



ABN 23 039 013 724  
Suite 1, Building 8  
49 Frenchs Forest Road East  
Frenchs Forest NSW 2086

PO Box 652  
Forestville, NSW, 2087  
PH: (02) 9451 3455  
FX: (02) 9451 3466  
Email: info@dbce.com.au

Ref: 18219

25<sup>th</sup> September 2018

Attn: Ms Anita Searls

**Structural Design Certification**  
**Unit 3, 69 Quinton Rd, Manly – Deck Extension**

We, Dennis Bunt Consulting Engineers Pty Ltd, certify that we have designed the structural components for the deck extension at Unit 3, 69 Quinton Rd, Manly, as shown on the attached DBCE sketches 18219:- S01-S04 Revision 1, to relevant structural Australian Standards and relevant structural sections of the NCC.

We certify that the existing deck structure is capable of withstanding the additional loads of the extension provided the work is carried out in accordance with these sketches.

This certificate shall not be construed as relieving any other party of their responsibilities, liabilities or obligations.

Yours Faithfully,

A handwritten signature in blue ink, appearing to read 'Dennis Bunt'.

Dennis Bunt, Director, BE (Hons), FIEAust, RBP (Vic)  
for Dennis Bunt Consulting Engineers Pty Ltd.

## GENERAL

- G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED.
- G2. ANY QUERIES OR DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER OR PROJECT MANAGER FOR A DECISION PRIOR TO PROCEEDING WITH THE WORK.
- G3. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE APPROPRIATE AUSTRALIAN STANDARD AND THE BCA AS AMENDED.
- G4. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- G5. ALL DIMENSIONS SHALL BE VERIFIED BY THE BUILDER ON SITE PRIOR TO ANY FABRICATION OR CONSTRUCTION.
- G6. DIMENSIONS AND SITE SETOUT SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS.
- G7. TEMPORARY BRACING OR PROPPING TO ENSURE THE STRUCTURE IS KEPT IN A STABLE STATE IS THE RESPONSIBILITY OF THE BUILDER.
- G8. THE STRUCTURAL ELEMENTS SHOWN ON THESE DRAWINGS HAVE BEEN DESIGNED FOR THE FOLLOWING LIVE LOADS:

STRUCTURAL ELEMENT	LIVE LOAD kPa
BALCONIES	2.0

- G9. WIND LOADS TO AS1170.2  
WIND TERRAIN CATEGORY = 3 REGION A  
REGION WIND SPEED ULS  $V_{500} = 45\text{m/s}$   
REGION WIND SPEED SLS  $V_{25} = 37\text{m/s}$

## TIMBER

- T1. ALL WORKMANSHIP AND MATERIALS TO BE IN ACCORDANCE WITH AS1684 AND AS1720.
- T2. MEMBERS TO HAVE STRENGTHS AS SHOWN ON STRUCTURAL DRAWINGS.
- T3. TIMBER DURABILITY SHALL BE IN ACCORDANCE WITH AS1684.2 APPENDIX B, TABLE B1.
- T4. ALL TIMBER SHALL BE FREE OF KNOT HOLES, POCKETS OR SPLITS WITHIN 300mm OF CONNECTIONS.
- T5. ALL NUTS, BOLTS AND WASHERS SHALL BE HOT DIP GALVANISED. NUTS TO BE RE-TIGHTENED 6 MONTHS AFTER INSTALLATION.
- T6. TIE DOWN RAFTERS, TOP PLATES, FLOORS ETC AS DETAILED IN AS1684.2.
- T7. ALL FLOOR JOISTS TO HAVE ROWS OF NOGGINS IN ACCORDANCE WITH AS1684.2.

## STRUCTURAL STEEL

- S1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH AS4100, AS1554 AND AS4600.
- S2. STEEL MEMBERS TO HAVE THE FOLLOWING GRADES:

MEMBER	GRADE
HOT ROLLED SECTIONS UB'S, UC'S, PFC'S AND ANGLES	300
HOLLOW SECTIONS CHS, SHS AND RHS	350, 250
COLD FORMED PURLINS AND GIRTS	400
FLAT BARS AND RODS	250

- S3. BOLT DESIGNATION:
- 4.6/S GRADE 4.6 BOLTS TO AS1111 SNUG TIGHTENED  
8.8/S HIGH STRENGTH GRADE 8.8 TO AS1252 SNUG TIGHTENED  
8.8/TB HIGH STRENGTH GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS4100 AS A BEARING JOINT  
8.8/TF HIGH STRENGTH GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS4100 AS A FRICTION JOINT WITH CONTACT SURFACES LEFT UNCOATED
- S4. ALL BOLTS TO BE M20 GRADE 8.8/S U.N.O ON STRUCTURAL DRAWINGS. NO STEEL TO STEEL CONNECTION TO HAVE LESS THAN 2 BOLTS.
- S5. ALL PLATES, GUSSETS, FINIS ETC TO BE 10mm THICK MINIMUM. ALL WELDS TO BE 6mm CONTINUOUS FILLET WELDS ALL AROUND U.N.O. BUTT WELDS TO BE FULL PENETRATION. ELECTRODES TO BE E48XX/W50X U.N.O.
- S6. ALL WELDS TO BE STRUCTURAL PURPOSE (SP) U.N.O.
- S7. ALL WELDS TO BE MINIMUM 6mm CFW OR EQUIVALENT TO STEEL THICKNESS, WHICHEVER IS LESSER.
- S8. THE BUILDER SHALL PROVIDE ALL CLEATS AND HOLES NECESSARY FOR ALL ATTACHMENTS WHETHER SHOWN ON STRUCTURAL DRAWINGS OR NOT.
- S9. PROVIDE HOOK BOLTS FROM BRACING TO PURLINS AT BRACING MID POINT TO PREVENT SAG IN BRACING.
- S10. THE BUILDER SHALL MAINTAIN THE STRUCTURE AND STRUCTURAL STEEL IN A STABLE CONDITION DURING THE CONSTRUCTION AND SHALL PROVIDE TEMPORARY BRACING, FALSEWORK OR PROPPING AS REQUIRED TO ACHIEVE THIS. THIS BRACING ETC SHALL BE AT THE COST OF THE BUILDER.

## STRUCTURAL STEEL CONTINUED

11. THE BUILDER SHALL PROVIDE 4 COPIES OF STRUCTURAL STEEL SHOP DRAWINGS FOR APPROVAL BY THE ENGINEER 14 DAYS PRIOR TO FABRICATION.

- S12. STRUCTURAL STEELWORK TO HAVE THE FOLLOWING SURFACE TREATMENT:

ELEMENT	SURFACE TREATMENT	SURFACE COATING
EXTERNAL OR IN CAVITIES	PICKLE TO AS1627 PART 5	HOT DIP GALVANIZE 600g PER SQUARE METRE & 50um OF TWO PACK EPOXY PRIMER, PLUS 200um OF HIGH BUILD EPOXY MICACEOUS IRON OXIDE (TWO PACK) ALL TO AS2699.3
INTERNAL	BLAST CLEAN TO CLASS 2 TO AS1627	2 COATS RED OXIDE PRIMER

- S13. ALL SITE WELDED & DRILLED GALVANIZED STEELWORK TO BE PAINTED WITH-
- MODERATE ATMOSPHERIC CORROSION ZONES = 2 COATS OF 'GALVANITE' EPOXY ZINC RICH PRIMER OR EQUIVALENT TO 125-155µm DFT.
  - SEVERE ATMOSPHERIC CORROSION ZONES = 2 COATS OF 2 PACK EPOXY ZINC TO AS3750.9 TO 150µm DFT FOLLOWED BY 2 PACK EPOXY ENAMEL TO 150µm DFT.

FOR CONSTRUCTION

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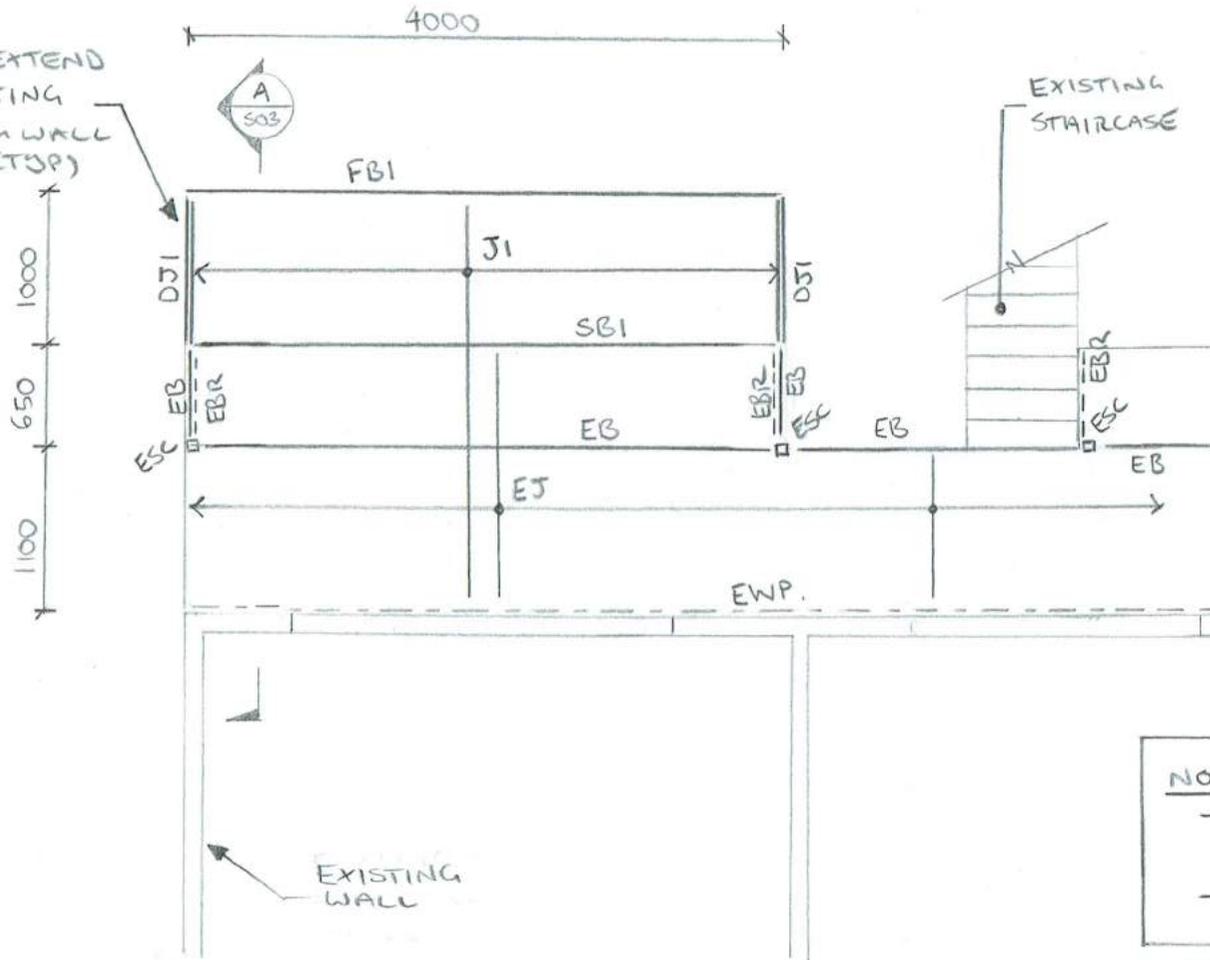
PROJECT:  
UNIT 3, 69 QUINTON RD, MANLY

TITLE: STRUCTURAL NOTES

CLIENT:

DRAWN D.BR	DESIGN D.BR	DATE: AUG 2018
JOB NO:	18219	DWG NO: S01
SCALE @ A4: AS SHOWN	REV: 1	

DJI TO EXTEND TO EXISTING BUILDING WALL (TOP)



MEMBER SCHEDULE

J1	140 x 45 F7 @ 450 CTRS	JOISTS H3 TREATED
SBI	200 PFC	STEEL BEAM (GALV)
FBI	2/140 x 45	FASCIA BEAM
DJI	-	DOUBLE JOIST
EJ	140 x 45 @ 450 CTRS	EXIST. JOIST
EB	200 PFC	EXISTING BEAM.
ESC	100 x 100 SHS	EXISTING COLUMN
EBR	100 x 75 x 9 UA	EXISTING BRACE
EWP	140 x 45	EXISTING WALL PLATE

NOTE

- BOLT J1 TO EJ WITH 3M12 4.6/5 BOLTS (TOP)
- CLEAT SBI/EB EVERY 3<sup>RD</sup> JOIST (REFER S04)

FOR CONSTRUCTION

PLAN VIEW  
NTS



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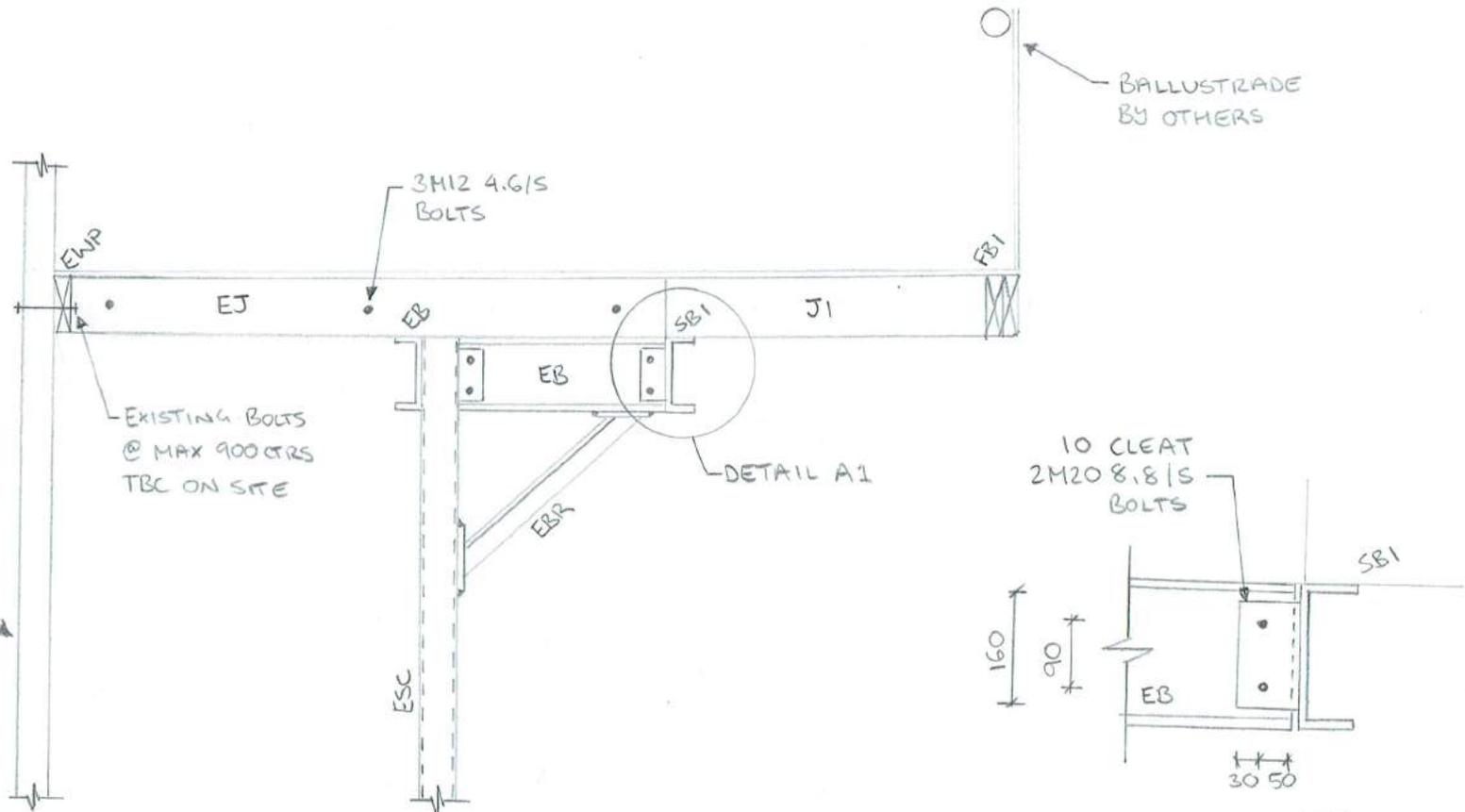
PROJECT:  
UNIT 3, 69 QUINTON RD, MANLY

TITLE:  
PLAN VIEW

CLIENT:		DATE: AUG 2018
DRAWN D.BR	DESIGN D.BR	
JOB NO: 18219	DWG NO: S02	
SCALE @ A4: AS SHOWN	REV: 1	

ENGINEER TO BE NOTIFIED OF EXIST. STRUCTURE SUPPORTING WALL PLATE

EXISTING WALL



SECTION (A) 1:20 (S02)

DETAIL (A1) 1:10

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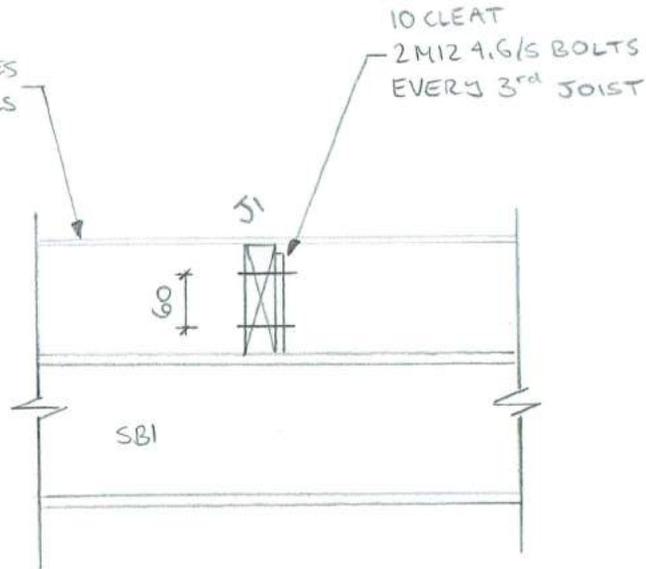
PROJECT:  
 UNIT 3, 69 QUINTON RD, MANLY

TITLE:  
 STRUCTURAL DETAILS

CLIENT:

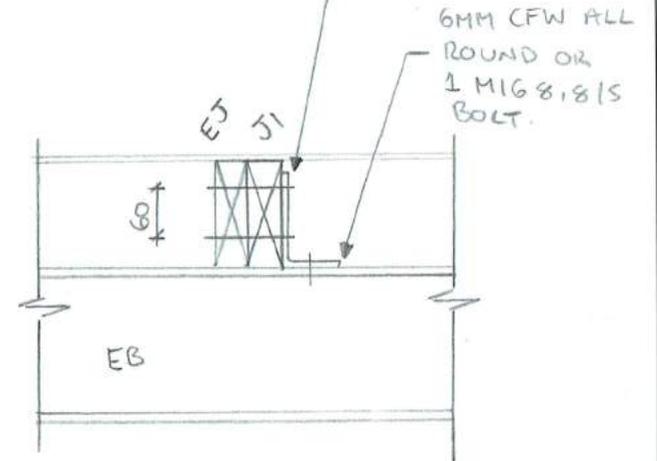
DRAWN D.BR	DESIGN D.BR	DATE: AUG 2018
JOB NO: 18219	DWG NO: S03	
SCALE @ A4: AS SHOWN	REV: 1	

FLOOR FINISHES  
TO ARCH. DETAILS  
(TYP)



TYPICAL SBI - J1  
CLEAT CONNECTION

125x75x6 UA (75 LONG)  
2 M12 4.6/5 BOLTS  
EVERY 3rd JOIST



TYPICAL EB - JOIST  
CLEAT CONNECTION

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TITLE:  
STRUCTURAL DETAILS

CLIENT:

DRAWN  
D.BR

DESIGN  
D.BR

DATE: AUG 2018

JOB NO:

18219

DWG NO: S04

SCALE @ A4: AS SHOWN

REV: 1