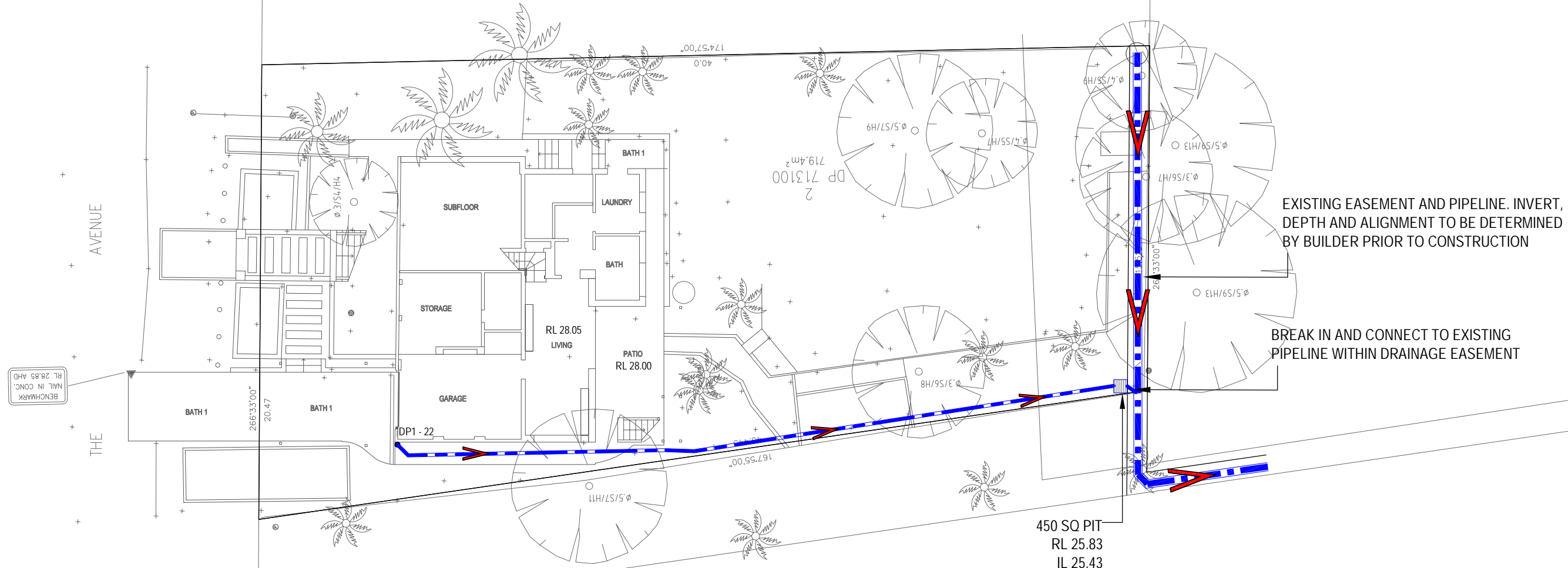


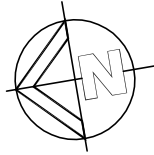
<div>STORMWATER DRAINAGE NOTES:</div> <div><div><div>- ALL PIPES TO BE 100mm Ø uPVC, LAID AT 1% MINIMUM GRADE TO AS1254.2002 U.N.O.</div><div>- ALL PIPES SHALL BE LAID ON A 75mm SAND BED, COMPACTED TO 100% S.M.D.D BELOW PAVEMENTS. (NO COMPACTION IS REQUIRED BELOW LANDSCAPING).</div><div>- COVER TO SURFACE FROM TOP OF PIPE TO BE 300mm MINIMUM. BACKFILL TO BE ADEQUATELY CONSOLIDATED AROUND PIPES BY METHOD OF RAMMING AND WATERING IN. TRENCHES TO BE FILLED WITH GRANULAR MATERIAL AS SPECIFIED.</div><div>- DOWNPIPE LOCATIONS ARE INDICATIVE ONLY. LOCATIONS TO BE CONFIRMED WITH ARCHITECT PRIOR TO COMMENCEMENT OF WORK.</div><div>- PROVIDE CLEANING EYES AND LEAF CATCHERS TO ALL DOWNPIPES.</div><div>- ALL WORK TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARDS AND SPECIFICATIONS.</div><div>- ALL LEVELS SHOWN ARE TO AHD.</div><div>- ENSURE THAT ALL PITS AND STORMWATER PIPES ARE LOCATED CLEAR FROM TREE ROOT SYSTEMS.</div><div>- ALL EXISTING EARTHENWARE PIPES TO BE UPGRADED TO uPVC.</div><div>- ALL WORKS TO BE IN ACCORDANCE WITH AS3500.3-2003 NATIONAL PLUMBING AND DRAINAGE CODE PART 3 - STORMWATER DRAINAGE.</div><div>- SUBSOIL DRAINS ARE TO BE INSTALLED IN ACCORDANCE WITH AS3500.3 ALONGSIDE WALLS THAT IMPEDE THE NATURAL FLOW OF GROUNDWATER. THIS MAY ALSO INVOLVE TRENCHING INTO THE CLAY OR ROCK SUBGRADE TO DIRECT GROUNDWATER AWAY FROM STRUCTURES.</div><div>- EXISTING ROOF DRAINAGE AND SITE DRAINAGE SYSTEM TO BE CHECKED AND UPGRADED AS REQUIRED. BUILDER TO INSPECT AND UPGRADE DRAINAGE IN ACCORDANCE WITH AS3500.3 IF REQUIRED.</div></div><div>RAINWATER STORAGE / REUSE NOTES:</div><div><div>- THE RAINWATER TANK IS TO BE INSTALLED AND USED AS PER BASIX REQUIREMENTS AND SYDNEY WATER AND NSW HEALTH REQUIREMENTS FOR NON DRINKING USE ONLY.</div><div>- ALL CONNECTIONS TO PLUMBING AND RAINWATER TANKS IS TO BE IN ACCORDANCE WITH SYDNEY WATERS 'GUIDE TO INSTALLING A RAINWATER TANK' AVAILABLE AT: WWW.SYDNEYWATER.COM.AU.</div><div>- PROVIDE DUAL SUPPLY SYSTEM AND BACKFLOW PREVENTION SYSTEM IN ACCORDANCE WITH 'BASIX - DESIGN GUIDE FOR SINGLE DWELLINGS' BY NSW DEPARTMENT OF INFRASTRUCTURE, PLANNING AND NATURAL RESOURCES.</div><div>- IF NOT SPECIFIED ON PLANS, THE FIRST FLUSH SYSTEM IS TO HAVE A MINIMUM SIZE OF 20L PER 100 m2 OF ROOF CATCHMENT AREA PRIOR TO ENTERING THE RAINWATER TANK. INDIVIDUAL SITE ANALYSIS IS REQUIRED IN HEAVILY POLLUTED AREAS TO DETERMINE IF LARGER VOLUMES OF FIRST FLUSH RAINWATER ARE TO BE DIVERTED. IF IN DOUBT, CHECK WITH LOCAL HEALTH AUTHORITIES.</div></div></div>			<div><div>- SCREENED DOWNPIPE RAINWATER HEAD OR OTHER SUITABLE LEAF AND DEBRIS DEVICE TO BE INSTALLED ON EACH DOWNPIPE. SCREEN MESH TO BE 4-6mm AND DESIGNED TO BE SELF-CLEANING.</div><div>- FIRST FLUSH DEVIDED, OR APPROVED ALTERNATIVE TO BE INSTALLED WITH AND AUTOMATED DIVERSION AND DRAINAGE SYSTEM, THAT IS, NO MANUAL DIVERSION AND DRAINAGE VALVES. REFER TYPICAL FLUSH OUT PIT FOR DETAILS.</div><div>- BEFORE PURCHASING MATERIALS OR PAINT TO BE USED ON ROOF CATCHMENT AREAS, THE MANUFACTURER'S RECOMMENDATIONS ON LABELS AND BROCHURES FOR RAINWATER TANK SUITABILITY TO BE READ AND ADHERED TO.</div><div>- BUILDER/PLUMBER TO ENSURE THE INSTALLATION OF THE RAINWATER TANK SYSTEM IS IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND THE RAINWATER TANK DESIGN AND INSTALLATION HANDBOOK - HB 230- 2008. IF IN DOUBT CONTACT ENGINEER.</div><div>- RAINWATER TANK TO BE WATERPROOFED IN ACCORDANCE WITH HB-230-2008.</div><div>- ORIFICE PLATE (IF APPLICABLE) TO BE INSTALLED PRIOR TO THE INSTALLATION OF THE ROOF DRAINAGE SYSTEM AND CONNECTION OF THE STORMWATER SYSTEM TO THE OSD TANK.</div></div> <div>LEGEND</div> <div><div><div>DP1 - xxx</div><div>DP1 - 100mm Ø DOWNPIPE TO RAINWATER TANK xxx - ROOF CATCHMENT AREA TO DOWNPIPE</div></div><div><div>SS</div><div>PIPELINE SUSPENDED FROM SOFFIT OF SLAB OVER</div></div><div><div>SP</div><div>100mm Ø DOWNPIPE SPREADER TO LOWER ROOF</div></div><div><div></div><div>100mm Ø uPVC STORMWATER PIPELINE, UNO</div></div><div><div>GDE</div><div>150 (W) x 150 (D) GRATED DRAIN</div></div><div><div></div><div>GRAVITY LINE PROVIDE 1% (MIN) FALL, UNO.</div></div></div>	<div>SITE INFORMATION SUMMARY</div> <div><div>COUNCIL</div><div>NORTHERN BEACHES (PITTWATER)</div></div> <div><div>SITE AREA</div><div>719.4 m²</div></div> <div><div>EXISTING IMPERVIOUS AREA</div><div>284 m² (40%)</div></div> <div><div>PROPOSED IMPERVIOUS AREA</div><div>271 m² (38%)</div></div> <div>SINCE THERE IS A REDUCTION IN SITE AREA, OSD IS NOT REQUIRED FOR THIS DEVELOPMENT.</div> <div>DIAL BEFORE YOU DIG NOTICE</div> <div><div>NO INVESTIGATION OF UNDERGROUND SERVICES HAS BEEN MADE. ALL RELEVANT AUTHORITIES SHOULD BE NOTIFIED PRIOR TO ANY EXCAVATION ON OR NEAR THE SITE</div><div>DEVELOPERS & EXCAVATORS MAY BE HELD FINANCIALLY RESPONSIBLE BY THE ASSET OWNER SHOULD THEY DAMAGE UNDERGROUND NETWORKS.</div><div>CARELESS DIGGING CAN:<ul style="list-style-type: none">CAUSE DEATH OR SERIOUS INJURY TO WORKERS AND THE GENERAL PUBLICINCONVENIENCE USERS OF ELECTRICITY, GAS, WATER AND COMMUNICATIONSLEAD TO CRIMINAL PROSECUTION AND DAMAGES CLAIMSCAUSE EXPENSIVE FINANCIAL LOSSES TO BUSINESSCUT OFF EMERGENCY SERVICESDELAY PROJECT COMPLETION TIMES WHILE THE DAMAGE IS REPAIRED</div><div>MINIMISE YOUR RISK AND DIAL BEFORE YOU DIG. – TEL. 1100</div><div><div>www.dialbeforeyoudig.com.au</div><div><div><div></div><div>1100</div><div>BEFORE YOU DIG</div></div></div></div></div>				
<div></div>	<div></div>	<div></div>	<div>BILL KERLEY</div>	<div><div></div><div>GREENWOOD CONSULTING ENGINEERS</div></div>	<div>Project</div> <div>53 THE AVENUE NEWPORT</div>	<div>EG</div>	<div>Designed</div> <div>EG</div>	<div>03/12/2020</div>
<div></div>	<div></div>	<div></div>	<div>Architect</div>	<div></div>	<div>Title</div>	<div>Checked</div> <div>EG</div>	<div>Approved</div> <div>EG</div>	<div>Scale</div> <div>1 : 200</div>
<div>-</div>	<div>ISSUE FOR DA SUBMISSION ONLY</div>	<div>3/12/20</div>	<div>BAIKIE CORR</div>	<div>2/25 Seabeach Avenue, Mona Vale ABN - 90 625 916 341</div>	<div></div>	<div>Drawing number</div> <div>SW0</div>	<div>Job number</div> <div>2020206</div>	<div>Revision</div> <div>-</div>
<div>REVISION</div>	<div>AMENDMENT</div>	<div>DATE</div>						



NOTE: ALL EXISTING SURFACE DRAINAGE TO BE RETAINED IS TO BE UPGRADED BY THE BUILDER IN ACCORDANCE WITH AS3500.3

ISSUE FOR DA
SUBMISSION ONLY

			BILL KERLEY	 <div>GREENWOOD CONSULTING ENGINEERS</div>	Project 53 THE AVENUE NEWPORT	EG	Designed EG	03/12/2020
						Architect	Checked EG	Approved EG
-	ISSUE FOR DA SUBMISSION ONLY	3/12/20	BAIKIE CORR	2/25 Seabeach Avenue, Mona Vale ABN - 90 625 916 341	Title SITE DRAINAGE PLAN	Drawing number SW02	Job number 2020206	Revision -
REVISION	AMENDMENT	DATE						

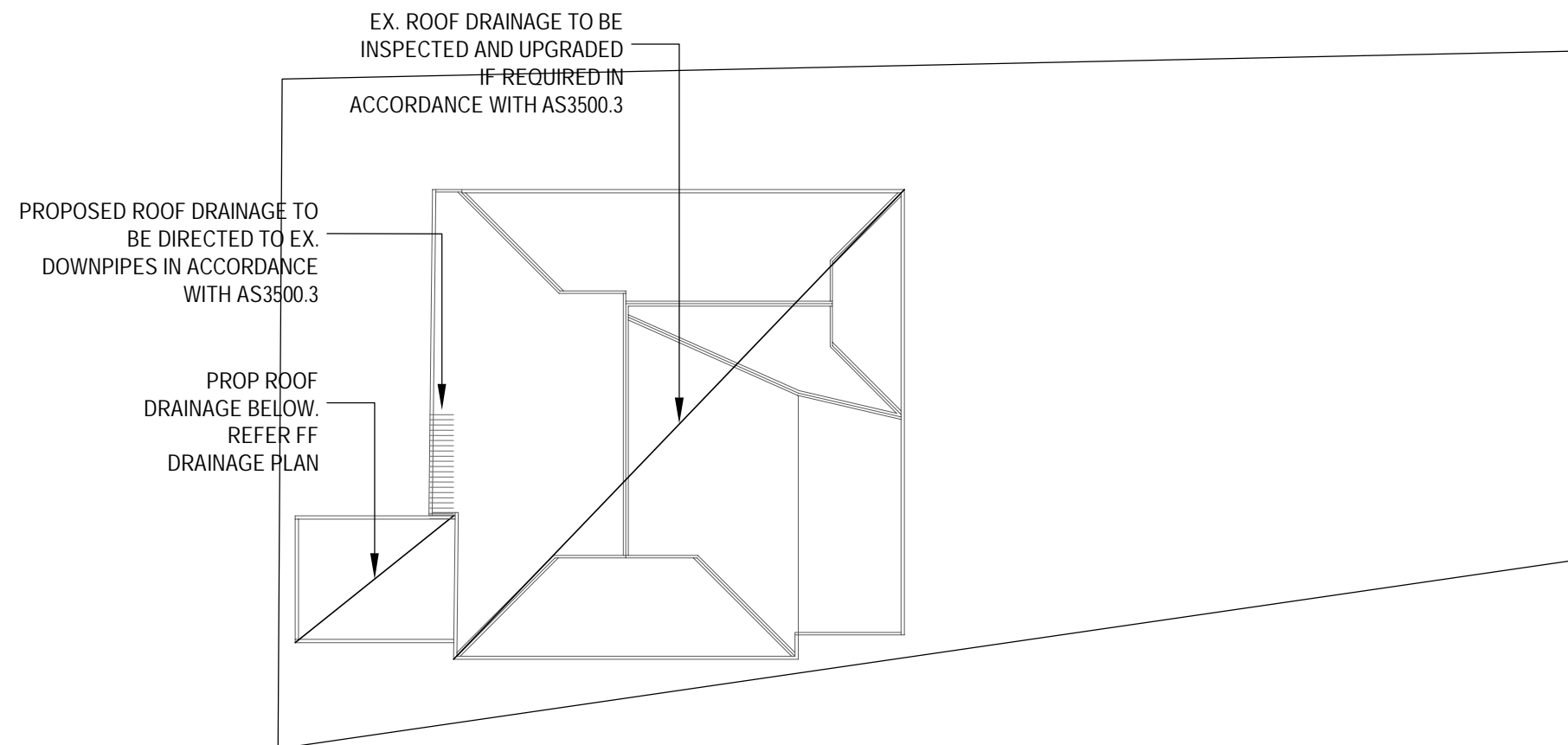


FIRST FLOOR DRAINAGE PLAN

SCALE 1:200

ISSUE FOR DA
SUBMISSION ONLY

			Architect	<div>GREENWOOD CONSULTING ENGINEERS</div> <div>2/25 Seabeach Avenue, Mona Vale ABN - 90 625 916 341</div>	Project 53 THE AVENUE NEWPORT	EG	Designed EG	03/12/2020
						Checked EG	Approved EG	Scale 1 : 200
-	ISSUE FOR DA SUBMISSION ONLY	3/12/20	Architect	BAIKIE CORR	Title FIRST FLOOR DRAINAGE PLAN	Drawing number SW03	Job number 2020206	Revision -
REVISION	AMENDMENT	DATE						



SCALE 1:200

ISSUE FOR DA
SUBMISSION ONLY

			BILL KERLEY	 <div>GREENWOOD CONSULTING ENGINEERS</div>	Project	53 THE AVENUE NEWPORT	EG	Designed EG	03/12/2020				
							Architect	Checked EG	Approved EG	Scale 1 : 200			
			BAIKIE CORR	2/25 Seabeach Avenue, Mona Vale ABN - 90 625 916 341	Title	ROOF DRAINAGE PLAN	Drawing number		Job number		Revision		
-	ISSUE FOR DA SUBMISSION ONLY	3/12/20											
REVISION	AMENDMENT	DATE											



04/12/2020
Eliot Greenwood
53 The Avenue
Newport, NSW
Project Reference: 2020206

To whom it may concern,

RE: ALTERATIONS AND ADDITIONS AT 53 THE AVENUE NEWPORT – CIVIL DESIGN STATEMENT

Greenwood Consulting Engineers has designed the stormwater for the above address (Drawing Numbers: SW01-SW05 (03-12-20)) and confirm that the plans have been completed from the architectural plans prepared by Baikie Corr (Drawing No's: A000 – A501, Revision B).

The design and documentation is in general compliance with the National plumbing and drainage code AS3500.3 and Northern Beaches (Pittwater) Council's DCP.

I am an appropriately qualified and competent person in this area and as such can certify that the design and performance of the alterations & additions to the address above will comply with the above Australian Standards. I possess indemnity insurance to the satisfaction of the building owner or my principal.

Designer: Eliot Greenwood

Business no: 0421399423

Qualifications: MIE Aust. NER

Institute of Engineers Australia No: 3726157

Address: 2/25 Seabeach Avenue, Mona Vale, NSW, 2103

We believe above meets your current need. Please don't hesitate to contact me if you have any queries.

Yours sincerely,

Eliot Greenwood
Director
Greenwood Consulting Engineers