

Works Inspection & Testing

STAGE 3D BELIVAH

Prepared for Belivah Pty Ltd

8th October 2025





Document Information

Prepared for	Belivah Pty Ltd
Proposal Name	Stage 3D Belivah
Date	8th October 2025
Version Number	01

Contact Information

Construction Sciences	ABN 74 128 806 735
Phone	+61 7 5597 2720
Email	goldcoast@constructionsciences.net
Address	21 Activity Crescent, Molendinar Qld 4214

Andrew Dickie
Laboratory Manager
Effective date: 8/10/2025

Steven Whatley
Laboratory Supervisor
Date approved: 8/10/2025

DOCUMENT HISTORY

Version	Effective Date	Revision	Author	Reviewer	Recipient
01	8/10/2025	00	Andrew Dickie	Steven Whatley	Nev Volker

© Construction Sciences. Copyright in the whole and every part of this document belongs to Construction Sciences and may not be used, sold, transferred, copied or reproduced in whole or in part in any manner or form or in or on any media to any person other than by agreement with Construction Sciences.

This document is produced by Construction Sciences solely for the benefit and use by the client in accordance with the terms of the engagement. Construction Sciences does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by any third party on the content of this document.



Contents

1.	Introduction & Scope of Works.....	1
2.	Specification Requirements.....	2
3.	Site Works – Earthworks.....	3
3.1	General	3
3.2	Compaction Control Testing.....	3
4.	Conclusion	4

Appendices

Appendix A : Site Works Photographs

Appendix B : Earthworks Testing



1. Introduction & Scope of Works

Construction Sciences was commissioned by Belivah Pty Ltd to carry out the geotechnical inspection and testing required for a proposed residential development described as Stage 3D at Belivah Road, Belivah.

Inspection and testing of the earthworks for the development was carried out between March 2024 and September 2025.

Works on this development were monitored in accordance with the scope of our commission as follows:-

Level 1 : Earthworks stripping and filling was inspected and tested on a Level 1 basis, in accordance with AS 3798. This includes:

- (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.*



2. Specification Requirements

Earthworks on this development were inspected and tested in accordance with the specification of the design engineer and / or to the specifications of the local authority Logan City Council.

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

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

SPECIFICATIONS	
<i>Item</i>	<i>Minimum Compaction Requirement</i>
<i>Earthworks Fill</i>	<i>95% Wet Density Ratio – Standard</i>



3. Site Works – Bulk Earthworks

3.1 General

Site inspection was conducted in general accordance with Level 1 requirements whilst earthworks were carried out on this development.

The natural ground in the areas of filling generally comprised medium to high plasticity sandy clays/weathered rock.

The material used in the bulk earthworks filling was either imported and/or sourced from site cutting to design levels. Large rocks and organic material encountered during stripping were removed and discarded.

3.2 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”.

A total of 33 field density tests were carried out throughout the earthworks. The average wet density ratio was recorded to be 100.9%.

It should be noted that allotments with only minor filling or cut with no fill did not require field density testing, however, these works were carried out under Level 1 supervision per AS 3798.

Approximate test locations are marked on attached sketch P11813 SK1 included in Appendix B.

Progressive photographs taken during the bulk earthworks are included in Appendix A.



4. Conclusion

We confirm that:

- (a) Our representative was in attendance whilst earthworks filling was in progress on between March 2024 and September 2025.
- (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.

ANDREW DICKIE
LABORATORY MANAGER
Construction Sciences



Appendix A

Site Works Photographs











Appendix B

Bulk Earthworks

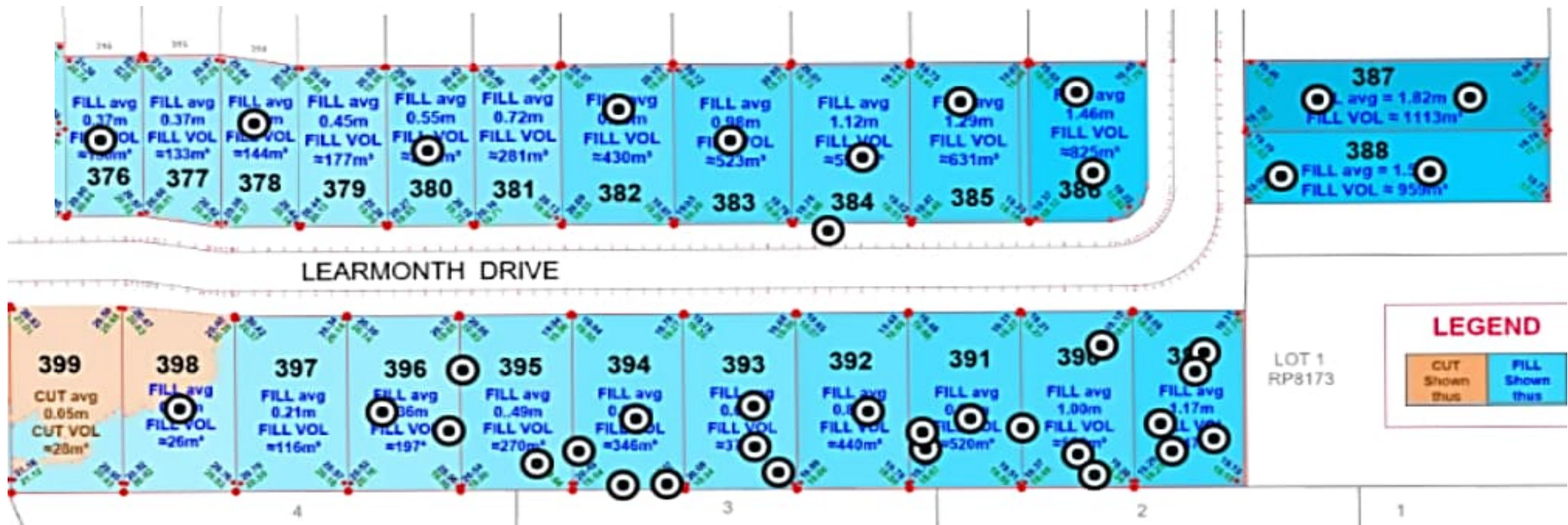
TABLE 1 : SUMMARY OF BULK EARTHWORKS FILL FIELD DENSITY TESTING

CLIENT : BELIVAH PTY LTD
PROJECT : BELIVAH - STAGE 3D

JOB NO: P1813

Mean %: 100.9

SITE TEST No.	GENERAL LOCATION	EASTING	NORTHING	ELEVATION LEVEL / RL	WET DENSITY RATIO (%)	
						FAILED TESTS RETESTED
13385/S/ 288194	Backfill to Retaining Wall	518235	6929780	Layer 1	102.5	
13385/S/ 288195	Backfill to Retaining Wall	518234	6920782	Layer 1	102.0	
13385/S/ 288196	Backfill to Retaining Wall	518227	6929784	Layer 1	97.5	
13385/S/ 288197	Backfill to Retaining Wall	518229	6929784	Layer 1	97.5	
13385/S/ 288198	Backfill to Retaining Wall	518184	6929830	Layer 2	101.0	
13385/S/ 288199	Backfill to Retaining Wall	518180	6929826	Layer 2	97.5	
13385/S/ 288200	Backfill to Retaining Wall	518147	6929785	Layer 2	103.0	
13385/S/ 288201	Backfill to Retaining Wall	518140	6929785	Layer 2	95.0	
13385/S/ 289121	Backfill to Retaining Wall	518235	6929780	Layer 3	101.0	
13385/S/ 289122	Backfill to Retaining Wall	518180	6929826	Layer 3	101.0	
13385/S/ 289123	Backfill to Retaining Wall	518227	6929784	Layer 3	100.0	
13385/S/ 289124	Backfill to Retaining Wall	518140	6929785	Layer 3	101.5	
13385/S/ 297757	Stage 3D earthworks	518213	6929781	Layer 1	99.5	
13385/S/ 297758	Stage 3D earthworks	518189	6929789	Layer 1	102.0	
13385/S/ 297759	Stage 3D earthworks	518165	6929786	Layer 1	103.5	
13385/S/ 297760	Stage 3D earthworks	518114	6929802	Layer 1	102.5	
13385/S/ 302018	Lot 392	518205	6929787	RL 80.8	102.0	
13385/S/ 302019	Lot 389	518234	6929792	RL 80.4	100.5	
13385/S/ 303838	Lot 389 - retaining wall backfill	518236	6929795	RL 18.7	101.5	
13385/S/ 303839	Lot 392 - retaining wall backfill	518189	6929786	RL 19.5	97.0	
13385/S/ 303840	Lot 391 - retaining wall backfill	518058	6929872	RL 21.5	95.5	
13385/S/ 317765	Backfill to Retaining Wall	518118	6929812	Layer 5	97.0	
13385/S/ 317766	Backfill to Retaining Wall	518144	6929799	Layer 5	97.5	
13385/S/ 317767	Backfill to Retaining Wall	518215	6929777	Layer 5	100.0	
13385/S/ 317768	Backfill to Retaining Wall	518162	6929791	Layer 5	100.5	
13385/S/ 331288	Lot 389	518228	6929779	FL	102.0	
13385/S/ 331289	Lot 390	518220	6929799	1.0 < FL	101.5	
13385/S/ 331290	Lot 391	518197	6929790	0.5 < FL	103.5	
13385/S/ 331291	Lot 393	518163	6929798	0.5 < FL	103.5	
13385/S/ 342296	Lot 392	518181	6929794	FL	104.0	
13385/S/ 342297	Lot 394	518134	6929795	FL	102.5	
13385/S/ 342298	Lot 396	518104	6929807	FL	103.0	
13385/S/ 342299	Lot 398	518072	6929813	FL	100.5	



● denotes approximate field test location

WET DENSITY RATIO REPORT

Client:	Belivah Pty Ltd	Report Number:	13385/R/109899-1
Client Address:	PO Box 411, BEENLEIGH	Project Number:	13385/P/1813
Project:	Belivah Road - Stage 3D	Lot Number:	-
Location:	Belivah	Internal Test Request:	13385/T/60666
Component:	Bulk Earthworks	Client Reference/s:	WR:41915
Area Description:	Backfill to Retaining Wall	Report Date / Page:	27/03/2024 Page 1 of 2

Test Procedures:	AS1289.5.7.1, AS1289.1.1, AS1289.5.8.1, AS1289.2.1.1
------------------	--

Sample Number	13385/S/288194	13385/S/288195	13385/S/288196	13385/S/288197
ID / Client ID	WR:41915	WR:41915	WR:41915	WR:41915
Lot Number	-	-	-	-
Date / Time Tested	21/03/2024 13:00	21/03/2024 13:10	21/03/2024 13:20	21/03/2024 13:30
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Bulk Earthworks Fill	Bulk Earthworks Fill	Bulk Earthworks Fill	Bulk Earthworks 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)	275 / 300 / 300	275 / 300 / 300	275 / 300 / 300	275 / 300 / 300
Standard or Modified	Standard	Standard	Standard	Standard
Location	Stage 3D	Stage 3D	Stage 3D	Stage 3D
Easting	518235	518234	518227	518229
Northing	6929780	6929782	6929784	6929784
Level	Layer 1	Layer 1	Layer 1	Layer 1
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	18	18	16	13
Compaction Sample Number	13385/S/288194	13385/S/288195	13385/S/288196	13385/S/288197
Sample Description	Clayey GRAVEL	Clayey GRAVEL	GM, Sandy Gravel, Grey	Silty Sandy Gravel, Brown
Moisture Test Results:				
Field Moisture Content (%)	5.8	5.6	4.8	8.2
Adjusted / Moist. Variation (%)	3.5	3.5	2.5	2.5
Density Test Results:				
Field Wet Density (t/m ³)	2.31	2.29	2.30	2.19
Field Dry Density (t/m ³)	2.18	2.17	2.19	2.03
Adj/Peak Conv Wet Density (t/m ³)	2.25	2.24	2.36	2.25
Density Ratio Required (%)	95	95	95	95
Hilf Density Ratio (%)	102.5	102.0	97.5	97.5

Remarks

 Accredited for compliance with ISO/IEC 17025 – Testing Accreditation Number: 1986 Corporate Site Number: 13385		 Approved Signatory: Matthew Ketchup Form ID: W5ASRep Rev 3
---	--	---

WET DENSITY RATIO REPORT

Client:	Belivah Pty Ltd	Report Number:	13385/R/109899-1
Client Address:	PO Box 411, BEENLEIGH	Project Number:	13385/P/1813
Project:	Belivah Road - Stage 3D	Lot Number:	-
Location:	Belivah	Internal Test Request:	13385/T/60666
Component:	Bulk Earthworks	Client Reference/s:	WR:41915
Area Description:	Backfill to Retaining Wall	Report Date / Page:	27/03/2024 Page 2 of 2

Test Procedures:	AS1289.5.7.1, AS1289.1.1, AS1289.5.8.1, AS1289.2.1.1
------------------	--

Sample Number	13385/S/288198	13385/S/288199	13385/S/288200	13385/S/288201
ID / Client ID	WR:41915	WR:41915	WR:41915	WR:41915
Lot Number	-	-	-	-
Date / Time Tested	21/03/2024 13:40	21/03/2024 13:50	21/03/2024 14:00	21/03/2024 14:10
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Bulk Earthworks Fill	Bulk Earthworks Fill	Bulk Earthworks Fill	Bulk Earthworks 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)	275 / 300 / 300	275 / 300 / 300	275 / 300 / 300	275 / 300 / 300
Standard or Modified	Standard	Standard	Standard	Standard
Location	Stage 3D	Stage 3D	Stage 3D	Stage 3D
Easting	518184	518180	518147	518140
Northing	6929830	6929826	6929785	6929785
Level	Layer 2	Layer 2	Layer 2	Layer 2
Test Fraction (mm)	< 37.5mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	17	15	14	18
Compaction Sample Number	13385/S/288198	13385/S/288199	13385/S/288200	13385/S/288201
Sample Description	Silty Sandy Gravel,Brown	Silty Sandy Gravel,Brown	Clayey GRAVEL	Silty Sandy Gravel,Brown
Moisture Test Results:				
Field Moisture Content (%)	4.6	6.7	5.8	8.6
Adjusted / Moist. Variation (%)	3.0	2.0	3.5	0.5
Density Test Results:				
Field Wet Density (t/m ³)	2.40	2.31	2.32	2.16
Field Dry Density (t/m ³)	2.29	2.16	2.19	1.99
Adj/Peak Conv Wet Density (t/m ³)	2.38	2.37	2.25	2.28
Density Ratio Required (%)	95	95	95	95
Hilf Density Ratio (%)	101.0	97.5	103.0	95.0

Remarks

Accredited for compliance with ISO/IEC 17025 – Testing



Accreditation Number: 1986
Corporate Site Number: 13385



Approved Signatory: Matthew Ketchup
Form ID: W5ASRep Rev 3

WET DENSITY RATIO REPORT

Client:	Belivah Pty Ltd	Report Number:	13385/R/110601-1
Client Address:	PO Box 411, BEENLEIGH	Project Number:	13385/P/1813
Project:	Belivah Road - Stage 3D	Lot Number:	-
Location:	Belivah	Internal Test Request:	13385/T/60899
Component:	Bulk Earthworks	Client Reference/s:	WR:41921
Area Description:	Backfill to Retaining Wall	Report Date / Page:	12/04/2024 Page 1 of 1

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

Sample Number	13385/S/289121	13385/S/289122	13385/S/289123	13385/S/289124
ID / Client ID	WR:41921	WR:41921	WR:41921	WR:41921
Lot Number	-	-	-	-
Date / Time Tested	2/04/2024 13:50	2/04/2024 14:00	2/04/2024 14:10	2/04/2024 14:20
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Bulk Earthworks Fill	Bulk Earthworks Fill	Bulk Earthworks Fill	Bulk Earthworks Fill
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b
Depths: Test / Nom / Actual (mm)	275 / 300 / 300	275 / 300 / 300	275 / 300 / 300	275 / 300 / 300
Standard or Modified	Standard	Standard	Standard	Standard
Location	Stage 3D	Stage 3D	Stage 3D	Stage 3D
Easting	518235	518180	518227	518140
Northing	6929780	6929826	6929784	6929785
Level	Layer 3	Layer 3	Layer 3	Layer 3
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	19	19	19	18
Compaction Sample Number	13385/S/289121	13385/S/289122	13385/S/289123	13385/S/289124
Sample Description	Bulk Earthworks Fill	Bulk Earthworks Fill	Bulk Earthwork Fill I	Bulk Earthwork Fill I
Moisture Test Results:				
Field Moisture Content (%)	9.5	9.2	6.7	6.3
Adjusted / Moist. Variation (%)	2.5	2.5	2.5	2.5
Optimum Moisture Content (%)	12.5	12.0	9.5	9.0
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	77.0	76.5	71.5	70.0
Density Test Results:				
Field Wet Density (t/m³)	2.26	2.24	2.27	2.31
Adj/Peak Conv Wet Density (t/m³)	2.24	2.22	2.26	2.27
Density Ratio Required (%)	95	95	95	95
Hilf Density Ratio (%)	101.0	101.0	100.0	101.5

Remarks

Accredited for compliance with ISO/IEC 17025 – Testing 		Accreditation Number: 1986 Corporate Site Number: 13385	 Approved Signatory: Matthew Ketchup Form ID: W5ASMRRep Rev 2
--	--	--	--

WET DENSITY RATIO REPORT

Client:	Belivah Pty Ltd	Report Number:	13385/R/113712-1
Client Address:	PO Box 411, BEENLEIGH	Project Number:	13385/P/1813
Project:	Belivah Road - Stage 3D	Lot Number:	-
Location:	Belivah	Internal Test Request:	13385/T/62932
Component:	Bulk Eathworks	Client Reference/s:	WR:42548
Area Description:	Stage 3D	Report Date / Page:	17/05/2024 Page 1 of 1

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

Sample Number	13385/S/297757	13385/S/297758	13385/S/297759	13385/S/297760
ID / Client ID	WR:42548	WR:42548	WR:42548	WR:42548
Lot Number	-	-	-	-
Date / Time Tested	13/05/2024 15:10	13/05/2024 15:20	13/05/2024 15:30	13/05/2024 15:40
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Bulk Earthworks Fill	Bulk Earthworks Fill	Bulk Earthworks Fill	Bulk Earthworks Fill
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b
Depths: Test / Nom / Actual (mm)	275 / 300 / 300	275 / 300 / 300	275 / 300 / 300	275 / 300 / 300
Standard or Modified	Standard	Standard	Standard	Standard
Location	Stage 3D	Stage 3D	Stage 3D	Stage 3D
Easting	518213	518189	518153	518114
Northing	6929781	6929789	6929796	6929802
Level	Layer 1	Layer 1	Layer 1	Layer 1
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	18	17	13	18
Compaction Sample Number	13385/S/297757	13385/S/297758	13385/S/297759	13385/S/297760
Sample Description	Clay Gravel Brown	Clay Gravel Brown	Clay Gravel Brown	Clay Gravel Brown
Moisture Test Results:				
Field Moisture Content (%)	10.5	9.6	12.1	10.8
Adjusted / Moist. Variation (%)	2.0	1.5	1.5	2.0
Density Test Results:				
Field Wet Density (t/m ³)	2.25	2.32	2.38	2.31
Adj/Peak Conv Wet Density (t/m ³)	2.26	2.27	2.30	2.26
Density Ratio Required (%)	95	95	95	95
Hilf Density Ratio (%)	99.5	102.0	103.5	102.5

Remarks

Accredited for compliance with ISO/IEC 17025 – Testing		
	Accreditation Number: 1986 Corporate Site Number: 13385	
		Approved Signatory: Matthew Ketchup Form ID: W5ASRep Rev 3

WET DENSITY RATIO REPORT

Client:	Belivah Pty Ltd	Report Number:	13385/R/116091-1
Client Address:	PO Box 411, BEENLEIGH	Project Number:	13385/P/1813
Project:	Belivah Road - Stage 3D	Lot Number:	-
Location:	Belivah	Internal Test Request:	13385/T/63939
Component:	Bulk Earthworks	Client Reference/s:	WR 37522
Area Description:	Stage 3D	Report Date / Page:	10/06/2024

Page 1 of 1

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

Sample Number	13385/S/302018	13385/S/302019		
ID / Client ID	WR 37522	WR 37522		
Lot Number	-	-		
Date / Time Tested	31/05/2024 08:58	31/05/2024 09:17		
Material Source	Onsite	Onsite		
Material Type	Bulk Earthworks Fill	Bulk Earthworks Fill		
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b		
Depths: Test / Nom / Actual (mm)	275 / - / 300	275 / - / 300		
Standard or Modified	Standard	Standard		
Location	Lot 392	Lot 389		
Easting	518205	518234		
Northing	6929787	6929792		
Level	RL. 80.80	RL. 80.37		
Test Fraction (mm)	< 19.0 mm	< 19.0 mm		
Sample Oversize (%)	17	17		
Compaction Sample Number	13385/S/302018	13385/S/302019		
Sample Description	Clayey GRAVEL	Clayey GRAVEL		
Moisture Test Results:				
Field Moisture Content (%)	13.8	12.8		
Adjusted / Moist. Variation (%)	1.5	-0.5		
Density Test Results:				
Field Wet Density (t/m ³)	2.22	2.23		
Adj/Peak Conv Wet Density (t/m ³)	2.17	2.22		
Density Ratio Required (%)	95	95		
Hilf Density Ratio (%)	102.0	100.5		

Remarks

	Accredited for compliance with ISO/IEC 17025 – Testing	
Accreditation Number:	1986	Approved Signatory: Matthew Ketchup
Corporate Site Number:	13385	Form ID: W5ASRep Rev 3

WET DENSITY RATIO REPORT

Client:	Belivah Pty Ltd	Report Number:	13385/R/116419-1
Client Address:	PO Box 411, BEENLEIGH	Project Number:	13385/P/1813
Project:	Belivah Road - Stage 3D	Lot Number:	-
Location:	Belivah	Internal Test Request:	13385/T/64364
Component:	Bulk Earthworks	Client Reference/s:	WR 37535
Area Description:	Retaining Wall Backfill	Report Date / Page:	12/06/2024 Page 1 of 1

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

Sample Number	13385/S/303838	13385/S/303839	13385/S/303840	
ID / Client ID	WR 37535	WR 37535	WR 37535	
Lot Number	-	-	-	
Date / Time Tested	6/06/2024 11:41	6/06/2024 11:48	6/06/2024 11:20	
Material Source	Onsite	Onsite	Onsite	
Material Type	Bulk Earthworks Fill	Bulk Earthworks Fill	Bulk Earthworks Fill	
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	
Depths: Test / Nom / Actual (mm)	275 / 300 / 300	275 / 300 / 300	275 / 300 / 300	
Standard or Modified	Standard	Standard	Standard	
Location	Lot 389	Lot 392	Lot 391	
Easting	518236	518189	518058	
Northing	6929795	6929786	6929872	
Level	18.70	19.50	21.50	
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	
Sample Oversize (%)	18	18	16	
Compaction Sample Number	13385/S/303838	13385/S/303839	13385/S/303840	
Sample Description	Sandy GRAVEL	Sandy GRAVEL	Sandy CLAY	
Moisture Test Results:				
Field Moisture Content (%)	10.6	12.1	15.1	
Adjusted / Moist. Variation (%)	1.5	0.0	2.0	
Density Test Results:				
Field Wet Density (t/m³)	2.29	2.28	1.95	
Adj/Peak Conv Wet Density (t/m³)	2.26	2.35	2.04	
Density Ratio Required (%)	95	95	95	
Hilf Density Ratio (%)	101.5	97.0	95.5	

Remarks

Accredited for compliance with ISO/IEC 17025 – Testing 		 Approved Signatory: Matthew Ketchup Form ID: W5ASRep Rev 3	
Accreditation Number:	1986		
Corporate Site Number:	13385		

WET DENSITY RATIO REPORT

Client:	Belivah Pty Ltd	Report Number:	13385/R/123255-1
Client Address:	PO Box 411, BEENLEIGH	Project Number:	13385/P/1813
Project:	Belivah Road - Stage 3D	Lot Number:	
Location:	Belivah	Internal Test Request:	13385/T/67503
Component:	Earthwork Fill	Client Reference/s:	WR:45714
Area Description:	Backfill to Retaining Wall	Report Date / Page:	14/08/2024 Page 1 of 1

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

Sample Number	13385/S/317765	13385/S/317766	13385/S/317767	13385/S/317768
ID / Client ID	WR:45714	WR:45714	WR:45714	WR:45714
Lot Number	-	-	-	-
Date / Time Tested	29/07/2024 15:00	29/07/2024 15:10	29/07/2024 15:20	29/07/2024 15:30
Material Source	Onsite	Onsite	Onsite	Onsite
Material Type	Bulk Earthworks Fill	Bulk Earthworks Fill	Bulk Earthworks Fill	Bulk Earthworks Fill
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b
Depths: Test / Nom / Actual (mm)	275 / 300 / 300	275 / 300 / 300	275 / 300 / 300	275 / 300 / 300
Standard or Modified	Standard	Standard	Standard	Standard
Location	Stage 3D	Stage 3D	Stage 3D	Stage 3D
Easting	518118	518144	518215	518162
Northing	6929812	6929799	6929777	6929791
Level	Layer 5	Layer 5	Layer 5	Layer 5
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	16	19	18	16
Compaction Sample Number	13385/S/317765	13385/S/317766	13385/S/317767	13385/S/317768
Sample Description	CLAY/GRAVEL,brown	CLAY/GRAVEL,brown	CLAY/GRAVEL,brown	CLAY/GRAVEL,brown
Moisture Test Results:				
Field Moisture Content (%)	12.7	11.3	10.0	10.9
Adjusted / Moist. Variation (%)	3.5	4.0	4.0	4.0
Optimum Moisture Content (%)	16.5	16.0	14.5	15.5
Moisture Variation from OMC	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)	(Drier than OMC)
Moisture Ratio (%)	77.0	71.0	68.5	71.0
Density Test Results:				
Field Wet Density (t/m³)	2.02	2.02	2.22	2.16
Adj/Peak Conv Wet Density (t/m³)	2.09	2.07	2.21	2.15
Density Ratio Required (%)	95	95	95	95
Hilf Density Ratio (%)	97.0	97.5	100.0	100.5

Remarks

 Accredited for compliance with ISO/IEC 17025 – Testing Accreditation Number: 1986 Corporate Site Number: 13385		 Approved Signatory: Matt Reece Form ID: W5ASMRRep Rev 2
---	--	---

WET DENSITY RATIO REPORT

Client:	Belivah Pty Ltd	Report Number:	13385/R/127431-1
Client Address:	PO Box 411, BEENLEIGH	Project Number:	13385/P/1813
Project:	Belivah Road - Stage 3D	Lot Number:	
Location:	Belivah	Internal Test Request:	13385/T/70583
Component:	Bulk Earthworks	Client Reference/s:	WR 46187
Area Description:	Stage 3D	Report Date / Page:	24/09/2024 Page 1 of 1

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

Sample Number	13385/S/331288	13385/S/331289	13385/S/331290	13385/S/331291
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	18/09/2024 14:20	18/09/2024 14:30	18/09/2024 14:40	18/09/2024 14:50
Material Source	Site Won - Cut to Fill	Site Won - Cut to Fill	Site Won - Cut to Fill	Site Won - Cut to Fill
Material Type	Bulk Earthworks Fill	Bulk Earthworks Fill	Bulk Earthworks Fill	Bulk Earthworks Fill
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b
Depths: Test / Nom / Actual (mm)	175 / 200 / 200	175 / 200 / 200	175 / 200 / 200	175 / 200 / 20
Standard or Modified	Standard	Standard	Standard	Standard
Location	Lot 389	Lot 390	Lot 391	Lot 393
Easting	518228	518220	518197	518163
Northing	6929779	6929799	6929790	6929798
Level	FL	1.0m below FL	0.5m below FL	0.5m below FL
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	7	8	7	5
Compaction Sample Number	13385/S/331288	13385/S/331289	13385/S/331290	13385/S/331291
Sample Description	Clayey Gravel	GRAVEL	Clayey Gravel red	Clayey Gravel red
Moisture Test Results:				
Field Moisture Content (%)	5.1	6.6	12.3	9.3
Adjusted / Moist. Variation (%)	4.5	3.5	5.0	4.0
Density Test Results:				
Field Wet Density (t/m³)	2.27	2.25	2.04	2.10
Adj/Peak Conv Wet Density (t/m³)	2.22	2.22	1.97	2.03
Density Ratio Required (%)	95	95	95	95
Hilf Density Ratio (%)	102.0	101.5	103.5	103.5

Remarks

Accredited for compliance with ISO/IEC 17025 – Testing


 Accreditation Number: 1986
Corporate Site Number: 13385



 Approved Signatory: Matthew Lorenzen
Form ID: W5ASRep Rev 3

WET DENSITY RATIO REPORT

Client:	Belivah Pty Ltd	Report Number:	13385/R/132620-1
Client Address:	PO Box 411, BEENLEIGH	Project Number:	13385/P/1813
Project:	Belivah Road - Stage 3D	Lot Number:	
Location:	Belivah	Internal Test Request:	13385/T/73129
Component:	Bulk Earthworks	Client Reference/s:	WR 48085
Area Description:	Stage 3D	Report Date / Page:	11/11/2024 Page 1 of 1

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

Sample Number	13385/S/342296	13385/S/342297	13385/S/342298	13385/S/342299
ID / Client ID	-	-	-	-
Lot Number	-	-	-	-
Date / Time Tested	31/10/2024 09:20	31/10/2024 09:30	31/10/2024 09:40	31/10/2024 09:50
Material Source	Site Won	Site Won	Site Won	Site Won
Material Type	Bulk Earthworks Fill	Bulk Earthworks Fill	Bulk Earthworks Fill	Bulk Earthworks Fill
Sampling Method	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 6.4b	AS1289.1.2.1 CI 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 392	Lot 394	Lot 396	Lot 398
Easting	518181	518134	518104	518072
Northing	6929794	6929795	6929807	6929813
Level	FL	FL	FL	FL
Test Fraction (mm)	< 19.0 mm	< 19.0 mm	< 19.0 mm	< 19.0 mm
Sample Oversize (%)	1	5	0	15
Compaction Sample Number	13385/S/342296	13385/S/342297	13385/S/342298	13385/S/342299
Sample Description	clay gravel brown	Clayey Gravel	Clayey Gravel	Clayey Gravel
Moisture Test Results:				
Field Moisture Content (%)	13.2	12.1	12.7	11.2
Adjusted / Moist. Variation (%)	5.0	4.0	4.5	4.0
Density Test Results:				
Field Wet Density (t/m ³)	2.10	2.09	2.20	2.18
Adj/Peak Conv Wet Density (t/m ³)	2.02	2.04	2.13	2.17
Density Ratio Required (%)	95	95	95	95
Hilf Density Ratio (%)	104.0	102.5	103.0	100.5

Remarks

Accredited for compliance with ISO/IEC 17025 – Testing		
	Accreditation Number: 1986 Corporate Site Number: 13385	
		Approved Signatory: Matthew Lorenzen Form ID: W5ASRep Rev 3

Located across Australia and New Zealand

QLD

Airlie
Beenleigh
Bowen
Brisbane (Albion)
Brisbane (Brendale)
Brisbane (Kingston)
Cairns
Childers
Emerald
Gladstone
Gold Coast
Mackay
Moranbah
Petrie
Rockhampton
Sunshine Coast
Toowoomba
Townsville

NSW

Ballina
Coffs Harbour
Dubbo
Marulan (Lynwood)
Newcastle
Port Macquarie
Sydney (Glendenning)
Wollongong

VIC

Ararat
Bendigo
Echuca
Melbourne (Chadstone)
Melbourne (Oaklands Junction)
Melbourne (Sunshine West)
Traralgon

WA

Bunbury
Gosnells
Newman
Perth
Port Hedland

SA

Adelaide

NT

Darwin
Katherine

ACT

Canberra

TAS

Hobart

NZ

Wellington

