HALL CONTRACTING PTY LTD

Compliance Testing

North Harbour Phase 3
Stages 14 to 22

DL17/006

4th October 2017

Work Performed By
Morrison Geotechnic Pty Ltd

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GEOTECHNIC
Solid thinking. Grounded results.

On Behalf of
Hall Contracting Pty Ltd

HALL
CONTRACTING PTY LTD

MORRISON GEOTECHNIC

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Brisbane Office
Job No: DL17/006
Ref No: 12502
Author: L. McDowall

4th October 2017

Hall Contracting Pty Ltd
PO Box 519
Buderim Qld 4556

ATTENTION: MR TOM FOX
MR NELSON RIDDLE
Email: TomFox@hallcontracting.com.au
NelsonRiddle@hallcontracting.com.au

Dear Sir's,

RE: LEVEL ONE COMPLIANCE REPORT FOR BULK EARTHWORKS FILLING OPERATIONS NORTH HARBOUR – PHASE 3, STAGES 14 - 22 BUCKLEY ROAD, BURPENGARY

Table of Contents

1.0 INTRODUCTION

1.1 General

This report presents results of Level One Earthworks Inspections and associated Compaction Compliance testing carried out on Earthworks Fill constructed to form Residential Lots and embankments below subgrade at the North Harbour Phase 3 development, Stages 14-22 (The Site).

The work was commissioned by Mr. T. Fox representing Hall Contracting Pty Ltd (The Client).

Earthworks were carried out by The Client.

Earthworks filling operations were carried out Intermittently between 18th January 2017 and 7th September 2017.

Picture 1: Arial View of The Site (Nearmap Image, dated 22nd July 2017)

1.2 Previous Earthworks

As far as could be determined on site, no previous earthworks have been carried out at The Site.

1.3 The Project

Earthworks filling operations at The Site were required to form building platforms supporting proposed residential buildings, filled embankments for new pavements and associated underground services.

Land Solutions Australia Bulk Earthworks Stage 14 – 22 Volume Comparison, Job Number: 5716, Drawing Number 5746-SK-02 Rev A, dated 17th January 2017 indicates the extents and approximate depths of fill constructed at the Site.

The Cut / Fill Depth range is detailed in Picture 2 Below.

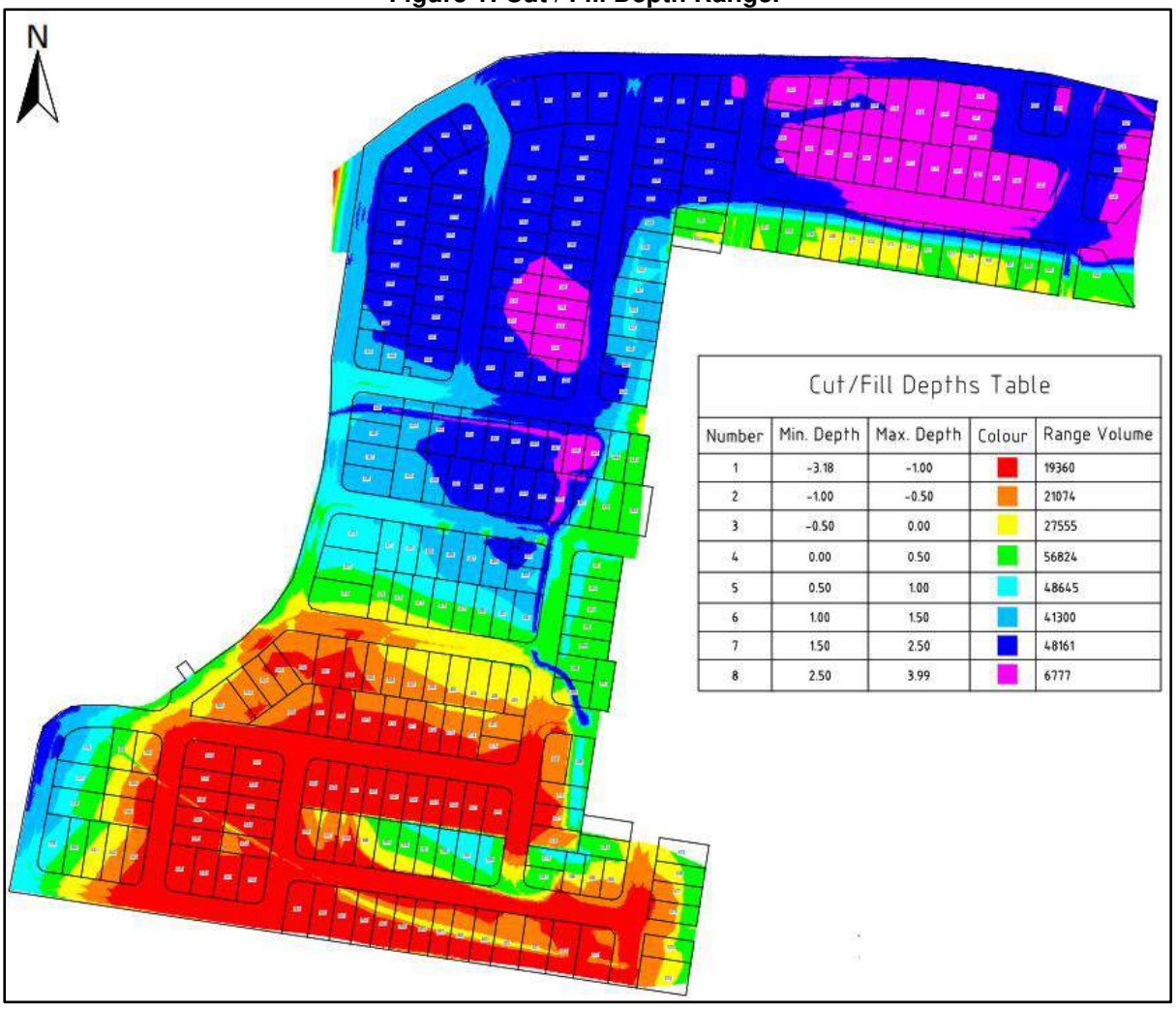
This plan is considered to be a reasonable indication of the actual fill constructed at The Site with the following exceptions; -

- Fill thickness in localised areas in Stages 17 and 18 exceeded 5m.

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

The Site is bounded by an existing residential development to the East, Future Stages to the North and South and undeveloped land to the West.

Figure 1: Cut / Fill Depth Range.



2.0 THE BRIEF

The Brief from the Client was limited to:

- Level One Inspection and Testing of the placement and compaction of fill materials in accordance with AS3798 2007 – "Guidelines on Earthworks for Commercial and Residential Developments",
- Relative Density Control Testing in accordance with AS1289 – Testing of Soils for Engineering Purposes and at frequencies required in AS3798 Table 8.1.
- Moreton Bay Regional Council Specifications
- Notes on KN Group Earthworks Drawings.

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

3.0 METHODOLOGY

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

Field and laboratory testing included a walk over assessments of the existing ground conditions, observation of filling and compaction activities and field density testing using a nuclear soil moisture density gauge and Hilf compactions. All work was carried out in accordance with AS 3798 and AS1289.

3.1 Stripped Surface Assessment

The fill areas at The Site were observed to be stripped and cleared of all visible organic matter, deleterious, loose and unsuitable materials to depths exposing a natural foundation suitable for the support of fill construction

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

- Silty Sand (SM) – At least stiff, fine to course grained sand, light brown – grey, moist.
- Clayey Sand (SC) – Dense, fine to course grained sand, low to medium plasticity, light brown - pale yellow, moist.
- Sandy Clay (CI) – At least Stiff, medium plasticity, fine to course grained sand, brown – light brown, moist.
- Clay (CH) – At least Stiff, medium to high plasticity, traces of fine sand, brown – black, moist.

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

- Walk over assessments confirming that the competent ground was exposed.
- Proof roll testing using loaded ADT's carrying out multiple passes confirming no movement of the exposed natural foundation.

Unsuitable materials encountered in Stage 17 and 18 which included deposits of compressible alluvial clays were removed to depths exposing competent residual soils. The excavated unsuitable materials were spread in thin layers on a designated drying pad, lime treated and then re-used as structural fill.

Picture 2: View of the Stripping Operations Prior to the Placement of Fill

Picture 3: Excavated Surface After Removal of Unsuitable Materials in Stages 17 and 18.

3.2 Filling Operations

Fill materials were sourced from onsite cuts, treated and dried unsuitable materials from Stages 17 and 18, road box excavations, trench excavations and imported fill from Borrow area 3-2.

Materials used as fill at The Site can be summarised as:

- Clayey Sand (SC) – fine to course grained sand, low to medium plasticity, light brown - pale yellow, moist.

- Sandy Clay (CI) – medium plasticity, fine to course grained sand, red grey brown, moist.

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

- Skid Steer Loader
- Pad Foot Rollers
- Excavators
- Grader
- Moxi Water Truck
- Scrapers
- Front End Loader
- Tractors
- Dozer
- 825 Compactor
- Articulated Dump Trucks
- Backhoes

Picture 4: View of the Stripping Operations Prior to the Placement of Fill

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

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

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

Field density tests and laboratory compactions were carried out on the fill materials in accordance with Table 5.1 and 8.1 of AS3798 2007 (Guidelines on Earthworks for Commercial and Residential Developments) and tested to AS1289 test methods (Testing of Soils for Engineering Purposes). Testing achieved the required specification of 95% of the Hilf Density.

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

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

Picture 5: View of the Site during Construction

4.0 STATEMENT OF COMPLIANCE

Our representatives observed the relevant earthworks operations including the stripped surface, fill placement and compaction operations and carried out field density tests and laboratory compaction tests in accordance with the required standard (AS3798, AS1289) and Specification.

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

The fill can be deemed to be “controlled in accordance with AS2870.

5.0 EXCLUSIONS

This statement does not include any top soil which may be placed for use as dressing, trench backfill, pavement construction or any other subsequent earthworks after 7th September 2017.

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

Our on-site attendance specifically excludes assessments of fill material quality and engineering properties that are outside the requirements of AS3798 - 2007, including soil or fill reactivity and soaked CBR values. We note that the fill materials used may result in unfavourable site classifications and low subgrade design strengths.
Footings and ground slabs for any structures constructed over natural soils or controlled fill should be designed to accommodate the characteristic ground surface movements and settlement potential.
Assessments of these design parameters are beyond the scope of this Report.

Picture 6: View of the Site during Construction

6.0 LIMITATIONS

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

This Report is for the sole benefit and use of Hall Contracting Pty Ltd (**Client**), its designers, clients and relevant statutory authorities for the sole purpose of providing Level One Inspections and Testing in respect of the North Harbour Phase 3, Stages 14 - 22, Buckley Road, Burpengary **(Project)**. The Report is only intended to address those issues expressly described in the Brief/ Work Instructions in this Report.

This Report should not be used or relied upon for any other purpose without Morrison Geotechnic's prior written consent. Morrison Geotechnic and the Contributors do not accept any responsibility or

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(a) released to any other party, whether in whole or in part (other than to the Client's officers, employees, advisers, designers, clients and relevant statutory authorities);
(b) used or relied upon by any other party.

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The information (including technical information and information obtained through discussions) on which this report is based has been provided by the Client and third parties. Morrison Geotechnic and the Contributors:

(a) have relied upon and presumed the accuracy of this information;
(b) have not verified the accuracy or reliability of this information (other than as expressly stated in this Report);
(c) have not made any independent investigations or enquiries in respect of those matters of which it has no actual knowledge at the time of giving this Report to the Client; and
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(a) is not an environmental, contamination or hazardous materials assessment; may be invalid, incomplete or inaccurate (including errors in the scope of work, investigation methodology, observations, opinions and advice) where the information provided to Morrison Geotechnic was invalid, incomplete or inaccurate;

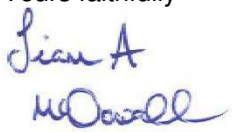
(b) is limited to observations of those parts of the site described in Section 1.0.

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

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

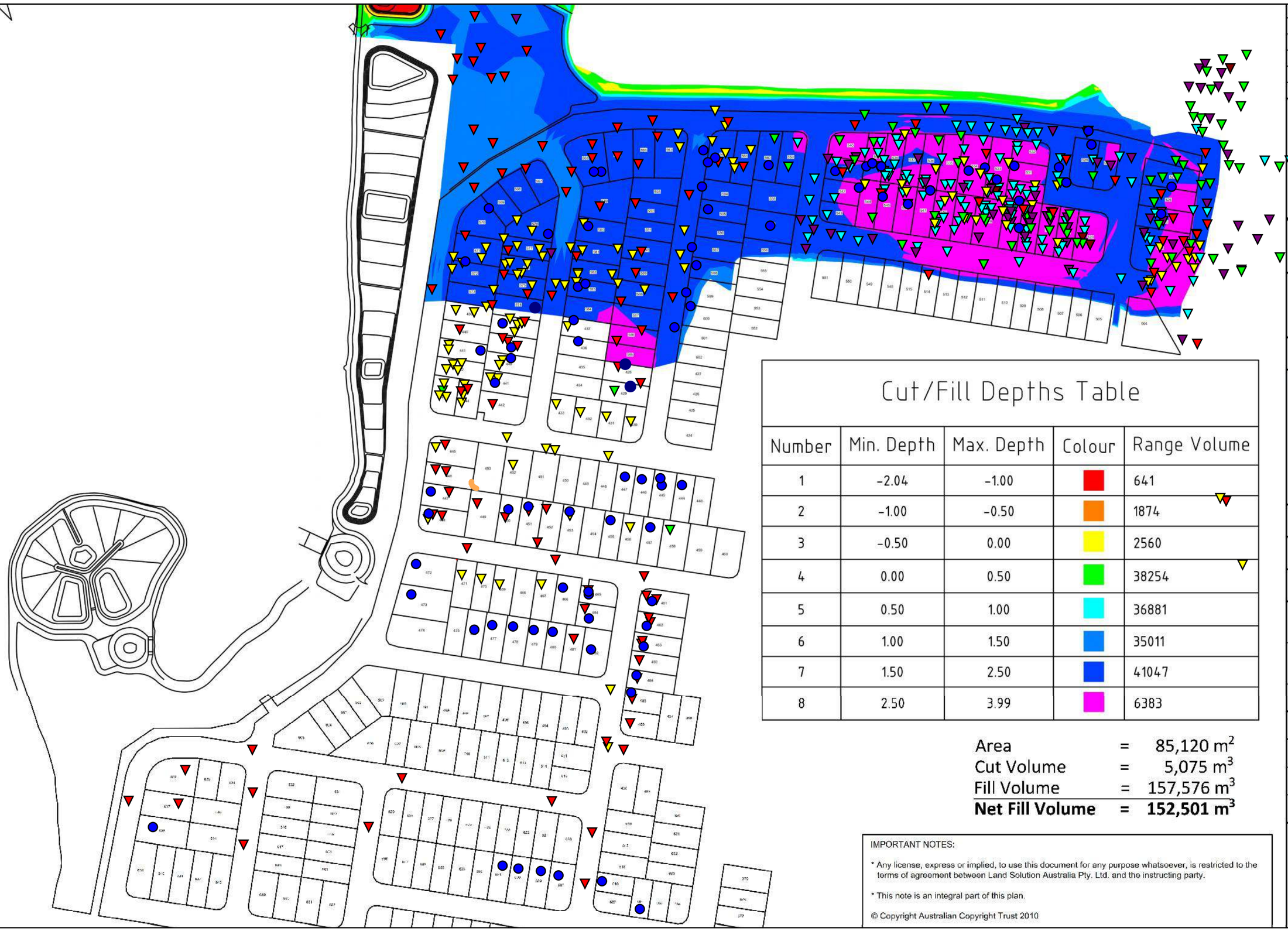
If you have any queries regarding the above, please contact our Brisbane office.

Yours faithfully



LIAM McDOWALL
For and on behalf of
MORRISON GEOTECHNIC PTY LIMITED

ATTACHMENTS:
Appendix A – Site Plan Showing Test Locations
Appendix B – Laboratory Test Results Reports



Cut/Fill Depths Table

Number	Min. Depth	Max. Depth	Colour	Range Volume
1	-2.04	-1.00		641
2	-1.00	-0.50		1874
3	-0.50	0.00		2560
4	0.00	0.50		38254
5	0.50	1.00		36881
6	1.00	1.50		35011
7	1.50	2.50		41047
8	2.50	3.99		6383

Area	=	85,120 m^2
Cut Volume	=	5,075 m^3
Fill Volume	=	157,576 m^3
Net Fill Volume	=	**152,501 m^3**

IMPORTANT NOTES:

* Any license, express or implied, to use this document for any purpose whatsoever, is restricted to the terms of agreement between Land Solution Australia Pty. Ltd. and the instructing party.

* This note is an integral part of this plan.

Rev.	Notes
A	Original Issue

Client: HALL CONTRACTING

Project: North Ha

Job No: 5716 | Scale:

Title: Bulk Earthworks Sta
Volume: Pre-comm
Design Surface 3.2m

SHEET 2 of 2

Date: 20/01/2017 | Raw D

Digital File: 170120SG Stage 3A volur

Locality: Burpengary East | Local

Horiz. Datum: Site

Height Datum: AHD

Contour Interval: N/A

	INIT.	
Surveyed	TM/SC	
Drawn	SRG	
Checked	SRG	

landsolu AUST

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Email: brisbanelab@morrisongeo.com.au Fax: 3279 0955

Engineers: D.Riley, J. Daly
D.Dragun, & S.Wynne
Geologists: L.Bexley & R.Howchin
Laboratory: M.Morrison

LEGEND

- 0.0 - 0.99 Below Final Level
- 1.0 - 1.99 Below Final Level
- 2.0 - 2.99 Below Final Level
- 3.0 - 3.99 Below Final Level
- 4.0 - 4.99 Below Final Level
- Final Level

Map Description :	**EARTHWORKS FIELD DENSITY TESTING - Level 1 Inspection**				
Client :	HALL CONTRACTING				
Project :	**NORTH HARBOUR STAGES 14 - 22**				
Project No :	DL17-006	Drawing No :	DL16-006-01	Scale :	Not to Scale

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 1
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	20/01/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	223595	223596		
Test Number :	1	2		
Sampling Method :	-	-		
Date Sampled :	18/01/2017	18/01/2017		
Date Tested :	18/01/2017	18/01/2017		
Material Type :	**Allotment Fill**	**Allotment Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	636	637		
Sample Location :	Lot 636 7m From North Boundary 5m From East Boundary 0.2m Below Final Level	Lot 637 5m From North Boundary 6m From East Boundary 0.2m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	5.6	6.6		
Hilf MDR Number :	223595	223596		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	72	74.5		
Field Wet Density (t/m³) :	2.098	2.063		
Optimum Moisture Content (%) :	7.8	8.8		
Moisture Variation :	2.3	2.3		
Peak Converted Wet Density (t/m³) :	2.170	2.089		
Hilf Density Ratio (%) :	**96.5**	**99.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

NATA ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

APPROVED SIGNATORY

Liam Mcdowall (Brisbane) - Branch Manager
NATA Accreditation Number
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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 2
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	30/01/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	223706	223707		
Test Number :	3	4		
Sampling Method :	-	-		
Date Sampled :	20/01/2017	20/01/2017		
Date Tested :	20/01/2017	20/01/2017		
Material Type :	**Allotment Fill**	**Allotment Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	638	481		
Sample Location :	Lot 638 5m From North Boundary 8m From West Boundary Final Level	Lot 481 6m From North Boundary 7m From West Boundary 0.2m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	12.6	6.8		
Hilf MDR Number :	223706	223707		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	84	74		
Field Wet Density (t/m³) :	2.143	2.064		
Optimum Moisture Content (%) :	15.0	9.2		
Moisture Variation :	2.3	2.4		
Peak Converted Wet Density (t/m³) :	2.077	2.104		
Hilf Density Ratio (%) :	**103.0**	**98.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 3**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**08/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	223824	223825	223826	
Test Number :	5	6	7	
Sampling Method :	-	-	-	
Date Sampled :	24/01/2017	24/01/2017	24/01/2017	
Date Tested :	24/01/2017	24/01/2017	24/01/2017	
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	
Material Source :	**On Site**	**On Site**	**On Site**	
Lot Number :	458	456	453	
Sample Location :	Lot 458 4m From North Boundary 3m From West Boundary 2m Below Final Level	Lot 456 7m From North Boundary 6m From West Boundary 1.9m Below Final Level	Lot 453 5m From North Boundary 4m From West Boundary 1.9m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	10.3	10.1	16.5	
Hilf MDR Number :	223824	223825	223826	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	82	81	85	
Field Wet Density (t/m³) :	1.910	1.973	1.980	
Optimum Moisture Content (%) :	12.6	12.5	19.5	
Moisture Variation :	2.4	2.5	2.9	
Peak Converted Wet Density (t/m³) :	2.012	2.031	1.913	
Hilf Density Ratio (%) :	**95.0**	**97.0**	**103.5**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 4
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	08/02/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	223904	223905		
Test Number :	8	9		
Sampling Method :	-	-		
Date Sampled :	25/01/2017	25/01/2017		
Date Tested :	25/01/2017	25/01/2017		
Material Type :	**Allotment Fill**	**Allotment Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	559	540		
Sample Location :	Lot 559 5m From North Boundary 5m From East Boundary 4m Below Final Level	Lot 540 4m From West Boundary 3m From North Boundary 2.5m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	14.6	13.0		
Hilf MDR Number :	223904	223905		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	100	100		
Field Wet Density (t/m³) :	2.200	2.137		
Optimum Moisture Content (%) :	14.6	13.0		
Moisture Variation :	0.0	0.0		
Peak Converted Wet Density (t/m³) :	2.108	2.140		
Hilf Density Ratio (%) :	**104.5**	**100.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 5**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**08/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	223930	223931	223932	223933
Test Number :	10	11	12	13
Sampling Method :	-	-	-	-
Date Sampled :	27/01/2017	27/01/2017	27/01/2017	27/01/2017
Date Tested :	27/01/2017	27/01/2017	27/01/2017	27/01/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	559	560	445	448
Sample Location :	Lot 559 11m From East Boundary 10m From South Boundary 2m Below Final Level	Lot 560 2m From North Boundary 3m From East Boundary 2m Below Final Level	Lot 445 6m From North Boundary 3m From West Boundary 1.2m Below Final Level	Lot 448 7m From North Boundary 5m From West Boundary 1.1m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	8.9	10.2	7.3	6.2
Hilf MDR Number :	223930	223931	223932	223933
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	67.5	78.5	76.5	77
Field Wet Density (t/m³) :	2.153	2.115	2.163	2.117
Optimum Moisture Content (%) :	13.2	13.0	9.6	8.0
Moisture Variation :	4.2	2.7	2.3	1.9
Peak Converted Wet Density (t/m³) :	2.120	2.134	2.189	2.206
Hilf Density Ratio (%) :	**101.5**	**99.0**	**99.0**	**96.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 6
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	08/02/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	223934			
Test Number :	14			
Sampling Method :	-			
Date Sampled :	27/01/2017			
Date Tested :	27/01/2017			
Material Type :	**Allotment Fill**			
Material Source :	**On Site**			
Lot Number :	452			
Sample Location :	Lot 452 8m From North Boundary 5m From West Boundary 1.1m Below Final Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	6.8			
Hilf MDR Number :	223934			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	79			
Field Wet Density (t/m³) :	2.152			
Optimum Moisture Content (%) :	8.6			
Moisture Variation :	1.9			
Peak Converted Wet Density (t/m³) :	2.207			
Hilf Density Ratio (%) :	**97.5**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 7**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**08/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224000	224001	224002	224003
Test Number :	15	16	17	18
Sampling Method :	-	-	-	-
Date Sampled :	30/01/2017	30/01/2017	30/01/2017	30/01/2017
Date Tested :	30/01/2017	30/01/2017	30/01/2017	30/01/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	461	462	463	465
Sample Location :	Lot 461 (Stage 15) 4m From North Boundary 2m From West Boundary 0.5m Below Final Level	Lot 462 (Stage 15) 4m From North Boundary 10m From West Boundary 0.5m Below Final Level	Lot 463 (Stage 15) 8m From North Boundary 5m From West Boundary 0.5m Below Final Level	Lot 465 (Stage 15) 7m From North Boundary 4m From West Boundary 0.5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	9.6	9.2	9.3	6.7
Hilf MDR Number :	224000	224001	224002	224003
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	98.5	98.5	99	76
Field Wet Density (t/m³) :	2.193	2.227	2.213	2.131
Optimum Moisture Content (%) :	9.7	9.3	9.4	8.8
Moisture Variation :	0.1	0.1	0.1	2.2
Peak Converted Wet Density (t/m³) :	2.218	2.209	2.224	2.139
Hilf Density Ratio (%) :	**99.0**	**101.0**	**99.5**	**99.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 8**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**08/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224004	224005	224006	224007
Test Number :	19	20	21	22
Sampling Method :	-	-	-	-
Date Sampled :	30/01/2017	30/01/2017	30/01/2017	30/01/2017
Date Tested :	30/01/2017	30/01/2017	30/01/2017	30/01/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	467	469	470	471
Sample Location :	Lot 467 (Stage 15) 9m From North Boundary 3m From West Boundary 1m Below Final Level	Lot 469 (Stage 15) 7m From North Boundary 4m From West Boundary 1m Below Final Level	Lot 470 (Stage 15) 6m From North Boundary 4m From West Boundary 1m Below Final Level	Lot 471 (Stage 15) 7m From North Boundary 5m From West Boundary 1m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	7.1	6.6	5.9	6.1
Hilf MDR Number :	224004	224005	224006	224007
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	78	68	57.5	58.5
Field Wet Density (t/m³) :	2.134	2.186	2.177	2.223
Optimum Moisture Content (%) :	9.1	9.7	10.3	10.5
Moisture Variation :	2.1	3.1	4.4	4.4
Peak Converted Wet Density (t/m³) :	2.145	2.194	2.086	2.112
Hilf Density Ratio (%) :	**99.5**	**99.5**	**104.5**	**105.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 9
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	08/02/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	224008	224009		
Test Number :	23	24		
Sampling Method :	-	-		
Date Sampled :	30/01/2017	30/01/2017		
Date Tested :	30/01/2017	30/01/2017		
Material Type :	**Allotment Fill**	**Allotment Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	451	452		
Sample Location :	Lot 451 (Stage 14) 6m From North Boundary 5m From West Boundary 0.3m Below Final Level	Lot 452 (Stage 14) 4m From North Boundary 4m From West Boundary 0.3m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	6.1	6.8		
Hilf MDR Number :	224008	224009		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	71.5	61		
Field Wet Density (t/m³) :	2.185	2.118		
Optimum Moisture Content (%) :	8.6	11.1		
Moisture Variation :	2.5	4.4		
Peak Converted Wet Density (t/m³) :	2.120	2.115		
Hilf Density Ratio (%) :	**103.0**	**100.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 10**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**08/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224165	224166	224167	224168
Test Number :	25	26	27	28
Sampling Method :	-	-	-	-
Date Sampled :	01/02/2017	01/02/2017	01/02/2017	01/02/2017
Date Tested :	01/02/2017	01/02/2017	01/02/2017	01/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	445	446	447	448
Sample Location :	Lot 445 (Stage 15) 4m From North Boundary 7m From West Boundary 0.6m Below Final Level	Lot 446 (Stage 15) 5m From North Boundary 10m From West Boundary 0.6m Below Final Level	Lot 447 (Stage 15) 3m From North Boundary 12m From West Boundary 0.6m Below Final Level	Lot 448 (Stage 15) 6m From North Boundary 5m From West Boundary 0.6m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	13.1	13.0	16.0	18.2
Hilf MDR Number :	224165	224166	224167	224168
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	102	101	103	104.5
Field Wet Density (t/m³) :	2.092	2.085	2.152	2.165
Optimum Moisture Content (%) :	12.8	12.9	15.5	17.4
Moisture Variation :	-0.2	-0.1	-0.5	-0.8
Peak Converted Wet Density (t/m³) :	2.157	2.180	2.109	2.106
Hilf Density Ratio (%) :	**97.0**	**95.5**	**102.0**	**103.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 11**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**08/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224169	224170	224171	224172
Test Number :	29	30	31	32
Sampling Method :	-	-	-	-
Date Sampled :	01/02/2017	01/02/2017	01/02/2017	01/02/2017
Date Tested :	01/02/2017	01/02/2017	01/02/2017	01/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	450	449	448	446
Sample Location :	Lot 450 (Stage 14) 10m From North Boundary 3m From West Boundary 0.5m Below Final Level	Lot 449 (Stage 14) 8m From North Boundary 6m From West Boundary 0.5m Below Final Level	Lot 448 (Stage 14) 11m From North Boundary 5m From West Boundary 0.5m Below Final Level	Lot 446 (Stage 14) 5m From North Boundary 6m From West Boundary 0.5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	17.1	15.0	16.1	17.9
Hilf MDR Number :	224169	224170	224171	224172
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	100.5	98	99.5	99
Field Wet Density (t/m³) :	2.027	2.068	2.060	2.085
Optimum Moisture Content (%) :	17.0	15.3	16.2	18.1
Moisture Variation :	-0.1	0.2	0.0	0.2
Peak Converted Wet Density (t/m³) :	2.079	2.057	2.113	2.051
Hilf Density Ratio (%) :	**97.5**	**100.5**	**97.5**	**101.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 12**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**08/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224255	224256	224257	224258
Test Number :	33	34	35	36
Sampling Method :	-	-	-	-
Date Sampled :	02/02/2017	02/02/2017	02/02/2017	02/02/2017
Date Tested :	02/02/2017	02/02/2017	02/02/2017	02/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	472	473	465	466
Sample Location :	Lot 472 (Stage 16) 5m From North Boundary 8m From West Boundary Final Level	Lot 473 (Stage 16) 4m From North Boundary 7m From West Boundary Final Level	Lot 465 (Stage 15) 9m From North Boundary 5m From West Boundary Final Level	Lot 466 (Stage 15) 8m From North Boundary 4m From West Boundary Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	15.4	17.0	16.9	16.9
Hilf MDR Number :	224255	224256	224257	224258
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	101	102	102	120
Field Wet Density (t/m³) :	2.063	2.052	2.060	2.072
Optimum Moisture Content (%) :	15.2	16.7	16.5	14.1
Moisture Variation :	-0.2	-0.3	-0.3	-2.8
Peak Converted Wet Density (t/m³) :	2.111	2.096	2.111	2.132
Hilf Density Ratio (%) :	**97.5**	**98.0**	**97.5**	**97.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 13**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**08/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224259	224260	224261	224262
Test Number :	37	38	39	40
Sampling Method :	-	-	-	-
Date Sampled :	02/02/2017	02/02/2017	02/02/2017	02/02/2017
Date Tested :	02/02/2017	02/02/2017	02/02/2017	02/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	453	447	455	451
Sample Location :	Lot 453 (Stage 14) 3m From North Boundary 4m From West Boundary Final Level	Lot 447 (Stage 15) 5m From North Boundary 6m From West Boundary Final Level	Lot 455 (Stage 15) 6m From North Boundary 4m From West Boundary Final Level	Lot 451 (Stage 15) 4m From North Boundary 4m From West Boundary Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	15.6	15.1	14.5	15.5
Hilf MDR Number :	224259	224260	224261	224262
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	101	101.5	104.5	104
Field Wet Density (t/m³) :	2.094	2.062	2.073	2.117
Optimum Moisture Content (%) :	15.4	14.9	13.8	14.9
Moisture Variation :	-0.2	-0.2	-0.7	-0.6
Peak Converted Wet Density (t/m³) :	2.130	2.121	2.146	2.156
Hilf Density Ratio (%) :	**98.5**	**97.0**	**96.5**	**98.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 14**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**08/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224263	224264	224265	224266
Test Number :	41	42	43	44
Sampling Method :	-	-	-	-
Date Sampled :	02/02/2017	02/02/2017	02/02/2017	02/02/2017
Date Tested :	02/02/2017	02/02/2017	02/02/2017	02/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	445	446	476	477
Sample Location :	Lot 445 (Stage 14) 8m From North Boundary 3m From West Boundary Final Level	Lot 446 (Stage 14) 6m From North Boundary 5m From West Boundary Final Level	Lot 476 (Stage 16) 10m From North Boundary 6m From West Boundary Final Level	Lot 477 (Stage 16) 7m From North Boundary 3m From West Boundary Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	11.7	12.4	11.7	12.3
Hilf MDR Number :	224263	224264	224265	224266
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	97	97.5	104.5	102
Field Wet Density (t/m³) :	2.133	2.142	2.133	2.122
Optimum Moisture Content (%) :	12.0	12.7	11.2	12.0
Moisture Variation :	0.3	0.3	-0.6	-0.2
Peak Converted Wet Density (t/m³) :	2.100	2.112	2.117	2.128
Hilf Density Ratio (%) :	**101.5**	**101.5**	**101.0**	**99.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 15**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**08/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224267	224268	224269	224270
Test Number :	45	46	47	48
Sampling Method :	-	-	-	-
Date Sampled :	02/02/2017	02/02/2017	02/02/2017	02/02/2017
Date Tested :	02/02/2017	02/02/2017	02/02/2017	02/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	478	479	480	482
Sample Location :	Lot 478 (Stage 16) 4m From North Boundary 4m From West Boundary Final Level	Lot 479 (Stage 16) 7m From North Boundary 5m From West Boundary Final Level	Lot 480 (Stage 16) 5m From North Boundary 3m From West Boundary Final Level	Lot 482 (Stage 16) 10m From North Boundary 6m From West Boundary Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	13.4	12.8	14.5	14.9
Hilf MDR Number :	224267	224268	224269	224270
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	89.5	88.5	105	104
Field Wet Density (t/m³) :	2.098	2.091	2.114	2.103
Optimum Moisture Content (%) :	15.0	14.5	13.8	14.4
Moisture Variation :	1.6	1.7	-0.7	-0.6
Peak Converted Wet Density (t/m³) :	2.072	2.086	2.098	2.091
Hilf Density Ratio (%) :	**101.0**	**100.0**	**101.0**	**100.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 16**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**08/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224376	224377	224378	
Test Number :	49	50	51	
Sampling Method :	-	-	-	
Date Sampled :	03/02/2017	03/02/2017	03/02/2017	
Date Tested :	03/02/2017	03/02/2017	03/02/2017	
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	
Material Source :	**On Site**	**On Site**	**On Site**	
Lot Number :	443	359	360	
Sample Location :	Lot 443 (Stage 14) 10m From North Boundary 5m From West Boundary 2m Below Final Level	Lot 359 (Stage 11) 8m From North Boundary 4m From West Boundary 2m Below Final Level	Lot 360 (Stage 11) 9m From North Boundary 6m From West Boundary 2.1m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	13.5	12.9	12.6	
Hilf MDR Number :	224376	224377	224378	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	103	99	99	
Field Wet Density (t/m³) :	2.125	2.134	2.119	
Optimum Moisture Content (%) :	13.1	13.0	12.7	
Moisture Variation :	-0.3	0.1	0.1	
Peak Converted Wet Density (t/m³) :	2.159	2.138	2.072	
Hilf Density Ratio (%) :	**98.5**	**100.0**	**102.5**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 17**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**08/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224379	224380	224381	224382
Test Number :	52	53	54	55
Sampling Method :	-	-	-	-
Date Sampled :	03/02/2017	03/02/2017	03/02/2017	03/02/2017
Date Tested :	03/02/2017	03/02/2017	03/02/2017	03/02/2017
Material Type :	**Road Fill**	**Road Fill**	**Road Fill**	**Road Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Musgrave Street (Stage 14) E 498895 N 7000385 1.5m Below Final Level	Musgrave Street (Stage 14) E 498924 N 7000391 1.5m Below Final Level	Musgrave Street (Stage 14) E 498930 N 7000390 1.9m Below Final Level	Musgrave Street (Stage 14) E 498966 N 7000386 1.6m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	10.4	9.3	9.5	7.8
Hilf MDR Number :	224379	224380	224381	224382
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	97	83.5	84.5	77
Field Wet Density (t/m³) :	2.094	2.106	2.032	2.051
Optimum Moisture Content (%) :	10.7	11.2	11.2	10.1
Moisture Variation :	0.3	1.9	1.8	2.3
Peak Converted Wet Density (t/m³) :	2.092	2.165	2.143	2.157
Hilf Density Ratio (%) :	**100.0**	**97.5**	**95.0**	**95.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 18**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**15/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224507	224508	224509	224510
Test Number :	56	57	58	59
Sampling Method :	-	-	-	-
Date Sampled :	07/02/2017	07/02/2017	07/02/2017	07/02/2017
Date Tested :	07/02/2017	07/02/2017	07/02/2017	07/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	464	461	462	463
Sample Location :	Lot 464 (Stage 15) 5m From North Boundary 4m From West Boundary 0.3m Below Final Level	Lot 461 (Stage 15) 8m From North Boundary 7m From West Boundary 0.3m Below Final Level	Lot 462 (Stage 15) 9m From North Boundary 6m From West Boundary 0.3m Below Final Level	Lot 463 (Stage 15) 7m From North Boundary 3m From West Boundary 0.3m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	9.0	8.6	8.2	8.3
Hilf MDR Number :	224507	224508	224509	224510
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	81	94	77.5	84.5
Field Wet Density (t/m³) :	2.241	2.264	2.199	2.154
Optimum Moisture Content (%) :	11.1	9.2	10.6	9.8
Moisture Variation :	2.2	0.6	2.4	1.5
Peak Converted Wet Density (t/m³) :	2.214	2.237	2.231	2.227
Hilf Density Ratio (%) :	**101.0**	**101.0**	**98.5**	**96.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 19**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**15/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224511	224512	224513	224514
Test Number :	60	61	62	63
Sampling Method :	-	-	-	-
Date Sampled :	07/02/2017	07/02/2017	07/02/2017	07/02/2017
Date Tested :	07/02/2017	07/02/2017	07/02/2017	07/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	483	484	485	486
Sample Location :	Lot 483 (Stage 16) 10m From North Boundary 6m From West Boundary 0.6m Below Final Level	Lot 484 (Stage 16) 8m From North Boundary 7m From West Boundary 0.6m Below Final Level	Lot 485 (Stage 16) 11m From North Boundary 6m From West Boundary 0.6m Below Final Level	Lot 486 (Stage 16) 9m From North Boundary 7m From West Boundary 0.6m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	6.2	6.8	6.7	6.9
Hilf MDR Number :	224511	224512	224513	224514
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	77	80.5	79.5	82.5
Field Wet Density (t/m³) :	2.141	2.162	2.159	2.150
Optimum Moisture Content (%) :	8.0	8.4	8.4	8.4
Moisture Variation :	1.9	1.6	1.7	1.5
Peak Converted Wet Density (t/m³) :	2.226	2.215	2.236	2.240
Hilf Density Ratio (%) :	**96.0**	**97.5**	**96.5**	**96.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 20**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**15/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224515	224516	224517	224518
Test Number :	64	65	66	67
Sampling Method :	-	-	-	-
Date Sampled :	07/02/2017	07/02/2017	07/02/2017	07/02/2017
Date Tested :	07/02/2017	07/02/2017	07/02/2017	07/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	457	444	465	464
Sample Location :	Lot 457 (Stage 15) 5m From North Boundary 5m From West Boundary Final Level	Lot 444 (Stage 14) 6m From North Boundary 7m From West Boundary Final Level	Lot 465 (Stage 15) 10m From North Boundary 5m From West Boundary Final Level	Lot 464 (Stage 15) 10m From North Boundary 10m From West Boundary Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	6.7	6.3	5.9	6.5
Hilf MDR Number :	224515	224516	224517	224518
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	81	75.5	94.5	77.5
Field Wet Density (t/m³) :	2.089	2.110	2.127	2.154
Optimum Moisture Content (%) :	8.3	8.3	6.2	8.4
Moisture Variation :	1.6	2.1	0.3	2.0
Peak Converted Wet Density (t/m³) :	2.202	2.200	2.238	2.188
Hilf Density Ratio (%) :	**95.0**	**96.0**	**95.0**	**98.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 21**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**15/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224519	224520	224521	224522
Test Number :	68	69	70	71
Sampling Method :	-	-	-	-
Date Sampled :	07/02/2017	07/02/2017	07/02/2017	07/02/2017
Date Tested :	07/02/2017	07/02/2017	07/02/2017	07/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	450	448	445	447
Sample Location :	Lot 450 (Stage 14) 9m From North Boundary 6m From West Boundary Final Level	Lot 448 (Stage 14) 7m From North Boundary 5m From West Boundary Final Level	Lot 445 (Stage 14) 5m From North Boundary 4m From West Boundary Final Level	Lot 447 (Stage 14) 6m From North Boundary 6m From West Boundary Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	9.8	10.6	10.4	10.7
Hilf MDR Number :	224519	224520	224521	224522
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	103	97	103.5	102.5
Field Wet Density (t/m³) :	2.099	2.094	2.107	2.109
Optimum Moisture Content (%) :	9.5	10.9	10.0	10.5
Moisture Variation :	-0.3	0.3	-0.3	-0.2
Peak Converted Wet Density (t/m³) :	2.213	2.205	2.202	2.221
Hilf Density Ratio (%) :	**95.0**	**95.0**	**95.5**	**95.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 22**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**16/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224584	224586	224587	224588
Test Number :	72	73	74	75
Sampling Method :	-	-	-	-
Date Sampled :	08/02/2017	08/02/2017	08/02/2017	08/02/2017
Date Tested :	08/02/2017	08/02/2017	08/02/2017	08/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	358	356	355	354
Sample Location :	Lot 358 (Stage 11) 6m From North Boundary 13m From East Boundary Final Level	Lot 356 (Stage 11) 8m From North Boundary 12m From East Boundary Final Level	Lot 355 (Stage 11) 5m From North Boundary 13m From East Boundary Final Level	Lot 354 (Stage 11) 7m From North Boundary 15m From East Boundary Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	7.1	12.7	10.9	11.5
Hilf MDR Number :	224584	224586	224587	224588
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	79.5	99	80	82.5
Field Wet Density (t/m³) :	2.129	2.093	2.136	2.168
Optimum Moisture Content (%) :	8.9	12.8	13.6	14.0
Moisture Variation :	1.9	0.1	2.8	2.4
Peak Converted Wet Density (t/m³) :	2.209	2.150	2.094	2.111
Hilf Density Ratio (%) :	**96.5**	**97.5**	**102.0**	**102.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 23
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	16/02/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	224585			
Test Number :	76			
Sampling Method :	-			
Date Sampled :	08/02/2017			
Date Tested :	08/02/2017			
Material Type :	**Allotment Fill**			
Material Source :	**On Site**			
Lot Number :	357			
Sample Location :	Lot 357 (Stage 11) 5m From North Boundary 14m From East Boundary Final Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	7.5			
Hilf MDR Number :	224585			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	82			
Field Wet Density (t/m³) :	2.064			
Optimum Moisture Content (%) :	9.1			
Moisture Variation :	1.6			
Peak Converted Wet Density (t/m³) :	2.211			
Hilf Density Ratio (%) :	**93.5**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 24**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**21/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224764	224765	224766	224767
Test Number :	77	78	79	80
Sampling Method :	-	-	-	-
Date Sampled :	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Date Tested :	13/02/2017	13/02/2017	13/02/2017	13/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	524	524	525	525
Sample Location :	Lot 524 (Stage 18) 10m From North Boundary 11m From West Boundary 5m Below Final Level	Lot 524 (Stage 18) 6m From North Boundary 9m From West Boundary 4.5m Below Final Level	Lot 525 (Stage 18) 4m From North Boundary 10m From West Boundary 4m Below Final Level	Lot 525 (Stage 18) 2m From North Boundary 12m From West Boundary 3.5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	14.3	15.2	10.4	12.0
Hilf MDR Number :	224764	224765	224766	224767
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.4	AS1289.2.1.4	AS1289.2.1.4	AS1289.2.1.4
Moisture Ratio (%) :	100	101.5	83.5	84.5
Field Wet Density (t/m³) :	1.969	1.974	1.973	1.943
Optimum Moisture Content (%) :	14.3	15.0	12.5	14.2
Moisture Variation :	0.0	-0.2	2.1	2.3
Peak Converted Wet Density (t/m³) :	2.063	2.046	2.018	1.945
Hilf Density Ratio (%) :	**95.5**	**96.5**	**98.0**	**100.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 25**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**21/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	224974			
Test Number :	81			
Sampling Method :	-			
Date Sampled :	16/02/2017			
Date Tested :	16/02/2017			
Material Type :	**Allotment Fill**			
Material Source :	**On Site**			
Lot Number :	357			
Sample Location :	Lot 357 (Stage 11) 5m From North Boundary 14m From East Boundary / Final Level Retest of Field Density No. 76 on the 08/02/17			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	10.1			
Hilf MDR Number :	224974			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.4			
Moisture Ratio (%) :	69.5			
Field Wet Density (t/m³) :	2.125			
Optimum Moisture Content (%) :	14.5			
Moisture Variation :	4.3			
Peak Converted Wet Density (t/m³) :	2.088			
Hilf Density Ratio (%) :	**102.0**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 26**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**22/02/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225037	225038	225039	225040
Test Number :	82	83	84	85
Sampling Method :	-	-	-	-
Date Sampled :	17/02/2017	17/02/2017	17/02/2017	17/02/2017
Date Tested :	17/02/2017	17/02/2017	17/02/2017	17/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	429	430	431	432
Sample Location :	Lot 429 9m From North Boundary 6m From West Boundary 2m Below Final Level	Lot 430 12m From North Boundary 4m From West Boundary 1.9m Below Final Level	Lot 431 14m From North Boundary 5m From West Boundary 1.9m Below Final Level	Lot 432 12m From North Boundary 3m From West Boundary 1.8m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	9.6	8.2	8.1	8.8
Hilf MDR Number :	225037	225038	225039	225040
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	78.5	77.5	75.5	77.5
Field Wet Density (t/m³) :	2.084	2.119	2.113	2.109
Optimum Moisture Content (%) :	12.2	10.6	10.7	11.4
Moisture Variation :	2.6	2.4	2.6	2.6
Peak Converted Wet Density (t/m³) :	2.191	2.141	2.201	2.177
Hilf Density Ratio (%) :	**95.0**	**99.0**	**96.0**	**97.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 27
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	22/02/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	225041			
Test Number :	86			
Sampling Method :	-			
Date Sampled :	17/02/2017			
Date Tested :	17/02/2017			
Material Type :	**Allotment Fill**			
Material Source :	**On Site**			
Lot Number :	433			
Sample Location :	Lot 433 8m From North Boundary 6m From West Boundary 1.7m Below Final Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	7.1			
Hilf MDR Number :	225041			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	74			
Field Wet Density (t/m³) :	2.098			
Optimum Moisture Content (%) :	9.6			
Moisture Variation :	2.5			
Peak Converted Wet Density (t/m³) :	2.176			
Hilf Density Ratio (%) :	**96.5**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Liam Mcdowall (Brisbane) - Branch Manager
NATA Accreditation Number
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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 28**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**03/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225355	225356	225357	225358
Test Number :	87	88	89	90
Sampling Method :	-	-	-	-
Date Sampled :	24/02/2017	24/02/2017	24/02/2017	24/02/2017
Date Tested :	24/02/2017	24/02/2017	24/02/2017	24/02/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Drying Pad E 498949 N 7000522 1.5m Below Final Level	Drying Pad E 498946 N 7000507 1.5m Below Final Level	Drying Pad E 498946 N 7000506 1.4m Below Final Level	Drying Pad E 498937 N 7000499 1.4m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	21.1	22.0	21.7	23.5
Hilf MDR Number :	225355	225356	225357	225358
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	102.5	99.5	111	103.5
Field Wet Density (t/m³) :	1.933	1.922	1.930	1.878
Optimum Moisture Content (%) :	20.6	22.2	19.6	22.7
Moisture Variation :	-0.5	0.1	-2.0	-0.8
Peak Converted Wet Density (t/m³) :	2.016	1.968	1.999	1.982
Hilf Density Ratio (%) :	**96.0**	**97.5**	**96.5**	**95.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 29**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**03/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225359	225360	225361	225362
Test Number :	91	92	93	94
Sampling Method :	-	-	-	-
Date Sampled :	24/02/2017	24/02/2017	24/02/2017	24/02/2017
Date Tested :	24/02/2017	24/02/2017	24/02/2017	24/02/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Drying Pad E 498903 N 7000468 1.4m Below Final Level	Drying Pad E 498905 N 7000473 1.5m Below Final Level	Drying Pad E 498900 N 7000477 1.3m Below Final Level	Drying Pad E 498884 N 7000485 1.3m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	23.1	21.4	20.9	16.3
Hilf MDR Number :	225359	225360	225361	225362
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	114.5	99.5	100.5	123.5
Field Wet Density (t/m³) :	1.890	1.865	1.935	1.978
Optimum Moisture Content (%) :	20.2	21.6	20.8	13.2
Moisture Variation :	-3.0	0.1	-0.1	-3.2
Peak Converted Wet Density (t/m³) :	1.966	1.964	2.004	2.068
Hilf Density Ratio (%) :	**96.0**	**95.0**	**96.5**	**95.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 30**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**03/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225363	225364	225365	225366
Test Number :	95	96	97	98
Sampling Method :	-	-	-	-
Date Sampled :	24/02/2017	24/02/2017	24/02/2017	24/02/2017
Date Tested :	24/02/2017	24/02/2017	24/02/2017	24/02/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Drying Pad E 498861 N 7000510 1.3m Below Final Level	Drying Pad E 498881 N 7000517 1.2m Below Final Level	Drying Pad E 498897 N 7000513 1.2m Below Final Level	Drying Pad E 498900 N 7000514 1.2m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	21.3	23.1	26.5	24.9
Hilf MDR Number :	225363	225364	225365	225366
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	117.5	132.5	110	100.5
Field Wet Density (t/m³) :	1.959	1.903	1.917	1.923
Optimum Moisture Content (%) :	18.1	17.4	24.1	24.8
Moisture Variation :	-3.1	-5.9	-2.3	-0.1
Peak Converted Wet Density (t/m³) :	2.051	1.997	1.974	1.953
Hilf Density Ratio (%) :	**95.5**	**95.5**	**97.0**	**98.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 31**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**03/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225367	225368	225369	225370
Test Number :	99	100	101	102
Sampling Method :	-	-	-	-
Date Sampled :	24/02/2017	24/02/2017	24/02/2017	24/02/2017
Date Tested :	24/02/2017	24/02/2017	24/02/2017	24/02/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Drying Pad E 498908 N 7000507 1.2m Below Final Level	Drying Pad E 498912 N 7000713 1.2m Below Final Level	Drying Pad E 498922 N 7000518 1.2m Below Final Level	Drying Pad E 498928 N 7000520 1.3m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	24.4	23.2	28.2	26.4
Hilf MDR Number :	225367	225368	225369	225370
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	102	103.5	122	111
Field Wet Density (t/m³) :	1.918	1.900	1.848	1.892
Optimum Moisture Content (%) :	23.9	22.4	23.1	23.8
Moisture Variation :	-0.5	-0.8	-5.2	-2.6
Peak Converted Wet Density (t/m³) :	1.968	1.982	1.942	1.967
Hilf Density Ratio (%) :	**97.5**	**96.0**	**95.0**	**96.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 32**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**09/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225520	225521	225522	225523
Test Number :	103	104	105	106
Sampling Method :	-	-	-	-
Date Sampled :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Date Tested :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	525	525	524	524
Sample Location :	Lot 525 (Stage 18) 4m From North Boundary 8m From West Boundary 3.4m Below Final Level	Lot 525 (Stage 18) 6m From North Boundary 12m From West Boundary 3.3m Below Final Level	Lot 524 (Stage 18) 7m From North Boundary 8m From West Boundary 4.2m Below Final Level	Lot 524 (Stage 18) 4m From North Boundary 4m From West Boundary 3.9m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	7.6	6.9	6.8	11.2
Hilf MDR Number :	225520	225521	225522	225523
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	73	79	70	84.5
Field Wet Density (t/m³) :	2.070	2.120	2.115	2.095
Optimum Moisture Content (%) :	10.4	8.8	9.7	13.3
Moisture Variation :	2.8	1.9	2.9	2.1
Peak Converted Wet Density (t/m³) :	2.131	2.158	2.151	2.066
Hilf Density Ratio (%) :	**97.0**	**98.0**	**98.5**	**101.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 33**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**09/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225524	225525	225526	225527
Test Number :	107	108	109	110
Sampling Method :	-	-	-	-
Date Sampled :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Date Tested :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	524	523	523	523
Sample Location :	Lot 524 (Stage 18) 8m From North Boundary 4m From East Boundary 3.5m Below Final Level	Lot 523 (Stage 17) 4m From North Boundary 4m From West Boundary 4.5m Below Final Level	Lot 523 (Stage 17) 7m From North Boundary 5m From West Boundary 4.2m Below Final Level	Lot 523 (Stage 17) 12m From North Boundary 3m From West Boundary 3.8m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	12.3	10.5	13.6	12.9
Hilf MDR Number :	225524	225525	225526	225527
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	90.5	74.5	87	84
Field Wet Density (t/m³) :	2.107	2.106	2.112	2.131
Optimum Moisture Content (%) :	13.6	14.1	15.6	15.4
Moisture Variation :	1.4	3.6	2.0	2.5
Peak Converted Wet Density (t/m³) :	2.060	2.039	2.080	2.059
Hilf Density Ratio (%) :	**102.5**	**103.5**	**101.5**	**103.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 34**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**09/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225528	225529	225530	225531
Test Number :	111	112	113	114
Sampling Method :	-	-	-	-
Date Sampled :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Date Tested :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	523	522	522	522
Sample Location :	Lot 523 (Stage 17) 15m From North Boundary 11m From West Boundary 3.6m Below Final Level	Lot 522 (Stage 17) 2m From South Boundary 3m From West Boundary 4.7m Below Final Level	Lot 522 (Stage 17) 6m From South Boundary 6m From West Boundary 4.4m Below Final Level	Lot 522 (Stage 17) 6m From North Boundary 5m From West Boundary 4m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	12.1	9.2	10.8	9.3
Hilf MDR Number :	225528	225529	225530	225531
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	86	70	70	66.5
Field Wet Density (t/m³) :	2.136	2.110	2.124	2.118
Optimum Moisture Content (%) :	14.1	13.1	15.5	14.0
Moisture Variation :	2.0	4.0	4.6	4.7
Peak Converted Wet Density (t/m³) :	2.051	2.006	1.999	1.981
Hilf Density Ratio (%) :	**104.0**	**105.0**	**106.0**	**107.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 35**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**09/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225532	225533	225534	225535
Test Number :	115	116	117	118
Sampling Method :	-	-	-	-
Date Sampled :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Date Tested :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	522	521	521	521
Sample Location :	Lot 522 (Stage 17) 8m From North Boundary 8m From West Boundary 3.6m Below Final Level	Lot 521 (Stage 17) 3m From South Boundary 3m From West Boundary 4.2m Below Final Level	Lot 521 (Stage 17) 6m From South Boundary 9m From West Boundary 4m Below Final Level	Lot 521 (Stage 17) 9m From North Boundary 4m From West Boundary 3.7m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	10.8	9.3	10.8	10.4
Hilf MDR Number :	225532	225533	225534	225535
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	77	80.5	72.5	76
Field Wet Density (t/m³) :	2.136	2.133	2.118	2.107
Optimum Moisture Content (%) :	14.0	11.5	14.9	13.7
Moisture Variation :	3.2	2.3	4.0	3.3
Peak Converted Wet Density (t/m³) :	2.010	2.029	2.096	2.021
Hilf Density Ratio (%) :	**106.5**	**105.0**	**101.0**	**104.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 36**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**09/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225536	225537	225538	225539
Test Number :	119	120	121	122
Sampling Method :	-	-	-	-
Date Sampled :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Date Tested :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	521	520	520	520
Sample Location :	Lot 521 (Stage 17) 4m From North Boundary 8m From West Boundary 3.3m Below Final Level	Lot 520 (Stage 17) 4m From South Boundary 5m From West Boundary 4.3m Below Final Level	Lot 520 (Stage 17) 5m From South Boundary 7m From West Boundary 4m Below Final Level	Lot 520 (Stage 17) 8m From North Boundary 4m From West Boundary 3.5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	11.0	9.5	9.7	9.3
Hilf MDR Number :	225536	225537	225538	225539
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	84	78	84	69.5
Field Wet Density (t/m³) :	2.113	2.104	2.099	2.102
Optimum Moisture Content (%) :	13.1	12.1	11.6	13.4
Moisture Variation :	2.1	2.7	1.9	4.0
Peak Converted Wet Density (t/m³) :	2.070	2.031	2.070	2.073
Hilf Density Ratio (%) :	**102.0**	**103.5**	**101.5**	**101.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 37**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**09/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225540	225541	225542	225543
Test Number :	123	124	125	126
Sampling Method :	-	-	-	-
Date Sampled :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Date Tested :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Material Type :	**Allotment Fill**	**Bulk Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	520	-	444	444
Sample Location :	Lot 520 (Stage 17) 5m From North Boundary 8m From West Boundary 3.1m Below Final Level	Road 38 (Stage 18) 3m From Lot 522 / 523 Boundary 3.2m Below Final Level	Lot 444 (Stage 15) 5m From North Boundary 2m From West Boundary 1.7m Below Final Level	Lot 444 (Stage 15) 10m From North Boundary 6m From West Boundary 1.2m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	9.5	9.2	19.6	6.0
Hilf MDR Number :	225540	225541	225542	225543
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	67.5	73.5	101.5	68.5
Field Wet Density (t/m³) :	2.114	2.103	2.107	2.137
Optimum Moisture Content (%) :	14.1	12.5	19.3	8.7
Moisture Variation :	4.6	3.4	-0.2	2.8
Peak Converted Wet Density (t/m³) :	2.045	2.072	1.978	2.145
Hilf Density Ratio (%) :	**103.5**	**101.5**	**106.5**	**99.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 38**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**09/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225544	225545	225546	225547
Test Number :	127	128	129	130
Sampling Method :	-	-	-	-
Date Sampled :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Date Tested :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	443	443	442	442
Sample Location :	Lot 443 (Stage 15) 4m From North Boundary 5m From West Boundary 1.6m Below Final Level	Lot 443 (Stage 15) 11m From North Boundary 8m From West Boundary 1.1m Below Final Level	Lot 442 (Stage 15) 4m From North Boundary 10m From West Boundary 1.6m Below Final Level	Lot 442 (Stage 15) 8m From North Boundary 5m From West Boundary 1.1m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	8.0	4.9	4.5	7.6
Hilf MDR Number :	225544	225545	225546	225547
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	65.5	54.5	79.5	61.5
Field Wet Density (t/m³) :	2.123	2.124	2.132	2.044
Optimum Moisture Content (%) :	12.2	9.0	5.7	12.3
Moisture Variation :	4.2	4.2	1.2	4.8
Peak Converted Wet Density (t/m³) :	2.094	2.140	2.184	2.023
Hilf Density Ratio (%) :	**101.5**	**99.0**	**97.5**	**101.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 39**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**09/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225548	225549	225550	225551
Test Number :	131	132	133	134
Sampling Method :	-	-	-	-
Date Sampled :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Date Tested :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	441	441	440	440
Sample Location :	Lot 441 (Stage 15) 3m From North Boundary 11m From West Boundary 1.6m Below Final Level	Lot 441 (Stage 15) 6m From North Boundary 6m From West Boundary 1.1m Below Final Level	Lot 440 (Stage 15) 3m From North Boundary 11m From West Boundary 1.5m Below Final Level	Lot 440 (Stage 15) 6m From North Boundary 7m From West Boundary 1.1m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	10.5	7.3	7.7	7.8
Hilf MDR Number :	225548	225549	225550	225551
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	73	62	67	63.5
Field Wet Density (t/m³) :	2.078	2.067	2.050	2.067
Optimum Moisture Content (%) :	14.4	11.8	11.5	12.3
Moisture Variation :	4.0	4.6	3.9	4.6
Peak Converted Wet Density (t/m³) :	2.036	1.982	2.020	2.005
Hilf Density Ratio (%) :	**102.0**	**104.5**	**101.5**	**103.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 40**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**09/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225552	225553	225554	225555
Test Number :	135	136	137	138
Sampling Method :	-	-	-	-
Date Sampled :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Date Tested :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	439	439	441	441
Sample Location :	Lot 439 (Stage 15) 4m From North Boundary 15m From West Boundary 1.6m Below Final Level	Lot 439 (Stage 15) 7m From North Boundary 7m From West Boundary 1m Below Final Level	Lot 441 (Stage 14) 9m From North Boundary 4m From West Boundary 1.5m Below Final Level	Lot 441 (Stage 14) 6m From North Boundary 7m From West Boundary 1m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	7.4	7.5	9.3	12.4
Hilf MDR Number :	225552	225553	225554	225555
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	58	62	67.5	86.5
Field Wet Density (t/m³) :	2.076	2.082	2.146	2.148
Optimum Moisture Content (%) :	12.8	12.1	13.8	14.3
Moisture Variation :	5.4	4.7	4.5	1.9
Peak Converted Wet Density (t/m³) :	2.005	2.022	2.056	2.057
Hilf Density Ratio (%) :	**103.5**	**103.0**	**104.5**	**104.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 41**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**09/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225556	225557	225558	225559
Test Number :	139	140	141	142
Sampling Method :	-	-	-	-
Date Sampled :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Date Tested :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	442	442	444	444
Sample Location :	Lot 442 (Stage 14) 3m From North Boundary 12m From West Boundary 1.6m Below Final Level	Lot 442 (Stage 14) 10m From North Boundary 9m From West Boundary 1m Below Final Level	Lot 444 (Stage 15) 7m From North Boundary 5m From West Boundary 0.5m Below Final Level	Lot 444 (Stage 15) 2m From North Boundary 8m From West Boundary Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	11.0	7.8	11.0	8.8
Hilf MDR Number :	225556	225557	225558	225559
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	75	58	72.5	64
Field Wet Density (t/m³) :	2.120	2.110	2.132	2.146
Optimum Moisture Content (%) :	14.7	13.4	15.2	13.7
Moisture Variation :	3.6	5.6	4.2	4.9
Peak Converted Wet Density (t/m³) :	2.030	1.997	2.038	2.013
Hilf Density Ratio (%) :	**104.5**	**105.5**	**104.5**	**106.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 42**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**09/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225560	225561	225562	225563
Test Number :	143	144	145	146
Sampling Method :	-	-	-	-
Date Sampled :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Date Tested :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	443	440	443	442
Sample Location :	Lot 443 (Stage 15) 8m From North Boundary 2m From West Boundary 0.5m Below Final Level	Lot 440 (Stage 15) 6m From North Boundary 8m From West Boundary 0.5m Below Final Level	Lot 443 (Stage 15) 4m From North Boundary 3m From West Boundary Final Level	Lot 442 (Stage 15) 7m From North Boundary 5m From West Boundary Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	8.7	7.9	8.7	6.6
Hilf MDR Number :	225560	225561	225562	225563
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	63.5	54.5	65	49
Field Wet Density (t/m³) :	2.130	2.074	2.065	2.053
Optimum Moisture Content (%) :	13.7	14.5	13.4	13.5
Moisture Variation :	5.0	6.5	4.6	6.9
Peak Converted Wet Density (t/m³) :	2.011	2.019	2.072	2.000
Hilf Density Ratio (%) :	**106.0**	**102.5**	**99.5**	**102.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 43**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**09/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225564	225565	225566	225567
Test Number :	147	148	149	150
Sampling Method :	-	-	-	-
Date Sampled :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Date Tested :	28/02/2017	28/02/2017	28/02/2017	28/02/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	441	440	439	439
Sample Location :	Lot 441 (Stage 15) 4m From North Boundary 4m From West Boundary Final Level	Lot 440 (Stage 15) 2m From North Boundary 9m From West Boundary Final Level	Lot 439 (Stage 15) 4m From North Boundary 12m From West Boundary 0.5m Below Final Level	Lot 439 (Stage 15) 6m From North Boundary 9m From West Boundary Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	7.2	7.5	7.1	7.1
Hilf MDR Number :	225564	225565	225566	225567
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	52	54	51.5	51.5
Field Wet Density (t/m³) :	2.083	2.152	2.145	2.154
Optimum Moisture Content (%) :	13.8	13.9	13.7	13.7
Moisture Variation :	6.6	6.3	6.6	6.6
Peak Converted Wet Density (t/m³) :	2.019	1.988	2.014	1.992
Hilf Density Ratio (%) :	**103.0**	**108.0**	**106.5**	**108.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 44**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**17/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225952	225953	225954	225955
Test Number :	151	152	153	154
Sampling Method :	-	-	-	-
Date Sampled :	07/03/2017	07/03/2017	07/03/2017	07/03/2017
Date Tested :	07/03/2017	07/03/2017	07/03/2017	07/03/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	518	518	519	519
Sample Location :	Lot 518 5m From North Boundary 6m From West Boundary 5.6m Below Final Level	Lot 518 11m From North Boundary 8m From West Boundary 5m Below Final Level	Lot 519 4m From North Boundary 4m From West Boundary 5.5m Below Final Level	Lot 519 12m From North Boundary 7m From West Boundary 5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	150	150	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	24.6	24.6	24.1	25.4
Hilf MDR Number :	225952	225953	225954	225955
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	94	96.5	97.5	98
Field Wet Density (t/m³) :	1.980	1.991	1.989	2.011
Optimum Moisture Content (%) :	26.2	25.5	24.7	25.9
Moisture Variation :	1.6	0.8	0.6	0.5
Peak Converted Wet Density (t/m³) :	1.871	1.890	1.893	1.915
Hilf Density Ratio (%) :	**106.0**	**105.5**	**105.0**	**105.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 45**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**17/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	225956	225957	225958	225959
Test Number :	155	156	157	158
Sampling Method :	-	-	-	-
Date Sampled :	07/03/2017	07/03/2017	07/03/2017	07/03/2017
Date Tested :	07/03/2017	07/03/2017	07/03/2017	07/03/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	519	519	520	520
Sample Location :	Lot 519 7m From North Boundary 2m From West Boundary 5.3m Below Final Level	Lot 519 17m From North Boundary 8m From West Boundary 4.9m Below Final Level	Lot 520 3m From North Boundary 3m From West Boundary 4m Below Final Level	Lot 520 15m From North Boundary 5m From West Boundary 3.8m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	25.2	25.2	24.9	23.4
Hilf MDR Number :	225956	225957	225958	225959
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	95.5	91.5	97	91
Field Wet Density (t/m³) :	1.967	2.009	1.941	1.961
Optimum Moisture Content (%) :	26.4	27.5	25.6	25.6
Moisture Variation :	1.2	2.2	0.7	2.1
Peak Converted Wet Density (t/m³) :	1.857	1.852	1.887	1.873
Hilf Density Ratio (%) :	**106.0**	**108.5**	**103.0**	**104.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 46
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	17/03/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	225960			
Test Number :	159			
Sampling Method :	-			
Date Sampled :	07/03/2017			
Date Tested :	07/03/2017			
Material Type :	**Allotment Fill**			
Material Source :	**On Site**			
Lot Number :	521			
Sample Location :	Lot 521 5m From North Boundary 8m From West Boundary 3.1m Below Final Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	25.2			
Hilf MDR Number :	225960			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	95.5			
Field Wet Density (t/m³) :	1.956			
Optimum Moisture Content (%) :	26.4			
Moisture Variation :	1.1			
Peak Converted Wet Density (t/m³) :	1.884			
Hilf Density Ratio (%) :	**104.0**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 47
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	17/03/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	226127	226128	226129	226130
Test Number :	160	161	162	163
Sampling Method :	-	-	-	-
Date Sampled :	09/03/2017	09/03/2017	09/03/2017	09/03/2017
Date Tested :	09/03/2017	09/03/2017	09/03/2017	09/03/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**
Lot Number :	521	522	522	520
Sample Location :	Lot 521 (Stage 17) 15m From North Boundary 5m From West Boundary 2.9m Below Final Level	Lot 522 (Stage 17) 6m From North Boundary 4m From West Boundary 3.3m Below Final Level	Lot 522 (Stage 17) 20m From North Boundary 7m From West Boundary 3m Below Final Level	Lot 520 (Stage 17) 10m From North Boundary 6m From West Boundary 3.6m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	17.0	15.3	15.8	15.3
Hilf MDR Number :	226127	226128	226129	226130
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.4	AS1289.2.1.4	AS1289.2.1.4	AS1289.2.1.4
Moisture Ratio (%) :	88.5	87.5	87	86
Field Wet Density (t/m³) :	1.967	1.987	1.971	1.977
Optimum Moisture Content (%) :	19.2	17.5	18.1	17.7
Moisture Variation :	2.2	2.2	2.3	2.4
Peak Converted Wet Density (t/m³) :	1.974	2.008	1.997	1.992
Hilf Density Ratio (%) :	**99.5**	**99.0**	**98.5**	**99.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 48**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**17/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	226131	226132	226133	226134
Test Number :	164	165	166	167
Sampling Method :	-	-	-	-
Date Sampled :	09/03/2017	09/03/2017	09/03/2017	09/03/2017
Date Tested :	09/03/2017	09/03/2017	09/03/2017	09/03/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**
Lot Number :	520	519	519	519
Sample Location :	Lot 520 (Stage 17) 18m From North Boundary 3m From West Boundary 3.2m Below Final Level	Lot 519 (Stage 17) 5m From North Boundary 3m From West Boundary 4.6m Below Final Level	Lot 519 (Stage 17) 8m From North Boundary 6m From West Boundary 4m Below Final Level	Lot 519 (Stage 17) 10m From North Boundary 5m From West Boundary 3.6m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	15.6	14.7	29.8	28.4
Hilf MDR Number :	226131	226132	226133	226134
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.4	AS1289.2.1.4	AS1289.2.1.4	AS1289.2.1.4
Moisture Ratio (%) :	90	89	91.5	101
Field Wet Density (t/m³) :	1.980	1.987	1.939	1.933
Optimum Moisture Content (%) :	17.4	16.6	32.6	28.2
Moisture Variation :	1.7	1.8	2.6	-0.2
Peak Converted Wet Density (t/m³) :	2.009	1.996	1.879	1.961
Hilf Density Ratio (%) :	**98.5**	**99.5**	**103.0**	**98.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 49**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**17/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	226135	226136	226137	226138
Test Number :	168	169	170	171
Sampling Method :	-	-	-	-
Date Sampled :	09/03/2017	09/03/2017	09/03/2017	09/03/2017
Date Tested :	09/03/2017	09/03/2017	09/03/2017	09/03/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**
Lot Number :	519	518	518	518
Sample Location :	Lot 519 (Stage 17) 15m From North Boundary 4m From West Boundary 3.2m Below Final Level	Lot 518 (Stage 17) 4m From North Boundary 5m From West Boundary 4.5m Below Final Level	Lot 518 (Stage 17) 8m From North Boundary 9m From West Boundary 4.1m Below Final Level	Lot 518 (Stage 17) 11m From North Boundary 8m From West Boundary 3.7m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	29.2	23.5	23.6	30.7
Hilf MDR Number :	226135	226136	226137	226138
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.4	AS1289.2.1.4	AS1289.2.1.4	AS1289.2.1.4
Moisture Ratio (%) :	92	91	90	91.5
Field Wet Density (t/m³) :	1.921	1.932	1.935	1.950
Optimum Moisture Content (%) :	31.7	25.8	26.2	33.5
Moisture Variation :	2.5	2.2	2.4	2.6
Peak Converted Wet Density (t/m³) :	1.803	1.994	1.945	1.857
Hilf Density Ratio (%) :	**106.5**	**97.0**	**99.5**	**105.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 50
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	17/03/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	226139	226140	226141	226142
Test Number :	172	173	174	175
Sampling Method :	-	-	-	-
Date Sampled :	09/03/2017	09/03/2017	09/03/2017	09/03/2017
Date Tested :	09/03/2017	09/03/2017	09/03/2017	09/03/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**
Lot Number :	518	530	530	530
Sample Location :	Lot 518 (Stage 17) 22m From North Boundary 3m From West Boundary 3.2m Below Final Level	Lot 530 (Stage 18) 2m From North Boundary 5m From West Boundary 5.8m Below Final Level	Lot 530 (Stage 18) 6m From North Boundary 10m From West Boundary 5.4m Below Final Level	Lot 530 (Stage 18) 8m From North Boundary 12m From West Boundary 5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	26.0	29.8	30.1	29.9
Hilf MDR Number :	226139	226140	226141	226142
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.4	AS1289.2.1.4	AS1289.2.1.4	AS1289.2.1.4
Moisture Ratio (%) :	91.5	91.5	93	93
Field Wet Density (t/m³) :	2.003	1.991	1.983	1.979
Optimum Moisture Content (%) :	28.5	32.5	32.3	32.2
Moisture Variation :	2.3	2.5	2.0	2.1
Peak Converted Wet Density (t/m³) :	1.916	1.878	1.860	1.882
Hilf Density Ratio (%) :	**104.5**	**106.0**	**106.5**	**105.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 51
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	17/03/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	226143	226144	226145	226146
Test Number :	176	177	178	179
Sampling Method :	-	-	-	-
Date Sampled :	09/03/2017	09/03/2017	09/03/2017	09/03/2017
Date Tested :	09/03/2017	09/03/2017	09/03/2017	09/03/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**
Lot Number :	530	533	533	533
Sample Location :	Lot 530 (Stage 18) 4m From North Boundary 15m From West Boundary 4.6m Below Final Level	Lot 533 (Stage 18) 2m From South Boundary 1m From West Boundary 5.4m Below Final Level	Lot 533 (Stage 18) 5m From South Boundary 4m From West Boundary 5m Below Final Level	Lot 533 (Stage 18) 5m From South Boundary 9m From West Boundary 4.4m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	30.5	27.8	20.6	21.5
Hilf MDR Number :	226143	226144	226145	226146
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.4	AS1289.2.1.4	AS1289.2.1.4	AS1289.2.1.4
Moisture Ratio (%) :	92	91.5	90	90
Field Wet Density (t/m³) :	1.978	1.996	2.001	2.010
Optimum Moisture Content (%) :	33.1	30.3	22.9	23.9
Moisture Variation :	2.4	2.3	2.1	2.3
Peak Converted Wet Density (t/m³) :	1.881	1.927	2.022	1.989
Hilf Density Ratio (%) :	**105.0**	**103.5**	**99.0**	**101.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 52
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	17/03/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	226147	226148	226149	226150
Test Number :	180	181	182	183
Sampling Method :	-	-	-	-
Date Sampled :	09/03/2017	09/03/2017	09/03/2017	09/03/2017
Date Tested :	09/03/2017	09/03/2017	09/03/2017	09/03/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**
Lot Number :	533	518	519	520
Sample Location :	Lot 533 (Stage 18) 3m From South Boundary 4m From West Boundary 4m Below Final Level	Lot 518 (Stage 17) 10m From North Boundary 9m From West Boundary 2.9m Below Final Level	Lot 519 (Stage 17) 9m From North Boundary 5m From West Boundary 3m Below Final Level	Lot 520 (Stage 17) 14m From North Boundary 4m From West Boundary 2.9m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	18.6	22.9	24.5	21.3
Hilf MDR Number :	226147	226148	226149	226150
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	88.5	91	91	89
Field Wet Density (t/m³) :	1.976	1.960	1.982	2.017
Optimum Moisture Content (%) :	21.1	25.2	26.9	23.9
Moisture Variation :	2.4	2.2	2.2	2.4
Peak Converted Wet Density (t/m³) :	1.928	1.913	1.919	1.923
Hilf Density Ratio (%) :	**102.5**	**102.5**	**103.5**	**105.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 53
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	17/03/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	226151	226152		
Test Number :	184	185		
Sampling Method :	-	-		
Date Sampled :	09/03/2017	09/03/2017		
Date Tested :	09/03/2017	09/03/2017		
Material Type :	**Allotment Fill**	**Allotment Fill**		
Material Source :	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**		
Lot Number :	521	522		
Sample Location :	Lot 520 (Stage 17) 12m From North Boundary 6m From West Boundary 2.7m Below Final Level	Lot 522 (Stage 17) 13m From North Boundary 5m From West Boundary 2.8m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	24.1	20.1		
Hilf MDR Number :	226151	226152		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	91	90		
Field Wet Density (t/m³) :	2.015	2.051		
Optimum Moisture Content (%) :	26.5	22.4		
Moisture Variation :	2.3	2.2		
Peak Converted Wet Density (t/m³) :	1.976	1.976		
Hilf Density Ratio (%) :	**102.0**	**104.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 54
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	17/03/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	226241	226242		
Test Number :	186	187		
Sampling Method :	-	-		
Date Sampled :	10/03/2017	10/03/2017		
Date Tested :	10/03/2017	10/03/2017		
Material Type :	**Allotment Fill**	**Allotment Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	533	530		
Sample Location :	Lot 533 (Stage 18) 4m From South Boundary 8m From West Boundary 3.5m Below Final Level	Lot 530 (Stage 18) 2m From South Boundary 10m From West Boundary 4m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	29.7	27.7		
Hilf MDR Number :	226241	226242		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	94	95		
Field Wet Density (t/m³) :	1.900	1.953		
Optimum Moisture Content (%) :	31.7	29.1		
Moisture Variation :	1.9	1.4		
Peak Converted Wet Density (t/m³) :	1.779	1.835		
Hilf Density Ratio (%) :	**107.0**	**106.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 55**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**21/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	226346	226347	226348	226349
Test Number :	188	189	190	191
Sampling Method :	-	-	-	-
Date Sampled :	14/03/2017	14/03/2017	14/03/2017	14/03/2017
Date Tested :	14/03/2017	14/03/2017	14/03/2017	14/03/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**
Lot Number :	516	516	516	516
Sample Location :	Lot 516 (Stage 17) 4m From South Boundary 2m From West Boundary 4.9m Below Final Level	Lot 516 (Stage 17) 10m From South Boundary 3m From East Boundary 4.6m Below Final Level	Lot 516 (Stage 17) 8m From North Boundary 4m From West Boundary 4.9m Below Final Level	Lot 516 (Stage 17) 15m From North Boundary 5m From West Boundary 4.7m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	22.2	20.6	18.9	19.9
Hilf MDR Number :	226346	226347	226348	226349
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	91	87	82	90.5
Field Wet Density (t/m³) :	1.989	1.957	1.985	1.983
Optimum Moisture Content (%) :	24.4	23.7	23.1	22.0
Moisture Variation :	2.2	3.0	4.0	2.2
Peak Converted Wet Density (t/m³) :	1.839	1.934	1.896	1.798
Hilf Density Ratio (%) :	**108.0**	**101.0**	**104.5**	**110.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 56
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	21/03/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	226350	226351	226352	226353
Test Number :	192	193	194	195
Sampling Method :	-	-	-	-
Date Sampled :	14/03/2017	14/03/2017	14/03/2017	14/03/2017
Date Tested :	14/03/2017	14/03/2017	14/03/2017	14/03/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**
Lot Number :	517	517	517	517
Sample Location :	Lot 517 (Stage 17) 6m From South Boundary 2m From West Boundary 4.9m Below Final Level	Lot 517 (Stage 17) 10m From South Boundary 5m From West Boundary 4.6m Below Final Level	Lot 517 (Stage 17) 4m From North Boundary 3m From West Boundary 4.8m Below Final Level	Lot 517 (Stage 17) 8m From North Boundary 7m From West Boundary 4.5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	20.1	19.4	30.0	28.7
Hilf MDR Number :	226350	226351	226352	226353
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	90	86.5	100	96
Field Wet Density (t/m³) :	1.988	1.995	1.932	1.946
Optimum Moisture Content (%) :	22.4	22.4	30.0	29.9
Moisture Variation :	2.2	2.9	0.0	1.1
Peak Converted Wet Density (t/m³) :	1.953	1.935	1.829	1.832
Hilf Density Ratio (%) :	**102.0**	**103.0**	**105.5**	**106.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 57**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**21/03/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	226354	226355	226356	226357
Test Number :	196	197	198	199
Sampling Method :	-	-	-	-
Date Sampled :	14/03/2017	14/03/2017	14/03/2017	14/03/2017
Date Tested :	14/03/2017	14/03/2017	14/03/2017	14/03/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**
Lot Number :	530	533	534	534
Sample Location :	Lot 530 (Stage 18) 8m From North Boundary 5m From East Boundary 3.5m Below Final Level	Lot 533 (Stage 18) 6m From South Boundary 5m From West Boundary 3m Below Final Level	Lot 534 (Stage 18) 6m From South Boundary 10m From West Boundary 4m Below Final Level	Lot 534 (Stage 18) 3m From South Boundary 5m From West Boundary 3.5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	27.9	28.4	31.1	26.9
Hilf MDR Number :	226354	226355	226356	226357
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	115	97.5	112	91.5
Field Wet Density (t/m³) :	1.919	1.963	1.956	1.929
Optimum Moisture Content (%) :	24.3	29.1	27.7	29.4
Moisture Variation :	-3.4	0.8	-3.2	2.4
Peak Converted Wet Density (t/m³) :	2.011	1.821	2.014	1.834
Hilf Density Ratio (%) :	**95.5**	**108.0**	**97.0**	**105.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 58
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	21/03/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	226358			
Test Number :	200			
Sampling Method :	-			
Date Sampled :	14/03/2017			
Date Tested :	14/03/2017			
Material Type :	**Allotment Fill**			
Material Source :	**On Site (Marina Borrow Pit)**			
Lot Number :	535			
Sample Location :	Lot 535 (Stage 18) 3m From South Boundary 5m From West Boundary 4.2m Below Final Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	29.9			
Hilf MDR Number :	226358			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	110.5			
Field Wet Density (t/m³) :	1.964			
Optimum Moisture Content (%) :	27.1			
Moisture Variation :	-2.7			
Peak Converted Wet Density (t/m³) :	2.025			
Hilf Density Ratio (%) :	**97.0**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 59**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**24/04/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227171	227172	227173	227174
Test Number :	201	202	203	204
Sampling Method :	-	-	-	-
Date Sampled :	10/04/2017	10/04/2017	10/04/2017	10/04/2017
Date Tested :	10/04/2017	10/04/2017	10/04/2017	10/04/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 498869 N 7000577 0.7m Below Final Level	E 498876 N 7000602 0.7m Below Final Level	E 498889 N 7000593 0.8m Below Final Level	E 498895 N 7000573 0.8m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	19.7	17.1	19.9	15.7
Hilf MDR Number :	227171	227172	227173	227174
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	100	96.5	99	89.5
Field Wet Density (t/m³) :	1.991	2.002	2.036	2.021
Optimum Moisture Content (%) :	19.7	17.7	20.1	17.6
Moisture Variation :	0.0	0.6	0.2	1.8
Peak Converted Wet Density (t/m³) :	2.015	1.987	2.024	2.020
Hilf Density Ratio (%) :	**99.0**	**101.0**	**100.5**	**100.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 60**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**24/04/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227175	227176	227177	227178
Test Number :	205	206	207	208
Sampling Method :	-	-	-	-
Date Sampled :	10/04/2017	10/04/2017	10/04/2017	10/04/2017
Date Tested :	10/04/2017	10/04/2017	10/04/2017	10/04/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 498911 N 7000576 0.8m Below Final Level	E 498926 N 7000594 1.4m Below Final Level	E 498942 N 7000574 1.5m Below Final Level	E 498956 N 7000592 1.4m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	15.9	17.8	20.3	23.7
Hilf MDR Number :	227175	227176	227177	227178
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	87	99.5	97	110.5
Field Wet Density (t/m³) :	2.013	2.003	2.018	2.012
Optimum Moisture Content (%) :	18.3	17.8	21.0	21.5
Moisture Variation :	2.4	0.0	0.7	-2.2
Peak Converted Wet Density (t/m³) :	2.005	2.041	1.941	1.989
Hilf Density Ratio (%) :	**100.5**	**98.0**	**104.0**	**101.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 61**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**24/04/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227179	227180	227181	227182
Test Number :	209	210	211	212
Sampling Method :	-	-	-	-
Date Sampled :	10/04/2017	10/04/2017	10/04/2017	10/04/2017
Date Tested :	10/04/2017	10/04/2017	10/04/2017	10/04/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 498973 N 7000603 1.5m Below Final Level	E 498987 N 7000579 1.5m Below Final Level	E 499000 N 7000597 1.6m Below Final Level	E 499014 N 7000599 1.8m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	22.2	21.8	16.9	23.3
Hilf MDR Number :	227179	227180	227181	227182
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	102	97.5	97	108.5
Field Wet Density (t/m³) :	1.979	1.994	2.015	2.058
Optimum Moisture Content (%) :	21.7	22.4	17.4	21.4
Moisture Variation :	-0.5	0.6	0.5	-1.8
Peak Converted Wet Density (t/m³) :	1.954	1.946	1.945	1.956
Hilf Density Ratio (%) :	**101.5**	**102.5**	**103.5**	**105.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 62**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**24/04/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227183	227184	227185	227186
Test Number :	213	214	215	216
Sampling Method :	-	-	-	-
Date Sampled :	10/04/2017	10/04/2017	10/04/2017	10/04/2017
Date Tested :	10/04/2017	10/04/2017	10/04/2017	10/04/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499015 N 7000590 1.7m Below Final Level	E 499051 N 7000580 1.7m Below Final Level	E 499037 N 7000594 1.7m Below Final Level	E 499039 N 7000614 1.8m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	17.1	22.0	20.9	20.8
Hilf MDR Number :	227183	227184	227185	227186
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	96.5	99.5	99	100
Field Wet Density (t/m³) :	2.051	2.005	2.016	1.984
Optimum Moisture Content (%) :	17.7	22.1	21.1	20.8
Moisture Variation :	0.6	0.1	0.2	0.0
Peak Converted Wet Density (t/m³) :	1.961	1.968	1.970	2.011
Hilf Density Ratio (%) :	**104.5**	**102.0**	**102.5**	**98.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 63**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**24/04/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227187	227188	227189	227190
Test Number :	217	218	219	220
Sampling Method :	-	-	-	-
Date Sampled :	10/04/2017	10/04/2017	10/04/2017	10/04/2017
Date Tested :	10/04/2017	10/04/2017	10/04/2017	10/04/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499046 N 7000604 1.7m Below Final Level	E 499046 N 7000586 1.8m Below Final Level	E 499052 N 7000576 1.7m Below Final Level	E 499063 N 7000588 1.7m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	25.0	23.5	23.7	25.5
Hilf MDR Number :	227187	227188	227189	227190
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	107.5	100	114	99
Field Wet Density (t/m³) :	1.990	1.976	1.937	1.949
Optimum Moisture Content (%) :	23.2	23.5	20.8	25.7
Moisture Variation :	-1.7	0.0	-3.0	0.2
Peak Converted Wet Density (t/m³) :	1.997	1.968	1.975	1.977
Hilf Density Ratio (%) :	**99.5**	**100.5**	**98.0**	**98.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 64**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**24/04/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227308	227309	227310	
Test Number :	221	222	223	
Sampling Method :	-	-	-	
Date Sampled :	12/04/2017	12/04/2017	12/04/2017	
Date Tested :	12/04/2017	12/04/2017	12/04/2017	
Material Type :	**Road Embankment**	**Road Embankment**	**Road Embankment**	
Material Source :	**On Site From Stage 24**	**On Site From Stage 24**	**On Site From Stage 24**	
Lot Number :	-	-	-	
Sample Location :	Buckley Road Chainage 1312 4.5m Right of Centreline 0.5m Below Final Level	Buckley Road Chainage 1333 6m Left of Centreline 0.6m Below Final Level	Buckley Road Chainage 1351 3m Right of Centreline 0.5m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	17.0	16.8	16.3	
Hilf MDR Number :	227308	227309	227310	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	95.5	89.5	94.5	
Field Wet Density (t/m³) :	2.148	2.156	2.129	
Optimum Moisture Content (%) :	17.8	18.8	17.3	
Moisture Variation :	0.8	1.9	0.9	
Peak Converted Wet Density (t/m³) :	2.075	2.047	2.063	
Hilf Density Ratio (%) :	**103.5**	**105.5**	**103.0**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 65**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**24/04/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227311	227312	227313	
Test Number :	224	225	226	
Sampling Method :	-	-	-	
Date Sampled :	12/04/2017	12/04/2017	12/04/2017	
Date Tested :	12/04/2017	12/04/2017	12/04/2017	
Material Type :	**Road Embankment**	**Road Embankment**	**Road Embankment**	
Material Source :	**On Site**	**On Site**	**On Site**	
Lot Number :	-	-	-	
Sample Location :	Norfolk Drive Chainage 170 2m Left of Centreline 4.7m Below Final Level	Norfolk Drive Chainage 190 1.5m Right of Centreline 4.4m Below Final Level	Norfolk Drive Chainage 235 1m Left of Centreline 4.5m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	16.4	15.3	19.1	
Hilf MDR Number :	227311	227312	227313	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	100.5	89	101	
Field Wet Density (t/m³) :	2.100	2.056	2.068	
Optimum Moisture Content (%) :	16.3	17.2	19.0	
Moisture Variation :	-0.1	1.8	-0.1	
Peak Converted Wet Density (t/m³) :	2.072	2.071	2.033	
Hilf Density Ratio (%) :	**101.5**	**99.5**	**101.5**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 66
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	24/04/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	227412	227413	227414	
Test Number :	227	228	229	
Sampling Method :	-	-	-	
Date Sampled :	13/04/2017	13/04/2017	13/04/2017	
Date Tested :	13/04/2017	13/04/2017	13/04/2017	
Material Type :	**General Fill**	**General Fill**	**General Fill**	
Material Source :	**On Site**	**On Site**	**On Site**	
Lot Number :	-	-	-	
Sample Location :	Buckley Road Chainage 1315 6m Left of Centreline 0.4m Below Final Level	Buckley Road Chainage 1331 7m Left of Centreline 0.45m Below Final Level	Buckley Road Chainage 1352 2m Right of Centreline 0.4m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	14.5	15.7	13.5	
Hilf MDR Number :	227412	227413	227414	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	84	89	84	
Field Wet Density (t/m³) :	2.166	2.177	2.216	
Optimum Moisture Content (%) :	17.3	17.7	16.0	
Moisture Variation :	2.7	1.9	2.4	
Peak Converted Wet Density (t/m³) :	2.088	2.081	2.095	
Hilf Density Ratio (%) :	**103.5**	**104.5**	**106.0**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 67**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**24/04/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227483	227484	227485	227486
Test Number :	230	231	232	233
Sampling Method :	-	-	-	-
Date Sampled :	18/04/2017	18/04/2017	18/04/2017	18/04/2017
Date Tested :	18/04/2017	18/04/2017	18/04/2017	18/04/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Drying Pad E 498939 N 7000472 1.3m Below Final Level	Drying Pad E 498973 N 7000500 1.3m Below Final Level	Drying Pad E 498983 N 7000519 1.3m Below Final Level	Drying Pad E 498973 N 7000523 1.3m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	23.4	21.6	21.9	21.5
Hilf MDR Number :	227483	227484	227485	227486
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	114.5	116.5	111.5	112
Field Wet Density (t/m³) :	2.015	2.022	1.998	1.993
Optimum Moisture Content (%) :	20.4	18.6	19.6	19.2
Moisture Variation :	-2.9	-3.0	-2.3	-2.3
Peak Converted Wet Density (t/m³) :	2.044	2.067	2.041	2.035
Hilf Density Ratio (%) :	**98.5**	**98.0**	**98.0**	**98.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 68**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**24/04/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227487	227488	227489	227490
Test Number :	234	235	236	237
Sampling Method :	-	-	-	-
Date Sampled :	18/04/2017	18/04/2017	18/04/2017	18/04/2017
Date Tested :	18/04/2017	18/04/2017	18/04/2017	18/04/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Drying Pad E 498945 N 7000501 1.4m Below Final Level	Drying Pad E 498930 N 7000472 1.4m Below Final Level	Drying Pad E 498908 N 7000474 1.4m Below Final Level	Drying Pad E 498915 N 7000499 1.4m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	22.2	24.8	26.2	27.3
Hilf MDR Number :	227487	227488	227489	227490
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	115	109	111	111
Field Wet Density (t/m³) :	1.962	1.992	2.030	2.009
Optimum Moisture Content (%) :	19.3	22.7	23.6	24.6
Moisture Variation :	-2.9	-2.0	-2.5	-2.5
Peak Converted Wet Density (t/m³) :	2.054	2.021	2.054	2.044
Hilf Density Ratio (%) :	**95.5**	**98.5**	**99.0**	**98.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 69**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**24/04/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227491	227492	227493	227494
Test Number :	238	239	240	241
Sampling Method :	-	-	-	-
Date Sampled :	18/04/2017	18/04/2017	18/04/2017	18/04/2017
Date Tested :	18/04/2017	18/04/2017	18/04/2017	18/04/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Drying Pad E 498920 N 7000523 1.2m Below Final Level	Drying Pad E 498915 N 7000535 1.2m Below Final Level	Drying Pad E 498896 N 7000530 1.2m Below Final Level	Drying Pad E 498889 N 7000496 1.2m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	31.0	27.9	20.9	22.3
Hilf MDR Number :	227491	227492	227493	227494
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	110.5	113	114	112.5
Field Wet Density (t/m³) :	1.993	1.999	2.060	2.054
Optimum Moisture Content (%) :	28.0	24.7	18.3	19.8
Moisture Variation :	-2.8	-3.0	-2.5	-2.4
Peak Converted Wet Density (t/m³) :	2.035	2.043	2.047	2.049
Hilf Density Ratio (%) :	**98.0**	**98.0**	**100.5**	**100.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 70
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	24/04/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	227495	227496		
Test Number :	242	243		
Sampling Method :	-	-		
Date Sampled :	18/04/2017	18/04/2017		
Date Tested :	18/04/2017	18/04/2017		
Material Type :	**Allotment Fill**	**Allotment Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	543	542		
Sample Location :	Lot 543 2m From South Boundary 4m From West Boundary 5m Below Final Level	Lot 542 3m From South Boundary 7m From West Boundary 5m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	16.7	16.7		
Hilf MDR Number :	227495	227496		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	102	105		
Field Wet Density (t/m³) :	2.019	2.051		
Optimum Moisture Content (%) :	16.4	15.9		
Moisture Variation :	-0.3	-0.8		
Peak Converted Wet Density (t/m³) :	2.030	2.062		
Hilf Density Ratio (%) :	**99.5**	**99.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 71**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**24/04/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227497	227498	227499	227500
Test Number :	244	245	246	247
Sampling Method :	-	-	-	-
Date Sampled :	18/04/2017	18/04/2017	18/04/2017	18/04/2017
Date Tested :	18/04/2017	18/04/2017	18/04/2017	18/04/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Norfolk Drive Chainage 240 3m Right of Centreline 4m Below Final Level	Norfolk Drive Chainage 260 Centreline 3.9m Below Final Level	Mornington Crescent Chainage 1315 1m Right of Centreline 4.9m Below Final Level	Mornington Crescent Chainage 1325 2m Left of Centreline 5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	17.2	17.8	17.8	16.4
Hilf MDR Number :	227497	227498	227499	227500
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	103	103	103.5	104
Field Wet Density (t/m³) :	2.077	2.071	2.081	2.070
Optimum Moisture Content (%) :	16.7	17.2	17.2	15.8
Moisture Variation :	-0.5	-0.6	-0.6	-0.6
Peak Converted Wet Density (t/m³) :	2.046	2.063	2.059	2.033
Hilf Density Ratio (%) :	**101.5**	**100.5**	**101.0**	**102.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 72**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**04/05/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227550	227551	227552	227553
Test Number :	248	249	250	251
Sampling Method :	-	-	-	-
Date Sampled :	19/04/2017	19/04/2017	19/04/2017	19/04/2017
Date Tested :	19/04/2017	19/04/2017	19/04/2017	19/04/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Norfolk Drive Chainage 190 2m Left of Centreline 3.5m Below Final Level	Norfolk Drive Chainage 220 1m Right of Centreline 3.5m Below Final Level	Norfolk Drive Chainage 258 3m Left of Centreline 3.5m Below Final Level	Mornington Crescent Chainage 1319 2.5m Right of Centreline 3.5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	10.1	9.1	15.5	17.2
Hilf MDR Number :	227550	227551	227552	227553
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	86	87	106	98.5
Field Wet Density (t/m³) :	2.201	2.204	2.143	2.096
Optimum Moisture Content (%) :	11.8	10.5	14.6	17.5
Moisture Variation :	1.7	1.4	-0.9	0.2
Peak Converted Wet Density (t/m³) :	2.157	2.177	2.052	2.041
Hilf Density Ratio (%) :	**102.0**	**101.0**	**104.5**	**102.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 73**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**04/05/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227554	227555	227556	227557
Test Number :	252	253	254	255
Sampling Method :	-	-	-	-
Date Sampled :	19/04/2017	19/04/2017	19/04/2017	19/04/2017
Date Tested :	19/04/2017	19/04/2017	19/04/2017	19/04/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Drying Pad E 498876 N 7000647 0.7m Below Final Level	Drying Pad E 498862 N 7000635 0.7m Below Final Level	Drying Pad E 498865 N 7000649 0.7m Below Final Level	Drying Pad E 498854 N 7000665 0.7m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	24.8	26.6	27.0	26.4
Hilf MDR Number :	227554	227555	227556	227557
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	100	109.5	100.5	108
Field Wet Density (t/m³) :	1.986	1.963	1.951	1.960
Optimum Moisture Content (%) :	24.8	24.3	26.8	24.5
Moisture Variation :	0.0	-2.2	-0.1	-1.9
Peak Converted Wet Density (t/m³) :	1.903	1.966	1.896	1.925
Hilf Density Ratio (%) :	**104.5**	**100.0**	**103.0**	**102.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 74**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**04/05/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227558	227559	227560	227561
Test Number :	256	257	258	259
Sampling Method :	-	-	-	-
Date Sampled :	19/04/2017	19/04/2017	19/04/2017	19/04/2017
Date Tested :	19/04/2017	19/04/2017	19/04/2017	19/04/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Drying Pad E 498877 N 7000677 0.7m Below Final Level	Drying Pad E 498881 N 7000656 0.7m Below Final Level	Drying Pad E 498888 N 7000636 0.7m Below Final Level	Drying Pad E 498897 N 7000637 0.7m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	22.6	21.7	21.5	24.0
Hilf MDR Number :	227558	227559	227560	227561
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	100	100	100	111.5
Field Wet Density (t/m³) :	1.933	1.948	1.974	1.951
Optimum Moisture Content (%) :	22.6	21.7	21.5	21.5
Moisture Variation :	0.0	0.0	0.0	-2.4
Peak Converted Wet Density (t/m³) :	1.937	1.946	1.958	1.999
Hilf Density Ratio (%) :	**100.0**	**100.0**	**101.0**	**97.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 75
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	04/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	227562	227563		
Test Number :	260	261		
Sampling Method :	-	-		
Date Sampled :	19/04/2017	19/04/2017		
Date Tested :	19/04/2017	19/04/2017		
Material Type :	**Bulk Fill**	**Bulk Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Drying Pad E 498912 N 7000654 0.7m Below Final Level	Drying Pad E 498905 N 7000675 0.7m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	27.7	22.6		
Hilf MDR Number :	227562	227563		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	111.5	101		
Field Wet Density (t/m³) :	1.986	1.969		
Optimum Moisture Content (%) :	24.9	22.3		
Moisture Variation :	-2.7	-0.2		
Peak Converted Wet Density (t/m³) :	1.966	1.941		
Hilf Density Ratio (%) :	**101.0**	**101.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 76**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**04/05/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227635	227636	227637	227638
Test Number :	262	263	264	265
Sampling Method :	-	-	-	-
Date Sampled :	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Date Tested :	20/04/2017	20/04/2017	20/04/2017	20/04/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	547	546	545	536
Sample Location :	Lot 547 (Stage 17) 4m From North Boundary 6m From West Boundary 7m Below Final Level	Lot 546 (Stage 17) 3m From North Boundary 5m From West Boundary 6.5m Below Final Level	Lot 545 (Stage 17) 4m From North Boundary 4m From West Boundary 6m Below Final Level	Lot 536 (Stage 18) 5m From South Boundary 3m From West Boundary 7m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	15.4	15.5	15.4	15.0
Hilf MDR Number :	227635	227636	227637	227638
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	96	93	88	84.5
Field Wet Density (t/m³) :	2.090	2.114	2.045	2.065
Optimum Moisture Content (%) :	16.1	16.6	17.5	17.8
Moisture Variation :	0.7	1.1	2.0	2.7
Peak Converted Wet Density (t/m³) :	2.072	2.069	2.065	2.061
Hilf Density Ratio (%) :	**101.0**	**102.0**	**99.0**	**100.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 77
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	04/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	227639	227640		
Test Number :	266	267		
Sampling Method :	-	-		
Date Sampled :	20/04/2017	20/04/2017		
Date Tested :	20/04/2017	20/04/2017		
Material Type :	**Allotment Fill**	**Allotment Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	537	538		
Sample Location :	Lot 537 (Stage 18) 5m From South Boundary 4m From West Boundary 6m Below Final Level	Lot 538 (Stage 18) 3m From South Boundary 6m From West Boundary 5.5m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	13.9	15.5		
Hilf MDR Number :	227639	227640		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	83	94		
Field Wet Density (t/m³) :	2.103	2.071		
Optimum Moisture Content (%) :	16.7	16.5		
Moisture Variation :	2.8	1.0		
Peak Converted Wet Density (t/m³) :	2.065	2.070		
Hilf Density Ratio (%) :	**102.0**	**100.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 78
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	04/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	227641	227642		
Test Number :	268	269		
Sampling Method :	-	-		
Date Sampled :	20/04/2017	20/04/2017		
Date Tested :	20/04/2017	20/04/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Norfolk Drive Chainage 260 3m Right of Centreline 3m Below Final Level	Norfolk Drive Chainage 280 1m Left of Centreline 3m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	13.8	13.1		
Hilf MDR Number :	227641	227642		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	83	82.5		
Field Wet Density (t/m³) :	2.148	2.156		
Optimum Moisture Content (%) :	16.6	15.9		
Moisture Variation :	2.8	2.8		
Peak Converted Wet Density (t/m³) :	2.068	2.076		
Hilf Density Ratio (%) :	**104.0**	**104.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 79
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	04/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	227821	227822	227823	
Test Number :	270	271	272	
Sampling Method :	-	-	-	
Date Sampled :	24/04/2017	24/04/2017	24/04/2017	
Date Tested :	24/04/2017	24/04/2017	24/04/2017	
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	
Material Source :	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	
Lot Number :	539	537	536	
Sample Location :	Lot 530 (Stage 18) 2m From South Boundary 4m From West Boundary 4m Below Final Level	Lot 537 (Stage 18) 3m From South Boundary 5m From West Boundary 5m Below Final Level	Lot 536 (Stage 18) 4m From South Boundary 3m From West Boundary 6m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	8.7	7.4	8.9	
Hilf MDR Number :	227821	227822	227823	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	80	81.5	99	
Field Wet Density (t/m³) :	2.044	2.049	2.067	
Optimum Moisture Content (%) :	10.9	9.1	9.0	
Moisture Variation :	2.2	1.8	0.1	
Peak Converted Wet Density (t/m³) :	2.095	2.080	2.083	
Hilf Density Ratio (%) :	**97.5**	**98.5**	**99.0**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 80**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**10/05/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227824	227825	227826	227827
Test Number :	273	274	275	276
Sampling Method :	-	-	-	-
Date Sampled :	24/04/2017	24/04/2017	24/04/2017	24/04/2017
Date Tested :	24/04/2017	24/04/2017	24/04/2017	24/04/2017
Material Type :	**Road Box Embankment**	**Road Box Embankment**	**Road Box Embankment**	**Road Box Embankment**
Material Source :	**On Site (Stage 24)**	**On Site (Stage 24)**	**On Site (Stage 24)**	**On Site (Stage 24)**
Lot Number :	-	-	-	-
Sample Location :	Mornington Crescent Chainage 590 1m Left of Centreline 0.3m Below Final Level	Elliot Street Chainage 30 1.5m Right of Centreline 0.3m Below Final Level	Burke Street Chainage 120 1m Right of Centreline 0.3m Below Final Level	Bourke Street Chainage 30 2m Left of Centreline 0.3m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	9.9	14.3	12.0	12.8
Hilf MDR Number :	227824	227825	227826	227827
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	68.5	78.5	72	72.5
Field Wet Density (t/m³) :	2.070	2.005	2.061	2.041
Optimum Moisture Content (%) :	14.5	18.3	16.6	17.7
Moisture Variation :	4.5	4.0	4.5	4.7
Peak Converted Wet Density (t/m³) :	2.082	1.889	1.985	1.993
Hilf Density Ratio (%) :	**99.5**	**106.0**	**104.0**	**102.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 81**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**10/05/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227828	227829	227830	227831
Test Number :	277	278	279	280
Sampling Method :	-	-	-	-
Date Sampled :	24/04/2017	24/04/2017	24/04/2017	24/04/2017
Date Tested :	24/04/2017	24/04/2017	24/04/2017	24/04/2017
Material Type :	**Road Box Embankment**	**Road Box Embankment**	**Road Box Embankment**	**Road Box Embankment**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Lindquist Crescent Chainage 70 1m Left of Centreline 0.3m Below Final Level	Elliot Street Chainage 80 1.5m Right of Centreline 0.3m Below Final Level	Bourke Street Chainage 190 1m Left of Centreline 0.3m Below Final Level	Mornington Crescent Chainage 250 1.5m Right of Centreline 0.3m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	9.4	14.6	9.3	9.6
Hilf MDR Number :	227828	227829	227830	227831
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	79.5	87	69	69
Field Wet Density (t/m³) :	2.275	2.050	2.140	2.149
Optimum Moisture Content (%) :	11.8	16.7	13.5	13.9
Moisture Variation :	2.4	2.1	4.1	4.3
Peak Converted Wet Density (t/m³) :	2.108	2.084	2.101	2.115
Hilf Density Ratio (%) :	**108.0**	**98.5**	**102.0**	**101.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 82
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	10/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	227832			
Test Number :	281			
Sampling Method :	-			
Date Sampled :	24/04/2017			
Date Tested :	24/04/2017			
Material Type :	**Road Box Embankment**			
Material Source :	**On Site**			
Lot Number :	-			
Sample Location :	Lindquist Crescent Chainage 30 1m Left of Centreline 0.3m Below Final Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	9.9			
Hilf MDR Number :	227832			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	80.5			
Field Wet Density (t/m³) :	2.134			
Optimum Moisture Content (%) :	12.3			
Moisture Variation :	2.4			
Peak Converted Wet Density (t/m³) :	2.106			
Hilf Density Ratio (%) :	**101.5**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 83**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**10/05/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	227953	227954	227955	
Test Number :	282	283	284	
Sampling Method :	-	-	-	
Date Sampled :	27/04/2017	27/04/2017	27/04/2017	
Date Tested :	27/04/2017	27/04/2017	27/04/2017	
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	
Material Source :	**On Site**	**On Site**	**On Site**	
Lot Number :	538	537	536	
Sample Location :	Lot 538 (Stage 18) 6m From South Boundary 4m From West Boundary 4.5m Below Final Level	Lot 537 (Stage 18) 7m From South Boundary 3m From West Boundary 4m Below Final Level	Lot 536 (Stage 18) 4m From South Boundary 4m From West Boundary 3.5m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	11.4	11.9	12.8	
Hilf MDR Number :	227953	227954	227955	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	101	128	119	
Field Wet Density (t/m³) :	2.162	2.148	2.175	
Optimum Moisture Content (%) :	11.3	9.3	10.8	
Moisture Variation :	-0.1	-2.6	-2.1	
Peak Converted Wet Density (t/m³) :	2.231	2.262	2.235	
Hilf Density Ratio (%) :	**97.0**	**95.0**	**97.5**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 84**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**10/05/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	228039	228040	228041	228042
Test Number :	285	286	287	288
Sampling Method :	-	-	-	-
Date Sampled :	28/04/2017	28/04/2017	28/04/2017	28/04/2017
Date Tested :	28/04/2017	28/04/2017	28/04/2017	28/04/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	526	525	524	523
Sample Location :	Lot 526 (Stage 18) 2m From South Boundary 5m From West Boundary 2.6m Below Final Level	Lot 525 (Stage 18) 5m From South Boundary 10m From West Boundary 2.6m Below Final Level	Lot 524 (Stage 18) 6m From South Boundary 11m From West Boundary 2.6m Below Final Level	Lot 523 (Stage 17) 10m From South Boundary 4m From West Boundary 2.6m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	13.2	13.8	10.5	12.3
Hilf MDR Number :	228039	228040	228041	228042
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	100.5	100	84	86.5
Field Wet Density (t/m³) :	2.014	2.025	1.989	2.026
Optimum Moisture Content (%) :	13.2	13.8	12.5	14.2
Moisture Variation :	0.0	0.0	2.0	1.9
Peak Converted Wet Density (t/m³) :	2.117	2.129	2.059	2.093
Hilf Density Ratio (%) :	**95.0**	**95.0**	**96.5**	**97.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	**HALL CONTRACTING PTY LTD**	Report Number:	**DL17/006 - 85**
Address :	**P O BOX 519, BUDERIM, QLD, 4556**	Report Date :	**10/05/2017**
Project Name :	**EARTHWORKS SUPERVISION**	Order Number :	**NH03**
Project Number :	**DL17/006**	Test Method :	**AS1289.5.8.1 & 5.7.1**
Location:	**NORTH HARBOUR, PHASE 3 , BURPENGARY**	**Page 1 of 1**	

Sample Number :	228043	228044	228045	228046
Test Number :	289	290	291	292
Sampling Method :	-	-	-	-
Date Sampled :	28/04/2017	28/04/2017	28/04/2017	28/04/2017
Date Tested :	28/04/2017	28/04/2017	28/04/2017	28/04/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	522	521	520	519
Sample Location :	Lot 522 (Stage 17) 4m From North Boundary 6m From West Boundary 2.6m Below Final Level	Lot 521 (Stage 17) 6m From North Boundary 4m From West Boundary 2.6m Below Final Level	Lot 520 (Stage 17) 7m From North Boundary 5m From West Boundary 2.8m Below Final Level	Lot 519 (Stage 17) 10m From North Boundary 3m From West Boundary 2.8m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	12.0	9.6	11.9	11.3
Hilf MDR Number :	228043	228044	228045	228046
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	100	98.5	100.5	99.5
Field Wet Density (t/m³) :	2.132	2.121	2.151	2.147
Optimum Moisture Content (%) :	12.0	9.8	11.8	11.3
Moisture Variation :	0.0	0.1	-0.1	0.0
Peak Converted Wet Density (t/m³) :	2.182	2.126	2.185	2.162
Hilf Density Ratio (%) :	**97.5**	**100.0**	**98.5**	**99.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 86
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	10/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	228047	228048		
Test Number :	293	294		
Sampling Method :	-	-		
Date Sampled :	28/04/2017	28/04/2017		
Date Tested :	28/04/2017	28/04/2017		
Material Type :	**Allotment Fill**	**Allotment Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	518	517		
Sample Location :	Lot 518 (Stage 17) 10m From North Boundary 9m From West Boundary 2.6m Below Final Level	Lot 517 (Stage 17) 11m From North Boundary 7m From West Boundary 2.6m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	8.8	9.5		
Hilf MDR Number :	228047	228048		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	78.5	96		
Field Wet Density (t/m³) :	2.210	2.155		
Optimum Moisture Content (%) :	11.2	9.9		
Moisture Variation :	2.4	0.5		
Peak Converted Wet Density (t/m³) :	2.129	2.094		
Hilf Density Ratio (%) :	**104.0**	**103.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 87
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	12/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	228234	228235	228236	228237
Test Number :	295	296	297	298
Sampling Method :	-	-	-	-
Date Sampled :	02/05/2017	02/05/2017	02/05/2017	02/05/2017
Date Tested :	02/05/2017	02/05/2017	02/05/2017	02/05/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499018 N 7000535 1.3m Below Final Level	E 499015 N 7000519 1.2m Below Final Level	E 499018 N 7000510 1.2m Below Final Level	E 498991 N 7000496 1.2m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	13.5	14.8	15.6	14.4
Hilf MDR Number :	228234	228235	228236	228237
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	81	84.5	87.5	79.5
Field Wet Density (t/m³) :	1.989	1.966	1.967	1.973
Optimum Moisture Content (%) :	16.6	17.6	17.8	18.1
Moisture Variation :	3.2	2.8	2.2	3.8
Peak Converted Wet Density (t/m³) :	1.906	1.917	1.923	1.909
Hilf Density Ratio (%) :	**104.5**	**102.5**	**102.5**	**103.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 88
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	12/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	228238	228239	228240	228241
Test Number :	299	300	301	302
Sampling Method :	-	-	-	-
Date Sampled :	02/05/2017	02/05/2017	02/05/2017	02/05/2017
Date Tested :	02/05/2017	02/05/2017	02/05/2017	02/05/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 498969 N 7000506 1.2m Below Final Level	E 498950 N 7000540 1m Below Final Level	E 498941 N 7000524 1m Below Final Level	E 498931 N 7000500 1m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	19.5	19.4	14.6	19.9
Hilf MDR Number :	228238	228239	228240	228241
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	93.5	98.5	81.5	88.5
Field Wet Density (t/m³) :	1.977	1.953	1.989	1.984
Optimum Moisture Content (%) :	20.8	19.7	17.9	22.4
Moisture Variation :	1.3	0.2	3.3	2.4
Peak Converted Wet Density (t/m³) :	1.970	2.018	1.927	1.979
Hilf Density Ratio (%) :	**100.5**	**97.0**	**103.0**	**100.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 89
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	12/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	228242	228243	228244	228245
Test Number :	303	304	305	306
Sampling Method :	-	-	-	-
Date Sampled :	02/05/2017	02/05/2017	02/05/2017	02/05/2017
Date Tested :	02/05/2017	02/05/2017	02/05/2017	02/05/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 498905 N 7000506 1m Below Final Level	E 498905 N 7000525 1m Below Final Level	E 498905 N 7000542 1m Below Final Level	E 498884 N 7000524 1.1m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	18.0	14.7	15.8	18.0
Hilf MDR Number :	228242	228243	228244	228245
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	87	81.5	86	97.5
Field Wet Density (t/m³) :	1.971	1.993	2.018	2.030
Optimum Moisture Content (%) :	20.7	18.0	18.3	18.4
Moisture Variation :	2.7	3.3	2.5	0.5
Peak Converted Wet Density (t/m³) :	1.909	1.924	1.941	2.005
Hilf Density Ratio (%) :	**103.0**	**103.5**	**104.0**	**101.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 90
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	12/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	228246	228247	228248	
Test Number :	307	308	309	
Sampling Method :	-	-	-	
Date Sampled :	02/05/2017	02/05/2017	02/05/2017	
Date Tested :	02/05/2017	02/05/2017	02/05/2017	
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	
Material Source :	**On Site**	**On Site**	**On Site**	
Lot Number :	-	-	-	
Sample Location :	E 498868 N 7000514 1.1m Below Final Level	E 498862 N 7000518 1m Below Final Level	E 498870 N 7000532 1m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	21.0	19.0	22.0	
Hilf MDR Number :	228246	228247	228248	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	99.5	89	98.5	
Field Wet Density (t/m³) :	2.019	2.036	2.014	
Optimum Moisture Content (%) :	21.1	21.4	22.4	
Moisture Variation :	0.1	2.3	0.3	
Peak Converted Wet Density (t/m³) :	2.035	1.996	2.011	
Hilf Density Ratio (%) :	**99.0**	**102.0**	**100.0**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 91
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	12/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	228309	228310	228311	228312
Test Number :	310	311	312	313
Sampling Method :	-	-	-	-
Date Sampled :	03/05/2017	03/05/2017	03/05/2017	03/05/2017
Date Tested :	03/05/2017	03/05/2017	03/05/2017	03/05/2017
Material Type :	**Road Embankment**	**Road Embankment**	**Road Embankment**	**Road Embankment**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Mornington Crescent Chainage 1040 Centreline 0.6m Below Final Level	Mornington Crescent Chainage 1090 0.5m Right of Centreline 0.5m Below Final Level	Mornington Crescent Chainage 1125 1.5m Right of Centreline 0.6m Below Final Level	Mornington Crescent Chainage 1185 1m Left of Centreline 0.6m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	11.7	11.3	12.4	10.2
Hilf MDR Number :	228309	228310	228311	228312
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	70	68	64	62
Field Wet Density (t/m³) :	2.013	1.956	2.000	2.015
Optimum Moisture Content (%) :	16.7	16.7	19.3	16.5
Moisture Variation :	5.1	5.5	6.9	6.2
Peak Converted Wet Density (t/m³) :	1.905	1.825	1.859	1.960
Hilf Density Ratio (%) :	**105.5**	**107.0**	**107.5**	**103.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 92
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	12/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	228313			
Test Number :	314			
Sampling Method :	-			
Date Sampled :	03/05/2017			
Date Tested :	03/05/2017			
Material Type :	**Road Embankment**			
Material Source :	**On Site**			
Lot Number :	-			
Sample Location :	Mornington Crescent Chainage 1210 1m Left of Centreline 0.6m Below Final Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	10.5			
Hilf MDR Number :	228313			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	67			
Field Wet Density (t/m³) :	2.019			
Optimum Moisture Content (%) :	15.6			
Moisture Variation :	5.0			
Peak Converted Wet Density (t/m³) :	1.985			
Hilf Density Ratio (%) :	**101.5**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 93
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	12/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	228314			
Test Number :	315			
Sampling Method :	-			
Date Sampled :	03/05/2017			
Date Tested :	03/05/2017			
Material Type :	**Allotment Fill**			
Material Source :	**On Site**			
Lot Number :	614			
Sample Location :	Lot 614 (Stage 45) 6m From North Boundary 4m From West Boundary 0.7m Below Final Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	14.0			
Hilf MDR Number :	228314			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	99			
Field Wet Density (t/m³) :	1.976			
Optimum Moisture Content (%) :	14.2			
Moisture Variation :	0.1			
Peak Converted Wet Density (t/m³) :	2.185			
Hilf Density Ratio (%) :	**90.5**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 94
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	12/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	228315	228316	228317	228318
Test Number :	316	317	318	319
Sampling Method :	-	-	-	-
Date Sampled :	03/05/2017	03/05/2017	03/05/2017	03/05/2017
Date Tested :	03/05/2017	03/05/2017	03/05/2017	03/05/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	**683**	**666**	**667**	**668**
Sample Location :	Lot 683 (Stage 44) 7m From North Boundary 5m From West Boundary 1m Below Final Level	Lot 666 (Stage 44) 5m From North Boundary 5m From West Boundary 1m Below Final Level	Lot 667 (Stage 44) 4m From North Boundary 6m From West Boundary 0.8m Below Final Level	Lot 668 6m From North Boundary 3m From West Boundary 1m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	14.7	15.5	12.3	14.2
Hilf MDR Number :	228315	228316	228317	228318
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	90.5	101	82	101.5
Field Wet Density (t/m³) :	2.005	1.994	2.051	2.064
Optimum Moisture Content (%) :	16.2	15.4	15.0	14.0
Moisture Variation :	1.5	-0.1	2.7	-0.2
Peak Converted Wet Density (t/m³) :	2.100	2.038	2.067	2.136
Hilf Density Ratio (%) :	**95.5**	**98.0**	**99.0**	**96.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 95
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	12/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	228376	228377	228378	228379
Test Number :	320	321	322	323
Sampling Method :	-	-	-	-
Date Sampled :	04/05/2017	04/05/2017	04/05/2017	04/05/2017
Date Tested :	04/05/2017	04/05/2017	04/05/2017	04/05/2017
Material Type :	**Road Embankment**	**Road Embankment**	**Road Embankment**	**Road Embankment**
Material Source :	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**
Lot Number :	-	-	-	-
Sample Location :	Norfolk Drive Chainage 5 2m Left of Centreline 5m Below Final Level	Norfolk Drive Chainage 20 2.5m Right of Centreline 4.5m Below Final Level	Norfolk Drive Chainage 30 1m Left of Centreline 4.5m Below Final Level	Norfolk Drive Chainage 40 2m Right of Centreline 4m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	21.7	17.8	19.6	19.9
Hilf MDR Number :	228376	228377	228378	228379
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	88	78.5	84.5	83
Field Wet Density (t/m³) :	1.936	1.945	1.936	1.963
Optimum Moisture Content (%) :	24.7	22.7	23.2	24.0
Moisture Variation :	2.8	4.6	3.5	3.9
Peak Converted Wet Density (t/m³) :	1.881	1.897	1.879	1.898
Hilf Density Ratio (%) :	**103.0**	**102.5**	**103.0**	**103.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 96
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	12/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	228380	228381	228382	228383
Test Number :	324	325	326	327
Sampling Method :	-	-	-	-
Date Sampled :	04/05/2017	04/05/2017	04/05/2017	04/05/2017
Date Tested :	04/05/2017	04/05/2017	04/05/2017	04/05/2017
Material Type :	**Road Embankment**	**Road Embankment**	**Road Embankment**	**Road Embankment**
Material Source :	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**
Lot Number :	-	-	-	-
Sample Location :	Moreton Bay Boulevard Chainage 490 2m Right of Centreline 5m Below Final Level	Moreton Bay Boulevard Chainage 500 2m Left of Centreline 4.5m Below Final Level	Moreton Bay Boulevard Chainage 510 3m Left of Centreline 4m Below Final Level	Moreton Bay Boulevard Chainage 525 1m Left of Centreline 4m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	22.7	21.6	24.3	22.4
Hilf MDR Number :	228380	228381	228382	228383
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	98	96	100	99.5
Field Wet Density (t/m³) :	2.073	2.028	2.025	2.013
Optimum Moisture Content (%) :	23.1	22.5	24.3	22.5
Moisture Variation :	0.5	0.8	0.0	0.1
Peak Converted Wet Density (t/m³) :	1.960	1.975	1.980	1.985
Hilf Density Ratio (%) :	**106.0**	**102.5**	**102.5**	**101.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 97
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	12/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	228615	228616	228617	228618
Test Number :	328	329	330	331
Sampling Method :	-	-	-	-
Date Sampled :	08/05/2017	08/05/2017	08/05/2017	08/05/2017
Date Tested :	08/05/2017	08/05/2017	08/05/2017	08/05/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	683	667	665	673
Sample Location :	Lot 683 (Stage 44) 5m From North Boundary 6m From West Boundary 0.4m Below Final Level	Lot 667 (Stage 44) 6m From North Boundary 4m From West Boundary 0.4m Below Final Level	Lot 665 (Stage 44) 8m From North Boundary 7m From West Boundary Final Level	Lot 673 (Stage 44) 7m From North Boundary 3m From West Boundary Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	8.2	8.6	7.2	7.2
Hilf MDR Number :	228615	228616	228617	228618
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	99	95.5	100	90
Field Wet Density (t/m³) :	2.149	2.111	2.139	2.146
Optimum Moisture Content (%) :	8.3	9.0	7.2	8.0
Moisture Variation :	0.1	0.4	0.0	0.9
Peak Converted Wet Density (t/m³) :	2.211	2.194	2.168	2.141
Hilf Density Ratio (%) :	**97.0**	**96.0**	**98.5**	**100.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 98
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	22/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY		

Sample Number :	228845	228846	228847	228848
Test Number :	332	333	334	335
Sampling Method :	-	-	-	-
Date Sampled :	15/05/2017	15/05/2017	15/05/2017	15/05/2017
Date Tested :	15/05/2017	15/05/2017	15/05/2017	15/05/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**
Lot Number :	539	539	538	538
Sample Location :	Lot 539 (Stage 18) 5m From North Boundary 2m From East Boundary 6m Below Final Level	Lot 539 (Stage 18) 10m From North Boundary 3m From East Boundary 4.5m Below Final Level	Lot 538 (Stage 18) 3m From North Boundary 6m From East Boundary 5.5m Below Final Level	Lot 538 (Stage 18) 10m From North Boundary 4m From East Boundary 5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	21.7	23.8	22.2	21.8
Hilf MDR Number :	228845	228846	228847	228848
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	100	100.5	100	101
Field Wet Density (t/m³) :	2.030	2.019	2.013	2.062
Optimum Moisture Content (%) :	21.7	23.6	22.2	21.6
Moisture Variation :	0.0	-0.1	0.0	-0.1
Peak Converted Wet Density (t/m³) :	2.004	1.976	2.026	1.999
Hilf Density Ratio (%) :	**101.5**	**102.0**	**99.5**	**103.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 99
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	22/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY		

Sample Number :	228849			
Test Number :	336			
Sampling Method :	-			
Date Sampled :	15/05/2017			
Date Tested :	15/05/2017			
Material Type :	**Allotment Fill**			
Material Source :	**On Site (Marina Borrow Pit)**			
Lot Number :	538			
Sample Location :	Lot 538 (Stage 18) 15m From North Boundary 5m From East Boundary 4.5m Below Final Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	19.6			
Hilf MDR Number :	228849			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	101			
Field Wet Density (t/m³) :	2.079			
Optimum Moisture Content (%) :	19.4			
Moisture Variation :	-0.2			
Peak Converted Wet Density (t/m³) :	1.999			
Hilf Density Ratio (%) :	**104.0**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 100
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	22/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	228850	228851		
Test Number :	337	338		
Sampling Method :	-	-		
Date Sampled :	15/05/2017	15/05/2017		
Date Tested :	15/05/2017	15/05/2017		
Material Type :	**Road Embankment**	**Road Embankment**		
Material Source :	**On Site (Marina Borrow Pit)**	**On Site (Marina Borrow Pit)**		
Lot Number :	-	-		
Sample Location :	Moreton Bay Boulevard Chainage 540 2m Left of Centreline 3.5m Below Final Level	Norfolk Drive Chainage 30 1.5m Right of Centreline 3m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	14.2	15.7		
Hilf MDR Number :	228850	228851		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	104.5	101		
Field Wet Density (t/m³) :	2.050	2.075		
Optimum Moisture Content (%) :	13.6	15.5		
Moisture Variation :	-0.6	-0.2		
Peak Converted Wet Density (t/m³) :	2.123	2.133		
Hilf Density Ratio (%) :	**96.5**	**97.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 101
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	26/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229071	229072	229073	229074
Test Number :	339	340	341	342
Sampling Method :	-	-	-	-
Date Sampled :	17/05/2017	17/05/2017	17/05/2017	17/05/2017
Date Tested :	17/05/2017	17/05/2017	17/05/2017	17/05/2017
Material Type :	**Road Embankment**	**Road Embankment**	**Road Embankment**	**Road Embankment**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Road 31 (Stage 18) Chainage 82 2m Right of Kerb 5.5m Below Final Level	Road 31 (Stage 18) Chainage 87 5m Right of Kerb 5m Below Final Level	Road 31 (Stage 18) Chainage 90 7m Right of Kerb 5m Below Final Level	Road 31 (Stage 18) Chainage 100 4m Right of Kerb 4.5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	15.4	15.9	14.8	14.4
Hilf MDR Number :	229071	229072	229073	229074
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	122.5	121	113	101
Field Wet Density (t/m³) :	2.062	2.072	2.093	2.085
Optimum Moisture Content (%) :	12.6	13.1	13.1	14.2
Moisture Variation :	-2.9	-2.8	-1.7	-0.1
Peak Converted Wet Density (t/m³) :	2.175	2.178	2.161	2.188
Hilf Density Ratio (%) :	**95.0**	**95.0**	**97.0**	**95.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 102
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	26/05/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229075	229076		
Test Number :	343	344		
Sampling Method :	-	-		
Date Sampled :	17/05/2017	17/05/2017		
Date Tested :	17/05/2017	17/05/2017		
Material Type :	**Road Embankment**	**Road Embankment**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Road 31 (Stage 18) Chainage 105 5m Right of Kerb 5m Below Final Level	Road 31 (Stage 18) Chainage 112 4.5m Right of Kerb 4.5m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	16.8	18.1		
Hilf MDR Number :	229075	229076		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	110	112.5		
Field Wet Density (t/m³) :	2.061	2.011		
Optimum Moisture Content (%) :	15.2	16.1		
Moisture Variation :	-1.5	-2.0		
Peak Converted Wet Density (t/m³) :	2.133	2.112		
Hilf Density Ratio (%) :	**96.5**	**95.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 103
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	05/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229422	229423	229424	229425
Test Number :	345	346	347	348
Sampling Method :	-	-	-	-
Date Sampled :	24/05/2017	24/05/2017	24/05/2017	24/05/2017
Date Tested :	24/05/2017	24/05/2017	24/05/2017	24/05/2017
Material Type :	**Road Box Embankment**	**Road Box Embankment**	**Road Box Embankment**	**Road Box Embankment**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Brampton Street (Stage 24) Chainage 210 1.5m Left of Centreline 0.4m Below Final Level	Brampton Street (Stage 24) Chainage 270 Centreline 0.4m Below Final Level	Brampton Street (Stage 24) Chainage 380 1m Right of Centreline 0.4m Below Final Level	Ellis Lane (Stage 24) Chainage 45 1m Left of Centreline 0.4m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	15.4	13.2	15.8	16.6
Hilf MDR Number :	229422	229423	229424	229425
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	80	85.5	92	90
Field Wet Density (t/m³) :	2.118	2.092	2.116	2.129
Optimum Moisture Content (%) :	19.2	15.4	17.2	18.5
Moisture Variation :	3.6	2.1	1.4	1.8
Peak Converted Wet Density (t/m³) :	2.093	2.114	2.067	2.050
Hilf Density Ratio (%) :	**101.0**	**99.0**	**102.5**	**104.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 104
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	05/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229426	229427		
Test Number :	349	350		
Sampling Method :	-	-		
Date Sampled :	24/05/2017	24/05/2017		
Date Tested :	24/05/2017	24/05/2017		
Material Type :	**Road Box Embankment**	**Road Box Embankment**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Heron Street (Stage 16) Chainage 70 Centreline 1m Below Final Level	Lindquist Crescent (Stage 16) Chainage 160 Centreline 1m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	13.5	13.5		
Hilf MDR Number :	229426	229427		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	96.5	97		
Field Wet Density (t/m³) :	2.082	2.068		
Optimum Moisture Content (%) :	14.0	13.9		
Moisture Variation :	0.4	0.4		
Peak Converted Wet Density (t/m³) :	2.166	2.177		
Hilf Density Ratio (%) :	**96.0**	**95.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 105
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	05/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229473	229474		
Test Number :	351	352		
Sampling Method :	-	-		
Date Sampled :	25/05/2017	25/05/2017		
Date Tested :	25/05/2017	25/05/2017		
Material Type :	**Road Embankment**	**Road Embankment**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Lindquist Crescent Chainage 160 2m Left of Centreline 0.3m Below Final Level	Heron Street Chainage 60 1m Right of Centreline 0.3m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	9.1	18.5		
Hilf MDR Number :	229473	229474		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	99	98.5		
Field Wet Density (t/m³) :	2.054	2.059		
Optimum Moisture Content (%) :	9.2	18.8		
Moisture Variation :	0.1	0.3		
Peak Converted Wet Density (t/m³) :	2.076	2.063		
Hilf Density Ratio (%) :	**99.0**	**100.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 106
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229622	229623	229624	229625
Test Number :	353	354	355	356
Sampling Method :	-	-	-	-
Date Sampled :	27/05/2017	27/05/2017	27/05/2017	27/05/2017
Date Tested :	27/05/2017	27/05/2017	27/05/2017	27/05/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499964 N 7000224 0.5m Below Final Level	E 499964 N 7000203 0.5m Below Final Level	E 499963 N 7000177 0.2m Below Final Level	E 499985 N 7000157 0.2m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	9.7	9.7	9.8	9.5
Hilf MDR Number :	229622	229623	229624	229625
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	98.5	102.5	96.5	105.5
Field Wet Density (t/m³) :	2.101	2.149	2.106	2.194
Optimum Moisture Content (%) :	9.9	9.4	10.1	9.0
Moisture Variation :	0.2	-0.2	0.3	-0.6
Peak Converted Wet Density (t/m³) :	2.212	2.264	2.211	2.268
Hilf Density Ratio (%) :	**95.0**	**95.0**	**95.0**	**96.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 107
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229626	229627	229628	229629
Test Number :	357	358	359	360
Sampling Method :	-	-	-	-
Date Sampled :	27/05/2017	27/05/2017	27/05/2017	27/05/2017
Date Tested :	27/05/2017	27/05/2017	27/05/2017	27/05/2017
Material Type :	**Allotment Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	614	-	-	-
Sample Location :	Lot 514 (Stage 45) 6m From North Boundary 4m From West Boundary / 0.7m Below Final Level Retest of Field Density No. 315 on the 03/05/17	E 499976 N 7000142 Final Level	E 499991 N 7000126 Final Level	E 499997 N 7000103 0.5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	9.5	9.2	9.1	18.7
Hilf MDR Number :	229626	229627	229628	229629
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	100.5	98	98	100.5
Field Wet Density (t/m³) :	2.101	2.218	2.230	2.040
Optimum Moisture Content (%) :	9.5	9.4	9.3	18.6
Moisture Variation :	0.0	0.2	0.2	-0.1
Peak Converted Wet Density (t/m³) :	2.211	2.271	2.280	2.077
Hilf Density Ratio (%) :	**95.0**	**97.5**	**98.0**	**98.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 108
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229630	229631	229632	229633
Test Number :	361	362	363	364
Sampling Method :	-	-	-	-
Date Sampled :	27/05/2017	27/05/2017	27/05/2017	27/05/2017
Date Tested :	27/05/2017	27/05/2017	27/05/2017	27/05/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499991 N 7000095 1m Below Final Level	E 499999 N 7000090 1m Below Final Level	E 500002 N 7000077 0.8m Below Final Level	E 499999 N 7000067 0.5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	9.3	17.9	10.1	9.2
Hilf MDR Number :	229630	229631	229632	229633
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	99	103	105.5	96
Field Wet Density (t/m³) :	2.145	2.042	2.150	2.159
Optimum Moisture Content (%) :	9.4	17.4	9.6	9.6
Moisture Variation :	0.1	-0.6	-0.6	0.3
Peak Converted Wet Density (t/m³) :	2.217	2.109	2.227	2.188
Hilf Density Ratio (%) :	**97.0**	**97.0**	**96.5**	**98.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 109
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229634	229635	229636	229637
Test Number :	365	366	367	368
Sampling Method :	-	-	-	-
Date Sampled :	27/05/2017	27/05/2017	27/05/2017	27/05/2017
Date Tested :	27/05/2017	27/05/2017	27/05/2017	27/05/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499989 N 7000072 Final Level	E 500002 N 7000052 Final Level	E 500006 N 7000032 Final Level	E 500002 N 7000017 Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	18.8	21.5	9.7	11.7
Hilf MDR Number :	229634	229635	229636	229637
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	98.5	110	97.5	99
Field Wet Density (t/m³) :	2.094	2.068	2.113	2.124
Optimum Moisture Content (%) :	19.0	19.5	9.9	11.8
Moisture Variation :	0.2	-1.9	0.2	0.1
Peak Converted Wet Density (t/m³) :	2.037	2.076	2.201	2.159
Hilf Density Ratio (%) :	**103.0**	**99.5**	**96.0**	**98.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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ABN: 51 009 878 899
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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 110
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229638	229639	229640	229641
Test Number :	369	370	371	372
Sampling Method :	-	-	-	-
Date Sampled :	27/05/2017	27/05/2017	27/05/2017	27/05/2017
Date Tested :	27/05/2017	27/05/2017	27/05/2017	27/05/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 500020 N 7000002 0.2m Below Final Level	E 500024 N 6999989 0.4m Below Final Level	E 500009 N 6999975 0.2m Below Final Level	E 499994 N 6999973 Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	10.4	9.9	8.8	9.3
Hilf MDR Number :	229638	229639	229640	229641
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	97.5	100	100	100.5
Field Wet Density (t/m³) :	2.183	2.113	2.175	2.176
Optimum Moisture Content (%) :	10.6	9.9	8.8	9.3
Moisture Variation :	0.2	0.0	0.0	0.0
Peak Converted Wet Density (t/m³) :	2.212	2.191	2.256	2.227
Hilf Density Ratio (%) :	**98.5**	**96.5**	**96.5**	**97.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Liam Mcdowall (Brisbane) - Branch Manager
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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 111
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229642	229643	229644	229645
Test Number :	373	374	375	376
Sampling Method :	-	-	-	-
Date Sampled :	27/05/2017	27/05/2017	27/05/2017	27/05/2017
Date Tested :	27/05/2017	27/05/2017	27/05/2017	27/05/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499991 N 6999965 Final Level	E 499995 N 6999950 Final Level	E 499980 N 6999952 0.2m Below Final Level	E 499976 N 6999933 0.8m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	9.1	8.6	15.5	13.5
Hilf MDR Number :	229642	229643	229644	229645
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	100.5	97.5	100	100.5
Field Wet Density (t/m³) :	2.163	2.188	2.087	2.078
Optimum Moisture Content (%) :	9.1	8.8	15.5	13.5
Moisture Variation :	0.0	0.2	0.0	0.0
Peak Converted Wet Density (t/m³) :	2.248	2.249	2.144	2.159
Hilf Density Ratio (%) :	**96.0**	**97.5**	**97.5**	**96.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 112
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229646	229647	229648	229649
Test Number :	377	378	379	380
Sampling Method :	-	-	-	-
Date Sampled :	27/05/2017	27/05/2017	27/05/2017	27/05/2017
Date Tested :	27/05/2017	27/05/2017	27/05/2017	27/05/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499964 N 6999925 0.8m Below Final Level	E 499956 N 6999926 0.4m Below Final Level	E 499951 N 6999931 Final Level	E 499966 N 6999946 Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	14.1	14.8	13.5	14.5
Hilf MDR Number :	229646	229647	229648	229649
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	99	100	99.5	101
Field Wet Density (t/m³) :	2.070	2.078	2.115	2.108
Optimum Moisture Content (%) :	14.2	14.8	13.6	14.4
Moisture Variation :	0.1	0.0	0.1	-0.1
Peak Converted Wet Density (t/m³) :	2.169	2.166	2.177	2.150
Hilf Density Ratio (%) :	**95.5**	**96.0**	**97.0**	**98.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 113
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229707	229708	229709	229710
Test Number :	381	382	383	384
Sampling Method :	-	-	-	-
Date Sampled :	29/05/2017	29/05/2017	29/05/2017	29/05/2017
Date Tested :	29/05/2017	29/05/2017	29/05/2017	29/05/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 20-25 Footprint E 499906 N 6999884 1m Below Final Level	Stage 20-25 Footprint E 499890 N 6999887 0.5m Below Final Level	Stage 20-25 Footprint E 499884 N 6999861 Final Level	Stage 20-25 Footprint E 499865 N 6999839 1m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	9.9	10.9	14.9	15.2
Hilf MDR Number :	229707	229708	229709	229710
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	119.5	117	101.5	99
Field Wet Density (t/m³) :	2.185	2.124	2.094	2.113
Optimum Moisture Content (%) :	8.3	9.3	14.7	15.3
Moisture Variation :	-1.7	-1.6	-0.2	0.1
Peak Converted Wet Density (t/m³) :	2.250	2.237	2.133	2.102
Hilf Density Ratio (%) :	**97.0**	**95.0**	**98.0**	**100.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 114
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229711	229712	229713	229714
Test Number :	385	386	387	388
Sampling Method :	-	-	-	-
Date Sampled :	29/05/2017	29/05/2017	29/05/2017	29/05/2017
Date Tested :	29/05/2017	29/05/2017	29/05/2017	29/05/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 20-25 Footprint E 499846 N 6999837 0.6m Below Final Level	Stage 20-25 Footprint E 499826 N 6999848 Final Level	Stage 20-25 Footprint E 499821 N 6999822 0.8m Below Final Level	Stage 20-25 Footprint E 499817 N 6999843 0.4m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	18.8	12.2	18.2	11.9
Hilf MDR Number :	229711	229712	229713	229714
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	101	106	98.5	112.5
Field Wet Density (t/m³) :	2.071	2.115	2.067	2.111
Optimum Moisture Content (%) :	18.7	11.5	18.5	10.6
Moisture Variation :	-0.1	-0.7	0.2	-1.4
Peak Converted Wet Density (t/m³) :	2.038	2.199	2.035	2.204
Hilf Density Ratio (%) :	**101.5**	**96.0**	**101.5**	**96.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 115
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229715	229716		
Test Number :	389	390		
Sampling Method :	-	-		
Date Sampled :	29/05/2017	29/05/2017		
Date Tested :	29/05/2017	29/05/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Stage 20-25 Footprint E 499822 N 6999807 Final Level	Stage 20-25 Footprint E 499804 N 6999810 Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	18.6	17.8		
Hilf MDR Number :	229715	229716		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	99	101		
Field Wet Density (t/m³) :	2.104	2.099		
Optimum Moisture Content (%) :	18.8	17.7		
Moisture Variation :	0.2	-0.1		
Peak Converted Wet Density (t/m³) :	2.046	2.043		
Hilf Density Ratio (%) :	**103.0**	**102.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 116
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229717	229718	229719	229720
Test Number :	391	392	393	394
Sampling Method :	-	-	-	-
Date Sampled :	29/05/2017	29/05/2017	29/05/2017	29/05/2017
Date Tested :	29/05/2017	29/05/2017	29/05/2017	29/05/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 20-25 Footprint E 499803 N 6999822 0.3m Above Design Level	Stage 20-25 Footprint E 499819 N 6999832 0.3m Above Design Level	Stage 20-25 Footprint E 499840 N 6999855 0.3m Above Design Level	Stage 20-25 Footprint E 499871 N 6999871 0.3m Above Design Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	19.4	21.6	19.2	19.5
Hilf MDR Number :	229717	229718	229719	229720
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	98.5	99.5	98.5	99.5
Field Wet Density (t/m³) :	2.006	2.019	2.020	2.014
Optimum Moisture Content (%) :	19.7	21.7	19.5	19.6
Moisture Variation :	0.2	0.1	0.3	0.1
Peak Converted Wet Density (t/m³) :	2.037	2.021	2.045	2.029
Hilf Density Ratio (%) :	**98.5**	**100.0**	**99.0**	**99.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 117
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229721			
Test Number :	395			
Sampling Method :	-			
Date Sampled :	29/05/2017			
Date Tested :	29/05/2017			
Material Type :	**General Fill**			
Material Source :	**On Site**			
Lot Number :	-			
Sample Location :	Stage 20-25 Footprint E 499896 N 6999878 0.3m Above Design Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	18.8			
Hilf MDR Number :	229721			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	98			
Field Wet Density (t/m³) :	2.038			
Optimum Moisture Content (%) :	19.1			
Moisture Variation :	0.3			
Peak Converted Wet Density (t/m³) :	2.029			
Hilf Density Ratio (%) :	**100.5**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 118
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229722	229723	229724	229725
Test Number :	396	397	398	399
Sampling Method :	-	-	-	-
Date Sampled :	29/05/2017	29/05/2017	29/05/2017	29/05/2017
Date Tested :	29/05/2017	29/05/2017	29/05/2017	29/05/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 35 Footprint E 499432 N 7000439 0.4m Below Final Level	Stage 35 Footprint E 499421 N 7000442 0.7m Below Final Level	Stage 35 Footprint E 499404 N 7000453 0.9m Below Final Level	Stage 35 Footprint E 499409 N 7000425 0.4m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	19.4	16.2	18.7	16.8
Hilf MDR Number :	229722	229723	229724	229725
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	96.5	93.5	97.5	94.5
Field Wet Density (t/m³) :	2.029	2.049	2.023	2.044
Optimum Moisture Content (%) :	20.1	17.4	19.2	17.8
Moisture Variation :	0.7	1.1	0.5	1.0
Peak Converted Wet Density (t/m³) :	2.023	2.027	2.025	2.057
Hilf Density Ratio (%) :	**100.5**	**101.0**	**100.0**	**99.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 119
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229726	229727	229728	229729
Test Number :	400	401	402	403
Sampling Method :	-	-	-	-
Date Sampled :	29/05/2017	29/05/2017	29/05/2017	29/05/2017
Date Tested :	29/05/2017	29/05/2017	29/05/2017	29/05/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 35 Footprint E 499413 N 7000443 0.7m Below Final Level	Stage 35 Footprint E 499419 N 7000415 0.4m Below Final Level	Stage 35 Footprint E 499408 N 7000411 0.8m Below Final Level	Stage 35 Footprint E 499393 N 7000405 0.4m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	18.9	17.4	18.4	15.5
Hilf MDR Number :	229726	229727	229728	229729
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	97	99	101.5	99.5
Field Wet Density (t/m³) :	2.038	2.022	2.013	2.045
Optimum Moisture Content (%) :	19.5	17.5	18.1	15.6
Moisture Variation :	0.6	0.1	-0.2	0.1
Peak Converted Wet Density (t/m³) :	2.015	2.067	2.088	2.083
Hilf Density Ratio (%) :	**101.0**	**98.0**	**96.5**	**98.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 120
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229730	229731		
Test Number :	404	405		
Sampling Method :	-	-		
Date Sampled :	29/05/2017	29/05/2017		
Date Tested :	29/05/2017	29/05/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Stage 35 Footprint E 499382 N 7000395 0.7m Below Final Level	Stage 35 Footprint E 499392 N 7000371 0.4m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	17.3	18.2		
Hilf MDR Number :	229730	229731		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	98	101		
Field Wet Density (t/m³) :	2.049	2.051		
Optimum Moisture Content (%) :	17.7	18.0		
Moisture Variation :	0.3	-0.1		
Peak Converted Wet Density (t/m³) :	2.095	2.097		
Hilf Density Ratio (%) :	**98.0**	**98.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 121
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229801	229802	229803	229804
Test Number :	406	407	408	409
Sampling Method :	-	-	-	-
Date Sampled :	30/05/2017	30/05/2017	30/05/2017	30/05/2017
Date Tested :	30/05/2017	30/05/2017	30/05/2017	30/05/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 34/35 E 499373 N 7000414 Final Level	Stage 34/35 E 499392 N 7000432 Final Level	Stage 34/35 E 499412 N 7000458 Final Level	Stage 34/35 E 499424 N 7000454 Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	17.0	16.3	19.1	17.8
Hilf MDR Number :	229801	229802	229803	229804
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	105.5	105	102.5	100.5
Field Wet Density (t/m³) :	2.196	2.086	2.066	2.090
Optimum Moisture Content (%) :	16.1	15.5	18.6	17.7
Moisture Variation :	-0.8	-0.8	-0.5	-0.1
Peak Converted Wet Density (t/m³) :	2.134	2.171	2.100	2.103
Hilf Density Ratio (%) :	**103.0**	**96.0**	**98.5**	**99.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 122
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229805	229806	229807	229808
Test Number :	410	411	412	413
Sampling Method :	-	-	-	-
Date Sampled :	30/05/2017	30/05/2017	30/05/2017	30/05/2017
Date Tested :	30/05/2017	30/05/2017	30/05/2017	30/05/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 34/35 E 499423 N 7000435 Final Level	Stage 34/35 E 499412 N 7000440 Final Level	Stage 34/35 E 499149 N 7000420 Final Level	Stage 34/35 E 499397 N 7000410 Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	14.8	15.5	14.1	15.8
Hilf MDR Number :	229805	229806	229807	229808
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	106	104	101.5	104.5
Field Wet Density (t/m³) :	2.122	2.018	2.044	2.123
Optimum Moisture Content (%) :	14.0	14.9	13.9	15.1
Moisture Variation :	-0.8	-0.6	-0.2	-0.7
Peak Converted Wet Density (t/m³) :	2.156	2.097	2.094	2.134
Hilf Density Ratio (%) :	**98.5**	**96.0**	**97.5**	**99.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 123
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229809			
Test Number :	414			
Sampling Method :	-			
Date Sampled :	30/05/2017			
Date Tested :	30/05/2017			
Material Type :	**General Fill**			
Material Source :	**On Site**			
Lot Number :	-			
Sample Location :	Stage 34/35 E 499406 N 7000404 Final Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	9.9			
Hilf MDR Number :	229809			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	109.5			
Field Wet Density (t/m³) :	2.028			
Optimum Moisture Content (%) :	9.0			
Moisture Variation :	-0.9			
Peak Converted Wet Density (t/m³) :	2.124			
Hilf Density Ratio (%) :	**95.5**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 124
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229928	229929	229930	229931
Test Number :	415	416	417	418
Sampling Method :	-	-	-	-
Date Sampled :	31/05/2017	31/05/2017	31/05/2017	31/05/2017
Date Tested :	31/05/2017	31/05/2017	31/05/2017	31/05/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499966 N 7000165 0.3m Above Design Level	E 499972 N 7000138 0.3m Above Design Level	E 499982 N 7000118 0.3m Above Design Level	E 499995 N 7000105 0.3m Above Design Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	17.7	17.7	17.3	16.4
Hilf MDR Number :	229928	229929	229930	229931
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	102	104	104	104
Field Wet Density (t/m³) :	2.064	2.053	2.077	2.065
Optimum Moisture Content (%) :	17.4	17.0	16.7	15.7
Moisture Variation :	-0.3	-0.7	-0.6	-0.7
Peak Converted Wet Density (t/m³) :	2.061	2.080	2.092	2.152
Hilf Density Ratio (%) :	**100.0**	**98.5**	**99.5**	**96.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 125
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229932	229933	229934	229935
Test Number :	419	420	421	422
Sampling Method :	-	-	-	-
Date Sampled :	31/05/2017	31/05/2017	31/05/2017	31/05/2017
Date Tested :	31/05/2017	31/05/2017	31/05/2017	31/05/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499990 N 7000090 0.3m Above Design Level	E 500001 N 7000077 0.3m Above Design Level	E 500005 N 7000050 0.3m Above Design Level	E 499998 N 7000019 0.3m Above Design Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	17.2	18.0	19.9	18.6
Hilf MDR Number :	229932	229933	229934	229935
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	104	100.5	104	104
Field Wet Density (t/m³) :	2.092	2.103	1.981	1.991
Optimum Moisture Content (%) :	16.5	17.9	19.2	17.8
Moisture Variation :	-0.7	-0.1	-0.7	-0.7
Peak Converted Wet Density (t/m³) :	2.110	2.164	2.052	2.042
Hilf Density Ratio (%) :	**99.0**	**97.0**	**96.5**	**97.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Liam Mcdowall (Brisbane) - Branch Manager
NATA Accreditation Number
1162 / 1169

MORRISON GEOTECHNIC

Brisbane | Gold Coast | Maroochydore
Unit 1, 35 Limestone Street (PO Box 3063), Darra Q 4076 P (07) 3279 0900 F (07) 3279 0955
ABN: 51 009 878 899
www.morrisongeo.com.au

Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 126
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229936	229937		
Test Number :	423	424		
Sampling Method :	-	-		
Date Sampled :	31/05/2017	31/05/2017		
Date Tested :	31/05/2017	31/05/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	E 500009 N 6999994 0.3m Above Design Level	E 499998 N 6999985 0.3m Above Design Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	19.8	19.7		
Hilf MDR Number :	229936	229937		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	118.5	103		
Field Wet Density (t/m³) :	2.060	2.056		
Optimum Moisture Content (%) :	16.7	19.1		
Moisture Variation :	-3.1	-0.6		
Peak Converted Wet Density (t/m³) :	2.079	2.048		
Hilf Density Ratio (%) :	**99.0**	**100.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 127
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229982	229983	229984	229985
Test Number :	425	426	427	428
Sampling Method :	-	-	-	-
Date Sampled :	01/06/2017	01/06/2017	01/06/2017	01/06/2017
Date Tested :	01/06/2017	01/06/2017	01/06/2017	01/06/2017
Material Type :	**Road Embankment**	**Road Embankment**	**Road Embankment**	**Road Embankment**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Fisher Street (Stage 19) Chainage 100 Centreline 0.4m Below Final Level	Fisher Street (Stage 19) Chainage 160 Centreline 0.4m Below Final Level	Houghton Street (Stage 19) Chainage 95 Centreline 0.4m Below Final Level	Houghton Street (Stage 19) Chainage 150 Centreline 0.4m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	15.0	14.0	15.4	16.9
Hilf MDR Number :	229982	229983	229984	229985
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	87.5	84	91	93
Field Wet Density (t/m³) :	2.162	2.131	2.085	2.111
Optimum Moisture Content (%) :	17.1	16.6	16.9	18.2
Moisture Variation :	2.1	2.6	1.5	1.2
Peak Converted Wet Density (t/m³) :	2.067	2.068	2.022	2.097
Hilf Density Ratio (%) :	**104.5**	**103.0**	**103.0**	**100.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 128
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	229986	229987		
Test Number :	429	430		
Sampling Method :	-	-		
Date Sampled :	01/06/2017	01/06/2017		
Date Tested :	01/06/2017	01/06/2017		
Material Type :	**Road Embankment**	**Road Embankment**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Brampton Street (Stage 23) Chainage 100 Centreline 0.4m Below Final Level	Newton Street (Stage 24) Chainage 80 Centreline 0.4m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	16.8	16.3		
Hilf MDR Number :	229986	229987		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	100.5	92		
Field Wet Density (t/m³) :	2.060	2.039		
Optimum Moisture Content (%) :	16.7	17.7		
Moisture Variation :	-0.1	1.4		
Peak Converted Wet Density (t/m³) :	2.081	2.072		
Hilf Density Ratio (%) :	**99.0**	**98.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 129
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230035	230036	230037	230038
Test Number :	431	432	433	434
Sampling Method :	-	-	-	-
Date Sampled :	02/06/2017	02/06/2017	02/06/2017	02/06/2017
Date Tested :	02/06/2017	02/06/2017	02/06/2017	02/06/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499966 N 7000174 0.6m Above Deisgn Level	E 499970 N 7000152 0.6m Above Deisgn Level	E 499976 N 7000140 0.6m Above Deisgn Level	E 499990 N 7000116 0.6m Above Deisgn Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	14.8	13.5	12.3	17.7
Hilf MDR Number :	230035	230036	230037	230038
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	98	98	95	97
Field Wet Density (t/m³) :	2.107	2.118	2.102	2.125
Optimum Moisture Content (%) :	15.1	13.8	13.0	18.2
Moisture Variation :	0.3	0.2	0.7	0.5
Peak Converted Wet Density (t/m³) :	2.072	2.093	2.041	2.117
Hilf Density Ratio (%) :	**101.5**	**101.0**	**103.0**	**100.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 130
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230039	230040	230041	230042
Test Number :	435	436	437	438
Sampling Method :	-	-	-	-
Date Sampled :	02/06/2017	02/06/2017	02/06/2017	02/06/2017
Date Tested :	02/06/2017	02/06/2017	02/06/2017	02/06/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499989 N 7000113 0.6m Above Deisgn Level	E 499997 N 7000092 0.6m Above Deisgn Level	E 499993 N 7000081 0.6m Above Deisgn Level	E 499987 N 7000069 0.6m Above Deisgn Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	15.4	14.7	13.9	12.9
Hilf MDR Number :	230039	230040	230041	230042
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	102.5	98	97.5	88.5
Field Wet Density (t/m³) :	2.131	2.122	2.128	2.137
Optimum Moisture Content (%) :	15.1	15.0	14.2	14.6
Moisture Variation :	-0.3	0.3	0.3	1.7
Peak Converted Wet Density (t/m³) :	2.076	2.106	2.061	2.103
Hilf Density Ratio (%) :	**102.5**	**101.0**	**103.0**	**101.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 131
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230043	230044		
Test Number :	439	440		
Sampling Method :	-	-		
Date Sampled :	02/06/2017	02/06/2017		
Date Tested :	02/06/2017	02/06/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	E 499991 N 7000052 0.6m Above Deisgn Level	E 500006 N 7000036 0.6m Above Deisgn Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	16.1	14.5		
Hilf MDR Number :	230043	230044		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	98	90.5		
Field Wet Density (t/m³) :	2.131	2.120		
Optimum Moisture Content (%) :	16.4	16.0		
Moisture Variation :	0.3	1.4		
Peak Converted Wet Density (t/m³) :	2.094	2.142		
Hilf Density Ratio (%) :	**102.0**	**99.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 132
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230124	230125	230126	230127
Test Number :	441	442	443	444
Sampling Method :	-	-	-	-
Date Sampled :	05/06/2017	05/06/2017	05/06/2017	05/06/2017
Date Tested :	05/06/2017	05/06/2017	05/06/2017	05/06/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 500006 N 7000038 0.6m Above Design Level	E 500003 N 7000023 0.6m Above Design Level	E 500016 N 7000014 0.6m Above Design Level	E 500018 N 7000002 0.6m Above Design Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	15.3	16.6	14.3	14.0
Hilf MDR Number :	230124	230125	230126	230127
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	98	96.5	90.5	97
Field Wet Density (t/m³) :	2.081	2.067	2.052	2.054
Optimum Moisture Content (%) :	15.6	17.2	15.8	14.5
Moisture Variation :	0.3	0.6	1.5	0.5
Peak Converted Wet Density (t/m³) :	2.099	2.079	2.080	2.069
Hilf Density Ratio (%) :	**99.0**	**99.5**	**98.5**	**99.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 133
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230128			
Test Number :	445			
Sampling Method :	-			
Date Sampled :	05/06/2017			
Date Tested :	05/06/2017			
Material Type :	**General Fill**			
Material Source :	**On Site**			
Lot Number :	-			
Sample Location :	E 499999 N 6999999 0.6m Above Design Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	12.5			
Hilf MDR Number :	230128			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	96.5			
Field Wet Density (t/m³) :	2.038			
Optimum Moisture Content (%) :	13.0			
Moisture Variation :	0.4			
Peak Converted Wet Density (t/m³) :	2.196			
Hilf Density Ratio (%) :	**93.0**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Liam Mcdowall (Brisbane) - Branch Manager
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ABN: 51 009 878 899
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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 134
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230129	230130	230131	230132
Test Number :	446	447	448	449
Sampling Method :	-	-	-	-
Date Sampled :	05/06/2017	05/06/2017	05/06/2017	05/06/2017
Date Tested :	05/06/2017	05/06/2017	05/06/2017	05/06/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499989 N 6999998 0.6m Above Design Level	E 499991 N 6999982 0.6m Above Design Level	E 500006 N 6999970 0.6m Above Design Level	E 500009 N 6999956 0.6m Above Design Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	16.1	16.3	15.1	15.9
Hilf MDR Number :	230129	230130	230131	230132
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	103.5	100.5	105.5	121.5
Field Wet Density (t/m³) :	2.062	2.055	2.076	2.095
Optimum Moisture Content (%) :	15.6	16.2	14.3	13.1
Moisture Variation :	-0.5	-0.1	-0.8	-2.8
Peak Converted Wet Density (t/m³) :	2.106	2.077	2.051	2.133
Hilf Density Ratio (%) :	**98.0**	**99.0**	**101.0**	**98.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 135
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230133	230134	230135	230136
Test Number :	450	451	452	453
Sampling Method :	-	-	-	-
Date Sampled :	05/06/2017	05/06/2017	05/06/2017	05/06/2017
Date Tested :	05/06/2017	05/06/2017	05/06/2017	05/06/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499995 N 6999950 0.6m Above Design Level	E 499979 N 6999959 0.6m Above Design Level	E 499963 N 6999962 0.6m Above Design Level	E 499961 N 6999942 0.6m Above Design Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	15.8	15.1	15.4	12.4
Hilf MDR Number :	230133	230134	230135	230136
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	101	87.5	104	88
Field Wet Density (t/m³) :	2.092	2.077	2.107	2.066
Optimum Moisture Content (%) :	15.7	17.2	14.8	14.1
Moisture Variation :	-0.1	2.0	-0.6	1.7
Peak Converted Wet Density (t/m³) :	2.067	2.002	2.131	2.004
Hilf Density Ratio (%) :	**101.0**	**104.0**	**99.0**	**103.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 136
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230137	230138	230139	230140
Test Number :	454	455	456	457
Sampling Method :	-	-	-	-
Date Sampled :	05/06/2017	05/06/2017	05/06/2017	05/06/2017
Date Tested :	05/06/2017	05/06/2017	05/06/2017	05/06/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499959 N 6999925 0.6m Above Design Level	E 499943 N 6999925 0.6m Above Design Level	E 499925 N 6999928 0.6m Above Design Level	E 499913 N 6999909 0.6m Above Design Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	13.4	14.5	14.4	14.6
Hilf MDR Number :	230137	230138	230139	230140
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	90	86	102.5	87
Field Wet Density (t/m³) :	2.116	2.115	2.085	2.062
Optimum Moisture Content (%) :	14.8	16.9	14.1	16.8
Moisture Variation :	1.5	2.4	-0.3	2.2
Peak Converted Wet Density (t/m³) :	2.068	2.015	2.126	1.987
Hilf Density Ratio (%) :	**102.5**	**105.0**	**98.0**	**104.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 137
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230141	230142	230143	230144
Test Number :	458	459	460	461
Sampling Method :	-	-	-	-
Date Sampled :	05/06/2017	05/06/2017	05/06/2017	05/06/2017
Date Tested :	05/06/2017	05/06/2017	05/06/2017	05/06/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499906 N 6999883 0.6m Above Design Level	E 499886 N 6999869 0.6m Above Design Level	E 499856 N 6999866 0.6m Above Design Level	E 499845 N 6999844 0.6m Above Design Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	13.6	17.7	17.0	17.5
Hilf MDR Number :	230141	230142	230143	230144
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	104.5	99.5	102.5	103
Field Wet Density (t/m³) :	2.079	2.031	2.059	2.101
Optimum Moisture Content (%) :	13.0	17.8	16.6	17.0
Moisture Variation :	-0.6	0.1	-0.3	-0.5
Peak Converted Wet Density (t/m³) :	2.123	2.070	2.077	2.088
Hilf Density Ratio (%) :	**98.0**	**98.0**	**99.0**	**100.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 138
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230145	230146	230147	230148
Test Number :	462	463	464	465
Sampling Method :	-	-	-	-
Date Sampled :	05/06/2017	05/06/2017	05/06/2017	05/06/2017
Date Tested :	05/06/2017	05/06/2017	05/06/2017	05/06/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499840 N 6999829 0.6m Above Design Level	E 499822 N 6999818 0.6m Above Design Level	E 499807 N 6999829 0.6m Above Design Level	E 499795 N 6999821 0.6m Above Design Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	17.2	15.7	14.7	16.5
Hilf MDR Number :	230145	230146	230147	230148
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	102	88	102.5	95
Field Wet Density (t/m³) :	2.053	2.056	2.118	2.073
Optimum Moisture Content (%) :	16.9	17.8	14.3	17.3
Moisture Variation :	-0.4	2.0	-0.3	0.8
Peak Converted Wet Density (t/m³) :	2.017	2.018	2.191	2.034
Hilf Density Ratio (%) :	**102.0**	**102.0**	**96.5**	**102.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 139
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230149			
Test Number :	466			
Sampling Method :	-			
Date Sampled :	05/06/2017			
Date Tested :	05/06/2017			
Material Type :	**General Fill**			
Material Source :	**On Site**			
Lot Number :	-			
Sample Location :	E 499792 N 6999803 0.6m Above Design Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	16.8			
Hilf MDR Number :	230149			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	96.5			
Field Wet Density (t/m³) :	2.053			
Optimum Moisture Content (%) :	17.4			
Moisture Variation :	0.6			
Peak Converted Wet Density (t/m³) :	2.089			
Hilf Density Ratio (%) :	**98.5**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 140
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	25/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230198	230199		
Test Number :	467	468		
Sampling Method :	-	-		
Date Sampled :	06/06/2017	06/06/2017		
Date Tested :	06/06/2017	06/06/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Stage 17 & 18 E 499283 N 7000526 2.7m Below Final Level	Stage 17 & 18 E 499257 N 7000542 2.7m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	19.6	19.8		
Hilf MDR Number :	230198	230199		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	100.5	101.5		
Field Wet Density (t/m³) :	2.062	2.054		
Optimum Moisture Content (%) :	19.5	19.5		
Moisture Variation :	-0.1	-0.3		
Peak Converted Wet Density (t/m³) :	2.029	2.066		
Hilf Density Ratio (%) :	**101.5**	**99.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 141
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	25/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230200	230201	230202	230203
Test Number :	469	470	471	472
Sampling Method :	-	-	-	-
Date Sampled :	06/06/2017	06/06/2017	06/06/2017	06/06/2017
Date Tested :	06/06/2017	06/06/2017	06/06/2017	06/06/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 17 & 18 E 499239 N 7000524 2.7m Below Final Level	Stage 17 & 18 E 499220 N 7000512 2.7m Below Final Level	Stage 17 & 18 E 499209 N 7000543 2.7m Below Final Level	Stage 17 & 18 E 499187 N 7000544 2.7m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	19.7	17.9	16.9	16.6
Hilf MDR Number :	230200	230201	230202	230203
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	118	103	99	104.5
Field Wet Density (t/m³) :	2.084	2.079	2.072	2.058
Optimum Moisture Content (%) :	16.7	17.4	17.0	15.9
Moisture Variation :	-3.0	-0.5	0.1	-0.7
Peak Converted Wet Density (t/m³) :	2.115	2.089	2.034	2.045
Hilf Density Ratio (%) :	**98.5**	**99.5**	**102.0**	**100.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 142
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	25/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230204	230205	230206	230207
Test Number :	473	474	475	476
Sampling Method :	-	-	-	-
Date Sampled :	06/06/2017	06/06/2017	06/06/2017	06/06/2017
Date Tested :	06/06/2017	06/06/2017	06/06/2017	06/06/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 17 & 18 E 499165 N 7000525 2.5m Below Final Level	Stage 17 & 18 E 499145 N 7000543 2.5m Below Final Level	Stage 17 & 18 E 499140 N 7000611 2.5m Below Final Level	Stage 17 & 18 E 499159 N 7000603 2.5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	15.7	18.0	12.5	11.5
Hilf MDR Number :	230204	230205	230206	230207
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	98.5	103.5	94.5	108.5
Field Wet Density (t/m³) :	2.076	2.065	2.126	2.119
Optimum Moisture Content (%) :	15.9	17.4	13.2	10.6
Moisture Variation :	0.2	-0.6	0.7	-0.9
Peak Converted Wet Density (t/m³) :	2.111	2.061	2.108	2.125
Hilf Density Ratio (%) :	**98.5**	**100.0**	**101.0**	**99.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 143
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	25/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230208			
Test Number :	477			
Sampling Method :	-			
Date Sampled :	06/06/2017			
Date Tested :	06/06/2017			
Material Type :	**General Fill**			
Material Source :	**On Site**			
Lot Number :	-			
Sample Location :	Stage 17 & 18 E 499174 N 7000599 2.5m Below Final Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	15.7			
Hilf MDR Number :	230208			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	102.5			
Field Wet Density (t/m³) :	2.049			
Optimum Moisture Content (%) :	15.4			
Moisture Variation :	-0.3			
Peak Converted Wet Density (t/m³) :	2.264			
Hilf Density Ratio (%) :	**90.5**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 144
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	25/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230209	230210	230211	
Test Number :	478	479	480	
Sampling Method :	-	-	-	
Date Sampled :	06/06/2017	06/06/2017	06/06/2017	
Date Tested :	06/06/2017	06/06/2017	06/06/2017	
Material Type :	**General Fill**	**General Fill**	**General Fill**	
Material Source :	**On Site**	**On Site**	**On Site**	
Lot Number :	-	-	-	
Sample Location :	Stage 17 & 18 E 499182 N 7000616 2.5m Below Final Level	Stage 17 & 18 E 499194 N 7000615 2.5m Below Final Level	Stage 17 & 18 E 499205 N 7000597 2.5m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	15.8	17.0	18.5	
Hilf MDR Number :	230209	230210	230211	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	104	102.5	103.5	
Field Wet Density (t/m³) :	2.055	2.089	2.066	
Optimum Moisture Content (%) :	15.2	16.6	17.9	
Moisture Variation :	-0.6	-0.3	-0.6	
Peak Converted Wet Density (t/m³) :	2.044	2.092	2.074	
Hilf Density Ratio (%) :	**100.5**	**100.0**	**99.5**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 145
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	25/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230212			
Test Number :	481			
Sampling Method :	-			
Date Sampled :	06/06/2017			
Date Tested :	06/06/2017			
Material Type :	**General Fill**			
Material Source :	**On Site**			
Lot Number :	-			
Sample Location :	Stage 17 & 18 E 499248 N 7000600 4.5m Below Final Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	18.0			
Hilf MDR Number :	230212			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	102			
Field Wet Density (t/m³) :	2.118			
Optimum Moisture Content (%) :	17.6			
Moisture Variation :	-0.3			
Peak Converted Wet Density (t/m³) :	2.286			
Hilf Density Ratio (%) :	**92.5**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 146
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	25/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230213			
Test Number :	482			
Sampling Method :	-			
Date Sampled :	06/06/2017			
Date Tested :	06/06/2017			
Material Type :	**General Fill**			
Material Source :	**On Site**			
Lot Number :	-			
Sample Location :	Stage 17 & 18 E 499243 N 7000608 4m Below Final Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	17.7			
Hilf MDR Number :	230213			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	104			
Field Wet Density (t/m³) :	2.127			
Optimum Moisture Content (%) :	17.0			
Moisture Variation :	-0.7			
Peak Converted Wet Density (t/m³) :	2.127			
Hilf Density Ratio (%) :	**100.0**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 147
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	25/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230214			
Test Number :	483			
Sampling Method :	-			
Date Sampled :	06/06/2017			
Date Tested :	06/06/2017			
Material Type :	**General Fill**			
Material Source :	**On Site**			
Lot Number :	-			
Sample Location :	Stage 17 & 18 E 499264 N 7000602 5.3m Below Final Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	17.4			
Hilf MDR Number :	230214			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	103.5			
Field Wet Density (t/m³) :	2.065			
Optimum Moisture Content (%) :	16.8			
Moisture Variation :	-0.6			
Peak Converted Wet Density (t/m³) :	2.291			
Hilf Density Ratio (%) :	**90.0**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 148
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	25/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230215			
Test Number :	484			
Sampling Method :	-			
Date Sampled :	06/06/2017			
Date Tested :	06/06/2017			
Material Type :	**General Fill**			
Material Source :	**On Site**			
Lot Number :	-			
Sample Location :	Stage 17 & 18 E 499257 N 7000599 5m Below Final Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	18.0			
Hilf MDR Number :	230215			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	104			
Field Wet Density (t/m³) :	2.096			
Optimum Moisture Content (%) :	17.3			
Moisture Variation :	-0.7			
Peak Converted Wet Density (t/m³) :	2.089			
Hilf Density Ratio (%) :	**100.5**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 149
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	25/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230487	230488	230489	230490
Test Number :	485	486	487	488
Sampling Method :	-	-	-	-
Date Sampled :	09/06/2017	09/06/2017	09/06/2017	09/06/2017
Date Tested :	09/06/2017	09/06/2017	09/06/2017	09/06/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 17 - Stage 18 E 499290 N 7000599 3.5m Below Final Level	Stage 17 - Stage 18 E 499267 N 7000600 3m Below Final Level	Stage 17 - Stage 18 E 499248 N 7000602 3m Below Final Level	Stage 17 - Stage 18 E 499198 N 7000565 5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	10.9	12.7	12.9	16.1
Hilf MDR Number :	230487	230488	230489	230490
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	87.5	91.5	84	89
Field Wet Density (t/m³) :	2.008	2.025	2.010	2.015
Optimum Moisture Content (%) :	12.4	13.9	15.4	18.1
Moisture Variation :	1.6	1.3	2.5	1.9
Peak Converted Wet Density (t/m³) :	2.058	2.021	1.964	2.023
Hilf Density Ratio (%) :	**97.5**	**100.0**	**102.5**	**99.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 150
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	25/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230491	230492		
Test Number :	489	490		
Sampling Method :	-	-		
Date Sampled :	09/06/2017	09/06/2017		
Date Tested :	09/06/2017	09/06/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Stage 17 - Stage 18 E 499224 N 7000569 5.5m Below Final Level	Stage 17 - Stage 18 E 499270 N 7000570 4.5m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	19.2	13.7		
Hilf MDR Number :	230491	230492		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	137	88.5		
Field Wet Density (t/m³) :	2.051	2.039		
Optimum Moisture Content (%) :	14.0	15.5		
Moisture Variation :	-5.2	1.8		
Peak Converted Wet Density (t/m³) :	2.151	2.047		
Hilf Density Ratio (%) :	**95.5**	**99.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 151
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	25/06/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY		

Sample Number :	230493	230494	230495	
Test Number :	491	492	493	
Sampling Method :	-	-	-	
Date Sampled :	09/06/2017	09/06/2017	09/06/2017	
Date Tested :	09/06/2017	09/06/2017	09/06/2017	
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	
Material Source :	**On Site**	**On Site**	**On Site**	
Lot Number :	-	-	-	
Sample Location :	Stage 23 Bulk Fill Replacement E 499892 N 6999933 0.7m Below Final Level	Stage 23 Bulk Fill Replacement E 499879 N 6999948 0.5m Below Final Level	Stage 23 Bulk Fill Replacement E 499871 N 6999970 0.2m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	15.0	13.7	13.9	
Hilf MDR Number :	230493	230494	230495	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	94	88.5	99	
Field Wet Density (t/m³) :	2.065	2.124	2.071	
Optimum Moisture Content (%) :	16.0	15.5	14.0	
Moisture Variation :	0.9	1.8	0.1	
Peak Converted Wet Density (t/m³) :	2.033	2.142	2.124	
Hilf Density Ratio (%) :	**101.5**	**99.0**	**97.5**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 152
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	05/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230858	230859	230860	
Test Number :	494	495	496	
Sampling Method :	-	-	-	
Date Sampled :	23/06/2017	23/06/2017	23/06/2017	
Date Tested :	23/06/2017	23/06/2017	23/06/2017	
Material Type :	**Road Embankment**	**Road Embankment**	**Road Embankment**	
Material Source :	**On Site**	**On Site**	**On Site**	
Lot Number :	-	-	-	
Sample Location :	Lindquist Street (Stage 15) Chainage 240 1m Left of Centreline 1m Below Final Level	Lindquist Street (Stage 15) Chainage 280 1.5m Right of Centreline 0.8m Below Final Level	Lindquist Street (Stage 15) Chainage 340 0.5m Left of Centreline 0.4m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	17.2	17.3	17.3	
Hilf MDR Number :	230858	230859	230860	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	96.5	98.5	98	
Field Wet Density (t/m³) :	2.062	2.059	2.016	
Optimum Moisture Content (%) :	17.9	17.6	17.7	
Moisture Variation :	0.7	0.2	0.3	
Peak Converted Wet Density (t/m³) :	2.059	2.068	2.037	
Hilf Density Ratio (%) :	**100.0**	**99.5**	**99.0**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 153
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	05/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230861	230862	230863	
Test Number :	497	498	499	
Sampling Method :	-	-	-	
Date Sampled :	23/06/2017	23/06/2017	23/06/2017	
Date Tested :	23/06/2017	23/06/2017	23/06/2017	
Material Type :	**Road Embankment**	**Road Embankment**	**Road Embankment**	
Material Source :	**On Site**	**On Site**	**On Site**	
Lot Number :	-	-	-	
Sample Location :	Fraser Road (Stage 24) Ch 60 3m Left of Centreline 0.5m Below Final Level	Fraser Road (Stage 24) Ch 120 2m Right of Centreline 0.5m Below Final Level	Fraser Road (Stage 24) Ch 210 1m Right of Centreline 0.35m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	14.7	13.8	13.6	
Hilf MDR Number :	230861	230862	230863	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	94	84.5	98	
Field Wet Density (t/m³) :	2.179	2.184	2.214	
Optimum Moisture Content (%) :	15.6	16.3	13.8	
Moisture Variation :	0.9	2.4	0.2	
Peak Converted Wet Density (t/m³) :	2.101	2.075	2.231	
Hilf Density Ratio (%) :	**103.5**	**105.0**	**99.0**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 154
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	05/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230864	230865	230866	230867
Test Number :	500	501	502	503
Sampling Method :	-	-	-	-
Date Sampled :	23/06/2017	23/06/2017	23/06/2017	23/06/2017
Date Tested :	23/06/2017	23/06/2017	23/06/2017	23/06/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 17 & 18 E 499174 / N 7000599 2.5m Below Final Level Retest of Field Density No. 477 on the 06/06/17	E 499999 N 6999999 0.6m Above Design Level Retest of Field Density No. 445 on the 05/06/17	Stage 23-45 Footprint E 498938 N 6999933 0.6m Above Design Level	Stage 23-45 Footprint E 499982 N 6999948 0.6m Above Design Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	14.7	13.9	14.4	13.7
Hilf MDR Number :	230864	230865	230866	230867
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	83	98.5	82.5	88
Field Wet Density (t/m³) :	2.087	2.160	2.074	2.048
Optimum Moisture Content (%) :	17.7	14.1	17.5	15.6
Moisture Variation :	2.9	0.2	3.0	1.9
Peak Converted Wet Density (t/m³) :	2.019	2.184	1.984	2.068
Hilf Density Ratio (%) :	**103.5**	**99.0**	**104.5**	**99.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 155
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	05/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230868	230869	230870	230871
Test Number :	504	505	506	507
Sampling Method :	-	-	-	-
Date Sampled :	23/06/2017	23/06/2017	23/06/2017	23/06/2017
Date Tested :	23/06/2017	23/06/2017	23/06/2017	23/06/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 23-45 Footprint E 500005 N 6999982 0.6m Above Design Level	Stage 23-45 Footprint E 500001 N 7000022 0.6m Above Design Level	Stage 23-45 Footprint E 500006 N 7000088 0.6m Above Design Level	Stage 23-45 Footprint E 499985 N 7000120 0.6m Above Design Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	13.4	15.3	15.2	15.6
Hilf MDR Number :	230868	230869	230870	230871
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	81.5	102	99	101
Field Wet Density (t/m³) :	2.124	2.074	2.044	2.076
Optimum Moisture Content (%) :	16.5	15.0	15.4	15.4
Moisture Variation :	3.0	-0.2	0.1	-0.2
Peak Converted Wet Density (t/m³) :	2.002	2.107	2.072	2.107
Hilf Density Ratio (%) :	**106.0**	**98.5**	**98.5**	**98.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 156
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	05/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230872			
Test Number :	508			
Sampling Method :	-			
Date Sampled :	23/06/2017			
Date Tested :	23/06/2017			
Material Type :	**General Fill**			
Material Source :	**On Site**			
Lot Number :	-			
Sample Location :	Stage 23-45 Footprint E 499986 N 7000167 0.6m Above Design Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	15.5			
Hilf MDR Number :	230872			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	97.5			
Field Wet Density (t/m³) :	2.086			
Optimum Moisture Content (%) :	15.9			
Moisture Variation :	0.3			
Peak Converted Wet Density (t/m³) :	2.113			
Hilf Density Ratio (%) :	**98.5**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 157
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	05/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230922	230923	230924	230925
Test Number :	509	510	511	512
Sampling Method :	-	-	-	-
Date Sampled :	26/06/2017	26/06/2017	26/06/2017	26/06/2017
Date Tested :	26/06/2017	26/06/2017	26/06/2017	26/06/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 498899 N 7000522 0.2m Below FL	E 498896 N 7000506 0.3m Below FL	E 498888 N 7000486 0.2m Below FL	E 498895 N 7000464 0.3m Below FL
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	13.3	12.4	15.3	11.2
Hilf MDR Number :	230922	230923	230924	230925
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	105.5	98	104	98
Field Wet Density (t/m³) :	2.132	2.070	2.084	2.057
Optimum Moisture Content (%) :	12.6	12.6	14.7	11.4
Moisture Variation :	-0.7	0.2	-0.6	0.2
Peak Converted Wet Density (t/m³) :	2.182	2.113	2.119	2.082
Hilf Density Ratio (%) :	**97.5**	**98.0**	**98.5**	**99.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 158
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	05/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	230926	230927	230928	230929
Test Number :	513	514	515	516
Sampling Method :	-	-	-	-
Date Sampled :	26/06/2017	26/06/2017	26/06/2017	26/06/2017
Date Tested :	26/06/2017	26/06/2017	26/06/2017	26/06/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 498905 N 7000459 0.2m Below FL	E 498910 N 7000475 0.2m Below FL	E 498912 N 7000493 0.3m Below FL	E 498918 N 7000329 0.3m Below FL
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	12.5	14.7	15.3	14.7
Hilf MDR Number :	230926	230927	230928	230929
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	103.5	98.5	101.5	98.5
Field Wet Density (t/m³) :	2.128	2.086	2.067	2.044
Optimum Moisture Content (%) :	12.1	14.9	15.1	14.9
Moisture Variation :	-0.4	0.2	-0.2	0.2
Peak Converted Wet Density (t/m³) :	2.207	2.112	2.109	2.067
Hilf Density Ratio (%) :	**96.5**	**99.0**	**98.0**	**99.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Liam Mcdowall (Brisbane) - Branch Manager
NATA Accreditation Number
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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 159
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	11/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	231141	231142	231143	231144
Test Number :	517	518	519	520
Sampling Method :	-	-	-	-
Date Sampled :	29/06/2017	29/06/2017	29/06/2017	29/06/2017
Date Tested :	29/06/2017	29/06/2017	29/06/2017	29/06/2017
Material Type :	**Fill**	**Fill**	**Fill**	**Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 498946 N 7000462 Final Level	E 498946 N 7000498 Final Level	E 498962 N 7000574 Final Level	E 498926 N 7000533 Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	11.6	13.0	9.6	12.9
Hilf MDR Number :	231141	231142	231143	231144
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	79.5	83.5	87.5	78.5
Field Wet Density (t/m³) :	2.082	2.019	2.135	2.030
Optimum Moisture Content (%) :	14.6	15.6	11.0	16.4
Moisture Variation :	3.0	2.6	1.4	3.5
Peak Converted Wet Density (t/m³) :	2.038	2.023	2.145	1.989
Hilf Density Ratio (%) :	**102.0**	**100.0**	**99.5**	**102.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 160
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	11/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	231145	231146	231147	231148
Test Number :	521	522	523	524
Sampling Method :	-	-	-	-
Date Sampled :	29/06/2017	29/06/2017	29/06/2017	29/06/2017
Date Tested :	29/06/2017	29/06/2017	29/06/2017	29/06/2017
Material Type :	**Fill**	**Fill**	**Fill**	**Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 498886 N 7000550 Final Level	E 498870 N 7000515 Final Level	E 498895 N 7000474 Final Level	E 498880 N 7000456 Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	10.2	10.1	14.5	13.4
Hilf MDR Number :	231145	231146	231147	231148
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	86	85.5	97	88
Field Wet Density (t/m³) :	2.125	2.081	2.121	2.140
Optimum Moisture Content (%) :	11.9	11.8	14.9	15.2
Moisture Variation :	1.7	1.8	0.5	1.8
Peak Converted Wet Density (t/m³) :	2.129	2.090	2.121	2.149
Hilf Density Ratio (%) :	**100.0**	**99.5**	**100.0**	**99.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 161
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	11/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	231149	231150	231151	231152
Test Number :	525	526	527	528
Sampling Method :	-	-	-	-
Date Sampled :	29/06/2017	29/06/2017	29/06/2017	29/06/2017
Date Tested :	29/06/2017	29/06/2017	29/06/2017	29/06/2017
Material Type :	**Fill**	**Fill**	**Fill**	**Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499351 N 7000569 2.8m Below Final Level	E 499350 N 7000580 2.5m Below Final Level	E 499341 N 7000569 3.2m Below Final Level	E 499333 N 7000567 3.5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	12.4	12.1	11.7	16.0
Hilf MDR Number :	231149	231150	231151	231152
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	108	83.5	88	91
Field Wet Density (t/m³) :	2.064	2.104	2.067	2.041
Optimum Moisture Content (%) :	11.5	14.5	13.3	17.6
Moisture Variation :	-0.9	2.4	1.6	1.6
Peak Converted Wet Density (t/m³) :	2.093	2.038	2.073	2.039
Hilf Density Ratio (%) :	**98.5**	**103.0**	**99.5**	**100.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 162
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	11/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	231153	231154		
Test Number :	529	530		
Sampling Method :	-	-		
Date Sampled :	29/06/2017	29/06/2017		
Date Tested :	29/06/2017	29/06/2017		
Material Type :	**Fill**	**Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	E 499320 N 7000566 3.8m Below Final Level	E 499309 N 7000567 4.4m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	16.8	14.3		
Hilf MDR Number :	231153	231154		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	88.5	90		
Field Wet Density (t/m³) :	2.061	2.132		
Optimum Moisture Content (%) :	19.0	15.9		
Moisture Variation :	2.2	1.6		
Peak Converted Wet Density (t/m³) :	1.987	2.141		
Hilf Density Ratio (%) :	**103.5**	**99.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 163
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	12/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	231245	231246	231247	231248
Test Number :	531	532	533	534
Sampling Method :	-	-	-	-
Date Sampled :	03/07/2017	03/07/2017	03/07/2017	03/07/2017
Date Tested :	03/07/2017	03/07/2017	03/07/2017	03/07/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 498988 N 7000434 0.45m Below Final Level	E 498973 N 7000445 0.45m Below Final Level	E 498972 N 7000462 0.45m Below Final Level	E 498989 N 7000469 0.45m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	37.5	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	25.8	20.0	23.5	15.1
Hilf MDR Number :	231245	231246	231247	231248
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	113.5	117	92	89
Field Wet Density (t/m³) :	1.872	1.904	2.008	1.984
Optimum Moisture Content (%) :	22.8	17.1	25.6	16.9
Moisture Variation :	-3.0	-3.0	1.9	1.8
Peak Converted Wet Density (t/m³) :	1.939	1.937	2.012	1.998
Hilf Density Ratio (%) :	**96.5**	**98.5**	**100.0**	**99.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 164
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	12/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	231249	231250	231251	231252
Test Number :	535	536	537	538
Sampling Method :	-	-	-	-
Date Sampled :	03/07/2017	03/07/2017	03/07/2017	03/07/2017
Date Tested :	03/07/2017	03/07/2017	03/07/2017	03/07/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 498975 N 7000488 0.45m Below Final Level	E 498985 N 7000507 0.45m Below Final Level	E 498489 N 7000521 0.45m Below Final Level	E 498985 N 7000553 0.45m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	10.6	10.4	17.9	13.9
Hilf MDR Number :	231249	231250	231251	231252
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	88.5	86	100	88
Field Wet Density (t/m³) :	2.294	2.255	1.970	2.036
Optimum Moisture Content (%) :	12.0	12.1	17.9	15.8
Moisture Variation :	1.3	1.6	0.0	1.9
Peak Converted Wet Density (t/m³) :	2.284	2.284	2.056	2.048
Hilf Density Ratio (%) :	**100.5**	**98.5**	**96.0**	**99.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 165
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	12/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	231253	231254	231255	231256
Test Number :	539	540	541	542
Sampling Method :	-	-	-	-
Date Sampled :	03/07/2017	03/07/2017	03/07/2017	03/07/2017
Date Tested :	03/07/2017	03/07/2017	03/07/2017	03/07/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 498973 N 7000584 0.45m Below Final Level	E 498953 N 7000583 0.45m Below Final Level	E 498961 N 7000551 0.45m Below Final Level	E 498945 N 7000518 0.45m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	15.0	7.9	8.8	8.4
Hilf MDR Number :	231253	231254	231255	231256
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	103.5	76	84	83
Field Wet Density (t/m³) :	2.039	2.148	2.136	2.156
Optimum Moisture Content (%) :	14.5	10.4	10.5	10.1
Moisture Variation :	-0.5	2.5	1.7	1.8
Peak Converted Wet Density (t/m³) :	2.054	2.098	2.128	2.154
Hilf Density Ratio (%) :	**99.5**	**102.5**	**100.5**	**100.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 166
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	12/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	231257	231258	231259	231260
Test Number :	543	544	545	546
Sampling Method :	-	-	-	-
Date Sampled :	03/07/2017	03/07/2017	03/07/2017	03/07/2017
Date Tested :	03/07/2017	03/07/2017	03/07/2017	03/07/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 498943 N 7000476 Final Level	E 498951 N 7000500 Final Level	E 498953 N 7000538 Final Level	E 498957 N 7000574 Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	11.9	10.8	12.2	12.8
Hilf MDR Number :	231257	231258	231259	231260
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	87	85	87.5	105
Field Wet Density (t/m³) :	1.979	2.010	2.020	2.088
Optimum Moisture Content (%) :	13.7	12.7	14.0	12.2
Moisture Variation :	1.8	1.9	1.8	-0.6
Peak Converted Wet Density (t/m³) :	2.034	2.093	2.019	2.024
Hilf Density Ratio (%) :	**97.5**	**96.0**	**100.0**	**103.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Liam Mcdowall (Brisbane) - Branch Manager
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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 167
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	14/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	231403	231404	231405	231406
Test Number :	547	548	549	550
Sampling Method :	-	-	-	-
Date Sampled :	05/07/2017	05/07/2017	05/07/2017	05/07/2017
Date Tested :	05/07/2017	05/07/2017	05/07/2017	05/07/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499011 N 7000471 Final Level	E 499022 N 7000485 Final Level	E 499019 N 7000494 Final Level	E 499026 N 7000512 Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	12.3	12.7	11.6	11.9
Hilf MDR Number :	231403	231404	231405	231406
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	94	104	86.5	87
Field Wet Density (t/m³) :	2.096	2.088	2.111	2.082
Optimum Moisture Content (%) :	13.0	12.2	13.4	13.7
Moisture Variation :	0.8	-0.5	1.8	1.8
Peak Converted Wet Density (t/m³) :	2.126	2.093	2.112	2.060
Hilf Density Ratio (%) :	**98.5**	**100.0**	**100.0**	**101.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 168
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	14/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	231407	231408	231409	231410
Test Number :	551	552	553	554
Sampling Method :	-	-	-	-
Date Sampled :	05/07/2017	05/07/2017	05/07/2017	05/07/2017
Date Tested :	05/07/2017	05/07/2017	05/07/2017	05/07/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499023 N 7000524 Final Level	E 499034 N 7000549 Final Level	E 499030 N 7000564 0.5m Below Final Level	E 499034 N 7000580 0.5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	14.4	12.7	12.9	10.0
Hilf MDR Number :	231407	231408	231409	231410
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	92.5	105.5	105.5	106
Field Wet Density (t/m³) :	2.039	2.048	2.068	2.042
Optimum Moisture Content (%) :	15.6	12.0	12.2	9.4
Moisture Variation :	1.1	-0.7	-0.7	-0.6
Peak Converted Wet Density (t/m³) :	2.050	2.079	2.085	2.028
Hilf Density Ratio (%) :	**99.5**	**98.5**	**99.0**	**100.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 169
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	14/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	231411	231412		
Test Number :	555	556		
Sampling Method :	-	-		
Date Sampled :	05/07/2017	05/07/2017		
Date Tested :	05/07/2017	05/07/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	E 499041 N 7000580 0.5m Below Final Level	E 499058 N 7000577 0.5m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	8.4	7.9		
Hilf MDR Number :	231411	231412		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	102	83		
Field Wet Density (t/m³) :	2.183	2.171		
Optimum Moisture Content (%) :	8.2	9.5		
Moisture Variation :	-0.1	1.7		
Peak Converted Wet Density (t/m³) :	2.233	2.171		
Hilf Density Ratio (%) :	**98.0**	**100.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Dynamic Cone Penetrometer Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 170
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	17/07/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.6.3.2
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY		

Sample Number :	231917						
Test Number :	1						
Date Sampled :	13/07/2017						
Date Tested :	13/07/2017						
Lot Number :	-						
Sample Location :	Eagle's Nest Relocation Proposed Pole E 9810 N 10527						
Soil Condition :	-						
Soil Description :	-						

Depth	Blows	Blow		Blow		Blow	
0.00 - 0.10	1						
0.10 - 0.20	2						
0.20 - 0.30	1						
0.30 - 0.40	2						
0.40 - 0.50	2						
0.50 - 0.60	2						
0.60 - 0.70	3						
0.70 - 0.80	3						
0.80 - 0.90	3						
0.90 - 1.00	4						
1.00 - 1.10	5						
1.10 - 1.20	6						
1.20 - 1.30	14						
1.30 - 1.40	8						
1.40 - 1.50	13						
1.50 - 1.60	12						
1.60 - 1.70	18						
1.70 - 1.80	16						
1.80 - 1.90	14						
1.90 - 2.00	13						
2.00 - 2.10	13						
2.10 - 2.20	13						
2.20 - 2.30	15						
2.30 - 2.40	17						
2.40 - 2.50	17						
2.50 - 2.60	16						
2.60 - 2.70	15						
2.70 - 2.80	15						
2.80 - 2.90	16						
2.90 - 3.00	16						

Remarks : -

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 171
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	04/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	231571	231572		
Test Number :	557	558		
Sampling Method :	-	-		
Date Sampled :	10/07/2017	10/07/2017		
Date Tested :	10/07/2017	10/07/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	E 499294 N 7000581 4.5m Below Final Level	E 499312 N 7000583 4.2m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	11.7	16.0		
Hilf MDR Number :	231571	231572		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	102.5	97		
Field Wet Density (t/m³) :	2.070	2.089		
Optimum Moisture Content (%) :	11.4	16.5		
Moisture Variation :	-0.3	0.5		
Peak Converted Wet Density (t/m³) :	2.116	2.103		
Hilf Density Ratio (%) :	**98.0**	**99.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 172
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	04/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	231644	231645	231646	231647
Test Number :	559	560	561	562
Sampling Method :	-	-	-	-
Date Sampled :	11/07/2017	11/07/2017	11/07/2017	11/07/2017
Date Tested :	11/07/2017	11/07/2017	11/07/2017	11/07/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499243 N 7000590 4m Below Final Level	E 499297 N 7000579 3.6m Below Final Level	E 499306 N 7000577 3.2m Below Final Level	E 499320 N 7000582 3m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	12.8	14.6	12.9	13.0
Hilf MDR Number :	231644	231645	231646	231647
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	81	83	81.5	83
Field Wet Density (t/m³) :	2.109	2.100	2.134	2.146
Optimum Moisture Content (%) :	15.8	17.6	15.8	15.7
Moisture Variation :	3.0	2.9	2.9	2.7
Peak Converted Wet Density (t/m³) :	1.982	1.976	1.999	1.980
Hilf Density Ratio (%) :	**106.5**	**106.5**	**107.0**	**108.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 173
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	04/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	231898	231899		
Test Number :	563	564		
Sampling Method :	-	-		
Date Sampled :	14/07/2017	14/07/2017		
Date Tested :	14/07/2017	14/07/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Stage 19 E 499039 N 7000583 Final Level	Stage 19 E 499031 N 7000588 Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	10.4	9.8		
Hilf MDR Number :	231898	231899		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	84.5	83		
Field Wet Density (t/m³) :	2.144	2.135		
Optimum Moisture Content (%) :	12.3	11.8		
Moisture Variation :	2.0	2.0		
Peak Converted Wet Density (t/m³) :	2.155	2.162		
Hilf Density Ratio (%) :	**99.5**	**99.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 174
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	04/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232015	232016	232017	
Test Number :	565	566	567	
Sampling Method :	-	-	-	
Date Sampled :	19/07/2017	19/07/2017	19/07/2017	
Date Tested :	19/07/2017	19/07/2017	19/07/2017	
Material Type :	**General Fill**	**General Fill**	**General Fill**	
Material Source :	**On Site**	**On Site**	**On Site**	
Lot Number :	-	-	-	
Sample Location :	Stage 18 E 499272 N 7000582 4.8m Below Final Level	Stage 18 E 499256 N 7000591 4.5m Below Final Level	Stage 18 E 499243 N 7000587 4m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	16.8	16.0	17.4	
Hilf MDR Number :	232015	232016	232017	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	104.5	103	103.5	
Field Wet Density (t/m³) :	2.057	2.065	2.042	
Optimum Moisture Content (%) :	16.1	15.6	16.8	
Moisture Variation :	-0.7	-0.5	-0.6	
Peak Converted Wet Density (t/m³) :	2.074	2.077	2.076	
Hilf Density Ratio (%) :	**99.0**	**99.5**	**98.5**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 175
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	04/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232085	232086	232087	232088
Test Number :	568	569	570	571
Sampling Method :	-	-	-	-
Date Sampled :	20/07/2017	20/07/2017	20/07/2017	20/07/2017
Date Tested :	20/07/2017	20/07/2017	20/07/2017	20/07/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 18 E 499220 N 7000594 4.5m Below Final Level	Stage 18 E 499207 N 7000588 4m Below Final Level	Stage 18 E 499192 N 7000582 4m Below Final Level	Stage 17 E 499076 N 7000538 Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	17.4	17.8	17.8	20.8
Hilf MDR Number :	232085	232086	232087	232088
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	91	93	96	98.5
Field Wet Density (t/m³) :	2.109	2.087	2.033	1.982
Optimum Moisture Content (%) :	19.2	19.2	18.5	21.1
Moisture Variation :	1.7	1.4	0.7	0.3
Peak Converted Wet Density (t/m³) :	2.006	2.040	2.046	2.018
Hilf Density Ratio (%) :	**105.0**	**102.5**	**99.5**	**98.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 176
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	04/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232089			
Test Number :	572			
Sampling Method :	-			
Date Sampled :	20/07/2017			
Date Tested :	20/07/2017			
Material Type :	**General Fill**			
Material Source :	**On Site**			
Lot Number :	-			
Sample Location :	Stage 19 E 499075 N 7000578 Final Level			
Test Depth (mm) :	150			
Layer Depth (mm) :	-			
Maximum Size (mm) :	19			
Oversize Wet (%) :	-			
Oversize Dry (%) :	-			
Oversize Density (t/m³) :	-			
Field Moisture Content (%) :	19.6			
Hilf MDR Number :	232089			
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1			
Compactive Effort :	Standard			
Field Density Method :	AS1289.5.8.1 & 5.7.1			
Moisture Method :	AS1289.2.1.1			
Moisture Ratio (%) :	92			
Field Wet Density (t/m³) :	2.001			
Optimum Moisture Content (%) :	21.3			
Moisture Variation :	1.6			
Peak Converted Wet Density (t/m³) :	2.006			
Hilf Density Ratio (%) :	**100.0**			
Minimum Specification :	95			
Moisture Specification :	-			
Site Selection :	-			
Soil Description :	-			
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 177
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	04/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232222	232223	232224	232225
Test Number :	573	574	575	576
Sampling Method :	-	-	-	-
Date Sampled :	24/07/2017	24/07/2017	24/07/2017	24/07/2017
Date Tested :	24/07/2017	24/07/2017	24/07/2017	24/07/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499121 N 7000580 5m Below Final Level	E 499130 N 7000576 4.7m Below Final Level	E 499140 N 7000586 4.3m Below Final Level	E 499153 N 7000581 4.3m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	14.1	13.4	11.6	12.2
Hilf MDR Number :	232222	232223	232224	232225
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	94.5	95	83	83.5
Field Wet Density (t/m³) :	2.122	2.111	2.100	2.096
Optimum Moisture Content (%) :	15.0	14.1	14.0	14.6
Moisture Variation :	0.8	0.7	2.4	2.5
Peak Converted Wet Density (t/m³) :	2.031	2.032	1.937	2.004
Hilf Density Ratio (%) :	**104.5**	**104.0**	**108.5**	**104.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 178
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	04/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY		

Sample Number :	232257	232258		
Test Number :	577	578		
Sampling Method :	-	-		
Date Sampled :	25/07/2017	25/07/2017		
Date Tested :	25/07/2017	25/07/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	E 499106 N 7000569 4m Below Final Level	E 499129 N 7000578 3.6m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	12.1	12.5		
Hilf MDR Number :	232257	232258		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	80	81		
Field Wet Density (t/m³) :	2.042	2.040		
Optimum Moisture Content (%) :	15.1	15.4		
Moisture Variation :	3.0	2.9		
Peak Converted Wet Density (t/m³) :	2.017	2.008		
Hilf Density Ratio (%) :	**101.0**	**101.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 179
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	07/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232366	232367		
Test Number :	579	580		
Sampling Method :	-	-		
Date Sampled :	26/07/2017	26/07/2017		
Date Tested :	26/07/2017	26/07/2017		
Material Type :	**Embankment Fill**	**Embankment Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Stage 18 Road Box Road 31 Chainage 40 1.3m Below Final Level	Stage 18 Road Box Road 31 Chainage 80 0.8m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	15.6	16.0		
Hilf MDR Number :	232366	232367		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	100	99.5		
Field Wet Density (t/m³) :	2.057	2.072		
Optimum Moisture Content (%) :	15.6	16.1		
Moisture Variation :	0.0	0.1		
Peak Converted Wet Density (t/m³) :	2.120	2.111		
Hilf Density Ratio (%) :	**97.0**	**98.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 180
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	09/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232368	232369	232370	232371
Test Number :	581	582	583	584
Sampling Method :	-	-	-	-
Date Sampled :	26/07/2017	26/07/2017	26/07/2017	26/07/2017
Date Tested :	26/07/2017	26/07/2017	26/07/2017	26/07/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 17 / 18 E 499115 N 7000582 3.6m Below Final Level	Stage 17 / 18 E 499134 N 7000583 3.4m Below Final Level	Stage 17 / 18 E 499153 N 7000574 3.1m Below Final Level	Stage 17 / 18 E 499176 N 7000582 3.1m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	11.1	13.1	14.5	16.7
Hilf MDR Number :	232368	232369	232370	232371
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	107	103	105	104
Field Wet Density (t/m³) :	2.100	2.107	2.121	2.137
Optimum Moisture Content (%) :	10.4	12.7	13.8	16.1
Moisture Variation :	-0.8	-0.3	-0.7	-0.6
Peak Converted Wet Density (t/m³) :	2.215	2.164	2.132	2.121
Hilf Density Ratio (%) :	**95.0**	**97.5**	**99.5**	**101.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 181
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	09/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232372	232373		
Test Number :	585	586		
Sampling Method :	-	-		
Date Sampled :	26/07/2017	26/07/2017		
Date Tested :	26/07/2017	26/07/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Stage 17 / 18 E 499190 N 7000594 2.6m Below Final Level	Stage 17 / 18 E 499146 N 7000593 2.2m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	9.1	7.4		
Hilf MDR Number :	232372	232373		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	95.5	80.5		
Field Wet Density (t/m³) :	1.973	1.983		
Optimum Moisture Content (%) :	9.5	9.2		
Moisture Variation :	0.5	1.9		
Peak Converted Wet Density (t/m³) :	2.072	2.088		
Hilf Density Ratio (%) :	**95.0**	**95.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 182
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	09/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232452	232453	232454	232455
Test Number :	587	588	589	590
Sampling Method :	-	-	-	-
Date Sampled :	27/07/2017	27/07/2017	27/07/2017	27/07/2017
Date Tested :	27/07/2017	27/07/2017	27/07/2017	27/07/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499167 N 7000598 1.5m Below Final Level	E 499389 N 7000529 4.3m Below Final Level	E 499392 N 7000542 4m Below Final Level	E 499405 N 7000544 3.8m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	16.2	14.5	14.9	15.8
Hilf MDR Number :	232452	232453	232454	232455
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	91	103	100.5	101
Field Wet Density (t/m³) :	2.019	2.121	2.124	2.147
Optimum Moisture Content (%) :	17.8	14.0	14.8	15.6
Moisture Variation :	1.6	-0.5	-0.1	-0.2
Peak Converted Wet Density (t/m³) :	2.041	2.155	2.142	2.135
Hilf Density Ratio (%) :	**99.0**	**98.5**	**99.0**	**100.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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NATA Accreditation Number
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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 183
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	15/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232610	232611	232612	232613
Test Number :	591	592	593	594
Sampling Method :	-	-	-	-
Date Sampled :	31/07/2017	31/07/2017	31/07/2017	31/07/2017
Date Tested :	31/07/2017	31/07/2017	31/07/2017	31/07/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499382 N 7000505 3.4m Below Final Level	E 499394 N 7000508 3.2m Below Final Level	E 499385 N 7000522 3m Below Final Level	E 499405 N 7000528 3m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	11.4	12.4	11.9	11.9
Hilf MDR Number :	232610	232611	232612	232613
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	87.5	95.5	95	93
Field Wet Density (t/m³) :	2.121	2.119	2.132	2.182
Optimum Moisture Content (%) :	13.0	13.0	12.5	12.8
Moisture Variation :	1.7	0.6	0.7	0.9
Peak Converted Wet Density (t/m³) :	2.061	2.059	2.158	2.124
Hilf Density Ratio (%) :	**103.0**	**103.0**	**99.0**	**102.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 184
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	15/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232614	232615	232616	
Test Number :	595	596	597	
Sampling Method :	-	-	-	
Date Sampled :	31/07/2017	31/07/2017	31/07/2017	
Date Tested :	31/07/2017	31/07/2017	31/07/2017	
Material Type :	**General Fill**	**General Fill**	**General Fill**	
Material Source :	**On Site**	**On Site**	**On Site**	
Lot Number :	-	-	-	
Sample Location :	E 499428 N 7000539 2.8m Below Final Level	E 499413 N 7000541 2.8m Below Final Level	E 499392 N 7000537 2.8m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	12.5	18.8	22.6	
Hilf MDR Number :	232614	232615	232616	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	91	96.5	95	
Field Wet Density (t/m³) :	2.150	1.965	1.977	
Optimum Moisture Content (%) :	13.7	19.5	23.8	
Moisture Variation :	1.2	0.7	1.2	
Peak Converted Wet Density (t/m³) :	2.092	1.952	1.901	
Hilf Density Ratio (%) :	**103.0**	**100.5**	**104.0**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 185
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	18/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232684	232685	232686	232687
Test Number :	598	599	600	601
Sampling Method :	-	-	-	-
Date Sampled :	01/08/2017	01/08/2017	01/08/2017	01/08/2017
Date Tested :	01/08/2017	01/08/2017	01/08/2017	01/08/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499394 N 7000507 2.3m Below Final Level	E 499375 N 7000515 2.3m Below Final Level	E 499360 N 7000525 2.2m Below Final Level	E 499347 N 7000516 2.2m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	18.7	19.0	17.4	21.3
Hilf MDR Number :	232684	232685	232686	232687
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	97	96	101	99
Field Wet Density (t/m³) :	2.007	1.992	1.935	1.923
Optimum Moisture Content (%) :	19.3	19.8	17.2	21.5
Moisture Variation :	0.6	0.8	-0.1	0.2
Peak Converted Wet Density (t/m³) :	2.009	2.007	2.013	1.993
Hilf Density Ratio (%) :	**100.0**	**99.0**	**96.0**	**96.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 186
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	18/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232688	232689	232690	232691
Test Number :	602	603	604	605
Sampling Method :	-	-	-	-
Date Sampled :	01/08/2017	01/08/2017	01/08/2017	01/08/2017
Date Tested :	01/08/2017	01/08/2017	01/08/2017	01/08/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499331 N 7000500 2m Below Final Level	E 499333 N 7000501 1.9m Below Final Level	E 499340 N 7000504 1.9m Below Final Level	E 499358 N 7000515 1.9m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	19.1	20.5	18.4	19.1
Hilf MDR Number :	232688	232689	232690	232691
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	93.5	97.5	96.5	93.5
Field Wet Density (t/m³) :	1.939	1.930	1.940	1.963
Optimum Moisture Content (%) :	20.4	21.0	19.1	20.4
Moisture Variation :	1.3	0.5	0.7	1.3
Peak Converted Wet Density (t/m³) :	1.947	1.996	1.985	1.960
Hilf Density Ratio (%) :	**99.5**	**96.5**	**97.5**	**100.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 187
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	18/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232692	232693	232694	232695
Test Number :	606	607	608	609
Sampling Method :	-	-	-	-
Date Sampled :	01/08/2017	01/08/2017	01/08/2017	01/08/2017
Date Tested :	01/08/2017	01/08/2017	01/08/2017	01/08/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499363 N 7000516 1.7m Below Final Level	E 499362 N 7000509 1.7m Below Final Level	E 499368 N 7000575 1.2m Below Final Level	E 499366 N 7000524 1.3m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	17.1	20.8	19.2	19.3
Hilf MDR Number :	232692	232693	232694	232695
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	97.5	100.5	106	99.5
Field Wet Density (t/m³) :	1.967	1.957	1.949	1.943
Optimum Moisture Content (%) :	17.6	20.7	18.1	19.4
Moisture Variation :	0.5	-0.1	-1.1	0.1
Peak Converted Wet Density (t/m³) :	2.037	1.997	2.022	2.025
Hilf Density Ratio (%) :	**96.5**	**98.0**	**96.5**	**96.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 188
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	18/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232696	232697	232698	232699
Test Number :	610	611	612	613
Sampling Method :	-	-	-	-
Date Sampled :	01/08/2017	01/08/2017	01/08/2017	01/08/2017
Date Tested :	01/08/2017	01/08/2017	01/08/2017	01/08/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499350 N 7000510 1.3m Below Final Level	E 499339 N 7000523 1.2m Below Final Level	E 499344 N 7000516 1.2m Below Final Level	E 499333 N 7000493 0.9m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	19.6	20.5	19.1	20.1
Hilf MDR Number :	232696	232697	232698	232699
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	99	98.5	97.5	106.5
Field Wet Density (t/m³) :	1.936	1.958	1.972	1.975
Optimum Moisture Content (%) :	19.8	20.8	19.6	18.9
Moisture Variation :	0.2	0.4	0.5	-1.2
Peak Converted Wet Density (t/m³) :	2.012	1.974	2.004	2.025
Hilf Density Ratio (%) :	**96.0**	**99.0**	**98.5**	**97.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 189
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	18/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY		

Sample Number :	232700	232701	232702	232703
Test Number :	614	615	616	617
Sampling Method :	-	-	-	-
Date Sampled :	01/08/2017	01/08/2017	01/08/2017	01/08/2017
Date Tested :	01/08/2017	01/08/2017	01/08/2017	01/08/2017
Material Type :	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**	**Bulk Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499364 N 7000531 0.9m Below Final Level	E 499335 N 7000506 0.9m Below Final Level	E 499355 N 7000527 0.9m Below Final Level	E 499341 N 7000527 0.9m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	20.6	20.5	21.7	20.2
Hilf MDR Number :	232700	232701	232702	232703
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	99.5	96	108.5	102.5
Field Wet Density (t/m³) :	1.928	1.935	1.944	1.950
Optimum Moisture Content (%) :	20.7	21.3	20.0	19.7
Moisture Variation :	0.1	0.8	-1.7	-0.5
Peak Converted Wet Density (t/m³) :	1.998	2.000	1.993	1.995
Hilf Density Ratio (%) :	**96.5**	**97.0**	**97.5**	**97.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 190
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	18/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232813	232814	232815	
Test Number :	618	619	620	
Sampling Method :	-	-	-	
Date Sampled :	02/08/2017	02/08/2017	02/08/2017	
Date Tested :	02/08/2017	02/08/2017	02/08/2017	
Material Type :	**General Fill**	**General Fill**	**General Fill**	
Material Source :	**On Site**	**On Site**	**On Site**	
Lot Number :	-	-	-	
Sample Location :	E 499427 N 7000580 4.5m Below Final Level	E 499410 N 7000577 4m Below Final Level	E 499385 N 7000584 3.8m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	15.2	16.1	13.6	
Hilf MDR Number :	232813	232814	232815	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	90	98	83	
Field Wet Density (t/m³) :	2.103	2.111	2.045	
Optimum Moisture Content (%) :	16.9	16.5	16.4	
Moisture Variation :	1.7	0.3	2.8	
Peak Converted Wet Density (t/m³) :	2.030	2.037	2.004	
Hilf Density Ratio (%) :	**103.5**	**103.5**	**102.0**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 191
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	26/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232954	232955	232956	232957
Test Number :	621	622	623	624
Sampling Method :	-	-	-	-
Date Sampled :	04/08/2017	04/08/2017	04/08/2017	04/08/2017
Date Tested :	04/08/2017	04/08/2017	04/08/2017	04/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499355 N 7000577 2.5m Below Final Level	E 499373 N 7000565 2.5m Below Final Level	E 499386 N 7000577 2.7m Below Final Level	E 499393 N 7000575 2.3m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	13.4	13.7	14.6	14.6
Hilf MDR Number :	232954	232955	232956	232957
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	89.5	97.5	97	99.5
Field Wet Density (t/m³) :	2.057	2.044	2.102	2.112
Optimum Moisture Content (%) :	15.0	14.0	15.1	14.7
Moisture Variation :	1.6	0.3	0.5	0.1
Peak Converted Wet Density (t/m³) :	2.060	2.064	2.068	2.104
Hilf Density Ratio (%) :	**100.0**	**99.0**	**101.5**	**100.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 192
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	26/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	232958	232959		
Test Number :	625	626		
Sampling Method :	-	-		
Date Sampled :	04/08/2017	04/08/2017		
Date Tested :	04/08/2017	04/08/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	E 499420 N 7000576 2.7m Below Final Level	E 499439 N 7000569 2.3m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	15.8	15.5		
Hilf MDR Number :	232958	232959		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	103	103		
Field Wet Density (t/m³) :	2.104	2.126		
Optimum Moisture Content (%) :	15.3	15.0		
Moisture Variation :	-0.5	-0.5		
Peak Converted Wet Density (t/m³) :	2.107	2.112		
Hilf Density Ratio (%) :	**100.0**	**100.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 193
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	29/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233160	233161	233162	233163
Test Number :	627	628	629	630
Sampling Method :	-	-	-	-
Date Sampled :	08/08/2017	08/08/2017	08/08/2017	08/08/2017
Date Tested :	08/08/2017	08/08/2017	08/08/2017	08/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 17-18 E 499133 N 7000581 2.2m Below Final Level	Stage 17-18 E 499140 N 7000565 1.9m Below Final Level	Stage 17-18 E 499149 N 7000577 2.1m Below Final Level	Stage 17-18 E 499165 N 7000565 1.7m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	16.4	16.6	14.1	14.6
Hilf MDR Number :	233160	233161	233162	233163
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	100	104	96	99
Field Wet Density (t/m³) :	2.065	2.066	2.044	2.064
Optimum Moisture Content (%) :	16.4	16.0	14.7	14.7
Moisture Variation :	0.0	-0.7	0.6	0.1
Peak Converted Wet Density (t/m³) :	2.099	2.085	2.097	2.165
Hilf Density Ratio (%) :	**98.5**	**99.0**	**97.5**	**95.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 194
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	29/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233164	233165	233166	233167
Test Number :	631	632	633	634
Sampling Method :	-	-	-	-
Date Sampled :	08/08/2017	08/08/2017	08/08/2017	08/08/2017
Date Tested :	08/08/2017	08/08/2017	08/08/2017	08/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 17-18 E 499168 N 7000560 1.6m Below Final Level	Stage 17-18 E 499187 N 7000539 1.4m Below Final Level	Stage 17-18 E 499199 N 7000557 1.8m Below Final Level	Stage 17-18 E 499203 N 7000579 2.3m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	15.2	13.4	14.7	15.0
Hilf MDR Number :	233164	233165	233166	233167
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	98.5	99	99.5	100
Field Wet Density (t/m³) :	2.076	2.088	2.065	2.070
Optimum Moisture Content (%) :	15.4	13.5	14.8	15.0
Moisture Variation :	0.2	0.1	0.1	0.0
Peak Converted Wet Density (t/m³) :	2.136	2.161	2.149	2.169
Hilf Density Ratio (%) :	**97.0**	**96.5**	**96.0**	**95.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 195
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	29/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233168	233169		
Test Number :	635	636		
Sampling Method :	-	-		
Date Sampled :	08/08/2017	08/08/2017		
Date Tested :	08/08/2017	08/08/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Stage 17-18 E 499218 N 7000578 2.1m Below Final Level	Stage 17-18 E 499213 N 7000559 1.7m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	12.1	12.7		
Hilf MDR Number :	233168	233169		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	92	97.5		
Field Wet Density (t/m³) :	1.963	1.956		
Optimum Moisture Content (%) :	13.1	13.0		
Moisture Variation :	1.0	0.3		
Peak Converted Wet Density (t/m³) :	2.154	2.167		
Hilf Density Ratio (%) :	**91.0**	**90.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 196
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	29/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233170	233171	233172	233173
Test Number :	637	638	639	640
Sampling Method :	-	-	-	-
Date Sampled :	08/08/2017	08/08/2017	08/08/2017	08/08/2017
Date Tested :	08/08/2017	08/08/2017	08/08/2017	08/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 17-18 E 499207 N 7000542 1.3m Below Final Level	Stage 17-18 E 499215 N 7000541 1.4m Below Final Level	Stage 17-18 E 499233 N 7000554 1.7m Below Final Level	Stage 17-18 E 499255 N 7000564 1.9m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	15.0	17.2	13.8	13.3
Hilf MDR Number :	233170	233171	233172	233173
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	96	104	100.5	87
Field Wet Density (t/m³) :	2.000	2.029	2.028	2.047
Optimum Moisture Content (%) :	15.6	16.5	13.7	15.3
Moisture Variation :	0.6	-0.7	-0.1	1.9
Peak Converted Wet Density (t/m³) :	2.094	2.121	2.081	2.083
Hilf Density Ratio (%) :	**95.5**	**95.5**	**97.5**	**98.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 197
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	29/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233174	233175	233176	233177
Test Number :	641	642	643	644
Sampling Method :	-	-	-	-
Date Sampled :	08/08/2017	08/08/2017	08/08/2017	08/08/2017
Date Tested :	08/08/2017	08/08/2017	08/08/2017	08/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 17-18 E 499272 N 7000566 2.2m Below Final Level	Stage 17-18 E 499294 N 7000570 2m Below Final Level	Stage 17-18 E 499270 N 7000564 1.6m Below Final Level	Stage 17-18 E 499253 N 7000551 1.3m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	14.0	14.7	15.4	14.1
Hilf MDR Number :	233174	233175	233176	233177
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	89	97.5	100.5	94
Field Wet Density (t/m³) :	2.034	2.050	2.083	2.098
Optimum Moisture Content (%) :	15.8	15.1	15.4	15.0
Moisture Variation :	1.7	0.3	0.0	0.9
Peak Converted Wet Density (t/m³) :	2.089	2.111	2.118	2.117
Hilf Density Ratio (%) :	**97.5**	**97.0**	**98.5**	**99.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 198
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	29/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233178	233179		
Test Number :	645	646		
Sampling Method :	-	-		
Date Sampled :	08/08/2017	08/08/2017		
Date Tested :	08/08/2017	08/08/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Stage 17-18 E 499245 N 7000535 1.4m Below Final Level	Stage 17-18 E 499270 N 7000526 1.2m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	15.4	15.0		
Hilf MDR Number :	233178	233179		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	100	97.5		
Field Wet Density (t/m³) :	2.094	2.056		
Optimum Moisture Content (%) :	15.4	15.4		
Moisture Variation :	0.0	0.3		
Peak Converted Wet Density (t/m³) :	2.112	2.107		
Hilf Density Ratio (%) :	**99.0**	**97.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	**Hilf performed by Maroochydore Laboratory. Corporate Site No. 17071.**			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 199
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	29/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233365	233366		
Test Number :	647	648		
Sampling Method :	-	-		
Date Sampled :	10/08/2017	10/08/2017		
Date Tested :	10/08/2017	10/08/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	E 499364 N 7000601 4.1m Below Final Level	E 499373 N 7000608 3.7m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	13.6	13.5		
Hilf MDR Number :	233365	233366		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	85.5	87		
Field Wet Density (t/m³) :	2.114	2.119		
Optimum Moisture Content (%) :	15.9	15.5		
Moisture Variation :	2.2	2.0		
Peak Converted Wet Density (t/m³) :	2.070	2.083		
Hilf Density Ratio (%) :	**102.0**	**101.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 200
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	30/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233424	233425	233426	233427
Test Number :	649	650	651	652
Sampling Method :	-	-	-	-
Date Sampled :	11/08/2017	11/08/2017	11/08/2017	11/08/2017
Date Tested :	11/08/2017	11/08/2017	11/08/2017	11/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Moreton Bay Boulevard E 499367 N 7000608 2.9m Below Final Level	Moreton Bay Boulevard E 499381 N 7000604 2.9m Below Final Level	Moreton Bay Boulevard E 499386 N 7000622 3.5m Below Final Level	Moreton Bay Boulevard E 499367 N 7000628 3.5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	150	150	150	150
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	15.6	15.0	15.4	15.8
Hilf MDR Number :	233424	233425	233426	233427
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	107	100	104	103.5
Field Wet Density (t/m³) :	2.149	2.144	2.065	2.086
Optimum Moisture Content (%) :	14.6	15.0	14.8	15.3
Moisture Variation :	-1.0	0.0	-0.6	-0.6
Peak Converted Wet Density (t/m³) :	2.141	2.158	2.156	2.143
Hilf Density Ratio (%) :	**100.5**	**99.5**	**96.0**	**97.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 201
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	30/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233428	233429		
Test Number :	653	654		
Sampling Method :	-	-		
Date Sampled :	11/08/2017	11/08/2017		
Date Tested :	11/08/2017	11/08/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Moreton Bay Boulevard E 499366 N 7000636 3.6m Below Final Level	Moreton Bay Boulevard E 499387 N 7000641 3.8m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	150	150		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	14.8	15.4		
Hilf MDR Number :	233428	233429		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	101.5	99.5		
Field Wet Density (t/m³) :	2.118	2.089		
Optimum Moisture Content (%) :	14.6	15.5		
Moisture Variation :	-0.2	0.1		
Peak Converted Wet Density (t/m³) :	2.099	2.101		
Hilf Density Ratio (%) :	**101.0**	**99.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 202
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	30/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233612	233613	233614	233615
Test Number :	655	656	657	658
Sampling Method :	-	-	-	-
Date Sampled :	15/08/2017	15/08/2017	15/08/2017	15/08/2017
Date Tested :	15/08/2017	15/08/2017	15/08/2017	15/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499370 N 7000644 3.5m Below Final Level	E 499381 N 7000638 3.4m Below Final Level	E 499379 N 7000629 3m Below Final Level	E 499359 N 7000629 3.1m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	16.1	14.1	16.0	13.0
Hilf MDR Number :	233612	233613	233614	233615
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	98.5	89	96.5	93
Field Wet Density (t/m³) :	1.983	1.990	2.075	2.094
Optimum Moisture Content (%) :	16.4	15.8	16.6	14.0
Moisture Variation :	0.2	1.7	0.6	1.0
Peak Converted Wet Density (t/m³) :	2.057	2.074	2.079	2.062
Hilf Density Ratio (%) :	**96.5**	**96.0**	**100.0**	**101.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 203
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	30/08/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233616	233617	233618	
Test Number :	659	660	661	
Sampling Method :	-	-	-	
Date Sampled :	15/08/2017	15/08/2017	15/08/2017	
Date Tested :	15/08/2017	15/08/2017	15/08/2017	
Material Type :	**General Fill**	**General Fill**	**General Fill**	
Material Source :	**On Site**	**On Site**	**On Site**	
Lot Number :	-	-	-	
Sample Location :	E 499362 N 7000609 2.9m Below Final Level	E 499368 N 7000599 2.8m Below Final Level	E 499382 N 7000590 2.7m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	13.4	12.5	17.3	
Hilf MDR Number :	233616	233617	233618	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	88.5	95.5	96.5	
Field Wet Density (t/m³) :	2.077	2.085	2.070	
Optimum Moisture Content (%) :	15.1	13.1	17.9	
Moisture Variation :	1.7	0.6	0.6	
Peak Converted Wet Density (t/m³) :	2.032	2.110	2.031	
Hilf Density Ratio (%) :	**102.0**	**99.0**	**102.0**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 204
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	02/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233660	233661	233662	233663
Test Number :	662	663	664	665
Sampling Method :	-	-	-	-
Date Sampled :	16/08/2017	16/08/2017	16/08/2017	16/08/2017
Date Tested :	16/08/2017	16/08/2017	16/08/2017	16/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499398 N 7000650 2.7m Below Final Level	E 499382 N 7000647 2.7m Below Final Level	E 499371 N 7000639 2.6m Below Final Level	E 499374 N 7000627 2.5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	14.5	15.0	15.1	14.7
Hilf MDR Number :	233660	233661	233662	233663
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	88	87	89.5	91
Field Wet Density (t/m³) :	2.046	2.042	2.053	2.071
Optimum Moisture Content (%) :	16.5	17.2	16.9	16.1
Moisture Variation :	1.9	2.1	1.8	1.4
Peak Converted Wet Density (t/m³) :	2.064	2.028	2.090	2.075
Hilf Density Ratio (%) :	**99.0**	**100.5**	**98.0**	**100.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 205
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	02/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233664	233665	233666	
Test Number :	666	667	668	
Sampling Method :	-	-	-	
Date Sampled :	16/08/2017	16/08/2017	16/08/2017	
Date Tested :	16/08/2017	16/08/2017	16/08/2017	
Material Type :	**General Fill**	**General Fill**	**General Fill**	
Material Source :	**On Site**	**On Site**	**On Site**	
Lot Number :	-	-	-	
Sample Location :	E 499396 N 7000629 2.4m Below Final Level	E 499394 N 7000616 2.1m Below Final Level	E 499360 N 7000616 2.1m Below Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	16.7	17.1	15.8	
Hilf MDR Number :	233664	233665	233666	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	91	95	100	
Field Wet Density (t/m³) :	1.996	2.020	2.014	
Optimum Moisture Content (%) :	18.4	18.0	15.8	
Moisture Variation :	1.6	0.9	0.0	
Peak Converted Wet Density (t/m³) :	2.071	2.090	2.118	
Hilf Density Ratio (%) :	**96.5**	**96.5**	**95.0**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 206
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	02/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233714	233715	233716	233717
Test Number :	669	670	671	672
Sampling Method :	-	-	-	-
Date Sampled :	17/08/2017	17/08/2017	17/08/2017	17/08/2017
Date Tested :	17/08/2017	17/08/2017	17/08/2017	17/08/2017
Material Type :	**Road Embankment**	**Road Embankment**	**Road Embankment**	**Road Embankment**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Moreton Bay Boulevard E 499359 N 7000520 0.7m Below Final Level	Moreton Bay Boulevard E 499370 N 7000585 0.7m Below Final Level	Moreton Bay Boulevard E 499371 N 7000538 0.4m Below Final Level	Moreton Bay Boulevard E 499367 N 7000564 0.4m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	14.4	14.5	14.7	16.1
Hilf MDR Number :	233714	233715	233716	233717
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	99	94.5	88	98
Field Wet Density (t/m³) :	2.158	2.157	2.153	2.163
Optimum Moisture Content (%) :	14.6	15.3	16.7	16.4
Moisture Variation :	0.2	0.8	1.9	0.3
Peak Converted Wet Density (t/m³) :	2.124	2.131	2.118	2.123
Hilf Density Ratio (%) :	**101.5**	**101.0**	**101.5**	**102.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 207
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	02/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233857	233858	233859	233860
Test Number :	673	674	675	676
Sampling Method :	-	-	-	-
Date Sampled :	21/08/2017	21/08/2017	21/08/2017	21/08/2017
Date Tested :	21/08/2017	21/08/2017	21/08/2017	21/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499438 N 7000492 3m Below Final Level	E 499447 N 7000480 2.7m Below Final Level	E 499459 N 7000489 2.9m Below Final Level	E 499463 N 7000504 3m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	14.6	12.7	13.9	11.3
Hilf MDR Number :	233857	233858	233859	233860
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	77	75.5	85.5	80.5
Field Wet Density (t/m³) :	2.121	2.129	2.148	2.104
Optimum Moisture Content (%) :	18.9	16.8	16.2	14.0
Moisture Variation :	4.1	3.9	2.3	2.7
Peak Converted Wet Density (t/m³) :	2.071	2.085	2.097	2.088
Hilf Density Ratio (%) :	**102.5**	**102.0**	**102.5**	**101.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 208
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	02/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233919	233920	233921	233922
Test Number :	677	678	679	680
Sampling Method :	-	-	-	-
Date Sampled :	22/08/2017	22/08/2017	22/08/2017	22/08/2017
Date Tested :	22/08/2017	22/08/2017	22/08/2017	22/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 17 & 18 E 499245 N 7000552 1.1m Below Final Level	Stage 17 & 18 E 499233 N 7000547 1m Below Final Level	Stage 17 & 18 E 499222 N 7000560 1.3m Below Final Level	Stage 17 & 18 E 499194 N 7000554 1.2m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	26.9	24.8	27.4	24.3
Hilf MDR Number :	233919	233920	233921	233922
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	102	101.5	102.5	103
Field Wet Density (t/m³) :	2.017	2.026	2.014	2.021
Optimum Moisture Content (%) :	26.4	24.4	26.8	23.6
Moisture Variation :	-0.5	-0.4	-0.6	-0.6
Peak Converted Wet Density (t/m³) :	1.946	1.977	1.934	1.972
Hilf Density Ratio (%) :	**103.5**	**102.5**	**104.0**	**102.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 209
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	02/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	233923	233924	233925	233926
Test Number :	681	682	683	684
Sampling Method :	-	-	-	-
Date Sampled :	22/08/2017	22/08/2017	22/08/2017	22/08/2017
Date Tested :	22/08/2017	22/08/2017	22/08/2017	22/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 17 & 18 E 499188 N 7000575 1.4m Below Final Level	Stage 17 & 18 E 499207 N 7000580 1.5m Below Final Level	Stage 17 & 18 E 499218 N 7000572 1.2m Below Final Level	Stage 17 & 18 E 499237 N 7000579 1.4m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	31.9	31.9	29.1	31.3
Hilf MDR Number :	233923	233924	233925	233926
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	102	102	102.5	102
Field Wet Density (t/m³) :	1.871	1.908	1.907	1.915
Optimum Moisture Content (%) :	31.4	31.3	28.4	30.6
Moisture Variation :	-0.5	-0.5	-0.6	-0.6
Peak Converted Wet Density (t/m³) :	1.912	1.967	1.915	1.901
Hilf Density Ratio (%) :	**98.0**	**97.0**	**99.5**	**100.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 210
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	08/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	234312	234313	234314	234315
Test Number :	685	686	687	688
Sampling Method :	-	-	-	-
Date Sampled :	26/08/2017	26/08/2017	26/08/2017	26/08/2017
Date Tested :	26/08/2017	26/08/2017	26/08/2017	26/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 17 & 18 E 499274 N 7000536 0.2m Below Final Level	Stage 17 & 18 E 499267 N 7000546 0.3m Below Final Level	Stage 17 & 18 E 499247 N 7000548 0.2m Below Final Level	Stage 17 & 18 E 499244 N 7000554 Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	20.2	20.3	19.9	21.0
Hilf MDR Number :	234312	234313	234314	234315
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	101	106.5	100	106
Field Wet Density (t/m³) :	1.972	2.005	2.001	2.004
Optimum Moisture Content (%) :	20.0	19.1	19.9	19.8
Moisture Variation :	-0.1	-1.2	0.0	-1.2
Peak Converted Wet Density (t/m³) :	2.032	2.047	2.030	2.033
Hilf Density Ratio (%) :	**97.0**	**98.0**	**98.5**	**98.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 211
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	08/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	234316	234317	234318	234319
Test Number :	689	690	691	692
Sampling Method :	-	-	-	-
Date Sampled :	26/08/2017	26/08/2017	26/08/2017	26/08/2017
Date Tested :	26/08/2017	26/08/2017	26/08/2017	26/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 17 & 18 E 499241 N 7000577 Final Level	Stage 17 & 18 E 499222 N 7000585 0.3m Below Final Level	Stage 17 & 18 E 499221 N 7000576 Final Level	Stage 17 & 18 E 499229 N 7000568 Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	23.9	21.5	20.5	19.5
Hilf MDR Number :	234316	234317	234318	234319
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	106	102	107.5	116.5
Field Wet Density (t/m³) :	1.985	2.018	2.043	2.025
Optimum Moisture Content (%) :	22.5	21.0	19.1	16.7
Moisture Variation :	-1.3	-0.5	-1.4	-2.7
Peak Converted Wet Density (t/m³) :	2.006	2.032	2.044	2.057
Hilf Density Ratio (%) :	**99.0**	**99.5**	**100.0**	**98.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 212
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	08/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	234320	234321	234322	234323
Test Number :	693	694	695	696
Sampling Method :	-	-	-	-
Date Sampled :	26/08/2017	26/08/2017	26/08/2017	26/08/2017
Date Tested :	26/08/2017	26/08/2017	26/08/2017	26/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 17 & 18 E 499217 N 7000553 0.4m Below Final Level	Stage 17 & 18 E 499210 N 7000574 Final Level	Stage 17 & 18 E 499184 N 7000561 Final Level	Stage 17 & 18 E 499169 N 7000552 0.3m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	20.4	14.6	20.0	12.9
Hilf MDR Number :	234320	234321	234322	234323
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	113.5	112.5	99.5	98.5
Field Wet Density (t/m³) :	2.072	2.011	1.989	2.005
Optimum Moisture Content (%) :	18.0	13.0	20.1	13.1
Moisture Variation :	-2.4	-1.7	0.1	0.2
Peak Converted Wet Density (t/m³) :	2.083	2.001	2.009	2.027
Hilf Density Ratio (%) :	**99.5**	**100.5**	**99.0**	**99.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 213
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	08/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	234324	234325	234326	234327
Test Number :	697	698	699	700
Sampling Method :	-	-	-	-
Date Sampled :	26/08/2017	26/08/2017	26/08/2017	26/08/2017
Date Tested :	26/08/2017	26/08/2017	26/08/2017	26/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 17 & 18 E 499151 N 7000559 0.3m Below Final Level	Stage 17 & 18 E 499145 N 7000579 Final Level	Stage 17 & 18 E 499141 N 7000577 Final Level	Stage 17 & 18 E 499125 N 7000573 0.4m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	21.5	15.1	13.2	15.4
Hilf MDR Number :	234324	234325	234326	234327
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	91.5	96	89	94
Field Wet Density (t/m³) :	2.020	2.021	2.055	1.967
Optimum Moisture Content (%) :	23.5	15.7	14.8	16.4
Moisture Variation :	1.9	0.6	1.6	1.0
Peak Converted Wet Density (t/m³) :	2.016	2.033	2.060	2.063
Hilf Density Ratio (%) :	**100.0**	**99.5**	**100.0**	**95.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 214
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	08/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	234328	234329		
Test Number :	701	702		
Sampling Method :	-	-		
Date Sampled :	26/08/2017	26/08/2017		
Date Tested :	26/08/2017	26/08/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	Stage 17 & 18 E 499136 N 7000563 Final Level	Stage 17 & 18 E 499152 N 7000557 Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	15.2	16.0		
Hilf MDR Number :	234328	234329		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	92.5	96.5		
Field Wet Density (t/m³) :	1.988	1.995		
Optimum Moisture Content (%) :	16.4	16.6		
Moisture Variation :	1.1	0.6		
Peak Converted Wet Density (t/m³) :	2.058	1.995		
Hilf Density Ratio (%) :	**96.5**	**100.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 215
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	08/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	234529	234530	234531	234532
Test Number :	703	704	705	706
Sampling Method :	-	-	-	-
Date Sampled :	29/08/2017	29/08/2017	29/08/2017	29/08/2017
Date Tested :	29/08/2017	29/08/2017	29/08/2017	29/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499448 N 7000529 2.4m Below Final Level	E 499443 N 7000525 2.3m Below Final Level	E 499470 N 7000510 1.7m Below Final Level	E 499458 N 7000494 1.8m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	27.3	32.2	22.0	24.8
Hilf MDR Number :	234529	234530	234531	234532
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	100.5	103.5	99	97
Field Wet Density (t/m³) :	1.920	1.910	1.946	1.935
Optimum Moisture Content (%) :	27.2	31.1	22.2	25.6
Moisture Variation :	-0.1	-1.0	0.2	0.7
Peak Converted Wet Density (t/m³) :	1.934	1.913	1.979	1.993
Hilf Density Ratio (%) :	**99.5**	**100.0**	**98.5**	**97.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 216
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	08/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	234634	234635	234636	234637
Test Number :	707	708	709	710
Sampling Method :	-	-	-	-
Date Sampled :	30/08/2017	30/08/2017	30/08/2017	30/08/2017
Date Tested :	30/08/2017	30/08/2017	30/08/2017	30/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	Stage 17 & 18 E 499276 N 7000566 Final Level	Stage 17 & 18 E 499276 N 7000581 0.5m Below Final Level	Stage 17 & 18 E 499291 N 7000600 0.5m Below Final Level	Stage 17 & 18 E 499293 N 7000591 Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	14.0	13.1	20.2	23.5
Hilf MDR Number :	234634	234635	234636	234637
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	98.5	96	98.5	99.5
Field Wet Density (t/m³) :	2.013	2.050	2.031	2.028
Optimum Moisture Content (%) :	14.2	13.6	20.5	23.6
Moisture Variation :	0.2	0.6	0.3	0.1
Peak Converted Wet Density (t/m³) :	2.022	2.053	2.010	2.011
Hilf Density Ratio (%) :	**99.5**	**100.0**	**101.0**	**101.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 217
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	234759	234760	234761	234762
Test Number :	711	712	713	714
Sampling Method :	-	-	-	-
Date Sampled :	31/08/2017	31/08/2017	31/08/2017	31/08/2017
Date Tested :	31/08/2017	31/08/2017	31/08/2017	31/08/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499348 N 7000542 0.6m Below Final Level	E 499340 N 7000545 Final Level	E 499340 N 7000558 0.4m Below Final Level	E 499347 N 7000563 Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	2.2	13.5	12.1	12.7
Hilf MDR Number :	234759	234760	234761	234762
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	48.5	82.5	80.5	81.5
Field Wet Density (t/m³) :	2.097	2.105	2.117	2.098
Optimum Moisture Content (%) :	4.5	16.4	15.0	15.6
Moisture Variation :	2.6	2.8	2.9	2.9
Peak Converted Wet Density (t/m³) :	2.063	2.046	2.073	2.058
Hilf Density Ratio (%) :	**101.5**	**103.0**	**102.0**	**102.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 218
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	13/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	234941	234942		
Test Number :	715	716		
Sampling Method :	-	-		
Date Sampled :	04/09/2017	04/09/2017		
Date Tested :	04/09/2017	04/09/2017		
Material Type :	**General Fill**	**General Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	-	-		
Sample Location :	E 499447 N 7000506 1.5m Below Final Level	E 499420 N 7000516 2m Below Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	9.4	11.3		
Hilf MDR Number :	234941	234942		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	80.5	81.5		
Field Wet Density (t/m³) :	2.054	2.091		
Optimum Moisture Content (%) :	11.6	13.8		
Moisture Variation :	2.3	2.5		
Peak Converted Wet Density (t/m³) :	2.134	2.103		
Hilf Density Ratio (%) :	**96.0**	**99.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 219
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	21/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	235154	235155	235156	235157
Test Number :	717	718	719	720
Sampling Method :	-	-	-	-
Date Sampled :	06/09/2017	06/09/2017	06/09/2017	06/09/2017
Date Tested :	06/09/2017	06/09/2017	06/09/2017	06/09/2017
Material Type :	**Road Embankment**	**Road Embankment**	**Road Embankment**	**Road Embankment**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499364 N 7000459 0.5m Below Final Level	E 499383 N 7000355 0.5m Below Final Level	E 499379 N 7000357 1m Below Final Level	E 499394 N 7000313 1.5m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	16.8	15.6	15.0	15.1
Hilf MDR Number :	235154	235155	235156	235157
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	86	83.5	83.5	83
Field Wet Density (t/m³) :	2.100	2.123	2.117	2.120
Optimum Moisture Content (%) :	19.5	18.6	18.0	18.2
Moisture Variation :	2.6	2.9	2.9	3.0
Peak Converted Wet Density (t/m³) :	2.055	2.070	2.072	2.076
Hilf Density Ratio (%) :	**102.0**	**102.5**	**102.0**	**102.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 220
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	21/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	235237	235238	235239	235240
Test Number :	721	722	723	724
Sampling Method :	-	-	-	-
Date Sampled :	07/09/2017	07/09/2017	07/09/2017	07/09/2017
Date Tested :	07/09/2017	07/09/2017	07/09/2017	07/09/2017
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	**688**	**689**	**690**	**691**
Sample Location :	Stage 22 / Lot 688 4m From North Boundary 2m From West Boundary Final Level	Stage 22 / Lot 689 2m From North Boundary 4m From West Boundary Final Level	Stage 22 / Lot 690 2.5m From North Boundary 5m From West Boundary Final Level	Stage 22 / Lot 691 1m From North Boundary 4m From West Boundary Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	4.9	4.2	5.6	4.6
Hilf MDR Number :	235237	235238	235239	235240
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	72.5	78	75.5	72
Field Wet Density (t/m³) :	2.044	2.034	2.028	2.049
Optimum Moisture Content (%) :	6.8	5.4	7.4	6.4
Moisture Variation :	2.0	1.2	1.9	1.9
Peak Converted Wet Density (t/m³) :	2.104	2.056	2.124	2.127
Hilf Density Ratio (%) :	**97.0**	**99.0**	**95.5**	**96.5**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 221
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	21/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	235241	235242	235243	
Test Number :	725	726	727	
Sampling Method :	-	-	-	
Date Sampled :	07/09/2017	07/09/2017	07/09/2017	
Date Tested :	07/09/2017	07/09/2017	07/09/2017	
Material Type :	**Allotment Fill**	**Allotment Fill**	**Allotment Fill**	
Material Source :	**On Site**	**On Site**	**On Site**	
Lot Number :	**461**	**462**	**463**	
Sample Location :	Stage 15 / Lot 461 4m From North Boundary 1.5m From West Boundary Final Level	Stage 15 / Lot 462 3m From North Boundary 2m From West Boundary Final Level	Stage 15 / Lot 463 3m From North Boundary 2m From West Boundary Final Level	
Test Depth (mm) :	150	150	150	
Layer Depth (mm) :	-	-	-	
Maximum Size (mm) :	19	19	19	
Oversize Wet (%) :	-	-	-	
Oversize Dry (%) :	-	-	-	
Oversize Density (t/m³) :	-	-	-	
Field Moisture Content (%) :	14.4	13.3	16.7	
Hilf MDR Number :	235241	235242	235243	
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	
Compactive Effort :	Standard	Standard	Standard	
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	
Moisture Ratio (%) :	89	75	77.5	
Field Wet Density (t/m³) :	2.076	2.081	2.079	
Optimum Moisture Content (%) :	16.1	17.7	21.5	
Moisture Variation :	1.7	4.3	4.5	
Peak Converted Wet Density (t/m³) :	2.005	1.991	1.998	
Hilf Density Ratio (%) :	**103.5**	**104.5**	**104.0**	
Minimum Specification :	95	95	95	
Moisture Specification :	-	-	-	
Site Selection :	-	-	-	
Soil Description :	-	-	-	
Remarks :	-			

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Liam Mcdowall (Brisbane) - Branch Manager
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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 222
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	21/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	235244	235245		
Test Number :	728	729		
Sampling Method :	-	-		
Date Sampled :	07/09/2017	07/09/2017		
Date Tested :	07/09/2017	07/09/2017		
Material Type :	**Allotment Fill**	**Allotment Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	**483**	**484**		
Sample Location :	Stage 16 / Lot 483 3m From North Boundary 1m From West Boundary Final Level	Stage 16 / Lot 484 3m From North Boundary 2.5m From West Boundary Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	13.8	15.2		
Hilf MDR Number :	235244	235245		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	88	89		
Field Wet Density (t/m³) :	2.032	2.071		
Optimum Moisture Content (%) :	15.7	17.1		
Moisture Variation :	1.8	1.8		
Peak Converted Wet Density (t/m³) :	2.014	2.032		
Hilf Density Ratio (%) :	**101.0**	**102.0**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 223
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	21/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	235246	235247		
Test Number :	730	731		
Sampling Method :	-	-		
Date Sampled :	07/09/2017	07/09/2017		
Date Tested :	07/09/2017	07/09/2017		
Material Type :	**Allotment Fill**	**Allotment Fill**		
Material Source :	**On Site**	**On Site**		
Lot Number :	**619**	**686**		
Sample Location :	Stage 20 / Lot 619 2m From North Boundary 2m From East Boundary Final Level	Stage 22 / Lot 686 2.5m From North Boundary 4m From East Boundary Final Level		
Test Depth (mm) :	150	150		
Layer Depth (mm) :	-	-		
Maximum Size (mm) :	19	19		
Oversize Wet (%) :	-	-		
Oversize Dry (%) :	-	-		
Oversize Density (t/m³) :	-	-		
Field Moisture Content (%) :	6.0	4.8		
Hilf MDR Number :	235246	235247		
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1		
Compactive Effort :	Standard	Standard		
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1		
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1		
Moisture Ratio (%) :	71	67.5		
Field Wet Density (t/m³) :	2.051	2.080		
Optimum Moisture Content (%) :	8.4	7.1		
Moisture Variation :	2.5	2.4		
Peak Converted Wet Density (t/m³) :	2.137	2.130		
Hilf Density Ratio (%) :	**96.0**	**97.5**		
Minimum Specification :	95	95		
Moisture Specification :	-	-		
Site Selection :	-	-		
Soil Description :	-	-		
Remarks :	-			

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Hilf Density Ratio Report

Client :	HALL CONTRACTING PTY LTD	Report Number:	DL17/006 - 224
Address :	P O BOX 519, BUDERIM, QLD, 4556	Report Date :	21/09/2017
Project Name :	EARTHWORKS SUPERVISION	Order Number :	NH03
Project Number :	DL17/006	Test Method :	AS1289.5.8.1 & 5.7.1
Location:	NORTH HARBOUR, PHASE 3 , BURPENGARY	Page 1 of 1	

Sample Number :	235704	235705	235706	235707
Test Number :	732	733	734	735
Sampling Method :	-	-	-	-
Date Sampled :	14/09/2017	14/09/2017	14/09/2017	14/09/2017
Date Tested :	14/09/2017	14/09/2017	14/09/2017	14/09/2017
Material Type :	**General Fill**	**General Fill**	**General Fill**	**General Fill**
Material Source :	**On Site**	**On Site**	**On Site**	**On Site**
Lot Number :	-	-	-	-
Sample Location :	E 499451 N 700543 0.2m Below Final Level	E 499458 N 700522 1m Below Final Level	E 499438 N 700505 0.8m Below Final Level	E 499410 N 700530 0.8m Below Final Level
Test Depth (mm) :	150	150	150	150
Layer Depth (mm) :	-	-	-	-
Maximum Size (mm) :	19	19	19	19
Oversize Wet (%) :	-	-	-	-
Oversize Dry (%) :	-	-	-	-
Oversize Density (t/m³) :	-	-	-	-
Field Moisture Content (%) :	17.0	13.6	14.5	12.5
Hilf MDR Number :	235704	235705	235706	235707
Hilf MDR Method :	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1	AS1289.5.1.1 & 5.7.1
Compactive Effort :	Standard	Standard	Standard	Standard
Field Density Method :	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1	AS1289.5.8.1 & 5.7.1
Moisture Method :	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1	AS1289.2.1.1
Moisture Ratio (%) :	90.5	91	89	91
Field Wet Density (t/m³) :	2.151	2.142	2.145	2.036
Optimum Moisture Content (%) :	18.8	14.9	16.3	13.7
Moisture Variation :	1.7	1.3	1.7	1.2
Peak Converted Wet Density (t/m³) :	2.145	2.148	2.167	2.099
Hilf Density Ratio (%) :	**100.5**	**99.5**	**99.0**	**97.0**
Minimum Specification :	95	95	95	95
Moisture Specification :	-	-	-	-
Site Selection :	-	-	-	-
Soil Description :	-	-	-	-
Remarks :	-			

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