PROPOSED NEW RESIDENCE LOT 24 STEPHENS STREET, BINALONG

CONSTRUCTION NOTES

- CN1. BEFORE PLACING ANY FILLING. ALL ORGANIC MATERIAL. UNCOMPACTED FILL & TOP SOIL ARE TO RE REMOVED & THE AREA PROOF ROLLED TO IDENTIFY ANY LOW STRENGTH AREAS IN NECESSARY, LOW STRENGTH MATERIAL IS TO BE EXCAVATED TO OBTAIN A UNIFORM STRENGTH BASE PRIOR TO PLACEMENT OF FILL MATERIAL
- CN2. FOOTINGS ARE GENERALLY TO BE FOUNDED ON UNIFORM NATURAL GROUND, ALL FILL UNDER THE SLAB SHALL BE COMPACTED & TESTED IN ACCORDANCE WITH AS 3798/2007 GUIDELINES ON EARTHWORKS FOR COMMERCIAL & RESIDENTIAL DEVELOPMENTS. FOR RESIDENTIAL SITES THIS REQUIRES A MINIMUM DENSITY RATIO OF 95% (AT STANDARD COMPACTIVE EFFORT). WHERE RECURRES A MINIMUM DENSITI KATIO OF 95% IAI STANDARD COMPACTIVE EFFORT, MHERE REACTIVE SOLIS ARE TO BE USED AS FILL, THE MOSTURE CONTENT AT FLACEMENT SHALL NOT EXCEED ±2% OF STANDARD OPTIMUM MOISTURE CONTENT. FURTHERMORE, COMPACTED FILL MUST EXTEND A MINIMUM OF THB BEYOND THE BUILDING FOOTPRINT TO ENSURE PROPER COMPACTION UNDER THE ENTITUDES ACHIEVED. TESTS SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 3798-2007, WITH NOT LESS THAN ONE

TEST STALL DE CANDID. DO'T M'ACCONDANCE M'ITAS J'JOLDO', WITH NOT LEST TRAINO TEST PER LAYER OF FILL, OR OWE TEST PER 2000' OF MATERIAL - WHICHVEEN ES GEATER. TESTS SHOULD BE DISTRIBUTED EVENLY THROUGHOUT THE FULL DEPTH & AREA. AT THE COMPLETION OF FILLING THE GEOTECHNICAL TESTING AUTHORITY SHALL PROVIDE ALL TEST DATA, INCLUDING TEST LOCATIONS & RESULTS, AS REQUIRED FOR LEVEL 2 SAMPLING & TESTING IN ACCORDANCE WITH AS 3796207. ALTERNATIVELY, IF FILL IS UNCOMPACTED CONTACT THIS OFFICE FOR PIERING REQUIREMENTS.

- CN3. THE BASE OF FOOTINGS & EDGE BEAMS MAY BE STEPPED OR MAY BE SLOPED NOT MORE
- CN4. MINIMUM ALLOWABLE BEARING CAPACITY, INCLUDING EDGE BEAM, IS 100kPa.
- CNS. IN AREAS OF POTENTIAL TERMITE RISK, FOUNDATIONS SHALL BE CHEMICALLY OR OTHERWISE TREATED IN ACCORDANCE WITH AS 3660-CURRENT EDITION. THIS IS RECOMMENDED FOR ALL SITES. PROVIDE FOR TERMITE PROTECTION AS REQUIRED AT SLAB JOINTS.
- CN6. CLEAR CONCRETE COVER TO REINFORCEMENT SHALL BE 40mm TO UNPROTECTED GROUND, 30mm TO MEMBRANE IN CONTACT WITH GROUND, 20mm TO INTERNAL SURFACES & 30mm TO EXTERNAL SURFACES.
- CN7. IN BEAM DEPTHS OVER 500mm, SERVICE PENETRATIONS SHALL BE PERMITTED THROUGH THE MIDDLE THIRD OF THE EDGE BEAM & FOOTING BEAM DEPTH. ALL HORIZONTAL RUNS SHALL BE LOCATED BELOW THE SLAB REINFORCEMENT. PIPES IN EXCESS OF Ø20mm. SHALL NOT BE USED IN HORIZONTAL RUNS UNLESS THE SLAB IS THICKENED.
- CN8. TRENCH MESH SHALL HAVE ALL CROSS WIRES CUT FLUSH WITH OUTER MAIN WIRES. TRENCH MESH IN BEAMS SHALL BE OVERLAPPED BY WIDTH OF MESH AT "T" & "L" JUNCTIONS, TRENCH MESH SHALL BE SPLICED WHERE NECESSARY BY A LAP OF 500mm.
- CN9. WORKMANSHIP & MATERIALS SHALL BE IN ACCORDANCE WITH AS 2870 RESIDENTIAL SLABS & FOOTINGS & THE "ACCEPTABLE STANDARDS OF DOMESTIC CONSTRUCTION", NEW SOUTH WALES.
- CN10. CONCRETE 28 DAY DESIGN STRENGTH TO BE f'€=25MPa, WITH A MAXIMUM SLUMP OF 80mm, 20mm MAX. SIZE AGGREGATE. IF HYDRONIC HEATING \$/OR POLISHED CONCRETE IS PROPOSED, THIS MAY AFFECT THE PROPOSED DESIGN. CONTACT COOK&ROE FOR FURTHER ADVICE ON SLAB REINFORCEMENT, THICKNESS & CONCRETE REQUIREMENTS, FURTHERMORE, IN GROUND CONDITIONS WITH HIGH SALINITY, CONCRETE STRENGTH SHALL BE INCREASED TO f'c=32MPa.
- CN11. CONCRETE SHALL BE VIBRATED TO COMPLETELY FILL THE FORMWORK TO THE INTENDED LEVEL, EXPEL ENTRAPPED AIR, & CLOSELY SURROUND ALL REINFORCEMENT, TENDONS & EMBEDMENTS
- CN12. CONCRETE SHALL BE CURED (KEPT CONTINUOUSLY WET) FOR A MINIMUM PERIOD OF 7 DAYS AFTER PLACEMENT.
- CN13. ENSURE THAT WATER DOES NOT POND AROUND THE BUILDING, ON CUT & FILL SITES, GRADE GROUND AWAY FROM THE BUILDING A MINIMUM OF 1:20 SLOPE FOR 1.0m. ON LEVEL SITES THE MINIMUM HEIGHT OF SLAB ABOVE FINISHED EXTERNAL LEVELS SHALL BE 225mm THIS MAY BE REDUCED LOCALLY TO 50mm NEAR PAVED AREAS THAT SLOPE AWAY FROM THE BUILDING
- CN14. SLAB DESIGN DOES NOT ALLOW FOR SHRINKAGE CRACK CONTROL REFER TO ENGINEER IF CRACK CONTROL TO ALLOW FOR EXTENSIVE BRITTLE FLOOR COVERINGS IS REQUIRED.
- CN15. IF ENGINEERING INSPECTION OF SITE PREPARATIONS PRIOR TO CONCRETING IS REQUIRED, PROVIDE NIMUM OF FORTY EIGHT HOURS PROVISIONAL NOTIFICATION
- CN16. WHERE DEPTH OF FILLING BELOW SLABS EXCEEDS 400mm THE FILLING SHALL BE DEEMED TO BE UNCOMPACTED UNLESS SITE DENSITY TESTING IS CARRIED OUT
- CNT7. THE DETAILS SHOWN ON THIS DRAWING ASSUME COMPACTED FILL REFER TO ENGINEER FOR CHANGES TO CONSTRUCTION REQUIREMENTS TO ALLOW FOR UNCOMPACTED FILL BELOW SLAB OR EDGE BEAMS.
- CN18. LAP LENGTHS SHALL BE 40 × BAR DIAMETERS U.N.O. FOR DEFORMED BARS. NOTE: WHERE BARS WITH DIFFERENT DIAMETERS LAP, THE LAP LENGTH SHALL APPLY FOR THE SMALLER BAR DIAMETER ALL COGS TO BE STANDARD COGS UN O



- CN19. REINFORCEMENT SYMBOLS: S - DENOTES GRADE 230S HOT ROLLED DEFORMED BARS TO AS 1302. R - DENOTES GRADE 230R HOT ROLLED PLAIN BARS TO AS 1302. - DENOTES HARD-DRAWN PLAIN WIRE TO AS 1303 W - DENOTES GRADE D500N BARS TO AS 503. N - DENOTES GRADE D500N BARS TO AS 4671. SL/RL - DENOTES D500L REINFORCEMENT FABRIC TO AS 4671. TM - DENOTES GRADE D500L TRENCH MESH TO AS 4671.

BJK WGR 11.02.2

Drawn Approved Date

A ISSUED FOR APPROVAL

Revision Description

NOMINAL BAR SIZE IN mm _______ SPACING IN mm THE FIGURE FOLLOWING THE FABRIC SYMBOLS SL, RL, TM IS THE REFERENCE NUMBER FOR FABRIC

SITE DRAINAGE

ALLOTMENTS CONTAINING REACTIVE SITES SHALL BE PROVIDED WITH AN ADEQUATE SYSTEM OF DRAINAGE DESIGNED IN ACCORDANCE WITH THE FOLLOWING RECOMMENDATIONS

- SD1 THE FOOTING & SLAB DESIGN REQUIRES ADEQUATE SURFACE DRAINAGE AROUND THE PERIMETER OF THE BUILDING, CARE SHALL BE TAKEN WITH THE SURFACE DRAINAGE OF THE ALLOTMENT FROM THE START OF CONSTRUCTION. THE DRAINAGE SYSTEM SHOULD BE COMPLETED BY THE FINISH OF CONSTRUCTION OF THE BUILDING.
- SD2. THE DRAINAGE SHALL BE DESIGNED & CONSTRUCTED TO AVOID ANY POSSIBILITY OF WATER PONDING AGAINST OR NEAR THE BUILDING. THE GROUND IN THE IMMEDIATE VICINITY OF THE BUILDING SHOULD BE GRADED TO SLOPE 50mm AWAY FROM THE BUILDING OVER A DISTANCE OF 1m FROM THE BUILDING. ANY PAVING SHOULD ALSO BE SUITABLY SLOPED.
- SD3. PARTICULAR ATTENTION SHOULD BE GIVEN TO ENSURING THAT PLUMBING TRENCHES DO NOT INTRODUCE WATER TO THE FOUNDATION OF THE BUILDING. SPECIFICALLY, THE TRENCHES SHOULD BE SLOPED AWAY FROM THE BUILDING & SHOULD BE BACK FILLED WITH CLAY IN THE TOP 300mm WITHIN 15m OF THE BUILDING. WHERE PUES PASS UNDER THE FOOTING, THE TRENCH SHOULD BE BACK FILLED WITH CLAY OR CONCRETE TO PREVENT THE INGRESS OF WATER BENEATH THE
- SD4. SUBSURFACE DRAINS TO REMOVE GROUNDWATER SHALL NOT BE USED WITHIN 1.5m OF THE BUILDING UNLESS DESIGNED IN ACCORDANCE WITH ENGINEERING PRINCIPLES.

PLUMBING & DRAINAGE DETAILING

ON REACTIVE CLAY SITES ADDITIONAL CARE IS NEEDED TO REDUCE THE RISK OF LEAKS NEAR THE FOOTINGS & THE FOLLOWING IS RECOMMENDED:

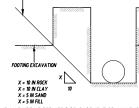
- PD1. PENETRATIONS OF THE SLAB & BEAMS SHOULD BE AVOIDED IF POSSIBLE. HOWEVER, WHERE NECESSARY, HORIZONTAL PENETRATIONS SHALL BE SLEEVED TO ALLOW FOR MOVEMENT WITH 10mm THICK CLOSED CELL POLYETHYLENE LAGGING FOR M CLASS SITES. 20mm THICK FOR H1 CLASS SITES & 40mm THICK FOR H2 & E CLASS SITES. VERTICAL PENETRATIONS DO NOT REQUIRE
- PD2. CONNECTION OF STORM WATER DRAINS & WASTE DRAINS SHOULD INCLUDE FLEXIBLE CONNECTIONS, PARTICULARLY ON REACTIVE SITES. IN ACCORDANCE WITH AS 2870 & THE PLUMBING CODE OF AUSTRALIA.
- PD3. SEPTIC TANKS & ASSOCIATED SOAKAGE AREAS SHOULD BE LOCATED TO MINIMISE THEIR EFFECT ON THE FOUNDATIONS
- PD4. PLUMBING & DRAINAGE UNDER A SLAB SHOULD BE AVOIDED WHERE PRACTICAL. PIPES SLEEVED WITH POLVETHVLENE MAY BE ENCASED IN CONCRETE OR RECESS IN THE SLAB & PROVIDED WITH FLEXIBLE JOINTS AT THE EXTERNOR OF THE SLAB. NOTE: METHODS USED SHOULD COMPLY WITH LOCAL PLUMBING & DRAINAGE REGULATIONS.

DRAWING LIST				
Dwg. No.	DESCRIPTION			
S.01	GENERAL NOTES & DRAWING LIST			
S.02	CONCRETE FOOTING & SLAB PLAN			
S.03	CONCRETE DETAILS '1'			
S.04	CONCRETE DETAILS '2'			
S.05	ARTICULATION JOINT PLAN & DETAILS			

RECOMMENDED SITE MANAGEMENT TECHNIQUES

IT IS IMPORTANT TO REALISE THAT ENGINEERING DESIGN ON REACTIVE CLAYS IS A COMPROMISE SOLUTION BETWEEN COSTS & BUILDING PERFORMANCE ENGINEERING DESIGN AIMS AT ACCOMMODATING SOLUTION BETWEEN COSTS & BUILDING PERFORMANCE. ENGINEERING DESIGN AIMS AT ALCOMMODATIN DIFFERENTIAL MOVEMENTS CAUSED BY EXTEME SEASONAL MOISTURE (HANGES & DOES NOT ALLOW FOR UNCONTROLLED LOCALISED MOISTURE CHANGES WHICH ARE CONTROLLABLE BY ADEQUATE SITE MANAGEMENT TECHNIQUES. IT IS VIRTUALLY IMPOSSIBLE TO DESIGN AN ECONOMIC FOUNDATION THAT MULL TOTALLY PREVENT DIFFERITIAL MOVEMENT. II IS THEREFORE TO BE EXPECTED THAT SOME NOM-STRUCTURAL AESTHETIC CRACKING & MOVEMENT WILD CCLUP, SLIGHT CRACKING IDEFINED AS COLORY MOTIVE ID TO SOLE AUCULAL VIEW DETURIED AT UNELLINGT ALL THE FORMET OF THE ENVIRONMENT. CRACK WIDTHS UP TO 5mm). USUALLY HAVE NO STRUCTURAL INFLUENCE ON THE FUNCTION OF THE WALL RECTIFICATION OF MOVEMENT PROBLEMS TO BE DESIGNED BY A QUALIFIED STRUCTURAL ENGINEER EXPERIENCED WITH REACTIVE SITE CONDITIONS. FOR REACTIVE SITES. THE FOLLOWING OWNER/TENAN RECOMMENDATIONS ARE SUGGESTED AS A MEANS OF MINIMISING LOCAL DIFFERENTIAL MOVEMENT PROBLEMS WITH THE FINISHED CONSTRUCTION

- SM1. LEAKING PLUMBING & BLOCKED DRAINS SHOULD BE PROMPTLY ATTENDED TO IN ADDITION. GARDEN WATERING SHOULD BE CAREFULLY CONTROLLED TO PREVENT EXCESSIVE MOISTURE VARIATIONS AROUND THE BUILDING. MEASURES AIMED AT PRODUCING A UNIFORM GROUND MOISTURE CONTENT YEAR ROUND ARE BENEFICIAL
- SM2 TREES & LARGE SHRUBS, WHEN PLANTED CLOSE TO THE BUILDING CAN CAUSE SIGNIFICANT INCL'S & LANGE SMORSES, MIENT FLANTED LEUSE (UI TIMES DE PODUIDING LAN CANADAS SIONIFICANT) MOISTURE CHANGES UNDER THE CONSTRUCTION IN TIMES DE PODUIDING LAN CANADAS SIONIFICANT CAUSE CAN BE SIGNIFICANTLY REDUELD BY PLANTING TREES SOME DISTANCE AWAY FROM BULIDINGS, 75X dO THE MATURE TREE HEIGHT IS A RECOMMENDED MINIWUM, HONEVER RECOMMENDED DISTANCE VARIES DEPENDING ON SITE CONDITIONS & TREE SPECIES.
- SM3. IN TIMES OF DROUGHT, WATER DEMAND OF TREES CAN BE SUBSTANTIALLY REDUCED BY EXTENSIVE PRUNING, OR ALTERNATIVELY PROVISION OF ADEQUATE WATER WILL REDUCE THE DEGREE OF BUILDING DAMAGE THAT TREES CAUSE. WATERING IS PROBABLY BEST ACHIEVED BY
- SM4. LIMITATIONS OF EXCAVATIONS NEAR FOOTINGS TO BE AS FOLLOWS LINE OF INFLUENCE



IF A EXISTING SERVICE PIPE, EASEMENT OR ANY EXCAVATION (INCLUDING SWIMMING POOL) EXISTS ADJACENT TO AN EDGE BEAM, THE BUILDING CONTRACTOR IS TO VERIFY THE EXCAVATION OR SERVICE PIPE OPETH IF COMPLIANCE WITH ABOVE DETAIL CANNOT BE ACHIEVED THEN THE ENGINEER SHOULD BE CONTACTED PRIOR TO PROCEEDING.

DO NOT SCALE	
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PROPOSED NEW RESIDENC LOT 24 STEPHENS STREET, BINA

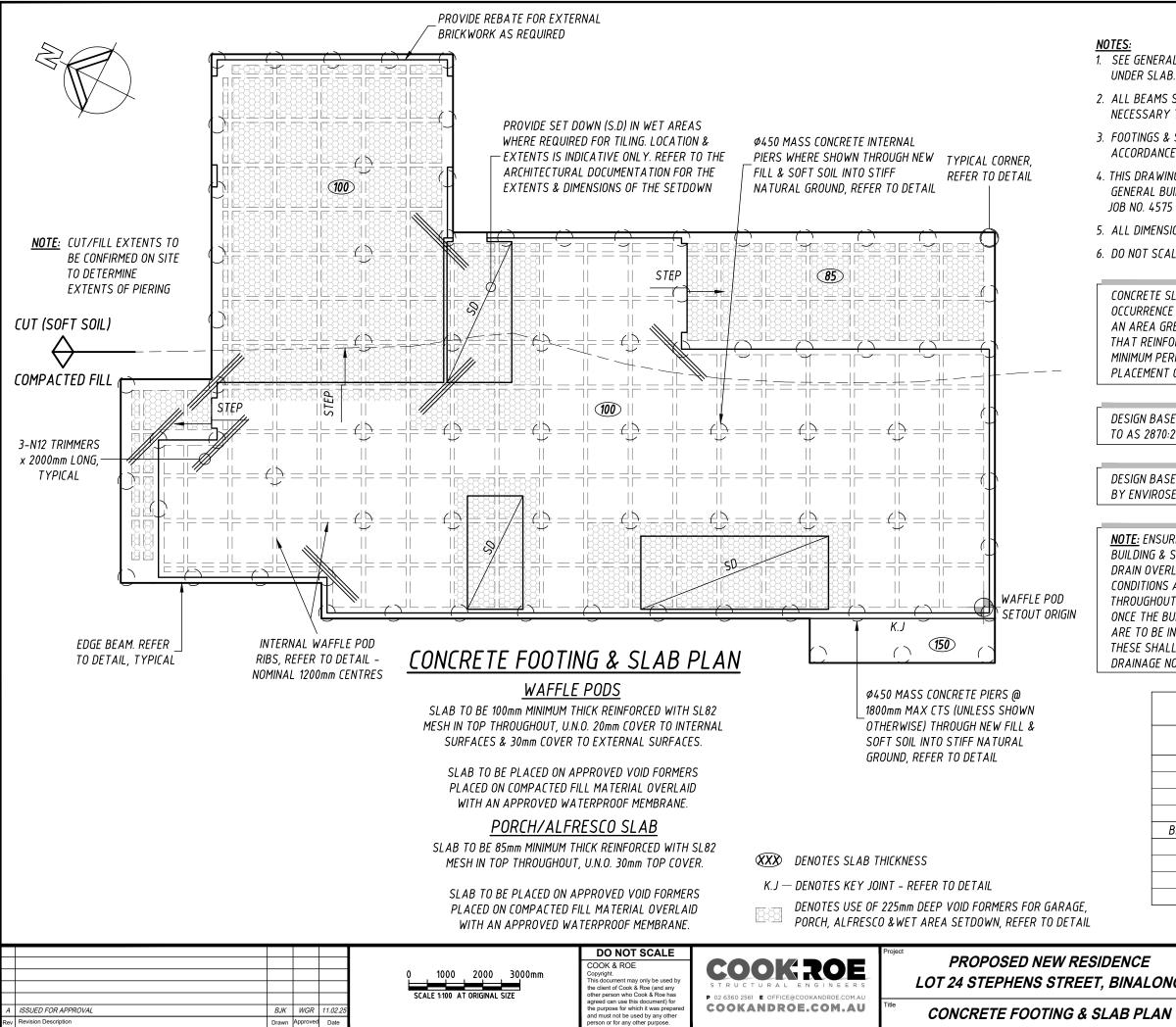
GENERAL NOTES & DRAWING

BACKFILL TRENCH OR OTHER EXCAVATION

ALL FOOTINGS TO BE FOUNDED ON CONSISTENT STRATA.

PROVIDE ARTICULATION JOINTS IN ACCORDANCE WITH AS 4773.1 & AS 4773.2.

CE	Client MELLROSS HOMES						
ALONG	Drawn	BJK	Designed	WGR	Approved	1.1.	Se
120/10	Scale	-	Date FEBRUARY 2025		Wayne Roe BE MIE Aust CPEng NER (2476635)		
LIST	Job No: 2	50071	Dwg No: S	5.01	This Drawing must used for Constru unless signed as Ap	ction	Original Size A3



1. SEE GENERAL NOTES & DETAILS REGARDING FILL REQUIREMENTS UNDER SLAB.

2. ALL BEAMS SUPPORTING BRICKWORK TO BE DEEPENED AS NECESSARY TO EXTEND THROUGH ANY FILL MATERIAL.

3. FOOTINGS & SLABS HAVE BEEN DESIGNED FOR A <u>CLASS 'M' SITE</u> IN ACCORDANCE WITH AS 2870:2011. RESIDENTIAL SLABS & FOOTINGS.

4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER GENERAL BUILDING PLANS & SPECIFICATIONS. JOB BY. AREI DESIGN JOB NO. 4575

5. ALL DIMENSIONS ARE GIVEN IN MILLIMETRES, U.N.O.

6. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONS. IF IN DOUBT - ASK.

CONCRETE SLABS CAN CRACK. TO MINIMISE THE CHANCE OF CRACK OCCURRENCE WHERE BRITTLE FLOOR COVERINGS ARE TO BE USED IN AN AREA GREATER THAN 16 SQUARE METRES, IT IS RECOMMENDED THAT REINFORCEMENT IS INCREASED TO SL92 MINIMUM. <u>OR ALLOW</u> A MINIMUM PERIOD OF 3 MONTHS DRYING OF CONCRETE BEFORE PLACEMENT OF BRITTLE FLOOR COVERINGS.

DESIGN BASED UPON **ARTICULATED MASONRY VENEER** CONSTRUCTION TO AS 2870:2011.

DESIGN BASED UPON CLASS ' M ' SOIL CLASSIFICATION AS ADVISED BY ENVIROSEER, REPORT: 24113

NOTE: ENSURE ALL SITE EARTHWORKS ARE GRADED AWAY FROM THE BUILDING & SITE LANDSCAPING CONSTRUCTED TO ADEQUATELY DRAIN OVERLAND FLOW & PREVENT ABNORMAL MOISTURE CONDITIONS ADJACENT TO THE FOOTINGS. THIS IMPORTANT THROUGHOUT THE CONSTRUCTION PHASE OF THE BUILDING & BEYOND ONCE THE BUILDING & LANDSCAPING IS COMPLETE. IF STRIP DRAINS ARE TO BE INSTALLED AROUND THE PERIMETER OF THE BUILDING THESE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SITE DRAINAGE NOTES ON DRAWING S.01 & THE REQUIREMENTS OF AS 2870,

THE TOTAL NUMBER OF REINFORCEMENT				
BARS IN BEAMS SHALL BE AS FOLLOWS:				
STEM WIDTH	TOP STEEL			
	(ADDITIONAL TO FABRIC)			
110 - 150mm	0			
151 - 220mm	1			
221 - 330mm	2			
331 - 440mm	3			
BEAM/STEM WIDTH	BOTTOM STEEL (IN TOTAL)			
110 - 150mm	1			
151 - 220mm	2			
221 - 330mm	3			
331 - 440mm	4			

CE	Client MELLROSS HOMES					
ALONG	Drawn	BJK	Designed	WGR	Approved W. De	
	Scale	1:100	Date FEBRU	IARY 2025	Wayne Roe BE MIE Aust CPEng NER	(2476635)
PLAN	Job No: 2 5	50071	Dwg No: S	.02	This Drawing must not be used for Construction unless signed as Approved	Original Size A3

