



# Level 1 Inspection and Testing Report

## Stage 11 Brushwood Estate

## Neilson St Edgeworth

Report Ref: P22721-L1R-001-Rev0

Written by: Scott Callinan (Laboratory Operations Manager)

Reviewed by: Nathan Roberts (Geotechnical Engineering Manager)

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Client: Edgeworth Developments



**13 February 2023**

**Prepared for**

**Edgeworth Developments**

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**Attn: Kevin Urane**

**Certification of Engineered Fill**

**Re: Level 1 Inspection & Testing for Proposed Subdivision**

**Lot 1 & 2 DP1011589, Neilson Street, Edgeworth - Brushwood Estate Stage 11**

This letter addresses our report for the provision of Level 1 earthworks inspection and testing certification undertaken by Hunter Civilab (HC) at the above-mentioned project.

Should you require further information regarding the outlined report, please do not hesitate to contact the undersigned.

For and on behalf of Hunter Civilab,

A handwritten signature in black ink, appearing to read "N. Roberts", written over a light blue horizontal line.

**Nathan Roberts**

Geotechnical Engineering Manager

**Distribution List:**

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## 1 Introduction

This report presents the results of Level 1 Inspection and Testing undertaken by Hunter Civilab (HC) during the placement of engineered fill for Lot 1 & 2 DP1011589, Neilson Street, Edgeworth - Brushwood Estate Stage 11.

These services were provided and carried out in accordance with HC's proposal Q2021\_194 dated 15<sup>th</sup> of March 2021.

## 2 Background and Project Summary

Earthworks Level 1 Inspection and Testing, as defined in AS3798-2007 "Guidelines on Earthworks for Commercial and Residential Development," provides supervision and inspection of engineered fill construction work: incorporating field and laboratory testing in accordance with AS1289 "Methods of Testing Soils for Engineering Purposes".

The Level 1 Inspection and testing was undertaken by Geotechnicians from HC in the following approximate Stage 11 locations:

- **Remediation Area #1**, (Building Lots 1110 & 1111) Foundation @RL5.97m Finish @RL10.3m (Capping of the area with 2.0m of clean natural material from approximately RL8.3m -RL10.3m)
- **Remediation Area #2**, (under building lot 1108 & 1109) Foundation @RL7.3m Finish @RL12.5m (Capping of the area with 2.0m of clean natural material from approximately RL10.5m -RL12.5m)
- **Remediation Area #3**, (Building Lots 1101 & 1102) foundation @RL11.2m Finish @RL16.0m (Capping of the area with 2.0m of clean natural material from approximately RL14.0m -RL16.0m)
- **Remediation Area #4**, (Building Lots 1103 & 1104) foundation @RL11.6m Finish @RL14.9m (Capping of the area with 2.0m of clean natural material from approximately RL13.0m-RL14.9m)
- **Remediation Area #8, Part in Stage 10 & 11** (Building Lots 1101, 1011, 1012) foundation @12.57m Finish @RL17.6m (Capping of the area with 2.0m of clean natural material from approximately RL13.0m-RL14.9m)
- **Building Lot 1105**, Foundation @RL13.7m Finish @RL14.4m
- **Building Lot 1106**, Foundation @RL13.4m Finish @RL14.0m
- **Building Lot 1107**, Foundation @RL13.2m Finish @RL13.8m

The earthworks contractor for the project was engaged under Edgeworth Developments. HC was engaged by Edgeworth Developments to undertake the compaction control testing of the engineered fill material as part of the Level 1 Inspection and Testing process. HC holds NATA accreditation for a construction material testing laboratory.

This certification report is applicable to engineered fill placed by the contractor in the approximate areas noted above on the site during the period of engagement. The report does not include trench backfill or any other fill that may be placed during or after this period or subsequent periods at or surrounding the subject site unless otherwise noted. The report does not include any disturbance to the placed fill post

period of Level 1 supervision including any trafficking resulting in rutting of exposed surfaces during construction, or exposure to inclement weather prior to concrete pour or the sealing of placed areas.

### **3 Specifications**

The specifications for this project were given to HC by Edgeworth Developments via email and later confirmed by telephone conversation and follow up onsite meeting.

All earthworks were to be constructed with the following requirements for the formation layers:

- General Fill Zones - in 0.3m layers compacted at 95% (Standard) Density Ratio at -2% to 2% of Optimum Moisture Content; and
- Capping layers of 2.0m over remediation areas within building lots – in 300mm layers compacted at 98% (Standard) Density Ratio at -2% to 2% of Optimum Moisture Content.

The following referenced documents were supplied:

- Plans titled: Construction Certificate for Stage 11, DP1011589, Neilson St Edgeworth for Edgeworth Developments Pty Ltd.
- Geotechnical Report titled: Pavement Investigation & Design Report, P1225-R001-Rev1 dated 25/08/2017; and
- AS3798-2007 *'Guidelines on earthworks for commercial and residential developments.*

### **4 Subgrade Assessment and Preparation**

Prior to the placement of any fill under the supervision of HC, the site was stripped of the existing material to expose the sandy “Weathered Sandstone” foundation. Proof rolling typically involved the use of a 12T static smooth drum roller traversing at walking pace with a minimum of 6 passes, whilst a suitably qualified geotechnical consultant from HC observed for any visual deformations. Any such deformations were assessed for impact on the project and rectification advice and works undertaken prior to the placement of any fill. The foundation inspections were conducted for the proposed areas, conformance tests were conducted throughout the filling process under the presence of HC’s personnel which includes inspection, compaction, and proof rolling. Inspection of building lot areas involved visual identification and confirmation that engineered fill is homogenous and is rid of any deleterious materials before and during placement.

### **5 Fill Material**

The material used for the engineered fill was all onsite won material which included natural residual clays and rock (sandstone, siltstone, claystone) and existing site spoil / fill (which was remediated by way of sifting / sorting prior to its use as engineered general fill).

### **6 Fill Construction**

The fill construction at the site comprised of placing onsite won material as described in **Section 5** above, within the Engineered Fill Zones.

Typical items of plant used in the engineered fill construction consisted of but not limited to: two x 30t Excavators, a 12t Padfoot Roller, a Water Cart, and (2) two x Moxy Dump Trucks.

## **7 Testing and Results**

Field density testing was undertaken progressively on the compacted fill layers at the required minimum frequency outlined in AS3798-2007 '*Guidelines for Earthworks for Commercial and Residential Developments*'.

All Compliant field density tests were undertaken on all engineered fill zones throughout the engineered filling process from foundation to finish level.

## **8 Accepted Marginally Non-Conforming Moisture Results**

The guidelines as presented in **Section 3** were adhered to by HC Geotechnicians, however, marginal moisture non-conformances were noted within the general fill below capping layers. These marginal moisture non-conformances were flagged with the client as part of the compliance process and provisions put in place to reduce this issue.

Acceptance of the marginal moisture non-conformances was primarily based on:

- compaction being achieved.
- the onsite won material having naturally high moisture content, and
- the high rainfall activity that was experienced during the construction phase.

## **9 Exclusions**

This report does not include trench backfill or any other fill that may be placed during or after this period or subsequent periods at or surrounding the subject site unless otherwise noted. The report does not include any disturbance to the placed fill post period of Level 1 supervision including any trafficking resulting in rutting of exposed surfaces during construction, or exposure to inclement weather prior to concrete pour or the sealing of placed areas.

## **10 Statement of Compliance**

HC personnel have provided Level 1 Inspection and Testing services during the construction of the engineered fill construction to the approximate design finished levels.

Any subsequent fill placed on the site above the design levels described in the above paragraph and/or after the completion of our testing will be considered outside the scope of this report.

A geotechnical professional from HC was on site as requested by Edgeworth Developments during subgrade preparation, fill placement and observed the construction techniques adopted.

Based on observations made by HC and the results of field and laboratory tests, HC assess that the fill placed by Edgeworth Developments for the bulk earthworks for the proposed residential development meets the requirements of controlled fill as per the AS 3798-2007 'Guidelines for Earthworks for Commercial and Residential Developments' Specifications.

## **11 Limit of Liability**

This report has been produced for and is the property of our client Edgeworth Developments.

Hunter Civilab accepts no liability to any third party and will not enter any communication with a third party regarding this report.

HC will not release this report to any third party without the written consent of our client.

If you have any further questions about this report, please contact the undersigned.

For and on behalf of

Valley Civilab Pty Ltd, trading as Hunter Civilab

Reported by:



**Scott Callinan**

*Laboratory Operations Manager*

Reviewed by:



**Nathan Roberts**

*Geotechnical Engineering Manager*



# Annex A



# Project Summary Report



**Report Date:** 31/01/2023  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Specification:** 95% Minimum Density Ratio  
**Test Methods:** AS 1289 5.7.1 STD & 5.8.1 & 2.1.1

Hunter Civilab  
 62 Sandringham Avenue Thornton NSW 2322  
 Phone: (02) 4966 1844  
 Email: office@huntercivilab.com.au

Lot #	Sample #	Date Sampled	Location	Location		Elevation (m)	Layer	Compaction Method	Relative Compaction (%)	Moisture Variation (%)	Moisture Content (%)	Field Wet Density (t/m3)
**	22-6574A	11/02/2022	Remediation Area 1 Grid V/47	**	**	Gen Fill	1	Standard	101.0	-0.5	23.4	1.99
**	22-6574B	11/02/2022	Remediation Area 1 Grid W/42	**	**	Gen Fill	2	Standard	101.0	-0.5	21.2	2.00
**	22-6574C	11/02/2022	Remediation Area 1 Grid Y/50	**	**	Gen Fill	3	Standard	101.5	0.0	24.6	2.01
**	22-6592A	15/02/2022	Remediation Area 1 Grid Y,50	**	**	Gen Fill	4	Standard	99.0	-2.5	21.2	1.99
**	22-6592B	15/02/2022	Remediation Area 1 Grid X,49	**	**	Gen Fill	5	Standard	99.0	-2.0	21.9	1.99
**	22-6592C	15/02/2022	Remediation Area 1 Grid Z,51	**	**	Gen Fill	6	Standard	102.5	-0.5	21.6	1.98
**	22-6625A	16/02/2022	Remediation Area 1 Grid T/47	**	**	Gen Fill	7	Standard	96.0	-0.5	15.2	2.02
**	22-6625B	16/02/2022	Remediation Area 1 Grid S/51	**	**	Gen Fill	8	Standard	95.5	-1.5	13.9	2.02
**	22-6625C	16/02/2022	Remediation Area 1 Grid N/46	**	**	Gen Fill	9	Standard	97.5	0.0	13.6	2.06
**	22-6718A	22/02/2022	Remediation Area 1, Lot 1111 Grids Z,50	**	**	Capping	1	Standard	103.0	0.5	17.3	2.06
**	22-6718B	22/02/2022	Remediation Area 1, Lot 1111 Grids X,52	**	**	Capping	2	Standard	102.5	0.5	16.4	2.07
**	22-6718C	22/02/2022	Remediation Area 1, Lot 1110 Grids W,44	**	**	Capping	1	Standard	101.5	2.0	15.8	2.07
**	22-6718D	22/02/2022	Remediation Area 1, Lot 1110 Grids AA,47	**	**	Capping	2	Standard	101.0	2.5	15.8	2.06
**	22-6911A	15/03/2022	Remediation Area #1 Building Lot 1110, Grids X,48	**	**	**	Capping Layer 3	Standard	106.0	2.5	13.0	2.18
**	22-6911B	15/03/2022	Remediation Area #1 Building Lot 1111, Grids Y,51	**	**	**	Capping Layer 3	Standard	105.0	0.5	13.3	2.16
**	22-6911C	15/03/2022	Remediation Area #1 Building Lot 1110, Grids W,47	**	**	**	Capping Layer 4	Standard	106.5	0.0	12.5	2.18
**	22-6911D	15/03/2022	Remediation Area #1 Building Lot 1111, Grids Z,50	**	**	**	Capping Layer 4	Standard	106.5	1.5	12.6	2.18
**	22-7804A	15/06/2022	Remediation Area #2 Grids P,48	**	**	**	1	Standard	101.0	-3.5	23.7	2.04
**	22-7804B	15/06/2022	Remediation Area #2 Grids M,49	**	**	**	2	Standard	102.5	-5.0	24.0	2.06
**	22-7804C	15/06/2022	Remediation Area #2 Grids R,47	**	**	**	3	Standard	99.0	-2.0	22.9	2.05
**	22-7812A	16/06/2022	Remediation Area #2 Grids N,48	**	**	**	4	Standard	102.5	0.0	24.4	2.01
**	22-7812B	16/06/2022	Remediation Area #2 Grids Q,49	**	**	**	5	Standard	100.5	-2.5	21.9	2.00
**	22-7812C	16/06/2022	Remediation Area #2 Grids S,46	**	**	**	6	Standard	100.0	-3.0	23.6	1.99
**	22-7871A	22/06/2022	Remediation Area #2 Grids N,49	**	**	**	7	Standard	99.0	-1.0	19.0	2.06
**	22-7871B	22/06/2022	Remediation Area #2 Grids S,47	**	**	**	8	Standard	102.0	-4.0	22.5	2.06
**	22-7871C	22/06/2022	Remediation Area #2 Grids Q,46	**	**	**	9	Standard	101.5	-5.5	23.8	2.05
**	22-7881A	23/06/2022	Remediation Area #2 Grids N,48	**	**	**	10	Standard	100.0	-6.0	25.1	2.09
**	22-7881B	23/06/2022	Remediation Area #2 Grids T,49	**	**	**	11	Standard	102.0	-4.0	25.5	2.07

Lot #	Sample #	Date Sampled	Location	Location		Elevation (m)	Layer	Compaction Method	Relative Compaction (%)	Moisture Variation (%)	Moisture Content (%)	Field Wet Density (t/m3)	
**	22-7881C	23/06/2022	Remediation Area #2 Grids Q,46	**	**	**	12	Standard	102.0	-5.0	24.6	2.08	
**	22-7903A	24/06/2022	Remediation Area #2 Lot 1108 Grids Q,48	**	**	Capping	1	Standard	103.0	-2.0	20.3	2.13	
**	22-7903B	24/06/2022	Remediation Area #2 Lot 1108 Grids T,49	**	**	Capping	2	Standard	103.5	-2.5	19.3	2.14	
**	22-7903C	24/06/2022	Remediation Area #2 Lot 1109 Grids O,52	**	**	Capping	1	Standard	102.5	-5.5	20.2	2.13	
**	22-7903D	24/06/2022	Remediation Area #2 Lot 1109 Grids S,52	**	**	Capping	2	Standard	104.0	0.5	19.5	2.12	
**	22-7918A	27/06/2022	Remediation Area #2 Lot 1108 Grids W,44	**	**	Capping	3	Standard	109.0	-0.5	20.2	2.20	
**	22-7918B	27/06/2022	Remediation Area #2 Lot 1108 Grids X,46	**	**	Capping	4	Standard	107.0	-0.5	18.8	2.17	
**	22-7918C	27/06/2022	Remediation Area #2 Lot 1109 Grids W,41	**	**	Capping	3	Standard	108.5	-0.5	21.1	2.15	
**	22-7918D	27/06/2022	Remediation Area #2 Lot 1109 Grids X,40	**	**	Capping	4	Standard	109.5	1.0	19.9	2.15	
**	22-7952A	30/06/2022	Remediation Area Lot 1108 Grid W/44	**	**	Capping	5	Standard	102.5	-0.5	21.2	2.04	
**	22-7952B	30/06/2022	Remediation Area Lot 1108 Grid X/45	**	**	Capping	5	Standard	103.0	-0.5	21.1	2.06	
**	22-7952C	30/06/2022	Remediation Area Lot 1109 Grid W/40	**	**	Capping	6	Standard	104.0	-0.5	24.4	2.06	
**	22-7952D	30/06/2022	Remediation Area Lot 1109 Grid X/39	**	**	Capping	6	Standard	102.0	-0.5	22.4	2.05	
**	22-8213A	01/08/2022	Remediation Area 3 Grid N/21	**	**	**	1	Standard	97.0	-2.5	22.3	2.00	
**	22-8213B	01/08/2022	Remediation Area 3 Grid Q/23	**	**	**	2	Standard	97.0	-2.5	22.0	2.00	
**	22-8213C	01/08/2022	Remediation Area 3 Grid O/22	**	**	**	3	Standard	99.5	-3.5	21.6	2.04	
**	22-8235A	02/08/2022	Remediation Area 3 Grid P/23	**	**	**	4	Standard	101.5	-3.0	21.6	2.04	
**	22-8235B	02/08/2022	Remediation Area 3 Grid R/23	**	**	**	5	Standard	101.5	-3.0	21.6	2.04	
**	22-8252A	04/08/2022	Remediation Area 3 Grid N/22	**	**	Fill	7	Standard	98.5	-5.0	25.2	2.00	
**	22-8252A	04/08/2022	Remediation Area 3 Grid N/22	**	**	Fill	7	Standard	96.5	-7.5	25.2	2.00	
**	22-8252B	04/08/2022	Remediation Area 3 Grid Q/21	**	**	Fill	8	Standard	100.5	-3.5	25.6	2.00	
**	22-8252C	04/08/2022	Remediation Area 3 Grid R/24	**	**	Fill	9	Standard	99.5	-4.0	23.4	2.01	
**	22-8440A	22/08/2022	Remediation Area #3 Lot 1101 Grids S,20	**	**	**	Capping	1	Standard	107.0	-1.5	20.7	2.11
**	22-8440B	22/08/2022	Remediation Area #3 Lot 1101 Grids Q,19	**	**	**	Capping	2	Standard	103.5	2.0	21.6	2.10
**	22-8440C	22/08/2022	Remediation Area #3 Lot 1102 Grids W,22	**	**	**	Capping	1	Standard	105.5	-1.0	21.5	2.12
**	22-8440D	22/08/2022	Remediation Area #3 Lot 1102 Grids R,22	**	**	**	Capping	2	Standard	106.0	0.0	22.5	2.13
**	22-8462A	23/08/2022	Remediation Area 3 Building Lots 1101 Grids V,19	**	**	**	Capping Layer 3	Standard	102.0	-1.0	21.1	2.05	
**	22-8462B	23/08/2022	Remediation Area 3 Building Lots 1101 Grids R,19	**	**	**	Capping Layer 4	Standard	101.0	-0.5	19.8	2.04	
**	22-8462C	23/08/2022	Remediation Area 3 Building Lots 1102 Grids X,22	**	**	**	Capping Layer 3	Standard	103.5	0.5	20.3	2.06	
**	22-8462D	23/08/2022	Remediation Area 3 Building Lots 1102 Grids R,22	**	**	**	Capping Layer 4	Standard	101.5	-0.5	20.0	2.06	
**	22-8498A	26/08/2022	Remediation Area 4 Building Lot 1103 & 1104 Grids U,25	**	**	**	1	Standard	99.0	-3.0	18.4	2.00	
**	22-8498B	26/08/2022	Remediation Area 4 Building Lot 1103 & 1104 Grids S,28	**	**	**	2	Standard	97.5	-4.5	18.2	2.01	
**	22-8498C	26/08/2022	Remediation Area 4 Building Lot 1103 & 1104 Grids W,26	**	**	**	3	Standard	97.0	-3.0	19.8	1.98	
**	22-8509A	29/08/2022	Remediation Area 4 Building Lot 1104 Grids U,25	**	**	**	Capping Layer 1	Standard	104.0	-0.5	15.8	2.20	

Lot #	Sample #	Date Sampled	Location	Location		Elevation (m)	Layer	Compaction Method	Relative Compaction (%)	Moisture Variation (%)	Moisture Content (%)	Field Wet Density (t/m3)
**	22-8509B	29/08/2022	Remediation Area 4 Building Lot 1104 Grids X,24	**	**	**	Capping Layer 2	Standard	104.0	0.0	15.3	2.20
**	22-8509C	29/08/2022	Remediation Area 4 Building Lot 1103 Grids S,28	**	**	**	Capping Layer 1	Standard	99.5	-1.0	16.7	2.08
**	22-8509D	29/08/2022	Remediation Area 4 Building Lot 1103 Grids X,28	**	**	**	Capping Layer 2	Standard	99.0	0.0	16.6	2.09
**	22-8509E	29/08/2022	Remediation Area 3 Building Lots 1101 Grids Q,19	**	**	**	Capping Layer 5	Standard	100.0	-0.5	18.1	2.08
**	22-8509F	29/08/2022	Remediation Area 3 Building Lots 1102 Grids U,22	**	**	**	Capping Layer 5	Standard	99.0	-0.5	17.6	2.07
**	22-9437A	24/11/2022	Building Lot 1101, Grids S,19	**	**	**	Final Layer	Standard	114.5	3.0	9.0	2.24
**	22-9437B	24/11/2022	Building Lot 1102, Grids U,22	**	**	**	Final Layer	Standard	115.5	4.5	10.8	2.24
**	22-9437C	24/11/2022	Building Lot 1103, Grids T,26	**	**	**	Final Layer	Standard	112.5	3.0	11.3	2.26
**	22-9437D	24/11/2022	Building Lot 1104, Grids R,28	**	**	**	Final Layer	Standard	112.5	2.5	11.2	2.26
**	22-9437E	24/11/2022	Building Lot 1105, Grids T,31	**	**	**	Final Layer	Standard	114.5	4.0	8.7	2.25
**	22-9437F	24/11/2022	Building Lot 1106, Grids V,34	**	**	**	Final Layer	Standard	116.0	2.0	10.2	2.26
**	22-9437G	24/11/2022	Building Lot 1107, Grids U,36	**	**	**	Final Layer	Standard	115.0	5.0	9.1	2.27
**	22-9437H	24/11/2022	Building Lot 1108, Grids V,39	**	**	**	Final Layer	Standard	111.5	2.5	10.3	2.26
**	22-9437I	24/11/2022	Building Lot 1109, Grids W,43	**	**	**	Final Layer	Standard	115.0	2.0	9.8	2.23
**	22-9437J	24/11/2022	Building Lot 1110, Grids U,44	**	**	**	Final Layer	Standard	116.5	3.5	9.2	2.26
**	22-9437K	24/11/2022	Building Lot 1111, Grids Y,51	**	**	**	Final Layer	Standard	117.5	3.0	9.9	2.27
**	23-10052A	25/01/2023	Lot 1105 Grid T/31	**	**	Layer 1	0.3m Below F/L	Standard	102.5	2.0	11.5	2.17
**	23-10052B	25/01/2023	Lot 1106 Grid V/33	**	**	Layer 1	0.3m Below F/L	Standard	102.5	2.5	11.9	2.17
**	23-10052C	25/01/2023	Lot 1107 Grid W/36	**	**	Layer 1	0.3m Below F/L	Standard	104.0	2.5	11.4	2.15

**Moisture Variation Note:**

Positive values = test is dry of OMC

Negative values = test is wet of OMC



# Annex B

# Material Test Report

**Report Number:** P22721-1A  
**Issue Number:** 1  
**Date Issued:** 16/02/2022  
**Client:** Edgeworth Developments  
5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 6574  
**Date Sampled:** 11/02/2022 11:00  
**Dates Tested:** 11/02/2022 - 15/02/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General fill  
**Material Source:** On site



Hunter Civilab  
62 Sandringham Avenue Thornton NSW 2322  
Phone: (02) 4966 1844  
Email: sc@huntercivilab.com.au



Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Scott Callinan  
Senior Technician  
NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	22-6574A	22-6574B	22-6574C
Date Tested	11/02/2022	11/02/2022	11/02/2022
Time Tested	11:12	11:20	11:30
Test Request #/Location	Remediation Area 1 Grid V/47	Remediation Area 1 Grid W/42	Remediation Area 1 Grid Y/50
Elevation (m)	Gen Fill	Gen Fill	Gen Fill
Layer / Reduced Level	1	2	3
Thickness of Layer (mm)	300	300	300
Soil Description	Clayey Silty Gravel	Clayey Silty Gravel	Clayey Silty Gravel
Test Depth (mm)	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	1.99	2.00	2.01
Field Moisture Content %	23.4	21.2	24.6
Field Dry Density (FDD) t/m <sup>3</sup>	1.61	1.65	1.61
Peak Converted Wet Density t/m <sup>3</sup>	1.97	1.98	1.98
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Moisture Variation (Wv) %	-0.5	-0.5	0.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	101.0	101.0	101.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

## Moisture Variation Note:

Positive values = test is dry of OMC  
Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P22721-2A  
**Issue Number:** 1  
**Date Issued:** 16/02/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 6592  
**Date Sampled:** 15/02/2022 8:0  
**Dates Tested:** 15/02/2022 - 15/02/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General fill  
**Material Source:** On site



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 Senior Technician  
 NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	22-6592A	22-6592B	22-6592C
Date Tested	15/02/2022	15/02/2022	15/02/2022
Time Tested	08:10	08:15	08:30
Test Request #/Location	Remediation Area 1 Grid Y,50	Remediation Area 1 Grid X,49	Remediation Area 1 Grid Z,51
Elevation (m)	Gen Fill	Gen Fill	Gen Fill
Layer / Reduced Level	4	5	6
Thickness of Layer (mm)	300	300	300
Soil Description	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay
Test Depth (mm)	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	1.99	1.99	1.98
Field Moisture Content %	21.2	21.9	21.6
Field Dry Density (FDD) t/m <sup>3</sup>	1.64	1.63	1.63
Peak Converted Wet Density t/m <sup>3</sup>	2.01	2.01	1.93
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Moisture Variation (Wv) %	-2.5	-2.0	-0.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	<b>99.0</b>	<b>99.0</b>	<b>102.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P22721-3  
**Issue Number:** 1  
**Date Issued:** 18/02/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 6625  
**Date Sampled:** 16/02/2022 11:00  
**Dates Tested:** 16/02/2022 - 17/02/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General fill  
**Material Source:** On site



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 Senior Technician  
 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	22-6625A	22-6625B	22-6625C
Date Tested	16/02/2022	16/02/2022	16/02/2022
Time Tested	11:15	11:30	11:45
Test Request #/Location	Remediation Area 1 Grid T/47	Remediation Area 1 Grid S/51	Remediation Area 1 Grid N/46
Elevation (m)	Gen Fill	Gen Fill	Gen Fill
Layer / Reduced Level	7	8	9
Thickness of Layer (mm)	300	300	300
Soil Description	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay
Test Depth (mm)	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.02	2.02	2.06
Field Moisture Content %	15.2	13.9	13.6
Field Dry Density (FDD) t/m <sup>3</sup>	1.76	1.77	1.81
Peak Converted Wet Density t/m <sup>3</sup>	2.10	2.11	2.11
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Moisture Variation (Wv) %	-0.5	-1.5	0.0
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	<b>96.0</b>	<b>95.5</b>	<b>97.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**

## Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P22721-4  
**Issue Number:** 1  
**Date Issued:** 24/02/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 6718  
**Date Sampled:** 22/02/2022  
**Dates Tested:** 22/02/2022 - 24/02/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson St, Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite



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 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	22-6718A	22-6718B	22-6718C	22-6718D
Date Tested	22/02/2022	22/02/2022	22/02/2022	22/02/2022
Time Tested	13:25	13:30	13:35	13:40
Test Request #/Location	Remediation Area 1, Lot 1111 Grids Z,50	Remediation Area 1, Lot 1111 Grids X,52	Remediation Area 1, Lot 1110 Grids W,44	Remediation Area 1, Lot 1110 Grids AA,47
Elevation (m)	Capping	Capping	Capping	Capping
Layer / Reduced Level	1	2	1	2
Thickness of Layer (mm)	300	300	300	300
Soil Description	Sandy Silty Clay	Sandy Silty Clay	Sandy Silty Clay	Sandy Silty Clay
Test Depth (mm)	300	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.06	2.07	2.07	2.06
Field Moisture Content %	17.3	16.4	15.8	15.8
Field Dry Density (FDD) t/m <sup>3</sup>	1.76	1.78	1.79	1.78
Peak Converted Wet Density t/m <sup>3</sup>	2.00	2.02	2.04	2.04
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Moisture Variation (Wv) %	0.5	0.5	2.0	2.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	103.0	102.5	101.5	101.0
Compaction Method	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**

## Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC



# Material Test Report

**Report Number:** P22721-5  
**Issue Number:** 1  
**Date Issued:** 18/03/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 6911  
**Date Sampled:** 15/03/2022  
**Dates Tested:** 15/03/2022 - 18/03/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson St, Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite



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 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	22-6911A	22-6911B	22-6911C	22-6911D
Date Tested	15/03/2022	15/03/2022	15/03/2022	15/03/2022
Time Tested	12:50	13:00	13:10	13:20
Test Request #/Location	Remediation Area #1 Building Lot 1110, Grids X,48	Remediation Area #1 Building Lot 1111, Grids Y,51	Remediation Area #1 Building Lot 1110, Grids W,47	Remediation Area #1 Building Lot 1111, Grids Z,50
Layer / Reduced Level	Capping Layer 3	Capping Layer 3	Capping Layer 4	Capping Layer 4
Thickness of Layer (mm)	300	300	300	300
Soil Description	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay
Test Depth (mm)	300	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.18	2.16	2.18	2.18
Field Moisture Content %	13.0	13.3	12.5	12.6
Field Dry Density (FDD) t/m <sup>3</sup>	1.92	1.90	1.94	1.93
Peak Converted Wet Density t/m <sup>3</sup>	2.05	2.05	2.05	2.05
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Moisture Variation (Wv) %	2.5	0.5	0.0	1.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	<b>106.0</b>	<b>105.0</b>	<b>106.5</b>	<b>106.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

## Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P22721-6A  
**Issue Number:** 1  
**Date Issued:** 22/06/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 7804  
**Date Sampled:** 15/06/2022  
**Dates Tested:** 15/06/2022 - 20/06/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite



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Senior Technician

NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

	22-7804A	22-7804B	22-7804C
Sample Number	22-7804A	22-7804B	22-7804C
Date Tested	15/06/2022	15/06/2022	15/06/2022
Time Tested	15:00	15:20	15:30
Test Request #/Location	Remediation Area #2 Grids P,48	Remediation Area #2 Grids M,49	Remediation Area #2 Grids R,47
Layer / Reduced Level	1	2	3
Thickness of Layer (mm)	300	300	300
Soil Description	Silty Gravelly Clay	Silty Gravelly Clay	Silty Gravelly Clay
Test Depth (mm)	300	300	300
Fraction Tested (mm)	19.0	19.0	19.0
Oversize (wet basis) %	**	**	**
Oversize (dry basis) %	**	**	**
Curing Hours	96.5	95.8	96.3
Method used to Determine Plasticity	vt	vt	vt
Field Wet Density t/m <sup>3</sup>	2.04	2.06	2.05
Field Moisture Content %	23.7	24.0	22.9
Field Dry Density t/m <sup>3</sup>	1.65	1.66	1.67
Maximum Dry Density t/m <sup>3</sup>	1.63	1.62	1.68
Adjusted Maximum Dry Density t/m <sup>3</sup>	**	**	**
Optimum Moisture Content (OMC) %	20.0	19.0	20.5
Adjusted Optimum Moisture Content (OMC) %	**	**	**
Moisture Variation %	-3.5	-5.0	-2.0
Moisture Ratio %	117.5	128.0	110.5
Density Ratio %	<b>101.0</b>	<b>102.5</b>	<b>99.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P22721-7A  
**Issue Number:** 1  
**Date Issued:** 22/06/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 7812  
**Date Sampled:** 17/06/2022  
**Dates Tested:** 17/06/2022 - 20/06/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite



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 Senior Technician  
 NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

	22-7812A	22-7812B	22-7812C
Sample Number	22-7812A	22-7812B	22-7812C
Date Tested	16/06/2022	16/06/2022	16/06/2022
Time Tested	14:55	15:15	15:35
Test Request #/Location	Remediation Area #2 Grids N,48	Remediation Area #2 Grids Q,49	Remediation Area #2 Grids S,46
Layer / Reduced Level	4	5	6
Thickness of Layer (mm)	300	300	300
Soil Description	Silty Gravelly Clay	Silty Gravelly Clay	Silty Gravelly Clay
Test Depth (mm)	300	300	300
Fraction Tested (mm)	19.0	19.0	19.0
Oversize (wet basis) %	**	5	**
Oversize (dry basis) %	**	6	**
Curing Hours	72.3	68.6	72.4
Method used to Determine Plasticity	vt	vt	vt
Field Wet Density t/m <sup>3</sup>	2.01	2.00	1.99
Field Moisture Content %	24.4	21.9	23.6
Field Dry Density t/m <sup>3</sup>	1.62	1.64	1.61
Maximum Dry Density t/m <sup>3</sup>	1.57	**	1.61
Adjusted Maximum Dry Density t/m <sup>3</sup>	**	1.63	**
Optimum Moisture Content (OMC) %	24.5	**	20.5
Adjusted Optimum Moisture Content (OMC) %	**	19.5	**
Moisture Variation %	0.0	-2.5	-3.0
Moisture Ratio %	100.0	112.5	115.5
Density Ratio %	<b>102.5</b>	<b>100.5</b>	<b>100.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

### Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P22721-8A  
**Issue Number:** 1  
**Date Issued:** 28/06/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 7871  
**Date Sampled:** 22/06/2022  
**Dates Tested:** 22/06/2022 - 27/06/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite



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 NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

	22-7871A	22-7871B	22-7871C
Sample Number	22-7871A	22-7871B	22-7871C
Date Tested	22/06/2022	22/06/2022	22/06/2022
Time Tested	09:45	10:00	10:15
Test Request #/Location	Remediation Area #2 Grids N,49	Remediation Area #2 Grids S,47	Remediation Area #2 Grids Q,46
Layer / Reduced Level	7	8	9
Thickness of Layer (mm)	300	300	300
Soil Description	Silty Gravelly Clay	Silty Gravelly Clay	Silty Gravelly Clay
Test Depth (mm)	300	300	300
Fraction Tested (mm)	19.0	19.0	19.0
Oversize (wet basis) %	6	**	**
Oversize (dry basis) %	8	**	**
Curing Hours	114.0	117.3	116.3
Method used to Determine Plasticity	vt	vt	vt
Field Wet Density t/m <sup>3</sup>	2.06	2.06	2.05
Field Moisture Content %	19.0	22.5	23.8
Field Dry Density t/m <sup>3</sup>	1.73	1.68	1.65
Maximum Dry Density t/m <sup>3</sup>	**	1.64	1.63
Adjusted Maximum Dry Density t/m <sup>3</sup>	1.75	**	**
Optimum Moisture Content (OMC) %	**	18.5	18.5
Adjusted Optimum Moisture Content (OMC) %	18.0	**	**
Moisture Variation %	-1.0	-4.0	-5.5
Moisture Ratio %	106.5	121.0	129.0
Density Ratio %	<b>99.0</b>	<b>102.0</b>	<b>101.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

### Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P22721-9A  
**Issue Number:** 1  
**Date Issued:** 04/07/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 7903  
**Date Sampled:** 24/06/2022  
**Dates Tested:** 24/06/2022 - 29/06/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite



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 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	22-7903A	22-7903B	22-7903C	22-7903D
Date Tested	24/06/2022	24/06/2022	24/06/2022	24/06/2022
Time Tested	14:45	15:00	15:15	15:25
Test Request #/Location	Remediation Area #2 Lot 1108 Grids Q,48	Remediation Area #2 Lot 1108 Grids T,49	Remediation Area #2 Lot 1109 Grids O,52	Remediation Area #2 Lot 1109 Grids S,52
Elevation (m)	Capping	Capping	Capping	Capping
Layer / Reduced Level	1	2	1	2
Thickness of Layer (mm)	300	300	300	300
Soil Description	Sandy Silty Clay	Sandy Silty Clay	Sandy Silty Clay	Sandy Silty Clay
Test Depth (mm)	300	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	**	0	**
Field Wet Density (FWD) t/m <sup>3</sup>	2.13	2.14	2.13	2.12
Field Moisture Content %	20.3	19.3	20.2	19.5
Field Dry Density (FDD) t/m <sup>3</sup>	1.77	1.79	1.77	1.77
Peak Converted Wet Density t/m <sup>3</sup>	2.06	2.07	2.08	2.04
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Moisture Variation (Wv) %	-2.0	-2.5	-5.5	0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	103.0	103.5	102.5	104.0
Compaction Method	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**

## Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P22721-10A  
**Issue Number:** 1  
**Date Issued:** 04/07/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 7918  
**Date Sampled:** 27/06/2022  
**Dates Tested:** 27/06/2022 - 02/07/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite



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Approved Signatory: Scott Callinan  
 Senior Technician  
 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	22-7918A	22-7918B	22-7918C	22-7918D
Date Tested	27/06/2022	27/06/2022	27/06/2022	27/06/2022
Time Tested	13:35	13:55	14:05	14:25
Test Request #/Location	Remediation Area #2 Lot 1108 Grids W,44	Remediation Area #2 Lot 1108 Grids X,46	Remediation Area #2 Lot 1109 Grids W,41	Remediation Area #2 Lot 1109 Grids X,40
Elevation (m)	Capping	Capping	Capping	Capping
Layer / Reduced Level	3	4	3	4
Thickness of Layer (mm)	300	300	300	300
Soil Description	Silty Clay	Silty Clay	Silty Clay	Silty Clay
Test Depth (mm)	300	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.20	2.17	2.15	2.15
Field Moisture Content %	20.2	18.8	21.1	19.9
Field Dry Density (FDD) t/m <sup>3</sup>	1.83	1.82	1.77	1.80
Peak Converted Wet Density t/m <sup>3</sup>	2.01	2.03	1.98	1.97
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Moisture Variation (Wv) %	-0.5	-0.5	-0.5	1.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	<b>109.0</b>	<b>107.0</b>	<b>108.5</b>	<b>109.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

## Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P22721-11A  
**Issue Number:** 1  
**Date Issued:** 04/07/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 7952  
**Date Sampled:** 30/06/2022 7:30  
**Dates Tested:** 30/06/2022 - 04/07/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General fill  
**Material Source:** On site



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Approved Signatory: Scott Callinan  
 Senior Technician  
 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	22-7952A	22-7952B	22-7952C	22-7952D
Date Tested	30/06/2022	30/06/2022	30/06/2022	30/06/2022
Time Tested	07:49	07:51	08:00	08:05
Test Request #/Location	Remediation Area Lot 1108 Grid W/44	Remediation Area Lot 1108 Grid X/45	Remediation Area Lot 1109 Grid W/40	Remediation Area Lot 1109 Grid X/39
Elevation (m)	Capping	Capping	Capping	Capping
Layer / Reduced Level	5	5	6	6
Thickness of Layer (mm)	300	300	300	300
Soil Description	Clayey Silty Sand	Clayey Sandy Silt	Clayey Sandy Silt	Clayey Sandy Silt
Test Depth (mm)	300	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.04	2.06	2.06	2.05
Field Moisture Content %	21.2	21.1	24.4	22.4
Field Dry Density (FDD) t/m <sup>3</sup>	1.68	1.70	1.65	1.67
Peak Converted Wet Density t/m <sup>3</sup>	2.00	2.00	1.98	2.01
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Moisture Variation (Wv) %	-0.5	-0.5	-0.5	-0.5
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	<b>102.5</b>	<b>103.0</b>	<b>104.0</b>	<b>102.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

## Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P22721-12A  
**Issue Number:** 1  
**Date Issued:** 04/07/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 7881  
**Date Sampled:** 23/06/2022  
**Dates Tested:** 23/06/2022 - 02/07/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite



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Approved Signatory: Scott Callinan

Senior Technician

NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

	22-7881A	22-7881B	22-7881C
Sample Number	22-7881A	22-7881B	22-7881C
Date Tested	23/06/2022	23/06/2022	23/06/2022
Time Tested	11:45	12:00	12:15
Test Request #/Location	Remediation Area #2 Grids N,48	Remediation Area #2 Grids T,49	Remediation Area #2 Grids Q,46
Layer / Reduced Level	10	11	12
Thickness of Layer (mm)	300	300	300
Soil Description	Silty Gravelly Clay	Silty Gravelly Clay	Silty Gravelly Clay
Test Depth (mm)	300	300	300
Fraction Tested (mm)	19.0	19.0	19.0
Oversize (wet basis) %	**	**	**
Oversize (dry basis) %	**	**	**
Curing Hours	117.0	117.9	116.6
Method used to Determine Plasticity	vt	vt	vt
Field Wet Density t/m <sup>3</sup>	2.09	2.07	2.08
Field Moisture Content %	25.1	25.5	24.6
Field Dry Density t/m <sup>3</sup>	1.67	1.65	1.67
Maximum Dry Density t/m <sup>3</sup>	1.67	1.62	1.64
Adjusted Maximum Dry Density t/m <sup>3</sup>	**	**	**
Optimum Moisture Content (OMC) %	19.0	21.5	20.0
Adjusted Optimum Moisture Content (OMC) %	**	**	**
Moisture Variation %	-6.0	-4.0	-5.0
Moisture Ratio %	132.0	119.5	124.5
Density Ratio %	<b>100.0</b>	<b>102.0</b>	<b>102.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC



# Material Test Report

**Report Number:** P21481-123A  
**Issue Number:** 2 - This version supersedes all previous issues  
**Reissue Reason:** UPDATE SAMPLE LOCATIONS  
**Date Issued:** 08/08/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 8213  
**Date Sampled:** 01/08/2022 11:30  
**Dates Tested:** 01/08/2022 - 03/08/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General fill  
**Material Source:** On site



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Approved Signatory: Scott Callinan  
 Senior Technician  
 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	22-8213A	22-8213B	22-8213C
Date Tested	01/08/2022	01/08/2022	01/08/2022
Time Tested	11:41	11:41	12:03
Test Request #/Location	Remediation Area 3 Grid N/21	Remediation Area 3 Grid Q/23	Remediation Area 3 Grid O/22
Layer / Reduced Level	1	2	3
Thickness of Layer (mm)	300	300	300
Soil Description	Clayey Silty Gravel	Clayey Silty Gravel	Clayey Silty Gravel
Test Depth (mm)	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	6	7	**
Field Wet Density (FWD) t/m <sup>3</sup>	2.00	2.00	2.04
Field Moisture Content %	22.3	22.0	21.6
Field Dry Density (FDD) t/m <sup>3</sup>	1.64	1.64	1.68
Peak Converted Wet Density t/m <sup>3</sup>	**	**	2.05
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.06	2.06	**
Moisture Variation (Wv) %	**	**	-3.5
Adjusted Moisture Variation %	-2.5	-2.5	**
Hilf Density Ratio (%)	<b>97.0</b>	<b>97.0</b>	<b>99.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**

## Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report



**Report Number:** P22721-13A  
**Issue Number:** 2 - This version supersedes all previous issues  
**Reissue Reason:** update sample locations  
**Date Issued:** 08/08/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 8235  
**Date Sampled:** 02/08/2022 12:30  
**Dates Tested:** 02/08/2022 - 04/08/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Nielsen St Edgeworth  
**Material:** General fill  
**Material Source:** On site

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 Senior Technician

NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	22-8235A	22-8235B	
Date Tested	02/08/2022	02/08/2022	
Time Tested	13:01	13:15	
Test Request #/Location	Remediation Area 3 Grid P/23	Remediation Area 3 Grid R/23	
Layer / Reduced Level	4	5	
Thickness of Layer (mm)	300	300	
Soil Description	Clayey Silty Gravel	Clayey Silty Gravel	
Test Depth (mm)	300	300	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	3	
Field Wet Density (FWD) t/m <sup>3</sup>	2.04	2.04	
Field Moisture Content %	21.6	21.6	
Field Dry Density (FDD) t/m <sup>3</sup>	1.68	1.68	
Peak Converted Wet Density t/m <sup>3</sup>	2.01	**	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	2.01	
Moisture Variation (Wv) %	-3.0	**	
Adjusted Moisture Variation %	**	-3.0	
Hilf Density Ratio (%)	<b>101.5</b>	<b>101.5</b>	
Compaction Method	<b>Standard</b>	<b>Standard</b>	
Report Remarks	**	**	

## Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P22721-14A  
**Issue Number:** 1  
**Date Issued:** 08/08/2022  
**Client:** Edgeworth Developments  
5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 8252  
**Date Sampled:** 04/08/2022 8:30  
**Dates Tested:** 04/08/2022 - 05/08/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Nielson Street, Edgeworth  
**Material:** General fill  
**Material Source:** On Site



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Senior Technician  
NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	22-8252B	22-8252C	
Date Tested	04/08/2022	04/08/2022	
Time Tested	09:00	09:10	
Test Request #/Location	Remediation Area 3 Grid Q/21	Remediation Area 3 Grid R/24	
Elevation (m)	Fill	Fill	
Layer / Reduced Level	8	9	
Thickness of Layer (mm)	300	300	
Soil Description	Clayey Silty Gravel	Clayey Silty Gravel	
Test Depth (mm)	300	300	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m <sup>3</sup>	2.00	2.01	
Field Moisture Content %	25.6	23.4	
Field Dry Density (FDD) t/m <sup>3</sup>	1.59	1.63	
Peak Converted Wet Density t/m <sup>3</sup>	1.99	2.03	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	
Moisture Variation (Wv) %	-3.5	-4.0	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	100.5	99.5	
Compaction Method	Standard	Standard	
Report Remarks	**	**	

## Moisture Variation Note:

Positive values = test is dry of OMC  
Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P22721-14A  
**Issue Number:** 1  
**Date Issued:** 08/08/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 8252  
**Date Sampled:** 04/08/2022 8:30  
**Dates Tested:** 04/08/2022 - 05/08/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Nielson Street, Edgeworth  
**Material:** General fill  
**Material Source:** On Site



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Approved Signatory: Scott Callinan  
 Senior Technician  
 NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

Sample Number	22-8252A		
Date Tested	04/08/2022		
Time Tested	08:50		
Test Request #/Location	Remediation Area 3 Grid N/22		
Elevation (m)	Fill		
Layer / Reduced Level	7		
Thickness of Layer (mm)	300		
Soil Description	Clayey Silty Gravel		
Test Depth (mm)	300		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	**		
Oversize (dry basis) %	**		
Curing Hours	**		
Method used to Determine Plasticity	vt		
Field Wet Density t/m <sup>3</sup>	2.00		
Field Moisture Content %	25.2		
Field Dry Density t/m <sup>3</sup>	1.60		
Maximum Dry Density t/m <sup>3</sup>	1.66		
Adjusted Maximum Dry Density t/m <sup>3</sup>	**		
Optimum Moisture Content (OMC) %	17.5		
Adjusted Optimum Moisture Content (OMC) %	**		
Moisture Variation %	-7.5		
Moisture Ratio %	143.0		
Density Ratio %	<b>96.5</b>		
Compaction Method	<b>Standard</b>		
Report Remarks	Variation of Test Method: No curing performed on sample 8252A, outside moisture parameters of a Hilf.		

### Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P22721-15A  
**Issue Number:** 1  
**Date Issued:** 23/08/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 8440  
**Date Sampled:** 22/08/2022  
**Dates Tested:** 22/08/2022 - 22/08/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite Won



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Approved Signatory: Scott Callinan  
 Senior Technician  
 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	22-8440A	22-8440B	22-8440C	22-8440D
Date Tested	22/08/2022	22/08/2022	22/08/2022	22/08/2022
Time Tested	11:10	11:20	11:30	11:40
Test Request #/Location	Remediation Area #3 Lot 1101 Grids S,20	Remediation Area #3 Lot 1101 Grids Q,19	Remediation Area #3 Lot 1102 Grids W,22	Remediation Area #3 Lot 1102 Grids R,22
Elevation (m)	Capping	Capping	Capping	Capping
Layer / Reduced Level	1	2	1	2
Thickness of Layer (mm)	300	300	300	300
Soil Description	Sandy Silty Clay	Sandy Silty Clay	Sandy Silty Clay	Sandy Silty Clay
Test Depth (mm)	300	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.11	2.10	2.12	2.13
Field Moisture Content %	20.7	21.6	21.5	22.5
Field Dry Density (FDD) t/m <sup>3</sup>	1.75	1.73	1.74	1.74
Peak Converted Wet Density t/m <sup>3</sup>	1.97	2.03	2.01	2.00
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Moisture Variation (Wv) %	-1.5	2.0	-1.0	0.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	<b>107.0</b>	<b>103.5</b>	<b>105.5</b>	<b>106.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

## Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P22721-16A  
**Issue Number:** 1  
**Date Issued:** 25/08/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 8462  
**Date Sampled:** 23/08/2022  
**Dates Tested:** 23/08/2022 - 24/08/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite Won



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Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Scott Callinan  
 Senior Technician  
 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1				
Sample Number	22-8462A	22-8462B	22-8462C	22-8462D
Date Tested	23/08/2022	23/08/2022	23/08/2022	23/08/2022
Time Tested	12:30	12:40	12:50	13:00
Test Request #/Location	Remediation Area 3 Building Lots 1101 Grids V,19	Remediation Area 3 Building Lots 1101 Grids R,19	Remediation Area 3 Building Lots 1102 Grids X,22	Remediation Area 3 Building Lots 1102 Grids R,22
Layer / Reduced Level	Capping Layer 3	Capping Layer 4	Capping Layer 3	Capping Layer 4
Thickness of Layer (mm)	300	300	300	300
Soil Description	Sandy Clay	Sandy Clay	Sandy Clay	Sandy Clay
Test Depth (mm)	300	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	2	1	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.05	2.04	2.06	2.06
Field Moisture Content %	21.1	19.8	20.3	20.0
Field Dry Density (FDD) t/m <sup>3</sup>	1.69	1.71	1.71	1.71
Peak Converted Wet Density t/m <sup>3</sup>	**	**	1.99	2.03
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.01	2.03	**	**
Moisture Variation (Wv) %	**	**	0.5	-0.5
Adjusted Moisture Variation %	-1.0	-0.5	**	**
Hilf Density Ratio (%)	<b>102.0</b>	<b>101.0</b>	<b>103.5</b>	<b>101.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

## Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P22721-17A  
**Issue Number:** 1  
**Date Issued:** 31/08/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 8509  
**Date Sampled:** 29/08/2022  
**Dates Tested:** 29/08/2022 - 30/08/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite Won



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Approved Signatory: Scott Callinan  
 Senior Technician  
 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	22-8509A	22-8509B	22-8509C	22-8509D	22-8509E	22-8509F
Date Tested	29/08/2022	29/08/2022	29/08/2022	29/08/2022	29/08/2022	29/08/2022
Time Tested	13:35	13:45	13:55	14:05	14:15	14:25
Test Request #/Location	Remediation Area 4 Building Lot 1104 Grids U,25	Remediation Area 4 Building Lot 1104 Grids X,24	Remediation Area 4 Building Lot 1103 Grids S,28	Remediation Area 4 Building Lot 1103 Grids X,28	Remediation Area 3 Building Lots 1101 Grids Q,19	Remediation Area 3 Building Lots 1102 Grids U,22
Layer / Reduced Level	Capping Layer 1	Capping Layer 2	Capping Layer 1	Capping Layer 2	Capping Layer 5	Capping Layer 5
Thickness of Layer (mm)	300	300	300	300	300	300
Soil Description	Sandy Gravelly Clay	Sandy Gravelly Clay	Sandy Gravelly Clay	Sandy Gravelly Clay	Sandy Gravelly Clay	Sandy Gravelly Clay
Test Depth (mm)	300	300	300	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.20	2.20	2.08	2.09	2.08	2.07
Field Moisture Content %	15.8	15.3	16.7	16.6	18.1	17.6
Field Dry Density (FDD) t/m <sup>3</sup>	1.90	1.90	1.78	1.79	1.76	1.76
Peak Converted Wet Density t/m <sup>3</sup>	2.12	2.11	2.09	2.11	2.09	2.09
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**	**
Moisture Variation (Wv) %	-0.5	0.0	-1.0	0.0	-0.5	-0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	104.0	104.0	99.5	99.0	100.0	99.0
Compaction Method	Standard	Standard	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**	**	**

## Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P22721-18A  
**Issue Number:** 1  
**Date Issued:** 02/09/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 8498  
**Date Sampled:** 26/08/2022  
**Dates Tested:** 26/08/2022 - 01/09/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Remarks:** Variation of Test method: Curing hours not reached before compaction.  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street Edgeworth  
**Material:** General Fill  
**Material Source:** Imported



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 Senior Technician

NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

Sample Number	22-8498A	22-8498B	22-8498C
Date Tested	26/08/2022	26/08/2022	26/08/2022
Time Tested	09:50	10:00	10:10
Test Request #/Location	Remediation Area 4 Building Lot 1103 & 1104 Grids U,25	Remediation Area 4 Building Lot 1103 & 1104 Grids S,28	Remediation Area 4 Building Lot 1103 & 1104 Grids W,26
Layer / Reduced Level	1	2	3
Thickness of Layer (mm)	300	300	300
Soil Description	Silty Gravelly Clay	Silty Gravelly Clay	Silty Gravelly Clay
Test Depth (mm)	300	300	300
Fraction Tested (mm)	19.0	19.0	19.0
Oversize (wet basis) %	7	**	**
Oversize (dry basis) %	8	**	**
Curing Hours	71.4	72.2	71.2
Method used to Determine Plasticity	vt	vt	vt
Field Wet Density t/m <sup>3</sup>	2.00	2.01	1.98
Field Moisture Content %	18.4	18.2	19.8
Field Dry Density t/m <sup>3</sup>	1.69	1.70	1.66
Maximum Dry Density t/m <sup>3</sup>	**	1.75	1.71
Adjusted Maximum Dry Density t/m <sup>3</sup>	1.71	**	**
Optimum Moisture Content (OMC) %	**	13.5	17.0
Adjusted Optimum Moisture Content (OMC) %	15.0	**	**
Moisture Variation %	-3.0	-4.5	-3.0
Moisture Ratio %	121.0	133.0	117.5
Density Ratio %	<b>99.0</b>	<b>97.5</b>	<b>97.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC



# Material Test Report

**Report Number:** P22721-20A  
**Issue Number:** 1  
**Date Issued:** 31/01/2023  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 10052  
**Date Sampled:** 25/01/2023 7:30  
**Dates Tested:** 25/01/2023 - 31/01/2023  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General fill  
**Material Source:** Onsite Won



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Approved Signatory: Scott Callinan  
 Laboratory Operations Manager  
 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	23-10052A	23-10052B	23-10052C
Date Tested	25/01/2023	25/01/2023	25/01/2023
Time Tested	07:45	08:00	08:14
Test Request #/Location	Lot 1105 Grid T/31	Lot 1106 Grid V/33	Lot 1107 Grid W/36
Elevation (m)	Layer 1	Layer 1	Layer 1
Layer / Reduced Level	0.3m Below F/L	0.3m Below F/L	0.3m Below F/L
Thickness of Layer (mm)	300	300	300
Soil Description	Sandy Clay	Sandy Clay	Sandy Clay
Test Depth (mm)	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.17	2.17	2.15
Field Moisture Content %	11.5	11.9	11.4
Field Dry Density (FDD) t/m <sup>3</sup>	1.95	1.94	1.93
Peak Converted Wet Density t/m <sup>3</sup>	2.12	2.12	2.07
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Moisture Variation (Wv) %	2.0	2.5	2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	<b>102.5</b>	<b>102.5</b>	<b>104.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**

**Moisture Variation Note:**

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P21481-75  
**Issue Number:** 1  
**Date Issued:** 20/08/2021  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elmore Vale NSW 2287  
**Contact:** Liam: 0408414198  
**Project Number:** P21481  
**Project Name:** Proposed Residential Subdivision - Stage 2 (Level 1)  
**Project Location:** Neilson St Edgeworth NSW  
**Work Request:** 4997  
**Date Sampled:** 17/08/2021  
**Dates Tested:** 17/08/2021 - 18/08/2021  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson St Edgeworth  
**Material:** General Fill  
**Material Source:** Imported



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Approved Signatory: Scott Callinan

Senior Technician

NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	21-4997A	21-4997B	
Sample Number	21-4997A	21-4997B	
Date Tested	10/08/2021	10/08/2021	
Time Tested	01:45	01:55	
Test Request #/Location	Remediation Area #8 Grids M,21	Remediation Area #8 Grids K,20	
Layer / Reduced Level	5	5	
Thickness of Layer (mm)	300	300	
Soil Description	Clayey Sandy Silt	Clayey Sandy Silt	
Test Depth (mm)	300	300	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m <sup>3</sup>	2.02	2.05	
Field Moisture Content %	12.3	12.6	
Field Dry Density (FDD) t/m <sup>3</sup>	1.80	1.82	
Peak Converted Wet Density t/m <sup>3</sup>	2.00	2.00	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	
Moisture Variation (Wv) %	3.5	2.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	<b>101.5</b>	<b>102.0</b>	
Compaction Method	<b>Standard</b>	<b>Standard</b>	
Report Remarks	**	**	

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P21481-75  
**Issue Number:** 2 - This version supersedes all previous issues  
**Reissue Reason:** update sample date  
**Date Issued:** 02/09/2021  
**Client:** Edgeworth Developments  
5 Aquarius Avenue, Elmore Vale NSW 2287  
**Contact:** Liam: 0408414198  
**Project Number:** P21481  
**Project Name:** Proposed Residential Subdivision - Stage 2 (Level 1)  
**Project Location:** Neilson St Edgeworth NSW  
**Work Request:** 4997  
**Date Sampled:** 17/08/2021  
**Dates Tested:** 17/08/2021 - 18/08/2021  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson St Edgeworth  
**Material:** General Fill  
**Material Source:** Imported



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Senior Technician  
NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	21-4997A	21-4997B	
Sample Number	21-4997A	21-4997B	
Date Tested	17/08/2021	17/08/2021	
Time Tested	01:45	01:55	
Test Request #/Location	Remediation Area #8 Grids M,21	Remediation Area #8 Grids K,20	
Layer / Reduced Level	5	5	
Thickness of Layer (mm)	300	300	
Soil Description	Clayey Sandy Silt	Clayey Sandy Silt	
Test Depth (mm)	300	300	
Sieve used to determine oversize (mm)	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	
Field Wet Density (FWD) t/m <sup>3</sup>	2.02	2.05	
Field Moisture Content %	12.3	12.6	
Field Dry Density (FDD) t/m <sup>3</sup>	1.80	1.82	
Peak Converted Wet Density t/m <sup>3</sup>	2.00	2.00	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	
Moisture Variation (Wv) %	3.5	2.5	
Adjusted Moisture Variation %	**	**	
Hilf Density Ratio (%)	<b>101.5</b>	<b>102.0</b>	
Compaction Method	<b>Standard</b>	<b>Standard</b>	
Report Remarks	**	**	

### Moisture Variation Note:

Positive values = test is dry of OMC  
Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P21481-76  
**Issue Number:** 1  
**Date Issued:** 20/08/2021  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Liam: 0408414198  
**Project Number:** P21481  
**Project Name:** Proposed Residential Subdivision - Stage 2 (Level 1)  
**Project Location:** Neilson St Edgeworth NSW  
**Work Request:** 5003  
**Date Sampled:** 18/08/2021 7:45  
**Dates Tested:** 18/08/2021 - 20/08/2021  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson St Edgeworth  
**Material:** General fill  
**Material Source:** On site



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Approved Signatory: Scott Callinan  
 Senior Technician  
 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	21-5003A	21-5003B	21-5003C
Date Tested	18/08/2021	18/08/2021	18/08/2021
Time Tested	08:10	08:00	07:50
Test Request #/Location	Remediation area 8 Grids K,21	Remediation area 8 Grids M,22	Remediation area 8 Grids N,23
Layer / Reduced Level	7	8	9
Thickness of Layer (mm)	300	300	300
Soil Description	Clayey Silty Gravel	Clayey Silty Gravel	Clayey Silty Gravel
Test Depth (mm)	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	3	6
Field Wet Density (FWD) t/m <sup>3</sup>	2.04	2.02	2.02
Field Moisture Content %	19.6	19.9	21.9
Field Dry Density (FDD) t/m <sup>3</sup>	1.71	1.69	1.66
Peak Converted Wet Density t/m <sup>3</sup>	1.97	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	2.00	1.98
Moisture Variation (Wv) %	-1.5	**	**
Adjusted Moisture Variation %	**	-1.0	-1.5
Hilf Density Ratio (%)	<b>103.5</b>	<b>101.0</b>	<b>102.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**

## Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P21481-77  
**Issue Number:** 1  
**Date Issued:** 23/08/2021  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elmore Vale NSW 2287  
**Contact:** Liam: 0408414198  
**Project Number:** P21481  
**Project Name:** Proposed Residential Subdivision - Stage 2 (Level 1)  
**Project Location:** Neilson St Edgeworth NSW  
**Work Request:** 4992  
**Date Sampled:** 17/08/2021 8:45  
**Dates Tested:** 17/08/2021 - 20/08/2021  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson st Edgeworth  
**Material:** General fill  
**Material Source:** On site



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Approved Signatory: Scott Callinan  
 Senior Technician  
 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	21-4992A	21-4992B	21-4992C
Date Tested	17/08/2021	17/08/2021	17/08/2021
Time Tested	08:45	08:55	09:05
Test Request #/Location	Remediation area 8 Grids M,20	Remediation area 8 Grids K,22	Remediation area 8 Grids N,21
Layer / Reduced Level	1	2	3
Thickness of Layer (mm)	300	300	300
Soil Description	Clayey Sandy Silt	Clayey Sandy Silt	Clayey Sandy Silt
Test Depth (mm)	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	6	2	**
Field Wet Density (FWD) t/m <sup>3</sup>	2.00	2.03	2.03
Field Moisture Content %	22.6	23.3	19.9
Field Dry Density (FDD) t/m <sup>3</sup>	1.64	1.64	1.69
Peak Converted Wet Density t/m <sup>3</sup>	**	**	2.00
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.05	1.98	**
Moisture Variation (Wv) %	**	**	0.0
Adjusted Moisture Variation %	-3.0	-1.0	**
Hilf Density Ratio (%)	<b>98.0</b>	<b>102.5</b>	<b>101.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**

## Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P21481-77  
**Issue Number:** 1  
**Date Issued:** 23/08/2021  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elmore Vale NSW 2287  
**Contact:** Liam: 0408414198  
**Project Number:** P21481  
**Project Name:** Proposed Residential Subdivision - Stage 2 (Level 1)  
**Project Location:** Neilson St Edgeworth NSW  
**Work Request:** 4992  
**Date Sampled:** 17/08/2021 8:45  
**Dates Tested:** 17/08/2021 - 20/08/2021  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson st Edgeworth  
**Material:** General fill  
**Material Source:** On site



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Approved Signatory: Scott Callinan

Senior Technician

NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

Sample Number	21-4992B		
Date Tested	17/08/2021		
Time Tested	08:55		
Test Request #/Location	Remediation area 8 Grids K,22		
Layer / Reduced Level	2		
Thickness of Layer (mm)	300		
Soil Description	Clayey Sandy Silt		
Test Depth (mm)	300		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	**		
Oversize (dry basis) %	**		
Curing Hours	**		
Method used to Determine Plasticity	**		
Field Wet Density t/m <sup>3</sup>	2.03		
Field Moisture Content %	23.3		
Field Dry Density t/m <sup>3</sup>	1.64		
Maximum Dry Density t/m <sup>3</sup>	1.68		
Adjusted Maximum Dry Density t/m <sup>3</sup>	**		
Optimum Moisture Content (OMC) %	16.0		
Adjusted Optimum Moisture Content (OMC) %	**		
Moisture Variation %	-7.5		
Moisture Ratio %	145.5		
Density Ratio %	<b>98.0</b>		
Compaction Method	<b>Standard</b>		

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P21481-78  
**Issue Number:** 1  
**Date Issued:** 23/08/2021  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elmore Vale NSW 2287  
**Contact:** Liam: 0408414198  
**Project Number:** P21481  
**Project Name:** Proposed Residential Subdivision - Stage 2 (Level 1)  
**Project Location:** Neilson St Edgeworth NSW  
**Work Request:** 4998  
**Date Sampled:** 17/08/2021 1:30  
**Dates Tested:** 17/08/2021 - 20/08/2021  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson St Edgeworth  
**Material:** General fill  
**Material Source:** On site



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Approved Signatory: Scott Callinan

Senior Technician

NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

	21-4998A	21-4998B	21-4998C
Sample Number	21-4998A	21-4998B	21-4998C
Date Tested	17/08/2021	17/08/2021	17/08/2021
Time Tested	14:05	14:15	14:30
Test Request #/Location	Remediation area 8 Grids J,21	Remediation area 8 Grids M,23	Remediation area 8 Grids L,21
Layer / Reduced Level	4	5	6
Thickness of Layer (mm)	300	300	300
Soil Description	Clayey Silty Gravel	Clayey Silty Gravel	Clayey Silty Gravel
Test Depth (mm)	300	300	300
Fraction Tested (mm)	19.0	19.0	19.0
Oversize (wet basis) %	6	3	4
Oversize (dry basis) %	6	3	4
Curing Hours	25.0	27.0	26.7
Method used to Determine Plasticity	**	**	**
Field Wet Density t/m <sup>3</sup>	1.98	1.99	2.00
Field Moisture Content %	24.8	27.0	22.8
Field Dry Density t/m <sup>3</sup>	1.59	1.57	1.63
Maximum Dry Density t/m <sup>3</sup>	**	**	**
Adjusted Maximum Dry Density t/m <sup>3</sup>	1.69	1.62	1.64
Optimum Moisture Content (OMC) %	**	**	**
Adjusted Optimum Moisture Content (OMC) %	17.5	20.5	19.5
Moisture Variation %	-7.5	-6.5	-3.5
Moisture Ratio %	142.0	132.5	117.5
Density Ratio %	<b>94.0</b>	<b>96.5</b>	<b>99.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report



**Report Number:** P21481-79  
**Issue Number:** 1  
**Date Issued:** 24/08/2021  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elmore Vale NSW 2287  
**Contact:** Liam: 0408414198  
**Project Number:** P21481  
**Project Name:** Proposed Residential Subdivision - Stage 2 (Level 1)  
**Project Location:** Neilson St Edgeworth NSW  
**Work Request:** 5042  
**Date Sampled:** 20/08/2021 10:45  
**Dates Tested:** 20/08/2021 - 24/08/2021  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson St Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite

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Approved Signatory: Scott Callinan  
 Senior Technician  
 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	21-5042A	21-5042B	21-5042C	21-5042D	21-5042E	21-5042F
Date Tested	20/08/2021	20/08/2021	20/08/2021	20/08/2021	20/08/2021	20/08/2021
Time Tested	11:00	11:10	11:20	11:30	11:40	11:50
Test Request #/Location	Remediation area 8 Building Lot 1011 Grids L,20	Remediation area 8 Building Lot 1012 Grids L,23	Remediation area 8 Building Lot 1011 Grids N,21	Remediation area 8 Building Lot 1012 Grids M,24	Remediation area 8 Building Lot 1011 Grids J,20	Remediation area 8 Building Lot 1012 Grids M,23
Elevation (m)	Capping	Capping	Capping	Capping	Capping	Capping
Layer / Reduced Level	2	2	3	3	4	4
Thickness of Layer (mm)	300	300	300	300	300	300
Soil Description	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay
Test Depth (mm)	300	300	300	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	**	0	0	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.03	2.03	2.05	2.01	2.01	2.00
Field Moisture Content %	19.5	19.7	20.0	20.6	20.1	20.2
Field Dry Density (FDD) t/m <sup>3</sup>	1.70	1.70	1.71	1.67	1.68	1.67
Peak Converted Wet Density t/m <sup>3</sup>	1.98	2.00	2.00	1.97	1.96	1.96
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**	**
Moisture Variation (Wv) %	-0.5	-0.5	-1.0	0.0	-0.5	-0.5
Adjusted Moisture Variation %	**	**	**	**	**	**
Hilf Density Ratio (%)	102.0	101.5	102.5	102.0	102.5	102.0
Compaction Method	Standard	Standard	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**	**	**

## Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC



# Material Test Report



**Report Number:** P21481-80  
**Issue Number:** 1  
**Date Issued:** 24/08/2021  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elmore Vale NSW 2287  
**Contact:** Liam: 0408414198  
**Project Number:** P21481  
**Project Name:** Proposed Residential Subdivision - Stage 2 (Level 1)  
**Project Location:** Neilson St Edgeworth NSW  
**Work Request:** 5035  
**Date Sampled:** 19/08/2021 12:15  
**Dates Tested:** 19/08/2021 - 20/08/2021  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Nielson St Edgeworth  
**Material:** General Fill  
**Material Source:** On Site

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Approved Signatory: Scott Callinan  
 Senior Technician  
 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	21-5035B		
Date Tested	19/08/2021		
Time Tested	12:30		
Test Request #/Location	Remediation Area 8 Building Lot 1012 Grids L,23		
Elevation (m)	Capping		
Layer / Reduced Level	1		
Thickness of Layer (mm)	300		
Soil Description	Clayey Silty Sand		
Test Depth (mm)	300		
Sieve used to determine oversize (mm)	19.0		
Percentage of Wet Oversize (%)	0		
Field Wet Density (FWD) t/m <sup>3</sup>	2.00		
Field Moisture Content %	20.0		
Field Dry Density (FDD) t/m <sup>3</sup>	1.67		
Peak Converted Wet Density t/m <sup>3</sup>	1.96		
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**		
Moisture Variation (Wv) %	0.0		
Adjusted Moisture Variation %	**		
Hilf Density Ratio (%)	<b>102.0</b>		
Compaction Method	<b>Standard</b>		
Report Remarks	**		

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

# Material Test Report



**Report Number:** P21481-80  
**Issue Number:** 1  
**Date Issued:** 24/08/2021  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elmore Vale NSW 2287  
**Contact:** Liam: 0408414198  
**Project Number:** P21481  
**Project Name:** Proposed Residential Subdivision - Stage 2 (Level 1)  
**Project Location:** Neilson St Edgeworth NSW  
**Work Request:** 5035  
**Date Sampled:** 19/08/2021 12:15  
**Dates Tested:** 19/08/2021 - 20/08/2021  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Nielson St Edgeworth  
**Material:** General Fill  
**Material Source:** On Site

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Approved Signatory: Scott Callinan

Senior Technician

NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

Sample Number	21-5035A		
Date Tested	19/08/2021		
Time Tested	12:15		
Test Request #/Location	Remediation Area 8 Building Lot 1011 Grids J,20		
Elevation (m)	Capping		
Layer / Reduced Level	1		
Thickness of Layer (mm)	300		
Soil Description	Clayey Silty Sand		
Test Depth (mm)	300		
Fraction Tested (mm)	19.0		
Oversize (wet basis) %	**		
Oversize (dry basis) %	**		
Curing Hours	2.3		
Method used to Determine Plasticity	**		
Field Wet Density t/m <sup>3</sup>	1.98		
Field Moisture Content %	21.2		
Field Dry Density t/m <sup>3</sup>	1.63		
Maximum Dry Density t/m <sup>3</sup>	1.64		
Adjusted Maximum Dry Density t/m <sup>3</sup>	**		
Optimum Moisture Content (OMC) %	19.5		
Adjusted Optimum Moisture Content (OMC) %	**		
Moisture Variation %	-2.0		
Moisture Ratio %	109.5		
Density Ratio %	<b>99.0</b>		
Compaction Method	<b>Standard</b>		

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P21481-81  
**Issue Number:** 1  
**Date Issued:** 25/08/2021  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elmore Vale NSW 2287  
**Contact:** Liam: 0408414198  
**Project Number:** P21481  
**Project Name:** Proposed Residential Subdivision - Stage 2 (Level 1)  
**Project Location:** Neilson St Edgeworth NSW  
**Work Request:** 5018  
**Date Sampled:** 18/08/2021 3:15  
**Dates Tested:** 18/08/2021 - 24/08/2021  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson St Edgeworth  
**Material:** General fill  
**Material Source:** On site



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Approved Signatory: Scott Callinan

Senior Technician

NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.1.1 & 5.4.1 & 5.8.1 & 2.1.1

	21-5018B	21-5018C	
Sample Number	21-5018B	21-5018C	
Date Tested	18/08/2021	18/08/2021	
Time Tested	15:30	15:45	
Test Request #/Location	Remediation area 8 Grids N,22	Remediation area 8 Grids L,22	
Layer / Reduced Level	11	12	
Thickness of Layer (mm)	300	300	
Soil Description	Clayey Silty Gravel	Clayey Silty Gravel	
Test Depth (mm)	300	300	
Fraction Tested (mm)	19.0	19.0	
Oversize (wet basis) %	3	**	
Oversize (dry basis) %	6	**	
Curing Hours	117.2	116.5	
Method used to Determine Plasticity	**	**	
Field Wet Density t/m <sup>3</sup>	1.98	1.98	
Field Moisture Content %	19.7	23.9	
Field Dry Density t/m <sup>3</sup>	1.65	1.60	
Maximum Dry Density t/m <sup>3</sup>	**	1.65	
Adjusted Maximum Dry Density t/m <sup>3</sup>	1.78	**	
Optimum Moisture Content (OMC) %	**	20.0	
Adjusted Optimum Moisture Content (OMC) %	16.0	**	
Moisture Variation %	-4.0	-4.0	
Moisture Ratio %	124.5	120.5	
Density Ratio %	<b>92.5</b>	<b>97.0</b>	
Compaction Method	<b>Standard</b>	<b>Standard</b>	

### Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P21481-82  
**Issue Number:** 1  
**Date Issued:** 25/08/2021  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Liam: 0408414198  
**Project Number:** P21481  
**Project Name:** Proposed Residential Subdivision - Stage 2 (Level 1)  
**Project Location:** Neilson St Edgeworth NSW  
**Work Request:** 5052  
**Date Sampled:** 23/08/2021  
**Dates Tested:** 23/08/2021 - 25/08/2021  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson St, Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite



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 Senior Technician  
 NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	21-5052A	21-5052B	21-5052C	21-5052D
Date Tested	23/08/2021	23/08/2021	23/08/2021	23/08/2021
Time Tested	10:15	10:30	10:40	10:50
Test Request #/Location	Remediation area 8 Building Lot 1011 Grids L,21	Remediation area 8 Building Lot 1011 Grids M,20	Remediation area 8 Building Lot 1012 Grids M,24	Remediation area 8 Building Lot 1012 Grids K,23
Elevation (m)	Capping	Capping	Capping	Capping
Layer / Reduced Level	5	6	5	6
Thickness of Layer (mm)	300	300	300	300
Soil Description	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay
Test Depth (mm)	300	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.02	2.00	2.02	2.02
Field Moisture Content %	14.0	14.9	15.0	14.7
Field Dry Density (FDD) t/m <sup>3</sup>	1.78	1.74	1.76	1.76
Peak Converted Wet Density t/m <sup>3</sup>	2.06	2.04	2.04	2.02
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Moisture Variation (Wv) %	0.5	2.0	1.5	0.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	<b>98.5</b>	<b>98.5</b>	<b>99.0</b>	<b>100.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P21481-83  
**Issue Number:** 1  
**Date Issued:** 30/08/2021  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elmore Vale NSW 2287  
**Contact:** Liam: 0408414198  
**Project Number:** P21481  
**Project Name:** Proposed Residential Subdivision - Stage 2 (Level 1)  
**Project Location:** Neilson St Edgeworth NSW  
**Work Request:** 5084  
**Date Sampled:** 26/08/2021  
**Dates Tested:** 26/08/2021 - 30/08/2021  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson St Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite



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 Senior Technician  
 NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	21-5084A	21-5084B	21-5084C	21-5084D
Date Tested	26/08/2021	26/08/2021	26/08/2021	26/08/2021
Time Tested	11:35	11:45	11:55	12:05
Test Request #/Location	Remediation area 8 Building Lot 1012 Grids K,23	Remediation area 8 Building Lot 1011 Grids N,20	Remediation area 8 Building Lot 1012 Grids O,24	Remediation area 8 Building Lot 1011 Grids M,20
Elevation (m)	Capping	Capping	Capping	Capping
Layer / Reduced Level	7	7	8	8
Thickness of Layer (mm)	300	300	300	300
Soil Description	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay
Test Depth (mm)	300	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	2	4	5	2
Field Wet Density (FWD) t/m <sup>3</sup>	2.11	2.13	2.18	2.13
Field Moisture Content %	19.7	18.3	19.7	18.5
Field Dry Density (FDD) t/m <sup>3</sup>	1.76	1.80	1.82	1.79
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.01	2.01	2.03	2.04
Moisture Variation (Wv) %	**	**	**	**
Adjusted Moisture Variation %	0.0	0.0	-1.0	-1.0
Hilf Density Ratio (%)	<b>105.0</b>	<b>106.0</b>	<b>107.0</b>	<b>104.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P21481-84  
**Issue Number:** 1  
**Date Issued:** 31/08/2021  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Liam: 0408414198  
**Project Number:** P21481  
**Project Name:** Proposed Residential Subdivision - Stage 2 (Level 1)  
**Project Location:** Neilson St Edgeworth NSW  
**Work Request:** 5092  
**Date Sampled:** 26/08/2021  
**Dates Tested:** 26/08/2021 - 30/08/2021  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 95% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson St, Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite



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Approved Signatory: Scott Callinan  
 Senior Technician  
 NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	21-5092A	21-5092B	21-5092C
Date Tested	26/08/2021	26/08/2021	26/08/2021
Time Tested	12:10	12:20	12:25
Test Request #/Location	Retest 21-4998A Remediation Area 8 Grids J,21	Retest 21-5018A Remediation Area 8 Grids L,21	Retest 21-5018B Remediation Area 8 Grids L,22
Layer / Reduced Level	4	10	11
Thickness of Layer (mm)	300	300	300
Soil Description	Gravelly Silty Clay	Gravelly Silty Clay	Gravelly Silty Clay
Test Depth (mm)	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	4	1	6
Field Wet Density (FWD) t/m <sup>3</sup>	2.19	2.17	2.16
Field Moisture Content %	19.4	21.4	17.7
Field Dry Density (FDD) t/m <sup>3</sup>	1.83	1.79	1.83
Peak Converted Wet Density t/m <sup>3</sup>	**	**	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	2.05	2.01	2.03
Moisture Variation (Wv) %	**	**	**
Adjusted Moisture Variation %	0.0	0.0	-0.5
Hilf Density Ratio (%)	<b>106.5</b>	<b>108.0</b>	<b>106.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P21481-85  
**Issue Number:** 1  
**Date Issued:** 31/08/2021  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Liam: 0408414198  
**Project Number:** P21481  
**Project Name:** Proposed Residential Subdivision - Stage 2 (Level 1)  
**Project Location:** Neilson St Edgeworth NSW  
**Work Request:** 5103  
**Date Sampled:** 27/08/2021  
**Dates Tested:** 27/08/2021 - 31/08/2021  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson St, Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite



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 NATA Accredited Laboratory Number: 14975

## Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

Sample Number	21-5103A	21-5103B	21-5103C	21-5103D
Date Tested	27/08/2021	27/08/2021	27/08/2021	27/08/2021
Time Tested	12:20	12:25	12:30	12:35
Test Request #/Location	Remediation area 8 Building Lot 1012 Grids K,23	Remediation area 8 Building Lot 1011 Grids J,20	Remediation area 8 Building Lot 1012 Grids N,23	Remediation area 8 Building Lot 1011 Grids O,21
Elevation (m)	Capping	Capping	Capping	Capping
Layer / Reduced Level	9	9	10	10
Thickness of Layer (mm)	300	300	300	300
Soil Description	Gravelly Silty Clay	Gravelly Silty Clay	Gravelly Silty Clay	Gravelly Silty Clay
Test Depth (mm)	300	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.13	2.11	2.10	2.14
Field Moisture Content %	20.0	15.7	18.0	13.9
Field Dry Density (FDD) t/m <sup>3</sup>	1.77	1.82	1.78	1.88
Peak Converted Wet Density t/m <sup>3</sup>	1.97	1.99	1.97	1.95
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**
Moisture Variation (Wv) %	0.5	1.5	0.5	3.0
Adjusted Moisture Variation %	**	**	**	**
Hilf Density Ratio (%)	<b>108.0</b>	<b>106.0</b>	<b>106.5</b>	<b>109.5</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**

### Moisture Variation Note:

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC

# Material Test Report

**Report Number:** P21481-124A  
**Issue Number:** 2 - This version supersedes all previous issues  
**Reissue Reason:** Update building lot test locations  
**Date Issued:** 30/11/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 9437  
**Date Sampled:** 24/11/2022  
**Dates Tested:** 24/11/2022 - 28/11/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite Won



Hunter Civilab  
 62 Sandringham Avenue Thornton NSW 2322  
 Phone: (02) 4966 1844  
 Email: sc@huntercivilab.com.au



Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Scott Callinan  
 Laboratory Operations Manager  
 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	22-9437A	22-9437B	22-9437C	22-9437D	22-9437E	22-9437F
Date Tested	24/11/2022	24/11/2022	24/11/2022	24/11/2022	24/11/2022	24/11/2022
Time Tested	08:45	08:50	08:55	09:00	09:05	09:10
Test Request #/Location	Building Lot 1101, Grids S,19	Building Lot 1102, Grids U,22	Building Lot 1103, Grids T,26	Building Lot 1104, Grids R,28	Building Lot 1105, Grids T,31	Building Lot 1106, Grids V,34
Layer / Reduced Level	Final Layer	Final Layer	Final Layer	Final Layer	Final Layer	Final Layer
Thickness of Layer (mm)	300	300	300	300	300	300
Soil Description	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay
Test Depth (mm)	300	300	300	300	300	300
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0	0	0	0
Field Wet Density (FWD) t/m <sup>3</sup>	2.24	2.24	2.26	2.26	2.25	2.26
Field Moisture Content %	9.0	10.8	11.3	11.2	8.7	10.2
Field Dry Density (FDD) t/m <sup>3</sup>	2.06	2.02	2.03	2.03	2.07	2.05
Peak Converted Wet Density t/m <sup>3</sup>	1.96	1.93	2.01	2.01	1.96	**
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**	1.95
Moisture Variation (Wv) %	3.0	4.5	3.0	2.5	4.0	**
Adjusted Moisture Variation %	**	**	**	**	**	2.0
Hilf Density Ratio (%)	<b>114.5</b>	<b>115.5</b>	<b>112.5</b>	<b>112.5</b>	<b>114.5</b>	<b>116.0</b>
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>
Report Remarks	**	**	**	**	**	**

**Moisture Variation Note:**

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC



# Material Test Report

**Report Number:** P21481-124A  
**Issue Number:** 2 - This version supersedes all previous issues  
**Reissue Reason:** Update building lot test locations  
**Date Issued:** 30/11/2022  
**Client:** Edgeworth Developments  
 5 Aquarius Avenue, Elernmore Vale NSW 2287  
**Contact:** Kevin Urane  
**Project Number:** P22721  
**Project Name:** Proposed Subdivision Brushwood Estate, Stage 11  
**Project Location:** Neilson St Edgeworth  
**Work Request:** 9437  
**Date Sampled:** 24/11/2022  
**Dates Tested:** 24/11/2022 - 28/11/2022  
**Sampling Method:** AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted  
**Preparation Method:** AS 1289.1.1 - Sampling and preparation of soils  
**Specification:** 98% Minimum Density Ratio  
**Site Selection:** Selected by Client  
**Location:** Neilson Street, Edgeworth  
**Material:** General Fill  
**Material Source:** Onsite Won



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Approved Signatory: Scott Callinan  
 Laboratory Operations Manager  
 NATA Accredited Laboratory Number: 14975

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	22-9437G	22-9437H	22-9437I	22-9437J	22-9437K	
Date Tested	24/11/2022	24/11/2022	24/11/2022	24/11/2022	24/11/2022	
Time Tested	09:15	09:20	09:25	09:30	10:35	
Test Request #/Location	Building Lot 1107, Grids U,36	Building Lot 1108, Grids V,39	Building Lot 1109, Grids W,43	Building Lot 1110, Grids U,44	Building Lot 1111, Grids Y,51	
Layer / Reduced Level	Final Layer	Final Layer	Final Layer	Final Layer	Final Layer	
Thickness of Layer (mm)	300	300	300	300	300	
Soil Description	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay	Silty Sandy Clay	
Test Depth (mm)	300	300	300	300	300	
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	
Percentage of Wet Oversize (%)	0	0	0	0	0	
Field Wet Density (FWD) t/m <sup>3</sup>	2.27	2.26	2.23	2.26	2.27	
Field Moisture Content %	9.1	10.3	9.8	9.2	9.9	
Field Dry Density (FDD) t/m <sup>3</sup>	2.08	2.05	2.03	2.06	2.06	
Peak Converted Wet Density t/m <sup>3</sup>	1.97	2.02	1.94	1.94	1.93	
Adjusted Peak Converted Wet Density t/m <sup>3</sup>	**	**	**	**	**	
Moisture Variation (Wv) %	5.0	2.5	2.0	3.5	3.0	
Adjusted Moisture Variation %	**	**	**	**	**	
Hilf Density Ratio (%)	<b>115.0</b>	<b>111.5</b>	<b>115.0</b>	<b>116.5</b>	<b>117.5</b>	
Compaction Method	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	<b>Standard</b>	
Report Remarks	**	**	**	**	**	

**Moisture Variation Note:**

Positive values = test is dry of OMC  
 Negative values = test is wet of OMC



# Annex C



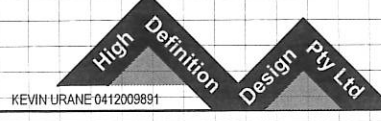
**LEGEND**

	DESIGN CONTOURS (0.5m INTERVALS)		FUTURE RETAINING WALL
	PROPOSED STORMWATER PIPE		FUTURE STORMWATER PIPE
	EXISTING STORMWATER PIPE		EXISTING PIT NUMBER
	EXISTING STORMWATER PIPE		PROPOSED PIT NUMBER
	EXISTING OVERHEAD POWER		FUTURE PIT NUMBER
	EXISTING SEWER MANHOLE		DESIGN LEVEL
	MD PIT		RETAINING WALL HEIGHT
	ON-GRADE PIT		PROPOSED TEMPORARY TURNING HEAD
	SAG PIT		
	PROPOSED CONCRETE WORKS		
	PROPOSED PAVEMENT CONSTRUCTION		
	EXISTING CONCRETE 'SLEEPER' RETAINING WALL		

**NOTE:**  
 ALL EXISTING UNDERGROUND SERVICES MUST BE LOCATED AND EXPOSED PRIOR TO EARTHWORKS COMMENCING AND IT IS RESPONSIBILITY OF THOSE PERSONS USING THIS PLAN TO CONFIRM BOTH POSITION AND LEVEL OF THESE UTILITIES IN CONJUNCTION WITH THE APPROPRIATE AUTHORITY.

Date:	21.06.21	Scale:	1:300 A1	Designed:	KU	Project No:	HD5 ST11
Cad Ref.:	HD5 stage 11r3						
	3	REPLACE DISH DRAIN WITH KERB AND GUTTER	KU	30.09.21			
	2	AMENDING COUNCIL COMMENTS	AS	16.06.21			
	1	CONSTRUCTION CERTIFICATE ISSUE	KU	21.06.21			
No	Amendment	Drawn	Date				
						ST11-02	3

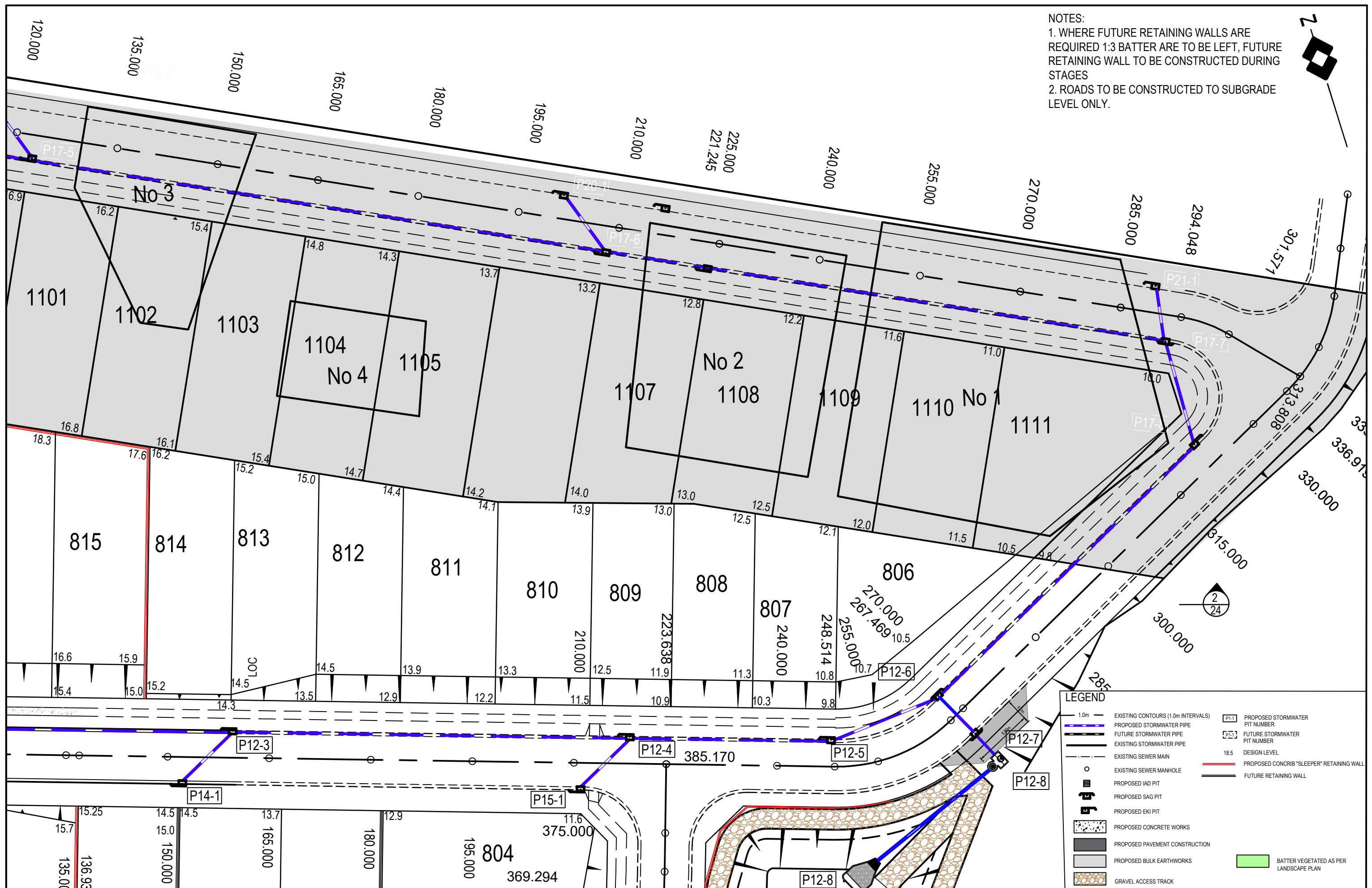
TITLE: CONSTRUCTION CERTIFICATE SUBDIVISION OF LOT 1 AND 2 DP1011589  
 NEILSON STREET EDGEMORTH  
 STAGE 11. PLAN SHEET  
 CLIENT: EDGEMORTH DEVELOPMENTS PTY LTD





# Annex D

NOTES:  
 1. WHERE FUTURE RETAINING WALLS ARE REQUIRED 1:3 BATTER ARE TO BE LEFT, FUTURE RETAINING WALL TO BE CONSTRUCTED DURING STAGES  
 2. ROADS TO BE CONSTRUCTED TO SUBGRADE LEVEL ONLY.



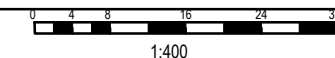
LEGEND	
1.0m	EXISTING CONTOURS (1.0m INTERVALS)
	PROPOSED STORMWATER PIPE
	FUTURE STORMWATER PIPE
	EXISTING STORMWATER PIPE
	EXISTING SEWER MAIN
	EXISTING SEWER MANHOLE
	PROPOSED IAD PIT
	PROPOSED SAG PIT
	PROPOSED EKI PIT
	PROPOSED CONCRETE WORKS
	PROPOSED PAVEMENT CONSTRUCTION
	PROPOSED BULK EARTHWORKS
	GRAVEL ACCESS TRACK
	BATTER VEGETATED AS PER LANDSCAPE PLAN
	PROPOSED STORMWATER PIT NUMBER
	FUTURE STORMWATER PIT NUMBER
	DESIGN LEVEL
	PROPOSED CONCRIB "SLEEPER" RETAINING WALL
	FUTURE RETAINING WALL

TITLE: PROPOSED SUBDIVISION OF LOT 1 AND 2 DP1011589  
 NEILSON STREET EDGEWORTH

STAGE 11 REMEDIATION LOCATIONS

CLIENT: EDGEWORTH DEVELOPMENTS

NOTE:  
 ALL EXISTING UNDERGROUND SERVICES MUST BE LOCATED AND EXPOSED PRIOR TO EARTHWORKS COMMENCING AND IT IS RESPONSIBILITY OF THOSE PERSONS USING THIS PLAN TO CONFIRM BOTH POSITION AND LEVEL OF THESE UTILITIES IN CONJUNCTION WITH THE APPROPRIATE AUTHORITY.



Date:	03.03.20	Scale:	1:250 A1	Designed:	KU	Project No:	HD5 ST11
Cad Ref:	HD5 stage 11 remediation					Drawing No:	ST11-03
						Revision:	1
No:	1	Amendment:	Remediation Locations	Drawn:	KU	Date:	03.03.20

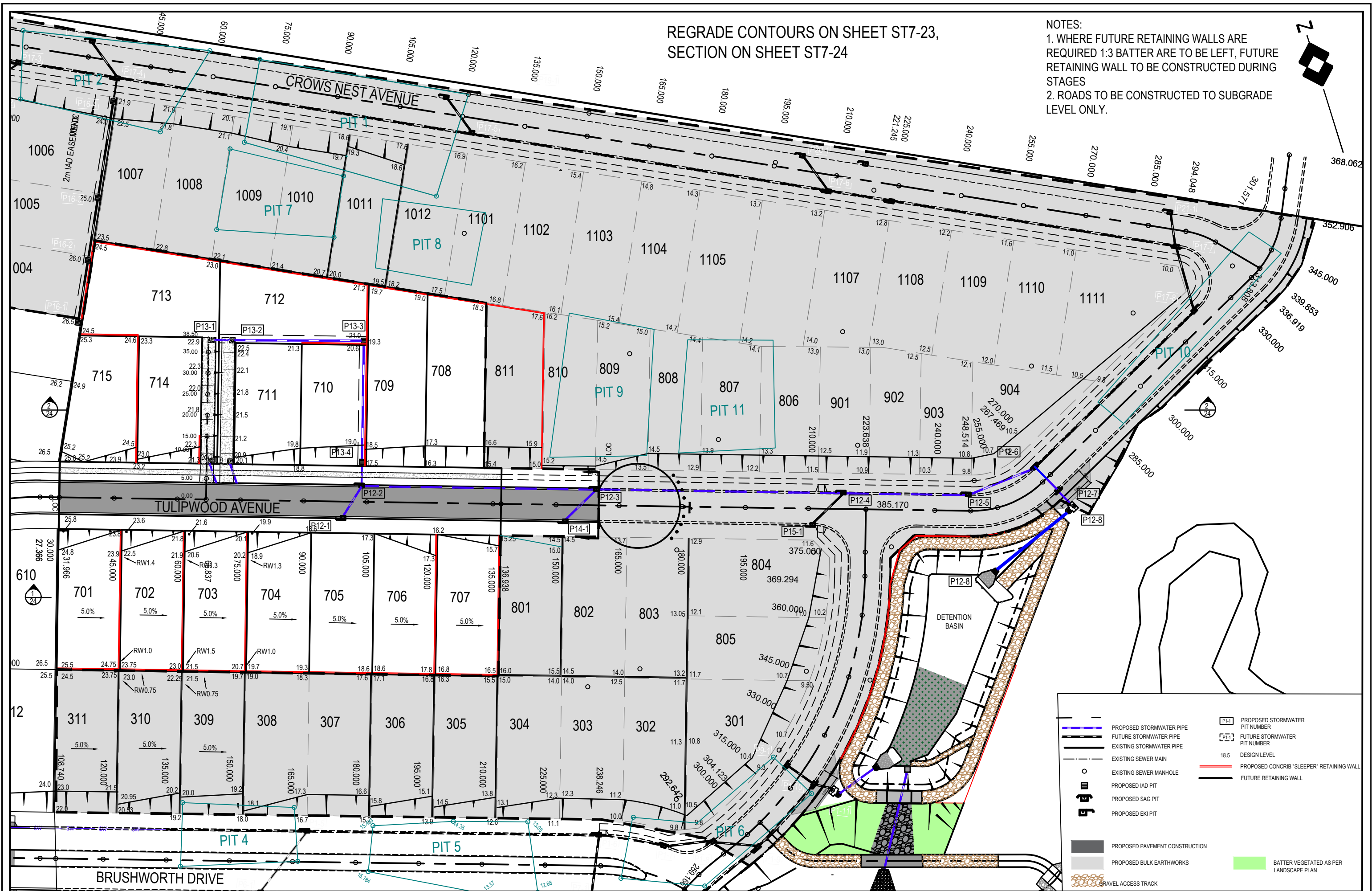
**High Definition Design Pty Ltd**  
 KEVIN URANE 0412009891



# Annex E

REGRADE CONTOURS ON SHEET ST7-23,  
SECTION ON SHEET ST7-24

- NOTES:  
1. WHERE FUTURE RETAINING WALLS ARE REQUIRED 1:3 BATTER ARE TO BE LEFT, FUTURE RETAINING WALL TO BE CONSTRUCTED DURING STAGES  
2. ROADS TO BE CONSTRUCTED TO SUBGRADE LEVEL ONLY.



	PROPOSED STORMWATER PIPE		PROPOSED STORMWATER PIT NUMBER
	FUTURE STORMWATER PIPE		FUTURE STORMWATER PIT NUMBER
	EXISTING STORMWATER PIPE		DESIGN LEVEL
	EXISTING SEWER MAIN		PROPOSED CONCRIB "SLEEPER" RETAINING WALL
	EXISTING SEWER MANHOLE		FUTURE RETAINING WALL
	PROPOSED IAD PIT		
	PROPOSED SAG PIT		
	PROPOSED EKI PIT		
	PROPOSED PAVEMENT CONSTRUCTION		
	PROPOSED BULK EARTHWORKS		BATTER VEGETATED AS PER LANDSCAPE PLAN
	GRAVEL ACCESS TRACK		

TITLE: PROPOSED SUBDIVISION OF LOT 1 AND 2 DP1011589  
NEILSON STREET EDGEWORTH

BULK EARTHWORKS PLAN

CLIENT: EDGEWORTH DEVELOPMENTS

**High Definition Design Pty Ltd**

KEVIN URANE 0412009891

ALL EXISTING UNDERGROUND SERVICES MUST BE LOCATED AND EXPOSED PRIOR TO EARTHWORKS COMMENCING AND IT IS RESPONSIBILITY OF THOSE PERSONS USING THIS PLAN TO CONFIRM BOTH POSITION AND LEVEL OF THESE UTILITIES IN CONJUNCTION WITH THE APPROPRIATE AUTHORITY.

1:400

03.03.20		Project No	
Cad Ref: HD5 stage 7 r2		HD5 ST7	
2	COUNCIL COMMENTS	KU	09.05.20
1	CONSTRUCTION CERTIFICATE ISSUE	KU	03.03.20
Amendment		Drawn	Date
		ST7-03	2