From: Lynne Cairns
Sent: Thu, 25 Mar 2021 13:51:00 +1100
To: Council Email
Cc: 'spowelly POWELL'
Subject: Third Email: SUBMISSION MOD2021/0016 AND DA2021/0153
Attachments: Attachment 11 ECM_2040409_v1_DA2019 0439 - 19 GUMNUT ROAD - Engineering.pdf, Attachment 12 ECM_2043020_v1_DA2019 0439 - Flood Certification - 206 Gumnut Road Yamba....pdf, Attachment 13 ECM_2043392_v3_CC2019 0377 - Construction Certificate - 19 Gumnut Road Y....pdf, Attachment 14 ECM_2058702_v1_DA2019 0439 Notice of Commencement of Works 19 Gumnut Roa....pdf, Attachment 15 ECM_2154601_v1_CC2019 0377 Frame Inspection.pdf, Attachment 16 MOD2021 0016 Notification plans 19 Gumnut Road YAMBA NSW 2464.pdf, Attachment 17 DA2021 0153 Notification Plan 19 Gumnut Road YAMBA NSW 2464.pdf

Mr Ashley Lindsay
General Manager
Clarence Valley Council

RE: SUBMISSION – MOD2021/0016 AND DA2021/0153 – Third and last Email

Third and last email.
Please inform that this email has been received and all attachments can be opened.

Please the attachments as listed below:

- Attachment 11 ECM_2040409_v1_DA2019 0439 - 19 GUMNUT ROAD - Engineering.pdf
- Attachment 12 ECM_2043020_v1_DA2019 0439 - Flood Certification - 206 Gumnut Road Yamba....pdf
- Attachment 13 ECM_2043392_v3_CC2019 0377 - Construction Certificate - 19 Gumnut Road Y....pdf
- Attachment 14 ECM_2058702_v1_DA2019 0439 Notice of Commencement of Works 19 Gumnut Roa....pdf
- Attachment 15 ECM_2154601_v1_CC2019 0377 Frame Inspection.pdf
- Attachment 16 MOD2021 0016 Notification plans 19 Gumnut Road YAMBA NSW 2464.pdf
- Attachment 17 DA2021 0153 Notification Plan 19 Gumnut Road YAMBA NSW 2464.pdf

Shane Powell
Lynne and Bob Cairns

From: Mark mousley
Sent: Tue, 25 Feb 2020 10:59:21 +1000
To: Council Email
Subject: DA2019/0439 - 19 GUMNUT ROAD - Engineering
Attachments: image003.jpg, image003.jpg, CS0216_SITE.pdf, CS0216-1.pdf, 302640.pdf, CS0216-0-Cert. of comp.pdf

Hi again Scott!
And the engineering
Cheers
Mark Mousley

---------- Forwarded message ---------
From: <b.inman@nrsce.com.au>
Date: Fri, 10 Jan. 2020, 13:03
Subject: 19 GUMNUT ROAD - Engineering
To: <mousley601@gmail.com>

Please find attached

Call if any questions

Cheers

Brady Inman, ENGINEER

Yamba Office
Unit 7-11, 18 Coldstream Street, Yamba NSW 2464
Tel: 0437 904 790

Byron Bay Office
5/61 Centennial Circuit, Byron Bay 2481
PH: (02) 6680 7510

Web: www.NRSCE.com.au

NORTHERN RIVERS
STRUCterre
consulting engineers


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GEOTECHNICAL REPORT FOR CLARENCE VALLEY COUNCIL
STANDARD SECTION

DATE OF REPORT: ***10-Jan-20***
DATE OF INVESTIGATION: ***10-Jan-20***

The General Manager,
Clarence Valley Council,
Locked Bag 23,
GRAFTON. 2460.

JOB: CS0216

Dear Sir,

PROPOSED DEVELOPMENT AT 19 GUMNUT ROAD, YAMBA NSW, FOR KRYSY & TODD CAMPBELL

The following is a Geotechnical Report for your Council's requirements.
Objective of investigation: To determine suitable foundations for the building proposed.

METHODS: Investigation is to AS1726 (1993) and AS2870 (2011) Standards.

1. Site observations of the site itself and surroundings. **X**
2. Observations of cutting where available near site. **X**
3. Hand probing where possible. **X**
4. Scala penetrometer testing. **X**
5. Examination of material through a magnifying glass. **X**
6. Borehole excavation with hand equipment (auger). _____
7. Excavation by other means as follows: _____
8. Other tests: _____

9a. Field work by ***BRADY INMAN BEng (Civil) Structerre CJA Pty. Ltd.***

LOCATION OF SITE: ***PER SITE PLAN***

I HEREBY CERTIFY THIS SITE IS NOT SUBJECT TO SLIP OR SUBSIDENCE ***X***

GEOLOGY: (If applicable)

Parent Age ***QUARTANARY***

Volcanic [ ] Sedimentary [***X***]

Old Slip [ ] Metamorphic [ ]

Dip and Strike if Visible _____

Slippages: Relevant [ ] Not Relevant [***X***]

Comments Including Topography (if relevant)
Some Loose sands. Requires pad footing to be tamped firm, and vibrating plate compaction under slab

CONCRETE: 25 MPA ***WIND: N3***

SOIL PROFILE: Including relevance of plasticity, consistency and potential for volume change.

TYPICAL - NATURAL (VARIES):

000 - 1500 White Silty Sand

GROUND WATER: ***NOT FOUND***

DRAINAGE: Well Drained: ***X***

DRAINS SAFELY TO SURFACE

MOISTURE CONTENT CHANGE:

Relevant: ***NOT VERY*** Likely: ***NOT VERY***

If both relevant and likely, see recommendations.

FIELD TEST RESULTS: Scala (our Scala is marked at 50 mm intervals).

00 - 1500 MAX. 75 / BLOW

TYP 50/BLOW

INCLINOMETER: ***SEE CONTOURS***

OTHER TESTS: _____

Samples removed for Lab. work _____ Are results attached _____
Each report should positively establish the "safe building site".

EXTRACT: CLASSIFICATION CLASSES (per AS2870 - 2011).
Site shall be classified on the basis of their expected maximum surface movements as follows:

NOTE: 'M' FOR TREE DISTANCE MIN 0.75 H PER C.S.I.R.O.

	Characteristic surface movement (y_s) mm		***Site classification in accordance with Table 2.1***
		Stable	A
xx	$0 < y_s \leq 20$	Slightly Reactive	S
	$20 < y_s \leq 40$	Moderately Reactive	M
	$40 < y_s \leq 60$	Highly Reactive	H1
	$60 < y_s \leq 75$	More Highly Reactive	H2
	$y_s > 75$	Extremely Reactive	E

XX = CLASS 'P' FOR EXISTING STRUCTURE & LOOSE SANDS

Approximately applied maximum bearing pressure indicated by building design.
50KPA

FOUNDATION: Allowable bearing pressure in Kilopascals.

Made ground	0 – 300	
Soft clay or loam	100	
Confined wet sand. AFTER VIBRATING PLATE.	150	***X***
Medium clay or sandy clay	200	
Hard dry clay or dense sand	300	
Soft shale	400	
Weathered rock or medium shale	600	
Shale rock at 600 mm from the boundary	1,000	
Shale rock at the boundary	650	
Soft sandstone, free of defects to a depth of 450 mm and with a total seam thickness not exceeding 20 mm for the next 450 mm of depth, when the footing is 900 mm or more from the boundary.	1,300	
Soft sandstone, free of defects to a depth of 450 mm and with a total seam thickness not exceeding 20 mm for the next 450 mm of depth, where the footing is 900 mm or more from the boundary	850	
Other forms of rock	1,400 – 8,500	

RECOMMENDATIONS:

Foundations per signed plan attached should be adopted. [***X***]

Additional comment (if any)

TAMP FIRM PIER HOLES

VIBRATING PLATE COMPACT UNDER SLAB

Further investigation and/or checks required.

a: Council normal inspection only [ ]

b: Special further investigation, reasons, etc., (if required)

TAMP FIRM PIER HOLES

VIBRATING PLATE COMPACT UNDER SLAB

PRACTICAL FURTHER COMMENTS: (if required)

TAMP FIRM PIER HOLES

VIBRATING PLATE COMPACT UNDER SLAB

IMPORTANT NOTE:

THIS REPORT, PARTICULARLY SITE CLASSIFICATION IS FOR NRS CONSULTING ENGINEERS TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIALLY APPROVED BY NRS CONSULTING ENGINEERS.

B.INMAN

BRADY INMAN

NRS CONSULTING ENGINEERS

NORTHERN RIVERS STRUCterre consulting engineers

KRYSY & TODD CAMPBELL

PROPOSED DEVELOPMENT AT
LOT 206 GUMNUT ROAD
YAMBA, NSW 2460

INDEX TO SHEETS	
SHEET	TITLE
S-000	COVER SHEET & DRAWING LIST
S-001	GENERAL NOTES - SHEET 1
S-002	GENERAL NOTES - SHEET 2
S-003	SAFETY IN DESIGN
S-101	FOOTING & SLAB PLAN
S-102	FOOTING & SLAB DETAILS - SHEET 1
S-103	FOOTING & SLAB DETAILS - SHEET 2
S-104	FOOTING & SLAB DETAILS - SHEET 3
S-105	SURFACE DRAINAGE DETAILS
S-106	PLUMBING CONNECTION DETAILS
S-107	WIND BRACING PLAN
S-108	BRACING & TIE-DOWN DETAILS

IMPORTANT NOTE:

IT IS THE RESPONSIBILITY OF THE CLIENT IN CONSULTATION WITH THEIR BUILDER TO CHECK AND VERIFY THE BUILDABILITY OF THE DESIGN AS PRESENTED AND REFER ANY CONCERNS BACK TO THE ENGINEER PRIOR TO CONSTRUCTION. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS.

IT IS ASSUMED THAT THE USER OF THESE DETAILS HAS A LEVEL OF FAMILIARITY AND COMPETENCY TO UNDERSTAND AND EXECUTE THE WORKS.

AT ALL TIMES COMMON SENSE IS TO BE USED. IF EVER IN DOUBT, ASK!

REV	BY	DATE	ISSUE / REVISION DESCRIPTION	CHK	APP
0	HBL	10/12/19	ISSUED FOR CONSTRUCTION	BI	BI

TITLE	NAME	DATE
DRAFTER	HBL	10/12/19
DESIGNER	HBL	10/12/19
ENG. CHECK	BI	10/12/19
SCALE	1:1	SIZE A3

APPROVED BY: B.INMAN

PROJECT: PROPOSED DEVELOPMENT AT LOT 206 GUMNUT ROAD YAMBA, NSW 2460

COVER SHEET & DRAWING LIST

CLIENT: KRYSY & TODD CAMPBELL

NORTHERN RIVERS STRUCterre consulting engineers
Structerre CJA Pty. Ltd. (ABN: 63 619 141 310)
82 JUBILEE STREET, MACLEAN NSW, 2463. P.O. Box 12
TEL (02) 6645 2637 FAX (02) 6645 3175 EMAIL: admin@nrsce.com.au

CLIENT REFERENCE. No. JW301

STRUCTERRE JOB No. CS0216

DRAWING REF. No. CS0216-S-000

REV 0

GENERAL NOTES:

G.1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL & OTHER CONSULTANTS DRAWINGS & SPECIFICATIONS & WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT/ENGINEER FOR DECISION BEFORE PROCEEDING WITH THE WORK.

G.2. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS.

G.3. SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY THE BUILDER.

G.4. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION & NO PART SHALL BE OVERSTRESSED.

G.5. ALL WORKMANSHIP & MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITIONS OF THE AS CODES & THE BY-LAWS & ORDINANCES OF THE RELEVANT BUILDING STATE AUTHORITY.

G.6. THIS REPORT IS BASED ON INFORMATION SUPPLIED BY THE CLIENT. IF ANY ASPECT OF THE SITE PREPARATION OR PROPOSED CONSTRUCTION CHANGES FROM THAT ORIGINALLY ADVISED, THE ENGINEER MUST BE NOTIFIED SO THAT ANY NECESSARY AMENDMENTS CAN BE MADE.

G.7. DEVELOPMENT APPLICATION DECISION NOTICE - FOR WORK REQUIRING BUILDING APPROVAL, THE DEVELOPMENT APPLICATION DECISION NOTICE, ISSUED BY THE COUNCIL OR BUILDING CERTIFIER MUST BE FORWARDED TO STRUCTERRE PRIOR TO ARRANGING ANY INSPECTIONS WITH THIS OFFICE.

G.8. THE ENGINEER'S APPROVAL SHALL BE SOUGHT PRIOR TO MAKING ANY SUBSTITUTIONS.

SITE CLASSIFICATION NOTES:

C.1. THIS DESIGN HAS BEEN BASED UPON INFORMATION PROVIDED TO OUR OFFICE &/OR GATHERED BY OUR STAFF.

C.2. THIS DESIGN HAS BEEN PREPARED IN ACCORDANCE WITH AS 2870 & RELEVANT STATE LEGISLATION.

C.3. SHOULD SOIL CONDITIONS ENCOUNTERED ON SITE DIFFER SIGNIFICANTLY FROM THOSE INDICATED IN THE SOIL TEST NOTED IN THIS DESIGN, THE ENGINEER MUST BE NOTIFIED BEFORE PROCEEDING AS THE SITE CLASSIFICATION MAY NEED REVISING & MODIFICATIONS TO THE DESIGN MAY BE REQUIRED.

C.4. THE SITE INVESTIGATION MAY BE RENDERED IRRELEVANT IF THE LOCATION OF PROPOSED STRUCTURES VARY FROM THAT SPECIFIED AT THE TIME OF THIS DESIGN. THIS DESIGN RELATES TO THE CONDITIONS EXISTING ON THE LAND AT THE TIME OF THE SITE INVESTIGATION. THIS DESIGN IS BASED UPON THE PROPOSED CUT / FILL INFORMATION PROVIDED BY THE CLIENT. ANY UNADVISED EXTENSIVE CUTTING OR FILLING MAY RENDER THIS DESIGN IRRELEVANT.

C.5. WHILE A REASONABLE EFFORT IS MADE TO ASSESS THE SITE'S SUITABILITY FOR THE PROPOSED CONSTRUCTION, THIS DESIGN DOES NOT TAKE INTO ACCOUNT SLOPE STABILITY. IF REQUIRED BY THE COUNCIL, A SUITABLY QUALIFIED PERSON SHOULD BE ENGAGED TO UNDERTAKE A SLOPE STABILITY ASSESSMENT.

MISCELLANEOUS NOTES:

M.1. WHERE TERMITE PROTECTION IS REQUIRED, INSTALL IN ACCORDANCE WITH AS3660. BUILDER SHALL CONFIRM WITH OWNER THE PREFERRED METHOD OF TERMITE MANAGEMENT. OWNER IS RESPONSIBLE FOR ONGOING INSPECTION OF STRUCTURAL ELEMENTS & ENSURING THAT TERMITE MANAGEMENT SYSTEMS ARE NOT BREACHED.

M.2. THE RECOMMENDED DISTANCE THAT A NEW TREE SHOULD BE LOCATED FROM A DWELLING WOULD BE EQUAL OR GREATER THAN 75% OF THE MATURE HEIGHT FOR CLASS M SITES, 100% OF THE MATURE HEIGHT FOR CLASS H1 & H2 SITES, 150% OF THE MATURE HEIGHT FOR CLASS E SITES.

M.3. SUITABLE QUARRY PRODUCT (20-80mm MAX IN DEPTH) MAY BE USED AS LEVELLING/BEDDING LAYER TO LEVEL THE BUILDING PLATFORM PRIOR TO SLAB CONSTRUCTION. THE BEDDING LAYER SHALL BE COMPACTED TO THE SATISFACTION OF THE BUILDING INSPECTOR.

DRAINAGE NOTES:

D.1. ALL WORKMANSHIP & MATERIAL SHALL BE IN ACCORDANCE WITH AS2870.

D.2. DRAINAGE SHALL BE CONSTRUCTED TO AVOID WATER PONDING AGAINST OR NEAR THE FOOTING. THE GROUND IN THE IMMEDIATE VICINITY OF THE PERIMETER FOOTING, INCLUDING THE GROUND UPHILL FROM THE SLAB ON CUT & FILL SITES, SHALL BE GRADED TO FALL 50mm MINIMUM AWAY FROM THE FOOTING OVER A DISTANCE OF 1.0m. SURFACE OR SUBSURFACE DRAINS SHALL BE USED TO CHANNEL WATER AWAY & CONNECT TO STORMWATER SYSTEM. ANY PAVING SHALL ALSO BE SUITABLY SLOPED. ATTENTION TO SITE GRADING/SITE DRAINAGE IS REQUIRED FROM THE START OF CONSTRUCTION.

D.3. WHERE FILLING IS PLACED ADJACENT TO THE BUILDING, THE FILLING SHALL BE COMPACTED & GRADED TO ENSURE DRAINAGE OF WATER AWAY FROM THE FOOTINGS.

D.4. DISCHARGE FROM THE DOWNPIPES MUST BE DIRECTED AWAY FROM THE BUILDING DURING CONSTRUCTION TO ENSURE WATER DOES NOT DISCHARGE OR POND ADJACENT TO THE FOOTINGS.

D.5. PLUMBING TRENCHES SHALL BE SLOPED AWAY FROM THE HOUSE & SHALL BE BACKFILLED WITH CLAY IN THE TOP 300mm WITHIN 1.5m OF THE HOUSE. THE CLAY USED FOR BACKFILLING SHALL BE COMPACTED. WHERE PIPES PASS UNDER THE FOOTING SYSTEM, THE TRENCH SHALL BE BACKFILLED WITH MOIST CLAY OR BENTONITE AT THE HIGH END OF THE FLOW TO RESTRICT THE INGRESS OF WATER BENEATH THE FOOTING SYSTEM.

D.6. EXCAVATIONS NEAR THE EDGE OF THE FOOTING SYSTEM SHALL BE BACKFILLED IN SUCH A WAY AS TO PREVENT ACCESS OF WATER TO THE FOUNDATION. FOR EXAMPLE, EXCAVATIONS SHOULD BE BACKFILLED ABOVE OR ADJACENT THE FOOTING WITH MOIST CLAY, COMPACTED BY HAND-RODDING/TAMPING. POROUS MATERIAL SUCH AS SAND, GRAVEL OR BUILDING RUBBLE SHOULD NOT BE USED.

D.7. WATER RUN-OFF SHALL BE COLLECTED & CHANNELED AWAY FROM THE HOUSE DURING CONSTRUCTION.

D.8. PENETRATIONS OF THE EDGE BEAMS & FOOTING BEAMS ARE TO BE AVOIDED, BUT WHERE NECESSARY SHALL BE SLEEVED TO ALLOW FOR MOVEMENT.

D.9. CONNECTION OF STORMWATER DRAINS & WASTE DRAINS SHALL INCLUDE FLEXIBLE CONNECTIONS (AS NECESSARY).

D.10. ADDITIONAL PLUMBING REQUIREMENTS ARE NEEDED FOR MODERATELY, HIGHLY & EXTREMELY REACTIVE SITES IN ACCORDANCE WITH CLAUSE 6.6 (F) FROM AS 2870.

D.11. PLUMBING & DRAINAGE UNDER THE SLAB SHOULD BE AVOIDED WHERE PRACTICAL. REFER AS 2870 CLAUSE 5.6.4 (d).

D.12. ALL PIPEWORK INCLUDING STORMWATER FITTINGS & ADAPTERS SHOULD BE PROTECTED FROM MECHANICAL DAMAGE.

D.13. PROVISIONS SHOULD BE MADE FOR THE CONNECTION OF OVERFLOW OR WATER DISCHARGE FROM FIXTURES SUCH AS HOT WATER SYSTEMS & AIR CONDITIONERS TO A DRAIN AS REQUIRED BY THE RELEVANT LOCAL AUTHORITY.

PROPERTY MAINTENANCE NOTES:

P.1. THIS DESIGN IS BASED UPON THE NORMAL FOOTING PERFORMANCE CRITERIA PROVIDED IN TABLE 2.2 OF AS2870-2011 WITH DAMAGE CATEGORIES DETAILED IN APPENDIX C. IF THESE PERFORMANCE CRITERIA IS UNSUITABLE FOR THIS DWELLING PLEASE CONSULT THIS OFFICE FOR ADDITIONAL ENGINEERING ADVICE & DESIGN SERVICES.

P.2. APPENDIX A OF OF AS 2870 DEFINES THE OWNER AS THE PERSON OR ORGANISATION RESPONSIBLE FOR THE MAINTENANCE OF THE BUILDING & THE SITE.

P.3. THE OWNER'S ATTENTION IS DRAWN TO APPENDIX B 'PERFORMANCE CRITERIA & FOUNDATION MAINTENANCE' & APPENDIX C 'CLASSIFICATION OF DAMAGE DUE TO FOUNDATION MOVEMENTS' OF AS 2870-2011.

P.4. WE ALSO DIRECT THE OWNER TO THE CSIRO PUBLICATION BTF 18 'FOUNDATION MAINTENANCE & FOOTING PERFORMANCE: A HOMEOWNER'S GUIDE'. COPIES OF THIS PUBLICATION ARE AVAILABLE FROM CSIRO PUBLISHING ON PH: 1300-788-000 OR AT http://www.publish.csiro.au/pid/7076.htm. THIS REPORT MAY BE RENDERED INVALID IF THE PROPERTY IS NOT MAINTAINED AS RECOMMENDED IN THIS PUBLICATION.

P.5. THE LONG TERM PERFORMANCE OF THE FOOTINGS AS DESIGNED IS DEPENDANT ON THE ONGOING SITE MAINTENANCE BY OWNER INCLUDING FACTORS SUCH AS SITE DRAINAGE, VEGETATION & WATERING OF AREAS ADJACENT TO THE DWELLING.

P.6. WATERING OF LAWNS & GARDENS SHOULD BE CONSISTENT. OVER WATERING CAN DAMAGE FOOTINGS. EQUALLY FOOTINGS MAY BE DAMAGED BY PROLONGED PERIODS OF NEGLECT AFTER YEARS OF CAREFUL WATERING. LEAKING TAPS & PIPES & BLOCKED DRAINS SHOULD BE REPAIRED PROMPTLY. PROLONGED NEGLECT CAN LEAD TO DAMAGED FOOTINGS.

P.7. IT IS HIGHLY RECOMMENDED THAT CONCRETE PAVING BE INSTALLED AROUND THE ENTIRE PERIMETER OF THE DWELLING. ALL CONCRETE PATHS & THE GROUND ON WHICH THEY ARE LAID SHALL SLOPE AWAY FROM THE BUILDING & BE DRAINED. DRAINAGE IN THE FORM OF SPOON DRAINS &/OR PITS, CONNECTED TO A LEGAL POINT OF DISCHARGE SHALL BE PROVIDED. ALL CONCRETE PATHS SHALL BE SEPARATED FROM STRUCTURES WITH A 10mm LAYER OF "ABLEFLEX" OR SIMILAR.

P.6. WHERE SEAL COATS HAVE BEEN APPLIED TO EXTERNAL SLABS WITHIN 1km OF SALT WATER, THE CONDITION OF THE SEALANT IS TO BE MONITORED & MAINTAINED THROUGH THE LIFE OF THE SLAB.

P.7. AS PER CLAUSE 1.3.1 BUILDINGS DESIGNED & CONSTRUCTED TO AS 2870 ON A NORMAL SITE DOES NOT GUARANTEE A DISTRESS FREE DWELLING. BUILDINGS ARE EXPECTED TO EXPERIENCE EITHER NO DAMAGE, A LOW INCIDENCE OF DAMAGE CATEGORY 1 & OCCASIONAL INCIDENCE OF DAMAGE CATEGORY 2 AS SHOWN IN TABLE BELOW.

SUMMARY OF AS2870-2011 - APPENDIX C TABLES C1 & C2

DAMAGE CATEGORIES	WALL CRACKS	SLAB CRACKS	LEVEL CHANGES OVER 3m
0 - Negligible	< 0.1mm	< 0.3mm	< 8mm
1- Very Slight	< 1mm	< 1mm	< 10mm
2 - Slight	< 5mm	< 2mm	< 15mm
3 - Moderate	5mm to 15mm	2mm to 4mm	15mm to 25mm
4 - Severe	15mm to 25mm	4mm to 10mm	> 25mm

FOUNDATIONS & FOOTINGS:

F.1. FOOTINGS SHALL BE PLACED CENTRALLY UNDER WALLS & COLUMNS UNLESS OTHERWISE NOTED.

F.2. ALL WORKMANSHIP & MATERIALS SHALL BE IN ACCORDANCE WITH AS 2870 & NATIONAL CONSTRUCTION CODE (N.C.C.)

F.3. THE FOOTING DETAILS SHOWN ARE FOR THE SITE CLASSIFICATION STIPULATED. WHILST EVERY CARE HAS BEEN TAKEN TO VERIFY THAT THE INFORMATION SHOWN IS CORRECT, STRUCTERRE CONSULTING ENGINEERS TAKE NO RESPONSIBILITY FOR VARIATIONS WHICH MAY OCCUR DUE TO VARIATIONS IN SITE CONDITIONS.

F.4. FILL USED IN THE CONSTRUCTION OF A SLAB EXCEPT WHERE THE SLAB IS SUSPENDED SHALL CONSIST OF A CONTROLLED FILL OR ROLLED FILL IN ACCORDANCE WITH AS 2870:

F.4.1. ROLLED FILL CONSISTS OF MATERIAL COMPACTED IN LAYERS BY REPEATED ROLLING WITH AN EXCAVATOR. ROLLED FILL SHALL NOT EXCEED 600mm COMPACTED IN LAYERS NOT MORE THAN 300mm FOR SAND MATERIAL OR 400mm COMPACTED IN LAYERS NOT MORE THAN 150mm FOR OTHER MATERIAL.

F.4.2. CONTROLLED FILL CONSISTS OF WELL GRADED SAND FILL UP TO 800mm DEEP, WELL COMPACTED IN NOT MORE THAN 300mm LAYERS BY VIBRATING PLATE OR VIBRATING ROLLER. NON SAND FILL UP TO 400mm DEEP, WELL COMPACTED IN NOT MORE THAN 150mm LAYERS BY A MECHANICAL ROLLER, CLAY FILL SHOULD BE MOIST DURING COMPACTION. THE DEPTHS OF FILL GIVEN ABOVE ARE DEPTHS MEASURED AFTER COMPACTION. FOR COMPACTED DEPTHS GREATER THAN THAT GIVEN ABOVE THE FILL SHALL BE SUBJECT TO CONTROL & TESTING. IF TEST FAILS THEN PIERS ARE REQUIRED. CONTACT THIS OFFICE PRIOR TO FURTHER CONSTRUCTION.

F.5. TOP SOIL CONTAINING GRASS ROOTS OR OTHER ORGANIC MATERIAL SHALL BE REMOVED FROM THE AREA ON WHICH THE SLAB IS TO REST.

F.6. IF ANY FOOTING IS LOCATED SUCH THAT A LINE DRAWN AT 45 DEGREES (FOR CLAY & 30 DEGREES FOR SAND) FROM ITS BASE INTERSECTS A PRIVATE SERVICE TRENCH, THEN PIERS ARE REQUIRED. REFER TO THE PRIVATE TRENCH SERVICE DETAIL FOR EXAMPLE.

F.7. FOOTING & SLAB PIERS ARE REQUIRED WHERE UNCONTROLLED FILL UNDER THE EDGE BEAM/SLAB IS PRESENT.

F.8. WHERE PIERS ARE USED TO SUPPORT A SLAB ON UNCONTROLLED FILL, PLUMBING & DRAINAGE PIPES FOUNDED WITHIN SUCH FILL SHALL BE HUNG FROM THE SLAB MESH WITH CORROSIVE RESISTANT STRAPS.

F.9. FOR SATISFACTORY RESULTS, CONCRETE MUST BE CURED FOR AT LEAST 7 DAYS. CURING MAY BE ACHIEVED BY KEEPING THE CONCRETE MOIST, BY APPLYING A CURING MEMBRANE, OR BY COVERING THE CONCRETE WITH A MOISTURE BARRIER. MANY BUILDERS FIND THAT THE MOST SATISFACTORY WAY TO CURE A SLAB IS TO COVER IT WITH SHEETS OF POLYETHYLENE AS SOON AS POSSIBLE AFTER FINISHING. IF A SLAB IS MOIST WHEN COVERED & THE POLYETHYLENE IS HELD SECURELY ONTO THE CONCRETE, THIS SYSTEM PROVIDES SATISFACTORY CURING OF THE CONCRETE.

ARTICULATED MASONRY NOTES:

A.1. THIS DESIGN ASSUMES THAT MASONRY ARTICULATION JOINTS WILL BE INSTALLED TO AS 4773 UNLESS NOTED OTHERWISE. ANY MASONRY ARTICULATION JOINTS SHALL BE POSITIONED IN ACCORDANCE WITH AS 4773 & AS 3700 SECTION 12.16.4 AND AS FOLLOWS;

A.1.1. MAXIMUM JOINT SPACING = 5.0m U.N.O

A.1.2. WITHIN 2.0m - 4.5m OF EXTERNAL CORNERS

A.1.3. CHANGES OF WALL HEIGHT & MASONRY WALL THICKNESS

A.1.4. JUNCTION OF DIFFERENT MASONRY MATERIALS

A.1.5. WHERE OLD BRICKWORK MEETS NEW BRICKWORK

A.1.6. ABOVE JOINTS IN FOOTINGS & SLABS & SLIP JOINT LOCATIONS

A.1.7. ABOVE JUNCTION OF STRIP FOOTINGS TO SLABS

A.1.8. FOR MASONRY WALLS OVER 3.0m HIGH, REFER ENGINEER.

A.2. WHERE MASONRY ARTICULATION IS SHOWN BESIDE OPENINGS, THE JOINT IS TO CONTINUE BETWEEN THE WINDOW/DOOR FRAME & THE BRICKWORK TO THE FULL HEIGHT OF THE WALL. AT THESE LOCATIONS, THE FRAMES ARE TO BE FIXED WITH FASTENERS THAT WILL ALLOW MOVEMENT OF THE JOINT.

A.3. TO ENSURE FULL COMPLIANCE WITH AS 4773 & LOCAL REQUIREMENTS (I.E. QBCC SUBSIDENCE POLICY) STRUCTERRE RECOMMENDS A MASONRY ARTICULATION LAYOUT IS PREPARED PER DESIGN. THE TABLE BELOW IS TO BE CONSIDERED ONLY IF NO PLAN IS PROVIDED BY AN ENGINEER.

MAX SPACING OF ARTICULATION JOINTS TO AS 4773 (UNREINFORCED MASONRY) U.N.O

SITE CLASS	CONSTRUCTION & SURFACE FINISH	10mm JOINT SPACING (m)	
		≤ 4m HIGH	4m TO 8.5m
A & S	EXPANSION JOINTS ONLY	7.0	6.0
M, M-D	EXTERNAL FACE FINISH	6.0	4.2
	EXTERNAL RENDERED/PAINTED	5.5	3.9
H1, H2, H1-D, H2-D	EXTERNAL FACE FINISH	5.0	3.5
	EXTERNAL RENDERED/PAINTED	4.5	3.2
P, E, E-D	REFER NOTE 2 / LOCATIONS	4.0 U.N.O	3.0 U.N.O

NOTES:
1. THE SITE CLASS REFERS TO THE SOIL CLASSIFICATION AS DEFINED IN AS 2870
2. JOINTS ON CLASS E, E-D & P SITES, REFER TO ENGINEER FOR ADVICE
3. IF 15mm JOINTS ARE TO BE USED, SPACINGS MAY BE RELAXED AS PER AS 4773

REV	BY	DATE	ISSUE / REVISION DESCRIPTION	CHK	APP
0	HBL	10/12/19	ISSUED FOR CONSTRUCTION	BI	BI

TITLE	NAME	DATE
DRAFTER	HBL	10/12/19
DESIGNER	HBL	10/12/19
ENG. CHECK	BI	10/12/19
SCALE	-	SIZE A3

APPROVED BY: B.INMAN

PROJECT
PROPOSED DEVELOPMENT AT
LOT 206 GUMNUT ROAD
YAMBA, NSW 2460

GENERAL NOTES - SHEET 1

CLIENT
KRYSY & TODD CAMPBELL

NORTHERN RIVERS STRUCterre consulting engineers
Structerre CJA Pty. Ltd. (ABN: 63 619 141 310)
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CLIENT REFERENCE No. JW301

STRUCTERRE JOB No. CS0216

DRAWING REF. No. CS0216-S-001

REV 0

CONCRETE WORK:

C.1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 & AS 2870. U.N.O

C.2. CONCRETE QUALITY FOR CEMENT TYPE A & EXPOSURE CLASSIFICATION A1 SHALL BE AS TABULATED AND SHALL BE VERIFIED BY TESTS (REFER TABLE BELOW). U.N.O, SEE SLAB PLAN FOR A2, B & C CATEGORIES.

ELEMENT	SLUMP	AGG	CONCRETE GRADE	COVER U.N.O (mm)
SLABS ON GROUND	100mm	20mm	20N	20 TOP
				30 BTM. & SIDES
				40 TOP (EXT.)
FOOTINGS	100mm	20mm	20N	50 TYPICAL
SUSPENDED SLAB	80mm	20mm	32N	30 TOP & SIDES
				20 BTM.
BEAMS	80mm	20mm	32N	45 TYPICAL
STAIRS	80mm	20mm	32N	45 TOP
				35 BTM.
WALLS	80mm	20mm	32N	30 SIDES (INT.)
				40 SIDES (EXT.)
COLUMNS	80mm	20mm	32N	40 TYPICAL

C.3. SAMPLE AND TEST IN ACCORDANCE WITH AS 3600.

C.4. CONSOLIDATE BY VIBRATION.

C.5. THOROUGHLY SCABBLE CONCRETE ON WHICH NEW CONCRETE IS TO BE POURED.

C.6. ALL CONCRETE SHALL BE PLACED AND CURED IN ACCORDANCE WITH AS3600. WHERE CURING COMPOUNDS ARE USED IT MUST BE APPLIED AS FOLLOWS:

C.6.1. ONTO SLAB WITHIN 2HRS OF FINISHING OPERATION.

C.6.2. ONTO WALLS AND COLUMNS IMMEDIATELY AFTER REMOVAL OF FORMWORK.

C.7. SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.

C.8. CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE TO THE APPROVAL OF THE ENGINEER.

C.9. BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS, IF ANY.

C.10. CONCRETE SHALL BE KEPT FREE OF SUPPORTING BRICKWORK WITH 2 LAYERS OF MALTHOID. HORIZONTAL FORMWORK SHALL BE STRIPPED WHEN APPROVED BY THE ENGINEER.

C.11. SLABS ON GROUND SHALL BE PROVIDED WITH A VAPOUR BARRIER IN ACCORDANCE WITH AS 2870.

C.12. U.N.O NO ALLOWANCE HAS BEEN MADE FOR STACKED MATERIALS OR MACHINERY ON THE CONCRETE STRUCTURE.

C.13. NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE ELEMENTS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

C.14. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY, IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.

C.15. SPLICES IN REINFORCEMENT MADE IN POSITIONS OTHER THAN SHOWN SHALL BE TO THE APPROVAL OF THE ENGINEER. WHERE THE LAP LENGTH IS NOT SHOWN IT SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT.

C.16. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.

C.17. PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER.

C.18. ALL REINFORCING BARS SHALL COMPLY WITH AS 4671. ALL FABRIC SHALL COMPLY WITH AS 4671 AND SHALL BE SUPPLIED IN FLAT SHEETS.

C.19. REINFORCEMENT SYMBOLS:
N - DENOTES GRADE D500 HIGH STRENGTH DEFORMED BARS TO AS 4671.
R - DENOTES GRADE R250 HOT ROLLED PLAIN BARS TO AS 4671.
SL - DENOTES HARD-DRAWN WIRE SQUARE REINFORCING FABRIC TO AS 4671.
RL - DENOTES HARD-DRAWN WIRE RECTANGULAR REINFORCING FABRIC TO AS 4671.
L - DENOTES HARD-DRAWN WIRE TRENCH MESH TO AS 4671.
THE NUMBER IMMEDIATELY FOLLOWING THESE SYMBOLS IS THE BAR DIAMETER IN MILLIMETRES.

C.20. FABRIC/MESH REINFORCEMENT TO BE LAPPED ONE MESH PLUS 30mm. LAPS IN POSITIONS OF MAXIMUM MOMENT ARE NOT PERMITTED.

C.21. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON INSULATED STEEL, PLASTIC OR CONCRETE CHAIRS GENERALLY AT NOT GREATER THAN 800 CENTRES BOTH WAYS. RODS SHALL BE TIED AT ALTERNATE INTERSECTIONS.

C.22. ALL TENSILE REINFORCEMENT TO BE LAPPED AS SHOWN IN TABLE BELOW:

REINFORCEMENT BAR	N12	N16	N20	N24
LAP LENGTH	400	600	700	800

STRUCTURAL STEELWORK NOTES:

S.1. DESIGN CONFORMS TO THE FOLLOWING STANDARDS:
AS 4100 - STEEL STRUCTURES.
AS/NZS 4600 - COLD-FORMED STEEL STRUCTURES.
FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF AS 4100.

S.2. ALL STEELWORK SHALL BE TEMPORARILY BUT SECURELY BRACED UNTIL ALL FINAL BRACING, CLADDING AND STABILISING BRICK OR BLOCKWORK HAVE BEEN COMPLETED, TO MAINTAIN THE STRUCTURE IN A SAFE AND STABLE CONDITION DURING CONSTRUCTION. ALL BRICK LINTELS TO BE PROPPED AT MID SPAN UNTIL BRICKWORK OVER IS A MINIMUM 3 DAYS OLD.

S.3. BASE PLATES SHALL BE GROUTED BEFORE THE MEMBER IS SUBSTANTIALLY LOADED. GROUT SHALL HAVE A MINIMUM STRENGTH f'c OF 25 MPa AND SHALL BE DRY PACK MORTAR RAMMED IN, OR AN APPROVED NON-SHRINK GROUT.

S.4. U.N.O. ALL MATERIAL SHALL BE:
GRADE 250 HOT-ROLLED PLATES COMPLYING WITH AS/NZS 3678.
GRADE 300 UB, UC, PFC, EA, UA, FLATS & ROUNDS COMPLYING WITH AS/NZS 3679.1.
GRADE 300 WB, WC COMPLYING WITH AS/NZS 3679.2.
GRADE C350 CHS COMPLYING WITH AS 1163.
GRADE C450 RHS, SHS COMPLYING WITH AS 1163.

S.5. WELDING SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF AS/NZS 1554.1.
WELDING CONSUMABLES SHALL BE GRADE E48XX OR W50X U.N.O.
ALL WELDS SHALL BE 6mm CFW SP CATEGORY U.N.O.
ALL BUTT WELDS SHALL BE SP CATEGORY U.N.O.
INSPECTION IS REQUIRED IN ACCORDANCE WITH AS/NZS 1554.1.
ALL GP / SP WELDS SHALL BE 100% VISUALLY SCANNED.
SP FILLET WELDS SHALL HAVE 10% VISUAL EXAMINATION U.N.O
SP BUTT WELDS SHALL HAVE 50% VISUAL EXAMINATION U.N.O.
ALL GP WELDS SHALL HAVE 10% VISUAL EXAMINATION.

S.6. BOLTS SHALL BE M16 DIAMETER U.N.O.
BOLT CATEGORY IS TO BE 8.8/S COMPLYING WITH AS 4100, AS/NZS 1252 & AS/NZS 4291.1. U.N.O.
PROVIDE DESIGN ENGINEER WITH EVIDENCE OF COMPLIANCE WITH THESE CODES.
HOLDING DOWN BOLTS SHALL BE CATEGORY 4.6/S U.N.O.
THREADS MAY BE INCLUDED IN THE SHEAR PLANES U.N.O.
ALL BOLTS, NUTS AND WASHERS SHALL BE HOT DIP GALVANISED.
BOLTS DENOTED 4.6/S ARE COMMERCIAL BOLTS OF STRENGTH GRADE 4.6 TO AS 1111 SNUG TIGHT.
BOLTS DENOTED 8.8/S, 8.8/TB AND 8.8/TF ARE HIGH STRENGTH STRUCTURAL BOLTS OF STRENGTH GRADE 8.8 TO AS/NZS 1252 & AS/NZS 4291.1.
8.8/S DENOTES BOLTS SNUG TIGHT.
8.8/TB DENOTES BOLTS FULLY TENSIONED IN BEARING, TO AS 4100.
8.8/TF DENOTES BOLTS FULLY TENSIONED IN FRICTION, TO AS 4100 - MATING SURFACES MUST NOT BE PAINTED.

S.7. ALL DETAILS, GAUGE LINES ETC. (WHERE NOT SPECIFICALLY SHOWN) ARE TO BE IN ACCORDANCE WITH AISC PUBLICATIONS "DESIGN CAPACITY TABLES FOR STRUCTURAL STEEL" AND "STANDARDISED STRUCTURAL CONNECTIONS". PLATES ARE TO BE 10mm THICK, CUT FROM STANDARD FLAT BARS U.N.O. ENDS OF HOLLOW SECTIONS SHALL BE SEALED WITH NOMINAL THICKNESS PLATES AND CONTINUOUSLY WELDED TO SEAL ENDS, UNO.

S.8. THE STEEL FABRICATOR SHALL PROVIDE THE ENGINEER WITH 1 COPY OF WORKSHOP DRAWINGS FOR INSPECTION AT LEAST 7 DAYS BEFORE FABRICATION IS STARTED. STEELWORK IS NOT TO BE FABRICATED UNTIL WORKSHOP DRAWINGS ARE APPROVED.

S.9. ALL DIMENSIONS ARE MILLIMETRES U.N.O.

S.10. CORROSION PROTECTION

S.10.1. INTERNAL STEELWORK (ENCLOSED)

S.10.1.1. THE STEELWORK SHALL BE CLEANED TO AS 1627 CLASS 1 AND GIVEN ONE COAT OF ALKYD PRIMER TO GIVE A DRY FILM THICKNESS OF 50 MICRONS BEFORE DISPATCH TO SITE, UNLESS THE STEEL IS TO BE ENCASED IN CONCRETE OR IS DETAILED OTHERWISE. APPLY ONE FINISH COAT OF ALL WEATHER GLOSS ACRYLIC PAINT.

S.10.2. EXTERNAL STEELWORK (UNENCLOSED)

S.10.2.1. ALL STRUCTURAL STEELWORK WHICH IS EXPOSED OR IN CONTACT WITH EXPOSED BRICKWORK, AND ALL LINTELS, SHALL BE HOT DIP GALVANISED AFTER FABRICATION. STEELWORK GALVANISED AFTER FABRICATION SHALL COMPLY WITH AS/NZS 4680.

S.10.2.2. AS AN ALTERNATIVE TO GALVANISING, ALL STRUCTURAL STEELWORK WHICH IS EXPOSED SHALL BE CLEANED TO AS 1627 CLASS 2 1/2 PREPARATION AND GIVEN A COAT OF INORGANIC ZINC SILICATE TO GIVE A DRY FILM THICKNESS OF 75 MICRONS BEFORE DISPATCH TO THE SITE, UNLESS THE STEEL IS TO BE ENCASED IN CONCRETE OR IS DETAILED OTHERWISE.

S.10.2.3. REPAIR OF GALVANISED COATING AFTER WELDING PREPARATION - REMOVE ALL WELDING SCALE, SLAG & SHARP EDGES. POWER TOOL CLEAN TO AS 1627.2, CLASS 3, USING ABRASIVE WHEEL ON A POLISHER AT 3500RPM. DEGREASE & REMOVE ALL SURFACE CONTAMINANTS TO AS 1627.1.

S.10.2.4. 'SEVERE' CORROSION ENVIRONMENT - APPLY 2 COATS OF 2-PACK EPOXY ZINC TO AS 3750.9, TO TOTAL 150um DFT, FOLLOWED BY 2 PACK EPOXY ENAMEL TO TOTAL 150um DFT.

S.10.2.5. 'MODERATE' CORROSION ENVIRONMENT - APPLY A TOTAL OF 125um DFT OF DULUX METALSHIELD COLD GALV. PRIMER OR EQUIV IN 2 COATS, USING BRUSH OR SPRAY CAN.

S.11. UNLESS NOTED OTHERWISE, PROTECTIVE COATINGS FOR STEELWORK SHALL BE AS TABULATED BELOW AND IN ACCORDANCE WITH VOL. 2 PART 3.4.4 OF THE NCC.

ENVIRONMENT (EXPOSURE CLASS AS PER AS 2312	STRUCTURAL MEMBERS (NOT BUILT INTO MASONRY/CONCRETE)		LINTELS (BUILT INTO MASONRY OR CONCRETE)
	INTERNAL	EXTERNAL	
VERY LOW	0	-	-
LOW	0	1	2
MEDIUM	0	2	3
HIGH	1	3	4
VERY HIGH	1	4	5
PROTECTIVE COATING SPECIFICATION TO AS 2699.3			

TIMBER NOTES:

T.1. ALL EXTERNAL TIMBER MEMBERS ARE TO BE WEATHER TREATED. MANUFACTURED TIMBER ELEMENTS (e.g. LVL) EXPOSED TO WEATHERING SHALL BE L.O.S.P. TREATED TO H3 LEVEL. WHERE EXPOSED TO DIRECT SUN, FURTHER PROTECTION WITH A GOOD QUALITY PAINT SYSTEM IS REQUIRED.

T.2. ALL WORK IN STRUCTURAL TIMBER TO BE IN ACCORDANCE WITH THE CURRENT EDITION OF AS 1684, SAA TIMBER FRAMING CODE AS 1720, SAA TIMBER ENGINEERING CODE AS 1320 - GLUED LAMINATED STRUCTURAL TIMBER.

T.3. TIMBER MEMBERS PARALLEL TO MASONRY WALLS SHALL BE SEPARATED FROM THE MASONRY WITH A GAP OR WATERPROOF MEMBRANE.

T.4. ALL MULTIPLE SAWN MEMBERS TO BE NAIL LAMINATED IN ACCORDANCE WITH REQUIREMENTS OF AS 1684. FOR MULTIPLE LVL MEMBERS REFER TO MANUFACTURER'S SPECIFICATIONS.

T.5. BOLTS: ALL NUTS & BOLTS TO BE PROVIDED WITH WASHERS. ALL BOLTS TO BE TIGHTENED FINALLY BEFORE HANDOVER. BOLT HOLES TO BE 2mm OVERSIZE IN UNSEASONED TIMBER.

T.6. UNLESS DETAILED OTHERWISE TIMBER MEMBERS TO BE FIXED WITH NOMINAL NAILING AS SPECIFIED IN AS 1684. ALL TIE DOWN OF ROOF MEMBERS (INCLUDING LINTELS) IN ACCORDANCE WITH AS 1684.

T.7. SIZES AND DETAILS NOT SHOWN SHALL COMPLY WITH AS 1684 ALL OPENINGS TO BE FULLY FLASHED WITH STD GALVANISED SHEET STEEL FLASHING.

T.8. ALL BOLTS TO HAVE MILD STEEL GALVANISED WASHERS :
BOLTS UP TO 12mm DIA - 50x50x3 WASHERS
BOLTS UP TO 20mm DIA - 65x65x5 WASHERS

ROOF TRUSS NOTES:

RT.1. THE BASIS OF DESIGN SHALL BE SAA LOADING CODE AS 1170.1; AS 1170.2 & SAA TIMBER STRUCTURE CODE AS 1720.1.

RT.2. DESIGN THE ROOF TRUSSES AS PER THE WIND CLASSIFICATION AS SPECIFIED. LOCATION & LOAD OF GIRDER TRUSSES ARE ASSUMED - TRUSS LAYOUT HAS NOT BEEN SIGHTED U.N.O.

RT.3. INTERNAL LOAD BEARING WALLS TO HAVE STUDS LOCATED DIRECTLY BELOW EACH TRUSS.

RT.4. IN ADDITION TO THE NOMINATED PERMANENT BRACING, PROVIDE ANY ADDITIONAL PERMANENT BRACING REQUIRED FOR STRUCTURAL SUFFICIENCY OF THE TRUSS SYSTEM.

RT.5. PROVIDE ANY TEMPORARY BRACING REQUIRED TO MAINTAIN THE STABILITY OF THE TRUSSES AT ALL STAGES OF ERECTION.

RT.6. MAKE ALLOWANCES FOR SIZE AND LOCATION OF MECHANICAL SERVICES/AIRCONDITIONING DUCTWORK IF APPLICABLE.

RT.7. SPAN TRUSSES ONLY BETWEEN THE NOMINATED SUPPORTS AND HOLDING DOWN POSITIONS INDICATED.

RT.8. PROVIDE CERTIFICATION FROM A STRUCTURAL ENGINEER, AS DEFINED IN THE QUEENSLAND BUILDING BY-LAWS, THAT THE ROOF TRUSSES ARE STRUCTURALLY SUFFICIENT.

CLAY MASONRY NOTES:

CM.1. DESIGN CONFORMS TO AS 3700 - MASONRY STRUCTURES. CONSTRUCT IN ACCORDANCE WITH THE PROVISIONS OF AS 3700.
STRENGTH, f'uc = 12 MPa
SALT RESISTANCE GRADE = EXPOSURE

CM.2. MORTAR TYPE = M3
NOMINAL THICKNESS = 10mm

CM.3. CORE-FILLING GROUT TO BRICK PIERS = 20 MPa.

CM.4. WALL TIES TYPE = MEDIUM DUTY
DURABILITY CLASSIFICATION = R4 (STAINLESS STEEL)
FIXING = MIN. EMBEDMENT IN MORTAR 50mm. FACE FIXED VENEER TIES TO BE SCREW FIXED.

CM.5. JOINTS TO BE TOOLED. CONTROL JOINTS TO BE PROVIDED AS PER FOUNDATION DESIGN ENGINEERING REPORT.

REV	BY	DATE	ISSUE / REVISION DESCRIPTION	CHK	APP
0	HBL	10/12/19	ISSUED FOR CONSTRUCTION	BI	BI

TITLE	NAME	DATE
DRAFTER	HBL	10/12/19
DESIGNER	HBL	10/12/19
ENG. CHECK	BI	10/12/19
SCALE	-	SIZE A3

APPROVED BY: B.INMAN

PROJECT
PROPOSED DEVELOPMENT AT
LOT 206 GUMNUT ROAD
YAMBA, NSW 2460

GENERAL NOTES - SHEET 2

CLIENT
KRYSY & TODD CAMPBELL

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REV 0

GENERAL SAFETY NOTES:

IT IS THE CLIENT'S RESPONSIBILITY TO PROVIDE THIS 'SAFETY IN DESIGN REPORT' TO THE BUILDER (OR PROJECT MANAGER OR PRINCIPLE CONTRACTOR)

IN ACCORDANCE WITH THE WORK HEALTH AND SAFETY ACT AND REGULATIONS 2011, BELOW IS THE LIST OF POTENTIAL CONSTRUCTION HAZARDS ASSOCIATED WITH IMPLEMENTING THE DESIGN IS DOCUMENTED.

HEALTH HAZARDS:

H.1. MANUAL MATERIAL HANDLING:
THE BUILDER IS TO ENSURE THE COMPONENTS WITHIN THIS DESIGN WITH A MASS IN EXCESS OF 25 KG ARE LIFTED BY TWO OR MORE WORKERS OR USE MECHANICAL LIFTING DEVICE. WHERE THIS IS NOT PRACTICAL, SUPPLIERS OR FABRICATORS SHOULD BE REQUIRED TO LIMIT THE COMPONENT MASS.

H.2. HAZARDOUS SUBSTANCES:THE BUILDER IS TO ENSURE DANGEROUS SITE MATERIALS INCLUDING CONTAMINATED SOILS AND ASBESTOS ARE ADEQUATELY TREATED AND DISPOSED IN ACCORDANCE WITH AUTHORITY REGULATIONS, INDUSTRY STANDARDS & PRACTICES.

SAFETY HAZARDS:

SH.1. SLIPS, TRIPS AND FALLS:
THE BUILDER IS TO ENSURE THE WALKING AND WORKING SURFACES ARE CLEAR AND FREE OF DEBRIS, PROVIDE SAFE ACCESS IN AND AROUND THE BUILDING SITE INCLUDING ADEQUATE STAIRS, SCAFFOLDING, SECURE LADDER ACCESS, SAFE WORKING PLATFORMS, ACCESS PATHS FREE FROM FALLING OBJECTS, ADEQUATE RAILINGS, FALL ARREST SYSTEMS, ETC.

SH.2. MATERIAL HANDLING

IT IS THE BUILDER'S RESPONSIBILITY TO ENSURE THAT SITE MATERIALS ARE DELIVERED, TRANSPORTED, STORED AND POSITIONED IN A SAFE MANNER AND IN ACCORDANCE WITH THE PRODUCT SPECIFICATION, THE SITE SPECIFIC SAFETY PLAN & GENERAL SAFETY INDUCTION REGULATIONS. AT NO STAGE SHALL SITE PERSONNEL PASS UNDER MATERIALS BEING LIFTED AND MOVED AROUND ON SITE.

SH.3. EQUIPMENT

IT IS THE BUILDER'S RESPONSIBILITY TO ENSURE ALL CONSTRUCTION EQUIPMENT IS USED IN ACCORDANCE WITH THE BEST INDUSTRY SAFETY PRACTICES AND REGULATIONS. ALL SITE PERSONNEL ARE TO BE PROVIDED WITH ADEQUATE SPACE, VENTILATION AND APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT TO UNDERTAKE THE WORKS AS REQUIRED. ALL SITE MACHINERY AND ELECTRICAL EQUIPMENT ARE TO BE KEPT IN GOOD WORKING ORDER WITH SAFETY TAGGING AND SERVICING WHERE APPLICABLE.

SH.4. FORMWORK & SCAFFOLDING

CLIMBING ON SCAFFOLDING OR FORMWORK AND WORKING AT HEIGHTS WITHOUT SUITABLY APPROVED RAILINGS, BARRIERS AND RESTRAINTS FIXED TO UNCERTIFIED ANCHOR POINTS IS STRICTLY PROHIBITED. ALL FORMWORK AND SCAFFOLDING SYSTEMS ARE TO BE DESIGNED AND CERTIFIED BY A LICENSED CONTRACTOR TO COMPLY WITH RELEVANT AUSTRALIAN STANDARDS AND KEPT MAINTAINED IN GOOD WORKING ORDER.

SH.5. EXCAVATION

THE BUILDER SHALL PROVIDE SUITABLE FENCING AROUND ALL EXCAVATIONS AND AT NO STAGE SHOULD AN EXCAVATION BE APPROACHED OR ENTERED INTO UNLESS AN APPROVED AND CERTIFIED SHORING SYSTEM HAS BEEN INSTALLED OR THE BANKS HAVE BEEN BATTERED AND/OR BENCHED IN ACCORDANCE WITH THE PROJECTS GEOTECHNICAL ENGINEERING SPECIFICATION AND/OR WRITTEN INSTRUCTIONS BY THE INSPECTING GEOTECHNICAL ENGINEER. THE BUILDER SHALL SUPPORT OR PROP ANY EXISTING STRUCTURES WITHIN THE ZONE OF INFLUENCE OF ALL EXCAVATIONS AND IS RESPONSIBLE FOR MAINTAINING THIS SUPPORT THE THROUGH THE CONSTRUCTION PROCESS.

SH.6. SITE HAZARDS & RISKS

IT IS THE CLIENT'S AND THE BUILDER'S RESPONSIBILITY TO MAKE THE DESIGNER AWARE OF ANY INFORMATION RELATING TO HAZARDS AND RISKS WHERE CONSTRUCTION WORK IS CARRIED OUT, INCLUDING BUT NOT LIMITED TO THE LOCATION OF UNDER GROUND AND ABOVE GROUND SERVICES, IDENTIFICATION OF CONTAMINATED SOILS AND OTHER MATERIALS OR THE PRESENCE OF DANGEROUS MATERIAL INCLUDING ASBESTOS. DURING THE CONSTRUCTION, THE BUILDER SHALL PROTECT NEIGHBOURING PROPERTIES FROM NOISE IN ACCORDANCE WITH THE LOCAL AUTHORITY REQUIREMENTS, RADIATION, GROUND VIBRATIONS AND OTHER CONSTRUCTION HAZARDS. CONDITION REPORTS ON THE NEIGHBOURING PROPERTIES AND STRUCTURES ARE RECOMMENDED PRIOR TO CONSTRUCTION.

SH.7. BOUNDARY & SERVICES

THE BUILDER IS REQUIRED TO VERIFY AND IF NECESSARY CONDUCT FURTHER SEARCHES TO ACCURATELY LOCATE EASEMENTS, UNDER GROUND AND ABOVE GROUND SERVICES, PROPERTY BOUNDARIES, TREES, EXISTING STRUCTURES AND OTHER OBSTRUCTIONS PRIOR TO CONSTRUCTION. THE DESIGNER IS TO BE IMMEDIATELY NOTIFIED OF ANY ELEMENTS NOT SHOWN ON THE APPROVED DRAWINGS AS THE DESIGN AND SAFETY IN DESIGN REPORT MAY REQUIRE AMENDING.

SH.8. TRAINED AND QUALIFIED WORKERS

THE BUILDER IS REQUIRED TO ENSURE THAT THE SITE WORKERS ARE SUITABLY QUALIFIED, TRAINED AND INSURED FOR THE TASKS BEING PERFORMED ON SITE.

SH.9. SITE MAINTENANCE

IT IS THE BUILDER'S RESPONSIBILITY TO ENSURE THAT THE SITE IS MAINTAINED IN A SAFE WORKING MANNER AND THAT ALL SITE PRACTICES ARE IN ACCORDANCE WITH THE CURRENT WORK PLACE HEALTH AND SAFETY LAWS AND REGULATIONS.

PROCEDURE OR TASK DEVIATIONS:

PT.1. ONSITE VARIATIONS
IT IS THE BUILDER'S RESPONSIBILITY TO STRICTLY BUILD IN ACCORDANCE WITH THE DOCUMENTATION AND NOT TO MAKE ANY VARIATIONS TO THE CONSTRUCTION WITHOUT THE SPECIFIC WRITTEN APPROVAL FROM THE ENGINEER.

PT.2. COMPLIANCE INSPECTIONS
THIS DESIGN HAS BEEN DOCUMENTED IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS, LOCAL AUTHORITY REGULATIONS AND STANDARD BUILDING CODES OF PRACTICE UNLESS NOTED OTHERWISE. EACH LEVEL OF CONSTRUCTION IS TO BE STRUCTURALLY COMPLETED AND INSPECTED TO ENSURE DESIGN COMPLIANCE BY CERTIFYING AUTHORITY PRIOR TO ADVANCING TO NEXT STAGE OF WORK. THE BUILDER SHOULD ENSURE THAT THE WORKS ARE PROGRAMMED IN A SAFE MANNER AND TO HIGHLIGHT TO THE DESIGNER ANY ASPECTS OF THE WORK THAT MAY REQUIRE FURTHER CLARIFICATION OR ADVICE WITH REGARD TO THE HEALTH AND THE SAFETY OF THE PROJECT.

PT.3. TEMPORARY SUPPORT & BRACING

ALL ASPECTS DETAILED IN THE STRUCTURAL DOCUMENTS ARE THOSE REQUIRED FOR THE COMPLETED STRUCTURE ONLY. THE BUILDER IS RESPONSIBLE FOR PROVIDING ANY NECESSARY TEMPORARY CONNECTIONS AS WELL AS SUPPORTS AND BRACING TO MAINTAIN THE STABILITY AND SAFETY OF THE STRUCTURE THROUGHOUT THE CONSTRUCTION PERIOD. THIS INCLUDES ELEMENTS SUCH AS PREFABRICATED TIMBER AND STEEL ELEMENTS, UNRESTRAINED WALLS, CONCRETE COLUMNS, BEAMS & SLABS, PRECAST PANELS, ETC., WHICH REQUIRE TEMPORARY SUPPORT OR PROPPING TO PREVENT OVER STRESS, EXCESSIVE DEFORMATION OR INSTABILITY UNTIL THE FINAL STRUCTURAL SYSTEM IS COMPLETED. THE DESIGNER IS TO BE CONTACTED FOR FURTHER ADVICE IF REQUIRED.

PT.4. CO-ORDINATION

IF THESE DESIGN DRAWINGS ONLY DOCUMENT PART OF THE STRUCTURE, IT IS THE BUILDER'S RESPONSIBILITY TO ENSURE ALL DESIGN DRAWINGS ARE CO-ORDINATED BETWEEN ALL CONSULTANTS. FOR EXAMPLE, CO-ORDINATION TO ENSURE APPROPRIATE SLAB THICKENINGS AND DETAILS FOR LOADBEARING AND BRACING WALL ELEMENTS, CAST IN FIXINGS ETC.

PT.5. CONSTRUCTION LOADS

IT IS BUILDER'S RESPONSIBILITY TO NOTIFY THE DESIGNER OF ANY SPECIFIC LOADS THAT THE STRUCTURE MAY BE SUBJECT TO DURING CONSTRUCTION. NO ALLOWANCE HAS BEEN MADE FOR CONSTRUCTION LOADS INCLUDING STACKING OF MATERIAL ON DECKS, FLOORS OR ROOF PLATFORMS, LOADS IMPOSED DUE TO MACHINERY, LIFTING DEVICES, IMPACT/VIBRATION/CYCLIC LOADS ETC. UNLESS NOTED ON THE DRAWINGS NO STRUCTURAL ALLOWANCE HAS BEEN MADE FOR SPECIFIC LOADS ASSOCIATED WITH THE MAINTENANCE OF THE STRUCTURE. THE DESIGNER IS TO BE INFORMED OF ANY REQUIREMENTS NECESSARY TO EXTERNALLY SUPPORT THE PLATFORMS, SCAFFOLDS ETC., AS REQUIRED.

PT.6. INSPECTION CERTIFICATE FOR NON-STRUCTURAL ELEMENTS

ALL SUNDRY ELEMENTS OF THE STRUCTURE INCLUDING BUT NOT LIMITED TO CLADDING DESIGN AND FIXINGS, WINDOWS, BALUSTRADES, STAIRS, SUSPENDED CEILINGS, INTERNAL FIT-OUT ITEMS AND ALL OTHER ELEMENTS NOT DETAILED IN THE DESIGN DOCUMENTS MUST DESIGNED AND INSPECTED BY SUPPLIERS OR MANUFACTURERS.

PT.7. CHANGES TO CONTRACTUAL ARRANGEMENTS

IT IS THE CLIENT'S AND THE BUILDER'S RESPONSIBILITY TO INFORM THE DESIGNER OF ANY CHANGE TO CONTRACTUAL ARRANGEMENTS BETWEEN THE CLIENT AND THE BUILDER WHICH MAY IMPACT ON THE DESIGN AND SAFETY OF THE DESIGN. THE CONSTRUCTION IS TO BE FULLY CARRIED OUT IN ACCORDANCE WITH ALL DESIGN DRAWINGS & NOTES AS DOCUMENTED. IF THE CONSTRUCTION CEASES AT ANY STAGE, THE DESIGNER IS TO BE NOTIFIED TO PROVIDE ADVICE ON THE SAFETY OF COMPLETED CONSTRUCTION WORK AT THAT TIME.

PT.8. MATERIAL SPECIFICATION

ALL CONTRACTORS ARE REQUIRED TO COMPLY WITH MATERIAL PRODUCT SPECIFICATION AS PER THE DESIGN DOCUMENTATION, AND IF REQUIRED TO REPLACE A PRODUCT SHOULD GET A WRITTEN ALTERNATIVE RECOMMENDATION FROM THE DESIGNER.

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0	HBL	10/12/19	ISSUED FOR CONSTRUCTION	BI	BI

TITLE	NAME	DATE
DRAFTER	HBL	10/12/19
DESIGNER	HBL	10/12/19
ENG. CHECK	BI	10/12/19
SCALE	-	SIZE A3

APPROVED BY: B.INMAN

PROJECT
PROPOSED DEVELOPMENT AT
LOT 206 GUMNUT ROAD
YAMBA, NSW 2460

SAFETY IN DESIGN

CLIENT: KRYSY & TODD CAMPBELL

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CLIENT REFERENCE. No. JW301

STRUCTERRE JOB No. CS0216

DRAWING REF. No. CS0216-S-003

REV 0

SLAB DESIGN SUMMARY (U.N.O)

'st' SLAB THICKNESS (mm)	100
'od' OVERALL DEPTH (mm)	360
'bw' BEAM WIDTH (mm)	300
'iw' INT. BEAM WIDTH (mm)	N/A
SLAB REINF'T	SL72
EXT. BEAM REINF'T (BOTTOM)	3-L11TM
INT. BEAM REINF'T (BOTTOM)	N/A
BEAM REINF'T (TOP)	NOT REQ'D

GEOTECHNICAL INFORMATION

SOIL CLASSIFICATION:	'S' CLASS PROPERTIES
SOIL TEST BY:	NRSCE
REFERENCE #:	CS0216
DATE:	10.1.19
LEVEL 1 COMPACTION:	N/A
RFM:	FIRM NATURAL SAND - TAMP FIRM
MIN. BEARING CAPACITY:	100 kPa

LEGEND

EB1-EB2	EDGE BEAM	
DEB	DEEP EDGE BEAM	
RW1	RATAINING WALL	
	DENOTES CONCRETE BORED PIERS SUPPORTING TIMBER POST ON STEEL SADDLE, CONNECTION BY BUILDER.	
	Auger Size: 450Ø	Depth into RFM (mm): 600
BP1	DENOTES CONCRETE BORED PIERS FOUNDED BELOW INFLUENCE OF ADJACENT POOL	
	Auger Size: 350Ø	Depth: 1500
TAMP FIRM BOTTOMS		

FOOTING & SLAB NOTES:

F.S.1. CUT/FILL LINE SHOWN IS APPROXIMATE ONLY. IF NOT SHOWN, SITE SCRAPE SHOULD SUFFICE TO CREATE BUILDING PLATFORM. IF IN DOUBT PLEASE CONSULT ENGINEER FOR FURTHER ADVICE.

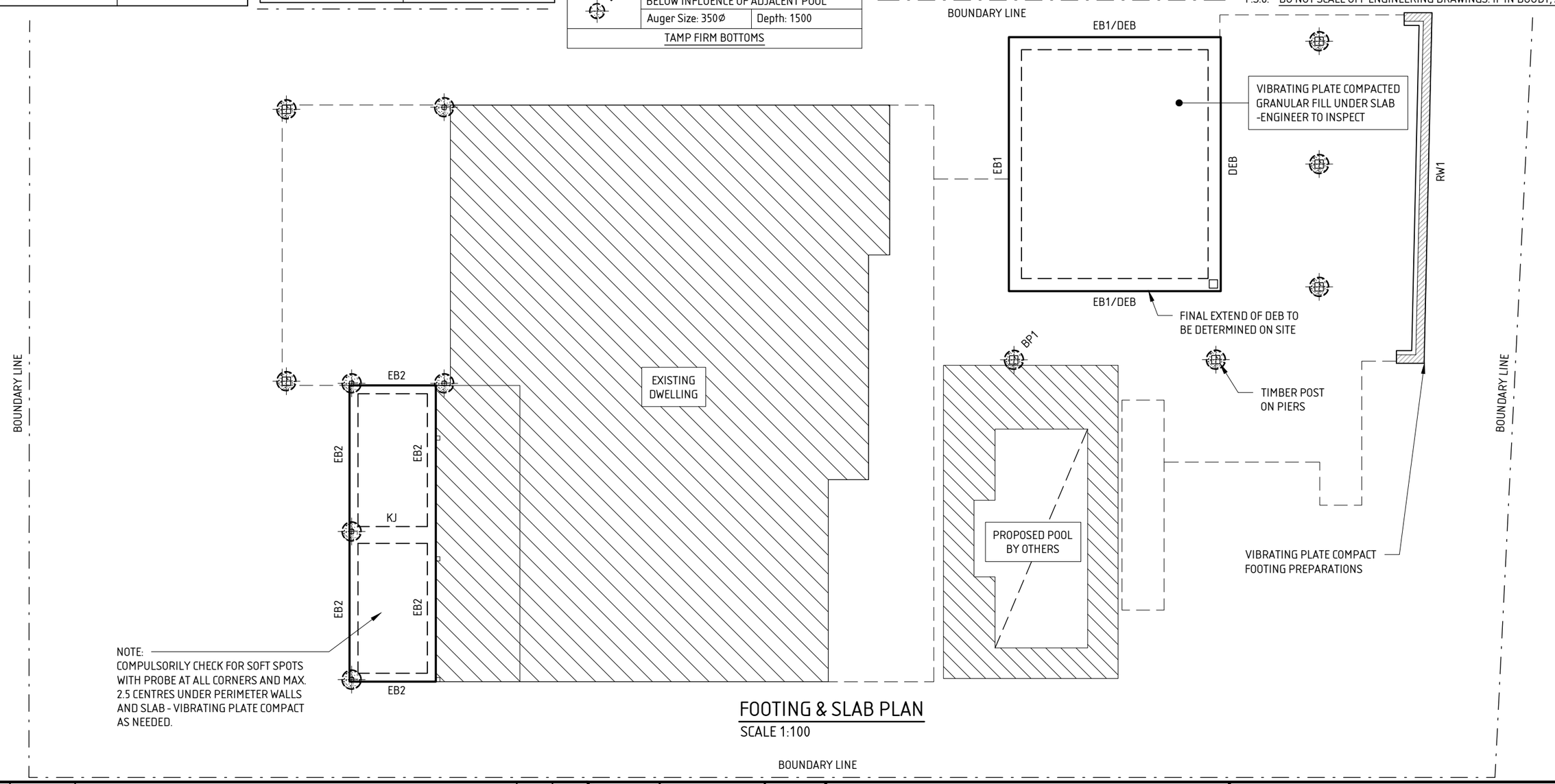
F.S.2. SLAB THICKENINGS OR BEAMS SHALL BE PLACED UNDER PLY BRACING/LOAD BEARING WALLS AND POINT LOADS.

F.S.3. BUILDER TO CONFIRM SERVICES DO NOT AFFECT STRUCTURE BEFORE COMMENCING WORK ON-SITE. REFER DETAILS IN THIS DRAWING SET FOR REQUIREMENTS.

F.S.4. RFM = RECOMMENDED FOUNDING MATERIAL

F.S.5. CONCRETE GRADE SHALL BE N20 / 100 SLUMP / 20 AGG.

F.S.6. DO NOT SCALE OFF ENGINEERING DRAWINGS. IF IN DOUBT, ASK



FOOTING & SLAB PLAN

SCALE 1:100

REV	BY	DATE	ISSUE / REVISION DESCRIPTION	CHK	APP
0	HBL	10/12/19	ISSUED FOR CONSTRUCTION	BI	BI

TITLE	NAME	DATE
DRAFTER	HBL	10/12/19
DESIGNER	HBL	10/12/19
ENG. CHECK	BI	10/12/19
SCALE	1:100	SIZE A3

APPROVED BY: B.INMAN

PROJECT

PROPOSED DEVELOPMENT AT
LOT 206 GUMNUT ROAD
YAMBA, NSW 2460

FOOTING & SLAB PLAN

CLIENT: KRYSY & TODD CAMPBELL

NORTHERN RIVERS STRUCterre consulting engineers
Structerre CJA Pty. Ltd. (ABN: 63 619 141 310)
82 JUBILEE STREET, MACLEAN NSW, 2463. P.O. Box 12
TEL (02) 6645 2637 FAX (02) 6645 3175 EMAIL: admin@nrsce.com.au

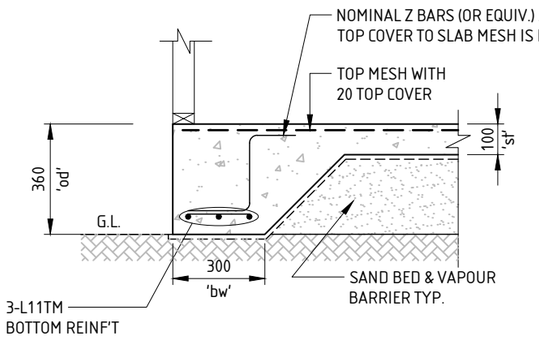
CLIENT REFERENCE. No. JW301

STRUCTERRE JOB No. CS0216

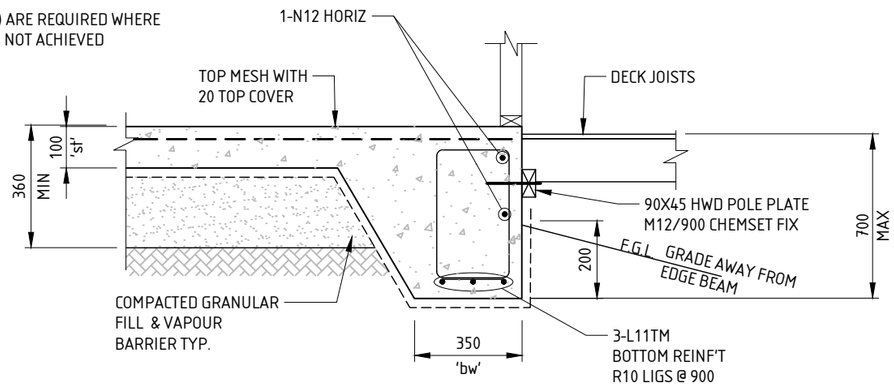
DRAWING REF. No. CS0216-S-101

REV 0

SLAB DESIGN SUMMARY (U.N.O)	
'st' SLAB THICKNESS (mm)	100
'od' OVERALL DEPTH (mm)	360
'bw' BEAM WIDTH (mm)	300
'iw' INT. BEAM WIDTH (mm)	N/A
SLAB REINF'T	SL72
EXT. BEAM REINF'T (BOTTOM)	3-L11TM
INT. BEAM REINF'T (BOTTOM)	N/A
BEAM REINF'T (TOP)	NOT REQ'D

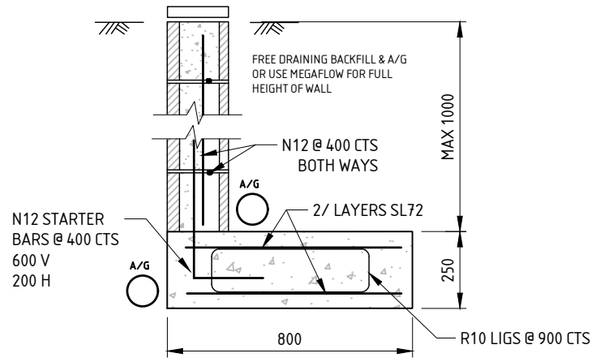


EDGE BEAM - EB1

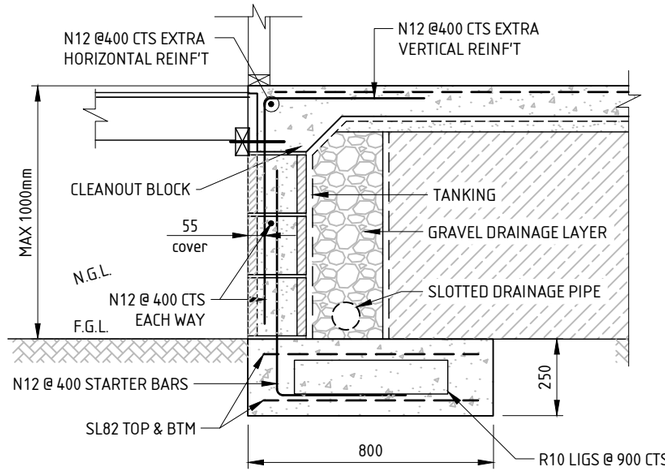


DROP EDGE BEAM - DEB

ALTERNATIVE



RETAINING WALL - RW1

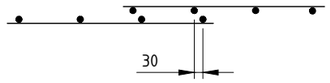


DEEP EDGE BEAM - DEB

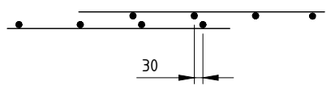
MESH LAPS

1. MESH IS TO BE LAPPED AS SHOWN BELOW:

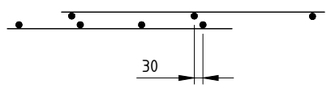
a) OVERLAP OF SIDE OF SHEETS



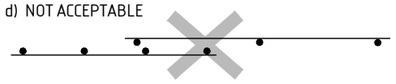
b) OVERLAP OF ENDS OF SHEETS



c) OVERLAP SIDE AND END OF SHEETS

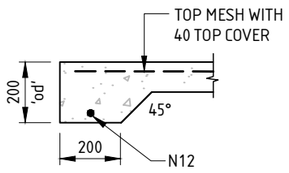


d) NOT ACCEPTABLE

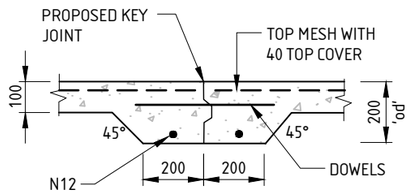


BAR LAPS

REINFORCEMENT BAR	N12	N16	N20	N24
LAP LENGTH	400	600	700	800



PATIO EDGE BEAM - EB2



KEY JOINT - KJ

GENERAL PATIO/DRIVEWAY SPECIFICATIONS

1) ALL CONCRETE PAVING SHALL BE ON A COMPACTED BASE OF 50 MM SAND OR CRUSHER DUST, WATERED AND VIBRATING PLATE COMPACTED.
2) ALL EDGES SHALL HAVE "EB4" DETAIL PER BELOW UNLESS FUTURE ENCLOSURE IS A LIKELY FACT, IN WHICH CASE CONTACT THE ENGINEER
3) KEY JOINTS SHALL BE INCLUDED WHERE PRACTICABLE AT 6.2 METRES CENTRES BUT SUBJECT TO SHAPE AND CONVENIENCE JOINT CENTRES MAY BE DOWN TO 1.200 METRES OR UP TO 9.000 METRES (6.200 METRES WORKS A 6.000 METRE SHEET & 9.000 WORKS $1\frac{1}{2}$ SHEETS).
4) MESH SHALL BE SUPPORTED ON CHAIRS AT MAX. 800 CENTRES BOTH WAYS IN TOP $\frac{1}{3}$ OF SLAB.
5) ALL LAPS SHALL BE 2 BAR PLUS 25.
6) 450 DIA. PIERS TO SOLID, PARTICULARLY IN FILL, SHALL BE AT 2.000 MAX. CENTRES FOR STRAIGHT PIERS OR 2.500 MAX. WITH TOP UPSIDE DOWN CONING TO 850 DIA. AND 45 DEGREES BACK TO THE 450 DIA. CYLINDRICAL PART.
   FILL AREAS SHALL BE DEEMED NOT SOLID UNLESS SCALA PROBE PROVEN SANDY MATERIAL (25 MAX./BLOW).

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ENG. CHECK	BI	10/12/19
SCALE	1:20	SIZE A3

APPROVED BY: B.INMAN

PROJECT

PROPOSED DEVELOPMENT AT
LOT 206 GUMNUT ROAD
YAMBA, NSW 2460

FOOTING & SLAB DETAILS - SHEET 1

CLIENT: KRYSY & TODD CAMPBELL

NORTHERN RIVERS STRUCterre consulting engineers
Structerre CJA Pty. Ltd. (ABN: 63 619 141 310)
82 JUBILEE STREET, MACLEAN NSW, 2463. P.O. Box 12
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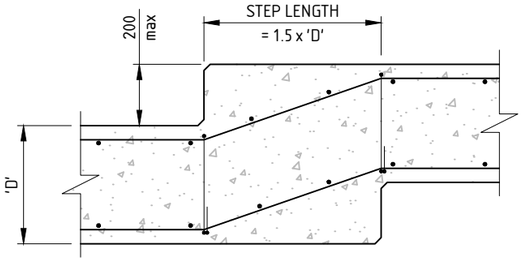
CLIENT REFERENCE. No. JW301

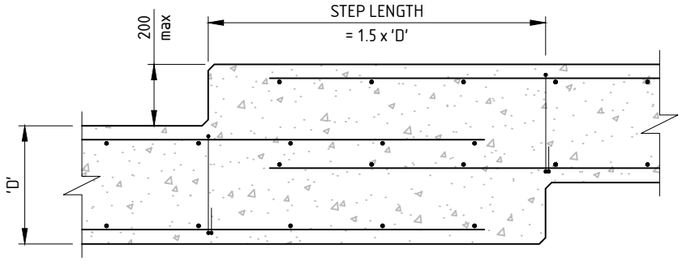
STRUCTERRE JOB No. CS0216

DRAWING REF. No. CS0216-S-102

REV 0



METHOD 'A'



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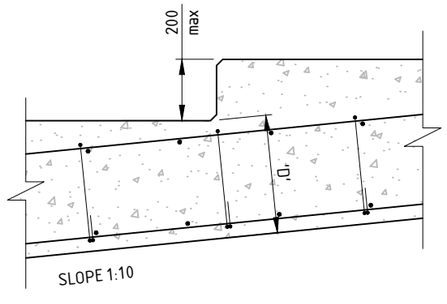

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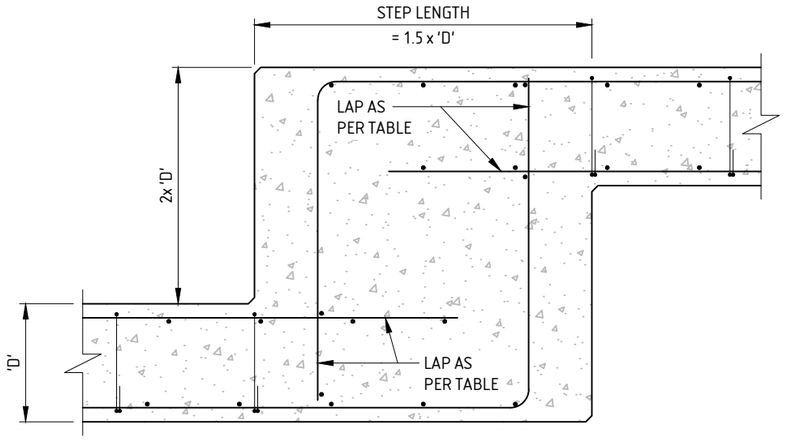
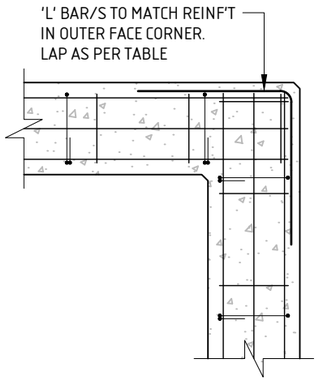


METHOD 'D'

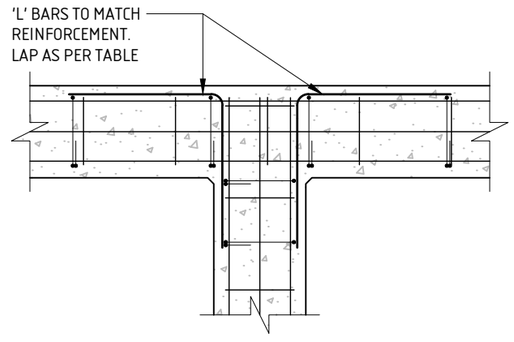
METHODS FOR STEPPING FOOTINGS

BEND REINFORCEMENT ON SITE TO MAINTAIN COVER & LAP



FOOTING CORNER DETAIL

SIMILAR FOR TOP REINF'T BARS IN SLAB, WHERE SHOWN

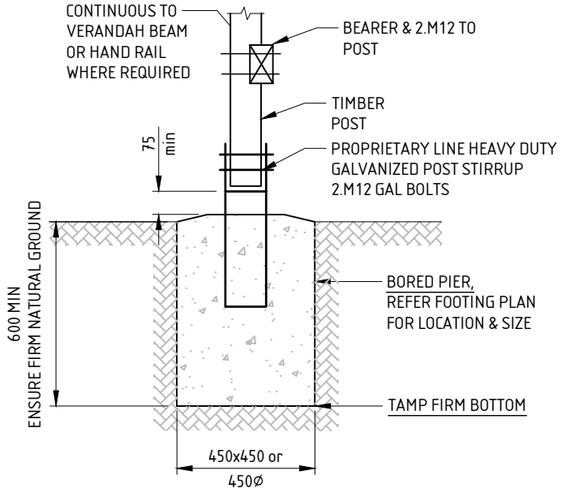


FOOTING INTERSECTION DETAIL

SIMILAR FOR TOP REINF'T BARS IN SLAB, WHERE SHOWN

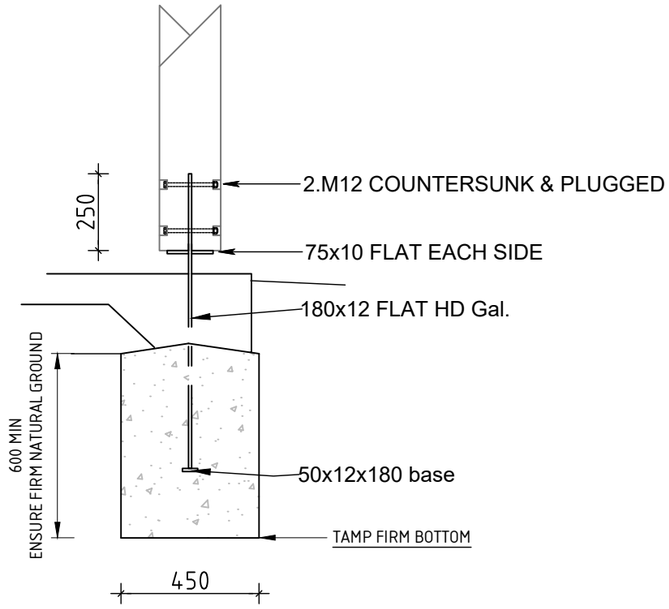
REINFORCEMENT BAR	N12	N16	N20	N24
LAP LENGTH	400	600	700	800

BAR LAPS



BORED PIER DETAIL

TYPE 1 STIRUP - UNDER DECK



BORED PIER DETAIL

TYPE 2 STIRUP - VERANDAH & ROOF POSTS

NOTE - FOR ALL REINFORCEMENT, FOOTING SIZE AND LOCATION REFER TO FOOTING & SLAB PLAN

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ENG. CHECK	BI	10/12/19
SCALE	1:20	SIZE A3

APPROVED BY: B.INMAN

PROJECT

PROPOSED DEVELOPMENT AT
LOT 206 GUMNUT ROAD
YAMBA, NSW 2460

FOOTING & SLAB DETAILS - SHEET 2

CLIENT: KRYSY & TODD CAMPBELL

NORTHERN RIVERS
STRUCterre
consulting engineers
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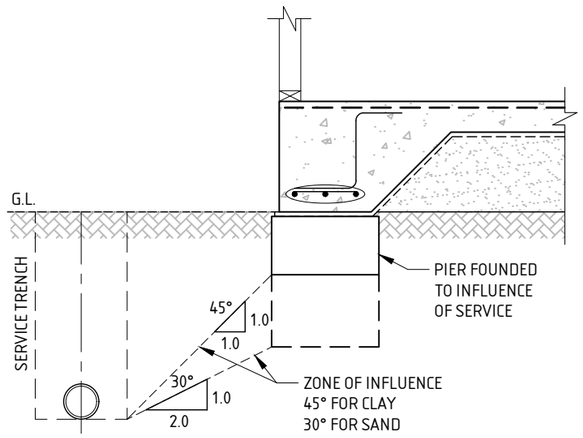
CLIENT REFERENCE. No. JW301

STRUCTERRE JOB No. CS0216

DRAWING REF. No. CS0216-S-103

REV 0

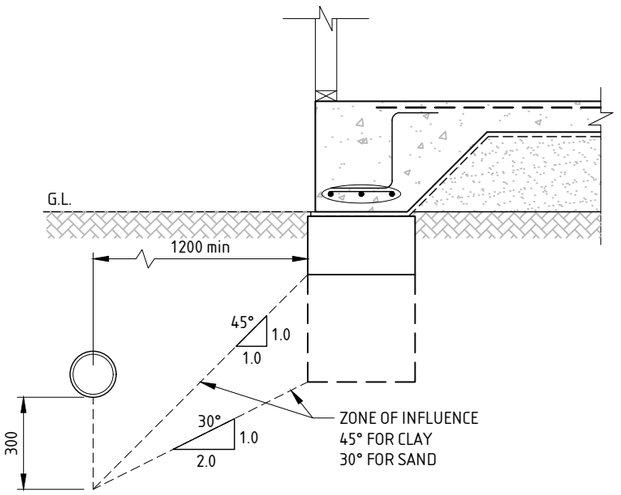


PRIVATE SERVICE TRENCH DETAIL

PRIVATE SERVICE TRENCH NOTES

ST.1. PLUMBING AND DRAINAGE TRENCHES SHALL BE LOCATED OUTSIDE THE INFLUENCE OF THE FOOTINGS. THE HORIZONTAL DISTANCE TO ANY TRENCH EXCAVATION MUST BE GREATER THAN THE TRENCH DEPTH IN ACCORDANCE WITH CLAUSE 6.3 FROM AS 2870-2011. THIS HORIZONTAL CLEARANCE TO BE INCREASED MORE THAN TWICE THE TRENCH DEPTH FOR SAND SITES. FOOTING PIERS WILL BE NECESSARY UNDER ALL EDGE BEAMS IF THESE CONDITIONS ARE NOT MET.

ST.2. TRENCH BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH CLAUSE 5.5 OF AS/NZS 3500.2-2003 OR CLAUSE 7.2.13 OF AS/NZS 3500.3-2003. SAND BEDDING AND SURROUND SHALL BE BLOCKED WITH A CLAY PLUG WHEREVER TRENCHES PASS UNDER THE EDGE OF ANY SLAB.



COUNCIL SERVICES WITHIN INFLUENCE OF EDGE BEAM

AS PER QDC MP 1.4

NOTE - FOR ALL REINFORCEMENT, FOOTING SIZE AND LOCATION REFER TO FOOTING & SLAB PLAN

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TITLE	NAME	DATE
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DESIGNER	HBL	10/12/19
ENG. CHECK	BI	10/12/19
SCALE	1:20	SIZE A3

APPROVED BY: B.INMAN

PROJECT

PROPOSED DEVELOPMENT AT
LOT 206 GUMNUT ROAD
YAMBA, NSW 2460

FOOTING & SLAB DETAILS - SHEET 3

CLIENT: KRYSY & TODD CAMPBELL

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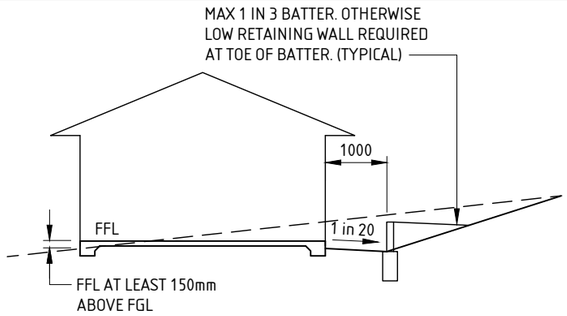
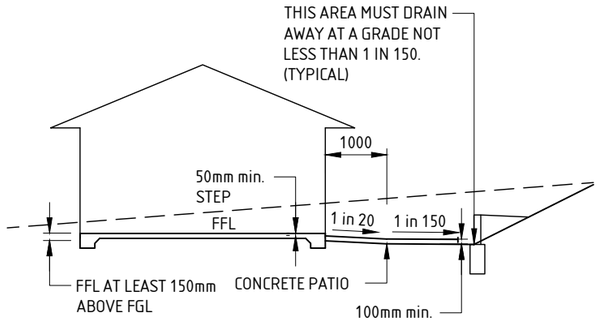
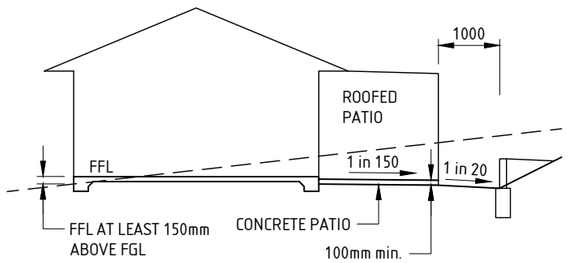
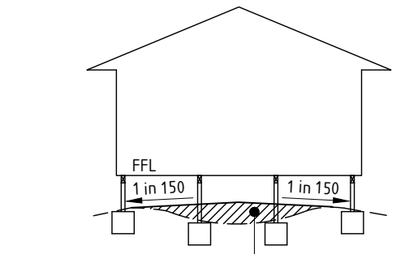
STRUCTERRE JOB No. CS0216 | DRAWING REF. No. CS0216-S-104 | REV 0

CLIENT REFERENCE No. JW301



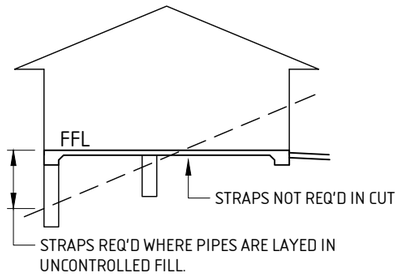






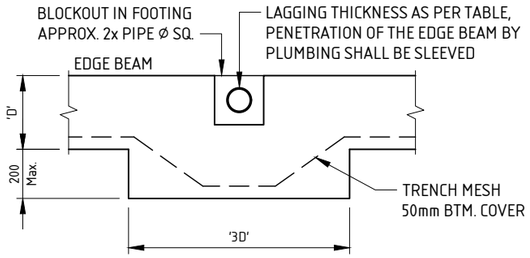
TYP. SURFACE DRAINAGE DETAILS

FFL - FINISHED FLOOR LEVEL
FGL - FINISHED GROUND LEVEL

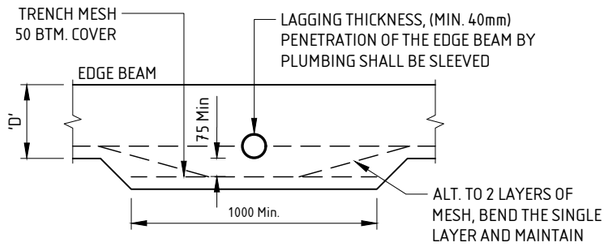


PLUMBING & DRAINAGE STRAPS

FFL - FINISHED FLOOR LEVEL

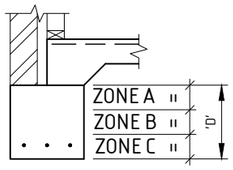


EDGE BEAM THICKENING DETAIL 1



EDGE BEAM THICKENING DETAIL 2

PLUMBING PIPE PENETRATION DETAILS



ZONE A	REFER DETAIL 1
ZONE B	NO THICKENING REQ'D
ZONE C	REFER DETAIL 2

PIPE PLACEMENT

LAGGING REQUIREMENTS

SITE CLASS	MINIMUM LAGGING THICKNESS (mm)
"M"	20
"H1"	20
"H2"	40
"E"	40
"P"	40

EXPANSION JOINT REQUIREMENTS

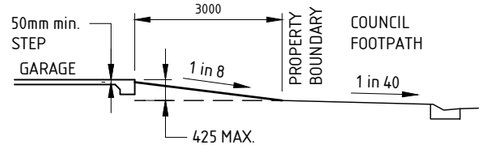
SITE CLASS	MIN. REQ'D EXPANSION JOINT CAPACITY U.N.O	ALLOWABLE ROTATION
"H1" & "H2"	80mm	15°
"E"	150mm	15°
"P/H1 OR H2"	80mm	15°
"P/E"	150mm	15°

GARAGE SET BACK 6.0m FROM BOUNDARY

THE 1 IN 4 SLOPE IS EXTENDED FOR SET BACKS GREATER THAN 6.0m

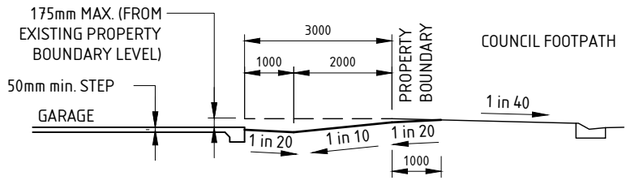
GARAGE SET BACK 6.0m FROM BOUNDARY

THE 1 IN 4 SLOPE IS EXTENDED FOR SET BACKS GREATER THAN 6.0m



GARAGE SET BACK 3.0m FROM BOUNDARY

THE 1 IN 8 SLOPE IS EXTENDED FOR SET BACKS GREATER THAN 3.0m & 6.0m



GARAGE SET BACK 3.0m FROM BOUNDARY

THE 1 IN 8 SLOPE IS EXTENDED FOR SET BACKS GREATER THAN 3.0m & 6.0m

SURFACE DRAINAGE NOTES:

S.D.1. CLAUSE 3.1.2.3 OF VOLUME 2 OF THE NATIONAL CONSTRUCTION CODE (NCC) REQUIRES THAT THE FINISHED HEIGHT OF ANY SLAB BE A MINIMUM OF 150mm, GENERALLY, ABOVE THE FINISHED GROUND LEVEL AFTER LANDSCAPING, AND THAT THE EXTERNAL SURFACE DRAINS AWAY WITH A MINIMUM OF 50mm FALL OVER THE FIRST METRE. IT SHOULD ALSO BE NOTED THAT CLAUSE 4.6.6.6 OF AS/NZS 3500.2-2003 REQUIRES THAT THE TOP OF THE OVERFLOW RELIEF GULLY BE A MINIMUM OF 150mm BELOW THE LOWEST GRATE IN THE SLAB AND 75mm ABOVE THE FINISHED GROUND LEVEL.

S.D.2. FINISHED GROUND AND FLOOR LEVELS SHALL BE AS SHOWN IN THE TYPICAL SURFACE DRAINAGE DETAILS ON THIS PAGE AND THE FOLLOWING REQUIREMENTS:

S.D.2.1. DURING CONSTRUCTION, SURFACE WATER SHALL BE DIVERTED AWAY FROM FOOTINGS TO A LAWFUL POINT OF DISCHARGE.

S.D.2.2. THE FINISHED SURFACE OF ANY GROUND, INCLUDING PATHWAYS AND DRIVEWAYS, SHALL BE GRADED AWAY FROM ANY FOOTING, SLAB OR BASEMENT RETAINING WALL A MINIMUM OF 50mm OVER THE FIRST METRE.

S.D.2.3. THE GROUND SHALL THEN BE GRADED AROUND THE BUILDING SUCH THAT SURFACE WATER WILL DRAIN AWAY FROM THE BUILDING TO A LAWFUL POINT OF DISCHARGE.

S.D.2.4. THE GROUND SHALL ALSO BE SHAPED SUCH THAT NO PONDING OF SURFACE WATER CAN OCCUR.

S.D.2.5. WHERE DRAINAGE PITS ARE INSTALLED TO DRAIN SURFACE WATER AWAY, GRATED INLET PITS SHALL BE INSTALLED WITH PIPES DRAINING TO A LAWFUL POINT OF DISCHARGE. PITS AND PIPES SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AS/NZS 3500.3-2003. DRAINAGE PITS MAY NEED TO BE INSTALLED TO ALLOW SURFACE WATER TO DRAIN AWAY IN AREAS WHERE THE DISTANCE FROM A FOOTING TO A BOUNDARY OR ADJACENT STRUCTURE, EG FENCE, IS LESS THAN 1.0m.

S.D.2.6. THE FINISHED FLOOR LEVEL OF ANY GARAGE OR CARPORT SHALL ALSO BE SET SUCH THAT DRIVEWAY SLOPES COMPLY WITH AS/NZS 2890.1-2004. REFER TO THE TYPICAL DRIVEWAY DETAILS ON THIS PAGE.

S.D.3. RETAINING WALLS SHALL BE INSTALLED AT THE BASE OF CUT AND FILL BATTERS WHERE BATTER SLOPES EXCEED 1:3. RETAINING WALLS ARE ALSO REQUIRED WHERE CUTTING BELOW THE BASE OF AN EXISTING RETAINING WALL AND WHERE AN ADDITIONAL SURCHARGE IS PLACED ABOVE AN EXISTING RETAINING WALL.

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DRAFTER	HBL	10/12/19
DESIGNER	HBL	10/12/19
ENG. CHECK	BI	10/12/19
SCALE	NTS	SIZE A3

APPROVED BY: B.INMAN

PROJECT
PROPOSED DEVELOPMENT AT
LOT 206 GUMNUT ROAD
YAMBA, NSW 2460

SURFACE DRAINAGE DETAILS

CLIENT
KRYSY & TODD CAMPBELL

NORTHERN RIVERS STRUCterre consulting engineers
Structerre CJA Pty. Ltd. (ABN: 63 619 141 310)
82 JUBILEE STREET, MACLEAN NSW, 2463. P.O. Box 12
TEL (02) 6645 2637 FAX (02) 6645 3175 EMAIL: admin@nrsce.com.au

CLIENT REFERENCE. No. JW301

STRUCTERRE JOB No. CS0216

DRAWING REF. No. CS0216-S-105

REV 0

PLUMBING CONNECTION NOTES:

P.1. THE FOLLOWING NOTES & DETAILS PROVIDED ARE A GUIDE ONLY FOR ARTICULATION FOR SANITARY PLUMBING, DRAINAGE & SHOULD BE READ IN CONJUNCTION WITH AS/NZS 3500, AS 2870 & ANY OTHER RELEVANT STANDARD & OTHER REQUIREMENTS OF THE BUILDING CODE OF AUSTRALIA.

P.2. ALL SEWER & STORMWATER TO BE CONSTRUCTED IN ACCORDANCE WITH AS/NZS 3500 & THE REQUIREMENTS OF AS 2870 SECTION 5: CLAUSE 5.6 & SECTION 6: CLAUSE 6.6: FOR SLAB OR STRIP FOOTINGS ON HIGHLY AND EXTREMELY REACTIVE SITES, THE FOLLOWING REQUIREMENTS APPLY: DRAINS ATTACHED TO OR EMERGING FROM UNDERNEATH THE BUILDING SHALL INCORPORATE FLEXIBLE JOINTS IMMEDIATELY OUTSIDE THE FOOTING AND COMMENCING WITHIN 1m OF THE BUILDING PERIMETER TO ACCOMMODATE A TOTAL RANGE OF DIFFERENTIAL MOVEMENT IN ANY DIRECTION EQUAL TO THE ESTIMATED CHARACTERISTIC SURFACE MOVEMENT OF THE SITE (Ys). IN THE ABSENCE OF SPECIFIC DESIGN REQUIREMENTS, THE FITTINGS OR OTHER DEVICES THAT ARE PROVIDED TO ALLOW FOR THE MOVEMENT SHALL BE SET AT THE MID POSITION OF THEIR RANGE OF POSSIBLE MOVEMENT AT THE TIME OF INSTALLATION, SO AS TO ALLOW FOR MOVEMENT EQUAL TO 0.5YS IN ANY DIRECTION FROM THE INITIAL SETTING. THIS REQUIREMENT APPLIES TO ALL STORMWATER AND SANITARY PLUMBING DRAINS AND DISCHARGE PIPES.

P.3. PLUMBING & DRAINAGE UNDER THE SLAB SHOULD BE AVOIDED WHERE PRACTICAL (REFER AS/NZS 3500 CLAUSE 4.10)

P.4. GRADES IN PIPEWORK ON 'M', 'H', 'E' & 'P' SITES SHOULD HAVE A MINIMUM GRADE OF 1:30 WITHIN 1.5 METRES OF THE BUILDING & 1:60 ELSEWHERE. GRADES IN FLEXIBLE FITTINGS TO BE SET AT THE MINIMUM GRADE.

P.5. ALL EXPANSION & ARTICULATION JOINTS TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALL JOINTS TO BE SET MID POINT SO AS TO ALLOW FOR MAXIMUM MOVEMENT IN EITHER DIRECTION.

P.6. STORMPLASTICS (SA) PTY LTD "SWIVEL JOINTS" SHOULD NOT BE USED AS A BEND TO ACHIEVE CORRECT FALLS. THE JOINTS SHOULD BE SET IN A STRAIGHT LINE OF THE DRAIN TO ALLOW MAXIMUM (+) OR (-) MOVEMENT. A MINIMUM 15° BEND TO BE INSTALLED BEFORE SWIVEL JOINTS TO ACHIEVE MINIMUM GRADES FROM THE FACE OF THE FOOTINGS.

P.7. GULLY PITS ARE RECOMMENDED UNDER ALL HOSE COCK LOCATIONS

P.8. 20mm PENETRATION LAGGING IS ONLY RECOMMENDED THROUGH PENETRATIONS GREATER THAN 50mm DIA.

P.9. DETAIL & SUPPORT OF TRAPS AT THE O.R.G. TO BE CONSIDERED ON SITE, TO ALLOW FOR POTENTIAL MOVEMENTS INCLUDING ISOLATION AND ARTICULATION ASSOCIATED WITH PATHS & PAVEMENTS. THE O.R.G. SHOULD BE CAST IN CONCRETE MONOLITHICALLY WITH THE FOOTING SYSTEM ON CLASS 'H' & 'E' SITES.

P.10. STORMWATER SYSTEMS THAT COLLECT ROOFWATER & SURFACE WATER ARE REQUIRED TO BE DESIGNED & CONSTRUCTED IN ACCORDANCE WITH AS/NZS 3500 PART 5.

P.11. THE USE OF CORRUGATED FLEXIBLE PVC PIPE PRODUCTS SHOULD BE AVOIDED ON CLASS H & E SITES AS THEY ARE NOT ABLE TO EXPAND LONGITUDINALLY TO ACCOMMODATE POTENTIAL VERTICAL & LATERAL MOVEMENTS AT THE SLAB OR FOOTING EDGE UNLESS SPECIFICALLY DETAILED BY THE MANUFACTURER.

P.12. SEPTIC TANKS & ASSOCIATED SOAKAGE AREAS SHOULD BE LOCATED TO MINIMISE SOIL MOISTURE INCREASES WITHIN THE FOUNDATION.

P.13. ALL PIPEWORK INCLUDING STORMWATER FITTINGS & ADAPTERS SHOULD BE PROTECTED FROM MECHANICAL DAMAGE.

P.14. TERMITE PROTECTION NOT SPECIFIED IN THIS DESIGN AS THERE ARE VARIOUS OPTIONS. REFER TO THE BUILDING DESIGNER.

P.15. PROVISIONS SHOULD BE MADE FOR THE CONNECTION OF OVERFLOW OR WATER DISCHARGE FROM FIXTURES SUCH AS HOT WATER SYSTEMS & AIR CONDITIONERS TO A DRAIN AS REQUIRED BY THE RELEVANT LOCAL AUTHORITY.

P.16. EXPANDABLE JOINT & SWIVEL SPECIFICATIONS:

P.16.1. TO BE MANUFACTURED AND COMPLY WITH AS 1280 AND AS 1415.

P.16.2. TO BE INSTALLED AS PER MANUFACTURES SPECIFICATIONS AND INSPECTED BY THE LOCAL AUTHORITY.

P.16.3. DRAINAGE PIPES FOUNDED WITHIN THE FILLED SECTION OF THE BUILDING PAD UNDER THE SLAB ARE TO BE HUNG FROM SLAB REINFORCEMENT WITH STAINLESS STEEL STRAPS.

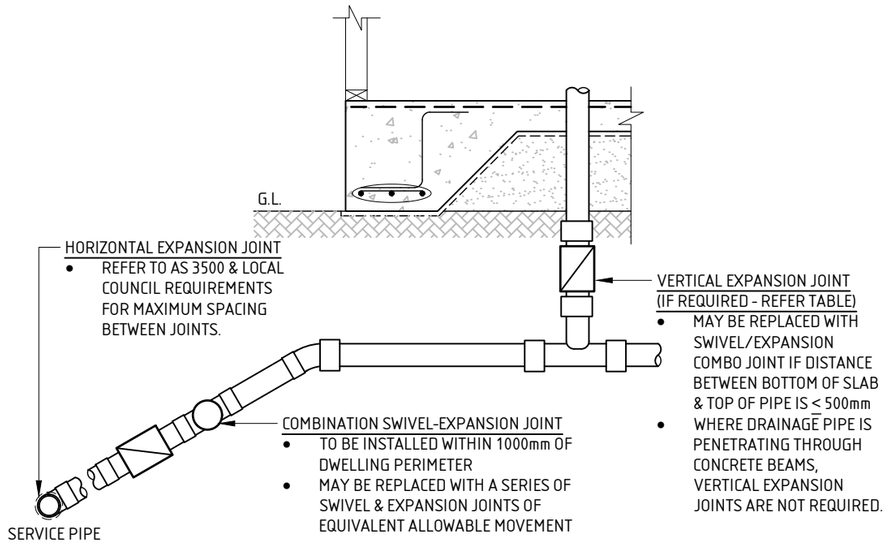
P.16.4. TO ENSURE CORRECT PLUMBING CONNECTIONS ARE INSTALLED IT IS ESSENTIAL THAT A COPY OF THIS REPORT AND ANY RELEVANT ADDITIONS (WHERE APPLICABLE) ARE SUPPLIED TO THE PLUMBER PRIOR TO THEIR PREPARATION.

P.16.5. IT IS ALSO ADVISABLE THAT SLAB DOCUMENTATION IS AVAILABLE ON-SITE FOR REFERENCE BY THE PLUMBERS AND NOMINATED INSPECTORS.

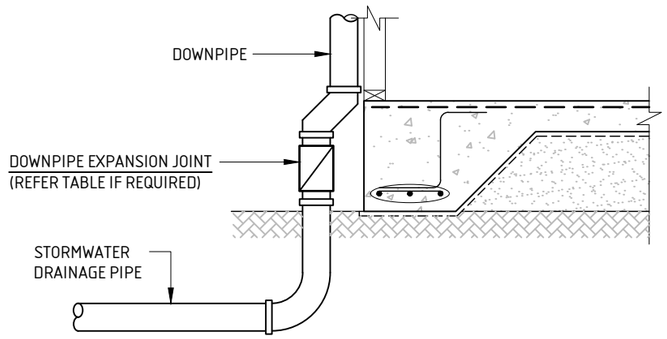
MINIMUM PLUMBING RECOMMENDATIONS

COMPONENT	SITE/DESIGN CLASSIFICATION								
	A & S	M	H1	H2	E	P *	M-D	H-D	E-D
HORIZONTAL PENETRATION LAGGING (mm)	×	20	20	40	40	40	40	40	40
JOINT EXPANSION SIZE (mm)	×	×	100	100	150	150	100	150	150-220
VERTICAL EXPANSION JOINTS (UNDER SLAB)	×	×	×	×	✓	✓	×	×	✓
SWIVEL JOINTS	×	×	✓	✓	✓	✓	✓	✓	✓
DOWNPIPE EXPANSION JOINTS	×	×	✓	✓	✓	✓	✓	✓	✓
GULLY PITS FOR HOSE COCKS & AC UNITS	×	×	✓	✓	✓	✓	✓	✓	✓

* 'P' CLASSIFICATION PLUMBING REQUIREMENTS ARE SPECIFIC TO UNCONTROLLED FILL ONLY



TYPICAL UNDER SLAB-EDGE DETAIL
NTS



TYPICAL STORMWATER DETAIL
NTS

IMPORTANT NOTE:

THESE RECOMMENDATIONS ARE A GUIDE ONLY. FINAL PLUMBING REQUIREMENTS TO BE DETERMINED BY LOCAL PLUMBING AUTHORITY IN CONJUNCTION WITH AS/NZS 3500

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SCALE	NTS	SIZE A3

APPROVED BY: B.INMAN

PROJECT
PROPOSED DEVELOPMENT AT
LOT 206 GUMNUT ROAD
YAMBA, NSW 2460

PLUMBING CONNECTION DETAILS

CLIENT: KRYSY & TODD CAMPBELL

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CLIENT REFERENCE. No. JW301

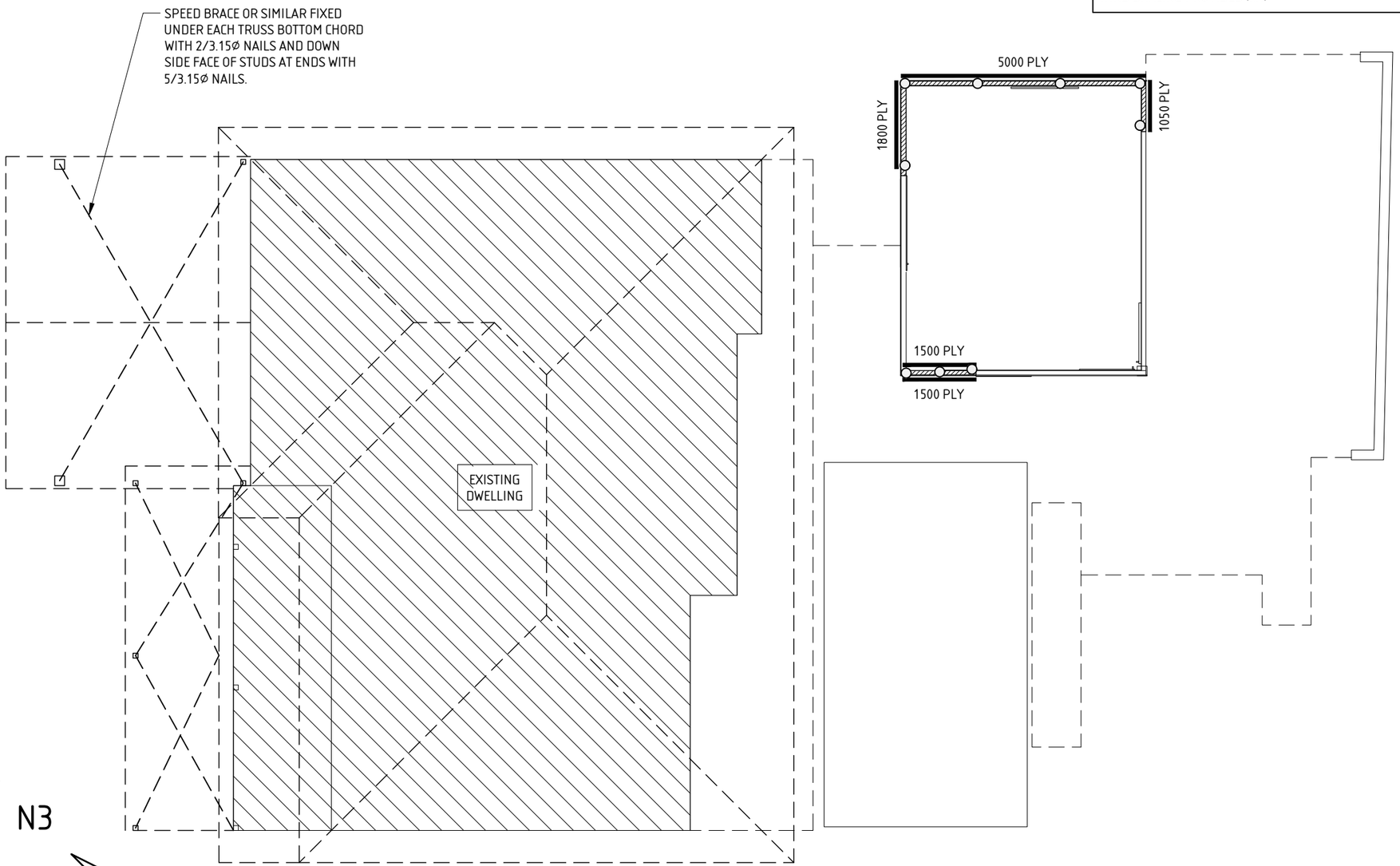
STRUCTERRE JOB No. CS0216

DRAWING REF. No. CS0216-S-106

REV 0

WIND BRACING SCHEDULE

WIND DIRECTION		DIRECTION A		DIRECTION B	
WIND BRACING REQUIRED (kN)		12.96		23.4	
BRACING TYPE	RATE (kN)	QUANTITY	AMOUNT (kN)	QUANTITY	AMOUNT (kN)
PLYWOOD BRACING PANEL (PLY)	6.0/m	2.85m	17.1	8.00m	48.0
WIND BRACING PROVIDED (kN)		17.1		48.0	



WIND BRACING AXIS

WIND BRACING PLAN
SCALE 1:100

WIND BRACING NOTES:

W.1. BRACING PANELS, INCLUDING FIXINGS AT TOP & BOTTOM ARE TO BE CONSTRUCTED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION AND AS 1684-2010.

W.2. CONSTRUCTION BRACING: 40% OF BRACING TO BE IN PLACE BEFORE ROOFING IS INSTALLED.

W.3. STRUCTURAL PLY SHEET BRACING IN ACCORDANCE WITH AS 1684-2010. PLYWOOD BRACING PANELS LESS THAN 900mm IN WIDTH ARE TO HAVE ADDITIONAL FIXINGS OF 1-M10 COACH SCREW AT EACH CORNER OF THE PANEL OR M12 RODS EACH END.

W.4. PLYWOOD BRACING (6kN/m RATING) FIXED IN ACCORDANCE WITH AS 1684 (TABLE 8.18 H).

W.5. DOUBLE BRACED WALLS TO HAVE M16 RODS EACH END.

W.6. CEILING DIAPHRAGM ACTION IS REQUIRED TO DISTRIBUTE LOADS TO BRACING WALLS. CEILING BATTENS TO BE DIRECTLY FIXED TO THE TRUSSES OR RAFTERS. HANGING BRACKET WILL NOT BE PERMITTED UNLESS THE BRACKET IS CERTIFIED BY THE MANUFACTURER, SPECIFICALLY THAT IT WILL NOT AFFECT THE CEILING DIAPHRAGM.

W.7. ALL PLY BRACE TO BE INSTALLED IN VENEER CAVITY WHERE POSSIBLE.

LEGEND

M16 — INDICATES M16 TIE DOWN ROD FROM TOP PLATE TO FLOOR

M12 — INDICATES M12 TIE DOWN ROD FROM TOP PLATE TO FLOOR

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ENG. CHECK	BI	10/12/19
SCALE	1:100	SIZE A3

APPROVED BY: B.INMAN

PROJECT
PROPOSED DEVELOPMENT AT
LOT 206 GUMNUT ROAD
YAMBA, NSW 2460

WIND BRACING PLAN

CLIENT: KRYSY & TODD CAMPBELL

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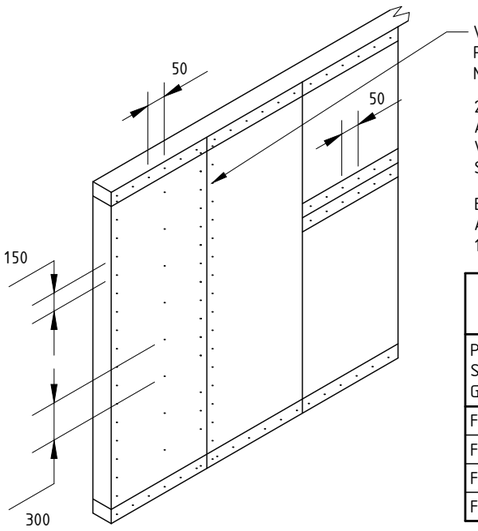
STRUCTERRE JOB No. CS0216

DRAWING REF. No. CS0216-S-107

REV 0



VERTICAL BUTT JOINTS PERMITTED PROVIDED FIXED TO NOGGING AT 50mm CRS

2.8Ø FH NAILS AT 9mm FROM EDGE OF SHEET AND: 50 CRS TOP & BTM PLATE, 150 CRS VERTICAL EDGES & 300 CRS INTERMEDIATE STUDS

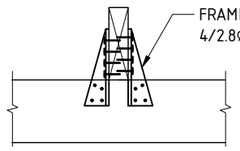
BRACING PANELS CONNECTED TO FLOOR WITH A 13kN AT EACH END & INTERMEDIATELY AT 1200mm CRS MAX.

MINIMUM PLYWOOD THICKNESS (mm)		
PLYWOOD STRESS GRADE	STUD SPACING 450mm	STUD SPACING 600mm
F8	7mm	9mm
F11	6mm	7mm
F14	4mm	6mm
F27	4mm	4.5mm

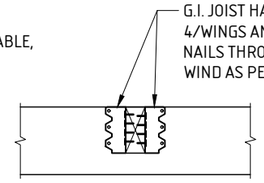
TYPICAL BRACING WALL (PLY)

READ IN CONJUNCTION WITH AS 1684 TABLE 8.18(h) - METHOD B
(6.0 kN/m RATING FOR 2.7m HIGH WALLS)

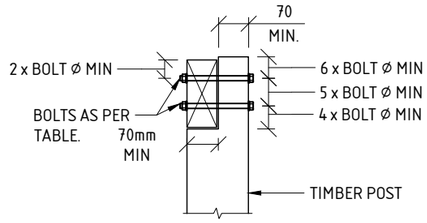
N3 - SHEET	TIE-DOWN SCHEDULE			
CONNECTION	REQUIRED	PROVIDED	DESCRIPTION	AS1684.2-2010 FIGURE REF.
ROOF SHEETING TO BATTENS	-	-	FIXED AS PER MANUFACTURERS SPECIFICATIONS	-
BATTENS TO TRUSSES	2.4 kN	4.5 kN	1/75mm No:14, TYPE 17 SCREW (ASSUMED BATTEN SIZE TO BE 38x75mm)	9.25 (D)
TRUSSES TO TOP PLATE	7.2 kN	13 kN	1/30x0.8 GI LOOPED STRAP WITH 4/2.8mm DIA NAILS EACH END	9.21 (E)
GIRDER TRUSSES TO TOP PLATE (11m^2)	14.6 kN	25 kN	2/30x0.8 GI LOOPED STRAP WITH 4/2.8mm DIA NAILS EACH END	9.21 (E)
TOP PLATE TO FLOOR FRAME/CONCRETE SLAB	14.4 kN	20.0 kN	1 - M12 ROD @ 1800mm crs & AT CORNERS (ENSURE TOP PLATE IS DESIGNED FOR 1800mm TIEDOWN SPACING)	9.19 (F)
BESIDE OPENINGS (UP TO 3600mm)	18.0 kN	20.0 kN	1 - M12 ROD EACH END	9.20 (C)
BESIDE OPENINGS (UP TO 4800mm)	22.7 kN	35.0 kN	1 - M16 ROD EACH END	9.20 (D)
ROOF BEAM TO STUDS (UP TO 10 SQM)	13.3 kN	20 kN	1 - M12 ROD	9.20 (H)
ROOF BEAM TO TIMBER COLUMN (UP TO 15m²)	20.0 kN	35.0 kN	2 - M12 VERTICAL BOLTS THROUGH TO 2 - 150x90x10mm MS ANGLE WITH 2 - M12 HORIZONTAL THROUGH ANGLE TO COLUMN. (ENSURE 60mm EDGE DISTANCE FOR HORIZONTAL BOLTS TO TIMBER COLUMNS AND 24mm EDGE DISTANCE FOR VERTICAL BOLTS THROUGH TIMBER BEAMS)	9.20 (N)
SINGLE OR UPPER STOREY FLOOR FRAME JOISTS TO BEARER IN SAME PLANE	2.7 kN	4.7 kN	G I JOIST HANGER WITH 4 WINGS AND 3/2.8 DIA NAILS THRO' EACH WING.	9.17 (G)
SINGLE OR UPPER STOREY FLOOR FRAME JOISTS TO BEARER JOISTS OVER BEARER	2.7 kN	3.5 kN	1/FRAMING ANCHOR WITH 4/2.8mm DIA NAILS EACH LEG	9.17 (D)
NOTE: ASSUMED SHEET ROOF, TRUSSES AT 900 CRS, BATTENS AT 900 CRS, JOINT GROUP JD4, MAX ROOF LOAD WIDTH = 6000mm, BEARER/COLUMN SPACING SUPPORTING ROOF = 3000mm, HEIGHT ABOVE SINGLE/UPPER STOREY BEARERS = 3000				



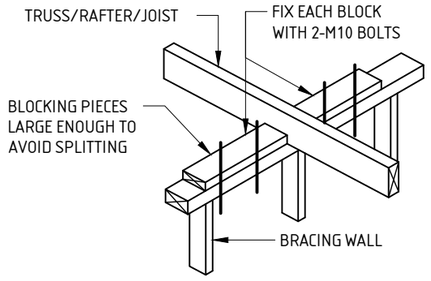
FLOOR JOISTS TO BEARERS OR TOP PLATE
AS1684.2 - 2010 TABLE 9.17 (d)



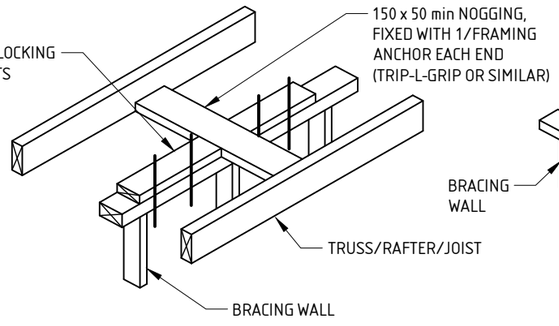
FLOOR JOISTS TO BEARERS OR TOP PLATE
AS1684.2 - 2010 TABLE 9.17 (g)



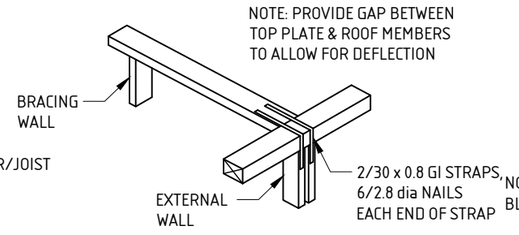
BEARERS TO STUMPS, POSTS, PIERS
AS1684.2 - 2010 TABLE 9.16 (c)



WALL PERPENDICULAR TO TRUSS/RAFTER/JOIST



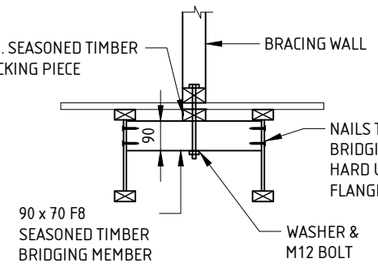
WALL PARALLEL TO TRUSS/RAFTER/JOIST



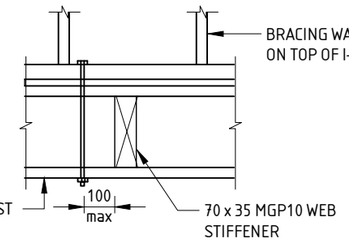
INTERNAL WALL TO EXTERNAL WALL

TYPICAL BRACING WALL CONNECTION DETAILS

READ IN CONJUNCTION WITH AS 1684



WALL TO JOIST BRIDGING CONNECTION



WALL TO JOIST CONNECTION

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SCALE	NTS	SIZE A3

APPROVED BY: B.INMAN

PROJECT
PROPOSED DEVELOPMENT AT
LOT 206 GUMNUT ROAD
YAMBA, NSW 2460

BRACING DETAILS

CLIENT: KRYSY & TODD CAMPBELL

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CLIENT REFERENCE. No. JW301

STRUCTERRE JOB No. CS0216

DRAWING REF. No. CS0216-S-108

REV 0

NORTHERN RIVERS STRUCterre consulting engineers

A.B.N. 63 619 141 310
Unit 5A/61 Centennial Circuit,
Byron Bay NSW 2481
Tel: 026680 7510

Bill To:
CAMPBELL
PROPOSED ALTERATIONS & ADDITIONS
19 GUMNUT ROAD, YAMBA NSW
,

Invoice Date: 10/01/2020
Our Ref: CS0216
Invoice No: 302640

TAX INVOICE

Job Address: 19 GUMNUT ROAD, YAMBA NSW

CODE	DESCRIPTION	PURCHASE ORDER	FEE
SITE CLASSIFICATION REPORT	Fee for provision of site classification report	19 GUMNUT	$300.00
FOOTING DESIGN	FEE FOR FOOTING & SLAB	19 GUMNUT	$400.00
WIND BRACING & TIE DOWN	FEE FOR WIND BRACING & TIE DOWN	19 GUMNUT	$150.00

FEE: $850.00
GST: $85.00
TOTAL: $935.00

+

Tear Here

PAYABLE WITHIN 7 DAYS

by direct deposit
Structerre CJA
Name: Northern Rivers Structerre
BSB No: 086-420
A/C No: 707078450
Quote inv: 302640

by mail
Detach this section and mail your cheque to:
Northern Rivers Structerre
Unit 5A/61 Centennial Circuit,
BYRON BAY NSW 2481

AMOUNT PAYABLE: $935.00

Byron Bay
Unit 5A/61 Centennial Circuit
BYRON BAY NSW 2481
Tel: 026680 7510
Fax:

Yamba
Unit 7-11, 18 Coldstream Street
Yamba NSW 2464
Tel: 0437 904 790

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NORTHERN RIVERS STRUCterre consulting engineers
Residential Geotechnical Commercial & Infrastructure
Inspect & Investigate Energy Assessment Environmental

Building Act 1993
Building Regulations 2006

CERTIFICATE OF COMPLIANCE NSW – STRUCTURAL DESIGN

Property Details

Project Address:	Lot 206 on D.P. 260230, Gumnut Road, Yamba, NSW 2460
Project Description:	Single Residential Development
Description of Component/s Certified:	Slab and footings, wind bracing & tie-down

Compliance:
I certify that the part of the design described above has been designed in accordance with the project specifications and complies with the provisions of the Building Code of Australia (BCA), including the relevant codes and standards referred to therein as listed below.

Australian Standards/Reference Documents

AS 4055-2012	Wind Loads for Housing
AS 2870:2011	Residential Slabs and Footings
AS 3600:2009	Concrete Structures
AS 3700-2001	Masonry Structures
AS/NZS 4100:1998	Steel Structures

Geotechnical xxx Engineers Ref: xxxx, Dated xx/xx/xx.

Design Documents
Drawings/Specifications: Northern Rivers Structerre Engineering Documentation
Job Number: CS0216, Drawing No. S-000 to S-003, S-101 to S-108 (Rev 0), Date: 10/12/19.

JWHIDA Building Design Services Architectural Documentation
Job Number: JW301, Sheet 1-19, Rev C, Dated 15/11/19.

Brady Inman BE (Civil)

Signature

Date: 19 December 2019

From: Mark mousley
Sent: Fri, 28 Feb 2020 13:01:09 +1000
To: Council Email
Subject: DA2019/0439
Attachments: CS0216_flood.pdf

Please see attached engineers document for DA2019/0439
Thanks
Mark Mousley

NORTHERN RIVERS STRUCterre consulting engineers

Residential | Geotechnical | Commercial & Infrastructure | Inspect & Investigate | Energy Assessment | Environmental

28 February 2020

Our reference: CS0216

Attention: Clarence Valley Council

RE: PROPOSED DEVELOPMENT AT LOT 206 GUMNUT ROAD YAMBA, NSW 2460
- FLOOD CERTIFICATION

Dear Sir,

The building complies with the Australian Building Codes Board Standard for Construction of Buildings in Flood Hazard Areas. The building will withstand the likely forces imposed on it by a 1:100 year flood event including hydrostatic, hydrodynamic, debris, wave, erosion and scour actions.

If any detail of this report is unclear, contact this office.

Kind Regards

B.INMAN

BRADY INMAN (BE)

Perth | Brisbane | Sydney | Melbourne | Geelong | Geraldton | Albany | Karratha | Maclean
82 Jubilee Street Maclean NSW 2463 | P.O. Box 12 Maclean NSW 2463
Phone (+612) 6645 2637 I Fax (+612) 6645 3175 I Email admin@nrsce.com.au Web www.structerre.com.au
ABN: 63 619 141 310 Structerre CJA Pty Ltd trading as Northern Rivers Structerre Consulting Engineers

clarence
VALLEY COUNCIL

02 March 2020

Reference: MD19/0439
Contact: Scott Whitehouse

T B Campbell
PO Box 355
YAMBA NSW 2464

Construction Certificate No. CC2019/0377
Issued under the Environmental Planning and Assessment Act 1979 Section 6.7 and 6.8

Application No: DA2019/0439
Development Proposal: Studio, deck, carport & awning
Property Address: 19 Gumnut Road YAMBA NSW 2464
Legal Description: Lot 206 DP 260230
Classification: Class1A & Class10A

Determination
Application for Construction Certificate has been approved.

Plans and Specifications Approved

Drawing No	Drawn by	Drawing Dated	Sheets	Revision
A001, A101, A102, A103, A201, A202, A301, A401, A801, A802, A901,	JWHIDA	15/11/19	19	C
CS0216, S-000 to S-001 to S-003, S-101 to S-108	Northern Rivers Structerre Consulting Engineers	10/12/19	12	0

Certificate
I certify that the work if completed in accordance with these plans and specifications will comply with the requirements of S6.8 of the Environmental Planning and Assessment Act 1979.

Certifying Authority
Name of Certifying Authority: Clarence Valley Council

NOTE: A Notice of Commencement Form must be submitted to Council 48 hours before commencement of construction.

Date of Endorsement: 02 March 2020

Yours faithfully

Kerry Harre
Building and Environmental Services Coordinator
BPB Accreditation BPB1042

Locked Bag 23 GRAFTON NSW 2460
ABN 85 864 095 684 p 02 6643 0200 w 02 6642 7647 e council@clarence.nsw.gov.au w www.clarence.nsw.gov.au

Print

DOC#
DOC DOC
IN 25 MAR 2020
clarence VALLEY COUNCIL
CLARENCE VALLEY COUNCIL

Contact Details:
Postal Address: Locked Bag 23,
GRAFTON NSW 2460
Telephone: (02) 6643 0200
Email: council@clarence.nsw.gov.au

Office Locations:
2 Prince Street, Grafton
50 River Street, Maclean

NOTICE OF COMMENCEMENT OF BUILDING OR SUBDIVISION WORK AND APPOINTMENT OF PRINCIPAL CERTIFIER

Under Environmental Planning and Assessment Act 1979
Section 6.6

Subject Land:

Lot: 206 Section: _____ DP: 260230 No.: 19

Street: CLUMNEUT ROAD Town: YAMBA

Description of Development:

STUDIO, DECK, CARPORT + AWNING

Type of Work:

☐ Subdivision ☑ Building

Consent:

Development Application No. or Construction Certificate No Complying Development Certificate No.: DA 2019/0439

Name of Certifying Authority: CLARENCE VALLEY COUNCIL

Date Work is to Commence:

23/03/2020

If Council is the PCA please book progress inspections with **Council's Customer Service Centre on (02) 6643 0200**. **Bookings for next day inspections are required to be booked by 3.30pm**. I have read the attached Notice requiring mandatory inspections to be performed by the Principle Certifying Authority and understand my responsibilities in requesting these inspections to be performed.

Signed:

Applicant/Owner/Builders Name: MARK MOUSLEY
(Print Name)

Signature: M S Mousley Date: 17/03/2020

Privacy Advice

The personal information that Council has collected or is collecting from you is personal information for the purposes of the Privacy and Personal Information Protection Act 1998 (PIPPA). Council will only use this information in accordance with the PIPIPA.

The supply of this information by you is voluntary. However, if you cannot provide or do not wish to provide the information sought, the Council may be limited in dealing with your application/request. Council requires this personal information from you in order to process your application. You may make application for access or amendment to your personal information held by Council. Council will consider any such application in accordance with the PIPPA. Council is to be regarded as the agency that holds the information.

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50 River Street, Maclean

Building Inspection Report

DA/CC/CDC: DA2019/0439	**Site Address** 19 Gumnut Rd Yamba

Issued to:
☐Plumber ☐Builder ☐Owner ☐Other

Inspection Type

☐Site – Prior to CC/CDC	☐ Sewer Connection	☐ Erosion
☐ Piers	☐ Internal Drainage	☐ Pool Fence
☐ Footings	☐ External Drainage	☐ Environmental Enforcement
☐ Slab	☐ Water plumbing Rough-In	
☐ Reinforced Element	☐ Plumbing Stackwork	
☐ Pool Steel	☐ OSM/Septic Tank	
☑ Frame	☐ OSM Effluent Disposal Area	
☐ Fire rating – wall/floor/ceiling	☐ OSM/AWTS	
☐ Sound rating - wall/floor/ceiling	☐ OSM/Sub/Surface Irrigation	
☐ Wet area/Waterproofing	☐ Plumbing Final	
☐ Stormwater		
☐ Final Completion		

☐ Other

Toilet on Site? ☐ Yes ☐ No **PC Sign on site** ☐ Yes ☐ No
Adequate Erosion/Sediment Control ☐ Yes ☐ No

Inspection result

☑ Work Satisfactory	☐ Work Satisfactory – Certificates Required
☐ Work Unsatisfactory	☐ Complete works outlined below and proceed
	☐ Reinspection necessary before proceeding

Please email requested information to: council@clarence.nsw.gov.au and quote the above application number

Occupation Certificate ☐ Yes ☐ No **Issue unsatisfactory final letter** ☐ Yes ☐ No
It is a legal requirement to obtain an Occupation Certificate PRIOR to occupation or use of the approved work.
Failure to apply and complete any required works prior to occupation can result in fines and may prevent the issue of an Occupation Certificate which may impact on the sale of the property or insurance claims.

Issuing Officer Scott Whitehouse BPB1071

Signature: 	Date: 19/08/2020	Time

On Site Hazard ID	How Severe	How Likely	What Priority	Controls

GENERAL NOTES

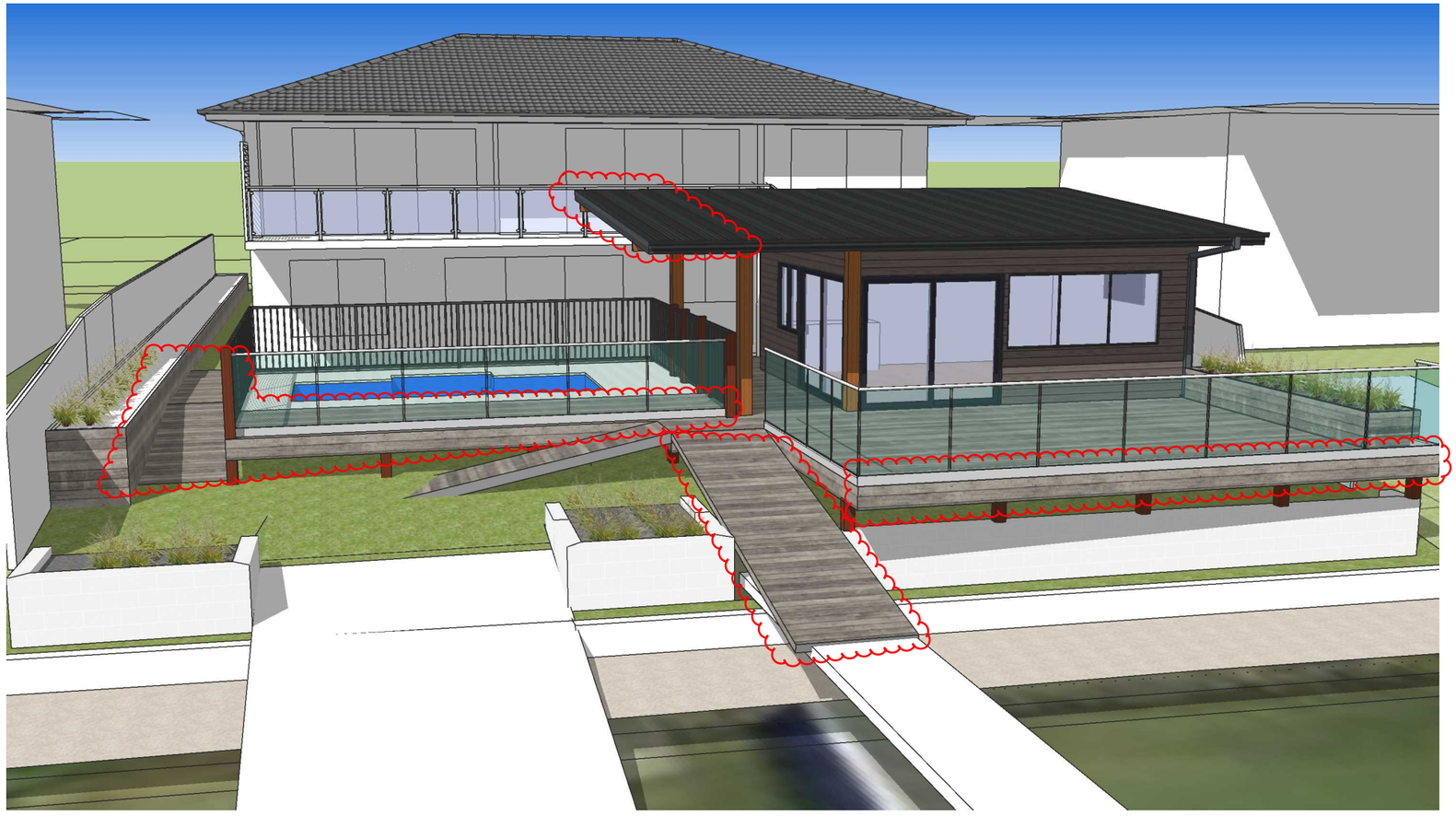
1 ALL DIMENSIONS & DETAILS TO BE CHECKED & VERIFIED ON SITE BY OWNER, BUILDER OR TRADESPERSON PRIOR TO CONSTRUCTION.
2 WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS
3 DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED
4 DIMENSIONS ARE ACTUAL AND NOT NOMINAL.
5 DIMENSIONS ARE STRUCTURE TO STRUCTURE UNLESS OTHERWISE NOTED AND DO NOT INCLUDE INTERNAL FINISHES AND CLADDING
6 ALL OVERHANG DIMENSIONS SHOWN ARE FROM EXTERNAL FACE OF FRAME WORK OR GABLE FACES
7 EAVES OVERHANG DIMENSIONS SHOWN INCLUDE AND FASCIA (EXCLUDE GUTTERING)
8 IF ACTUAL CONSTRUCTION OF THE DESIGN IN THIS SET OF PLANS DIFFERS FROM THESE PLANS THE OWNER AND BUILDER TO NOTIFY DESIGNER
9 ALL SET OUT OF BUILDINGS & STRUCTURES TO BE CARRIED OUT BY A REGISTERED LAND SURVEYOR AND CHECKED PRIOR TO CONSTRUCTION
10 THESE DRAWINGS TO BE READ IN CO-ORDINATION WITH ENGINEERS DRAWINGS, COUNCIL APPROVALS & OTHER RELEVANT CONSULTANTS DOCUMENTATION SUPPLIED
11 ALL FOOTINGS, SLABS, WALLS, RETAINING WALLS, STEEL, TIE-DOWN, FRAMING, BEAMS, ROOF, BRACING AND EXCAVATION TO BE DESIGNED AND CERTIFIED BY ENGINEER
12 ALL DETAILS & SPECIFICATION (EVEN IF NOT NOTED) TO COMPLY WITH THE NATIONAL CONSTRUCTION CODE (BCA), RELEVANT AUSTRALIAN STANDARDS, AND LOCAL COUNCIL BY-LAWS
13 IT IS THE BUILDERS RESPONSIBILITY TO COMPLY WITH ALL PLANNING CONDITIONS
14 BUILDER TO HAVE STAMPED BUILDING APPROVAL DRAWINGS PRIOR TO COMMENCEMENT OF CONSTRUCTION
15 ALL ALTERATIONS TO THE DRAWINGS TO BE REFERRED TO THE CERTIFYING AUTHORITY
16 ALL GROUND WORKS TO BE APPROVED BY ENGINEER

19 GUMNUT ROAD, YAMBA NSW

ADDITIONS: RUMPUS ROOM, DECK & CARPORT

SCOPE OF WORKS

1 CONSTRUCTION OF NEW CARPORT AND AWNING ATTACHED TO EXISTING DWELLING
2 CONSTRUCTION OF RUMPUS ROOM AT REAR OF LOT
3 CONSTRUCTION OF DECK AT REAR OF LOT
4 NEW FENCE ALONG WESTERN BOUNDARY
* NOTE: POOL AND SURROUND TO BE APPROVED AS SEPARATE D.A.



INDEX OF DRAWINGS

CLIENT	PROJECT ADDRESS	PROJECT	DRAWING TITLE	PROJECT #	DRAWN	SCALE	DOCUMENT DATE	DRAWING No.	REV.
KRYSTYNA & TODD CAMPBELL	19 GUMNUT ROAD, YAMBA NSW Lot 206/ DP 260230	**19 Gumnut Road YAMBA**	**COVER SHEET**	JW301	JH CHECK --	N/A	24 / 02 / 21	A001	E

REVISIONS		
B	DA ISSUE	13/08/19
C	AMENDMENTS FOR DA	15/11/19
D	MODIFICATION	16/2/21
E	LANDSCAPE PLAN, DIMS	24/2/21

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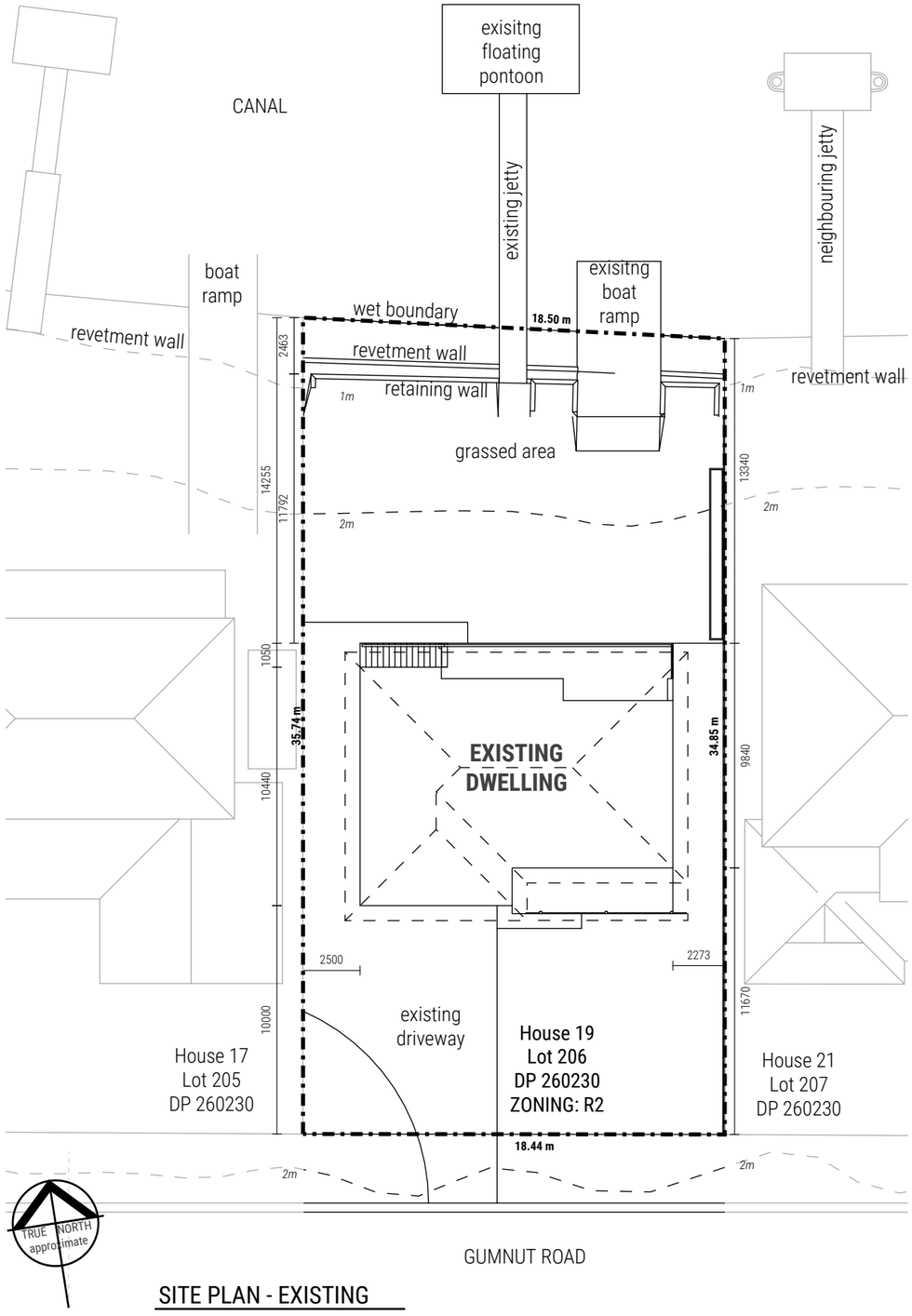
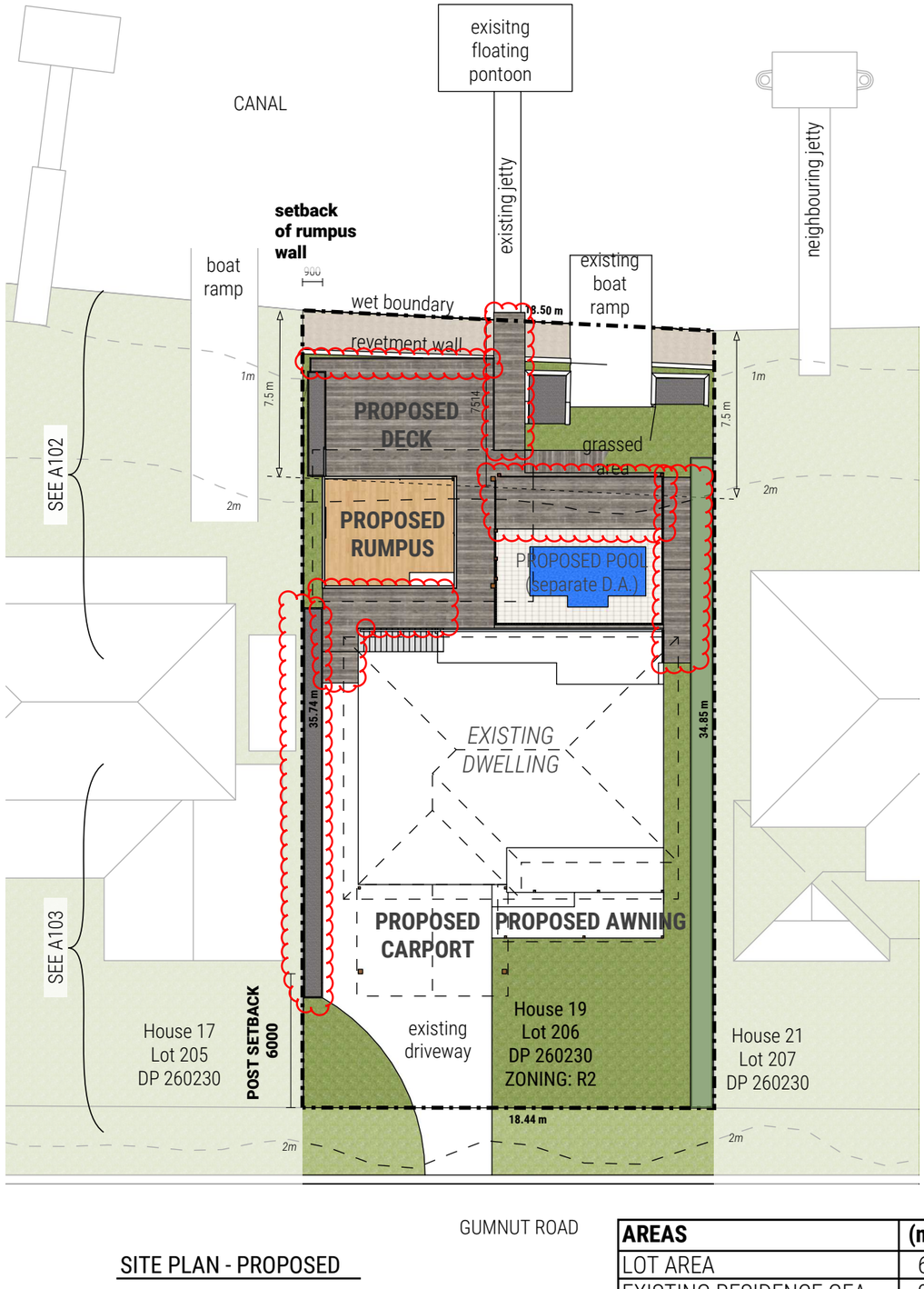


SITE PLAN - EXISTING



SITE PLAN - PROPOSED

AREAS	(m2)
LOT AREA	651.9
EXISTING RESIDENCE GFA	217.9
NEW RUMPUS GFA	28.1

CLIENT	PROJECT ADDRESS	PROJECT	DRAWING TITLE	PROJECT #	DRAWN	SCALE	DOCUMENT DATE	DRAWING No.	REV.
KRYSTYNA & TODD CAMPBELL	19 GUMNUT ROAD, YAMBA NSW Lot 206/ DP 260230	**19 Gumnut Road YAMBA**	**SITE PLAN**	JW301	JH CHECK --	1:250 @ A3	24 / 02 / 21	A101	E

REVISIONS		
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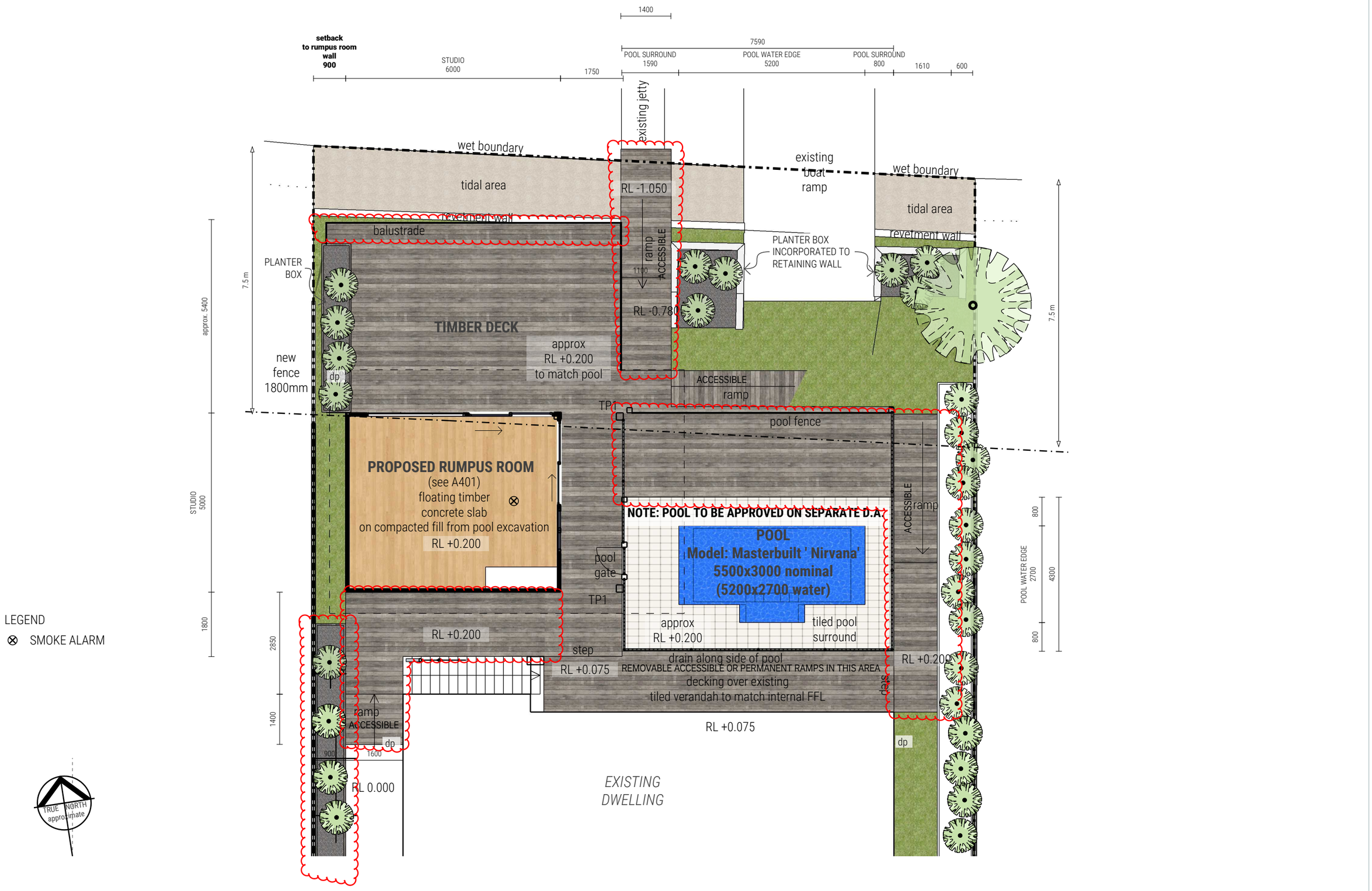

CLIENT	PROJECT ADDRESS	PROJECT	DRAWING TITLE	PROJECT #	DRAWN	SCALE	DOCUMENT DATE	DRAWING No.	REV.
KRYSTYNA & TODD CAMPBELL	19 GUMNUT ROAD, YAMBA NSW Lot 206/ DP 260230	**19 Gumnut Road YAMBA**	**PLAN - BACKYARD**	JW301	JH CHECK --	1:100 @ A3	24 / 02 / 21	A102	E

REVISIONS		
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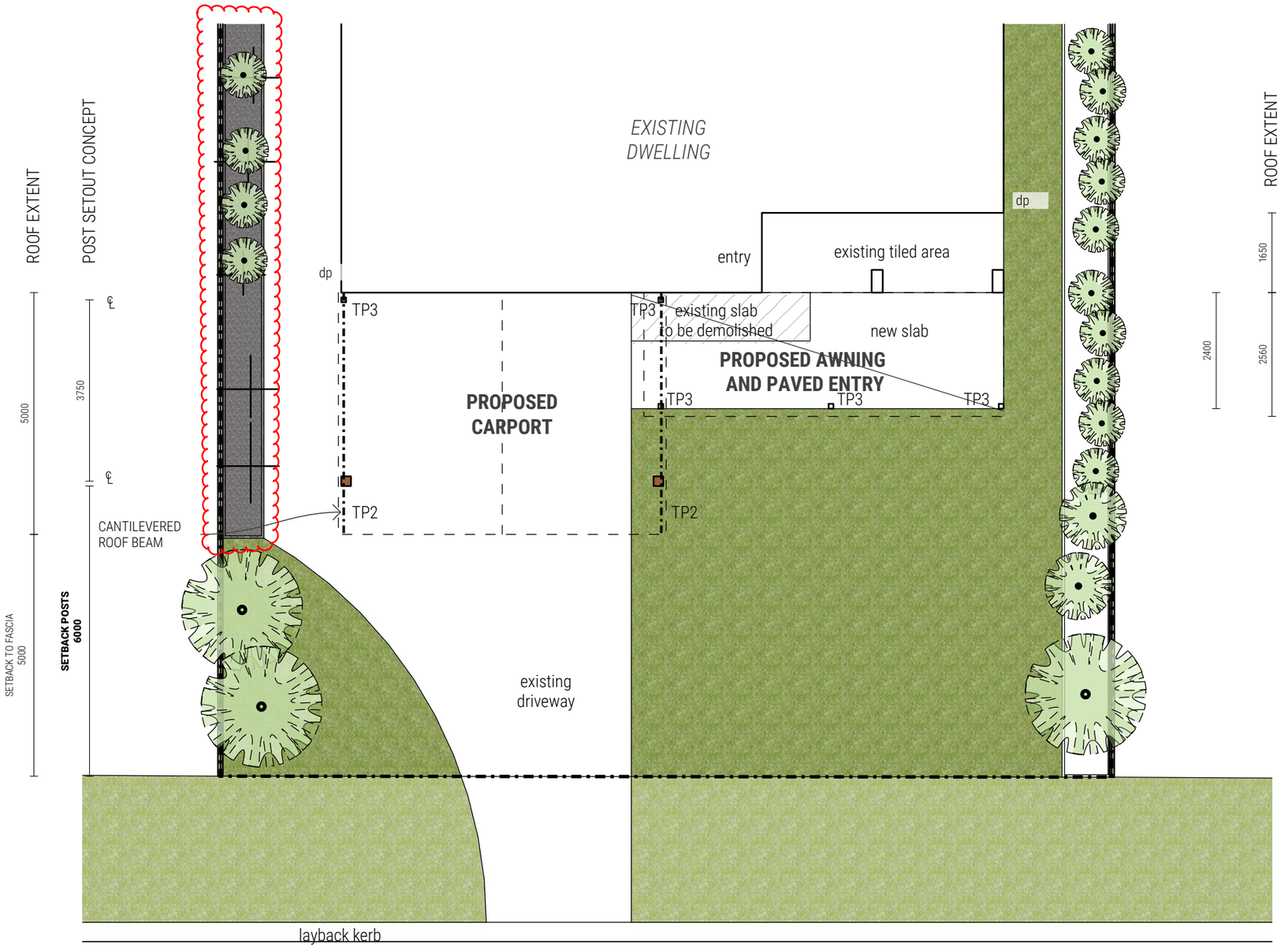
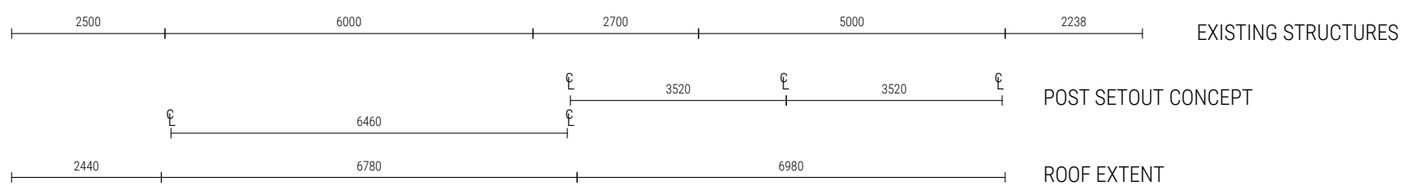
NOTE: POST LOCATIONS AS PER ENGINEERING.
SETBACK OF POSTS FROM FRONT BOUNDARY TO BE 6m MINIMUM



GUMNUT ROAD



CLIENT	PROJECT ADDRESS	PROJECT	DRAWING TITLE	PROJECT #	DRAWN	SCALE	DOCUMENT DATE	DRAWING No.	REV.
KRYSTYNA & TODD CAMPBELL	19 GUMNUT ROAD, YAMBA NSW Lot 206/ DP 260230	**19 Gumnut Road YAMBA**	**PLAN - FRONT YARD**	JW301	JH CHECK --	1:100 @ A3	24 / 02 / 21	A103	E

REVISIONS		
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	Material	Area		Area %			Landscaping %
GROUND PLANE MATERIALS							
	_Building	164.0	m²	25%		0	0%
	_Conncrete slab	110.9	m²	17%		0	0%
	_Decking	122.6	m²	19%		0	0%
	_Grass	133.7	m²	21%		1	21%
	_Planter box existing	45.2	m²	7%		1	7%
	_Planter box proposed	15.5	m²	2%		1	2%
	_Pool	12.3	m²	2%		0	0%
	_Retaining Wall - Revetment	4.9	m²	1%		0	0%
	_Tidal Area	21.9	m²	3%		0	0%
	_Tiles	20.2	m²	3%		0	0%
	SUB TOTAL	651.5		100%			30%
VERTICAL VEGETATION							
	Signifcant existing trees						
	Planter boxes with significant vertical vegetation						

We seek a variation to Clause 19 of CVC DCP 2011 that sets minimum landscape requirements. The configuration of the property does not provide adequate private open spaces to the rear of the property that adjoins the canal. This rear area considered as 'landscaping' is comprised of sloping grass that is not particularly amenable to outdoor activities and does not provide much privacy. Conversion of this space to a useable private open space as proposed in the plans has the consequence of reducing the landscaping area to below that set in the DCP.

The proposed additions of landscaping in other areas of the property are aimed at compensating for some of this loss. Due to the constraints of the geometry of the existing situation the total landscaped horizontal area falls short of the minimums set in the DCP.

We seek consideration that these proposed landscaping additions and the significant existing trees at loctions in the lot have a greater 'vertical' component that the 'horizontal' nature of the grass lost, and as such are not fully captured in a landscape assessment solely based on horizontal considerations.

CLIENT	PROJECT ADDRESS	PROJECT	DRAWING TITLE	PROJECT #	DRAWN	SCALE	DOCUMENT DATE	DRAWING No.	REV.
KRYSTYNA & TODD CAMPBELL	19 GUMNUT ROAD, YAMBA NSW Lot 206/ DP 260230	**19 Gumnut Road YAMBA**	**LANDSCAPING PLAN**	JW301	JH CHECK --	1:100 @ A3	24 / 02 / 21	A104	E

REVISIONS		
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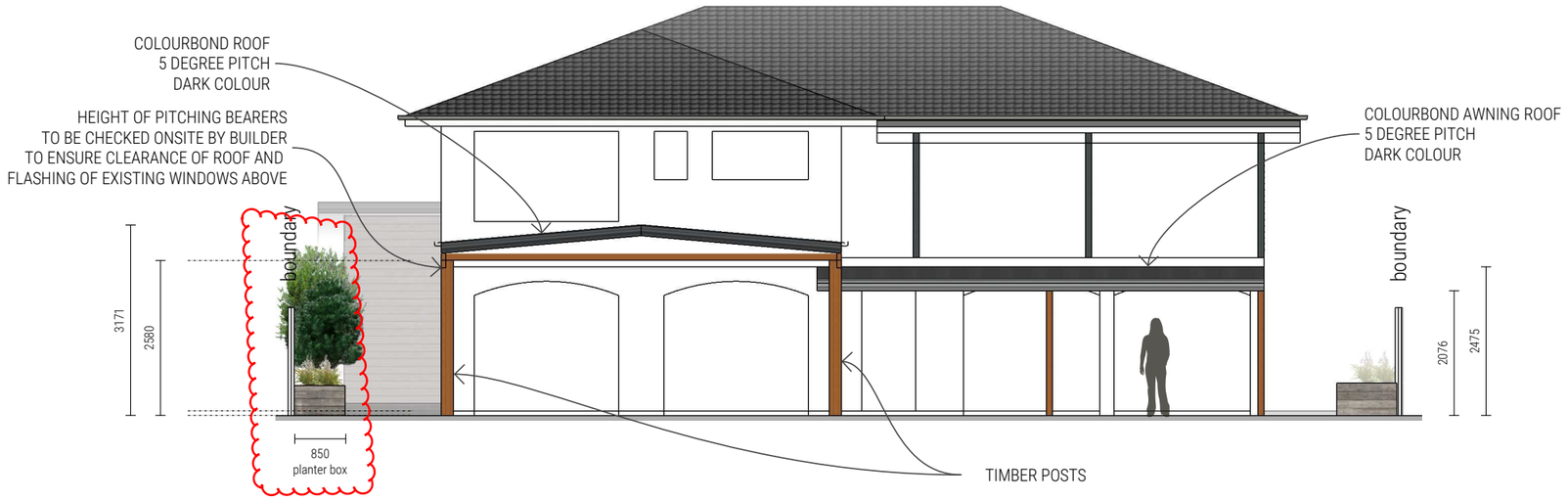
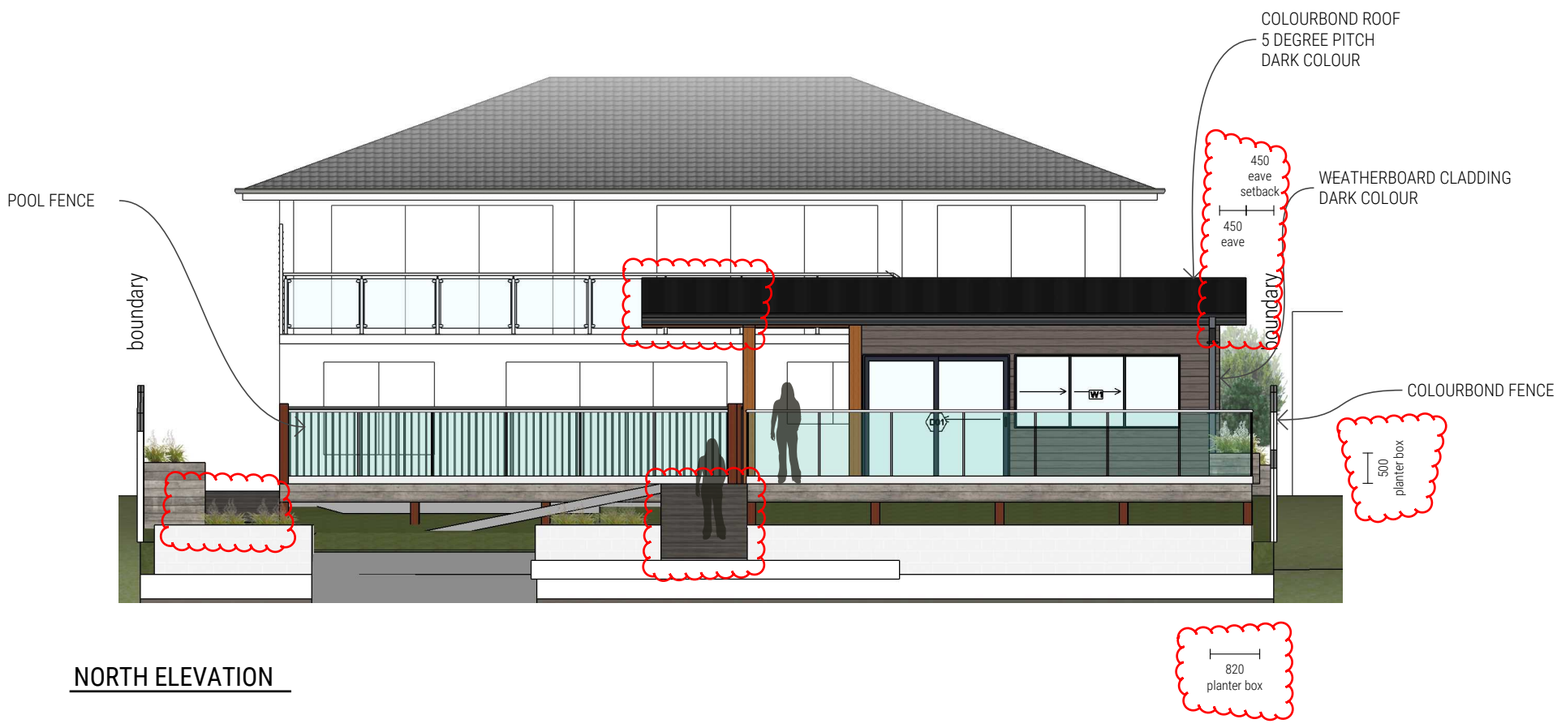


SOUTH ELEVATION



NORTH ELEVATION

CLIENT	PROJECT ADDRESS	PROJECT	DRAWING TITLE	PROJECT #	DRAWN	SCALE	DOCUMENT DATE	DRAWING No.	REV.
KRYSTYNA & TODD CAMPBELL	19 GUMNUT ROAD, YAMBA NSW Lot 206/ DP 260230	**19 Gumnut Road YAMBA**	**ELEVATIONS**	JW301	JH CHECK --	1:100 @ A3	24 / 02 / 21	A201	E

REVISIONS		
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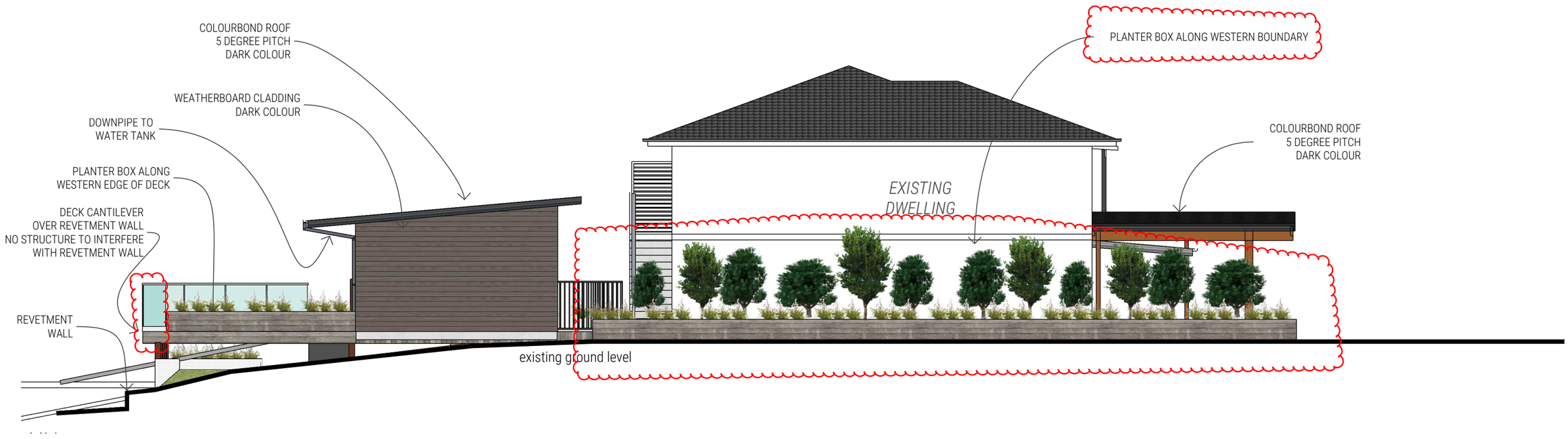
EAST ELEVATION



WEST ELEVATION

CLIENT	PROJECT ADDRESS	PROJECT	DRAWING TITLE	PROJECT #	DRAWN	SCALE	DOCUMENT DATE	DRAWING No.	REV.
KRYSTYNA & TODD CAMPBELL	19 GUMNUT ROAD, YAMBA NSW Lot 206/ DP 260230	**19 Gumnut Road YAMBA**	**ELEVATIONS**	JW301	JH CHECK --	1:100 @ A3	24 / 02 / 21	A202	E

REVISIONS		
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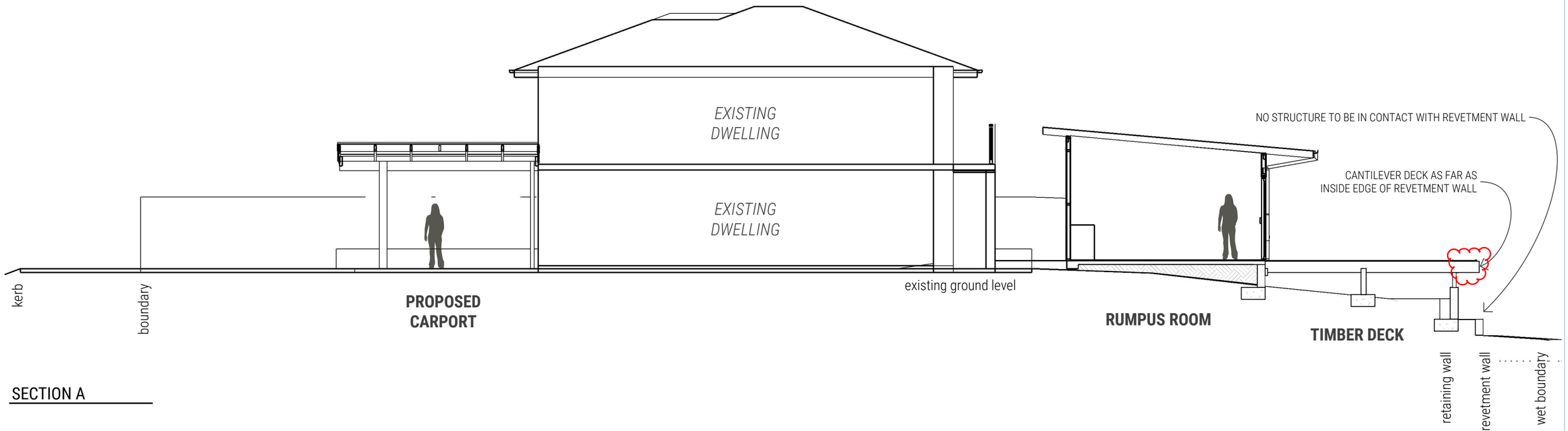

SECTION A

CLIENT	PROJECT ADDRESS	PROJECT	DRAWING TITLE	PROJECT #	DRAWN	SCALE	DOCUMENT DATE	DRAWING No.	REV.
KRYSTYNA & TODD CAMPBELL	19 GUMNUT ROAD, YAMBA NSW Lot 206/ DP 260230	**19 Gumnut Road YAMBA**	**SECTIONS**	JW301	JH CHECK --	1:100 @ A3	24 / 02 / 21	A301	E

REVISIONS		
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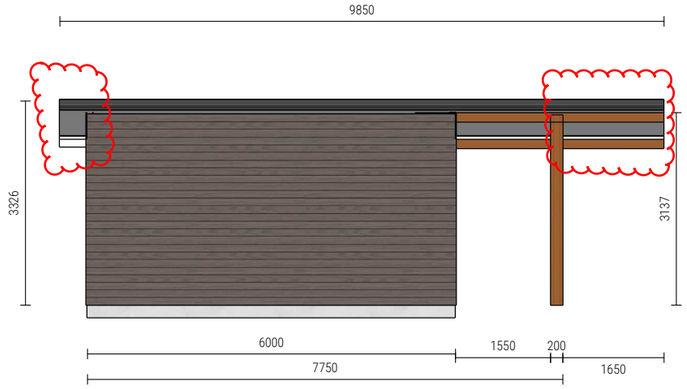
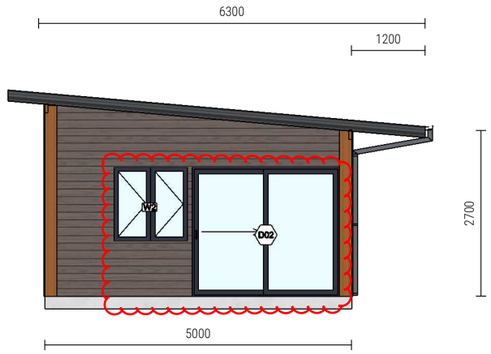
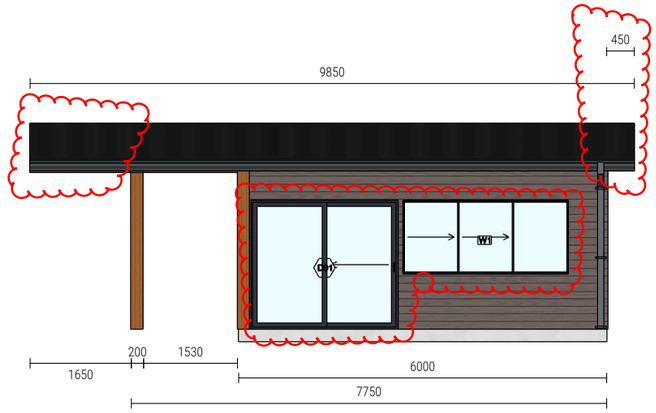


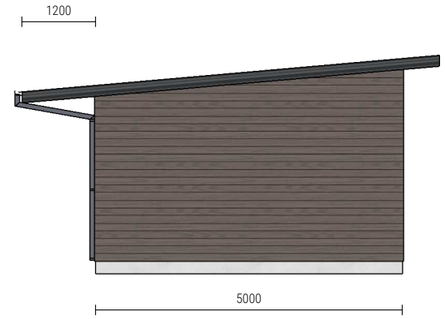
SOUTH ELEVATION



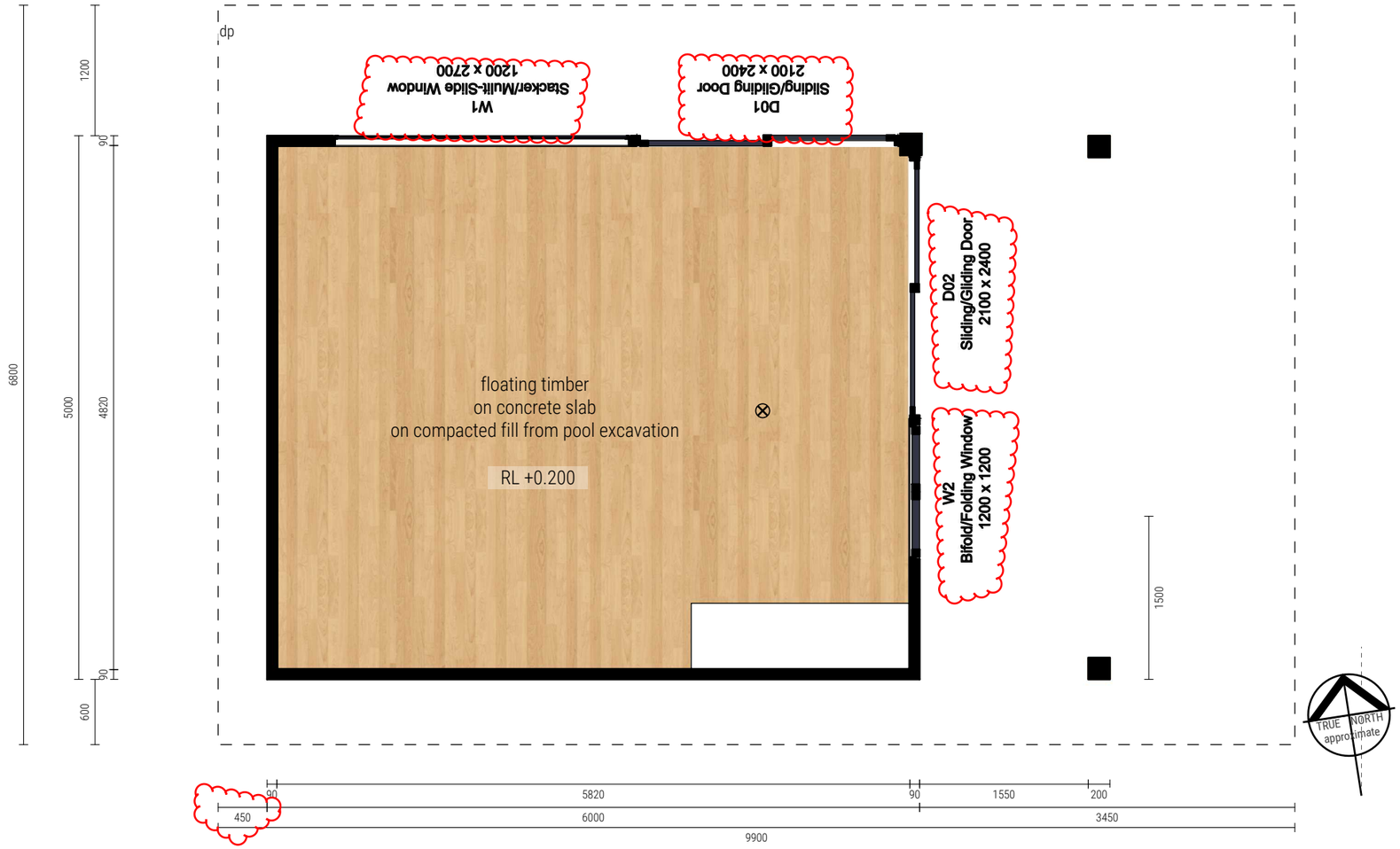
EAST ELEVATION



NORTH ELEVATION



WEST ELEVATION



PLAN 1:50

LEGEND

⊗ SMOKE ALARM

dp DOWN PIPE

CLIENT	PROJECT ADDRESS	PROJECT	DRAWING TITLE	PROJECT #	DRAWN	SCALE	DOCUMENT DATE	DRAWING No.	REV.
KRYSTYNA & TODD CAMPBELL	19 GUMNUT ROAD, YAMBA NSW Lot 206/ DP 260230	**19 Gumnut Road YAMBA**	**RUMPUS PLAN, ELEVATIONS, SECTION**	JW301	JH CHECK --	1:100 @ A3	24 / 02 / 21	A401	E

REVISIONS		
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PROPOSED ADDITIONS:

PROPOSED FLOATING PONTOON / DOCKS
Marginally outside the 13m x 8m Exempt Development dimensions and hence council approval is sought
If this configuration is unacceptable then alternative configurations are possible
To be installed by factory trained DOCKPRO Technician
See supplier for details

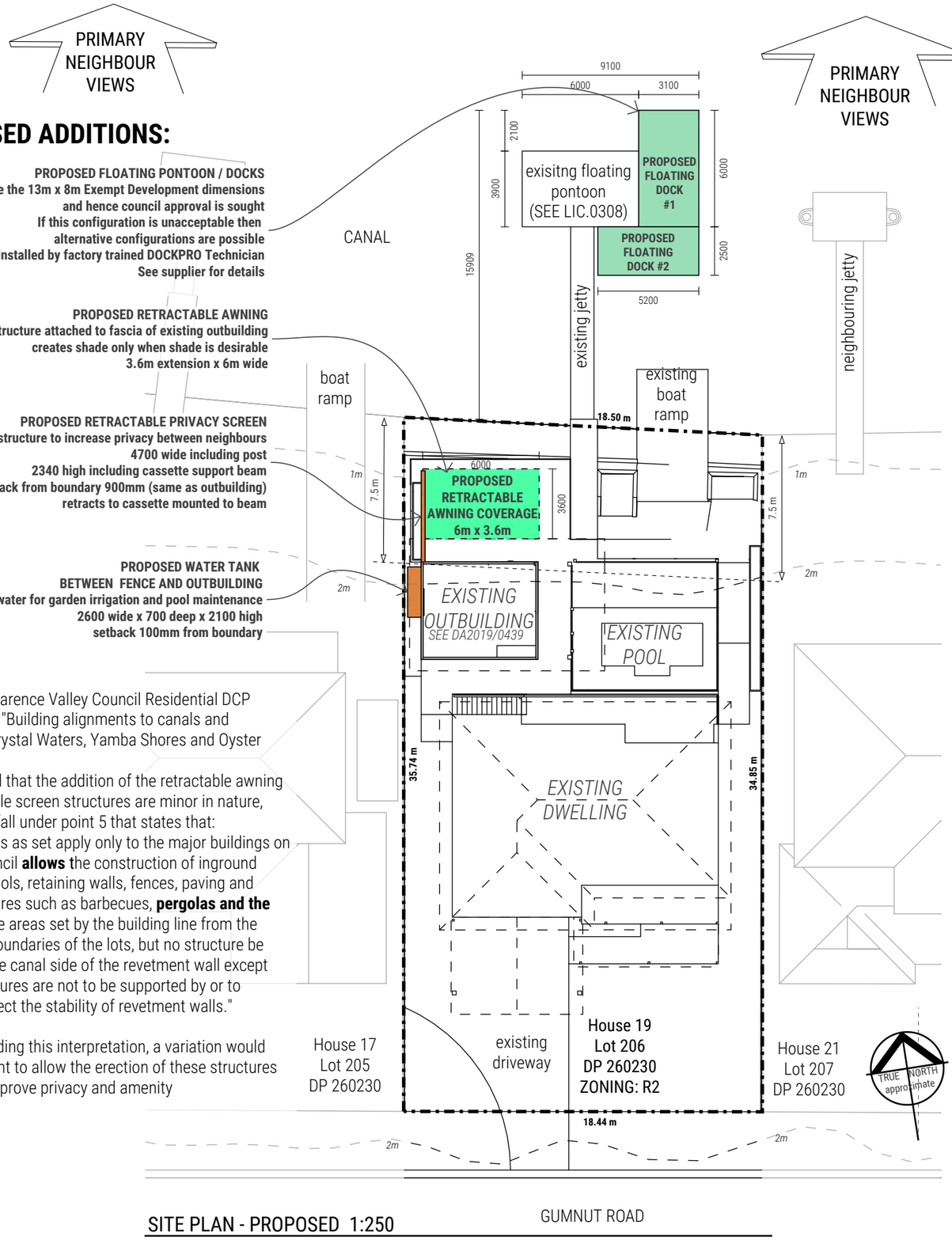
PROPOSED RETRACTABLE AWNING
A minor structure attached to fascia of existing outbuilding
creates shade only when shade is desirable
3.6m extension x 6m wide

PROPOSED RETRACTABLE PRIVACY SCREEN
A minor structure to increase privacy between neighbours
4700 wide including post
2340 high including cassette support beam
Setback from boundary 900mm (same as outbuilding)
retracts to cassette mounted to beam

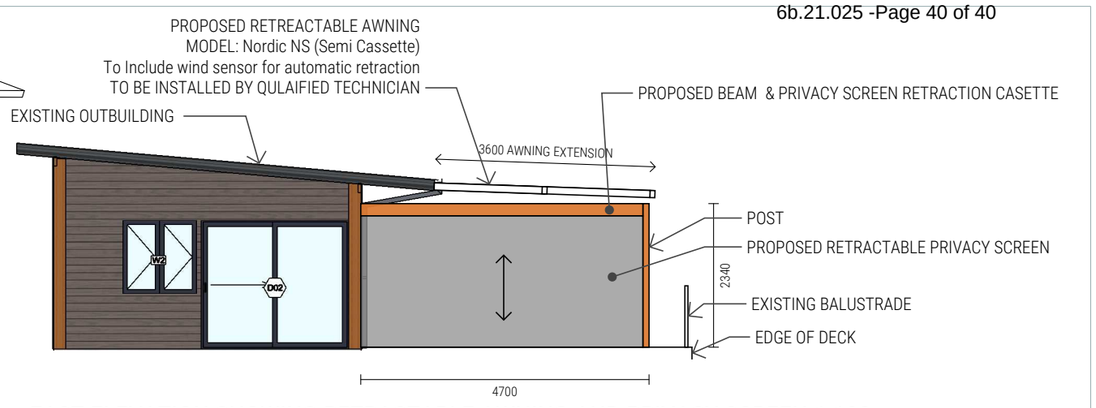
PROPOSED WATER TANK
BETWEEN FENCE AND OUTBUILDING
to capture rainwater for garden irrigation and pool maintenance
2600 wide x 700 deep x 2100 high
setback 100mm from boundary

In line with Clarence Valley Council Residential DCP Schedule C2: "Building alignments to canals and waterways Crystal Waters, Yamba Shores and Oyster Cove "
It is proposed that the addition of the retractable awning and retractable screen structures are minor in nature, and as such fall under point 5 that states that:
" Building lines as set apply only to the major buildings on the site. Council **allows** the construction of inground swimming pools, retaining walls, fences, paving and minor structures such as barbecues, **pergolas and the like** within the areas set by the building line from the canal front boundaries of the lots, but no structure be erected on the canal side of the revetment wall except jetties. Structures are not to be supported by or to adversely affect the stability of revetment walls."

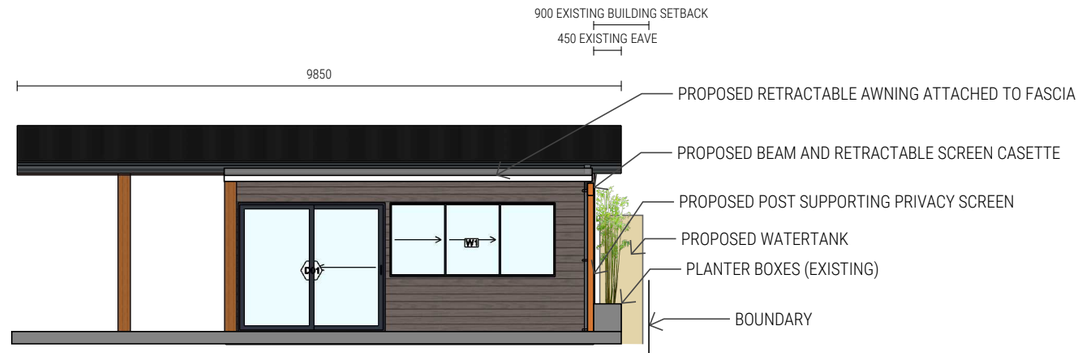
Not withstanding this interpretation, a variation would then be sought to allow the erection of these structures in order to improve privacy and amenity



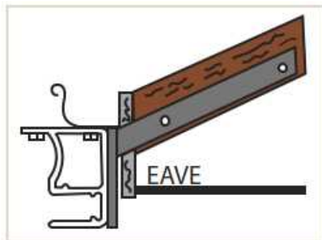
SITE PLAN - PROPOSED 1:250



EAST ELEVATION SHOWING RETRACTABLE AWNING AND PRIVACY SCREEN 1:100



NORTH ELEVATION SHOWING RETRACTABLE AWNING AND PRIVACY SCREEN 1:100



3) Mounting the awning through the fascia:

This option is selected if there is minimal head clearance. A slot is made next to the roof rafter through the fascia board. This allows the bracket to slide beside the roof rafter, which is then bolted together.

METHOD OF AWNING ATTACHMENT AS PER SKILTEC FOLDING ARM AWNING INSTALLATION MANUAL

JETTY PONTOON DETAILS & DESCRIPTION	DIM 1 (m)	DIM 2 (m)	AREA m2
Existing Jetty	1.2	10	12
Existing floating pontoon	6	3.9	23.4
Proposed floating dock #1 (FloatBricks U-600 T)	3.1	6	18.6
Proposed Floating dock #2 (FloatBricks U-450)	5.2	2.5	13
Floating Dock supplied by 'DOCKPRO'			
Installation by a factory trained DOCKPRO Technician.			
See supplier technical details			

CLIENT	PROJECT ADDRESS	PROJECT	DRAWING TITLE	PROJECT #	DRAWN	SCALE	DOCUMENT DATE	DRAWING No.	REV.
KRYSTYNA & TODD CAMPBELL	19 GUMNUT ROAD, YAMBA NSW Lot 206/ DP 260230	**19 Gumnut Road YAMBA**	**PROPOSED ADDITIONS**	JW301b	JH CHECK --	as shown @ A3	23 / 02 / 21	A001	B

REVISIONS		
A	DA ISSUE	17/2/21
B	AWNING AND DOCK DETAILS	23/2/21

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