

Shadforth Civil Pty Ltd
99 Sandalwood Lane,
Forest Glen, QLD, 4556

Project Number: PTP/07776
Letter Number: PTP/07776 – 0003 – Rev0
Project Name: The Pocket - Stage 1,
Collingwood Park

Attention: Campbell Thompson
Email: Campbell.Thompson@shadcivil.com.au

Report on Level 1 Earthworks
The Pocket - Stage 1,
Collingwood Park, QLD, 4301

1. Introduction

This report summarises the results of inspection and testing provided by Protest Engineering (Protest) for the bulk earthworks as part of The Pocket - Stage 1 project located at Collingwood Park undertaken between 26 September 2021 to 27 October 2021. The works were undertaken at the request of Shadforth Civil Pty Ltd.

The scope of inspection and testing undertaken was in general accordance with AS3798-2007 *Guidelines on Earthworks for Commercial and Residential Developments*. As part of the inspection and testing undertaken, Protest provided Level 1 supervision in accordance with Section 8.2 of AS3798-2007.

Approximately 20,000m³ of fill was placed at the site with a maximum depth of approximately 2.0m. Drawing No. 202, Revision 2 – *Bulk Earthworks Layout Plan* attached is the bulk earthworks cut to fill plan. The frequency of field density testing adopted for this project was based on AS3798-2007, Table 8.1 with a minimum of one test per 500m³ placed for a *Type 1 – Large Scale Operation*.

Based off the information provided within the general notes (Drawing No. 201, Revision 2 – General Notes), the minimum relative compaction requirements were not specified and therefore the criteria in AS3798, Table 5.1 was adopted. A summary of the criteria is summarized in Table 1.

Table 1. Test Request Compaction and Moisture Content Specification

Fill Types	Maximum Dry Density Ratio (%)	Optimum Moisture Content Variation (%)
Residential – lot, fill, house, sites	>95%	±2% (Dry/Wet of OMC ⁽¹⁾)

(Notes: ⁽¹⁾ Optimum Moisture Content)

2. Earthworks Activities

Foundation preparation observed by Protest comprised the removal of topsoil and unsuitable materials across the cut to fill area exposing the underlying natural materials. A test roll was performed on the natural soils using a pad foot roller and no noticeable movement was observed on the final pass.

Following successful proof rolling, filling operations comprised the placement and compaction of material obtained from onsite cuts which were typically sandy clays. Filling materials were placed onsite in uniform layers not exceeding 150mm thick compacted layers with the plant detailed below. The material used as fill was moisture conditioned at the fill source and during placement and blended to achieve suitable moisture content for compaction. The following heavy plant were used throughout the bulk earthworks component:

- Water Truck
- Dump Trucks
- Moxys
- Pad Foot Roller
- Excavators
- Compactor

A total of forty-three (43) field density ratio tests were undertaken at select locations during the filling operations. Field density testing was carried out using a nuclear gauge and in accordance with the test method outlined in AS1289.5.8.1. The relative compaction was then determined by comparing the recorded field density with the laboratory maximum dry density (standard compaction) outlined in test method AS1289.5.1.1.

A summary of the test results is presented in Table 2 with the individual reports attached and the approximate test locations are shown on the marked earthworks layout plan attached.

Table 2. Summary of Density Testing

Item	Compaction	Moisture Variation
No. of tests	43	43
Mean	100%	1.0% (Dry of OMC ⁽¹⁾)

(Notes: ⁽¹⁾ Optimum Moisture Content)

3. Compliance

As far as it has been able to determine, it is our opinion that the bulk earthworks placed and compacted at The Pocket - Stage 1 in Collingwood Park by Shadforth Civil between 26 September 2021 to 27 October 2021 comply with the above-mentioned specifications and can be considered as Level 1 'controlled' or structural fill.

4. Comments

Based on the results of the inspections and field density testing whilst Protest were on-site, it is considered that the bulk earthworks at The Pocket - Stage 1 between 26 September 2021 to 27 October 2021 have been undertaken in general accordance with AS3798-2007 *Guidelines on Earthworks for Commercial and Residential Developments*. Protest believes consideration should be given to the following:

- I. This report only certifies the bulk earthworks activities supervised by Protest between 26 September 2021 to 27 October 2021. Protest does not take responsibility for any other bulk earthworks activities that have occurred before or after these dates;

- II. The installation of services or any activities that may cause disruption of the compacted filling;
- III. The suitability of the filled land to support the proposed structures; and
- IV. Any variation in filling depth of extent of areas that is not noted within this report or on the individual test report sheets.

5. Constraints

- I. Protest has prepared this report for the bulk earthworks at The Pocket - Stage 1, Collingwood Park. This report was produced for the sole use of Shadforth Civil. It should not be used by or depended upon for other projects or purposes on the same or other site or by a third party. In the preparation of this report Protest has relied upon information provided by the client and/or their agents.
- II. The results provided in this report are indicative of the subsurface conditions on the site only at the specific sampling or testing locations, and then only to the depths investigated along with the time the work was carried out. It is known that subsurface conditions can suddenly change due to irregular geological processes and as a result of human influences. Such changes may occur after Protest field testing has been completed.
- III. Certain ground conditions and the materials behaviour observed or contained at the test locations may alter from those which may be encountered elsewhere on the site. Should variations in subsurface conditions be encountered, then additional advice should be sought from Protest and, if required, amendments made.
- IV. Protest cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion given in this report.

We trust that the above information is suitable for your present requirements. Should you have any queries, please do not hesitate to contact the undersigned.

Written By:



Lachlan Cameirao

Laboratory Division Managers Assistant

p | 0429 318 828

e | lachlan.cameirao@protestengineering.com

Reviewed By:



Kenney Pham

Branch Manager

p | 0413 254 375

e | kenney.pham@protestengineering.com

- Attachments:
- 1. Site Images;
 - 2. Test Location Plan;
 - 3. Density Reports;
 - 4. Referenced Drawings.



GEOTECHNICAL // TESTING SERVICES // STRUCTURAL

Attachment 1

Site Images



Figure 1 – Moxy removing cut material and stockpiling elsewhere. (Taken: 30.09.2021)



Figure 2 – Heavy machinery working strip. (Taken: 30.09.2021)



Figure 3 – View of boundary of works area. (Taken: 30.09.2021)



Figure 4 – Excavator loading moxy with cut material. (Taken: 30.09.2021)



Figure 5 – Test rolling being completed. (Taken: 21.10.2021)



Figure 5 – Layer being cut back of excess material with a belly scraper, water being drained from nearby (Taken: 21.10.2021)



Figure 5 – Fill being placed, grader trailing behind and spreading fill out. (Taken: 21.10.2021)



Figure 5 – Overview of the area of works with heavy machinery working pad. (Taken: 21.10.2021)



GEOTECHNICAL // TESTING SERVICES // STRUCTURAL

Attachment 2
Testing Location Plan

Job No.
PTP/07776



Drawing No.
Lot 01





GEOTECHNICAL // TESTING SERVICES // STRUCTURAL

Attachment 3
Density Reports



Soil Compaction and Density Tests Report - Compaction Control

Client :	Shadforth				Report Number :	SR/PTP/07776 - 5/2
Client Address :	99 Sandalwood Lane, Forest Glen, 4556, QLD				Report Date :	18/09/2021
Project Name :	The Pocket Stage 1, Collingwood Park				Test Request :	-
Project Number :	PTP/07776				Page 1 of 1	
Location :	Collingwood Park					
Test Methods :	AS1289.5.4.1, AS1289.5.8.1, AS1289.2.1.1, AS1289.5.7.1					
Sample Number :	S/125142	S/125143	S/125144	S/125145		
Date Tested :	30/10/2021	30/10/2021	30/10/2021	30/10/2021		
Material Source :	On Site	On Site	On Site	On Site		
For use as :	General Fill	General Fill	General Fill	General Fill		
Test / Layer Depths :	150 / 300	150 / 300	150 / 300	150 / 300		
Sampling Method :	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b		
Time :	10:30	10:35	10:40	10:45		
Lot Number :	-	-	-	-		
Location 1 :	E: 486055	E: 486053	E: 486051	E: 486058		
Location 2 :	N: 6944895	N: 6944886	N: 6944880	N: 6944891		
Location 3 :	-	-	-	-		
Location 4 :	-	-	-	-		
Test Fraction (mm) :	< 19mm	< 19mm	< 19mm	< 19mm		
Oversize Wet :	0%	0%	0%	0%		
Oversize Density - Dry (t/m³) :	-	-	-	-		
Assigned MDR (Yes/No) :	No	No	No	No		
MDR Sample Number :	S/125142	S/125143	S/125144	S/125145		
MDR Test Date :	14/10/2021	14/10/2021	14/10/2021	14/10/2021		
Soil Description :	Brown - Sandy Clay	Brown - Sandy Clay	Brown - Sandy Clay	Brown - Sandy Clay		
MDR Test Results						
PCWD (t/m³) :	2.14	2.14	2.16	2.14		
Moisture Variation :	1.5%	-0.5%	1.5%	-0.5%		
ADJ PCWD (t/m³) :	-	-	-	-		
ADJ Moisture Variation :	-	-	-	-		
Moisture Test Results :						
Field Moisture Content :	12.5%	14.5%	12.0%	15.0%		
Moisture Specification :	±2% of OMC	±2% of OMC	±2% of OMC	±2% of OMC		
Variation from OMC :	1.5% Dry of OMC	0.5% Wet of OMC	1.5% Dry of OMC	0.5% Wet of OMC		
Relative Moisture Ratio (Q250) :	-	-	-	-		
Moisture Ratio :	N/A	N/A	N/A	N/A		
Density Test Results						
Field Wet Density (t/m³) :	2.16	2.17	2.16	2.16		
Density Specification :	98%	98%	98%	98%		
Wet Density Ratio :	101.0%	101.5%	100.5%	101.0%		
Characteristic Value (Q020) :	CV(min) = 100.7% CV(max) = 101.3% Mean = 101.0% Std. Dev. = 0.4% n = 4 k = 0.828					
Degree of Saturation / Required :	-	-	-	-		
Soil Particle Density (APD) t/m³ :						
Soil Particle Density (APD) Date :						
Remarks :						
 <p>Note: The results contained in this report relate only to the item/s that were tested/sampled</p> <p>Accredited for Compliance with ISO/ IEC 17025 - Testing</p> <p>Protest Engineering (Gold Coast) Accreditation Number - 19667</p> <p>Base Laboratory Site Number - 22838 - Gold Coast</p> <p>Base Laboratory Address - 8/36 Blanck Street, ORMEAU, QLD 4208</p>			<p>APPROVED SIGNATORY</p>  <p>Kenney Pham - Signatory</p>			



Soil Compaction and Density Tests Report - Compaction Control

Client :	Shadforth				Report Number :	SR/PTP/07776 - 6/1
Client Address :	99 Sandalwood Lane, Forest Glen, 4556, QLD				Report Date :	18/10/2021
Project Name :	The Pocket Stage 1, Collingwood Park				Test Request :	-
Project Number :	PTP/07776				Page 1 of 1	
Location :	Collingwood Park					
Test Methods :	AS1289.5.4.1, AS1289.5.8.1, AS1289.2.1.1, AS1289.5.7.1					
Sample Number :	S/125349	S/125350	S/125351	S/125352		
Date Tested :	1/10/2021	1/10/2021	1/10/2021	1/10/2021		
Material Source :	On Site	On Site	On Site	On Site		
For use as :	General Fill	General Fill	General Fill	General Fill		
Test / Layer Depths :	150 / -	150 / -	150 / -	150 / -		
Sampling Method :	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b		
Time :	10:30	10:35	10:40	10:45		
Lot Number :	-	-	-	-		
Location 1 :	E: 486050	E: 486042	E: 486093	E: 486105		
Location 2 :	N: 6944872	N: 6944848	N: 6944854	N: 6944838		
Location 3 :	-	-	-	-		
Location 4 :	-	-	-	-		
Test Fraction (mm) :	< 19mm	< 19mm	< 19mm	< 19mm		
Oversize Wet :	0%	0%	0%	0%		
Oversize Density - Dry (t/m³) :	-	-	-	-		
Assigned MDR (Yes/No) :	No	No	No	No		
MDR Sample Number :	S/125349	S/125350	S/125351	S/125352		
MDR Test Date :	14/10/2021	14/10/2021	14/10/2021	14/10/2021		
Soil Description :	Brown - Gravelly Clay	Brown - Gravelly Clay	Brown - Gravelly Clay	Brown - Gravelly Clay		
MDR Test Results						
PCWD (t/m³) :	1.95	1.90	1.92	1.95		
Moisture Variation :	0.0%	1.5%	1.5%	0.0%		
ADJ PCWD (t/m³) :	-	-	-	-		
ADJ Moisture Variation :	-	-	-	-		
Moisture Test Results :						
Field Moisture Content :	18.0%	18.0%	15.5%	17.0%		
Moisture Specification :	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC		
Variation from OMC :	0.0% Wet of OMC	1.5% Dry of OMC	1.5% Dry of OMC	0.0% Wet of OMC		
Relative Moisture Ratio (Q250) :	-	-	-	-		
Moisture Ratio :	N/A	N/A	N/A	N/A		
Density Test Results						
Field Wet Density (t/m³) :	1.91	1.92	1.91	1.92		
Density Specification :	98%	98%	98%	98%		
Wet Density Ratio :	98.0%	101.0%	99.5%	98.5%		
Characteristic Value (Q020) :	CV(min) = 98.2%	CV(max) = 100.3%	Mean = 99.3%	Std. Dev. = 1.3%	n = 4	k = 0.828
Degree of Saturation / Required :	-	-	-	-		
Soil Particle Density (APD) t/m³ :						
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>  <p>Kenney Pham - Signatory</p>		



Soil Compaction and Density Tests Report - Compaction Control

Client :	Shadforth				Report Number :	SR/PTP/07776 - 7/1
Client Address :	99 Sandalwood Lane, Forest Glen, 4556, QLD				Report Date :	18/10/2021
Project Name :	The Pocket Stage 1, Collingwood Park				Test Request :	-
Project Number :	PTP/07776				Page 1 of 1	
Location :	Collingwood Park					
Test Methods :	AS1289.5.4.1, AS1289.5.8.1, AS1289.2.1.1, AS1289.5.7.1					
Sample Number :	S/125396	S/125397	S/125398	S/125399		
Date Tested :	5/10/2021	5/10/2021	5/10/2021	5/10/2021		
Material Source :	On Site	On Site	On Site	On Site		
For use as :	General Fill	General Fill	General Fill	General Fill		
Test / Layer Depths :	150 / 300	150 / 300	150 / 300	150 / 300		
Sampling Method :	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b		
Time :	15:05	15:06	15:06	15:07		
Lot Number :	-	-	-	-		
Location 1 :	E: 486095	E: 486095	E: 486095	E: 486095		
Location 2 :	N: 6944868	N: 6944868	N: 6944868	N: 6944868		
Location 3 :	-	-	-	-		
Location 4 :	-	0	0	0		
Test Fraction (mm) :	< 19mm	< 19mm	< 19mm	< 19mm		
Oversize Wet :	0%	0%	0%	0%		
Oversize Density - Dry (t/m³) :	-	-	-	-		
Assigned MDR (Yes/No) :	No	No	No	No		
MDR Sample Number :	S/125396	S/125397	S/125398	S/125399		
MDR Test Date :	14/10/2021	14/10/2021	14/10/2021	14/10/2021		
Soil Description :	Brown - Sandy Clay	Brown - Sandy Clay	Brown - Sandy Clay	Brown - Sandy Clay		
MDR Test Results						
PCWD (t/m³) :	1.91	1.95	1.93	1.91		
Moisture Variation :	2.0%	0.0%	0.0%	1.0%		
ADJ PCWD (t/m³) :	-	-	-	-		
ADJ Moisture Variation :	-	-	-	-		
Moisture Test Results :						
Field Moisture Content :	17.5%	18.0%	18.0%	17.0%		
Moisture Specification :	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC		
Variation from OMC :	2.0% Dry of OMC	0.0% Dry of OMC	0.0% Dry of OMC	1.0% Dry of OMC		
Relative Moisture Ratio (Q250) :	-	-	-	-		
Moisture Ratio :	N/A	N/A	N/A	N/A		
Density Test Results						
Field Wet Density (t/m³) :	1.91	1.91	1.91	1.90		
Density Specification :	98%	98%	98%	98%		
Wet Density Ratio :	100.0%	98.0%	99.0%	99.5%		
Characteristic Value (Q020) :	CV(min) = 98.4%	CV(max) = 99.8%	Mean = 99.1%	Std. Dev. = 0.9%	n = 4	k = 0.828
Degree of Saturation / Required :	-	-	-	-		
Soil Particle Density (APD) t/m³ :						
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>  <p>Kenney Pham - Signatory</p>		



Dry Density / Moisture Ratio Report

Client :	Shadforth			Report Number :	SR/PTP/07776 - 11/1	
Client Address :	99 Sandalwood Lane, Forest Glen, 4556, QLD			Report Date :	29/10/2021	
Project Name :	The Pocket Stage 1, Collingwood Park			Test Request :	-	
Project Number :	PTP/07776			Page 1 of 1		
Location :	Collingwood Park					
Test Methods :	AS1289.5.4.1, AS1289.5.8.1, AS1289.2.1.1, AS1289.5.1.1					
Sample Number :	S/126490	S/126493	S/126494	S/126495	S/126502	S/126503
Date Tested :	25/10/2021	25/10/2021	25/10/2021	25/10/2021	25/10/2021	25/10/2021
Material Source :	Onsite	Onsite	Onsite	Onsite	Onsite	Onsite
For use as :	General Fill	General Fill	General Fill	General Fill	General Fill	General Fill
Test / Layer Depths :	150 / 300	150 / 300	150 / 300	150 / 300	150 / 300	150 / 300
Sampling Method :	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b
Time :	10:30	10:35	10:40	10:45	10:50	10:55
Lot Number :	-	-	-	-	-	-
Location 1 :	E: 486050	E: 486077	E: 486006	E: 486016	E: 486001	E: 486005
Location 2 :	N: 6944824	N: 6944812	N: 6944818	N: 6944818	N: 6944818	N: 6944809
Location 3 :	0.3m Below finish level	0.3m Below finish level	0.3m Below finish level	0.3m Below finish level	0.3m Below finish level	0.3m Below finish level
Location 4 :	-	-	-	-	-	-
Test Fraction (mm) :	< 19mm	< 19mm	< 19mm	< 19mm	< 19mm	< 19mm
Oversize Wet :	0%	0%	5%	0%	8%	7%
Oversize Dry :	0%	0%	6%	0%	9%	7%
Oversize Density - Dry (t/m ³) :	-	-	2.54	-	2.55	2.48
Assigned MDR (Yes/No) :	No	No	No	No	No	No
MDR Sample Number :	S/126490	S/126493	S/126494	S/126495	S/126502	S/126503
MDR Test Date :	26/10/2021	27/10/2021	27/10/2021	29/10/2021	27/10/2021	27/10/2021
Soil Description :	Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay
MDR Test Results						
MDD (t/m ³) :	1.97	1.67	1.66	1.79	1.81	1.83
OMC :	9.5%	21.0%	24.0%	14.0%	14.5%	13.0%
ADJ MDD (t/m ³) :	-	-	1.69	-	1.85	1.87
ADJ OMC :	-	-	22.5%	-	13.5%	12.0%
Moisture Test Results :						
Field Moisture Content :	8.5%	19.5%	21.0%	13.0%	12.0%	11.5%
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 :	1.0% Dry of OMC	1.5% Dry of OMC	1.5% Dry of OMC	1.0% Dry of OMC	1.5% Dry of OMC	0.5% Dry of OMC
Relative Moisture Ratio (Q250) :	-	-	-	-	-	-
Moisture Ratio :	88.0%	92.5%	94.0%	92.5%	89.0%	96.5%
Density Test Results						
Field Dry Density (t/m ³) :	1.99	1.72	1.68	1.85	1.87	1.84
Density Specification :	98%	98%	98%	98%	98%	98%
Dry Density Ratio :	100.5%	103.0%	99.0%	103.0%	101.0%	98.5%
Degree of Saturation / Required :	-	-	-	-	-	-
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</p> <p>Accredited for Compliance with ISO/ IEC 17025 - Testing</p> <p>Protest Engineering (Gold Coast) Accreditation Number - 19667</p> <p>Base Laboratory Site Number - 22838 - Gold Coast</p> <p>Base Laboratory Address - 8/36 Blanck Street, ORMEAU, QLD 4208</p>				<p>APPROVED SIGNATORY</p>  <p>Kenney Pham - Signatory</p>		



Dry Density / Moisture Ratio Report

Client :	Shadforth				Report Number :	SR/PTP/07776 - 12/1	
Client Address :	99 Sandalwood Lane, Forest Glen, 4556, QLD				Report Date :	29/10/2021	
Project Name :	The Pocket Stage 1, Collingwood Park				Test Request :	-	
Project Number :	PTP/07776				Page 1 of 1		
Location :	Collingwood Park						
Test Methods :	AS1289.5.4.1, AS1289.5.8.1, AS1289.2.1.1, AS1289.5.1.1						
Sample Number :	S/126392	S/126393	S/126394	S/126395			
Date Tested :	22/10/2021	22/10/2021	22/10/2021	22/10/2021			
Material Source :	Onsite	Onsite	Onsite	Onsite			
For use as :	General Fill	General Fill	General Fill	General Fill			
Test / Layer Depths :	150 / 300	150 / 300	150 / 300	150 / 300			
Sampling Method :	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b			
Time :	22:15	22:20	22:25	13:30			
Lot Number :	-	-	-	-			
Location 1 :	E: 486099	E: 486078	E: 486014	E: 486010			
Location 2 :	N: 6944842	N: 6944831	N: 6944851	N: 6944865			
Location 3 :	0.3m Below finish level	0.3m Below finish level	Finish level	Finish level			
Location 4 :	-	-	-	-			
Test Fraction (mm) :	< 19mm	< 19mm	< 19mm	< 19mm			
Oversize Wet :	7%	5%	6%	6%			
Oversize Dry :	7%	5%	6%	6%			
Oversize Density - Dry (t/m ³) :	2.46	2.47	2.53	2.46			
Assigned MDR (Yes/No) :	No	No	No	No			
MDR Sample Number :	S/126392	S/126393	S/126394	S/126395			
MDR Test Date :	25/10/2021	26/10/2021	25/10/2021	23/10/2021			
Soil Description :	Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay			
MDR Test Results							
MDD (t/m ³) :	1.75	1.91	1.89	1.83			
OMC :	17.0%	14.5%	12.0%	13.5%			
ADJ MDD (t/m ³) :	1.79	1.93	1.92	1.86			
ADJ OMC :	15.5%	14.0%	11.0%	12.5%			
Moisture Test Results :							
Field Moisture Content :	15.0%	12.0%	11.5%	12.0%			
Moisture Specification :	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC			
Variation from OMC :	0.5% Dry of OMC	1.5% Dry of OMC	0.5% Wet of OMC	0.5% Dry of OMC			
Relative Moisture Ratio (Q250) :	-	-	-	-			
Moisture Ratio :	96.5%	87.5%	102.5%	98.0%			
Density Test Results							
Field Dry Density (t/m ³) :	1.78	1.93	1.89	1.87			
Density Specification :	98%	98%	98%	98%			
Dry Density Ratio :	100.0%	100.0%	98.5%	100.5%			
Degree of Saturation / Required :	-	-	-	-			
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</p> <p>Accredited for Compliance with ISO/ IEC 17025 - Testing</p> <p>Protest Engineering (Gold Coast) Accreditation Number - 19667</p> <p>Base Laboratory Site Number - 22838 - Gold Coast</p> <p>Base Laboratory Address - 8/36 Blanck Street, ORMEAU, QLD 4208</p>				<p>APPROVED SIGNATORY</p>  <p>Kenney Pham - Signatory</p>			



Dry Density / Moisture Ratio Report

Client :	Shadforth			Report Number :	SR/PTP/07776 - 13/1	
Client Address :	99 Sandalwood Lane, Forest Glen, 4556, QLD			Report Date :	29/10/2021	
Project Name :	The Pocket Stage 1, Collingwood Park			Test Request :	-	
Project Number :	PTP/07776			Page 1 of 1		
Location :	Collingwood Park					
Test Methods :	AS1289.5.4.1, AS1289.5.8.1, AS1289.2.1.1, AS1289.5.1.1					
Sample Number :	S/126352	S/126353	S/126354			
Date Tested :	21/10/2021	21/10/2021	21/10/2021			
Material Source :	Onsite	Onsite	Onsite			
For use as :	General fill	General fill	General fill			
Test / Layer Depths :	150 / 300	150 / 300	150 / 300			
Sampling Method :	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b			
Time :	00:00	00:05	00:10			
Lot Number :	-	-	-			
Location 1 :	E: 486199	E: 486185	E: 486173			
Location 2 :	N: 6944842	N: 6944818	N: 6944805			
Location 3 :	F.L	F.L	F.L			
Location 4 :	-	-	-			
Test Fraction (mm) :	< 19mm	< 19mm	< 19mm			
Oversize Wet :	6%	6%	5%			
Oversize Dry :	6%	7%	6%			
Oversize Density - Dry (t/m ³) :	2.46	2.53	2.49			
Assigned MDR (Yes/No) :	No	No	No			
MDR Sample Number :	S/126352	S/126353	S/126354			
MDR Test Date :	22/10/2021	22/10/2021	24/10/2021			
Soil Description :	Sandy clay	Sandy clay	Sandy clay			
MDR Test Results						
MDD (t/m ³) :	1.81	1.79	1.74			
OMC :	16.0%	18.0%	18.0%			
ADJ MDD (t/m ³) :	1.84	1.83	1.77			
ADJ OMC :	15.0%	17.0%	17.0%			
Moisture Test Results						
Field Moisture Content :	15.5%	16.5%	17.0%			
Moisture Specification :	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC			
Variation from OMC :	1.0% Wet of OMC	0.5% Dry of OMC	0.0% Dry of OMC			
Relative Moisture Ratio (Q250) :	-	-	-			
Moisture Ratio :	105.5%	96.5%	99.0%			
Density Test Results						
Field Dry Density (t/m ³) :	1.83	1.81	1.76			
Density Specification :	98%	98%	98%			
Dry Density Ratio :	99.0%	99.0%	99.5%			
Degree of Saturation / Required :	-	-	-			
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>Kenney Pham - Signatory</p>		



Dry Density / Moisture Ratio Report

Client :	Shadforth				Report Number :	SR/PTP/07776 - 14/1	
Client Address :	99 Sandalwood Lane, Forest Glen, 4556, QLD				Report Date :	29/10/2021	
Project Name :	The Pocket Stage 1, Collingwood Park				Test Request :	-	
Project Number :	PTP/07776				Page 1 of 1		
Location :	Collingwood Park						
Test Methods :	AS1289.5.4.1, AS1289.5.8.1, AS1289.2.1.1, AS1289.5.1.1						
Sample Number :	S/126183	S/126184	S/126185	S/126186			
Date Tested :	19/10/2021	19/10/2021	19/10/2021	19/10/2021			
Material Source :	Onsite	Onsite	Onsite	Onsite			
For use as :	General Fill	General Fill	General Fill	General Fill			
Test / Layer Depths :	150 / 300	150 / 300	150 / 300	150 / 300			
Sampling Method :	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b			
Time :	10:00	10:05	10:10	10:15			
Lot Number :	-	-	-	-			
Location 1 :	E: 486139	E: 486140	E: 486108	E: 486109			
Location 2 :	N: 6944885	N: 6944860	N: 6944854	N: 6944871			
Location 3 :	F.L	F.L	F.L	F.L			
Location 4 :	-	-	-	-			
Test Fraction (mm) :	< 19mm	< 19mm	< 19mm	< 19mm			
Oversize Wet :	5%	6%	7%	7%			
Oversize Dry :	5%	7%	8%	8%			
Oversize Density - Dry (t/m³) :	2.55	2.50	2.54	2.50			
Assigned MDR (Yes/No) :	No	No	No	No			
MDR Sample Number :	S/126183	S/126184	S/126185	S/126186			
MDR Test Date :	23/10/2021	22/10/2021	20/10/2021	22/10/2021			
Soil Description :	Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay			
MDR Test Results							
MDD (t/m³) :	1.70	1.81	1.81	1.77			
OMC :	19.5%	18.5%	18.0%	17.5%			
ADJ MDD (t/m³) :	1.73	1.84	1.85	1.81			
ADJ OMC :	18.5%	17.5%	16.5%	16.0%			
Moisture Test Results							
Field Moisture Content :	18.0%	16.0%	16.0%	16.0%			
Moisture Specification :	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC			
Variation from OMC :	0.5% Dry of OMC	1.5% Dry of OMC	0.5% Dry of OMC	0.0% Dry of OMC			
Relative Moisture Ratio (Q250) :	-	-	-	-			
Moisture Ratio :	96.0%	92.0%	96.0%	98.5%			
Density Test Results							
Field Dry Density (t/m³) :	1.70	1.81	1.82	1.81			
Density Specification :	98%	98%	98%	98%			
Dry Density Ratio :	98.5%	98.0%	98.0%	99.5%			
Degree of Saturation / Required :	-	-	-	-			
Soil Particle Density (APD) t/m³ :							
Soil Particle Density (APD) Date :							
Remarks :							
 <p>Note: The results contained in this report relate only to the item/s that were tested/sampled</p> <p>Accredited for Compliance with ISO/ IEC 17025 - Testing</p> <p>Protest Engineering (Gold Coast) Accreditation Number - 19667</p> <p>Base Laboratory Site Number - 22838 - Gold Coast</p> <p>Base Laboratory Address - 8/36 Blanck Street, ORMEAU, QLD 4208</p>				<p>APPROVED SIGNATORY</p>  <p>Kenney Pham - Signatory</p>			



Dry Density / Moisture Ratio Report

Client :	Shadforth				Report Number :	SR/PTP/07776 - 15/1	
Client Address :	99 Sandalwood Lane, Forest Glen, 4556, QLD				Report Date :	29/10/2021	
Project Name :	The Pocket Stage 1, Collingwood Park				Test Request :	-	
Project Number :	PTP/07776				Page 1 of 1		
Location :	Collingwood Park						
Test Methods :	AS1289.5.4.1, AS1289.5.8.1, AS1289.2.1.1, AS1289.5.1.1						
Sample Number :	S/126129	S/126130	S/126131	S/126132			
Date Tested :	18/10/2021	18/10/2021	18/10/2021	18/10/2021			
Material Source :	Onsite	Onsite	Onsite	Onsite			
For use as :	General fill	General fill	General fill	General fill			
Test / Layer Depths :	150 / 300	150 / 300	150 / 300	150 / 300			
Sampling Method :	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b			
Time :	10:30	10:35	10:40	10:45			
Lot Number :	-	-	-	-			
Location 1 :	E: 486178	E: 486160	E: 486142	E: 486158			
Location 2 :	N: 6944869	N: 6944868	N: 6944883	N: 6944885			
Location 3 :	F.L	F.L	F.L	F.L			
Location 4 :	-	-	-	-			
Test Fraction (mm) :	< 19mm	< 19mm	< 19mm	< 19mm			
Oversize Wet :	8%	5%	6%	8%			
Oversize Dry :	8%	6%	7%	8%			
Oversize Density - Dry (t/m³) :	2.55	2.52	2.50	2.54			
Assigned MDR (Yes/No) :	No	No	No	No			
MDR Sample Number :	S/126129	S/126130	S/126131	S/126132			
MDR Test Date :	21/10/2021	22/10/2021	20/10/2021	19/10/2021			
Soil Description :	Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay			
MDR Test Results							
MDD (t/m³) :	1.77	1.85	1.84	1.77			
OMC :	15.0%	11.5%	10.5%	12.5%			
ADJ MDD (t/m³) :	1.82	1.87	1.87	1.82			
ADJ OMC :	13.5%	10.5%	10.0%	11.5%			
Moisture Test Results							
Field Moisture Content :	12.5%	9.5%	9.5%	11.5%			
Moisture Specification :	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC			
Variation from OMC :	1.0% Dry of OMC	1.0% Dry of OMC	0.5% Dry of OMC	0.0% Dry of OMC			
Relative Moisture Ratio (Q250) :	-	-	-	-			
Moisture Ratio :	91.5%	90.0%	95.0%	99.0%			
Density Test Results							
Field Dry Density (t/m³) :	1.79	1.87	1.85	1.80			
Density Specification :	98%	98%	98%	98%			
Dry Density Ratio :	98.5%	100.0%	99.0%	99.0%			
Degree of Saturation / Required :	-	-	-	-			
Soil Particle Density (APD) t/m³ :							
Soil Particle Density (APD) Date :							
Remarks :							
 <p>Note: The results contained in this report relate only to the item/s that were tested/sampled</p> <p>Accredited for Compliance with ISO/ IEC 17025 - Testing</p> <p>Protest Engineering (Gold Coast) Accreditation Number - 19667</p> <p>Base Laboratory Site Number - 22838 - Gold Coast</p> <p>Base Laboratory Address - 8/36 Blanck Street, ORMEAU, QLD 4208</p>				<p>APPROVED SIGNATORY</p>  <p>Kenney Pham - Signatory</p>			

Dry Density / Moisture Ratio Report

Client :	Shadforth			Report Number :	SR/PTP/07776 - 16/1	
Client Address :	99 Sandalwood Lane, Forest Glen, 4556, QLD			Report Date :	29/10/2021	
Project Name :	The Pocket Stage 1, Collingwood Park			Test Request :	-	
Project Number :	PTP/07776			Page 1 of 1		
Location :	Collingwood Park					
Test Methods :	AS1289.5.4.1, AS1289.5.8.1, AS1289.2.1.1, AS1289.5.1.1					
Sample Number :	S/125874	S/125875	S/125876			
Date Tested :	11/10/2021	11/10/2021	11/10/2021			
Material Source :	On Site	On Site	On Site			
For use as :	General Fill	General Fill	General Fill			
Test / Layer Depths :	150 / 300	150 / 300	150 / 300			
Sampling Method :	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b			
Time :	10:30	10:35	10:40			
Lot Number :	-	-	-			
Location 1 :	E: 486077	E: 486090	E: 486098			
Location 2 :	N: 6944894	N: 6944879	N: 6944872			
Location 3 :	RL: 31.18	RL: 31.18	RL: 31.18			
Location 4 :	-	-	-			
Test Fraction (mm) :	< 19mm	< 19mm	< 19mm			
Oversize Wet :	0%	0%	6%			
Oversize Dry :	0%	0%	7%			
Oversize Density - Dry (t/m ³) :	-	-	2.48			
Assigned MDR (Yes/No) :	No	No	No			
MDR Sample Number :	S/125874	S/125875	S/125876			
MDR Test Date :	13/10/2021	12/10/2021	14/10/2021			
Soil Description :	Sandy Clay	Sandy Clay	Sandy Clay			
MDR Test Results						
MDD (t/m ³) :	1.69	1.72	1.71			
OMC :	17.0%	14.0%	15.5%			
ADJ MDD (t/m ³) :	-	-	1.75			
ADJ OMC :	-	-	14.5%			
Moisture Test Results						
Field Moisture Content :	14.5%	12.5%	13.5%			
Moisture Specification :	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC			
Variation from OMC :	2.5% Dry of OMC	1.5% Dry of OMC	1.0% Dry of OMC			
Relative Moisture Ratio (Q250) :	-	-	-			
Moisture Ratio :	86.5%	88.0%	92.5%			
Density Test Results						
Field Dry Density (t/m ³) :	1.73	1.73	1.71			
Density Specification :	98%	98%	98%			
Dry Density Ratio :	102.5%	100.5%	98.0%			
Degree of Saturation / Required :	-	-	-			
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</p> <p>Accredited for Compliance with ISO/ IEC 17025 - Testing</p> <p>Protest Engineering (Gold Coast) Accreditation Number - 19667</p> <p>Base Laboratory Site Number - 22838 - Gold Coast</p> <p>Base Laboratory Address - 8/36 Blanck Street, ORMEAU, QLD 4208</p>				<p>APPROVED SIGNATORY</p>  <p>Kenney Pham - Signatory</p>		

Dry Density / Moisture Ratio Report

Client :	Shadforth				Report Number :	SR/PTP/07776 - 17/1	
Client Address :	99 Sandalwood Lane, Forest Glen, 4556, QLD				Report Date :	29/10/2021	
Project Name :	The Pocket Stage 1, Collingwood Park				Test Request :	-	
Project Number :	PTP/07776				Page 1 of 1		
Location :	Collingwood Park						
Test Methods :	AS1289.5.4.1, AS1289.5.8.1, AS1289.2.1.1, AS1289.5.1.1						
Sample Number :	S/125595	S/125596	S/125597	S/125598			
Date Tested :	8/10/2021	8/10/2021	8/10/2021	8/10/2021			
Material Source :	Onsite	Onsite	Onsite	Onsite			
For use as :	General Fill	General Fill	General Fill	General Fill			
Test / Layer Depths :	150 / -	150 / -	150 / -	150 / -			
Sampling Method :	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b	AS1289.1.2.1 - cl6.4b			
Time :	20:00	20:05	20:10	20:15			
Lot Number :	-	-	-	-			
Location 1 :	E: 486060	E: 486067	E: 486051	E: 486052			
Location 2 :	N: 6944884	N: 6944884	N: 6944891	N: 6944899			
Location 3 :	0.1m Bfl	0.1m Bfl	0.1m Bfl	0.1m Bfl			
Location 4 :	-	-	-	-			
Test Fraction (mm) :	< 19mm	< 19mm	< 19mm	< 19mm			
Oversize Wet :	8%	5%	7%	7%			
Oversize Dry :	9%	6%	8%	8%			
Oversize Density - Dry (t/m³) :	2.50	2.54	2.47	2.45			
Assigned MDR (Yes/No) :	No	No	No	No			
MDR Sample Number :	S/125595	S/125596	S/125597	S/125598			
MDR Test Date :	11/10/2021	9/10/2021	12/10/2021	9/10/2021			
Soil Description :	Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay			
MDR Test Results							
MDD (t/m³) :	1.92	1.92	1.70	1.93			
OMC :	14.0%	15.0%	17.0%	13.0%			
ADJ MDD (t/m³) :	1.96	1.95	1.74	1.97			
ADJ OMC :	12.5%	14.0%	16.0%	12.0%			
Moisture Test Results							
Field Moisture Content :	12.0%	12.5%	15.5%	11.5%			
Moisture Specification :	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC	+/-2.0% of OMC			
Variation from OMC :	1.0% Dry of OMC	1.5% Dry of OMC	0.0% Dry of OMC	0.5% Dry of OMC			
Relative Moisture Ratio (Q250) :	-	-	-	-			
Moisture Ratio :	93.0%	88.0%	98.5%	95.5%			
Density Test Results							
Field Dry Density (t/m³) :	1.95	1.94	1.72	1.94			
Density Specification :	98%	98%	98%	98%			
Dry Density Ratio :	99.5%	99.5%	99.0%	99.0%			
Degree of Saturation / Required :	-	-	-	-			
Soil Particle Density (APD) t/m³ :							
Soil Particle Density (APD) Date :							
Remarks :							
 <p>Note: The results contained in this report relate only to the item/s that were tested/sampled</p> <p>Accredited for Compliance with ISO/ IEC 17025 - Testing</p> <p>Protest Engineering (Gold Coast) Accreditation Number - 19667</p> <p>Base Laboratory Site Number - 22838 - Gold Coast</p> <p>Base Laboratory Address - 8/36 Blanck Street, ORMEAU, QLD 4208</p>				<p>APPROVED SIGNATORY</p>  <p>Kenney Pham - Signatory</p>			



GEOTECHNICAL // TESTING SERVICES // STRUCTURAL

Attachment 4
Referenced Drawings

GENERAL NOTES:

1.

THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, PLANT AND EQUIPMENT TO CONSTRUCT THE WORKS AS DOCUMENTED AND STRICTLY IN ACCORDANCE WITH THE RELEVANT AUTHORITY STANDARDS, SPECIFICATIONS AND REQUIREMENTS.
2.

THE EXISTING SERVICES THAT ARE SHOWN ON THE DRAWINGS ARE PROVIDED FOR INFORMATION PURPOSES ONLY. NO RESPONSIBILITY IS TAKEN BY THE SUPERINTENDENT OR THE PRINCIPAL FOR INFORMATION THAT HAS BEEN SUPPLIED BY OTHERS, OR ANY EXISTING SERVICES THAT MAY BE PRESENT NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL VERIFY THE POSITION OF ANY UNDERGROUND SERVICES WITHIN THE AREAS OF WORKS AND SHALL BE RESPONSIBLE FOR MAKING GOOD ANY DAMAGE THERETO. ANY ALTERATION WORKS TO SERVICES WILL BE CARRIED OUT ONLY BY THE SERVICE OWNER AUTHORITY UNLESS APPROVED OTHERWISE.
3.

ALL CONSTRUCTION ACTIVITIES UNDERTAKEN SHALL COMPLY WITH CURRENT WORKPLACE HEALTH AND SAFETY REQUIREMENTS AND LEGISLATION.
4.

PRIOR TO COMMENCING WORK, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL RELEVANT LOCAL AUTHORITY PERMITS.
5.

THE CONTRACTOR SHALL NOT COMMENCE THE DEMOLITION OF ANY EXISTING BUILDINGS AND/OR STRUCTURES WITHOUT APPROVAL FROM THE SUPERINTENDENT.
6.

THE CONTRACTOR SHALL APPLY INDUSTRY BEST PRACTICE SO WORKS SHALL NOT DISTURB OR AFFECT NEARBY RESIDENTS EITHER BY DUST, NOISE, FLOODING OR DISCONNECTION OF SERVICES. CONTRACTOR TO ENSURE THAT ACCESS AND SERVICES TO EXISTING PROPERTIES ARE AVAILABLE AT ALL TIMES.
7.

THE CONTRACTOR SHALL VERIFY LEVELS OF EXISTING SERVICE CROSSINGS AND CONNECTION POINTS PRIOR TO COMMENCEMENT OF WORKS AND NOTIFY SUPERINTENDENT OF ANY DISCREPANCIES BETWEEN ACTUAL AND PROPOSED DESIGN LEVELS.
8.

THESE ENGINEERING DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE APPROVED VEGETATION MANAGEMENT PLAN, WHERE APPLICABLE. WHEN IN DOUBT, ALL EXISTING TREES ARE TO REMAIN UNLESS DIRECTED OTHERWISE.
9.

HOLD POINT: ONCE THE BASE OF MANHOLES, INSPECTION PITS, GULLIES AND FIELD INLETS FOR STORMWATER DRAINAGE AND SEWER RETICULATION HAVE BEEN POURED, CONSTRUCTION SHALL ONLY RE-COMMENCE ONCE THE SUPERINTENDENT AND/OR ENGINEER HAVE INSPECTED THE WORKS.
10.

THE CONTRACTOR SHALL NOTE DURING THE COURSE OF THE WORKS WHEN JOINT INSPECTIONS WITH THE AUTHORITY AND THE SUPERINTENDENT ARE REQUIRED. THESE INCLUDE PRE-STARTS, SUBGRADES, PRE-SEALS, CLEARING, AND OTHER SUCH INSPECTIONS AS NOMINATED IN THE APPROVAL AND THE SPECIFICATIONS. THE CONTRACTOR SHALL ENSURE NO WORKS PROCEED PAST THE INSPECTION POINT UNTIL THE JOINT INSPECTION HAS BEEN SUCCESSFULLY COMPLETED.
11.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SAFE MOVEMENT OF TRAFFIC AND THE PROTECTION OF PERSON AND PROPERTY THROUGH AND AROUND THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC MANAGEMENT INCLUDING THE DESIGN, CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ROADWAYS, DETOURS, SIGNS, LIGHTS AND BARRIER AS REQUIRED STRICTLY IN ACCORDANCE WITH THE RELEVANT AUTHORITY REQUIREMENTS.

BULK EARTHWORKS NOTES

1.

NOTWITHSTANDING THE EXTENTS OF CUTTING AND FILLING SHOWN ON DRAWINGS, THE SUPERINTENDENT RESERVES THE RIGHT TO ADJUST THE FINISHED SURFACE LEVELS AND EARTHWORKS EXTENTS THROUGH WRITTEN DIRECTION.
2.

THE CONTRACTOR SHALL UNDERTAKE ALL CLEARING USING INDUSTRY BEST PRACTICE INCLUDING CONSIDERATION OF FAUNA RELOCATION.
3.

THE CONTRACTOR SHALL UNDERTAKE ALL EARTHWORKS IN ACCORDANCE WITH AS3798-2007 AND LOCAL AUTHORITY REQUIREMENTS. LEVEL 1 SUPERVISION IS REQUIRED.
4.

THE CONTRACTOR SHALL CONSIDER LOADS GENERATED BY THE EARTHWORKS OPERATIONS SO AS TO AVOID DAMAGE TO ALL PIPES, SERVICES AND STRUCTURES.
5.

THE EARTHWORKS DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT'S SEDIMENT AND EROSION CONTROL PLAN, WHERE APPLICABLE.
6.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLANNING, DESIGN, CERTIFICATION, IMPLEMENTATION AND MAINTENANCE OF AN EROSION AND SEDIMENT CONTROL PLAN THAT IS COMPLIANT WITH THE INTERNATIONAL EROSION CONTROL ASSOCIATION (IECA) GUIDELINE 'BEST PRACTICE EROSION AND SEDIMENT CONTROL' AND RELEVANT COUNCIL POLICIES.
7.

ALLOTMENT FINISHED SURFACE LEVELS, SHOWN ON THE LAYOUT PLAN, INDICATE THE FINISHED SURFACE LEVEL AFTER TOPSOIL PLACEMENT.

ROADWORKS AND DRAINAGE NOTES

1.

ALL WORKS SHALL BE IN ACCORDANCE WITH THE RELEVANT AUTHORITY'S STANDARD DRAWINGS, METHODS AND SPECIFICATIONS.
2.

NOTWITHSTANDING THE EXTENTS OF CUTTING AND FILLING SHOWN ON DRAWINGS, THE SUPERINTENDENT RESERVES THE RIGHT TO ADJUST THE FINISHED SURFACE LEVELS AND EARTHWORKS EXTENTS THROUGH WRITTEN DIRECTION.
3.

NEW CONSTRUCTION SHALL BE NEATLY JOINED TO EXISTING FORMATION. WHERE REQUIRED, THE EXISTING FORMATION SHALL BE SAW CUT IN ACCORDANCE WITH IPWEAQ STD DRG RS-170. LEVELS AND GRADIENTS AT CONNECTIONS WITH EXISTING WORKS MAY BE VARIED AS REQUIRED TO ACHIEVE A SMOOTH CONNECTION.
4.

THE CONTRACTOR SHALL UNDERTAKE ALL EARTHWORKS IN ACCORDANCE WITH AS3798-2007 AND LOCAL AUTHORITY REQUIREMENTS. LEVEL 1 SUPERVISION IS REQUIRED.
5.

THE CONTRACTOR SHALL SUPPLY THE SUPERINTENDENT WITH THE SUBGRADE TEST RESULTS NECESSARY FOR ALL PAVEMENT DESIGN.
6.

THE CONTRACTOR SHALL ENSURE A MINIMUM OF 75mm TOPSOIL TO ALL VERGE AND BATTER AREAS (AND STABILISATION AS ORDERED)
7.

THE CONTRACTOR SHALL INSTALL ALL FOOTPATH AND PRAM RAMPS IN COMPLIANCE WITH THE AUTHORITY'S STANDARD DRAWINGS. PRAM RAMPS ARE TO BE LOCATED CLEAR OF DRAINAGE GULLY PITS AND FUTURE DRIVEWAY POSITIONS INDICATED ON THE LAYOUT PLANS.
8.

THE CONTRACTOR SHALL INSTALL SUBSOIL DRAINS UNDER ALL KERBS AS REQUIRED BY THE LOCAL AUTHORITY'S STANDARDS.
9.

THE CONTRACTOR SHALL ENSURE THAT ALL RETAINING WALL SUBSOIL DRAINS ARE TO CONNECT TO EITHER KERB ADAPTORS, KERB SUBSOIL DRAINS OR STORMWATER DRAINAGE STRUCTURES. CONTRACTOR TO DEMONSTRATE TO SUPERINTENDENT THAT SUITABLE CONNECTIONS HAVE BEEN PROVIDED FOR ALL WALLS.
10.

ALL STORMWATER DRAINAGE MATERIALS, BEDDING, JOINTING AND STEP IRON REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE RELEVANT AUTHORITY'S STANDARD DRAWINGS, METHODS AND SPECIFICATIONS.
11.

THE STORMWATER PIPE CLASSES HAVE BEEN DESIGNED FOR SERVICE LOADS ONLY. THE CONTRACTOR SHALL ASSESS THE SUITABILITY OF MACHINERY USED ON SITE AND THE ANTICIPATED CONSTRUCTION LOADS, AND UPGRADE THE PIPE CLASSES IF NECESSARY IN ACCORDANCE WITH AS3725-2007.
12.

THE TERM D₅₀ DOCUMENTED ON THE DRAWINGS, IN RELATION TO ROCK ARMORING, CORRESPONDS TO THE REQUIRED MEDIAN DIAMETER OF THE PLACED ROCKS. THE ROCKS USED SHALL NOT VARY IN SIZE BY +/- 30% OF THE PROPOSED D₅₀ SIZE.

ROOFWATER NOTES

1.

THE GEOMETRIC CENTRE SHALL BE TAKEN AS THE SETOUT POINT FOR ALL STRUCTURES, UNLESS DETAILED OTHERWISE.
2.

ROOFWATER ALIGNMENT, COVER, MATERIALS, BEDDING, JOINTING AND STEP IRON REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE RELEVANT AUTHORITY'S STANDARD DRAWINGS, METHODS AND SPECIFICATIONS.
3.

ALL PVC PIPES ARE TO BE MINIMUM CLASS SN8.
4.

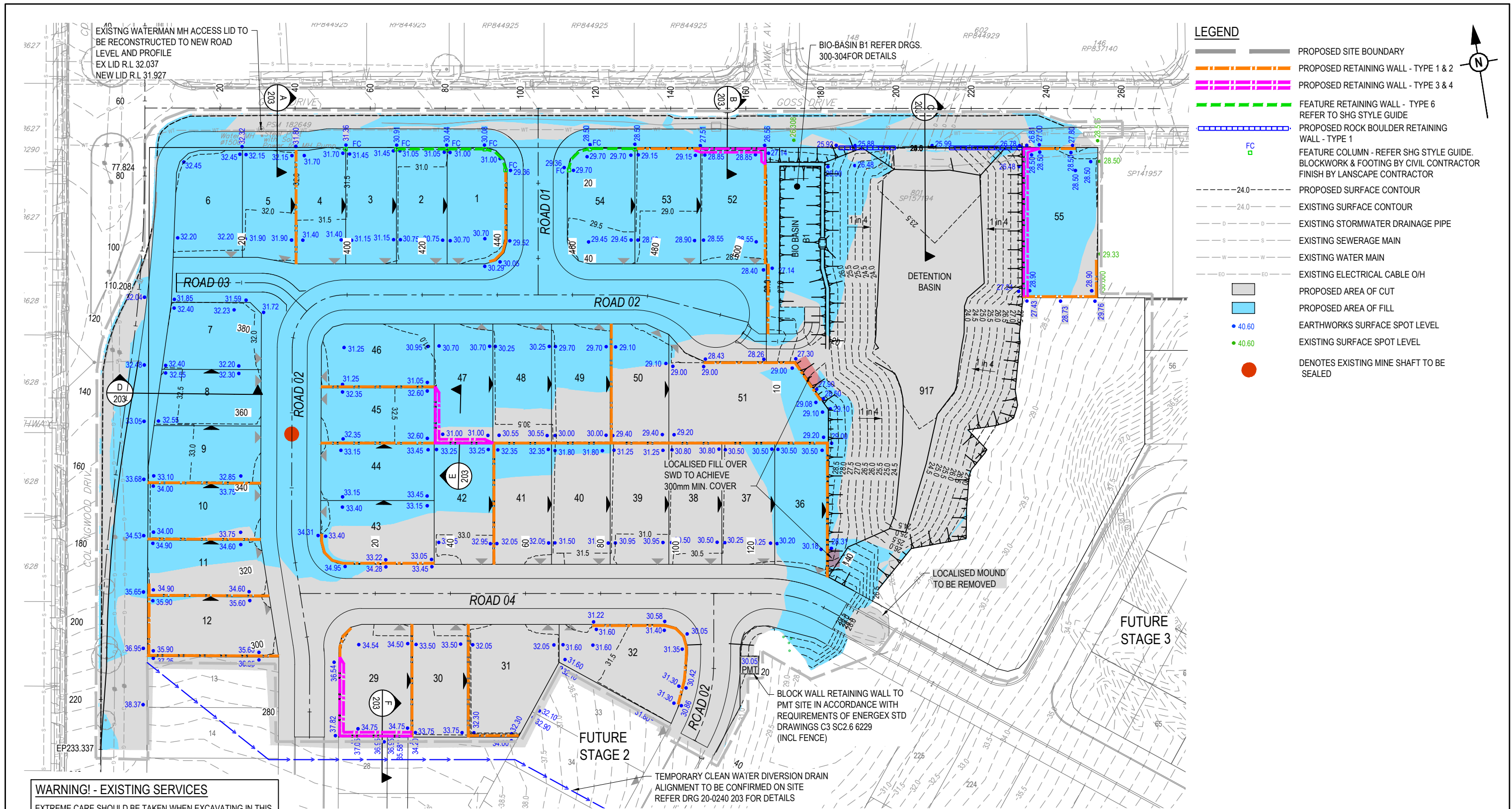
END CAPS SHALL BE INSTALLED ON ENDS OF ALL PIPES AND STUBS.
5.

WHERE ROOFWATER PIPES ARE ALIGNED BEHIND PROPOSED RETAINING WALLS, THE CONTRACTOR IS TO REFER TO THE SPECIFIC PROJECT DESIGN DETAILS AND CONFIRM CLEARANCES WITH THE SUPERINTENDENT PRIOR TO LAYING OF THE PIPES.
6.

PROPERTY CONNECTIONS SHALL BE 100Ø UNLESS SHOWN OTHERWISE. THE CONTRACTOR SHALL EXTEND CONNECTIONS A MINIMUM OF 1.0m BEYOND ADJACENT SEWER LINES, WHERE APPLICABLE.
7.

IN INSTANCES WHERE REAR ALLOTMENT DRAINAGE IS NOT PROVIDED, THE CONTRACTOR SHALL INSTALL A ROOFWATER CONNECTION TO EACH PROPERTY BY ONE OF THE FOLLOWING METHODS, AS SHOWN ON THE LAYOUT PLAN:
- TWO ROOFWATER KERB ADAPTOR ALIGNED AS PER DETAIL ON DRAWING 20-0240-205 (UNLESS SHOWN ON A DIFFERENT ALIGNMENT). WHERE THERE IS A CONCRETE FOOTPATH, A ROOFWATER PIPE SHALL BE INSTALLED FROM THE PROPERTY BOUNDARY CONNECTED TO THE KERB ADAPTOR AT 1.25% MINIMUM GRADE IN ACCORDANCE WITH COUNCIL'S STANDARDS.
- ONE 150Ø ROOFWATER PIPE CONNECTED TO PROPOSED STORMWATER GULLY PIT OR MANHOLE AT MINIMUM 1.0% GRADE WITH 1.0m COVER.

REV	DATE	DESIGN	DRAWN	REVISION DETAILS			DRAWN	STATUS	<div><div></div><div>PEAKURBAN</div><div>Achieve more.</div></div> <div>ENQUIRIES@PEAKURBAN.COM.AU</div>	SCALE	CLIENT	PROJECT NAME	DRAWING TITLE		
1	23.04.21	DC	SC	ORIGINAL ISSUE			DC	NOT FOR CONSTRUCTION		HB QLD PTY LTD	THE POCKET STAGE 1	GENERAL NOTES			
2	06.07.21	DC	DC	GENERAL AMENDMENT											
							DESIGN	APPROVED	TROY SCHULTZ <div></div> <div>RPEQ 20631</div> <div>FOR AND ON BEHALF OF PEAKURBAN PTY LTD</div>	ASSOCIATED CONSULTANT SAUNDERS HAVILL GROUP 1300 123 744	280 COLLINGWOOD DRIVE COLLINGWOOD PARK	PROJECT No.	DRAWING No.	REVISION	
							DC					20-0240	201	2	



WARNING! - EXISTING SERVICES

EXTREME CARE SHOULD BE TAKEN WHEN EXCAVATING IN THIS AREA. THE FOLLOWING EXISTING SERVICES ARE LIKELY TO BE PRESENT IN THE VICINITY OF THE SITE:

- ELECTRICAL CABLES
- TELECOMMUNICATIONS CABLES
- GAS MAINS
- WATER MAINS
- SEWER MAINS

THE CONTRACTOR SHOULD CONTACT THE SERVICE PROVIDER FOR FURTHER INFORMATION AND SATISFY THEMSELVES OF ANY SPECIFIC TREATMENT OR REQUIREMENTS.

EXISTING MINING SHAFT TO BE SEALED

EXISTING MINE SHAFT TO BE LOCATED AND SEALED BY APPROPRIATELY QUALIFIED CIVIL CONTRACTOR.

ALL WORKS TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE DOUGLAS PARTNERS GEOTECHNICAL INVESTIGATION REPORT 200473.00 DATED FEBRUARY 2021 AND TO SATISFY THE APPROPRIATE COUNCIL AND STATE PROCEDURES.

QA DOCUMENTATION TO BE PROVIDED PRIOR PRACTICAL COMPLETION.

REV	DATE	DESIGN	DRAWN	REVISION DETAILS	DRAWN	STATUS	CLIENT	PROJECT NAME	DRAWING TITLE
1	23.04.21	DC	SC	ORIGINAL ISSUE	DC	NOT FOR CONSTRUCTION	HB QLD PTY LTD	THE POCKET STAGE 1	BULK EARTHWORKS LAYOUT PLAN
2	06.07.21	DC	DC	WALLS AMENDED	DC				
					DESIGN	APPROVED TROY SCHULTZ RPEQ 20631	ASSOCIATED CONSULTANT SAUNDERS HAVILL GROUP 1300 123 744	280 COLLINGWOOD DRIVE COLLINGWOOD PARK	PROJECT No. 20-0240
					DC	FOR AND ON BEHALF OF PEAKURBAN PTY LTD			DRAWING No. 202
						ENQUIRIES@PEAKURBAN.COM.AU			REVISION 2