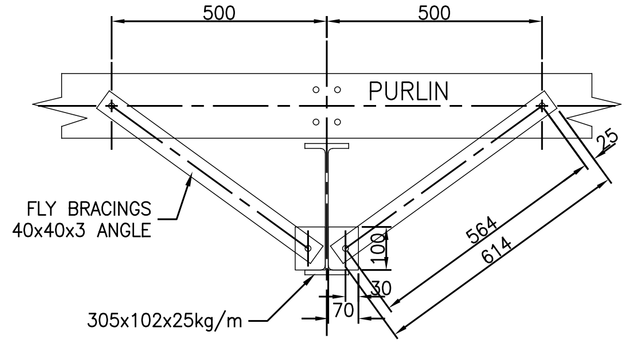
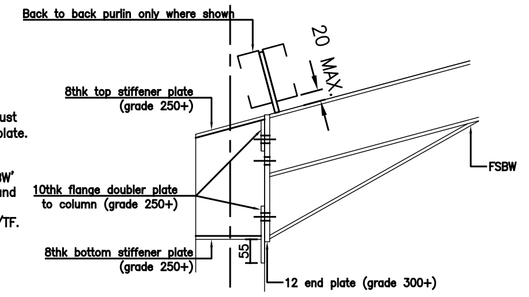



TYPICAL FLY BRACE DETAIL 1:10

8mm THICK CLEAT, 6CFW, M12 –4.6/S BOLTS

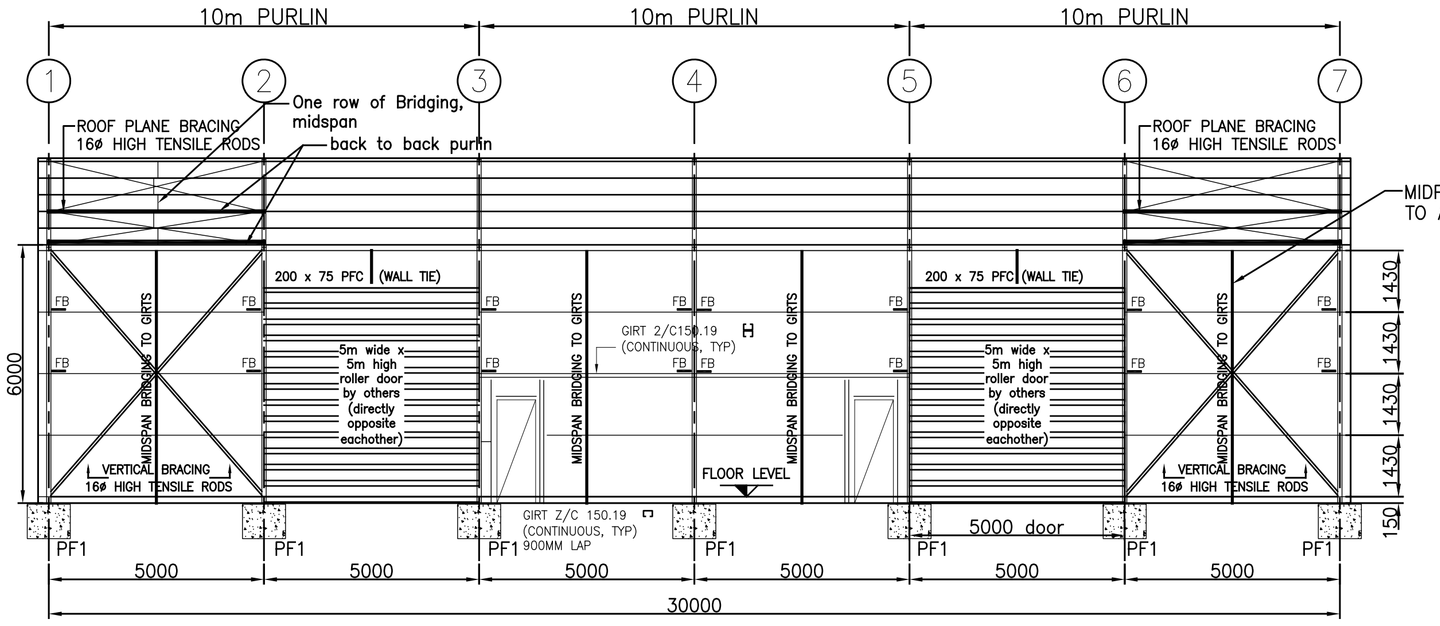



Note:
All rafter/haunch flanges must have a 'FSBW' to the end plate.
6CFW Webs
6CFW stiffener plates
Flange doubler plate – 'FSBW' to column web, 6CFW top and bottom to column flange.
All bolts to be designated /TF.
Use E4(9)XX Electrodes for welding.

FSBW–Denotes Full Strength Butt Weld

DETAIL A

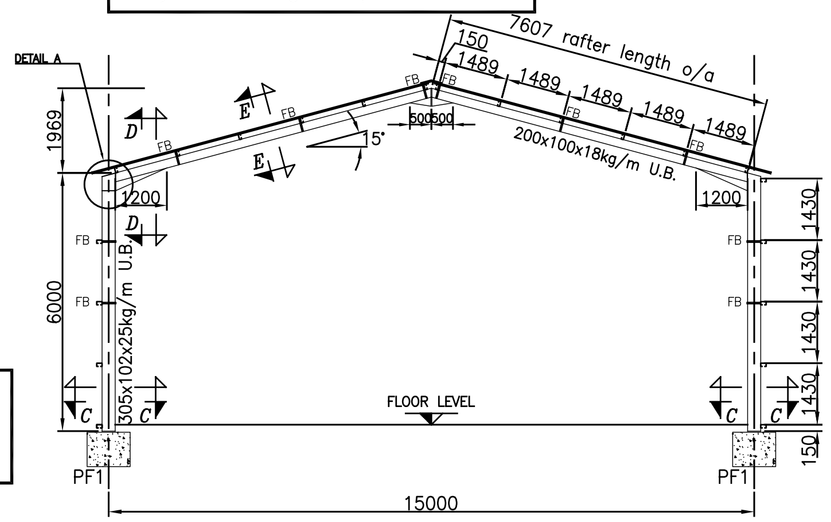
1:10




SIDE ELEVATION 1:100

(both sides)

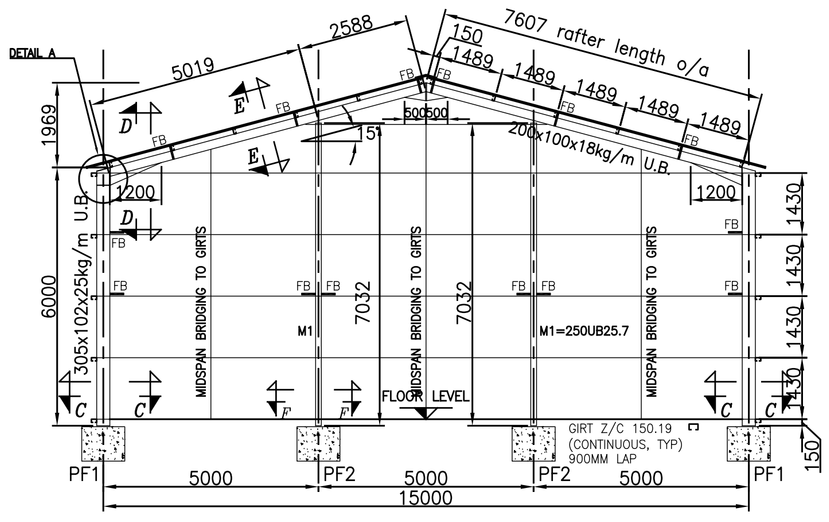
## PRE–GALVANISED PURLINS
## Fly Bracing 3 per rafter




SECTION A–A 1:100

NOTE: ALL BACK TO BACK GIRTS TO BE BOLTED WITH M12 BOLTS AT 600MM MAX. CTS, CENTRAL (TYPICAL THROUGHOUT)

## PRE–GALVANISED PURLINS
## Fly Bracing 3 per rafter




GABLE END (both ends) 1:100

## GENERAL

G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ALSO, NOTIFY THE ARCHITECT AND ENGINEER OF ALL VARIATIONS ARISING FROM THE CLARIFICATION OF THE DISCREPANCY BEFORE PROCEEDING WITH THE WORKS.

G2. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.

G3. SETTING OUT AND OFF–SITE FABRICATION DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR, BEFORE SUCH WORK COMMENCES.

G4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE GROUND WORKS, STRUCTURE AND ALL RELATED ELEMENTS ARE MAINTAINED IN A STABLE CONDITION AND ARE PREVENTED FROM BEING OVERSTRESSED DURING CONSTRUCTION.

G5. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SAA CODES AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION OVER ANY PART OF THE WORKS.

G6. ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS STATED OTHERWISE.

G7. DUE ATTENTION AND CARE SHALL BE MAINTAINED BY THE CONTRACTOR REGARDING THE CARRYING OUT OF CONSTRUCTION ACTIVITIES IN AREAS CONTAINING EXISTING SERVICES.

G8. NO SERVICES ARE IDENTIFIED ON THE DRAWINGS. THE CONTRACTOR SHALL SATISFY HIMSELF THAT THE LOCATION OF ALL SERVICES THAT MAY BE AFFECTED BY THE WORKS, HAVE BEEN CORRECTLY IDENTIFIED. THE STRUCTURAL DRAWINGS DO NOT SHOW DETAILS OF ALL FIXINGS, INSERTS, SLEEVES, OPENINGS, ETC, REQUIRED BY THE VARIOUS TRADES. ALL SUCH DETAILS SHALL BE OBTAINED FROM THE ARCHITECT'S OR OTHER CONSULTANTS DRAWINGS AND/OR FROM THE VARIOUS TRADES AND SHALL BE APPROVED BY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.

G9. CONTRACTOR TO MAKE GOOD ALL WORKS AFTER CONSTRUCTION IS COMPLETED.

G10. FOR LOCATION AND SIZES OF ALL PENETRATIONS REFER ARCHITECTS AND BUILDING SERVICES DRAWINGS.

G11. WIND CLASSIFICATION:

WIND LOADS TO AS1170.2
Vu = 45m/sec (ultimate)
Vs = 37m/sec
Cpi= +0.2
–0.3
Terrain Category = 3.0
Mz, Mt, Mi = 1.0

G12: DESIGN LOADS:

– ROOF SHEETING/PURLINS 0.15KPa
– LIVE LOAD 0.25KPa

G12. DETAILS OF THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE ARCHITECTURAL DRAWINGS AND ARE INDICATIVE ONLY. THE CONTRACTOR SHALL NOT RELY ON THIS INFORMATION AND SHALL CONFIRM ALL DETAILS.

G13. NO SUBSTITUTIONS ARE TO BE MADE OF SIZES ON STRUCTURAL DRAWINGS OR MEMBERS VARIED WITHOUT OBTAINING THE APPROVAL OF THE ENGINEER. THE APPROVAL OF THE ENGINEER FOR A SUBSTITUTION IS NOT AN AUTHORIZATION FOR A VARIATION OR EXTRA. ANY REQUEST FOR A COST VARIATION SHALL BE RESOLVED WITH THE ARCHITECT OR CLIENT PRIOR TO PROCEEDING WITH ANY WORK.

G14. THE CONTRACTOR SHALL PROVIDE 48 HOURS WRITTEN NOTICE TO THE ENGINEER FOR INSPECTION OF THE STRUCTURAL WORK DETAILED.

G15. THE CONTRACTOR IS RESPONSIBLE FOR WORK THAT HAS NOT BEEN PROPERLY PERFORMED AND INSPECTIONS. REVIEW OF WORKS AND SITE RECOMMENDATIONS BY THE ENGINEER SHALL NOT BE CONSIDERED "APPROVAL" OF ANY PART OF THE WORK.

G16. THE CONTRACTOR IS NOT RELEASED FROM LIABILITY FOR WORK NOT CARRIED OUT PROPERLY WHEN THE ENGINEER ON INSPECTING THE BUILDING WORK INDICATES THAT THE WORK APPEARS TO BE SATISFACTORY AND IT IS FOUND SUBSEQUENTLY THAT THE BUILDER HAS FAILED TO DO THE WORK PROPERLY AS SPECIFIED.

G17. ALL WORK TO BE CARRIED OUT STRICTLY IN ACCORDANCE WITH THE OCCUPATION, HEALTH AND SAFETY ACT, 1981, INCLUDING AMENDMENTS.

G18. IF AT ANY TIME PRIOR TO PRACTICAL COMPLETION, THE CONTRACTOR SHOULD BECOME AWARE OF ANY SIGNS OF DISTRESS, EXCESSIVE SETTLEMENT OR DEFLECTION, CONFLICT OF COMPONENTS OR ANY OTHER INDICATIONS WHATSOEVER OF ACTUAL OR POTENTIAL DAMAGE TO THE WORKS OR ANY PART THEREOF, HE SHALL FORTHWITH NOTIFY THE ENGINEER AND CONFIRM SUCH NOTICE IN WRITING AS SOON AS PRACTICABLE.

G19. EXTERNAL CLADDING, WALL PANELING, FACADE, INSULATION, FINISHING SYSTEMS, ETC SHALL BE DESIGNED, CERTIFIED AND APPROVED BY A SUITABLY QUALIFIED PROFESSIONAL. OUR OFFICE CAN BE CONTACTED TO UNDERTAKE THIS DESIGN. .

G20. DESIGN OF FOOTINGS, SLAB ON GROUND, ETC SHALL BE UNDERTAKEN BY A SUITABLY QUALIFIED PROFESSIONAL. OUR OFFICE CAN BE CONTACTED TO UNDERTAKE THIS DESIGN.

## STEELWORK

S1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND THE CURRENT VERSIONS OF THE FOLLOWING CODES, INCLUDING AMENDMENTS:

A) AS1554 B) AS1074 C) AS3678 D) AS3679
D) AS1163 E) AS1111 F) AS1252 G) AS2327
H) AS1397 I) AS4100 J) AS4600

S2. UNLESS NOTED OTHERWISE:
- ALL FILLET WELDS SHALL BE 6MM CONTINUOUS FILLET WELDS
- ALL BUTT WELDS SHALL BE FULL PENETRATION BUTT WELDS
- ALL WELDING TO BE DONE WITH E48XX ELECTRODES
- ALL WELDS SHALL BE CATEGORY "SP"
- M20 BOLTS AND LARGER DIAMETERS SHALL BE GRADE 8.8 AND TIGHTENED TO SNUG TIGHT CONDITION. (8.8 /S)
- M16 BOLTS AND SMALLER DIAMETERS SHALL BE GRADE 4.6 AND TIGHTENED TO SNUG TIGHT CONDITION. (4.6 /S)
- HIGH TENSILE BOLTS FULLY TENSIONED SHALL BE DENOTED AS (8.8/TF) OR (8.8/TB)
- ALL CAST–IN FIXINGS SHALL BE HOT DIP GALVANIZED
- ALL CLEATS AND GUSSET PLATES SHALL BE 10MM MINIMUM THICKNESS, GRADE 250.
- ALL SLOTTED HOLES TO BE 40MM MAXIMUM LENGTH AND ARE TO APPEAR ONLY IN CLEAT PLATES.
- THERE SHALL BE A MINIMUM OF 2M20 BOLTS PER CONNECTION IN 20MM DIAMETER HOLES.
- ALL BOLTS SHALL BE OF SUCH LENGTH THAT AT LEAST ONE FULL THREAD IS EXPOSED BEYOND THE NUT AFTER THE NUT HAS BEEN TIGHTENED.
- MINIMUM ONE WASHER SHALL BE USED UNDER THE NUT IN ALL SITUATIONS. IF TIGHTENING IS CARRIED OUT AT THE HEAD, AN ADDITIONAL WASHER SHALL BE USED UNDER THE HEAD. FOR SLOTTED HOLES USE HARDENED WASHER UNDER THE NUT AND BOLT HEAD.

S3. THE FABRICATOR SHALL PROVIDE ALL CLEATS AND HOLES REQUIRED TO FIX TIMBER AND OTHER MATERIALS AND FINISHES TO THE STEELWORK, AS REQUIRED BY THE ARCHITECTURAL DRAWINGS AND SPECIFICATION, WITHOUT WEAKENING THE STRUCTURAL MEMBER IN ANYWAY.

S4. UNLESS NOTED OTHERWISE REFER TO AS4100 FOR STEEL FABRICATION AND ERECTION TOLERANCES.

S5. WELDING GRADE 8.8 BOLTS IS PROHIBITED. THIS INCLUDES THE CAGING OF HOLDING DOWN BOLTS.

S6. ALL EXPOSED EXTERNAL STEELWORK SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AS 1650. MINIMUM COATING THICKNESS OF 85 MICRONS.

S7. THE FABRICATOR SHALL BE RESPONSIBLE FOR SHOP DRAWINGS WHICH SHALL COMPLY WITH THESE DRAWINGS. ANY VARIATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO FABRICATION.

S8. STEEL MEMBERS ENCASED IN CONCRETE, FIRE SPRAYED OR FRICTION GRIP BOLTED CONNECTIONS MUST NOT BE PAINTED.

S9. ALL STEELWORK NOT TO BE ENCASED IN CONCRETE SHALL BE GIVEN ONE SHOP COAT OF AN APPROVED PRIMER UNLESS NOTED OTHERWISE.

S10. ANY COATINGS DAMAGED DURING TRANSPORT AND ERECTION SHALL BE MADE GOOD.

S11. LOCATE ALL PENETRATIONS TO MSS FLANGES UNLESS DETAILED OTHERWISE. MSS PENETRATIONS LESS THAN 20MM DIAMETER ARE ALLOWABLE AT A PITCH OF NOT LESS THAN 300 AND NOT WITHIN 50MM OF THE FLANGE.

S12. THE FABRICATOR SHALL BE RESPONSIBLE FOR SHOP DRAWINGS WHICH SHALL COMPLY WITH THESE DRAWINGS. ANY VARIATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO FABRICATION.

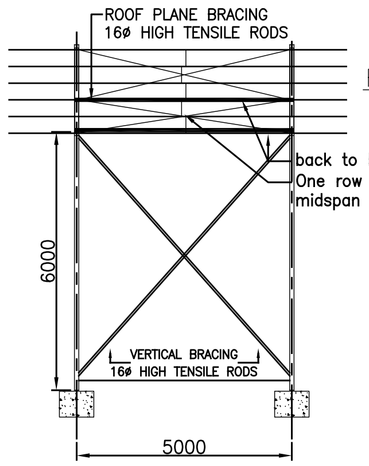
S13. UNLESS OTHERWISE NOTED CAMBER SHALL BE PROVIDED TO ALL ROOF BEAMS, TRUSSES, PORTALS, ETC. AT 5MM PER 2000MM OF SPAN. NO MEMBER SHALL BE ERECTED WITH A NEGATIVE CAMBER.

S14. ALL STEELWORK SHALL BE GRADE S355 JR+CR IN ACCORDANCE WITH SOUTH AFRICAN STANDARDS.

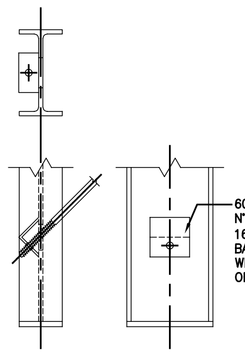
S15. THE STRUCTURE HAS BEEN DESIGNED AS A FULLY ENCLOSED STRUCTURE ONLY.

S16. EXTERNAL CLADDING SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS AND AUSTRALIAN STANDARDS SUBJECT TO THIS OFFICE REVIEW AND WRITTEN APPROVAL. THIS OFFICE CAN BE CONTACTED AS REQUIRED.

S17. WALL FRAMING/GIRTS, ETC SHALL BE INSTALLED IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS. THIS OFFICE SHALL BE CONTACTED FOR DESIGN ADVICE IN RELATION TO WALL CLADDING/GIRTS/FLY BRACING, ETC. THE RELEVANT DESIGN AND DRAWINGS WILL BE PROVIDED IN LIASON WITH THE CLIENTS CLADDING REQUIREMENTS. OUR DESIGN WILL REMAIN INVALID IF THE COLUMNS ARE NOT RESTRAINED BY GIRTS/FLY–BRACING.



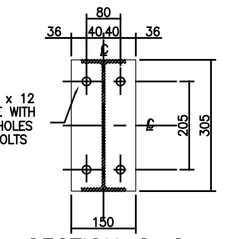

ELEVATION B–B 1:100




16ø HIGH TENSILE ROD BRACING DETAIL

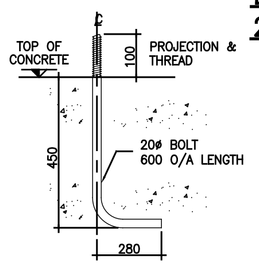
1:10

Base Plate Detail
305x102x25kg/m




SECTION C–C

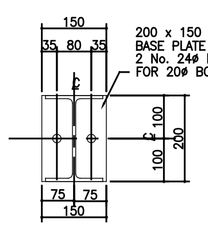
1:10




H.D. BOLT DETAIL

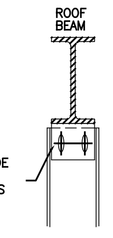
1:10

**Base Plate Detail**
**203x133x25kg/m**



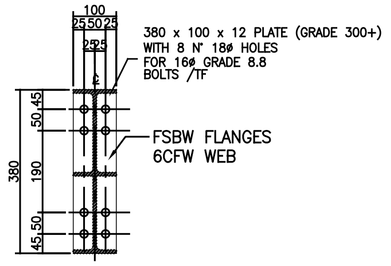

SECTION F–F

1:10



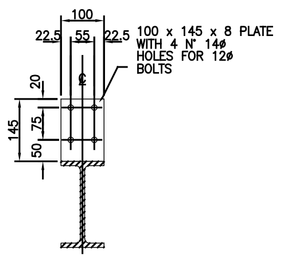

MULLION TO ROOF BEAM

Rafter Plate Detail
200x100x18kg/m



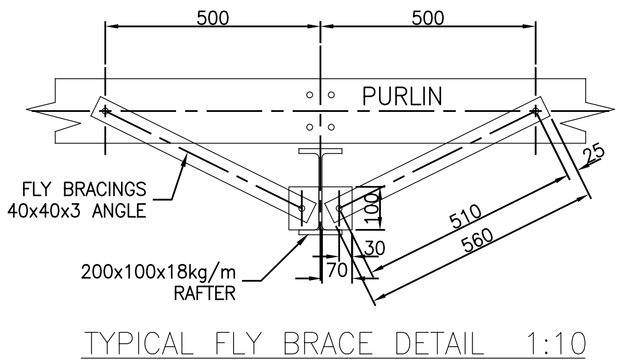

SECTION D–D

1:10




SECTION E–E
200x100x18kg/m

1:10




TYPICAL FLY BRACE DETAIL 1:10

8mm THICK CLEAT, 6CFW, M12– 4.6/S BOLTS

'DIVITARIS CONSULTING GROUP P/L' CERTIFICATION INCLUDES ONLY THOSE MEMBERS AS SPECIFIED AND DETAILED WITHIN THESE DRAWINGS.

ALL OTHER MEMBERS AND/OR COMPONENTS ARE EXCLUDED FROM CERTIFICATION.

ALL PROPRIETARY PRODUCTS ARE TO BE INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATIONS & DETAILS.

DURING CONSTRUCTION WHERE DISCREPANCIES OCCUR, CONTACT THIS OFFICE IF NECESSARY FOR SITE ENGINEER TO MAKE DETERMINATION & AMEND DESIGN IF CONSIDERED NECESSARY.

UNLESS SPECIFICALLY ENGAGED TO DO SO BY PRIOR FORMAL AGREEMENT, THIS OFFICE ASSUMES NO RESPONSIBILITY FOR THE LODGEMENT OF THESE DRAWINGS OR ANY OTHER DOCUMENTS AND/OR APPLICATIONS TO THE RELEVANT LOCAL AUTHORITIES FOR BUILDING APPROVAL PURPOSES. IT REMAINS THE CLIENT'S / OWNER'S / BUILDER'S OR THEIR AUTHORISED REPRESENTATIVE'S RESPONSIBILITY TO ENSURE THAT ALL RELEVANT AND APPLICABLE DOCUMENTATION FOR BUILDING APPLICATIONS HAVE BEEN LODGED AND APPROVED WITH THE LOCAL AUTHORITY PRIOR TO CONSTRUCTION COMMENCING. SEEK CLARIFICATION AND/OR CONFIRMATION FROM LOCAL AUTHORITY IF REQUIRED.

THE DESIGN CERTIFICATE (REGULATION 126), DRAWINGS OR ANY OTHER SUPPORTING DOCUMENTATION ISSUED BY THIS OFFICE DOES NOT CONSTITUTE 'BUILDING DEVELOPMENT APPROVAL' NOR AUTHORISES THE COMMENCEMENT OF WORK.

THIS OFFICE ACCEPTS NO RESPONSIBILITY IF IT IS FOUND THAT NO APPROVAL FROM THE RELEVANT LOCAL AUTHORITY WAS SOUGHT, COMPLETED OR OBTAINED PRIOR TO CONSTRUCTION COMMENCING OR THAT ANY WORK UNDERTAKEN DOES NOT COMPLY WITH THE BUILDING DEVELOPMENT APPROVAL.

THIS OFFICE MUST BE PROVIDED A COPY OF THE BUILDING PERMIT PRIOR TO THIS OFFICE UNDERTAKING ANY STRUCTURAL INSPECTIONS TO ASPECTS OF THE BUILDING WORK (i.e. FOOTINGS, SLAB, FRAME) AND THE ISSUING OF INSPECTION CERTIFICATES FOR THE PURPOSES OF COMPLIANCE WITH THE BUILDING DEVELOPMENT APPROVAL.

**INFORMATION ONLY ISSUE**
NOT TO BE USED FOR CONSTRUCTION PURPOSES