Haynes Consulting Engineers Pty Ltd
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LEVEL 2 CERTIFICATION

24 Lots at Swagmans Ridge, and Cattlemans Court,
Chatsworth
Lots 63-85, 87 on SP328631

CONTENTS

3th August 2022 File No 2005

To: Roberts Bros. Pty Ltd
(by email)

LEVEL 2 CERTIFICATION

24 Lots at Swagmans Ridge, and Cattlemans Court,
Chatsworth
Lots 63-85, 87 on SP328631

This letter provides Level 2 certification to AS3798-2007 'Guidelines on earthworks for commercial and residential developments' and includes the results of testing conducted during filling earthworks on proposed lots 63-85, and 87 on SP328631.

Roberts Brothers Pty Ltd personnel and sub-contractors undertook the cut to fill and compaction using existing site material to create house sites.

Inspections of surface stripping (to remove organic topsoil), removal of unsuitable materials and subgrade proof rolling prior to filling were completed.

Determination of field density of compacted fill in accordance with AS1289 was completed by Douglas Partners Pty Ltd as attached. The compaction tests show that results were above the required 95% Standard Compaction. Test locations are shown on the attached plans 2005-CS3A sheet numbers R2-R4 inclusive Revision 1.

This certification only provides an assurance of the density of the fill tested, and suitability of the stripped surface for placement of that fill. This certification does not address any other issues that may be relevant to foundation and building construction.

Please refer to report limitations attached, the Client in this instance is Roberts Brothers Pty Ltd.

Regards,

A Haynes BE Civil (Hons) RPEQ MIEAust CPEng

LIMITATIONS

This report is provided for the sole use by the Client and its professional advisers. No responsibility whatsoever for the contents of this report will be accepted to any person other than the Client. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, is the responsibility of such third parties. Haynes Consulting Engineers accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Haynes Consulting Engineers did not perform a complete assessment of all possible conditions or circumstances that may exist at the site referenced in the report. If a service is not expressly indicated, do not assume it has been provided. If a matter is not addressed, do not assume that any determination has been made by Haynes Consulting Engineers in regards to it.

Conditions may exist which were undetectable given that economic and time constraints limit the practical extent of investigation. Variations in conditions may occur between investigation locations, and there may be special conditions pertaining to the site which have not been revealed by the investigation and which have not therefore been taken into account in the report.

Where variations exist on site, additional studies and actions may be required.
Haynes Consulting Engineers's opinions are based upon information that existed at the time that the works were performed. The passage of time, man-made or natural events, may alter the site conditions. It is understood that the Services undertaken allowed Haynes Consulting Engineers to form an opinion of the actual conditions of the site at the time the site was visited and cannot be used to assess the effect of any subsequent changes in the quality of the site, or its surroundings, or any laws or regulations.

Any assessments made in this report are based on the conditions indicated from published sources and the findings of the investigation described. Actual subsurface conditions may differ from those indicated in the report (e.g. between boreholes or test pits). No warranty is included, either express or implied, that the actual conditions will conform exactly to the assessments contained in this report.

Where data supplied by the client or other external sources, including previous site investigation data, have been used, it has been assumed that the information is correct unless otherwise stated. No responsibility is accepted by Haynes Consulting Engineers for incomplete or inaccurate data supplied by others.

Geotech (S.C.) Pty Ltd ACN 074 982 979 ABN 39 074 982 979
Geotechnical Testing Authority

3 Bearing Ave
Warana Qld 4575
PO Box 2
Buddina Qld 4575
Telephone: (07) 5493 1733
Facsimile: (07) 5493 6019
Email: geotechs@ozemail.com.au

Dry Density Ratio Report

Client :	**Roberts Bros.**	Report Number:	**G17058 - 25/1**
Address:	**123 Maple St Cooroy Qld 4563**		
Job Number :	**G17058**	Report Date :	**13/11/2017**
Project :	**Field & Laboratory Testing**	Order Number:	
Location :	**Stage 2 , Chatsworth**	Test Method:	**AS1289.5.4.1**

Lab No :	**110290**	**110291**	**110292**	**110293**
ID No :	-	-	-	-
Lot No :	-	-	-	-
Item No :	-	-	-	-
Date Sampled :	**8/11/2017**	**8/11/2017**	**8/11/2017**	**8/11/2017**
Date/Time Tested :	**8/11/2017 / 2.40**	**8/11/2017 / 2.50**	**8/11/2017 / 3.00**	**8/11/2017 / 3.10**
Material Source :	**Site**	**Site**	**Site**	**Site**
For Use As :	**Fill**	**Fill**	**Fill**	**Fill**
Sample Location :	Lot 76 E 0462576 N 7108126 Approx 0.5m < Final Lvl	Lot 76 E 0462584 N 7108117 Final Fill Lvl	Lot 63 E 0462603 N 7108193 Approx 0.5m < Final Lvl	Lot 63 E 0462617 N 7108182 Final Fill Lvl
Test/Layer Depth (mm)	**150 /**	**150 /**	**150 /**	**150 /**
Max Size (mm) :	**19.0**	**19.0**	**19.0**	**19.0**
Oversize Wet (%) :	**10**	**12**	**13**	**9**
Oversize Dry (%) :	**11**	**14**	**15**	**10**
Field Moisture (%) :	**12.7**	**11.4**	**10.9**	**11.0**
MDR No :	**110290**	**110291**	**110292**	**110293**
Assigned MDR :	**No**	**No**	**No**	**No**
Field Dry Density (t/m³)	**1.83**	**1.85**	**1.76**	**1.82**
MDD (t/m³) :	**1.84***	**1.89***	**1.83***	**1.90***
OMC (%) :	**14.5**	**14.0**	**15.0**	**14.5**
Variation from OMC	**2% dry of omc**	**2.5% dry of omc**	**4% dry of omc**	**3.5% dry of omc**
Field Density Method :	**AS1289.5.8.1**	**AS1289.5.8.1**	**AS1289.5.8.1**	**AS1289.5.8.1**
MC Method :	**AS 1289.2.1.1**	**AS 1289.2.1.1**	**AS 1289.2.1.1**	**AS 1289.2.1.1**
Compactive Effort :	**Standard**	**Standard**	**Standard**	**Standard**
Moisture Ratio / Spec(%) :	**86.5 / -**	**81.5 / -**	**73 / -**	**75 / -**
Dry Density Ratio (%) :	**101.0**	**99.5**	**98.0**	**97.0**
Min Dry Dens Ratio (%)	**95**	**95**	**95**	**95**

Remarks :

*** - Denotes corrected for oversize**

NATA
WORLD RECOGNISED ACCREDITATION

Accredited for compliance with ISO/IEC 17025-Testing

APPROVED SIGNATORY

Mel Burnett

NATA Accred No:1551

FORM NUMBER

REP ANUC-1-3

Material Test Report

Douglas Partners
Geotechnics / Environment / Groundwater
Douglas Partners Pty Ltd
Sunshine Coast Laboratory
1/28 Kessling Avenue Kunda Park QLD 4556
Phone: (07) 5351 0400
Email: Shae.Harry@douglaspartners.com.au

Report Number:	**205535.00-36**
Issue Number:	1
Date Issued:	24/02/2022
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	16882
Date Sampled:	16/02/2022
Dates Tested:	16/02/2022 - 18/02/2022
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Shae Harry
Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-16882A	SS-16882B	
Date Tested	16/02/2022	16/02/2022	
Time Tested	13:00	13:10	
Test Request #/Location	Bulk Earthworks Lot 87	Bulk Earthworks Lot 87	
Easting	462468	462451	
Northing	7107883	7107884	
Elevation (m)	0.3 < F.L.	0.8 < F.L.	
Thickness of Layer (mm)	150	150	
Soil Description	Gravelly Clay	Gravelly Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	2.18	2.21	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	2.05	2.20	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	2.5	0.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**106.5**	**100.5**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
Geotechnics / Environment / Groundwater
Douglas Partners Pty Ltd
Sunshine Coast Laboratory
1/28 Kessling Avenue Kunda Park QLD 4556
Phone: (07) 5351 0400
Email: Shae.Harry@douglaspartners.com.au

Report Number:	**205535.00-37**
Issue Number:	1
Date Issued:	24/02/2022
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	16883
Date Sampled:	16/02/2022
Dates Tested:	16/02/2022 - 18/02/2022
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Shae Harry
Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-16883A		
Date Tested	16/02/2022		
Time Tested	13:27		
Test Request #/Location	Bulk Earthworks Lot 81		
Easting	462619		
Northing	7108108		
Elevation (m)	0.3 < F.L.		
Thickness of Layer (mm)	150		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Field Wet Density (FWD) t/m^3	2.27		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	2.23		
Adjusted Peak Converted Wet Density t/m^3	**		
Moisture Variation (Wv) %	2.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	**101.5**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
Geotechnics / Environment / Groundwater
Douglas Partners Pty Ltd
Sunshine Coast Laboratory
1/28 Kessling Avenue Kunda Park QLD 4556
Phone: (07) 5351 0400
Email: martin.cook@douglaspartners.com.au

Report Number:	**205535.00-42**
Issue Number:	1
Date Issued:	17/05/2022
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	17853
Date Sampled:	06/05/2022
Dates Tested:	06/05/2022 - 16/05/2022
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	78
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-17853A		
Date Tested	05/05/2022		
Time Tested	03:00		
Test Request #/Location	Lot 78		
Easting	462683		
Northing	7107998		
Elevation (m)	F.L.		
Thickness of Layer (mm)	150		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Field Wet Density (FWD) t/m^3	2.17		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	2.17		
Adjusted Peak Converted Wet Density t/m^3	**		
Moisture Variation (Wv) %	-0.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	**100.0**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
Geotechnics / Environment / Groundwater
Douglas Partners Pty Ltd
Sunshine Coast Laboratory
1/28 Kessling Avenue Kunda Park QLD 4556
Phone: (07) 5351 0400
Email: martin.cook@douglaspartners.com.au

Report Number:	**205535.00-43**
Issue Number:	1
Date Issued:	17/05/2022
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	17854
Date Sampled:	05/05/2022
Dates Tested:	06/05/2022 - 16/05/2022
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	77
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-17854A		
Date Tested	05/05/2022		
Time Tested	03:10		
Test Request #/Location	Lot 77		
Easting	462713		
Northing	7107971		
Elevation (m)	F.L.		
Thickness of Layer (mm)	150		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	19		
Field Wet Density (FWD) t/m^3	2.21		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	**		
Adjusted Peak Converted Wet Density t/m^3	2.29		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	0.0		
Hilf Density Ratio (%)	**96.5**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
Geotechnics / Environment / Groundwater
Douglas Partners Pty Ltd
Sunshine Coast Laboratory
1/28 Kessling Avenue Kunda Park QLD 4556
Phone: (07) 5351 0400
Email: martin.cook@douglaspartners.com.au

Report Number:	**205535.00-47**
Issue Number:	1
Date Issued:	21/06/2022
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	18245
Date Sampled:	15/06/2022
Dates Tested:	15/06/2022 - 16/06/2022
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	81
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-18245A		
Date Tested	15/06/2022		
Time Tested	08:50		
Test Request #/Location	Lot 81		
Easting	462634		
Northing	7108103		
Elevation (m)	F.L.		
Thickness of Layer (mm)	150		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	6		
Field Wet Density (FWD) t/m^3	2.25		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	**		
Adjusted Peak Converted Wet Density t/m^3	2.21		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	1.0		
Hilf Density Ratio (%)	**101.5**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
Geotechnics / Environment / Groundwater
Douglas Partners Pty Ltd
Sunshine Coast Laboratory
1/28 Kessling Avenue Kunda Park QLD 4556
Phone: (07) 5351 0400
Email: martin.cook@douglaspartners.com.au

Report Number:	**205535.00-48**
Issue Number:	1
Date Issued:	21/06/2022
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	18246
Date Sampled:	15/06/2022
Dates Tested:	15/06/2022 - 16/06/2022
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	72
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-18246A		
Date Tested	15/06/2022		
Time Tested	09:00		
Test Request #/Location	Lot 72		
Easting	462847		
Northing	7107977		
Elevation (m)	F.L.		
Thickness of Layer (mm)	150		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	6		
Field Wet Density (FWD) t/m^3	2.13		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	**		
Adjusted Peak Converted Wet Density t/m^3	2.23		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	0.5		
Hilf Density Ratio (%)	**95.5**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
Geotechnics / Environment / Groundwater
Douglas Partners Pty Ltd
Sunshine Coast Laboratory
1/28 Kessling Avenue Kunda Park QLD 4556
Phone: (07) 5351 0400
Email: martin.cook@douglaspartners.com.au

Report Number:	**205535.00-50**
Issue Number:	1
Date Issued:	19/07/2022
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	18613
Date Sampled:	29/06/2022
Dates Tested:	29/06/2022 - 13/07/2022
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	76
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-18613A	SS-18613B	
Date Tested	29/06/2022	29/06/2022	
Time Tested	13:01	13:09	
Test Request #/Location	Lot 76	Lot 76	
Easting	462765	462757	
Northing	7107933	7107940	
Elevation (m)	0.8 < F.L.	0.4 < F.L.	
Thickness of Layer (mm)	150	150	
Soil Description	Gravelly Clay	Gravelly Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	2.10	2.07	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	2.06	2.06	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	-1.0	0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**102.0**	**100.5**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
Geotechnics / Environment / Groundwater
Douglas Partners Pty Ltd
Sunshine Coast Laboratory
1/28 Kessling Avenue Kunda Park QLD 4556
Phone: (07) 5351 0400
Email: martin.cook@douglaspartners.com.au

Report Number:	**205535.00-51**
Issue Number:	1
Date Issued:	19/07/2022
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	18616
Date Sampled:	29/06/2022
Dates Tested:	29/06/2022 - 12/07/2022
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	83
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-18616A		
Date Tested	29/06/2022		
Time Tested	13:25		
Test Request #/Location	Lot 83		
Easting	462659		
Northing	710802		
Elevation (m)	0.6 < F.L.		
Thickness of Layer (mm)	150		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Field Wet Density (FWD) t/m^3	2.08		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	2.09		
Adjusted Peak Converted Wet Density t/m^3	**		
Moisture Variation (Wv) %	-3.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	**99.5**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
Geotechnics / Environment / Groundwater
Douglas Partners Pty Ltd
Sunshine Coast Laboratory
1/28 Kessling Avenue Kunda Park QLD 4556
Phone: (07) 5351 0400
Fax: (07) 5351 0499
Email: martin.cook@douglaspartners.com.au

Report Number:	**205535.00-1**
Issue Number:	2 - *This version supersedes all previous issues*
Reissue Reason:	*Client request for lots to be on separate reports*
Date Issued:	30/06/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	13092
Date Sampled:	03/06/2021
Dates Tested:	03/06/2021 - 04/06/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13092A	SS-13092B	
Date Tested	03/06/2021	03/06/2021	
Time Tested	10:55	11:04	
Test Request #/Location	Lot 81	Lot 81	
Easting	0462608	0462620	
Northing	7108097	7108107	
Elevation (m)	1.6 < F.L	1.0 < F.L	
Soil Description	Gravelly Clay	Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	2.08	1.94	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	2.03	1.97	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	-0.5	-2.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**102.5**	**98.5**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
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Report Number:	**205535.00-1**
Issue Number:	3 - *This version supersedes all previous issues*
Reissue Reason:	*Client request for lots to be on separate reports*
Date Issued:	30/06/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	13092
Date Sampled:	03/06/2021
Dates Tested:	03/06/2021 - 07/06/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13092C	SS-13092D	
Date Tested	03/06/2021	03/06/2021	
Time Tested	11:16	11:22	
Test Request #/Location	Lot 67	Lot 67	
Easting	0462804	0462788	
Northing	7108189	7108193	
Elevation (m)	1.5 < F.L	0.7 < F.L	
Soil Description	Sandy Clay	Sandy Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	2.05	2.15	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	2.07	2.06	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	0.0	0.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**99.0**	**104.0**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

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Report Number: **205535.00-3**
Issue Number: 1
Date Issued: 05/07/2021
Client: Roberts Bros Pty Ltd
123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact: John Roberts
Project Number: 205535.00
Project Name: Proposed Subdivision
Project Location: Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request: 13451
Date Sampled: 29/06/2021
Dates Tested: 29/06/2021 - 02/07/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Hilf Density Ratio
Location: Bulk Earthworks
Material Source: Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13451A	SS-13451B	
Date Tested	29/06/2021	29/06/2021	
Time Tested	10:55	11:03	
Test Request #/Location	Lot 64	Lot 64	
Easting	462652	462646	
Northing	7108166	708170	
Elevation (m)	0.4 < F.L.	1.0 < F.L.	
Soil Description	Gravelly Clay	Gravelly Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	2.15	2.18	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	2.00	2.06	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	0.0	2.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**107.5**	**106.0**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

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Email: martin.cook@douglaspartners.com.au

Report Number: **205535.00-4**
Issue Number: 1
Date Issued: 05/07/2021
Client: Roberts Bros Pty Ltd
123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact: John Roberts
Project Number: 205535.00
Project Name: Proposed Subdivision
Project Location: Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request: 13454
Date Sampled: 29/06/2021
Dates Tested: 29/06/2021 - 02/07/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Hilf Density Ratio
Location: Bulk Earthworks
Material Source: Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13454A	SS-13454B	
Date Tested	29/06/2021	29/06/2021	
Time Tested	11:10	11:16	
Test Request #/Location	Lot 65	Lot 65	
Easting	462674	462691	
Northing	7108147	7108137	
Elevation (m)	0.3 < F.L.	1.1 < F.L.	
Soil Description	Gravelly Clay	Gravelly Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	2.20	2.16	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	2.08	2.17	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	1.5	1.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**106.0**	**99.5**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

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Report Number: **205535.00-5**
Issue Number: 1
Date Issued: 05/07/2021
Client: Roberts Bros Pty Ltd
123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact: John Roberts
Project Number: 205535.00
Project Name: Proposed Subdivision
Project Location: Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request: 13455
Date Sampled: 29/06/2021
Dates Tested: 29/06/2021 - 02/07/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Hilf Density Ratio
Location: Bulk Earthworks
Material Source: Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13455A	SS-13455B	
Date Tested	29/06/2021	29/06/2021	
Time Tested	11:30	11:38	
Test Request #/Location	Lot 67	Lot 67	
Easting	462781	462788	
Northing	7108149	7108158	
Elevation (m)	0.3 < F.L.	1.1 < F.L.	
Soil Description	Gravelly Clay	Gravelly Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	2.17	2.20	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	2.22	2.19	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	2.0	0.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**98.0**	**101.0**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

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Report Number: **205535.00-6**
Issue Number: 1
Date Issued: 05/07/2021
Client: Roberts Bros Pty Ltd
123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact: John Roberts
Project Number: 205535.00
Project Name: Proposed Subdivision
Project Location: Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request: 13456
Date Sampled: 29/06/2021
Dates Tested: 29/06/2021 - 02/07/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Hilf Density Ratio
Location: Bulk Earthworks
Material Source: Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13456A	SS-13456B	
Date Tested	29/06/2021	29/06/2021	
Time Tested	11:52	12:04	
Test Request #/Location	Lot 80	Lot 80	
Easting	462645	462636	
Northing	7108062	7108059	
Elevation (m)	0.4 < F.L.	1.2 < F.L.	
Soil Description	Gravelly Clay	Gravelly Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	2.14	2.07	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	2.06	2.04	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	2.5	1.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**104.0**	**101.5**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
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Report Number:	**205535.00-8**
Issue Number:	1
Date Issued:	19/07/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	13587
Date Sampled:	14/07/2021
Dates Tested:	14/07/2021 - 15/07/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	68
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13587A	SS-13587B	
Date Tested	14/07/2021	14/07/2021	
Time Tested	12:42	12:47	
Test Request #/Location	Lot 68	Lot 68	
Easting	462776	462788	
Northing	7108105	7108101	
Elevation (m)	0.2 < F.L.	0.5 < F.L.	
Soil Description	Gravelly Clay	Gravelly Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	5	
Field Wet Density (FWD) t/m^3	2.16	2.26	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	2.15	**	
Adjusted Peak Converted Wet Density t/m^3	**	2.15	
Moisture Variation (Wv) %	0.0	**	
Adjusted Moisture Variation %	**	2.0	
Hilf Density Ratio (%)	**100.5**	**105.0**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

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Report Number:	**205535.00-9**
Issue Number:	1
Date Issued:	19/07/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	13596
Date Sampled:	14/07/2021
Dates Tested:	15/07/2021 - 15/07/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	69
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13596A		
Date Tested	14/07/2021		
Time Tested	12:55		
Test Request #/Location	Lot 69		
Easting	462759		
Northing	7108056		
Layer / Reduced Level	0.2 < F.L		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	9		
Field Wet Density (FWD) t/m^3	2.22		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	**		
Adjusted Peak Converted Wet Density t/m^3	2.17		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	2.0		
Hilf Density Ratio (%)	**102.5**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
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Report Number:	**205535.00-10**
Issue Number:	1
Date Issued:	19/07/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	13597
Date Sampled:	14/07/2021
Dates Tested:	15/07/2021 - 16/07/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	70
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13597A	SS-13597B	
Date Tested	14/07/2021	14/07/2021	
Time Tested	13:04	13:10	
Test Request #/Location	Lot 70	Lot 70	
Easting	462794	462815	
Northing	7108022	7108043	
Layer / Reduced Level	0.2 < F.L	0.45 < F.L	
Soil Description	Gravelly Clay	Gravelly Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	10	8	
Field Wet Density (FWD) t/m^3	2.14	2.04	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	**	**	
Adjusted Peak Converted Wet Density t/m^3	2.09	2.09	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	4.0	2.0	
Hilf Density Ratio (%)	**102.5**	**97.5**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

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Report Number:	**205535.00-11**
Issue Number:	1
Date Issued:	19/07/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	13599
Date Sampled:	14/07/2021
Dates Tested:	15/07/2021 - 16/07/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	71
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13599A	SS-13599B	
Date Tested	14/07/2021	14/07/2021	
Time Tested	13:20	13:27	
Test Request #/Location	Lot 71	Lot 71	
Easting	462820	462836	
Northing	7107999	7108012	
Layer / Reduced Level	0.2 < F.L	0.55 < F.L	
Soil Description	Gravelly Clay	Gravelly Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	2.14	2.10	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	2.10	1.98	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	1.0	0.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**102.0**	**106.0**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

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Report Number:	**205535.00-12**
Issue Number:	1
Date Issued:	19/07/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	13601
Date Sampled:	14/07/2021
Dates Tested:	15/07/2021 - 16/07/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	79
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13601A	SS-13601B	
Date Tested	14/07/2021	14/07/2021	
Time Tested	13:38	13:50	
Test Request #/Location	Lot 79	Lot 79	
Easting	462662	462653	
Northing	7108018	7108016	
Layer / Reduced Level	0.3 < F.L	0.75 < F.L	
Soil Description	Gravelly Clay	Gravelly Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	14	13	
Field Wet Density (FWD) t/m^3	2.19	2.07	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	**	**	
Adjusted Peak Converted Wet Density t/m^3	2.21	2.10	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	2.0	0.0	
Hilf Density Ratio (%)	**99.0**	**98.5**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

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Report Number:	**205535.00-13**
Issue Number:	1
Date Issued:	27/07/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	13738
Date Sampled:	21/07/2021
Dates Tested:	21/07/2021 - 26/07/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	73
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13738A	SS-13738B	
Date Tested	21/07/2021	21/07/2021	
Time Tested	10:40	10:47	
Test Request #/Location	Lot 73	Lot 73	
Easting	462880	462883	
Northing	7107959	7107946	
Elevation (m)	0.6 < F.L.	0.2 < F.L.	
Soil Description	Gravelly Clay	Gravelly Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	16	5	
Field Wet Density (FWD) t/m^3	2.18	2.19	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	**	**	
Adjusted Peak Converted Wet Density t/m^3	2.23	2.14	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	2.0	1.5	
Hilf Density Ratio (%)	**97.5**	**102.5**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
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Report Number:	**205535.00-14**
Issue Number:	1
Date Issued:	27/07/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	13739
Date Sampled:	21/07/2021
Dates Tested:	21/07/2021 - 26/07/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	72
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13739A	SS-13739B	
Date Tested	21/07/2021	21/07/2021	
Time Tested	11:04	11:15	
Test Request #/Location	Lot 72	Lot 72	
Easting	462856	462866	
Northing	7107970	7107975	
Elevation (m)	0.2 < F.L.	0.55 < F.L.	
Soil Description	Gravelly Clay	Gravelly Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	6	14	
Field Wet Density (FWD) t/m^3	2.19	2.19	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	**	**	
Adjusted Peak Converted Wet Density t/m^3	2.11	2.23	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	2.0	0.0	
Hilf Density Ratio (%)	**104.0**	**98.0**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
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Report Number:	**205535.00-15**
Issue Number:	1
Date Issued:	03/08/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	13740
Date Sampled:	21/07/2021
Dates Tested:	21/07/2021 - 02/08/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	77
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13740A		
Date Tested	21/07/2021		
Time Tested	11:30		
Test Request #/Location	Lot 77		
Easting	462706		
Northing	7107961		
Elevation (m)	0.75 < F.L.		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	13		
Field Wet Density (FWD) t/m^3	2.17		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	**		
Adjusted Peak Converted Wet Density t/m^3	2.22		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	2.5		
Hilf Density Ratio (%)	**97.5**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
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Report Number: **205535.00-16**
Issue Number: 1
Date Issued: 03/08/2021
Client: Roberts Bros Pty Ltd
123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact: John Roberts
Project Number: 205535.00
Project Name: Proposed Subdivision
Project Location: Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request: 13741
Date Sampled: 21/07/2021
Dates Tested: 21/07/2021 - 27/07/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Hilf Density Ratio
Location: Bulk Earthworks
Lot Number: 78
Material Source: Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13741A		
Date Tested	21/07/2021		
Time Tested	11:40		
Test Request #/Location	Lot 78		
Easting	462683		
Northing	7107987		
Elevation (m)	0.6 < F.L.		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	37.5		
Percentage of Wet Oversize (%)	8		
Field Wet Density (FWD) t/m^3	2.24		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	**		
Adjusted Peak Converted Wet Density t/m^3	2.20		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	3.0		
Hilf Density Ratio (%)	**102.0**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
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Report Number: **205535.00-17**
Issue Number: 1
Date Issued: 11/08/2021
Client: Roberts Bros Pty Ltd
123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact: John Roberts
Project Number: 205535.00
Project Name: Proposed Subdivision
Project Location: Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request: 13833
Date Sampled: 27/07/2021
Dates Tested: 27/07/2021 - 09/08/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Hilf Density Ratio
Location: Bulk Earthworks
Lot Number: 74
Material Source: Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13833A	SS-13833B	
Date Tested	27/07/2021	27/07/2021	
Time Tested	12:07	12:15	
Test Request #/Location	Lot 74	Lot 74	
Easting	462823	462827	
Northing	7107893	7107877	
Elevation (m)	0.3 < F.L.	1.1 < F.L.	
Soil Description	Gravelly Clay	Gravelly Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	37.5	
Percentage of Wet Oversize (%)	13	8	
Field Wet Density (FWD) t/m^3	2.22	2.11	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	**	**	
Adjusted Peak Converted Wet Density t/m^3	2.22	2.17	
Moisture Variation (Wv) %	**	**	
Adjusted Moisture Variation %	2.5	2.5	
Hilf Density Ratio (%)	**100.0**	**97.5**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

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Report Number:	**205535.00-18**
Issue Number:	1
Date Issued:	11/08/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	13834
Date Sampled:	27/07/2021
Dates Tested:	27/07/2021 - 09/08/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	77
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13834A		
Date Tested	27/07/2021		
Time Tested	12:30		
Test Request #/Location	Lot 77		
Easting	462697		
Northing	7107967		
Elevation (m)	0.3 < F.L.		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	17		
Field Wet Density (FWD) t/m^3	2.16		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	**		
Adjusted Peak Converted Wet Density t/m^3	2.25		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	2.5		
Hilf Density Ratio (%)	**96.5**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

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Report Number:	**205535.00-19**
Issue Number:	1
Date Issued:	11/08/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	13835
Date Sampled:	27/07/2021
Dates Tested:	27/07/2021 - 06/08/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	78
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13835A		
Date Tested	27/07/2021		
Time Tested	12:44		
Test Request #/Location	Lot 78		
Easting	462687		
Northing	7107992		
Elevation (m)	0.3 < F.L.		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	37.5		
Percentage of Wet Oversize (%)	15		
Field Wet Density (FWD) t/m^3	2.15		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	**		
Adjusted Peak Converted Wet Density t/m^3	2.22		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	4.0		
Hilf Density Ratio (%)	**97.0**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

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Report Number:	**205535.00-20**
Issue Number:	1
Date Issued:	12/08/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	13939
Date Sampled:	03/08/2021
Dates Tested:	03/08/2021 - 12/08/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	76
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13939A		
Date Tested	03/08/2021		
Time Tested	09:00		
Test Request #/Location	Lot 76		
Easting	462753		
Northing	7107935		
Elevation (m)	1.4 < F.L.		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	14		
Field Wet Density (FWD) t/m^3	2.10		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	**		
Adjusted Peak Converted Wet Density t/m^3	2.13		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	2.0		
Hilf Density Ratio (%)	**98.5**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
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Report Number:	**205535.00-21**
Issue Number:	1
Date Issued:	18/08/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	13940
Date Sampled:	03/08/2021
Dates Tested:	03/08/2021 - 16/08/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	75
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13940A	SS-13940B	
Date Tested	03/08/2021	03/08/2021	
Time Tested	09:15	09:25	
Test Request #/Location	Lot 75	Lot 75	
Easting	462790	462797	
Northing	7107918	7107911	
Elevation (m)	1.2 < F.L	0.4 < F.L.	
Soil Description	Gravelly Clay	Gravelly Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	1.99	2.09	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	2.08	2.13	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	2.5	2.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**96.0**	**98.0**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

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Report Number:	**205535.00-22**
Issue Number:	1
Date Issued:	18/08/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	13941
Date Sampled:	03/08/2021
Dates Tested:	03/08/2021 - 14/08/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	66
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-13941A		
Date Tested	03/08/2021		
Time Tested	09:45		
Test Request #/Location	Lot 66		
Easting	462728		
Northing	7108122		
Elevation (m)	0.3 < F.L		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Field Wet Density (FWD) t/m^3	2.16		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	2.10		
Adjusted Peak Converted Wet Density t/m^3	**		
Moisture Variation (Wv) %	0.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	**102.5**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

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Report Number: **205535.00-23**
Issue Number: 1
Date Issued: 18/08/2021
Client: Roberts Bros Pty Ltd
123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact: John Roberts
Project Number: 205535.00
Project Name: Proposed Subdivision
Project Location: Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request: 14004
Date Sampled: 05/08/2021
Dates Tested: 05/08/2021 - 17/08/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Hilf Density Ratio
Location: Bulk Earthworks
Material Source: Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-14004A		
Date Tested	05/08/2021		
Time Tested	12:59		
Test Request #/Location	Lot 84		
Easting	462674		
Northing	7107846		
Elevation (m)	1.0 < F.L.		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	16		
Field Wet Density (FWD) t/m^3	2.16		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	**		
Adjusted Peak Converted Wet Density t/m^3	2.24		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	2.5		
Hilf Density Ratio (%)	**96.5**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

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Report Number: **205535.00-25**
Issue Number: 1
Date Issued: 27/08/2021
Client: Roberts Bros Pty Ltd
123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact: John Roberts
Project Number: 205535.00
Project Name: Proposed Subdivision
Project Location: Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request: 14073
Date Sampled: 11/08/2021
Dates Tested: 11/08/2021 - 21/08/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Hilf Density Ratio
Location: Bulk Earthworks
Lot Number: 85
Material Source: Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-14073A		
Date Tested	11/08/2021		
Time Tested	11:40		
Test Request #/Location	Lot 85		
Easting	462611		
Northing	7107827		
Elevation (m)	0.2 < F.L.		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Field Wet Density (FWD) t/m^3	2.28		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	2.17		
Adjusted Peak Converted Wet Density t/m^3	**		
Moisture Variation (Wv) %	1.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	**105.0**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

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Report Number:	**205535.00-26**
Issue Number:	1
Date Issued:	27/08/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	14074
Date Sampled:	11/08/2021
Dates Tested:	11/08/2021 - 21/08/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	83
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-14074A	SS-14074B	
Date Tested	11/08/2021	11/08/2021	
Time Tested	11:50	12:00	
Test Request #/Location	Lot 83	Lot 83	
Easting	462649	462658	
Northing	7107800	7107791	
Elevation (m)	0.8 < F.L	1.3 < F.L	
Soil Description	Gravelly Clay	Gravelly Clay	
Test Depth (mm)	150	150	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m^3	2.16	2.11	
Field Dry Density (FDD) t/m^3	**	**	
Peak Converted Wet Density t/m^3	2.07	2.08	
Adjusted Peak Converted Wet Density t/m^3	**	**	
Moisture Variation (Wv) %	2.0	0.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	**104.0**	**101.5**	
Compaction Method	**Standard**	**Standard**	
Report Remarks	**	**	

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
Geotechnics / Environment / Groundwater
Douglas Partners Pty Ltd
Sunshine Coast Laboratory
1/28 Kessling Avenue Kunda Park QLD 4556
Phone: (07) 5351 0400
Fax: (07) 5351 0499
Email: martin.cook@douglaspartners.com.au

Report Number: **205535.00-27**
Issue Number: 1
Date Issued: 27/08/2021
Client: Roberts Bros Pty Ltd
123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact: John Roberts
Project Number: 205535.00
Project Name: Proposed Subdivision
Project Location: Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request: 14075
Date Sampled: 11/08/2021
Dates Tested: 11/08/2021 - 21/08/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Hilf Density Ratio
Location: Bulk Earthworks
Lot Number: 84
Material Source: Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-14075A		
Date Tested	11/08/2021		
Time Tested	12:10		
Test Request #/Location	Lot 84		
Easting	462682		
Northing	7107844		
Elevation (m)	1.5 < F.L		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Field Wet Density (FWD) t/m^3	2.07		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	2.08		
Adjusted Peak Converted Wet Density t/m^3	**		
Moisture Variation (Wv) %	2.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	**99.5**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
Geotechnics / Environment / Groundwater
Douglas Partners Pty Ltd
Sunshine Coast Laboratory
1/28 Kessling Avenue Kunda Park QLD 4556
Phone: (07) 5351 0400
Fax: (07) 5351 0499
Email: martin.cook@douglaspartners.com.au

Report Number:	**205535.00-30**
Issue Number:	1
Date Issued:	02/09/2021
Client:	Roberts Bros Pty Ltd
	123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact:	John Roberts
Project Number:	205535.00
Project Name:	Proposed Subdivision
Project Location:	Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request:	14269
Date Sampled:	23/08/2021
Dates Tested:	23/08/2021 - 01/09/2021
Sampling Method:	AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification:	Minimum 95% Standard Hilf Density Ratio
Location:	Bulk Earthworks
Lot Number:	83
Material Source:	Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-14269A		
Date Tested	23/08/2021		
Time Tested	09:28		
Test Request #/Location	Lot 83		
Easting	462651		
Northing	7107800		
Elevation (m)	0.2 < F.L		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Field Wet Density (FWD) t/m^3	2.19		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	2.10		
Adjusted Peak Converted Wet Density t/m^3	**		
Moisture Variation (Wv) %	4.5		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	**104.0**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

Material Test Report

Douglas Partners
Geotechnics / Environment / Groundwater
Douglas Partners Pty Ltd
Sunshine Coast Laboratory
1/28 Kessling Avenue Kunda Park QLD 4556
Phone: (07) 5351 0400
Fax: (07) 5351 0499
Email: martin.cook@douglaspartners.com.au

Report Number: **205535.00-32**
Issue Number: 1
Date Issued: 06/09/2021
Client: Roberts Bros Pty Ltd
123 Cooroy Belli Creek Road, Cooroy QLD 4563
Contact: John Roberts
Project Number: 205535.00
Project Name: Proposed Subdivision
Project Location: Chatsworth Estate, Stage 4, Chatsworth QLD
Work Request: 14270
Date Sampled: 23/08/2021
Dates Tested: 23/08/2021 - 01/09/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Specification: Minimum 95% Standard Hilf Density Ratio
Location: Bulk Earthworks
Lot Number: 84
Material Source: Onsite

Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Martin Cook
Assistant Laboratory Manager
Laboratory Accreditation Number: 828

Compaction Control AS 1289 5.7.1 & 5.8.1			
Sample Number	SS-14270A		
Date Tested	23/08/2021		
Time Tested	09:42		
Test Request #/Location	Lot 84		
Easting	462660		
Northing	7107848		
Elevation (m)	0.2 < F.L		
Soil Description	Gravelly Clay		
Test Depth (mm)	150		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	12		
Field Wet Density (FWD) t/m^3	2.17		
Field Dry Density (FDD) t/m^3	**		
Peak Converted Wet Density t/m^3	**		
Adjusted Peak Converted Wet Density t/m^3	2.07		
Moisture Variation (Wv) %	**		
Adjusted Moisture Variation %	4.5		
Hilf Density Ratio (%)	**104.5**		
Compaction Method	**Standard**		
Report Remarks	**		

Moisture Variation Note:
Positive values = test is dry of OMC
Negative values = test is wet of OMC

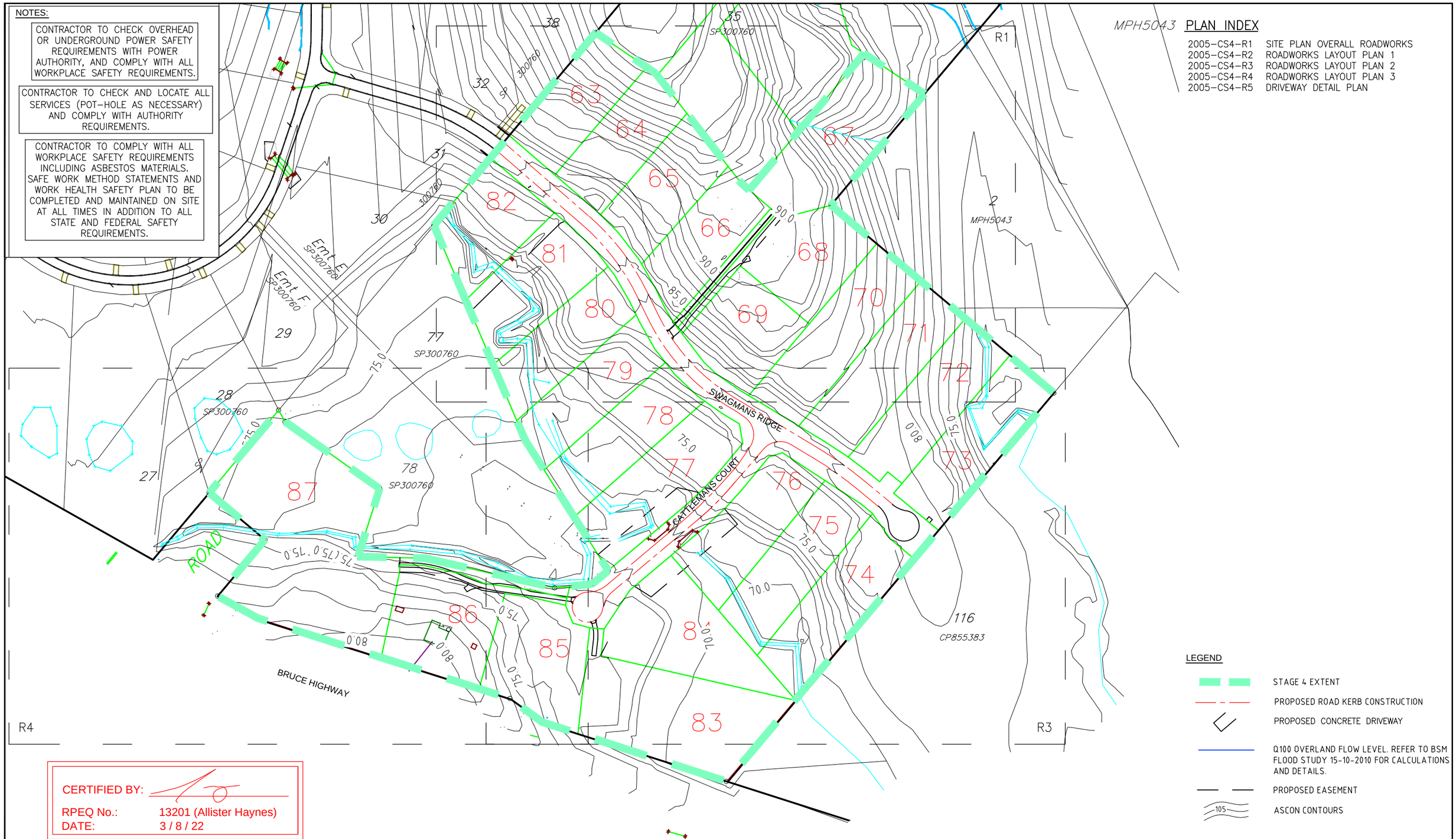
NOTES:

CONTRACTOR TO CHECK OVERHEAD OR UNDERGROUND POWER SAFETY REQUIREMENTS WITH POWER AUTHORITY, AND COMPLY WITH ALL WORKPLACE SAFETY REQUIREMENTS.

CONTRACTOR TO CHECK AND LOCATE ALL SERVICES (POT-HOLE AS NECESSARY) AND COMPLY WITH AUTHORITY REQUIREMENTS.

CONTRACTOR TO COMPLY WITH ALL WORKPLACE SAFETY REQUIREMENTS INCLUDING ASBESTOS MATERIALS. SAFE WORK METHOD STATEMENTS AND WORK HEALTH SAFETY PLAN TO BE COMPLETED AND MAINTAINED ON SITE AT ALL TIMES IN ADDITION TO ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

MPH5043 PLAN INDEX



LEGEND

- STAGE 4 EXTENT
- PROPOSED ROAD KERB CONSTRUCTION
- PROPOSED CONCRETE DRIVEWAY
- Q100 OVERLAND FLOW LEVEL. REFER TO BSM FLOOD STUDY 15-10-2010 FOR CALCULATIONS AND DETAILS.
- PROPOSED EASEMENT
- ASCON CONTOURS

CERTIFIED BY:

RPEQ No.: 13201 (Allister Haynes)
DATE: 3 / 8 / 22

This drawing is an accurate representation of the works as-constructed. All the locations and levels shown on this plan have been provided by a Surveyor as defined in the Surveyors Act 2003. I hereby accept responsibility for the as-constructed information shown on this plan.

0 25 50 75m Scale 1:2500 @A3

Rv	DATE	REVISIONS	APPR.
1	3-8-22	AS CONSTRUCTED	ATH
0	21-10-21	FOR CONSTRUCTION	ATH

PSM No	196358
(**AHD**) RL	84.831
SURVEYED	MURRAY & ASSOC

A3

HAYNES CONSULTING ENGINEERS

HAYNES CONSULTING ENGINEERS
ABN 53 613 630 078
PO BOX 549 NOOSA HEADS QLD 4567
(0432) 784 150

CHATSWORTH STAGE 4

LOTS 63-87 SP328631, 25 LOTS OPERATIONAL WORKS, SWAGMANS RIDGE, CHATSWORTH, FOR ROBERTS BROS. PTY LTD

SITE PLAN OVERALL ROADWORKS

2005-CS4

Sheet No. - Revision No.

R1 1

NOTES:

HOUSE SITE ALLOTMENT PROFILING ON 24 LOTS REFER BULK EARTHWORKS APPROVAL 2021–1524 (1 LOT EXISTING HOUSE).

CERTIFIED BY:

RPEQ No.: 13201 (Allister Haynes)

DATE: 3 / 8 / 22

This drawing is an accurate representation of the works as-constructed. All the locations and levels shown on this plan have been provided by a Surveyor as defined in the Surveyors Act 2003. I hereby accept responsibility for the as-constructed information shown on this plan.

0 10 20 30m Scale 1:1000 @A3

CUT ASPHALT/KERB AND JOIN SMOOTHLY TO EXISTING ROAD TO PAVEMENT DETAIL

REMOVE TEMP TURN

PIPED AND SWALE DRAINAGE IN EASEMENT

FILL GULLY AND SHAPE TO DIVERT WATER FROM PAD

CUT TO IMPROVE FLOOD FLOW

STAGE 2

STAGE 3A

SWAGMANS RIDGE

JOINS PLAN R3

LEGEND

- STAGE 4 EXTENT
- PROPOSED ROAD KERB CONSTRUCTION
- PROPOSED CONCRETE DRIVEWAY
- CUT BATTER EXTENT
- FILL BATTER EXTENT
- 2.6m — FILL DEPTH FROM NATURAL SURFACE
- 0.7 down — APPROXIMATE ALLOTMENT FILL COMPACTION TEST LOCATION AND DEPTH BELOW FINISHED LEVEL
- DRIVEWAY LOCATION (FUTURE BY OWNERS)
- Q100 OVERLAND FLOW LEVEL. REFER TO BSM FLOOD STUDY 15-10-2010 FOR CALCULATIONS AND DETAILS.
- PROPOSED EASEMENT
- EXISTING TREE/TREE TO BE REMOVED
- 105 — ASCON CONTOURS

A3	Rv	DATE	REVISIONS	APPR.
	1	3-8-22	AS CONSTRUCTED AND TEST LOCATIONS	ATH
	0	21-10-21	FOR CONSTRUCTION	ATH

PSM No	196358
(**AHD**) RL	84.831
SURVEYED	MURRAY & ASSOC

HAYNES CONSULTING ENGINEERS

HAYNES CONSULTING ENGINEERS
ABN 53 613 630 078
PO BOX 549 NOOSA HEADS QLD 4567
(0432) 784 150

CHATSWORTH STAGE 4

LOTS 63-87 SP328631, 25 LOTS OPERATIONAL WORKS, SWAGMANS RIDGE, CHATSWORTH, FOR ROBERTS BROS. PTY LTD

ROADWORKS LAYOUT PLAN 1

2005-CS4

Sheet No. - Revision No.

R2 1

NOTES:

HOUSE SITE ALLOTMENT PROFILING ON 24 LOTS REFER BULK EARTHWORKS APPROVAL 2021–1524 (1 LOT EXISTING HOUSE).

WIDEN VERGE TO CONTAIN BYPASS FLOW THROUGH INTERSECTION TO CROSS SECTIONS. 4.625m INVERT TO GRADE CHANGE.

CUT TO IMPROVE FLOOD FLOW

CUT TO IMPROVE FLOOD FLOW

PROVIDE CONCRETE ACCESS WITH PASSING BAYS AS SHOWN

INSTALL GUIDE POSTS WHERE KERB IS FLUSH TYPE

TURFED SWALES TO CROSS SECTIONS

CUT TO IMPROVE FLOOD FLOW

TEMP R10.5 AC CULDESAC WITH R20 APPROACH

JOINS PLAN R2

JOINS PLAN R4

SWAGMANS RIDGE

CATTLEMANS COURT

TP 380.95 TP 6.54 TP 35.91 TP 38.33 TP 89.05 TP 53.00 TP 450.28 TP 589.73

CH 0.00 CH 20.00 CH 40.00 CH 60.00 CH 80.00 CH 100.00 CH 120.00 CH 140.00 CH 160.00 CH 180.00 CH 189.02 CH 200.00 CH 400.000 CH 420.000 CH 440.000 CH 460.000 CH 480.000 CH 500.000 CH 520.000 CH 540.000 CH 560.000 CH 580.000 CH 600.000 CH 620.000 CH 640.000 CH 660.000

70 71 72 73 74 75 76 77 78 79 83 84 85 86 116 CP855383

0 10 20 30m

Scale 1:1000 @A3

LEGEND

- STAGE 4 EXTENT
- PROPOSED ROAD KERB CONSTRUCTION
- PROPOSED CONCRETE DRIVEWAY
- CUT BATTER EXTENT
- FILL BATTER EXTENT
- 2.6m — FILL DEPTH FROM NATURAL SURFACE
- 0.7 down — APPROXIMATE ALLOTMENT FILL COMPACTION TEST LOCATION AND DEPTH BELOW FINISHED LEVEL
- DRIVEWAY LOCATION (FUTURE BY OWNERS)
- Q100 OVERLAND FLOW LEVEL. REFER TO BSM FLOOD STUDY 15-10-2010 FOR CALCULATIONS AND DETAILS.
- PROPOSED EASEMENT
- EXISTING TREE/TREE TO BE REMOVED
- 105 — ASCON CONTOURS

CERTIFIED BY:

RPEQ No.: 13201 (Allister Haynes)

DATE: 3 / 8 / 22

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Rv	DATE	REVISIONS	APPR.
1	3-8-2022	AS CONSTRUCTED AND TEST LOCATIONS	ATH
0	21-10-21	FOR CONSTRUCTION	ATH

A3

PSM No	196358
(**AHD**) RL	84.831
SURVEYED	MURRAY & ASSOC

HAYNES CONSULTING ENGINEERS

HAYNES CONSULTING ENGINEERS
ABN 53 613 630 078
PO BOX 549 NOOSA HEADS QLD 4567
(0432) 784 150

CHATSWORTH STAGE 4

LOTS 63-87 SP328631, 25 LOTS OPERATIONAL WORKS, SWAGMANS RIDGE, CHATSWORTH, FOR ROBERTS BROS. PTY LTD

ROADWORKS LAYOUT PLAN 2

2005-CS4

Sheet No. - Revision No.

R3 1

LEGEND

- STAGE 4 EXTENT
- PROPOSED ROAD KERB CONSTRUCTION
- PROPOSED CONCRETE DRIVEWAY
- CUT BATTER EXTENT
- FILL BATTER EXTENT
- 2.6m$_o$ FILL DEPTH FROM NATURAL SURFACE
- 0.7 down APPROXIMATE ALLOTMENT FILL COMPACTION TEST LOCATION AND DEPTH BELOW FINISHED LEVEL
- DRIVEWAY LOCATION (FUTURE BY OWNERS)
- Q100 OVERLAND FLOW LEVEL. REFER TO BSM FLOOD STUDY 15-10-2010 FOR CALCULATIONS AND DETAILS.
- PROPOSED EASEMENT
- EXISTING TREE/TREE TO BE REMOVED
- 105 ASCON CONTOURS

JOINS PLAN R2

JOINS PLAN R3

77 SP300760

78 SP300760

79

80

87

86

85

78

CUT TO IMPROVE FLOOD FLOW

PROVIDE CONCRETE 5.5m WIDE ACCESS (2 CAR WIDTH) FOR PASSING.

SEPTIC TANK

EXISTING HOUSE TO REMAIN

EFFLUENT AREA IS NORTH OF HOUSE WITHIN EXISTING FENCELINE SHOWN AND WELL AWAY FROM ADJACENT LOTS.

EXISTING OVERHEAD POWER TO REMAIN. PILLAR TO BE SUPPLIED FOR FUTURE USE IF DESIRED.

BRUCE HIGHWAY AND SERVICE ROAD

ROAD 2

TP 115.67

TP 85.27

TP 74.85

TP 53.00

CH 124.28

CH 120.00

CH 100.00

CH 80.00

CH 60.00

CH 40.00

CH 20.00

CH 0.00

72 74 76 78

1.1m 1.2m 0.5m 0.8 down 0.3 down 0.4m 0.9m 0.2 down 0.5m 4.7 10.0

CERTIFIED BY:

RPEQ No.: 13201 (Allister Haynes)

DATE: 3 / 8 / 22

This drawing is an accurate representation of the works as-constructed. All the locations and levels shown on this plan have been provided by a Surveyor as defined in the Surveyors Act 2003. I hereby accept responsibility for the as-constructed information shown on this plan.

0 10 20 30m Scale 1:1000 @A3

N

NOTES:

HOUSE SITE ALLOTMENT PROFILING ON 24 LOTS REFER BULK EARTHWORKS APPROVAL 2021–1524 (1 LOT EXISTING HOUSE).

A3	Rv	DATE	REVISIONS	APPR.
	1	3-8-22	AS CONSTRUCTED AND TEST LOCATIONS	ATH
	0	21-10-21	FOR CONSTRUCTION	ATH

PSM No	196358
(**AHD**) RL	84.831
SURVEYED	MURRAY & ASSOC

HAYNES CONSULTING ENGINEERS

HAYNES CONSULTING ENGINEERS
ABN 53 613 630 078
PO BOX 549 NOOSA HEADS QLD 4567
(0432) 784 150

CHATSWORTH STAGE 4

LOTS 63-87 SP328631, 25 LOTS OPERATIONAL WORKS, SWAGMANS RIDGE, CHATSWORTH, FOR ROBERTS BROS. PTY LTD

ROADWORKS LAYOUT PLAN 3

2005-CS4

Sheet No. - Revision No.

R4 1