



ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD

PO Box 129
WAUCHOPE NSW 2446

Report: SC2144
D & M Calgaro Pty Ltd
327 Burraneer Road
Coomba Park NSW 2428

RE: GEOTECHNICAL ASSESSMENT RESULTS FOR SITE CLASSIFICATION.

Dear Mr & Mrs Calgaro,

At your request, Rosewood Environmental Services P/L carried out a site and soil assessment at Lot 50 DP253666, 327 Burraneer Road, Coomba Park on the 2nd October, 2024. All field works were sited within the proposed building site as per information supplied by the client.

Site Assessment:

- **General Description:** This rural property is located at Coomba Park, south of Forster, on the NSW Mid North Coast. The proposed additions will be on a concrete slab.
- **Proposed Earthworks:** A <1m cut and no fill is proposed. The house site has a ~10% grade in a westerly direction.
- **Trees/rocks/Fill:** No trees are within the building site. Trees are adjacent to the building site. No large rocks were encountered. Uncontrolled fill was recorded in BH1 (0-300m) and is insignificant. Uncontrolled fill is suspected within the higher section of the proposed additions (DCP3). No borehole testing able to be carried out in this section due to access restrictions. This fill is proposed to be cut out.
- **Utilities:** The property is connected to phone and phone. Water will be supplied via water tanks and an on-site wastewater treatment system will be located downslope of the house (Report Ref: E3977). The existing Septic tank will be decommissioned.
- **Drainage/Seepage:** Higher ground above the house site is present from the east. Drainage and seepage should be a major consideration in the design of this house due to the proposed cut and low wet strengths of the clays present.
- **Equipment refusal:** Tungsten Carbide V-bit auger refusal from a trailer-mounted Drill rig was encountered at 1000mm (BH1) due to rock. DCP refusal was recorded at 950mm (DCP1), 300mm (DCP2) and 1400mm (DCP3) due to rock. Rock bed not determined.
- **Bearing Capacities:** The site displayed low bearing capacities (ie <100kPa) in DCP1 (300-600mm), DCP2 (0-800mm) potentially due to water tank overflow and upslope seepage above test site and DCP3 (0-300mm) due to fill and plumbing pipes present.

Soil Assessment:

Based on the geotechnical information within this report the house site is classified **“P” Problem site due to low bearing capacities in all test sites, soil disturbance from septic tank removal and uncontrolled fill with plumbing pipes in DCP 2 & 3 areas. The soil classification is “M” ys 30-40mm Moderately Reactive Clay Site, inc Tree Effects score, as per AS2870:2011.** Site & soil profile photos available on request. This report does not address slope stability. Consideration should be given to all information supplied with the above classification when footings are designed. Should conditions change during excavations further assessment and consultation should be sought.

Please find attached:

- ◆ APPENDIX A: Site plan showing Bore holes and Dynamic Cone Penetrometer (DCP) locations.
- ◆ APPENDIX B: Borelogs of Bore holes.
- ◆ APPENDIX C: DCP Results.
- ◆ APPENDIX D: Soil Testing Results.
- ◆ APPENDIX E: Tree Effects score

For any further queries please contact the undersigned. Thank you for using ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD.
Yours Sincerely

Lyn Richardson

LYN RICHARDSON
ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD

ABN 13 104 186 441

Phone: 02 65 853 143

Email: rosewoodenviro@bigpond.com

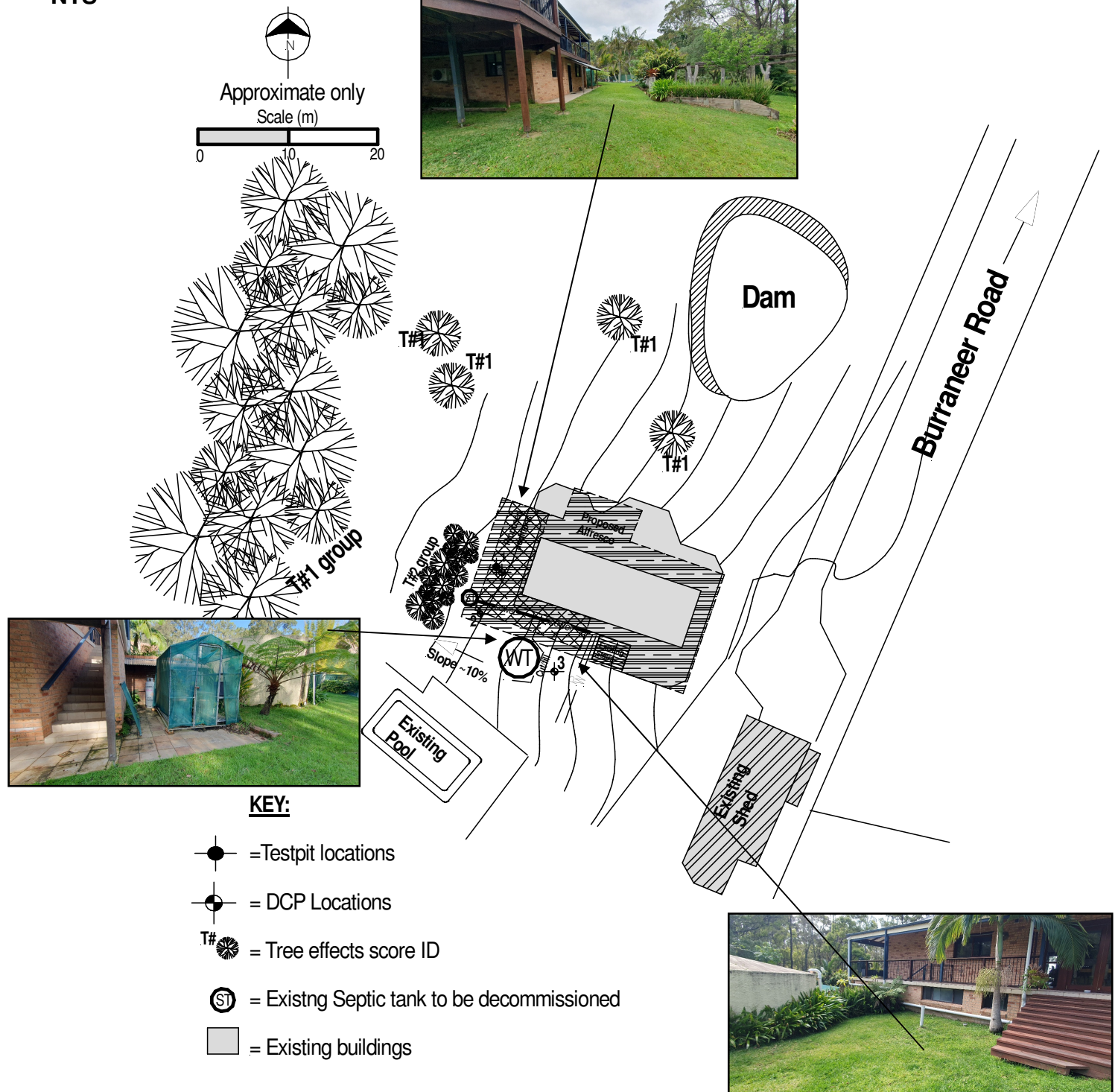
Mobile: 0428 853 143

ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD

APPENDIX A Site Plan

CLIENT NAME: David & Mirella Calgaro	PROJECT ADDRESS: 327 Burraneer Road Coomba Park
CLIENT REFERENCE: Additions	JOB REFERENCE #: SC2144
Sampled By: L. Richardson	Date Sampled: 2.10.2024
Comments: The test site is based on the information provided by the client.	

NTS



ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD

APPENDIX B SITE CLASSIFICATION TESTPIT BORELOGS.

Site Investigation as per AS2870-2011

CLIENT NAME: David & Mirella Calgaro	PROJECT ADDRESS: 327 Burraneer Road Coomba Park
CLIENT REFERENCE: Additions	JOB REFERENCE #: SC2144
Sampled By: L. Richardson	Date Sampled: 2.10.2024
Comments: The test site is based on the information provided by the client.	

Bore Hole	Soil Horizon Depths (mm)	Texture	Colour	Organic Matter (OM) Fill (F) Natural ground (NG)	Gravel/Cobbles			Moisture Content	Consistency	Plasticity Estimated Liquid Limit
			(P) = Pale (D) = Dark (/) = Mottled (-) = combination		Size (mm)	Shape Angular (A) Subangular (SA) Rounded (R) Subrounded (SR)	Qty Low (L) <10% Moderate (M) <25% High (H)	Dry (D) Moist (M) Wet (W)	Term (See note)	Low (L) ≤ 35% Med (M) >35 ≤ 50% High (H) > 50%
1	0-100	Topsoil	(D)Brown	OM/F	<20	A	L	M	VSt	-
	100-300	Sandy CLAY	(D)Brown/orange	F	<25	A	H	M	VSt	-
	300-350	Topsoil	(D)Brown	OM/NG	<20	A	L	M	St	-
	350-600	Silty Sandy CLAY	(D)Brown/(D)Grey	NG	<25	A	L	W	S-St	M
	600-800	Silty CLAY	(D)Brown/(D)Grey	NG	<20	A	L	M-W	VSt	M
	800-1000	Sandy CLAY	Orange	NG	<30	A	H	D-M	VSt	L
	1000	Refusal Rock								

NOTE: CONSISTENCY TERMS. As per: AS1726: Table A4

COHESIVE SOILS Undrained shear strength kPa	Very Soft (VS) ≤12 kPa	Soft (S) >12 ≤25 kPa	Firm (F) >25 ≤50 kPa	Stiff (St) >50 ≤100 kPa	Very Stiff (VSt) >100 ≤200 kPa	Hard (H) >200 kPa
NON-COHESIVE SOILS Density Index	Very Loose (VL) ≤15%	Loose (L) >15 ≤35%	Medium Dense (MD) >35 ≤65 %	Dense (D) >65 ≤85 %	Very Dense (VD) >85 %	-

Comments. Rock bed not determined

Checked By: LR

Date Checked: 2.10.2024

ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD

APPENDIX C

DYNAMIC CONE PENETROMETER

☒ AS1289 6.3.2 (Standard) ☐ AS1289 6.3.3 (Perth)

DCP #: **DCP1**

CLIENT NAME: David & Mirella Calgaro	PROJECT ADDRESS: 327 Burraneer Road Coomba Park
CLIENT REFERENCE: Additions	JOB REFERENCE #: SC2144
Sampled By: L. Richardson	Date Sampled: 2.10.2024
Comments: The test site is based on the information provided by the client.	

TEST DEPTH	REDUCED DEPTH*	DCP Test Location Reference Number. Blows/100mm Increment.						
(mm)	(mm)	1	2	3	4	5	6	7
0-100	0	3	1	1				
100-200		3	1	2				
200-300		3	2	2				
300-400		2	1	5				
400-500		1	1	3				
500-600	0 (DCP1)	2	1	3				
600-700		6	2	3				
700-800		13	2	2				
800-900		16	3	3				
900-1000		5+Ref	4	8				
1000-1100			3	3				
1100-1200			3	3				
1200-1300			8	5				
1300-1400			5+Ref	10+Ref				
1400-1500								
1500-1600								
1600-1700								
1700-1800								
1800-1900								
1900-2000								
2000-2100								
2100-2200								
2200-2300								
2300-2400								
2400-2500								
2500-2600								
2600-2700								
2700-2800								
2800-2900								
2900-3000								

*= Reduced Depth = Depth (mm) below soil surface level at commencement of penetration.

DCP Drop Height (mm): 510mm **Moisture Condition:** Moist

Ground Water Table: Not detected

Comments: NOTE: 1) Low DCP readings (<4 blows/100mm=<100KPa**) in **BOLD** type.

(2-4 blows/100mm = 50-110KPa**). **Estimated KPa and to be used as a guide only

2) Refusal due to rock

Checked By: **LR**

Date: **2.10.2024**

ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD

APPENDIX D
Soil Test Results

CLIENT NAME: David & Mirella Calgaro	PROJECT ADDRESS: 327 Burraneer Road Coomba Park
CLIENT REFERENCE: Additions	JOB REFERENCE #: SC2144
Sampled By: L. Richardson	Date Sampled: 2.10.2024
Comments: The test site is based on the information provided by the client.	

Sample History: Oven-dried (50°C) / Dry sieved (-425um)

Method of preparation: AS1289.1.1

SOIL DESCRIPTION	Silty CLAY
SOIL DEPTH (mm)	BH1 700mm
MOISTURE CONTENT (%) AS1289.2.1.1	15.7
LIQUID LIMIT (%) AS1289.3.1.2-1995	27.9
LINEAR SHRINKAGE (%) AS1289.3.4.1-1995	6.0

COMMENTS: The clay has a Moderate Liquid Limit and Linear shrinkage.

Checked By: LR

Date: 16.10.2024

ROSEWOOD ENVIRONMENTAL SERVICES PTY LTD

APPENDIX E

SITE CLASSIFICATION

TREE EFFECT SCORE.

As per AS2870-2011 Table CH5.1

CLIENT NAME: David & Mirella Calgaro	PROJECT ADDRESS: 327 Burraneer Road Coomba Park
CLIENT REFERENCE: Additions	JOB REFERENCE #: SC2144
Sampled By: L. Richardson	Date Sampled: 2.10.2024

	Characteristics		Option	Option Score	Characteristic Score							
					Tree #1	Tree #2	Tree #3	Tree #4	Tree #5	Tree #6	Tree #7	Tree #8
Tree Name				Trees	Small trees							
Tree Characteristics	Canopy	Dense	3	2	3							
		Med Dense	2									
		Sparse	1									
	Height	Tall >15m	3	3	1							
		Med 8-15m	2									
		Small <8m	1									
	Stage of growth	Growing	2	1	1							
		Mature	1									
	Drought Resistance	Resistant	2	2	0							
		Not resistant	0									
Ground & Site Conditions	Depth of Fill	≥1m	2	0	0							
		<1m	0									
	Adverse Conditions	Yes	1-2	0	0							
		No	0									
	Soil Profile Reactivity	H/E	2	1	1							
		M	1									
Total Tree effect score (sum characteristic scores above)				9	6							
Tree Effect (As per AS2870-2011 Table CH5.2)				High	Moderate							

COMMENTS: Increase Classification to “M” ys30-40mm due to High tree score.

Checked By: LR

Date: 2.10.2024