

Level One Compliance Report

BULK EARTHWORKS FILLING OPERATIONS Rosehaven - Stage 4

January 27, 2023

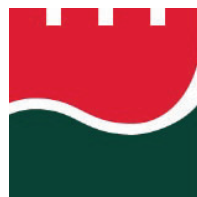
Prepared By

MORRISON GEOTECHNIC PTY LTD

Prepared for:

Shadforth Civil Pty Ltd

Document Reference: PTP/09505



MORRISON
GEOTECHNIC

Ormeau Office
Job No: PTP/09505
Ref No: DL22/097
Author: Tom Taylor

27th January 2023

Shadforth's Civil Pty Ltd
99 Sandalwood Lane
Forest Glen, QLD, 4560

ATTENTION: MR CAMERON MORISON
Email: cameron.morison@shadcivil.com.au

Dear Sir,

**RE: LEVEL ONE COMPLIANCE REPORT FOR
BULK EARTHWORKS FILLING OPERATIONS
ROSEHAVEN STAGE 4
ROSEWOOD**

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1.0 INTRODUCTION

1.1 General

This report presents results of Level One Earthworks Inspections and associated Compaction Compliance testing carried out on Earthworks Fill constructed to form residential and commercial building platforms at the Rosehaven Stage 4 (The Site).

The work was commissioned by Mr Cameron Morison representing Shadforths Civil (The Client), using Purchase Order 553454. Earthworks were carried out by Shadforth's Civil.

Earthworks filling operations were carried out intermittently between 24th June 2022 to 22nd November 2022.

The extent of fill covered by this report is presented as a marked-up Site Pan contained in Appendix A

Picture 1: Aerial View of the Site (Image Source: Nearmap.com- dated 15th October 2022)



1.2 Previous Earthworks

As far as could be reasonably determined on site, no previous earthworks have taken place.

1.3 The Project

The Purpose for filling at The Site is to construct a Residential Subdivision which included new pavements, residential & commercial building platforms and associated underground services.

ACOR Consultants, Project No. BR-180079.4, Drawing No. C2.00-D Cut Fill plan dated 2nd September 2019 indicates the extents and thickness of fill to be constructed at The Site.

The actual thickness of fill on an individual Lot can be obtained from the Developer as a Lot Disclosure Plan.

The Site is located within the Rosehaven residential development.

2.0 THE BRIEF

The Brief from the Client was limited to:

- Level One Inspection and Testing of the placement and compaction of fill materials in accordance with AS3798 2007 – “Guidelines on Earthworks for Commercial and Residential Developments”,
- Ipswich City Council Project Specifications.
- Relative Density Control Testing in accordance with AS1289 – Testing of Soils for Engineering Purposes and at frequencies required in AS3798 Table 8.1.

All other design requirements such as CBR and Quality of Materials, site classification, material, settlement assessments and existing filling were not included in the Brief and are therefore excluded from this Report.

3.0 METHODOLOGY

Earthworks Inspections and Testing was carried out on the stripped and exposed ground surfaces and during the placement and compaction of fill materials.

Field and laboratory testing included a walk over assessments of the existing ground conditions, observation of filling and compaction activities and compaction testing.

3.1 Stripped Surface Assessment

The areas to be filled at The Site were observed to be stripped and cleared of all visible organic matter, deleterious, loose and unsuitable materials to depths exposing competent natural ground.

The materials forming the natural foundation exposed after the stripping and clearing can be summarised as:

- Silty Clay (Cl - CH) – at least stiff, medium to high plasticity, dark brown and moist.

Following the stripped surface assessment of the fill areas, the natural foundation was approved for filling using the following process:

- Walk over assessments confirming that the competent ground was exposed.
- Proof roll testing using pad foot roller confirming no discernible movement of the fill foundation.

On this basis, the compliant assessments in accordance with above indicate that the exposed ground forming the fill foundation is capable of supporting new fill materials.

Picture 2: View of Earthworks Operations



3.2 Filling Operations

Fill material was sourced from onsite cuts, service spoil and onsite stockpiles.

Fill materials can be broadly summarised as:

- Silty Clay (CI - CH) – medium to high plasticity, dark brown, grey brown and moist.

Placement and compaction of the fill materials was carried out using the following plant:

- Padfoot Roller
- Excavator
- Water Truck
- Grader
- Body Trucks

The fill materials were moisture conditioned at the source and during placement to moisture contents suitable for compaction. Deleterious materials such as organics, sticks, roots and over size particles were sorted and removed during placement or were rejected for use. Occasional cobble sized particles may remain in the fill however are not considered to affect the fill as a mass.

Placement of the fill materials was carried layers appropriate for the above plant and compacted using the above plant carrying out multiple passes.

Our representative observed the filling process as described above and it was assessed to be consistent for the entire thickness of fill.

Compaction Testing was carried out on the compacted fill materials in accordance with Table 5.1 and 8.1 of AS3798 2007 (Guidelines on Earthworks for Commercial and Residential Developments) for

Type 1 Earthworks and tested to AS1289 test methods (Testing of Soils for Engineering Purposes). Testing achieved the required specification of 95% of the Hilt Density.

Fill placed and compacted at measured density ratios less than 95% were tined, moisture conditioned and re-compacted until the required specification was achieved. Retesting was carried out using Random Stratified Location methods.

The Location of the field density tests are shown on the Site Plan contained in Appendix A. These test locations and levels were not obtained by survey and therefore should only be considered as approximate.

Picture 3: View of Filling Operations



4.0 STATEMENT OF COMPLIANCE

Our representative observed all the relevant earthworks operations including the stripped surfaces, filling operations and carried out field density tests in accordance with the required standards (AS 3798 and AS 1289) and specifications.

It is confirmed that Level 1 Inspection has been carried out on the bulk earthworks fill used to form the residential lots and embankments below subgrade for this project. Based on observations made by our Geotechnicians and the results of the field and laboratory tests, the placed and compacted fill at the project has, as far as we have been able to assess, has been constructed in general accordance with the intent of AS3798 and the specifications.

The fill can be deemed to be “controlled” as defined in AS2870 (Residential Slabs and Footings).

The extent of fill covered by this report is presented as a marked-up Site Plan contained in Appendix A

5.0 EXCLUSIONS

This statement does not include any topsoil, which may be placed for use as dressing or any other subsequent earthworks after 8th September 2022.

Assessments of material quality such as soaked CBR and site classifications are excluded from this commission.

Our on-site attendance specifically excludes assessments of fill material quality and engineering properties that are outside the requirements of AS3798 - 2007, including soil or fill reactivity and soaked CBR values. We note that the fill materials used may result in unfavourable site classifications and low subgrade design strengths.

Footings and ground slabs for any structures constructed over natural soils or controlled fill should be designed to accommodate the characteristic ground surface movements and settlement potential. Assessments of these design parameters are beyond the scope of this Report.

This report is not to be relied upon for settlement analysis and soft soils engineering advice. This is beyond the scope of this report and outside our engagement.

6.0 LIMITATIONS

This Report has been prepared by Morrison Geotechnic Pty Ltd (**Morrison Geotechnic**), and may include contributions from Morrison Geotechnic's officers and employees, sub-contractors, sub-consultants or agents (**Contributors**).

This Report is for the sole benefit and use of Shadforth's Civil Pty Ltd (**Client**), its designers, clients and relevant statutory authorities for the sole purpose of providing geotechnical advice and recommendations in respect of the Rosehaven Stage 4 (**Project**). The Report is only intended to address those issues expressly described in the Brief/ Work Instructions in this Report.

This Report should not be used or relied upon for any other purpose without Morrison Geotechnic's prior written consent. Morrison Geotechnic and the Contributors do not accept any responsibility or liability in any way whatsoever for the use or reliance of this Report by anyone other than the **Client**, its designers, its clients and relevant statutory authorities or by anyone else for any purpose other than that for which it has been prepared.

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- (b) used or relied upon by any other party.

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- (a) have relied upon and presumed the accuracy of this information;
- (b) have not verified the accuracy or reliability of this information (other than as expressly stated in this Report);
- (c) have not made any independent investigations or enquiries in respect of those matters of which it has no actual knowledge at the time of giving this Report to the Client; and
- (d) make no warranty or guarantee, expressed or implied, as to the accuracy or reliability of this information.

Morrison Geotechnic and the Contributors do not accept responsibility or liability for any incorrect assumptions related to this Report. For the avoidance of doubt, this Report:

- (a) is not an environmental, contamination or hazardous materials assessment; may be invalid, incomplete or inaccurate (including errors in the scope of work, investigation methodology, observations, opinions and advice) where the information provided to Morrison Geotechnic was invalid, incomplete or inaccurate;
- (b) is limited to observations of those parts of the site described in Section 1.0.

No warranty or guarantee, whether express or implied, is made in respect of the geotechnical data, information, advice, opinions and recommendations present in this Report.

If further information becomes available, or additional assumptions need to be made, Morrison Geotechnic reserves its right to amend this Report.

If you have any queries regarding the above, please contact our Brisbane office.

Yours faithfully,

GARY TAYLOR

For and on behalf of

MORRISON GEOTECHNIC PTY LIMITED

ATTACHMENTS:

Appendix A – Site Plan Showing Approximate Extents of Controlled Filling

Appendix B – Laboratory Test Results Reports

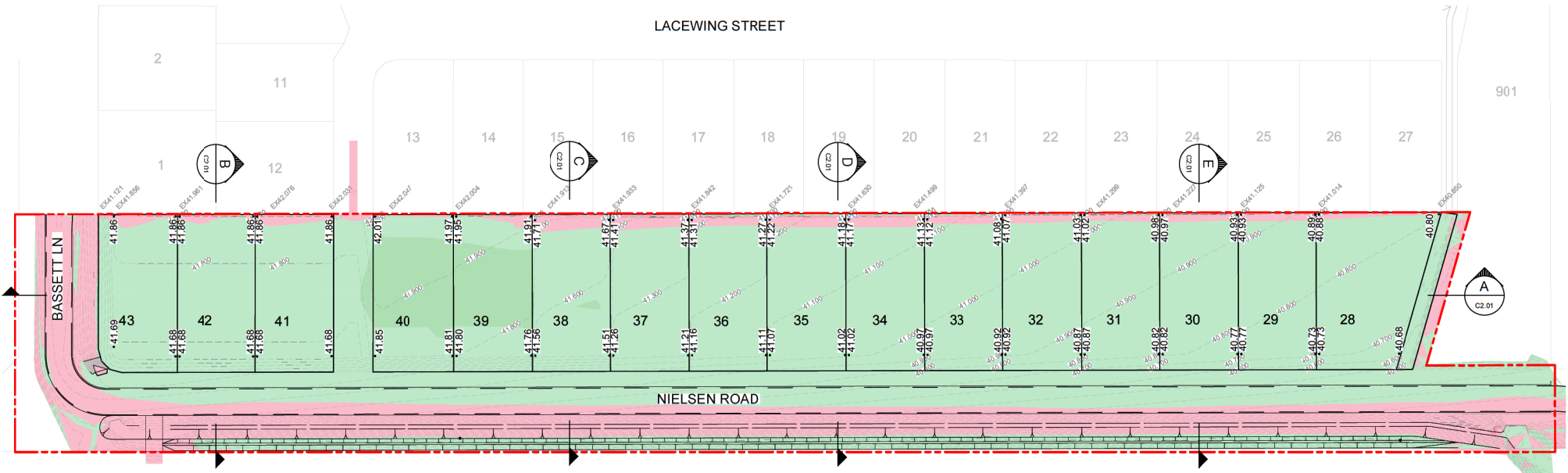


Appendix A

Site Plan & Test Locations

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CUT / FILL LEGEND

2.00	DEPTH OF FILL
1.00	
0.00	
1.00	DEPTH OF CUT
2.00	

VOLUMES

TOTAL CUT	-1279 m ³
TOTAL FILL	8837 m ³
TOTAL IMPORT	7558 m ³

NOTE: EARTHWORKS VOLUMES BASED ON DIFFERENCE BETWEEN EXISTING SURVEY DATA AND EARTHWORKS MODEL. VOLUMES DO NOT ACCOUNT FOR ROAD BOXING OR TOPSOIL QUANTITIES. IMPORT VOLUME SHOWN HAS NOT APPLIED COMPACTION FACTOR TO QUANTITY.

LEGEND

---	PROPOSED STAGE BOUNDARY
- - - - -	DESIGN CONTOURS (0.10m INTERVAL)
• 0.000	PROPOSED FINISHED SURFACE LEVEL

NOTE:

- ALL BATTERS TO BE 1 IN 4 U.N.O
- ALL BATTER STEEPER THAN 1:4 TO BE STABILIZED AS PER GEOTECHNICAL ENGINEERS SPECIFICATIONS
- REFER DRAWING BR180079.4-C2.01 FOR EARTHWORKS NOTES.
- EARTHWORKS LEVELS SUBJECT TO FINAL CHECK OF STORMWATER MAJOR STORM LEVELS WITH REMAINDER OF SUBDIVISION CIVIL ENGINEERING DRAWINGS.

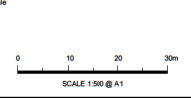
ENGINEER'S CERTIFICATION
 This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by:
 NAME: WILLIE MALHERBE
 REQ No: 8112
 SIGNED: *[Signature]*

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C	ISSUE FOR APPROVAL
C	ISSUE FOR APPROVAL
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A	ISSUE FOR REVIEW
Issue	Description

Date	Drawn	Approved
29/03/19	MC	WM
02/09/19	WH	WM
06/07/19	MC	MB
23/05/19	MC	MB

Client
RESIDIVE QLD PTY LTD
 12/2 QUAMBY PLACE
 NOOSA HEADS 4567 QLD
 PHONE : (07) 5455 5888



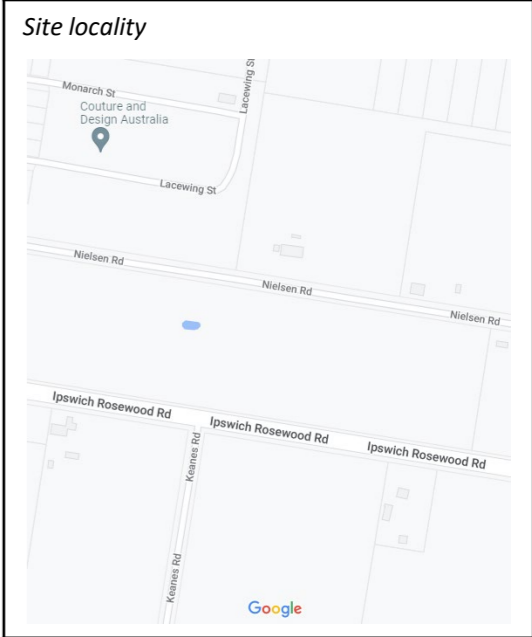
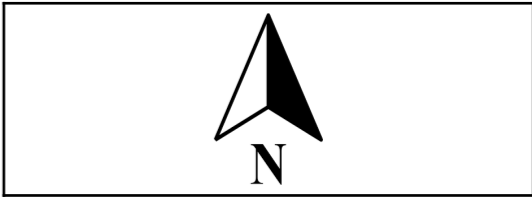
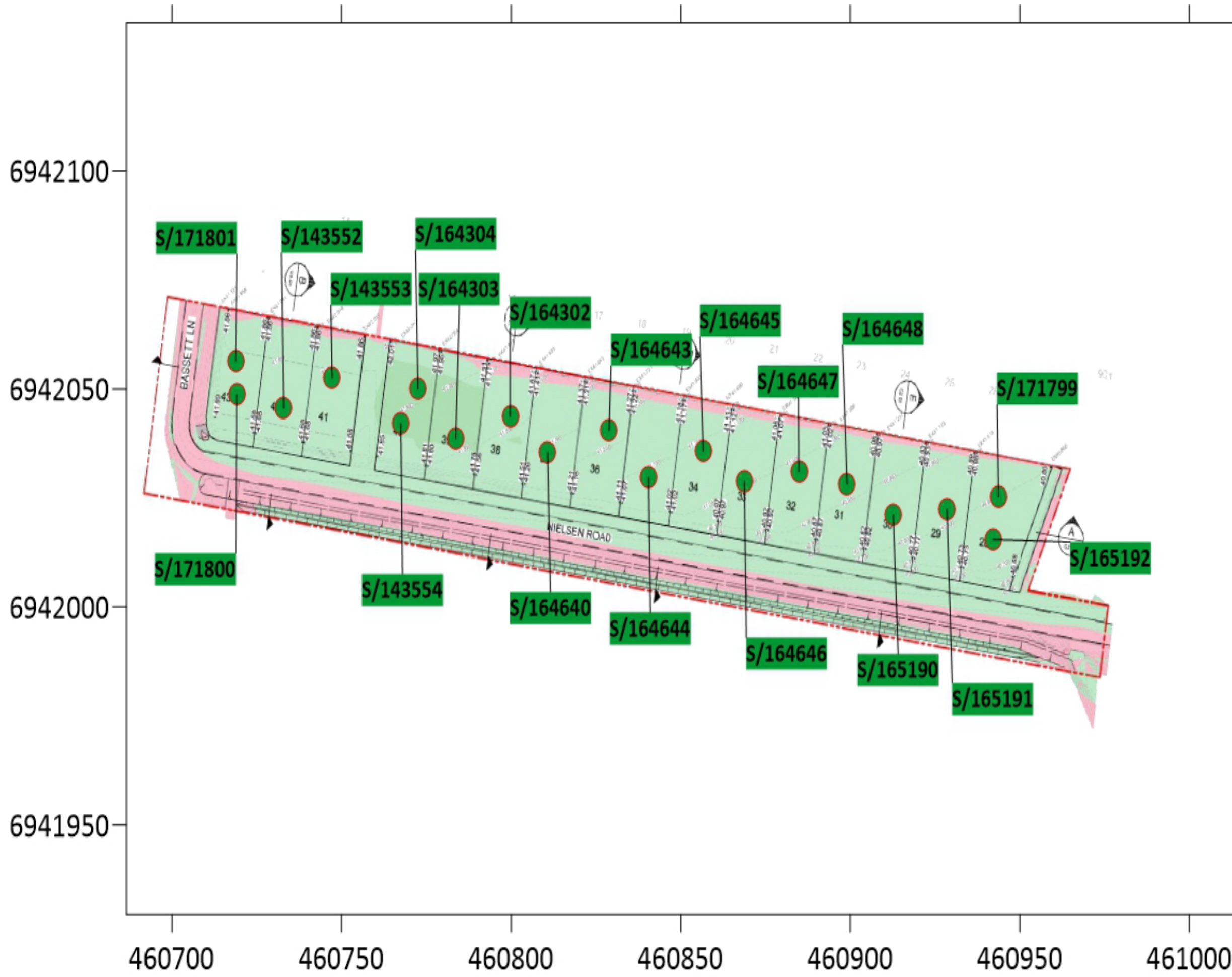
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 South Brisbane QLD 4101
 T +61 7 3844 5900
 23-45 BASSETT LANE
 ROSEWOOD, QLD, 4340


Drawing Title
BULK EARTHWORKS LAYOUT PLAN

Drawn	Date	Scale	A1	Ck. Check	Date
MC	12/09/18	1:500		WM	02/09/19
Designed	Project No.	Dep. No.	Issue		
BG	BR180079.4	C2.00	D		

ISSUE FOR APPROVAL



Legend

-  Approximate test location and number



Client: Shadforth Civil

Site: 7001 Nielson Road, Rosewood

Title: Residential Lots

Date: 27/01/2023	Drawn: TH	Checked: ND
Project: PTP/09505	Drawing No: 1	Revision: 0



Appendix B



Laboratory Test Reports

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GEOTECHNIC



Dry Density / Moisture Ratio Report

Client :	Shadforth			Report Number :	SR/PTP/09505 - 3/1	
Client Address :	99 Sandalwood Lane, Forest Glen, 4556, QLD			Report Date :	20/07/2022	
Project Name :	Rosehaven, Stage 4 - DL22/097 & DL22/098 (LV1 & LV2)			Test Request :	Lot Fill	
Project Number :	PTP/09505			Page 1 of 1		
Location :	Rosewood					
Test Methods :	AS1289.5.4.1, AS1289.5.8.1, AS1289.2.1.1, AS1289.5.1.1,					
Sample Number :	S/143552	S/143553	S/143554			
Date Tested :	24/06/2022	24/06/2022	24/06/2022			
Material Source :	Onsite Cut	Onsite Cut	Onsite Cut			
For use as :	Lot Fill	Lot Fill	Lot Fill			
Test / Layer Depths :	150 / 175	150 / 175	150 / 175			
Sampling Method :	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b			
Time :	10:12	10:19	10:35			
Lot Number :	WR: 16461	WR: 16461	WR: 16461			
Location 1 :	LOT 42	LOT 41	LOT 40			
Location 2 :	E:460673	E:460701	E:460729			
Location 3 :	N:6942056	N:69642050	N:6942046			
Location 4 :	0.47m Below Finish Level	0.67m Below Finish Level	1.2m Below Finish Level			
Test Fraction (mm) :	< 19mm	< 19mm	< 19mm			
Oversize Wet :	9%	8%	4%			
Oversize Dry :	11%	9%	5%			
Oversize Density - Dry (t/m ³) :	2.48	2.54	2.47			
Assigned MDR (Yes/No) :	No	No	No			
MDR Sample Number :	S/143552	S/143553	S/143554			
MDR Test Date :	26/06/2022	25/06/2022	27/06/2022			
Soil Description :	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay			
MDR Test Results						
MDD (t/m ³) :	1.64	1.67	1.56			
OMC :	22.5%	23.5%	27.5%			
ADJ MDD (t/m ³) :	1.71	1.72	1.59			
ADJ OMC :	20.0%	21.5%	26.0%			
Moisture Test Results :						
Field Moisture Content :	19.5%	20.0%	24.5%			
Moisture Specification :	-	-	-			
Variation from OMC :	0.5% Dry of OMC	1.5% Dry of OMC	1.5% Dry of OMC			
Relative Moisture Ratio (Q250) :	-	-	-			
Moisture Ratio :	98.5%	92.5%	93.5%			
Density Test Results						
Field Dry Density (t/m ³) :	1.67	1.67	1.58			
Density Specification :	95%	95%	95%			
Dry Density Ratio :	97.5%	97.5%	99.5%			
-						
-						
-						
Soil Particle Density (APD) t/m ³ :						
Soil Particle Density (APD) Date :						
Remarks :						
	Note: The results contained in this report relate only to the item/s that were tested/sampled Accredited for Compliance with ISO/ IEC 17025 - Testing Protest Engineering (Gold Coast) Accreditation Number - 19667 Base Laboratory Site Number - 22838 - Gold Coast			APPROVED SIGNATORY  Samuel Bamford - Signatory		
	Base Laboratory Address - 8/36 Blanck Street, ORMEAU, QLD 4208					



Dry Density / Moisture Ratio Report

Client :	Shadforth			Report Number :	SR/PTP/09505 - 12/1	
Client Address :	99 Sandalwood Lane, Forest Glen, 4556, QLD			Report Date :	10/11/2022	
Project Name :	Rosehaven, Stage 4 - DL22/097 & DL22/098 (LV1 & LV2)			Test Request :	-	
Project Number :	PTP/09505			Page 1 of 1		
Location :	Rosewood					
Test Methods :	AS1289.5.4.1, AS1289.5.8.1, AS1289.2.1.1, AS1289.5.1.1,					
Sample Number :	S/165190	S/165191	S/165192			
Date Tested :	19/10/2022	19/10/2022	19/10/2022			
Material Source :	Onsite	Onsite	Onsite			
For use as :	Level One Fill	Level One Fill	Level One Fill			
Test / Layer Depths :	150 / -	150 / -	150 / -			
Sampling Method :	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b			
Time :	09:10	10:00	11:05			
Lot Number :	Lot 30	Lot 29	Lot 28			
Location 1 :	E: 792.81	E: 811.86	E: 830.71			
Location 2 :	N: 1021.08	N: 1023.92	N: 1029.18			
Location 3 :	RL: 40.54	RL: 40.349	RL: 40.40			
Location 4 :	-	-	-			
Test Fraction (mm) :	< 19mm	< 19mm	< 19mm			
Enlarge Wet :	0%	0%	0%			
Enlarge Dry :	0%	0%	0%			
Enlarge Density - Dry (t/m ³) :	-	-	-			
Assigned MDR (Yes/No) :	No	No	No			
MDR Sample Number :	S/165190	S/165191	S/165192			
MDR Test Date :	21/10/2022	22/10/2022	20/10/2022			
Soil Description :	Silty Clay	Silty Clay	Silty Clay			
<i>MDR Test Results</i>						
MDD (t/m ³) :	1.57	1.59	1.66			
OMC :	22.0%	22.0%	19.0%			
ADJ MDD (t/m ³) :	-	-	-			
ADJ OMC :	-	-	-			
<i>Moisture Test Results :</i>						
Field Moisture Content :	21.0%	20.0%	19.0%			
Moisture Specification :	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC			
Variation from OMC :	1.0% Dry of OMC	2.0% Dry of OMC	0.0% Dry of OMC			
Relative Moisture Ratio (Q250) :	-	-	-			
Moisture Ratio :	96.0%	90.5%	99.5%			
<i>Density Test Results</i>						
Field Dry Density (t/m ³) :	1.56	1.58	1.63			
Density Specification :	95%	95%	95%			
Dry Density Ratio :	99.5%	99.5%	98.5%			
-						
-						
Soil Particle Density (APD) t/m ³ :						
Soil Particle Density (APD) Date :						
Remarks :						
 <p>Note: The results contained in this report relate only to the item/s that were tested/sampled Accredited for Compliance with ISO/ IEC 17025 - Testing Protest Engineering (Gold Coast) Accreditation Number - 19667 Base Laboratory Site Number - 22838 - Gold Coast Base Laboratory Address - 8/36 Blanck Street, ORMEAU, QLD 4208</p>				<p>APPROVED SIGNATORY</p>  Samuel Bamford - Signatory		

Soil Compaction and Density Tests Report - Compaction Control

Client :	Shadforth			Report Number :	SR/PTP/09505 - 17/1	
Client Address :	99 Sandalwood Lane, Forest Glen, 4556, QLD			Report Date :	12/01/2023	
Project Name :	Rosehaven, Stage 4 - DL22/097 & DL22/098 (LV1 & LV2)			Test Request :	-	
Project Number :	PTP/09505			Page 1 of 1		
Location :	Rosewood					
Test Methods :	AS1289.5.4.1, AS1289.5.8.1, AS1289.2.1.1, AS1289.5.7.1,					
Sample Number :	S/164302	S/164303	S/164304			
Date Tested :	14/10/2022	14/10/2022	14/10/2022			
Material Source :	Import	Import	Import			
For use as :	General Fill	General Fill	General Fill			
Test / Layer Depths :	150 / -	150 / -	150 / -			
Sampling Method :	AS1289.1.2.1 - cl6.4a	AS1289.1.2.1 - cl6.4a	AS1289.1.2.1 - cl6.4a			
Time :	14:18	14:38	14:48			
Lot Number :	Lot 38	Lot 39	Lot 40			
Location 1 :	E:624.73	E: 608.07	E: 590.20			
Location 2 :	N: 1027.38	N: 1035.39	N: 1037.01			
Location 3 :	RL: 41.40	RL: 41.89	RL: 41.93			
Location 4 :	-	-	-			
Test Fraction (mm) :	< 19mm	< 19mm	< 19mm			
Oversize Wet :	1%	0%	3%			
Oversize Density - Dry (t/m ³) :	2.24	-	2.31			
Assigned MDR (Yes/No) :	No	No	No			
MDR Sample Number :	S/164302	S/164303	S/164304			
MDR Test Date :	2/11/2022	2/11/2022	2/11/2022			
Compaction Type :	Standard	Standard	Standard			
Soil Description :	Gravelly Sandy CLAY - Brown	Gravelly Sandy CLAY - Brown	Gravelly Sandy CLAY - Brown			
MDR Test Results						
PCWD (t/m ³) :	2.05	1.99	2.04			
Moisture Variation :	1.0%	0.5%	0.5%			
ADJ PCWD (t/m ³) :	2.05	-	2.05			
ADJ Moisture Variation :	1.0%	-	0.5%			
Moisture Test Results :						
Field Moisture Content :	13.0%	13.0%	14.0%			
Moisture Specification :	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC			
Variation from OMC :	1.0% Dry of OMC	0.5% Dry of OMC	0.5% Dry of OMC			
Relative Moisture Ratio (Q250) :	-	-	-			
Moisture Ratio :	N/A	N/A	N/A			
Density Test Results						
Field Wet Density (t/m ³) :	2.06	1.89	2.02			
Density Specification :	95%	95%	95%			
Wet Density Ratio :	100.0%	95.5%	98.5%			
Soil Particle Density (APD) t/m ³ :						
Soil Particle Density (APD) Date :						
Remarks :						
 <p style="font-size: small;">Note: The results contained in this report relate only to the item/s that were tested/sampled Accredited for Compliance with ISO/ IEC 17025 - Testing Protest Engineering (Gold Coast) Accreditation Number - 19667 Base Laboratory Site Number - 22838 - Gold Coast Base Laboratory Address - 8/36 Blanck Street, ORMEAU, QLD 4208</p>				<p>APPROVED SIGNATORY</p>  <p>Nick Dobson - Signatory</p>		

Soil Compaction and Density Tests Report - Compaction Control

Client :	Shadforth		Report Number :	SR/PTP/09505 - 18/1		
Client Address :	99 Sandalwood Lane, Forest Glen, 4556, QLD		Report Date :	12/01/2023		
Project Name :	Rosehaven, Stage 4 - DL22/097 & DL22/098 (LV1 & LV2)		Test Request :	-		
Project Number :	PTP/09505		Page 1 of 1			
Location :	Rosewood					
Test Methods :	AS1289.5.4.1, AS1289.5.8.1, AS1289.2.1.1, AS1289.5.7.1,					
Sample Number :	S/164648					
Date Tested :	17/10/2022					
Material Source :	Imported					
For use as :	General Fill					
Test / Layer Depths :	150 / -					
Sampling Method :	AS1289.1.2.1 - cl6.4a					
Time :	14:05					
Lot Number :	Lot 31					
Location 1 :	E: 771.42					
Location 2 :	N: 1029.90					
Location 3 :	RL: 40.807					
Location 4 :	-					
Test Fraction (mm) :	< 19mm					
Oversize Wet :	0%					
Oversize Density - Dry (t/m ³) :	-					
Assigned MDR (Yes/No) :	No					
MDR Sample Number :	S/164648					
MDR Test Date :	23/11/2022					
Compaction Type :	Standard					
Soil Description :	Gravelly Sandy CLAY - Brown					
<i>MDR Test Results</i>						
PCWD (t/m ³) :	2.12					
Moisture Variation :	1.5%					
ADJ PCWD (t/m ³) :	-					
ADJ Moisture Variation :	-					
<i>Moisture Test Results :</i>						
Field Moisture Content :	10.0%					
Moisture Specification :	+/- 2.0% of OMC					
Variation from OMC :	1.5% Dry of OMC					
Relative Moisture Ratio (Q250) :	-					
Moisture Ratio :	N/A					
<i>Density Test Results</i>						
Field Wet Density (t/m ³) :	2.17					
Density Specification :	95%					
Wet Density Ratio :	102.5%					
Soil Particle Density (APD) t/m ³ :						
Soil Particle Density (APD) Date :						
Remarks :						
 <p>Note: The results contained in this report relate only to the item/s that were tested/sampled Accredited for Compliance with ISO/ IEC 17025 - Testing Protest Engineering (Gold Coast) Accreditation Number - 19667 Base Laboratory Site Number - 22838 - Gold Coast Base Laboratory Address - 8/36 Blanck Street, ORMEAU, QLD 4208</p>			<p>APPROVED SIGNATORY</p>  Nick Dobson - Signatory			

Soil Compaction and Density Tests Report - Compaction Control

Client :	Shadforth	Report Number :	SR/PTP/09505 - 19/1
Client Address :	99 Sandalwood Lane, Forest Glen, 4556, QLD	Report Date :	27/01/2023
Project Name :	Rosehaven, Stage 4 - DL22/097 & DL22/098 (LV1 & LV2)	Test Request :	-
Project Number :	PTP/09505	Page 1 of 1	
Location :	Rosewood		

Test Methods :	AS1289.5.4.1, AS1289.5.8.1, AS1289.2.1.1, AS1289.5.7.1,					
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Sample Number :	S/164640	S/164643	S/164644	S/164645	S/164646	S/164647
Date Tested :	17/10/2022	17/10/2022	17/10/2022	17/10/2022	17/10/2022	17/10/2022
Material Source :	Imported	Imported	Imported	Imported	Imported	Imported
For use as :	General Fill	General Fill	General Fill	General Fill	General Fill	General Fill
Test / Layer Depths :	150 / -	150 / -	150 / -	150 / -	150 / -	150 / -

Sampling Method :	AS1289.1.2.1 - cl6.4a	AS1289.1.2.1 - cl6.4a	AS1289.1.2.1 - cl6.4a	AS1289.1.2.1 - cl6.4a	AS1289.1.2.1 - cl6.4a	AS1289.1.2.1 - cl6.4a
Time :	12:20	12:30	12:40	13:10	13:25	13:35
Lot Number :	Lot 37	Lot 36	Lot 35	Lot 34	Lot 33	Lot 32
Location 1 :	E: 643.24	E: 664.28	E: 688.37	E: 708.69	E: 727.63	E: 756.15
Location 2 :	N: 1029.81	N: 1022.63	N: 1022.55	N: 1022.98	N: 1027.51	N: 1029.29
Location 3 :	RL: 41.228	RL: 41.095	RL: 40.975	RL: 40.945	RL: 49.29	RL: 40.851
Location 4 :	-	-	-	-	-	-

Test Fraction (mm) :	< 19mm	< 19mm	< 19mm	< 19mm	< 19mm	< 19mm
Override Wet :	2%	0%	0%	2%	0%	0%
Override Density - Dry (t/m ³) :	2.64	-	-	2.33	-	-
Assigned MDR (Yes/No) :	No	No	No	No	No	No
MDR Sample Number :	S/164640	S/164643	S/164644	S/164645	S/164646	S/164647
MDR Test Date :	26/11/2022	26/11/2022	25/11/2022	23/11/2022	23/11/2022	23/11/2022
Compaction Type :	Standard	Standard	Standard	Standard	Standard	Standard
Soil Description :	Sandy Clay Brown	Sandy Clay - Brown	Clayey Sand - Brown	Gravelly Clay - Brown	Sandy Gravel - Brown	Gravelly Clay - Brown



<i>MDR Test Results</i>						
PCWD (t/m ³) :	2.06	2.01	2.14	2.17	2.01	2.07
Moisture Variation :	2.0%	2.0%	1.0%	-1.5%	2.0%	2.0%
ADJ PCWD (t/m ³) :	2.07	-	-	2.17	-	-
ADJ Moisture Variation :	2.0%	-	-	-1.5%	-	-

<i>Moisture Test Results :</i>						
Field Moisture Content :	11.0%	11.5%	12.0%	12.0%	6.5%	9.0%
Moisture Specification :	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC
Variation from OMC :	2.0% Dry of OMC	2.0% Dry of OMC	1.0% Dry of OMC	1.5% Wet of OMC	2.0% Dry of OMC	2.0% Dry of OMC
Relative Moisture Ratio (Q250) :	-	-	-	-	-	-
Moisture Ratio :	N/A	N/A	N/A	N/A	N/A	N/A



<i>Density Test Results</i>						
Field Wet Density (t/m ³) :	2.08	2.02	2.22	2.11	2.06	2.14
Density Specification :	95%	95%	95%	95%	95%	95%
Wet Density Ratio :	100.5%	100.0%	103.5%	97.0%	102.5%	103.5%

	-	-	-	-	-	-

Soil Particle Density (APD) t/m ³ :						
Soil Particle Density (APD) Date :						
Remarks :						

 <p style="font-size: small;">Note: The results contained in this report relate only to the item/s that were tested/sampled Accredited for Compliance with ISO/ IEC 17025 - Testing Protest Engineering (Gold Coast) Accreditation Number - 19667 Base Laboratory Site Number - 22838 - Gold Coast Base Laboratory Address - 8/36 Blanck Street, ORMEAU, QLD 4208</p>	<p>APPROVED SIGNATORY</p>  <p>Nick Dobson - Signatory</p>
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Soil Compaction and Density Tests Report - Compaction Control

Client :	Shadforth			Report Number :	SR/PTP/09505 - 20/1	
Client Address :	99 Sandalwood Lane, Forest Glen, 4556, QLD			Report Date :	27/01/2023	
Project Name :	Rosehaven, Stage 4 - DL22/097 & DL22/098 (LV1 & LV2)			Test Request :	-	
Project Number :	PTP/09505			Page 1 of 1		
Location :	Rosewood					
Test Methods :	AS1289.5.4.1, AS1289.5.8.1, AS1289.2.1.1, AS1289.5.7.1,					
Sample Number :	S/171799	S/171800	S/171801			
Date Tested :	22/11/2022	22/11/2022	22/11/2022			
Material Source :	Import	Import	Import			
For use as :	General Fill	General Fill	General Fill			
Test / Layer Depths :	150 / -	150 / -	150 / -			
Sampling Method :	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b			
Time :	14:00	14:15	14:30			
Lot Number :	Lot 28	Lot 28	Lot 28			
Location 1 :	E: 460981	E: 460985	E: 460987			
Location 2 :	N: 6942022	N: 6942021	N: 6942021			
Location 3 :	RL: 40.81	RL: 40.88	RL: 40.95			
Location 4 :	-	-	-			
Test Fraction (mm) :	< 19mm	< 19mm	< 19mm			
Oversize Wet :	0%	0%	0%			
Oversize Density - Dry (t/m ³) :	-	-	-			
Assigned MDR (Yes/No) :	No	No	No			
MDR Sample Number :	S/171799	S/171800	S/171801			
MDR Test Date :	22/12/2022	21/12/2022	22/12/2022			
Compaction Type :	Standard	Standard	Standard			
Soil Description :	Sandy Clay - Brown	Gravelly Sandy Clay - Yellow and Brown	Sandy Clay - Brown			
<i>MDR Test Results</i>						
PCWD (t/m ³) :	2.17	2.09	2.03			
Moisture Variation :	2.0%	1.5%	2.0%			
ADJ PCWD (t/m ³) :	-	-	-			
ADJ Moisture Variation :	-	-	-			
<i>Moisture Test Results :</i>						
Field Moisture Content :	13.0%	9.5%	11.5%			
Moisture Specification :	±2% of OMC	±2% of OMC	±2% of OMC			
Variation from OMC :	2.0% Dry of OMC	1.5% Dry of OMC	2.0% Dry of OMC			
Relative Moisture Ratio (Q250) :	-	-	-			
Moisture Ratio :	N/A	N/A	N/A			
<i>Density Test Results</i>						
Field Wet Density (t/m ³) :	2.10	2.11	2.10			
Density Specification :	95%	95%	95%			
Wet Density Ratio :	97.0%	101.0%	103.0%			
Soil Particle Density (APD) t/m ³ :						
Soil Particle Density (APD) Date :						
Remarks :						
 NATA <small>WORLD RECOGNISED ACCREDITATION</small>	<small>Note: The results contained in this report relate only to the item/s that were tested/sampled</small> Accredited for Compliance with ISO/ IEC 17025 - Testing Protest Engineering (Gold Coast) Accreditation Number - 19667 Base Laboratory Site Number - 22838 - Gold Coast			APPROVED SIGNATORY  Nick Dobson - Signatory		
	Base Laboratory Address - 8/36 Blanck Street, ORMEAU, QLD 4208					