488.11	283.24	38.62	48	98.0	-2.0
EW-04	1979/S/129208	18/03/2020 2:00:00 PM	On-Site	Bulk Fill	480.25	278.53	38.49	48	95.0	0.0
EW-05	1979/S/129209	18/03/2020 2:10:00 PM	On-Site	Bulk Fill	484.50	271.68	38.70	48	100.5	0.0
EW-06	1979/S/129210	18/03/2020 2:20:00 PM	On-Site	Bulk Fill	522.31	248.10	37.99	48	97.5	0.5
EW-42	1979/S/149215	20/07/2020 8:16:00 AM	On-Site	Bulk Fill	Lot 40	S/W Corner	6m N, 4m E	F/L	99.5	2.0
EW-43	1979/S/149216	20/07/2020 8:25:00 AM	On-Site	Bulk Fill	Lot 44	N/W Corner	3m S, 3m E	F/L	99.0	2.0
EW-44	1979/S/149217	20/07/2020 8:36:00 AM	On-Site	Bulk Fill	Lot 31	S/W Corner	4m N, 5m E	F/L	101.0	2.0
EW-45	1979/S/149218	20/07/2020 8:50:00 AM	On-Site	Bulk Fill	Lot 39	S/E Corner	6m N, 3m W	F/L	97.5	2.0

TABLE 1

Client: Shadforths Civil Contractors

Project: 1979/P/1900 - 72 Acacia Road

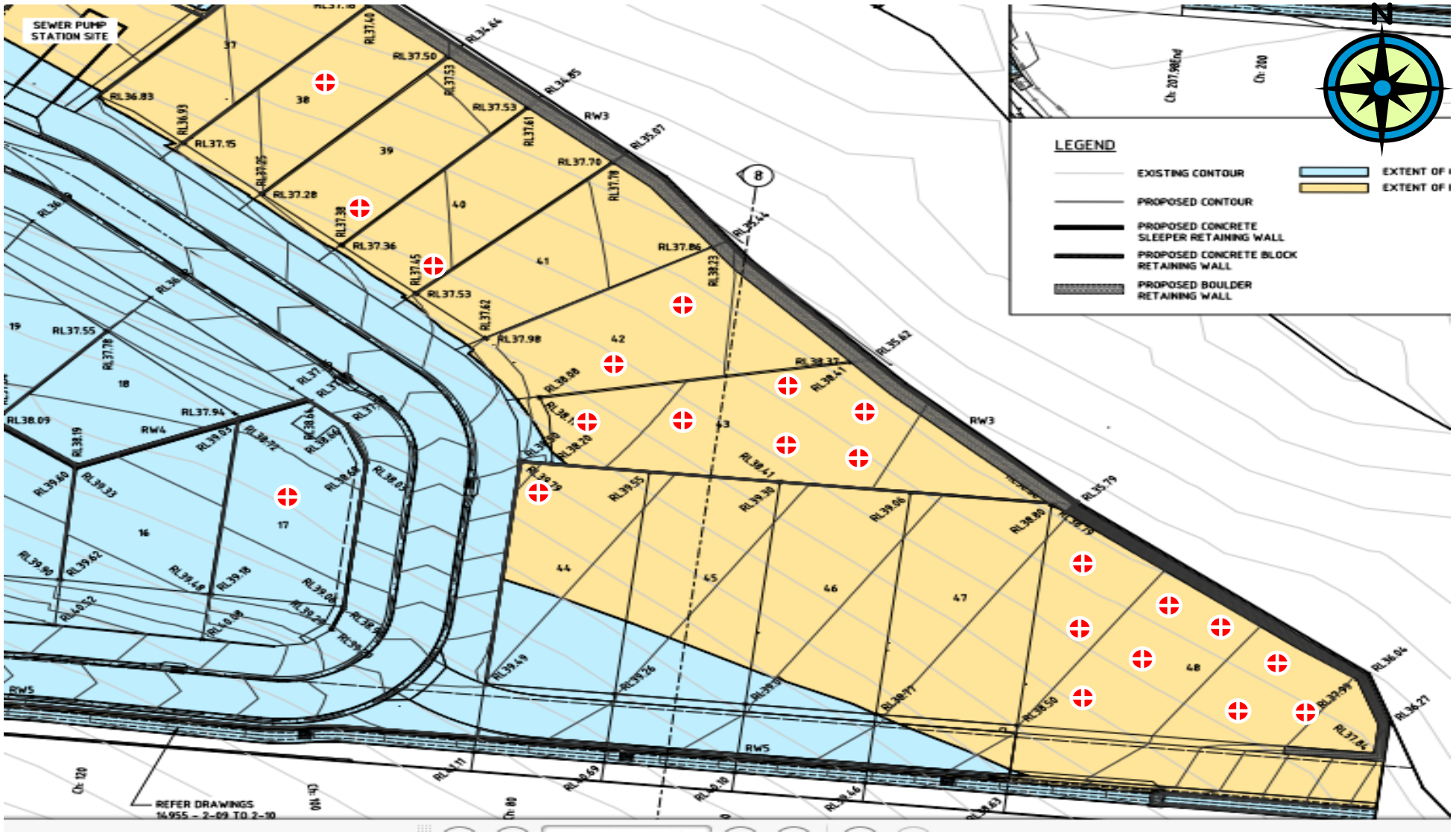
Sample Client Reference	Sample Number	Sample Date/Time	Source	Material	Location 1	Location 2	Location 3	Location 4	Dry Density Ratio	Moisture Ratio
EW-31	1979/S/135638	hh:mm	On-Site	Trench Fill	287.80	383.80	35.42	Culvert 1	96.0	93.5
EW-32	1979/S/135639	hh:mm	On-Site	Trench Fill	280.25	378.33	34.72	Culvert 1	100.0	98.0
EW-35	1979/S/136653	hh:mm	On-Site	Bulk Fill	399.05	372.21	35.94	35	100.5	89.5
EW-36	1979/S/136654	hh:mm	On-Site	Bulk Fill	386.21	379.88	36.52	35	102.5	79.0
EW-37	1979/S/136655	hh:mm	On-Site	Bulk Fill	392.72	368.15	36.29	34	103.5	77.0
EW-38	1979/S/136935	hh:mm	On-Site	Bulk Fill	251.08	458.84	38.28	74	101.0	89.5
EW-39	1979/S/137187	hh:mm	On-Site	Bulk Fill	251.08	458.84	38.28	73	100.5	86.5
EW-40	1979/S/137188	hh:mm	On-Site	Bulk Fill	242.98	475.48	39.64	72	106.5	75.0

APPENDIX

A

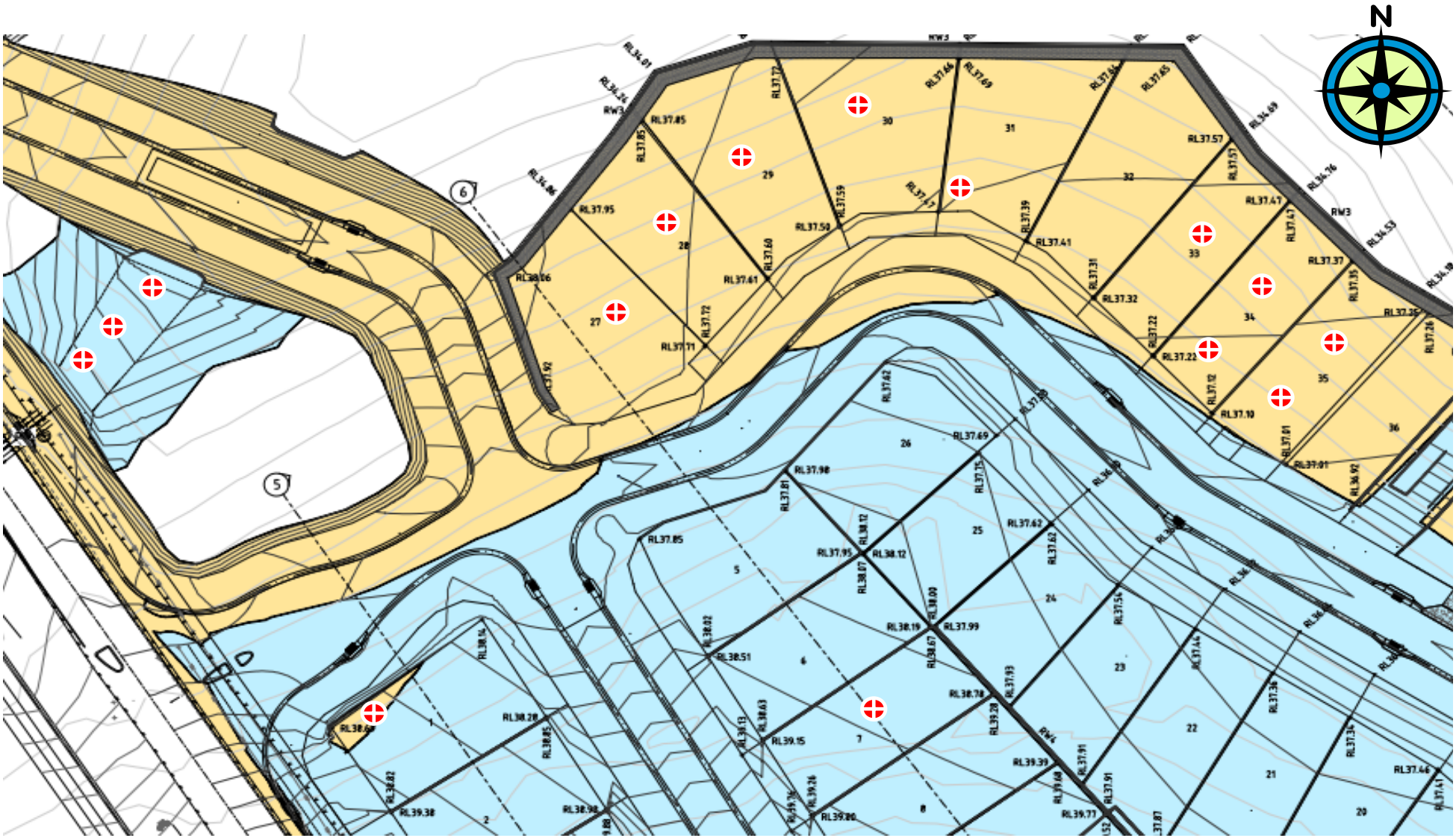
BULK EARTHWORKS FILL

Construction Sciences



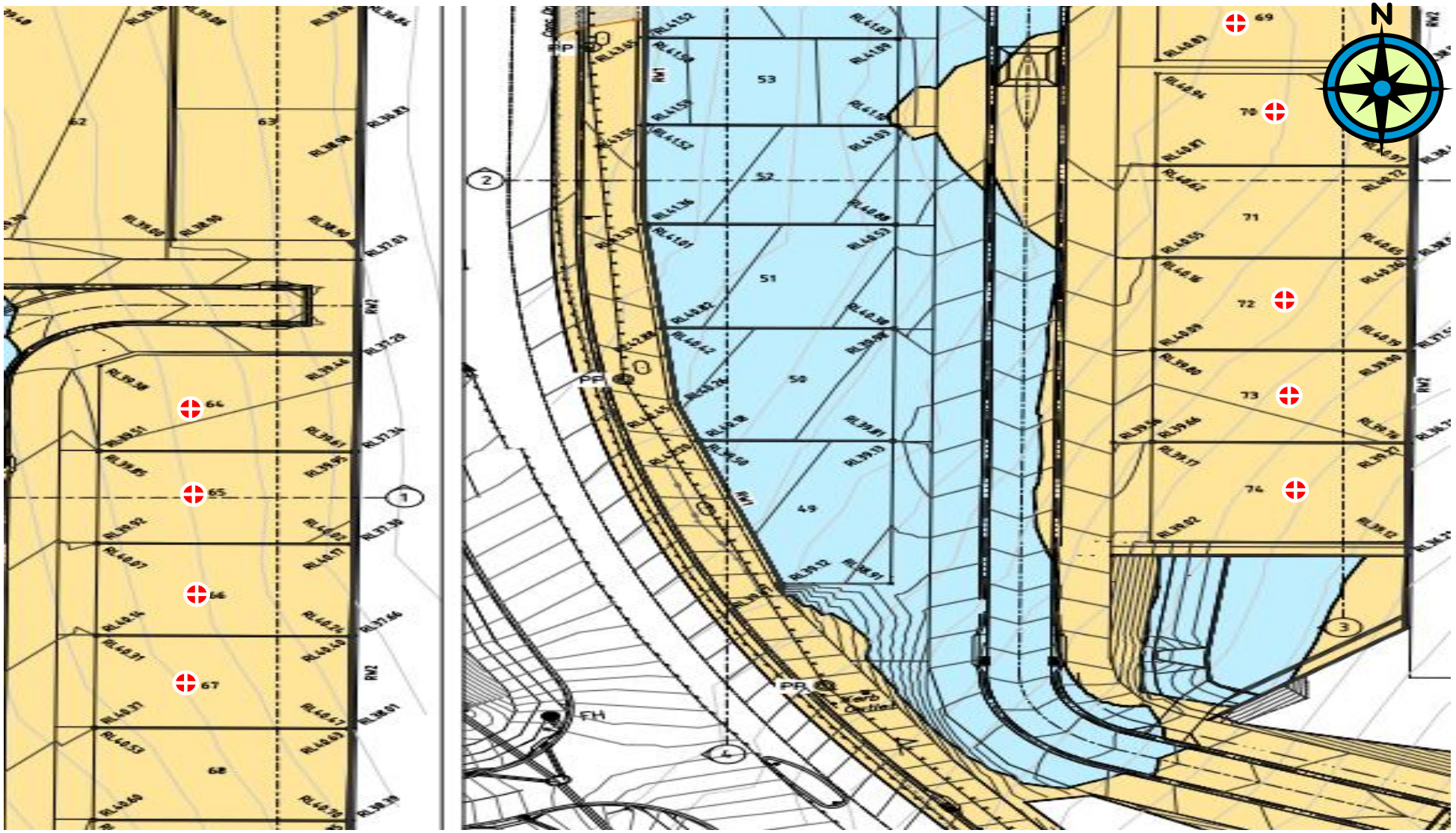
Denotes Approximate Density Location

Construction Sciences	CLIENT: **SHADFORTHS CIVIL CONTRACTORS**	JOB No.:	**P1900**
	PROJECT: **72 ACACIA ROAD**	SKETCH No.:	**SK4**
	TEST ITEM: **DENSITY LOCATION**	DATE ISSUED:	**15/01/2021**



Denotes Approximate Density Location

Construction Sciences	CLIENT: **SHADFORTHS CIVIL CONTRACTORS**	JOB No.:	**P1900**
	PROJECT: **72 ACACIA ROAD**	SKETCH No.:	**SK5**
	TEST ITEM: **DENSITY LOCATION**	DATE ISSUED:	**15/01/2021**



Denotes Approximate Density Location

Construction Sciences	CLIENT: **SHADFORTHS CIVIL CONTRACTORS**	JOB No.:	**P1900**
	PROJECT: **72 ACACIA ROAD**	SKETCH No.:	**SK6**
	TEST ITEM: **DENSITY LOCATION**	DATE ISSUED:	**15/01/2021**

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8500
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

WET DENSITY RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/47544-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	
Location:	Karawatha	Internal Test Request:	1979/T/25792
Supplied To:	n/a	Client Reference/s:	Docket Number: WR 2809
Area Description:		Report Date / Page:	2/04/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number	1979/S/129116	1979/S/129117			
ID / Client ID	EW-01	EW-02			
Lot Number	-	-			
Date / Time Tested	17/03/2020 10:10	17/03/2020 10:20			
Material Source	On-Site	On-Site			
Material Type	Bulk Fill	Bulk Fill			
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b			
Depths: Test / Nom / Actual (mm)	175 / 200 / 200	175 / 200 / 200			
Standard or Modified	Standard	Standard			
Easting: m	477.00	263.80			
Northing m	493.50	259.68			
RL: m	37.49	37.62			
Allotment:	48	48			
Test Fraction (mm)	< 19.0 mm	< 19.0 mm			
Sample Oversize (%)	0	0			
Compaction Sample Number	1979/S/129116	1979/S/129117			
Sample Description	Sandy Clay - Brown	Sandy Clay - Brown			
Moisture Test Results:					
Field Moisture Content (%)	14.5	18.3			
Adjusted / Moisture Variation (%)	2.0	0.0			
Optimum Moisture Content (%)	16.5	18.5			
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)			
Moisture Ratio (%)	**88.5**	**99.0**			
Density Test Results:					
Field Wet Density (t/m³)	1.95	2.00			
Adj/Peak Conv Wet Density (t/m³)	2.02	2.01			
Density Ratio Required (%)	95	95			
Hilf Density Ratio (%)	**96.5**	**99.5**			

Remarks

NATA

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

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Dean Stimpson
Form ID: W5ASRep Rev 2

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8500
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

WET DENSITY RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/47458-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	18/03
Location:	Karawatha	Internal Test Request:	1979/T/25798
Component:	Bulk Earthworks	Client Reference/s:	Docket Number: WR 2810
Area Description:	Stage 2	Report Date / Page:	27/03/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number		1979/S/129207	1979/S/129208	1979/S/129209	1979/S/129210
ID / Client ID		EW-03	EW-04	EW-05	EW-06
Lot Number		18/03	18/03	18/03	18/03
Date / Time Tested		18/03/2020 13:50	18/03/2020 14:00	18/03/2020 14:10	18/03/2020 14:20
Material Source		On-Site	On-Site	On-Site	On-Site
Material Type		Bulk Fill	Bulk Fill	Bulk Fill	Bulk Fill
Sampling Method		AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)		175 / 200 / 200	175 / 200 / 200	175 / 200 / 200	175 / 200 / 200
Standard or Modified		Standard	Standard	Standard	Standard
Easting:	m	488.11	480.25	484.50	522.31
Northing	m	283.24	278.53	271.68	248.10
RL:	m	38.62	38.49	38.70	37.99
Allotment:		48	48	48	48
Test Fraction (mm)		< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)		0	0	0	0
Compaction Sample Number		1979/S/129207	1979/S/129208	1979/S/129209	1979/S/129210
Sample Description		Clay - Light Brown	Clay - Grey mottled Brown	Clay - Grey mottled Brown	Clay - Grey
Moisture Test Results:					
Field Moisture Content (%)		18.1	15.8	16.8	19.3
Adjusted / Moisture Variation (%)		-2.0	0.0	0.0	0.5
Optimum Moisture Content (%)		16.0	15.5	16.5	20.0
Moisture Variation from OMC		(Wetter than OMC)	(Wetter than OMC)	(Wetter than OMC)	(Drier than OMC)
Moisture Ratio (%)		**113.0**	**101.5**	**101.0**	**97.5**
Density Test Results:					
Field Wet Density (t/m³)		2.08	1.95	2.03	1.92
Adj/Peak Conv Wet Density (t/m³)		2.12	2.05	2.02	1.97
Density Ratio Required (%)		95	95	95	95
Hilf Density Ratio (%)		**98.0**	**95.0**	**100.5**	**97.5**

Remarks

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

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Dean Stimpson
Form ID: W5ASRep Rev 2

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8500
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

WET DENSITY RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/47433-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	48
Location:	Karawatha	Internal Test Request:	1979/T/25820
Component:	Bulk Earthworks	Client Reference/s:	Docket Number: WR 2811
Area Description:	Lot 48	Report Date / Page:	25/03/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number	1979/S/129266	1979/S/129267	1979/S/129268	
ID / Client ID	EW-07	EW-08	EW-09	
Lot Number	48	48	48	
Date / Time Tested	19/03/2020 10:20	19/03/2020 10:32	19/03/2020 10:40	
Material Source	On-Site	On-Site	On-Site	
Material Type	Bulk Fill	Bulk Fill	Bulk Fill	
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	
Depths: Test / Nom / Actual (mm)	175 / 200 / 200	175 / 200 / 200	175 / 200 / 200	
Standard or Modified	Standard	Standard	Standard	
Easting: m	538.57	531.90	587.24	
Northing m	255.83	258.92	267.77	
RL: m	37.65	37.96	38.29	
Allotment:	48	48	48	
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	
Sample Oversize (%)	1	3	0	
Compaction Sample Number	1979/S/129266	1979/S/129267	1979/S/129268	
Sample Description	Clayey Sand - Light Grey	Clayey Sand - Light Grey	Clay - Light Brown	
Moisture Test Results:				
Field Moisture Content (%)	14.5	11.2	23.5	
Adjusted / Moisture Variation (%)	1.5	1.5	0.5	
Optimum Moisture Content (%)	16.0	13.0	24.0	
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	
Moisture Ratio (%)	**90.5**	**86.0**	**97.5**	
Density Test Results:				
Field Wet Density (t/m³)	2.01	2.12	1.98	
Adj/Peak Conv Wet Density (t/m³)	2.07	2.08	1.94	
Density Ratio Required (%)	95	95	95	
Hilf Density Ratio (%)	**97.0**	**101.5**	**102.0**	

Remarks

NATA

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

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Dean Stimpson
Form ID: W5ASRep Rev 2

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8500
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

WET DENSITY RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/47481-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	-
Location:	Karawatha	Internal Test Request:	1979/T/25829
Component:	Bulk Earthworks	Client Reference/s:	WR 2812
Area Description:	Stage 2	Report Date / Page:	30/03/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number		1979/S/129319	1979/S/129320		
ID / Client ID		EW-10	EW-11		
Lot Number		-	-		
Date / Time Tested		20/03/2020 10:00	20/03/2020 10:10		
Material Source		On-Site	On-Site		
Material Type		Bulk Fill	Bulk Fill		
Sampling Method		AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b		
Depths: Test / Nom / Actual (mm)		175 / 200 / 200	175 / 200 / 200		
Standard or Modified		Standard	Standard		
Easting	m	466.07	466.71		
Northing	m	309.62	308.45		
RL	m	32.09	36.45		
		43	43		
Test Fraction (mm)		< 19.0 mm	< 19.0 mm		
Sample Oversize (%)		0	0		
Compaction Sample Number		1979/S/129319	1979/S/129320		
Sample Description		Silty Clay - Brown	Clay - Brown		
Moisture Test Results:					
Field Moisture Content (%)		23.4	24.8		
Adjusted / Moisture Variation (%)		0.5	0.5		
Optimum Moisture Content (%)		24.0	25.5		
Moisture Variation from OMC		(Drier than OMC)	(Drier than OMC)		
Moisture Ratio (%)		**98.5**	**98.0**		
Density Test Results:					
Field Wet Density (t/m³)		1.93	1.88		
Adj/Peak Conv Wet Density (t/m³)		1.96	1.90		
Density Ratio Required (%)		95	95		
Hilf Density Ratio (%)		**98.5**	**99.0**		

Remarks

NATA

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

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Dean Stimpson
Form ID: W5ASRep Rev 2

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8500
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

WET DENSITY RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/47529-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	-
Location:	Karawatha	Internal Test Request:	1979/T/25847
Component:	Bulk Earthworks	Client Reference/s:	Dockect Number: WR 2813
Area Description:	Stage 2	Report Date / Page:	1/04/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number		1979/S/129416	1979/S/129417		
ID / Client ID		EW-12	EW-13		
Lot Number		-	-		
Date / Time Tested		23/03/2020 12:30	23/03/2020 12:45		
Material Source		On-Site	On-Site		
Material Type		Bulk Fill	Bulk Fill		
Sampling Method		AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b		
Depths: Test / Nom / Actual (mm)		175 / 200 / 200	175 / 200 / 200		
Standard or Modified		Standard	Standard		
Easting:	m	458.6	452.51		
Northing	m	308.8	303.52		
RL:	m	37.56	37.26		
Allotment:		43	43		
Test Fraction (mm)		< 19.0 mm	< 19.0 mm		
Sample Oversize (%)		0	0		
Compaction Sample Number		1979/S/129416	1979/S/129417		
Sample Description		Sandy Clay - Brown	Sandy Clay - Brown		
Moisture Test Results:					
Field Moisture Content (%)		18.1	23.3		
Adjusted / Moisture Variation (%)		1.0	-0.5		
Optimum Moisture Content (%)		19.0	23.0		
Moisture Variation from OMC		(Drier than OMC)	(Wetter than OMC)		
Moisture Ratio (%)		**96.0**	**102.0**		
Density Test Results:					
Field Wet Density (t/m³)		1.97	1.96		
Adj/Peak Conv Wet Density (t/m³)		1.94	1.91		
Density Ratio Required (%)		95	95		
Hilf Density Ratio (%)		**101.5**	**103.0**		

Remarks

NATA

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

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Dean Stimpson
Form ID: W5ASRep Rev 2

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8500
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

WET DENSITY RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/47569-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	
Location:	Karawatha	Internal Test Request:	1979/T/25883
Component:	Bulk Earthworks	Client Reference/s:	Docket Number: WR 2815
Area Description:	Stage 2	Report Date / Page:	6/04/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number		1979/S/129587	1979/S/129588	1979/S/129589	1979/S/129590
ID / Client ID		EW-14	EW-15	EW-16	EW-17
Lot Number		-	-	-	-
Date / Time Tested		25/03/2020 10:45	25/03/2020 10:55	25/03/2020 10:58	25/03/2020 11:09
Material Source		On-Site	On-Site	On-Site	On-Site
Material Type		Bulk Fill	Bulk Fill	Bulk Fill	Bulk Fill
Sampling Method		AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)		175 / 200 / 200	175 / 200 / 200	175 / 200 / 200	175 / 200 / 200
Standard or Modified		Standard	Standard	Standard	Standard
Easting:	m	444.09	470.99	483.0	497.89
Northing	m	328.01	322.04	307.0	292.7
RL:	m	37.3	37.4	37.87	38.38
Allotment:		42	42	43	43
Test Fraction (mm)		< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)		0	0	0	0
Compaction Sample Number		1979/S/129587	1979/S/129588	1979/S/129589	1979/S/129590
Sample Description		Silty CLAY, Light Grey/Mottle Ora	Silty CLAY, Pale Brown	Silty CLAY, Pale Brown	Sand CLAY, Grey / Mottle Red
Moisture Test Results:					
Field Moisture Content (%)		24.8	21.1	31.4	18.6
Adjusted / Moisture Variation (%)		1.5	0.0	0.0	-2.0
Optimum Moisture Content (%)		26.5	21.0	31.5	16.5
Moisture Variation from OMC		(Drier than OMC)	(Drier than OMC)	(Wetter than OMC)	(Wetter than OMC)
Moisture Ratio (%)		**93.5**	**99.5**	**100.5**	**111.5**
Density Test Results:					
Field Wet Density (t/m³)		1.89	1.87	1.93	2.07
Adj/Peak Conv Wet Density (t/m³)		1.93	1.93	1.89	2.06
Density Ratio Required (%)		95	95	95	95
Hilf Density Ratio (%)		**98.0**	**97.0**	**102.0**	**100.5**

Remarks

NATA

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

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Dean Stimpson
Form ID: W5ASRep Rev 2

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8500
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

WET DENSITY RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/47638-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	-
Location:	Karawatha	Internal Test Request:	1979/T/25916
Component:	Bulk Earthworks	Client Reference/s:	Docket Number: WR 2817
Area Description:	Stage 2	Report Date / Page:	14/04/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number	1979/S/129811	1979/S/129812	1979/S/129813	
ID / Client ID	EW-18	EW-19	EW-20	
Lot Number	-	-	-	
Date / Time Tested	27/03/2020 10:15	27/03/2020 10:25	27/03/2020 10:38	
Material Source	On-Site	On-Site	On-Site	
Material Type	Bulk Fill	Bulk Fill	Bulk Fill	
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	
Depths: Test / Nom / Actual (mm)	175 / 200 / 200	175 / 200 / 200	175 / 200 / 200	
Standard or Modified	Standard	Standard	Standard	
Easting m	316.88	318.73	369.68	
Northing m	388.36	372.55	399.68	
RL m	36.82	37.50	36.44	
	27	28	29	
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	
Sample Oversize (%)	0	0	0	
Compaction Sample Number	1979/S/129811	1979/S/129812	1979/S/129813	
Sample Description	Clayey SAND, Pale Grey / Mottle	Silty CLAY, Pale Grey / Mottle Ora	Sandy CLAY, Light Grey / Mottle	
Moisture Test Results:				
Field Moisture Content (%)	20.8	24.3	18.3	
Adjusted / Moisture Variation (%)	-2.0	2.0	1.5	
Optimum Moisture Content (%)	18.5	26.5	20.0	
Moisture Variation from OMC	(Wetter than OMC)	(Drier than OMC)	(Drier than OMC)	
Moisture Ratio (%)	**111.0**	**92.5**	**92.5**	
Density Test Results:				
Field Wet Density (t/m³)	1.81	1.99	2.05	
Adj/Peak Conv Wet Density (t/m³)	1.88	1.90	1.99	
Density Ratio Required (%)	95	95	95	
Hilf Density Ratio (%)	**96.0**	**105.0**	**102.5**	

Remarks

NATA

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

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Dean Stimpson
Form ID: W5ASRep Rev 2

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8500
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

WET DENSITY RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/47746-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	-
Location:	Karawatha	Internal Test Request:	1979/T/25957
Component:	Bulk Earthworks	Client Reference/s:	Docket Number: WR 2819
Area Description:	Stage 2	Report Date / Page:	17/04/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number	1979/S/130064	1979/S/130065			
ID / Client ID	EW-21	EW-22			
Lot Number	-	-			
Date / Time Tested	31/03/2020 09:35	31/03/2020 09:50			
Material Source	On-Site	On-Site			
Material Type	Bulk Fill	Bulk Fill			
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b			
Depths: Test / Nom / Actual (mm)	175 / 200 / 200	175 / 200 / 200			
Standard or Modified	Standard	Standard			
Easting: m	349.73	444.20			
Northing m	321.46	340.80			
RL: m	38.81	36.89			
Allotment:	7	38			
Test Fraction (mm)	< 19.0 mm	< 19.0 mm			
Sample Oversize (%)	0	0			
Compaction Sample Number	1979/S/130064	1979/S/130065			
Sample Description	Clayey SAND, Grey	Clayey SAND, Brown			
Moisture Test Results:					
Field Moisture Content (%)	15.2	18.6			
Adjusted / Moisture Variation (%)	0.0	0.5			
Optimum Moisture Content (%)	15.0	19.0			
Moisture Variation from OMC	(at OMC)	(Drier than OMC)			
Moisture Ratio (%)	**100.0**	**98.0**			
Density Test Results:					
Field Wet Density (t/m³)	2.17	2.06			
Adj/Peak Conv Wet Density (t/m³)	2.17	2.08			
Density Ratio Required (%)	95	95			
Hilf Density Ratio (%)	**100.0**	**99.5**			

Remarks

NATA

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

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Dean Stimpson
Form ID: W5ASRep Rev 2

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8500
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

WET DENSITY RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/47825-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	-
Location:	Karawatha	Internal Test Request:	1979/T/26012
Component:	Bulk Earthworks	Client Reference/s:	Docket Number: WR 2821
Area Description:	Stage 1	Report Date / Page:	22/04/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number		1979/S/130381			
ID / Client ID		EW-23			
Lot Number		-			
Date / Time Tested		3/04/2020 10:00			
Material Source		On-Site			
Material Type		Bulk Fill			
Sampling Method		AS1289.1.2.1 Cl 6.4b			
Depths: Test / Nom / Actual (mm)		175 / 200 / 200			
Standard or Modified		Standard			
Easting:	m	263.21			
Northing	m	577.31			
RL:	m	38.96			
Allotment:		64			
Test Fraction (mm)		< 19.0 mm			
Sample Oversize (%)		17			
Compaction Sample Number		1979/S/130381			
Sample Description		Clay - Brown			
Moisture Test Results:					
Field Moisture Content (%)		16.0			
Adjusted / Moisture Variation (%)		2.0			
Optimum Moisture Content (%)		18.5			
Moisture Variation from OMC		(Drier than OMC)			
Moisture Ratio (%)		**87.5**			
Density Test Results:					
Field Wet Density (t/m³)		2.00			
Adj/Peak Conv Wet Density (t/m³)		2.07			
Density Ratio Required (%)		95			
Hilf Density Ratio (%)		**96.0**			

Remarks

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

NATA

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Dean Stimpson
Form ID: W5ASRep Rev 2

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8500
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

WET DENSITY RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/47821-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	-
Location:	Karawatha	Internal Test Request:	1979/T/26034
Component:	Bulk Earthworks	Client Reference/s:	Docket Number: WR 2822
Area Description:	Stage 1	Report Date / Page:	22/04/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number		1979/S/130579			
ID / Client ID		EW-24			
Lot Number		-			
Date / Time Tested		6/04/2020 11:40			
Material Source		On-Site			
Material Type		Bulk Fill			
Sampling Method		AS1289.1.2.1 Cl 6.4b			
Depths: Test / Nom / Actual (mm)		175 / 200 / 200			
Standard or Modified		Standard			
Easting:	m	242.44			
Northing	m	571.57			
RL:	m	39.54			
Allotment:		65			
Test Fraction (mm)		< 19.0 mm			
Sample Oversize (%)		0			
Compaction Sample Number		1979/S/130579			
Sample Description		Silty Clay Brown			
Moisture Test Results:					
Field Moisture Content (%)		15.2			
Adjusted / Moisture Variation (%)		2.0			
Optimum Moisture Content (%)		17.5			
Moisture Variation from OMC		(Drier than OMC)			
Moisture Ratio (%)		**87.5**			
Density Test Results:					
Field Wet Density (t/m³)		1.93			
Adj/Peak Conv Wet Density (t/m³)		1.99			
Density Ratio Required (%)		95			
Hilf Density Ratio (%)		**97.0**			

Remarks

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

NATA

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Dean Stimpson
Form ID: W5ASRep Rev 2

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8500
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

WET DENSITY RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/47828-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	-
Location:	Karawatha	Internal Test Request:	1979/T/26068
Component:	Bulk Earthworks	Client Reference/s:	Docket Number: WR 2824
Area Description:	Stage 1	Report Date / Page:	22/04/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number	1979/S/130761	1979/S/130762			
ID / Client ID	EW-25	EW-26			
Lot Number	-	-			
Date / Time Tested	8/04/2020 10:52	8/04/2020 11:02			
Material Source	On-Site	On-Site			
Material Type	Bulk Fill	Bulk Fill			
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b			
Depths: Test / Nom / Actual (mm)	175 / 200 / 200	175 / 200 / 200			
Standard or Modified	Standard	Standard			
Easting: m	260.75	256.74			
Northing m	566.01	531.30			
RL: m	39.53	39.68			
Allotment:	66	67			
Test Fraction (mm)	< 19.0 mm	< 19.0 mm			
Sample Oversize (%)	0	0			
Compaction Sample Number	1979/S/130761	1979/S/130762			
Sample Description	Clay - Brown	Clay - Brown			
Moisture Test Results:					
Field Moisture Content (%)	20.1	20.8			
Adjusted / Moisture Variation (%)	0.0	0.0			
Optimum Moisture Content (%)	20.0	21.0			
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)			
Moisture Ratio (%)	**99.5**	**99.0**			
Density Test Results:					
Field Wet Density (t/m³)	2.04	2.02			
Adj/Peak Conv Wet Density (t/m³)	2.06	2.08			
Density Ratio Required (%)	95	95			
Hilf Density Ratio (%)	**99.0**	**97.0**			

Remarks

NATA

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

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Dean Stimpson
Form ID: W5ASRep Rev 2

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8500
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

WET DENSITY RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/48143-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	-
Location:	Karawatha	Internal Test Request:	1979/T/26118
Component:	Bulk Earthworks	Client Reference/s:	Docket Number: WR 2825
Area Description:	Stage 1	Report Date / Page:	6/05/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number		1979/S/131033	1979/S/131034	1979/S/131035	
ID / Client ID		EW-27	EW-28	EW-29	
Lot Number		-	-	-	
Date / Time Tested		14/04/2020 10:02	14/04/2020 10:15	14/04/2020 10:45	
Material Source		On-Site	On-Site	On-Site	
Material Type		Bulk Fill	Bulk Fill	Bulk Fill	
Sampling Method		AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	
Depths: Test / Nom / Actual (mm)		175 / 200 / 200	175 / 200 / 200	175 / 200 / 200	
Standard or Modified		Standard	Standard	Standard	
Easting:	m	246.22	259.42	509148	
Northing	m	511.15	525.50	6944582	
RL:	m	40.05	40.58	F/L	
Allotment:		69	70	Culvert 1	
Test Fraction (mm)		< 19.0 mm	< 19.0 mm	< 19.0 mm	
Sample Oversize (%)		0	0	0	
Compaction Sample Number		1979/S/131033	1979/S/131034	1979/S/131035	
Sample Description		Silty Clay Brown	Silty Clay Brown	Silty Clay Brown	
Moisture Test Results:					
Field Moisture Content (%)		18.5	13.1	12.4	
Adjusted / Moisture Variation (%)		0.0	0.0	0.0	
Optimum Moisture Content (%)		18.5	13.0	12.5	
Moisture Variation from OMC		(Drier than OMC)	(Drier than OMC)	(at OMC)	
Moisture Ratio (%)		**99.0**	**99.0**	**100.0**	
Density Test Results:					
Field Wet Density (t/m³)		2.06	2.00	1.96	
Adj/Peak Conv Wet Density (t/m³)		2.00	2.03	2.01	
Density Ratio Required (%)		95	95	95	
Hilf Density Ratio (%)		**102.5**	**99.0**	**97.5**	

Remarks

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

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Dean Stimpson
Form ID: W5ASRep Rev 2

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8500
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

WET DENSITY RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/48390-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	30
Location:	Karawatha	Internal Test Request:	1979/T/26207
Component:	Earthworks	Client Reference/s:	Docket Number: WR 2831
Area Description:	Stage 2	Report Date / Page:	15/05/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number		1979/S/131717			
ID / Client ID		EW-30			
Lot Number		30			
Date / Time Tested		21/04/2020 09:35			
Material Source		On-Site			
Material Type		Bulk Fill			
Sampling Method		AS1289.1.2.1 Cl 6.4b			
Depths: Test / Nom / Actual (mm)		175 / 200 / 200			
Standard or Modified		Standard			
Easting:	m	509231			
Northing	m	6944568			
RL:	m	35.0			
Allotment:		30			
Test Fraction (mm)		< 19.0 mm			
Sample Oversize (%)		0			
Compaction Sample Number		1979/S/131717			
Sample Description		Sandy Clay			
Moisture Test Results:					
Field Moisture Content (%)		15.2			
Adjusted / Moisture Variation (%)		2.0			
Optimum Moisture Content (%)		17.5			
Moisture Variation from OMC		(Drier than OMC)			
Moisture Ratio (%)		**88.0**			
Density Test Results:					
Field Wet Density (t/m³)		1.94			
Adj/Peak Conv Wet Density (t/m³)		1.93			
Density Ratio Required (%)		95			
Hilf Density Ratio (%)		**101.0**			

Remarks

NATA

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

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Dean Stimpson
Form ID: W5ASRep Rev 2

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8525
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

DRY DENSITY RATIO / MOISTURE RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/49392-2
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	-
Location:	Karawatha	Internal Test Request:	1979/T/26973
Component:	Compaction Testing	Client Reference/s:	Docket Number: WR 3115
Area Description:	Culvert 1	Report Date / Page:	10/08/2020 Page 1 of 1

Test Procedures:	AS1289.5.4.1, AS1289.5.1.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number		1979/S/135638	1979/S/135639		
ID / Client ID		EW-31	EW-32		
Lot Number		-	-		
Date / Time Tested		9/06/2020 11:07	9/06/2020 11:15		
Material Source		On-Site	On-Site		
Material Type		Trench Fill	Trench Fill		
Sampling Method		AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b		
Depths: Test / Nom / Actual (mm)		275 / 300 / 300	275 / 300 / 300		
Standard or Modified		Standard	Standard		
Stabilised Material Curing Time		-	-		
Easting:	m	287.80	280.25		
Northing	m	383.80	378.33		
RL:	m	35.42	34.72		
Allotment:		Culvert 1	Culvert 1		
Test Fraction (mm)		< 19.0 mm	< 19.0 mm		
Sample Oversize Wet (%)		0	0		
Sample Oversize Dry (%)		0	0		
MDR Sample Number		1979/S/135638	1979/S/135639		
MDR Sample Date / Update		9/06/2020	9/06/2020		
Assigned MDR (Yes / No)		No	No		
Moisture Test Results:					
Field Moisture Content (%)		16.7	17.5		
Optimum Moisture Content (%)		18.0	18.0		
Variation from OMC (%)		1.0% Drier than OMC	0.5% Drier than OMC		
Moisture Ratio (%)		**93.5**	**98.0**		
Density Test Results:					
Field Dry Density (t/m³)		1.65	1.66		
Maximum Dry Density (t/m³)		1.72	1.66		
Dry Density Ratio Required (%)		95	95		
Dry Density Ratio (%)		**96.0**	**100.0**		

Remarks	Re-Issued Report Replaces Report No 1979/R/49392-1 (reason: Material Type incorrectly Labelled).

NATA

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

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Wayne Gorman
Form ID: W27ASRep Rev 1

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8525
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

WET DENSITY RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/49728-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	-
Location:	Karawatha	Internal Test Request:	1979/T/27126
Component:	Bulk Earthworks	Client Reference/s:	Docket Number: WR 3122
Area Description:	Stage 2	Report Date / Page:	8/07/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number		1979/S/136543	1979/S/136544		
ID / Client ID		EW-33	EW-34		
Lot Number		-	-		
Date / Time Tested		24/06/2020 08:15	24/06/2020 08:28		
Material Source		On-Site	On-Site		
Material Type		Bulk Fill	Bulk Fill		
Sampling Method		AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b		
Depths: Test / Nom / Actual (mm)		275 / 300 / 300	275 / 300 / 300		
Standard or Modified		Standard	Standard		
Easting:	m	389.89	383.23		
Northing	m	370.58	380.55		
RL:	m	34.62	34.71		
Allotment:		33	34		
Test Fraction (mm)		< 19.0 mm	< 19.0 mm		
Sample Oversize (%)		0	0		
Compaction Sample Number		1979/S/136543	1979/S/136544		
Sample Description		clay sand brown	clay sand brown		
Moisture Test Results:					
Field Moisture Content (%)		16.4	16.1		
Adjusted / Moisture Variation (%)		2.5	0.0		
Optimum Moisture Content (%)		18.5	16.0		
Moisture Variation from OMC		(Drier than OMC)	(Wetter than OMC)		
Moisture Ratio (%)		**87.5**	**101.5**		
Density Test Results:					
Field Wet Density (t/m³)		1.94	1.97		
Adj/Peak Conv Wet Density (t/m³)		2.03	2.03		
Density Ratio Required (%)		95	95		
Hilf Density Ratio (%)		**95.5**	**97.0**		

Remarks

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

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Brendan Wild
Form ID: W5ASRep Rev 2

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8525
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

DRY DENSITY RATIO / MOISTURE RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/49736-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	
Location:	Karawatha	Internal Test Request:	1979/T/27153
Component:	Bulk Earthworks	Client Reference/s:	Docket Number: WR 3125
Area Description:	Stage 2	Report Date / Page:	8/07/2020 Page 1 of 1

Test Procedures:	AS1289.5.4.1, AS1289.5.1.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number	1979/S/136653	1979/S/136654	1979/S/136655	
ID / Client ID	EW-35	EW-36	EW-37	
Lot Number	-	-	-	
Date / Time Tested	25/06/2020 12:10	25/06/2020 12:22	25/06/2020 12:30	
Material Source	On-Site	On-Site	On-Site	
Material Type	Bulk Fill	Bulk Fill	Bulk Fill	
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	
Depths: Test / Nom / Actual (mm)	275 / 300 / 300	275 / 300 / 300	275 / 300 / 300	
Standard or Modified	Standard	Standard	Standard	
Stabilised Material Curing Time	-	-	-	
Easting: m	399.05	386.21	392.72	
Northing m	372.21	379.88	368.15	
RL: m	35.94	36.52	36.29	
Allotment:	35	35	34	
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	
Sample Oversize Wet (%)	0	0	0	
Sample Oversize Dry (%)	0	0	0	
MDR Sample Number	1979/S/136653	1979/S/136654	1979/S/136655	
MDR Sample Date / Update	25/06/2020	25/06/2020	25/06/2020	
Assigned MDR (Yes / No)	No	No	No	
Moisture Test Results:				
Field Moisture Content (%)	16.1	13.4	13.2	
Optimum Moisture Content (%)	18.0	17.0	17.0	
Variation from OMC (%)	2.0% Drier than OMC	3.5% Drier than OMC	4.0% Drier than OMC	
Moisture Ratio (%)	**89.5**	**79.0**	**77.0**	
Density Test Results:				
Field Dry Density (t/m³)	1.79	1.79	1.84	
Maximum Dry Density (t/m³)	1.78	1.75	1.77	
Dry Density Ratio Required (%)	95	95	95	
Dry Density Ratio (%)	**100.5**	**102.5**	**103.5**	

Remarks

NATA

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

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Brendan Wild
Form ID: W27ASRep Rev 1

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8525
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

DRY DENSITY RATIO / MOISTURE RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/54346-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	
Location:	Karawatha	Internal Test Request:	1979/T/27194
Component:	Compaction Testing	Client Reference/s:	26/06
Area Description:	Subgrade	Report Date / Page:	15/01/2021 Page 1 of 1

Test Procedures:	AS1289.5.4.1, AS1289.5.1.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number		1979/S/136935			
ID / Client ID		EW-38			
Lot Number		-			
Date / Time Tested		26/06/2020 14:29			
Material Source		On-Site			
Material Type		Bulk Fill			
Sampling Method		AS1289.1.2.1 Cl 6.4b			
Depths: Test / Nom / Actual (mm)		275 / 300 / 300			
Standard or Modified		Standard			
Stabilised Material Curing Time		-			
Easting:	m	251.08			
Northing	m	458.84			
RL:	m	38.28			
Allotment:		74			
Test Fraction (mm)		< 19.0 mm			
Sample Oversize Wet (%)		0			
Sample Oversize Dry (%)		0			
MDR Sample Number		1979/S/136935			
MDR Sample Date / Update		26/06/2020			
Assigned MDR (Yes / No)		No			
Moisture Test Results:					
Field Moisture Content (%)		18.1			
Optimum Moisture Content (%)		20.0			
Variation from OMC (%)		2.0% Drier than OMC			
Moisture Ratio (%)		**89.5**			
Density Test Results:					
Field Dry Density (t/m³)		1.66			
Maximum Dry Density (t/m³)		1.64			
Dry Density Ratio Required (%)		100			
Dry Density Ratio (%)		**101.0**			

Remarks

Accredited for compliance with ISO/IEC 17025 – Testing

NATA

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Dean Stimpson
Form ID: W27ASRep Rev 1

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8525
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

DRY DENSITY RATIO / MOISTURE RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/50031-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	
Location:	Karawatha	Internal Test Request:	1979/T/27238
Component:	Bulk Earthworks	Client Reference/s:	Docket Number: WR 3128
Area Description:	Stage 1	Report Date / Page:	17/07/2020 Page 1 of 1

Test Procedures:	AS1289.5.4.1, AS1289.5.1.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number		1979/S/137187	1979/S/137188		
ID / Client ID		EW-39	EW-40		
Lot Number		-	-		
Date / Time Tested		1/07/2020 14:45	1/07/2020 14:55		
Material Source		On-Site	On-Site		
Material Type		Bulk Fill	Bulk Fill		
Sampling Method		AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b		
Depths: Test / Nom / Actual (mm)		275 / 300 / 300	275 / 300 / 300		
Standard or Modified		Standard	Standard		
Stabilised Material Curing Time		-	-		
Easting:	m	251.08	242.98		
Northing	m	458.84	475.48		
RL:	m	38.28	39.64		
Allotment:		73	72		
Test Fraction (mm)		< 19.0 mm	< 19.0 mm		
Sample Oversize Wet (%)		0	0		
Sample Oversize Dry (%)		0	0		
MDR Sample Number		1979/S/137187	1979/S/137188		
MDR Sample Date / Update		1/07/2020	1/07/2020		
Assigned MDR (Yes / No)		No	No		
Moisture Test Results:					
Field Moisture Content (%)		17.6	15.1		
Optimum Moisture Content (%)		20.5	20.0		
Variation from OMC (%)		2.5% Drier than OMC	5.0% Drier than OMC		
Moisture Ratio (%)		**86.5**	**75.0**		
Density Test Results:					
Field Dry Density (t/m³)		1.66	1.75		
Maximum Dry Density (t/m³)		1.65	1.64		
Dry Density Ratio Required (%)		100	100		
Dry Density Ratio (%)		**100.5**	**106.5**		

Remarks

NATA

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

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Brendan Wild
Form ID: W27ASRep Rev 1

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8525
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

WET DENSITY RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/50041-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	Lot 1
Location:	Karawatha	Internal Test Request:	1979/T/27433
Component:	Road 1 Base	Client Reference/s:	Docket Number: WR 3139
Area Description:	Stage 2	Report Date / Page:	20/07/2020 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number		1979/S/138447			
ID / Client ID		EW-41			
Lot Number		Lot 1			
Date / Time Tested		17/07/2020 14:03			
Material Source		On-Site			
Material Type		Bulk Fill			
Sampling Method		AS1289.1.2.1 Cl 6.4b			
Depths: Test / Nom / Actual (mm)		275 / - / 300			
Standard or Modified		Standard			
Easting:	m	509151			
Northing	m	6944512			
RL:	m	FL			
Allotment:		1			
Test Fraction (mm)		< 19.0 mm			
Sample Oversize (%)		0			
Compaction Sample Number		1979/S/138447			
Sample Description		Brown Sandy Clay			
Moisture Test Results:					
Field Moisture Content (%)		23.2			
Adjusted / Moisture Variation (%)		2.0			
Optimum Moisture Content (%)		25.0			
Moisture Variation from OMC		(Drier than OMC)			
Moisture Ratio (%)		**92.0**			
Density Test Results:					
Field Wet Density (t/m³)		1.98			
Adj/Peak Conv Wet Density (t/m³)		1.91			
Density Ratio Required (%)		95			
Hilf Density Ratio (%)		**103.5**			

Remarks

NATA

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

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Wayne Gorman
Form ID: W5ASRep Rev 2

Construction Sciences

Construction Sciences Pty Ltd
ABN: 74 128 806 735

Address:
1 Fox Road,
Acacia Ridge QLD 4110

Laboratory: **Brisbane South Laboratory**
Phone: 07 3320 8525
Fax: 07 3320 8599
Email: Brisbane@constructionsciences.net

WET DENSITY RATIO REPORT

Client:	Shadforths Civil Contractors	Report Number:	1979/R/54343-1
Client Address:	99 Sandalwood Lane, Forest Glen	Project Number:	1979/P/1900
Project:	72 Acacia Road	Lot Number:	20/07
Location:	Karawatha	Internal Test Request:	1979/T/29444
Supplied To:	n/a	Client Reference/s:	
Area Description:		Report Date / Page:	15/01/2021 Page 1 of 1

Test Procedures:	AS1289.5.7.1, AS1289.5.8.1, AS1289.2.1.1

Sample Number	1979/S/149215	1979/S/149216	1979/S/149217	1979/S/149218
ID / Client ID	EW-42	EW-43	EW-44	EW-45
Lot Number	20/07	20/07	20/07	20/07
Date / Time Tested	20/07/2020 08:16	20/07/2020 08:25	20/07/2020 08:36	20/07/2020 08:50
Material Source	On-Site	On-Site	On-Site	On-Site
Material Type	Bulk Fill	Bulk Fill	Bulk Fill	Bulk Fill
Sampling Method	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b	AS1289.1.2.1 Cl 6.4b
Depths: Test / Nom / Actual (mm)	175 / 200 / 200	175 / 200 / 200	175 / 200 / 200	175 / 200 / 200
Standard or Modified	Standard	Standard	Standard	Standard
Location	Lot 40	Lot 44	Lot 31	Lot 39
	S/W Corner	N/W Corner	S/W Corner	S/E Corner
	6m N, 4m E	3m S, 3m E	4m N, 5m E	6m N, 3m W
Level	F/L	F/L	F/L	F/L
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	0	0	0	0
Compaction Sample Number	1979/S/149215	1979/S/149216	1979/S/149217	1979/S/149218
Sample Description	Clay - Brown	Clay - Brown	Clay - Brown	Clay - Brown
Moisture Test Results:				
Field Moisture Content (%)	13.4	16.7	16.2	15.7
Adjusted / Moisture Variation (%)	2.0	2.0	2.0	2.0
Optimum Moisture Content (%)	15.5	19.0	18.5	18.0
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	**85.5**	**88.5**	**88.5**	**88.0**
Density Test Results:				
Field Wet Density (t/m³)	2.10	2.05	2.12	2.00
Adj/Peak Conv Wet Density (t/m³)	2.11	2.07	2.09	2.05
Density Ratio Required (%)	95	95	95	95
Hilf Density Ratio (%)	**99.5**	**99.0**	**101.0**	**97.5**

Remarks

NATA

Accredited for compliance with ISO/IEC 17025 – Testing

Accreditation Number: 1986
Corporate Site Number: 1979

Approved Signatory: Dean Stimpson
Form ID: W5ASRep Rev 2

APPENDIX

B

Lot Certificates

Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 1, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 4, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 27, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 28, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 29, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 30, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 31, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 32, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 33, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 34, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 35, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 36, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 37, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 38, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 39, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 40, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 41, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 42, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 43, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 44, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 45, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 46, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 47, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 48, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 60, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 61, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 62, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 63, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 64, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 65, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 66, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 67, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 68, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 69, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 70, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 71, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 72, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 73, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Ref: 1979/L/1

Project Ref: 1979/P/1900

15/01/2021

Shadforths Civil Contractors
99 Sandalwood Lane
FOREST GLEN QLD 4556

Construction Sciences Pty Ltd
ABN 74 128 806 735

1 Fox Road
Acacia Ridge QLD 4110
Australia

PO Box 253
Acacia Ridge QLD 4110
Australia

Phone: 61 7 3320 8500
www.constructionsciences.net

Dear Sir/Madam,

INSPECTION OF PLACEMENT AND COMPACTION OF ALLOTMENT FILL
LOT 74, 72 ACACIA ROAD, KARAWATHA

This is to confirm that placement and compaction of the allotment fill for the above project and Lot was supervised by Construction Sciences Pty Ltd under Level 1 arrangements as described in AS3798-2007 “Guidelines on earthworks for commercial and residential developments”.

This indicates that the fill was compacted to at least the minimum density ratio in accordance with the specification requirements and it is considered that the fill may be deemed to be “controlled fill” in accordance with AS2870-2011 “Residential Slabs & Footings”.

It may be that non-structural topsoil was placed on the block after completion of the structural fill. This would need to be removed as part of the site preparation for building and driveway construction.

I trust this meets your requirements. Please do not hesitate to contact me if you have any queries.

Yours faithfully

Wayne Gorman
Lab Manager
For Brisbane South
Construction Sciences

Contact

1 Fox Road
Acacia Ridge, QLD 4110

Telephone: (07) 3320 8500
Facsimile: (07) 3320 8599

brisbane@constructionsciences.net
www.constructionsciences.net