

Level One Report AS3798

Client: CCA Winslow
Project: Riverbank Estate Stage 2A
Address: Suter Drive, Caboolture South, Qld 4510
Job No. J22/16
Docket No. 43555



Version	Date	Author	Initials	Reviewer	Initials
1	01/08/2022	Jacob Jones	J. Jones	Dean Wagner	D. Wagner

Form No: W169 – Version 4 (14/05/2021)



CONSTRUCTION

MATERIALS

TESTING

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1.0 Introduction

Wagner Soil Testing has recently completed a Level One Overview of Earthworks, in accordance with the requirements of **AS3798 – “Guidelines on Earthworks for Commercial and Residential Developments”** for Riverbank Estate Stage 2A.

Controlled fill (as defined in AS 2870) was placed by CCA Winslow. Stripping instructions, proof rolling, and compaction control testing was carried out by Wagner Soil Testing (on a fulltime basis) during all earthwork’s operations. Our onsite supervision component excludes assessments of fill quality and engineering properties that are outside the requirements of AS3798 – 2007, including CBR values and soil reactivity.

2.0 Site Description

The site is located at Suter Drive, Caboolture South, Qld 4510. The general location of the site is shown in the attached site plans (Appendix 1). The site is bound by existing & proposed residential developments.

3.0 Foundation Preparation

3.1 Site Stripping

Vegetation, topsoil, and organic rich materials were stripped and stockpiled onsite prior to the commencement of filling operations. As a safety factor several test pits were excavated in the proposed fill area to assess subsurface conditions, any significant issues were noted & remediated during this phase.

3.2 Proof Rolling

All stripped areas were proof rolled prior to any fill placement. Any compressible areas with apparent movement were excavated to a firm base before any fill being placed.

4.0 Controlled Filling

Fill materials (onsite) were compacted using a medium sized pad foot roller in layers not exceeding 0.3m loose. The natural ground in the areas of filling generally comprised of silty sandy clays (CI). The fill material used was generally as above. Moisture contents of all fill placed was monitored by Wagner Soil Testing. Total volumes of fill reached 19,750m³.

5.0 Compaction Control Testing

Compaction Control Testing was carried out by Wagner Soil Testing. Testing was carried out in accordance with the requirements of **AS3798 Table 5.1 (Minimum Relative Compaction)** and **Table 8.1 (Frequency of Field Density Tests)**. During the works, sixty-one (61) Field Dry Densities were carried out on fill materials together with Dynamic Cone Penetrometers (DCP's) over the filled zones periodically & at the completion of earthworks operations to help quantify bearing capacities.

6.0 Field Density Results

All Nuclear Field Densities carried out on the fill indicated Density Ratios greater than the specified requirement of 95% (standard compaction) & **AS3798 Table 5.1**.

7.0 Report on Filling Operations

The results obtained from Compaction Control Testing, together with observations made during earthworks operations indicate that all fill materials were placed in a controlled manner in accordance with good engineering practices. The earthworks have been carried out to meet the requirements of **Level 1 Certification as per AS3798 – “Guidelines on Earthworks for Commercial and Residential Developments”**.

8.0 Notes

Certified / Controlled (Level 1) Fill is only an assurance of its density. There are sites where long-term consolidations of fill can occur, unrelated to its actual density. Sites where fill has been placed over inferior material and sites where the depth of controlled fill varies dramatically over short distances are sites where differential consolidations must be considered. Although all Field Densities carried out reached density ratios greater than 95% as required, some material still may have bearing ratios below 100kPa as per AS2870 – Residential Slabs & Footings depending on material composition, and unfavourable site classifications and low subgrade design strengths still may be encountered.

All compacted fill is subject to secondary (creep) settlement, which is relational to the depth of the fill. Estimated secondary settlement may be of the order of 1% to 2% of the total fill height over 15 years. There is a possibility that additional fill has been placed after the date of the last field density test or at times when Wagner Soil Testing has not been notified that filling operations are in progress. The installation of services may cause disruption of the compacted fill.

Unless otherwise stated, Level 1 Certification does not address trench backfill operations, batter slope stability, retaining wall construction, global stability analysis, acid sulfate testing and or management. The “supervision” component of this Level 1 Report is not NATA endorsed. Wagner Soil Testing must be contacted if any site levels are modified whatsoever. It is the client's responsibility to maintain site drainage after the issue of this report.

A full geotechnical site investigation / classification and foundation design for the specific ground conditions should be carried out by suitably qualified or experienced personnel prior to building. This service can be provided, if required, by contacting Wagner Soil Testing.

Constraints:

This report was produced for the sole use of CCA Winslow. This report should not be used by or depended upon for other projects or purposes on the same or other projects or by a third party. In the preparation of this report Wagner Soil Testing has relied upon information provided by the client and or their agents.

The results provided in this report are indicative of the subsurface conditions on the site only at the specific sampling or testing locations, and then only to the depths investigated along with the time the work was carried out. It is known that subsurface conditions can suddenly change due to irregular geological processes and as a result of human influences. Such changes may occur after Wagner Soil Testing's field testing has been completed.

Certain ground conditions and the materials behaviour observed or contained at the test locations may alter from those which may be encountered elsewhere on the site. Should variations in subsurface conditions be encountered, then additional advice should be sought from Wagner Soil Testing and if required, amendments made.

Wagner Soil Testing cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome, or conclusion given in this report.

To establish a geotechnical model as per AS1726-2017-5.2 we require extra testing. No differential settlement estimates have been calculated for this site.

For further technical support regarding this Geotechnical Report please contact Mr. Dean Wagner of Wagner Soil Testing.



Authorised Signatory
Wagner Soil Testing

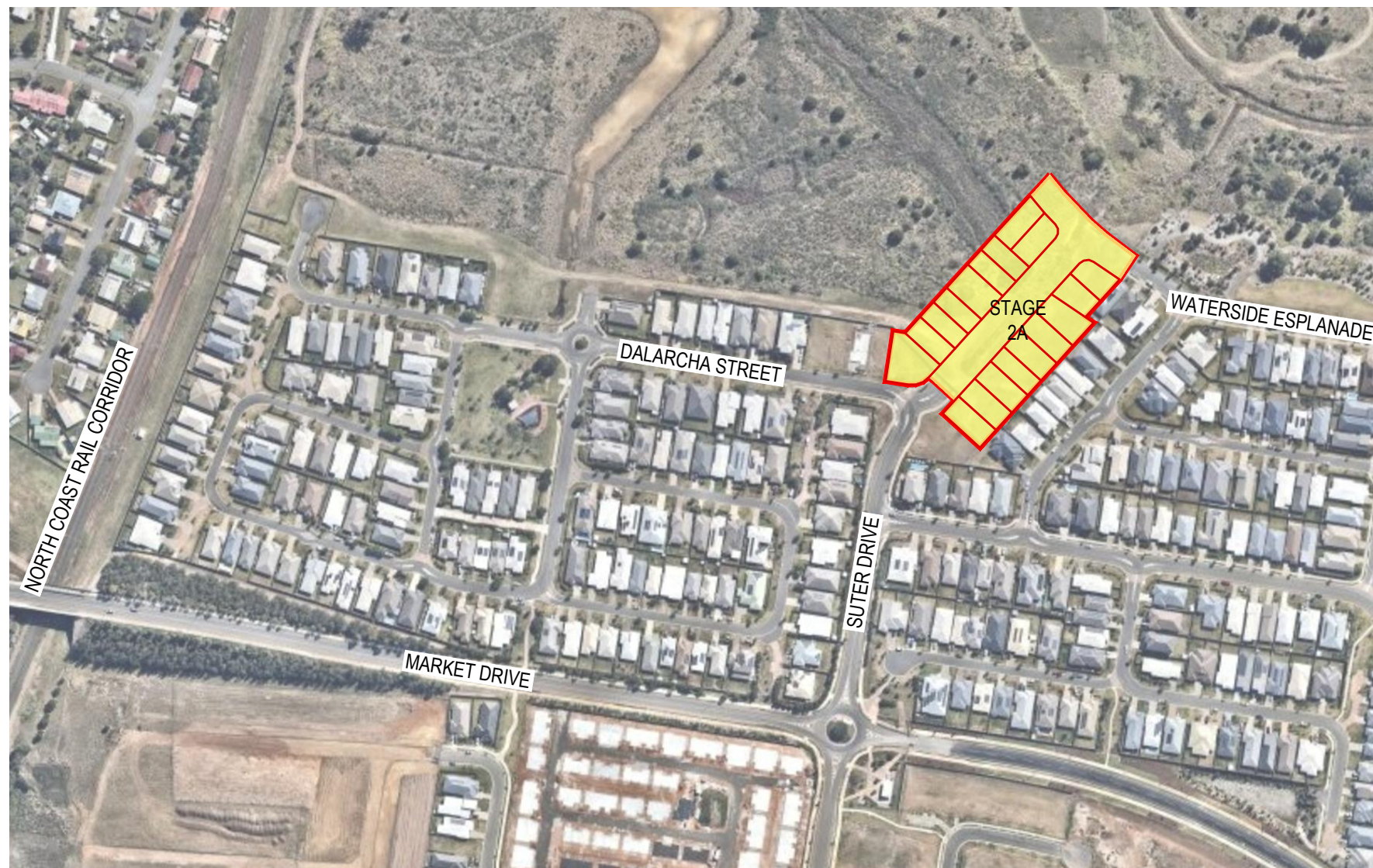


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Appendix 1 – General Layout Plan

RIVERBANK ESTATE

STAGE 2A FOR PEET CABOOLTURE SYNDICATE LTD



LOCALITY PLAN
NTS



**MORETON BAY
REGIONAL COUNCIL**

AREA OF SITE: 1.256 ha

LOT INFORMATION

EXISTING LOT

LOT 1024 SP317233

PROPOSED NO. OF LOTS: 18

DRAWING INDEX	
GENERAL	
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501	SEWER RETICULATION LAYOUT PLAN
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WATER RETICULATION	
600	WATER RETICULATION COVER SHEET
601	WATER RETICULATION LAYOUT PLAN

CONSTRUCTION NOTE

- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH:
- GEOTECHNICAL REPORT (PREPARED BY SOIL SURVEYS)
 - LANDSCAPE DRAWINGS (PREPARED BY SAUNDERS HAVILL GROUP)

CONSTRUCTION HOLD POINT

ONCE THE BASE OF MANHOLES, INSPECTION PITS, GULLIES AND FIELD INLETS FOR STORMWATER DRAINAGE AND SEWER RETICULATION HAVE BEEN POURED, FURTHER CONSTRUCTION SHALL NOT PROCEED UNTIL THE SUPERINTENDENT AND OR ENGINEER HAVE INSPECTED THE WORKS FOR FINISHED LEVELS AND APPROVED CONSTRUCTION TO CONTINUE.

CONSTRUCTION HOLD POINT

PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY LEVELS OF ALL EXISTING CROSSINGS AND CONNECTION POINTS.

RIVERBANK ESTATE

STAGE 2A

M.B.R.C. REF No. DA/2021/0413

Project No.:
21-000078.1

Stage:
2A

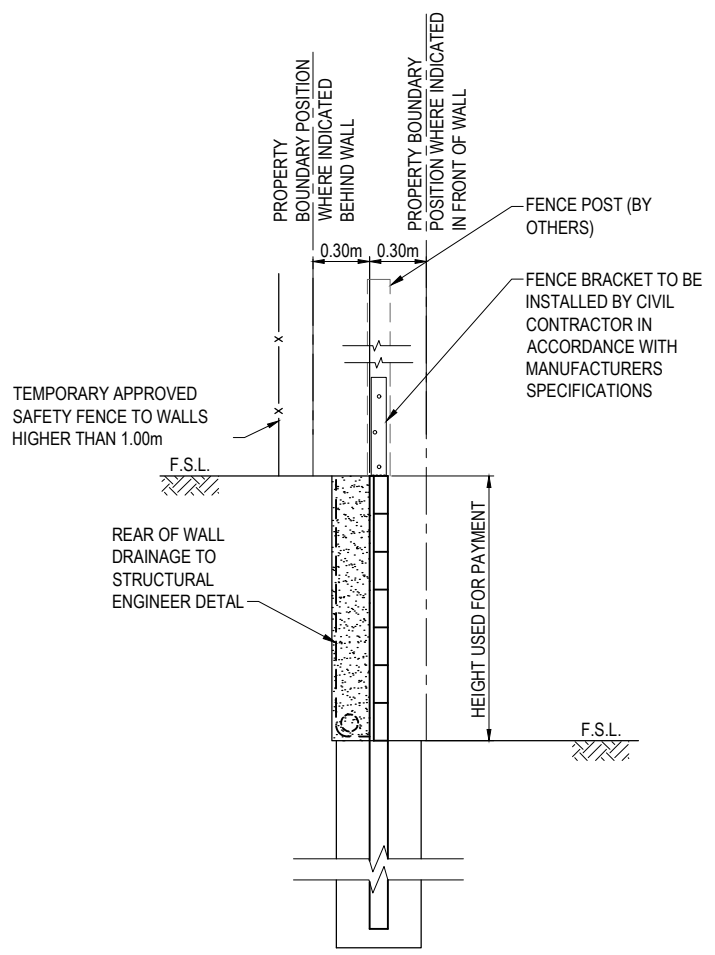
Milestone:
FOR
APPROVAL

Revision Date:
30.03.21

Drawing No.:
000

Revision:
1

MINIMUM DESIGN REQUIREMENTS
 - SURCHARGE LOADING TO SUIT RESIDENTIAL HOUSES LOADING TO BE DETERMINED BY STRUCTURAL ENGINEER
 - POST AND FOOTING DESIGN TO ALLOW FOR 1.8m HIGH FENCE BY OTHERS
 - MAX 1V:4H SLOPE BEHIND WALL
 - ALL RETAINING WALL FOOTINGS TO BE LOCATED A MINIMUM 1.0m HORIZONTALLY CLEAR OF THE ROOFWATER AND SEWER AND BE TAKEN BELOW THE ZONE OF INFLUENCE



REFERENCE CONCRETE SLEEPER RETAINING WALL DETAIL
 SCALE 1 : 20 (A1)

NOTES:
 1. CONCRETE SLEEPER RETAINING WALLS ARE A CIVIL CONTRACTOR DESIGN AND CONSTRUCT ITEM.
 2. THE CIVIL CONTRACTOR SHALL ENGAGE A STRUCTURAL RPEQ TO DESIGN THE RETAINING WALLS.
 3. PRIOR TO CONSTRUCTION THE PRINCIPAL CONTRACTOR SHALL PROVIDE THE STRUCTURAL RPEQ DESIGN AND FORM 15.
 4. PRIOR TO PRACTICAL COMPLETION BEING AWARDED THE CIVIL CONTRACTOR SHALL PROVIDE A FORM 16 FOR THE CONSTRUCTED RETAINING WALLS CERTIFIED BY THE STRUCTURAL RPEQ, AND COPIES OF ALL STRUCTURAL RPEQ INSPECTION REPORTS.

BULK EARTHWORKS NOTES

- NOTWITHSTANDING THE LIMITS OF CUTTING AND FILLING SHOWN ON THE CROSS SECTIONS, THE ACTUAL LIMITS SHALL BE DETERMINED ON-SITE BY THE SUPERINTENDENT DURING CONSTRUCTION AND SIMILARLY THE FINISHED SURFACE CONTOURS MAY BE ADJUSTED BY WRITTEN DIRECTION OF THE SUPERINTENDENT DURING CONSTRUCTION.
- SUBGRADE TEST RESULTS TO BE FORWARDED TO THE SUPERINTENDENT FOR DETERMINATION OF BOX DEPTHS PRIOR TO EXCAVATION. TESTS SHALL INCLUDE SOAKED CBR AND/OR OTHER TESTS AS REQUESTED BY THE SUPERINTENDENT.
- CONTRACTOR TO LAISE WITH ALL RELEVANT SERVICE AUTHORITIES TO ASCERTAIN SERVICES PRESENT ON-SITE. ANY ALTERATION WORKS TO SERVICES WILL BE CARRIED OUT BY THAT SERVICE AUTHORITY ONLY. THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENT PRIOR TO COMMENCING THE DEMOLITION OF ANY EXISTING STRUCTURES WITHIN THE SITE AREA.
- ALL DRAINAGE STRUCTURES TO BE PRESERVED FROM THE EFFECTS OF STRUCTURAL LOADING GENERATED BY THE EARTHWORKS.
- ALL EXCAVATION AND FILLING SHALL BE COMPACTED TO THE REQUIREMENTS OF AS3798-2007 IN ACCORDANCE WITH THE LOCAL AUTHORITY REQUIREMENTS. LEVEL 1 SUPERVISION IS REQUIRED.
- ALL CLEARING SHALL BE CARRIED OUT IN STAGES TO ALLOW FOR RELOCATION OF FAUNA, COMMENCING AT THE LOWER AREAS OF THE SITE. SETBACK TO FRONT OF PADS ARE 3.00m UNLESS OTHERWISE NOTIFIED.
- CONTRACTOR TO USE INDUSTRY BEST PRACTICE TO ENSURE ADEQUATE DUST CONTROL DURING EARTHWORKS OPERATIONS.
- ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH WORKPLACE HEALTH AND SAFETY REQUIREMENTS.

EARTHWORKS QUANTITIES:

CUT VOLUME : 384 m³
 FILL VOLUME : 23945 m³
 BAL : 23561 m³ IMPORT

NOTE:
 DESIGN LEVELS AND CONTOURS ARE TO FINISHED LEVEL.
 ROAD CARRIAGEWAY ARE TO BE FILLED TO PAVEMENT SUBGRADE ONLY.

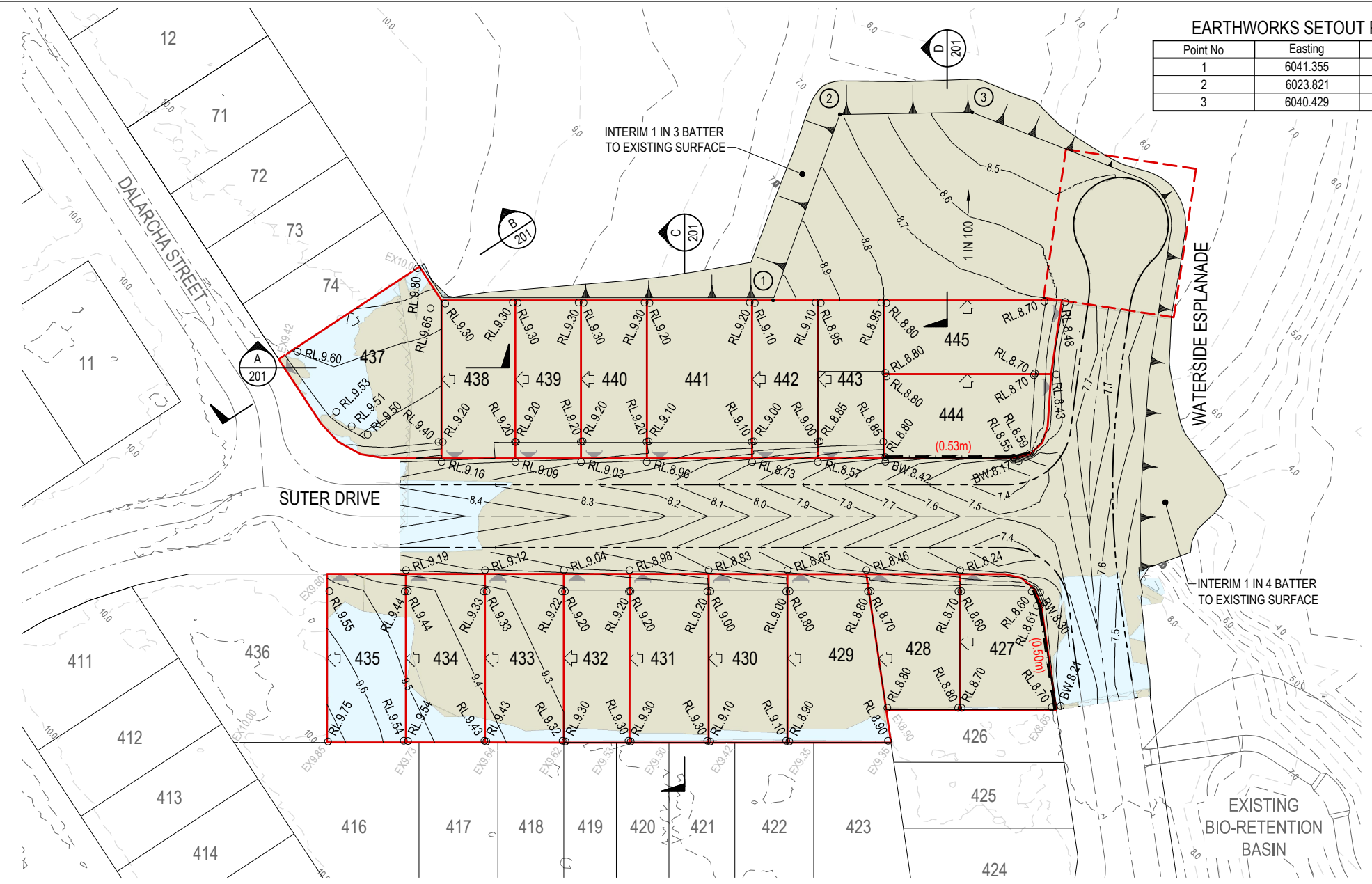
CAUTION !!
UNDERGROUND TELECOMMS CABLES
 UNDERGROUND TELECOMMUNICATION CABLES EXIST IN THIS VICINITY. CONTACT SUPPLIER FOR CABLE LOCATIONS. EXTREME CARE MUST BE TAKEN WHILST EXCAVATING.

CAUTION !!
OVERHEAD ELECTRICAL CABLES
 OVERHEAD ELECTRICITY CABLES EXIST IN THIS VICINITY. CONTACT ENERGEX WHERE CABLE CLEARANCE IS COMPROMISED BY MACHINERY.

NOTE:
 NOTWITHSTANDING THAT EXISTING SERVICES MAY OR MAY NOT BE SHOWN ON THE JOB DRAWINGS, NO RESPONSIBILITY IS TAKEN BY THE SUPERINTENDENT OR THE PRINCIPAL FOR THIS INFORMATION WHICH HAS BEEN SUPPLIED BY OTHERS. THE DETAILS ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR SHALL ASCERTAIN THE POSITION OF ANY UNDERGROUND SERVICES IN THIS AREA AND SHALL BE RESPONSIBLE FOR MAKING GOOD ANY DAMAGE THERETO.

EARTHWORKS SETOUT POINTS

Point No	Easting	Northing
1	6041.355	3348.507
2	6023.821	3381.645
3	6040.429	3400.545

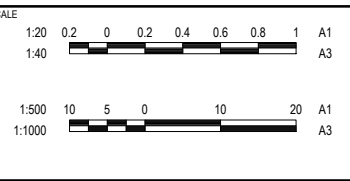


LEGEND

- PROPOSED CONCRETE SLEEPER RETAINING WALL REFER TYPICAL DETAIL
- PROPOSED RETAINING WALL HEIGHT (1.31m)
- EXISTING SURFACE CONTOUR (0.1m INTERVALS)
- BULK EARTHWORKS SURFACE CONTOUR (0.1m INTERVALS)
- AREA OF EARTHWORKS FILL
- AREA OF CUT
- FINISHED SURFACE SPOT LEVEL
- BOTTOM OF RETAINING WALL LEVEL (FINAL SURFACE)
- EXISTING SURFACE LEVEL
- INDICATIVE DRIVEWAY LOCATION
- MANDATORY ZERO LOT LINE
- NOMINAL ZERO LOT LINE
- PROPOSED EARTHWORKS BATTER

REVISION	DATE	ISSUE DETAILS	DRAWN	DESIGN	DRAWN CHECK	STATUS
1	30.03.21	ISSUED FOR APPROVAL	AR	CHC	AR	ISSUED FOR APPROVAL

ISSUED FOR APPROVAL
 APPROVED LESLIE ROCHE RPEQ 14843
 FOR & ON BEHALF OF CALIBRE PROFESSIONAL SERVICES PTY LTD



PEET
 CABOOLTURE SYNDICATE LTD

calibre
 calibregroup.com

RIVERBANK ESTATE STAGE 2A
 DISCLAIMER: ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY. DO NOT SCALE.

M.B.R.C. REF No. DA/2021/0413

PROJECT No.	DRAWING No.	REVISION
21-000078.1	200	1



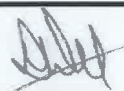
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Appendix 2 – Field Density Reports

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	10-Feb-22
Project:	Riverbank Estate Stage 2A	Tested by:	JL
Location:	Caboolture South, Qld	Checked:	DW / JJ
Report Number:	8	Page	1 of 4
		Order No:	Mick

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/1561	W22/1562	W22/1563
Test Location	Lot 427	Lot 428	Lot 429
	Centre	Centre	Centre
	3rd Lift	3rd Lift	3rd Lift
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	10-Feb-22	10-Feb-22	10-Feb-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
In situ Wet Density (t/m ³)	1.96	1.97	1.94
In situ Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	2.01	2.04	2.00
Peak Added Moisture (%)	+0.6	+1.4	+3.0
Moisture Correction (%)	+0.7	+1.6	+3.4
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	97.5	97.0	97.0
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #42211		

 Authorised Signatory
 Accreditation No: 15070
 Accredited for compliance ISO/IEC 17025 - Testing


Date 22-02-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	10-Feb-22
Project:	Riverbank Estate Stage 2A	Tested by:	JL
Location:	Caboolture South, Qld	Checked:	DW / JJ
Report Number:	9	Page	2 of 4
		Order No:	Mick

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/1564	W22/1565	W22/1566
Test Location	Lot 430	Lot 431	Lot 432
	Centre	Centre	Centre
	3rd Lift	3rd Lift	3rd Lift
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	10-Feb-22	10-Feb-22	10-Feb-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
Insitu Wet Density (t/m ³)	2.00	1.97	1.96
Insitu Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	2.06	2.01	2.00
Peak Added Moisture (%)	+1.8	+1.5	+3.6
Moisture Correction (%)	+2.0	+1.7	+4.0
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	97.0	98.0	98.0
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #42211		





 Authorised Signatory
 Accreditation No: 15070
 Accredited for compliance ISO/IEC 17025 - Testing

Date 22-02-22



WAGNER

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REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	11-Feb-22
Project:	Riverbank Estate Stage 2A	Tested by:	JL
Location:	Caboolture South, Qld	Checked:	JJ
Report Number:	12	Page	1 of 3
		Order No:	Nathan

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/1718	W22/1719	W22/1720
Test Location	Lot 428	Lot 429	Lot 430
	Centre	Centre	Centre
	5th Lift	5th Lift	5th Lift
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	11-Feb-22	11-Feb-22	11-Feb-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
In situ Wet Density (t/m ³)	1.97	1.97	1.94
In situ Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	2.05	2.06	2.03
Peak Added Moisture (%)	-1.2	-2.3	-2.2
Moisture Correction (%)	-1.5	-2.7	-2.6
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	96.0	95.5	96.0
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #42215		



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Accreditation No: 15070
Accredited for compliance ISO/IEC 17025 - Testing

Date 16-02-22

Form No: 95

Version: 5

19-10-21



WAGNER

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REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	11-Feb-22
Project:	Riverbank Estate Stage 2A	Tested by:	JL
Location:	Caboolture South, Qld	Checked:	JJ
Report Number:	13	Page	2 of 3
		Order No:	Nathan

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/1721	W22/1722	W22/1723
Test Location	Lot 431	Lot 432	Lot 433
	Centre	Centre	Centre
	5th Lift	5th Lift	5th Lift
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	11-Feb-22	11-Feb-22	11-Feb-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
In situ Wet Density (t/m ³)	1.98	1.96	1.90
In situ Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	2.06	2.06	2.00
Peak Added Moisture (%)	-1.1	-1.3	-2.1
Moisture Correction (%)	-1.3	-1.5	-2.6
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	96.0	95.5	95.0
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #42215		



Authorised Signatory
Accreditation No: 15070
Accredited for compliance ISO/IEC 17025 - Testing

Date 16-02-22

Form No: 95

Version: 5

19-10-21

CONSTRUCTION

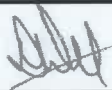
MATERIALS

TESTING

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	07-Apr-22
Project:	Riverbank Estate Stage 2A	Tested by:	PF
Location:	Caboolture South, Qld	Checked:	JJ
Report Number:	14	Page	1 of 1
		Order No:	Mick

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/3679	W22/3680	
Test Location	Lot 445	Lot 443	
	Centre Line	Centre Line	
	4.2m Below FL	4.3m Below FL	
Layer / Elevation	Allotment Fill	Allotment Fill	
Material Source	Onsite	Onsite	
Depth Tested	175	175	
Layer Thickness	200	200	
Date Tested	07-Apr-22	07-Apr-22	
Material Sampled	After Compaction	After Compaction	
Test Results			
In situ Wet Density (t/m ³)	2.02	2.06	
In situ Moisture Content (%)	N/A	N/A	
PCWD (t/m ³)	2.06	2.08	
Peak Added Moisture (%)	+1.7	+1.8	
Moisture Correction (%)	+1.9	+2.0	
Retaining Sieve (mm)	19.0	19.0	
Percentage Oversize (wet)	0.0	0.0	
HILF DENSITY RATIO (%)	98.0	99.0	
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	
Degree of Compaction	95%	95%	
Remarks	Docket #41378		

Authorized Signatory
Accreditation No: 15070
Accredited for compliance ISO/IEC 17025 - Testing


Date 08-04-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	07-Apr-22
Project:	Riverbank Estate Stage 2A	Tested by:	PF
Location:	Caboolture South, Qld	Checked:	JJ
Report Number:	15	Page	1 of 1
		Order No:	Mick

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/3681		
Test Location	Sater Drive		
	Ch 350m		
	3.7m Below FL		
Layer / Elevation	Embankment Fill		
Material Source	Onsite		
Depth Tested	175		
Layer Thickness	200		
Date Tested	07-Apr-22		
Material Sampled	After Compaction		
Test Results			
In situ Wet Density (t/m ³)	2.05		
In situ Moisture Content (%)	N/A		
PCWD (t/m ³)	2.08		
Peak Added Moisture (%)	+2.3		
Moisture Correction (%)	+2.5		
Retaining Sieve (mm)	19.0		
Percentage Oversize (wet)	0.0		
HILF DENSITY RATIO (%)	98.5		
MOISTURE VARIATION (%)			
Compaction Type	Standard		
Degree of Compaction	95%		
Remarks	Docket #41378		




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Date 08-04-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	08-Apr-22
Project:	Riverbank Estate Stage 2A	Tested by:	PF
Location:	Caboolture South, Qld	Checked:	DW
Report Number:	16	Page	1 of 1
		Order No:	Mick

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/3918	W22/3919	W22/3920
Test Location	Lot 443	Lot 442	Lot 441
	Centre Line	Centre Line	Centre Line
	3.4m Below FL	3.4m Below FL	3.4m Below FL
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	08-Apr-22	08-Apr-22	08-Apr-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
In situ Wet Density (t/m ³)	2.08	2.06	2.02
In situ Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	2.13	2.07	2.02
Peak Added Moisture (%)	+2.2	-0.1	+2.2
Moisture Correction (%)	+2.4	-0.1	+2.5
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	97.5	99.5	100.0
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #41333		





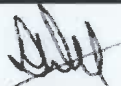
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Date 06-05-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	11-Apr-22
Project:	Riverbank Estate Stage 2A	Tested by:	PF
Location:	Caboolture South, Qld	Checked:	DW
Report Number:	17	Page	1 of 1
		Order No:	Mick

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/3921	W22/3922	W22/3923
Test Location	Lot 443	Lot 444	Lot 445
	Centre Line	Centre Line	Centre Line
	3.1m Below FL	3.1m Below FL	3.1m Below FL
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	11-Apr-22	11-Apr-22	11-Apr-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
In situ Wet Density (t/m ³)	2.01	2.07	2.05
In situ Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	2.06	2.09	2.08
Peak Added Moisture (%)	+2.1	+0.2	+0.8
Moisture Correction (%)	+2.3	+0.2	+0.9
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	98.0	99.0	98.5
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #41338		

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Date 06-05-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	22-Apr-22
Project:	Riverbank Estate Stage 2A	Tested by:	PF
Location:	Caboolture South, Qld	Checked:	DW
Report Number:	18	Page	1 of 1
		Order No:	Mick

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/4640	W22/4641	W22/4642
Test Location	Lot 443	Lot 444	Lot 445
	Left Centre Line	RL:6.5	RL:6.7
	RL:6.8		
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	22-Apr-22	22-Apr-22	22-Apr-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
Insitu Wet Density (t/m ³)	2.06	1.97	2.11
Insitu Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	2.09	2.06	2.13
Peak Added Moisture (%)	+2.9	+3.6	+2.4
Moisture Correction (%)	+3.2	+3.9	+2.6
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	99.0	96.0	99.0
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #42867		



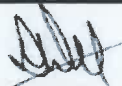

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Date 13-05-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	20-Apr-22
Project:	Riverbank Estate Stage 2A	Tested by:	PF
Location:	Caboolture South, Qld	Checked:	DW
Report Number:	19	Page	1 of 1
		Order No:	Nick

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/5551	W22/5552	W22/5553
Test Location	Lot 444	Lot 442	Lot 443
	2.0m below FL	2.0m Below FOL	2.4m Below FL
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	20-Apr-22	20-Apr-22	20-Apr-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
Insitu Wet Density (t/m ³)	2.08	2.06	2.02
Insitu Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	2.11	2.15	2.10
Peak Added Moisture (%)	+1.3	+0.7	+0.1
Moisture Correction (%)	+1.5	+0.8	+0.1
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	98.5	96.0	96.0
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #42853		

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Date 30-05-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	20-Apr-22
Project:	Riverbank Estate Stage 2A	Tested by:	PF
Location:	Caboolture South, Qld	Checked:	DW
Report Number:	20	Page	1 of 1
		Order No:	Nick

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/5554	W22/5555	
Test Location	Bute Road	Bute Road	
	Ch 310m	Ch 340m	
	2.5m Below FL	2.8m Below FL	
Layer / Elevation	Embankment Fill	Embankment Fill	
Material Source	Onsite	Onsite	
Depth Tested	175	175	
Layer Thickness	200	200	
Date Tested	20-Apr-22	20-Apr-22	
Material Sampled	After Compaction	After Compaction	
Test Results			
In situ Wet Density (t/m ³)	2.02	2.03	
In situ Moisture Content (%)	N/A	N/A	
PCWD (t/m ³)	2.11	2.10	
Peak Added Moisture (%)	+0.9	+0.8	
Moisture Correction (%)	+1.0	+0.9	
Retaining Sieve (mm)	19.0	19.0	
Percentage Oversize (wet)	0.0	0.0	
HILF DENSITY RATIO (%)	96.0	96.5	
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	
Degree of Compaction	95%	95%	
Remarks	Docket #42853		




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Date 30-05-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	22-Jun-22
Project:	Riverbank Estate Stage 2A	Tested by:	JL
Location:	Caboolture South, Qld	Checked:	DW
Report Number:	35	Page	1 of 1
		Order No:	Mick

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/7455	W22/7456	W22/7457
Test Location	N: 7003389	N: 7003417	N: 7003463
Park Area	E: 496144	E: 496124	E: 496094
	EL: 1.0m	EL: 6.0m	EL: 6.0m
Layer / Elevation	Pad Fill	Pad Fill	Pad Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	22-Jun-22	22-Jun-22	22-Jun-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
In situ Wet Density (t/m ³)	1.84	1.90	1.87
In situ Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	1.92	1.89	1.87
Peak Added Moisture (%)	-1.3	+0.0	+0.4
Moisture Correction (%)	-1.6	+0.0	+0.5
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	96.0	100.5	100.5
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #43418		




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Date 07-07-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	23-Jun-22
Project:	Riverbank Estate Stage 2A	Tested by:	JL
Location:	Caboolture South, Qld	Checked:	DW
Report Number:	36	Page	1 of 2
		Order No:	Mick

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/7599	W22/7600	W22/7601
Test Location	Lot 440	Lot 441	Lot 442
Park Area	Centre	Centre	Centre
	0.5m Below FL	0.5m Below FL	0.5m Below FL
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	23-Jun-22	23-Jun-22	23-Jun-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
In situ Wet Density (t/m ³)	1.94	2.02	1.99
In situ Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	2.02	2.03	2.05
Peak Added Moisture (%)	-1.4	+0.3	-0.2
Moisture Correction (%)	-1.7	+0.3	-0.2
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	96.5	99.0	97.0
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #43421		




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Date 07-07-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	23-Jun-22
Project:	Riverbank Estate Stage 2A	Tested by:	JL
Location:	Caboolture South, Qld	Checked:	DW
Report Number:	37	Page	2 of 2
		Order No:	Mick

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/7602	W22/7603	W22/7604
Test Location	Lot 437	Lot 438	Lot 439
Park Area	Centre	Centre	Centre
	0.5m Below FL	0.5m Below FL	0.5m Below FL
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	23-Jun-22	23-Jun-22	23-Jun-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
In situ Wet Density (t/m ³)	1.95	2.00	1.97
In situ Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	2.00	2.00	1.99
Peak Added Moisture (%)	+1.1	+0.0	+1.4
Moisture Correction (%)	+1.3	+0.0	+1.6
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	98.0	100.0	99.5
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #43421		




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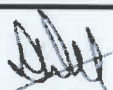
Date 07-07-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	16-Jul-22
Project:	Riverbank Estate Stage 2A	Tested by:	JL
Location:	Caboolture South, Qld	Checked:	JJ
Report Number:	59 Page 1 of 6	Order No:	JJ

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/9326	W22/9327	W22/9328
Test Location	Lot 427	Lot 428	Lot 429
	Centre	Centre	Centre
	Final Level	Final Level	Final Level
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	16-Jul-22	16-Jul-22	16-Jul-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
In situ Wet Density (t/m ³)	1.93	1.89	1.94
In situ Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	1.96	1.94	1.97
Peak Added Moisture (%)	+0.3	-0.1	+1.5
Moisture Correction (%)	+0.4	-0.1	+1.7
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	98.0	97.5	98.5
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #43953		





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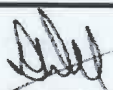
Date 01-08-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	16-Jul-22
Project:	Riverbank Estate Stage 2A	Tested by:	JL
Location:	Caboolture South, Qld	Checked:	JJ
Report Number:	60	Page	2 of 6
		Order No:	JJ

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/9329	W22/9330	W22/9331
Test Location	Lot 430	Lot 431	Lot 432
	Centre	Centre	Centre
	Final Level	Final Level	Final Level
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	16-Jul-22	16-Jul-22	16-Jul-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
In situ Wet Density (t/m ³)	1.92	2.00	1.90
In situ Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	1.96	1.99	1.94
Peak Added Moisture (%)	+0.9	+0.5	+2.4
Moisture Correction (%)	+1.0	+0.6	+2.8
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	98.0	100.5	97.5
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #43953		





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Date 01-08-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	16-Jul-22
Project:	Riverbank Estate Stage 2A	Tested by:	JL
Location:	Caboolture South, Qld	Checked:	JJ
Report Number:	61 Page 3 of 6	Order No:	JJ

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/9332	W22/9333	W22/9334
Test Location	Lot 433	Lot 434	Lot 444
	Centre	Centre	Centre
	Final Level	Final Level	Final Level
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	16-Jul-22	16-Jul-22	16-Jul-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
In situ Wet Density (t/m ³)	2.01	1.96	1.93
In situ Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	2.00	1.99	1.97
Peak Added Moisture (%)	+0.0	+1.6	-0.4
Moisture Correction (%)	+0.0	+1.8	-0.5
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	100.5	100.0	98.0
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #43953		




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Date 01-08-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	16-Jul-22
Project:	Riverbank Estate Stage 2A	Tested by:	JL
Location:	Caboolture South, Qld	Checked:	JJ
Report Number:	62 Page 4 of 6	Order No:	JJ

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/9335	W22/9336	W22/9337
Test Location	Lot 443	Lot 442	Lot 441
	Centre	Centre	Centre
	Final Level	Final Level	Final Level
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	16-Jul-22	16-Jul-22	16-Jul-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
In situ Wet Density (t/m ³)	2.01	1.99	1.92
In situ Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	2.02	1.98	1.94
Peak Added Moisture (%)	+0.7	+0.7	-0.4
Moisture Correction (%)	+0.8	+0.8	-0.5
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	99.5	100.5	99.5
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #43953		




 Authorised Signatory
 Accreditation No: 15070
 Accredited for compliance ISO/IEC 17025 - Testing

Date 01-08-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	16-Jul-22
Project:	Riverbank Estate Stage 2A	Tested by:	JL
Location:	Caboolture South, Qld	Checked:	JJ
Report Number:	63 Page 5 of 6	Order No:	JJ

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/9338	W22/9339	W22/9340
Test Location	Lot 440	Lot 439	Lot 438
	Centre	Centre	Centre
	Final Level	Final Level	Final Level
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	16-Jul-22	16-Jul-22	16-Jul-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
Insitu Wet Density (t/m ³)	1.92	1.98	1.97
Insitu Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	1.93	2.00	1.96
Peak Added Moisture (%)	+0.9	+0.3	+0.8
Moisture Correction (%)	+1.1	+0.4	+0.9
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	99.5	99.0	100.5
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #43953		




 Authorised Signatory
 Accreditation No: 15070
 Accredited for compliance ISO/IEC 17025 - Testing

Date 01-08-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	16-Jul-22
Project:	Riverbank Estate Stage 2A	Tested by:	JL
Location:	Caboolture South, Qld	Checked:	JJ
Report Number:	64 Page 6 of 6	Order No:	JJ

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/9341	W22/9342	W22/9343
Test Location	Lot 437	Lot 445	Lot 435
	Centre	Centre	Front of Lot
	Final Level	Final Level	Final Level
Layer / Elevation	Allotment Fill	Allotment Fill	Allotment Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	16-Jul-22	16-Jul-22	16-Jul-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
In situ Wet Density (t/m ³)	1.98	2.00	1.95
In situ Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	1.97	2.02	1.99
Peak Added Moisture (%)	+1.4	+0.0	+0.5
Moisture Correction (%)	+1.6	+0.0	+0.6
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	100.5	99.0	98.0
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #43953		





Authorised Signatory
Accreditation No: 15070
Accredited for compliance ISO/IEC 17025 - Testing


Date 01-08-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	16-Jul-22
Project:	Riverbank Estate Stage 2A	Tested by:	JL
Location:	Caboolture South, Qld	Checked:	JJ
Report Number:	65	Page	1 of 1
		Order No:	JJ

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/9344	W22/9345	
Test Location	Suter Parade	Waterside Esplanade	
	Ch 300m	Ch 60m	
	Final Level	Final Level	
Layer / Elevation	Embankment Fill	Embankment Fill	
Material Source	Onsite	Onsite	
Depth Tested	175	175	
Layer Thickness	200	200	
Date Tested	16-Jul-22	16-Jul-22	
Material Sampled	After Compaction	After Compaction	
Test Results			
Insitu Wet Density (t/m ³)	1.96	1.97	
Insitu Moisture Content (%)	N/A	N/A	
PCWD (t/m ³)	1.99	1.99	
Peak Added Moisture (%)	+2.9	+2.6	
Moisture Correction (%)	+3.3	+2.9	
Retaining Sieve (mm)	19.0	19.0	
Percentage Oversize (wet)	0.0	0.0	
HILF DENSITY RATIO (%)	98.5	99.5	
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	
Degree of Compaction	95%	95%	
Remarks	Docket #43955		





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 Accreditation No: 15070
 Accredited for compliance ISO/IEC 17025 - Testing

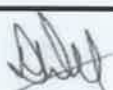
Date 01-08-22

REPORT ON FIELD HILF DENSITY - NUCLEAR METER

Client:	CCA Winslow	Job No:	J22/16
Client Address:	1587 Ipswich Road, Rocklea Qld 4106	Date:	28-Jul-22
Project:	Riverbank Estate Stage 2A	Tested by:	JL
Location:	Caboolture South, Qld	Checked:	JJ
Report Number:	71 Page 1 of 1	Order No:	Mick

Test Methods	AS 1289 5.8.1/5.7.1/5.1.1		
Sample Method	Earthworks Layer (Compact) AS 1289 1.2.1 (6.4(b))		
Lab Number	W22/9503	W22/9504	W22/9505
Test Location	N: 7003416	N: 7003451	N: 7003475
Park	E: 496147	E: 496137	E: 496096
	EL: 12.0m	EL: 8.0m	EL: 12.0m
Layer / Elevation	Fill	Fill	Fill
Material Source	Onsite	Onsite	Onsite
Depth Tested	175	175	175
Layer Thickness	200	200	200
Date Tested	28-Jul-22	28-Jul-22	28-Jul-22
Material Sampled	After Compaction	After Compaction	After Compaction
Test Results			
Insitu Wet Density (t/m ³)	1.92	1.87	1.89
Insitu Moisture Content (%)	N/A	N/A	N/A
PCWD (t/m ³)	1.95	1.95	1.98
Peak Added Moisture (%)	+2.6	+0.7	+2.0
Moisture Correction (%)	+3.0	+0.8	+2.3
Retaining Sieve (mm)	19.0	19.0	19.0
Percentage Oversize (wet)	0.0	0.0	0.0
HILF DENSITY RATIO (%)	98.5	95.5	95.5
MOISTURE VARIATION (%)			
Compaction Type	Standard	Standard	Standard
Degree of Compaction	95%	95%	95%
Remarks	Docket #43964		




 Authorised Signatory
 Accreditation No: 15070
 Accredited for compliance ISO/IEC 17025 - Testing

Date 01-08-22

Appendix 3 – Typical Site Conditions





PO Box 171, Wamuran Qld 4512
296 Old North Road, Wamuran Qld 4512
Office: 07 5496 6715
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ABN: 49 416 679 791
Email: admin@wagnersoilstesting.com.au
Website: www.wagnersoilstesting.com.au

Appendix 4 – Site Information

Information

Important Information about your Report

As a client of Wagner Soil Testing Pty Ltd you should know that site subsurface conditions cause more construction problems than any other factor. These notes have been provided to help you interpret and understand the limitations of your report.

Your report is project specific

Your report has been developed on the basis of your unique project specific requirements as understood by Wagner Soil Testing and applies only to the site investigated. Project criteria typically include the general nature of the project; its size and configuration; the location of any structure on the site; other site improvements; the presence of underground utilities; and the additional risk imposed by scope-of-surface limitations imposed by the client. Your report should not be used if there are any changes to the project without first asking Wagner Soil Testing to assess how factors that changed subsequent to the date of the report affect the report's recommendations. Wagner Soil Testing cannot accept responsibility for problems that may occur due to changed factors if they are not consulted. Our report does not take into account any existing filled ground or any other unforeseen subsurface conditions that may change anticipated site classification.

Subsurface conditions can change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. Do not rely on a geotechnical engineering report whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. Always contact Wagner Soil Testing before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Interpretation of factual data

Site assessment identifies actual subsurface conditions only at those points where samples are taken and when they are taken. Data derived from literature and external data source review, sampling and subsequent laboratory testing are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact on the proposed development and recommended actions. Actual conditions may differ from those inferred to exist, because no professional, no matter how qualified, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but steps can be taken to reduce the impact of unexpected conditions. For this reason, owners

should retain the services of Wagner Soil Testing through the development stage, to identify variances, conduct additional tests if required, and recommend solutions to problems encountered on site.

Your report will only give preliminary recommendations

Your report is based on the assumption that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area. This assumption cannot be substantiated until project implementation has commenced and therefore your report recommendations can only be regarded as preliminary. Only Wagner Soil Testing, who prepared the report, is fully familiar with the background information needed to assess whether or not the report's recommendations are valid and whether or not changes should be considered as the project develops. If another party undertakes the implementation of recommendations of this report, there is a risk that the report will be misinterpreted, and Wagner Soil Testing cannot be held responsible for such misinterpretation.

Your report is prepared for specific purposes and persons

To avoid misuse of the information contained in your report it is recommended that you confer with Wagner Soil Testing before passing your report on to another party who may not be familiar with the background and purpose of the report. Your report should not be applied to any project other than that originally specified at the time the report was issued.

It is a requirement that the client contacts Wagner Soil Testing Pty Ltd when the exact position of the proposed building is confirmed so we can check if our Boreholes fall in the footing area [our borelogs are only presumed indicative of the whole area until this is confirmed]. In the case of a cracked house investigation more testing may be required to conclude all possible causes of settlement and or movement. Initial drilling and lab testing may only identify some of the causes of the problem. Wagner Soil Testing should be contacted when additional testing is required. It is a company policy that Wagner Soil Testing are contacted if the development (including any portion and/or envelope) is sold and/or changes title as the report is only for the use of our direct client. If the development is sold and/or changes title Wagner Soil Testing must be contacted and subsequently will carry out a comprehensive site inspection – evaluation at no cost to ensure the preliminary report is relevant and no changes whatsoever have been made.

Lot Level One Certification

Guidelines on Earthworks for Commercial & Residential Developments – AS3798

Project:	Riverbank Estate Stage 2A & 2B
Lot No:	Lot 427
Job No:	J22/16
Earthworks Contractor:	CCA Winslow
Date:	22/07/2022

The results obtained from Compaction Control Testing, together with observations made during earthworks operations indicate that all fill materials were placed in a controlled manner in accordance with good engineering practices. The earthworks have been carried out to meet the requirements of **Level 1 Certification as per AS3798 – “Guidelines on Earthworks for Commercial and Residential Developments”**.



Jacob Jones
Laboratory Manager
Wagner Soil Testing

Notes:

Certified (Level 1) fill is only an assurance of its density. There are sites where long-term consolidations of fill can occur, unrelated to its actual density. Sites where fill has been placed over inferior material and sites where the depth of controlled fill varies dramatically over short distances are sites where differential consolidations must be considered. Although all Field Densities carried out reached density ratios greater than 95% as required, some material still may have bearing ratios below 100kPa as per AS2870 – Residential Slabs & Footings depending on material composition. Unless otherwise stated, Level 1 Certification does not address any other geotechnical issues which may be relevant to building construction. Trench backfill operations are not covered in this Level 1 Report. Site drainage must be maintained after the issue of this report. Wagner Soil Testing is to be contacted immediately if any site levels are modified whatsoever, especially at the building preparation phase. The “supervision” component of the Level 1 report is not NATA endorsed. A full geotechnical site investigation / classification and foundation design for the specific ground conditions should be carried out by suitably qualified or experienced personnel prior to building. This service can be provided, if required, by contacting Wagner Soil Testing. For further technical support regarding this Geotechnical Report please contact Mr. Jacob Jones of Wagner Soil Testing.

Lot Level One Certification

Guidelines on Earthworks for Commercial & Residential Developments – AS3798

Project:	Riverbank Estate Stage 2A & 2B
Lot No:	Lot 428
Job No:	J22/16
Earthworks Contractor:	CCA Winslow
Date:	22/07/2022

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Jacob Jones
Laboratory Manager
Wagner Soil Testing

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Lot Level One Certification

Guidelines on Earthworks for Commercial & Residential Developments – AS3798

Project:	Riverbank Estate Stage 2A & 2B
Lot No:	Lot 429
Job No:	J22/16
Earthworks Contractor:	CCA Winslow
Date:	22/07/2022

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Laboratory Manager
Wagner Soil Testing

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Lot Level One Certification

Guidelines on Earthworks for Commercial & Residential Developments – AS3798

Project:	Riverbank Estate Stage 2A & 2B
Lot No:	Lot 430
Job No:	J22/16
Earthworks Contractor:	CCA Winslow
Date:	22/07/2022

The results obtained from Compaction Control Testing, together with observations made during earthworks operations indicate that all fill materials were placed in a controlled manner in accordance with good engineering practices. The earthworks have been carried out to meet the requirements of **Level 1 Certification as per AS3798 – “Guidelines on Earthworks for Commercial and Residential Developments”**.



Jacob Jones
Laboratory Manager
Wagner Soil Testing

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Lot Level One Certification

Guidelines on Earthworks for Commercial & Residential Developments – AS3798

Project:	Riverbank Estate Stage 2A & 2B
Lot No:	Lot 431
Job No:	J22/16
Earthworks Contractor:	CCA Winslow
Date:	22/07/2022

The results obtained from Compaction Control Testing, together with observations made during earthworks operations indicate that all fill materials were placed in a controlled manner in accordance with good engineering practices. The earthworks have been carried out to meet the requirements of **Level 1 Certification as per AS3798 – “Guidelines on Earthworks for Commercial and Residential Developments”**.



Jacob Jones
Laboratory Manager
Wagner Soil Testing

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Lot Level One Certification

Guidelines on Earthworks for Commercial & Residential Developments – AS3798

Project:	Riverbank Estate Stage 2A & 2B
Lot No:	Lot 432
Job No:	J22/16
Earthworks Contractor:	CCA Winslow
Date:	22/07/2022

The results obtained from Compaction Control Testing, together with observations made during earthworks operations indicate that all fill materials were placed in a controlled manner in accordance with good engineering practices. The earthworks have been carried out to meet the requirements of **Level 1 Certification as per AS3798 – “Guidelines on Earthworks for Commercial and Residential Developments”**.



Jacob Jones
Laboratory Manager
Wagner Soil Testing

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Lot Level One Certification

Guidelines on Earthworks for Commercial & Residential Developments – AS3798

Project:	Riverbank Estate Stage 2A & 2B
Lot No:	Lot 433
Job No:	J22/16
Earthworks Contractor:	CCA Winslow
Date:	22/07/2022

The results obtained from Compaction Control Testing, together with observations made during earthworks operations indicate that all fill materials were placed in a controlled manner in accordance with good engineering practices. The earthworks have been carried out to meet the requirements of **Level 1 Certification as per AS3798 – “Guidelines on Earthworks for Commercial and Residential Developments”**.



Jacob Jones
Laboratory Manager
Wagner Soil Testing

Notes:

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Lot Level One Certification

Guidelines on Earthworks for Commercial & Residential Developments – AS3798

Project:	Riverbank Estate Stage 2A & 2B
Lot No:	Lot 434
Job No:	J22/16
Earthworks Contractor:	CCA Winslow
Date:	22/07/2022

The results obtained from Compaction Control Testing, together with observations made during earthworks operations indicate that all fill materials were placed in a controlled manner in accordance with good engineering practices. The earthworks have been carried out to meet the requirements of **Level 1 Certification as per AS3798 – “Guidelines on Earthworks for Commercial and Residential Developments”**.



Jacob Jones
Laboratory Manager
Wagner Soil Testing

Notes:

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Lot Level One Certification

Guidelines on Earthworks for Commercial & Residential Developments – AS3798

Project:	Riverbank Estate Stage 2A & 2B
Lot No:	Lot 435
Job No:	J22/16
Earthworks Contractor:	CCA Winslow
Date:	22/07/2022

The results obtained from Compaction Control Testing, together with observations made during earthworks operations indicate that all fill materials were placed in a controlled manner in accordance with good engineering practices. The earthworks have been carried out to meet the requirements of **Level 1 Certification as per AS3798 – “Guidelines on Earthworks for Commercial and Residential Developments”**.



Jacob Jones
Laboratory Manager
Wagner Soil Testing

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Lot Level One Certification

Guidelines on Earthworks for Commercial & Residential Developments – AS3798

Project:	Riverbank Estate Stage 2A & 2B
Lot No:	Lot 437
Job No:	J22/16
Earthworks Contractor:	CCA Winslow
Date:	22/07/2022

The results obtained from Compaction Control Testing, together with observations made during earthworks operations indicate that all fill materials were placed in a controlled manner in accordance with good engineering practices. The earthworks have been carried out to meet the requirements of **Level 1 Certification as per AS3798 – “Guidelines on Earthworks for Commercial and Residential Developments”**.



Jacob Jones
Laboratory Manager
Wagner Soil Testing

Notes:

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Lot Level One Certification

Guidelines on Earthworks for Commercial & Residential Developments – AS3798

Project:	Riverbank Estate Stage 2A & 2B
Lot No:	Lot 438
Job No:	J22/16
Earthworks Contractor:	CCA Winslow
Date:	22/07/2022

The results obtained from Compaction Control Testing, together with observations made during earthworks operations indicate that all fill materials were placed in a controlled manner in accordance with good engineering practices. The earthworks have been carried out to meet the requirements of **Level 1 Certification as per AS3798 – “Guidelines on Earthworks for Commercial and Residential Developments”**.



Jacob Jones
Laboratory Manager
Wagner Soil Testing

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Lot Level One Certification

Guidelines on Earthworks for Commercial & Residential Developments – AS3798

Project:	Riverbank Estate Stage 2A & 2B
Lot No:	Lot 439
Job No:	J22/16
Earthworks Contractor:	CCA Winslow
Date:	22/07/2022

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Lot Level One Certification

Guidelines on Earthworks for Commercial & Residential Developments – AS3798

Project:	Riverbank Estate Stage 2A & 2B
Lot No:	Lot 440
Job No:	J22/16
Earthworks Contractor:	CCA Winslow
Date:	22/07/2022

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Lot No:	Lot 441
Job No:	J22/16
Earthworks Contractor:	CCA Winslow
Date:	22/07/2022

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Project:	Riverbank Estate Stage 2A & 2B
Lot No:	Lot 442
Job No:	J22/16
Earthworks Contractor:	CCA Winslow
Date:	22/07/2022

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Project:	Riverbank Estate Stage 2A & 2B
Lot No:	Lot 443
Job No:	J22/16
Earthworks Contractor:	CCA Winslow
Date:	22/07/2022

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Lot No:	Lot 444
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