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5 Willow Court, Bangor-on-Dee

Extension and Alterations

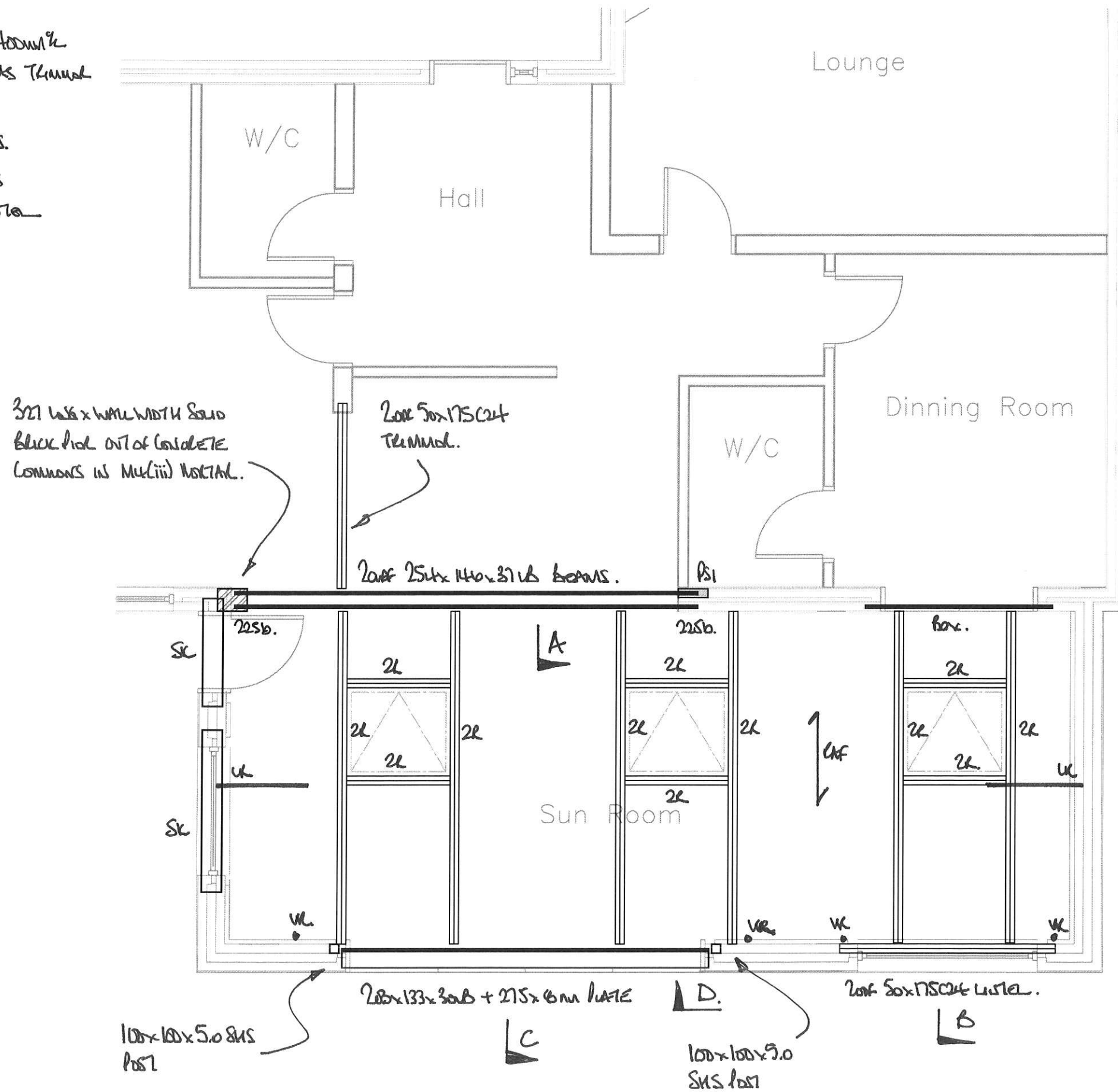
Structural Sketches

April 2022

PAGE NO. 5601

Initials		Date
Prepared by	GT	04/12
Checked by		

CAF - 50x175 C24 RAFTERS @ 400mm/c
2R - 20x175 C24 JOISTS AS TRIMMED
PSI - 450mm LONG PADSTONE.
2550 - 225mm LONG BEALINGS.
SL - KERSTONE S/L 90 UNITS
BOX - KERSTONE BOX 1/L 100 UNITS



SCHEME

PAGE No.

SK02

5 Willow Court, Bangor-on-Dee

Initials Date

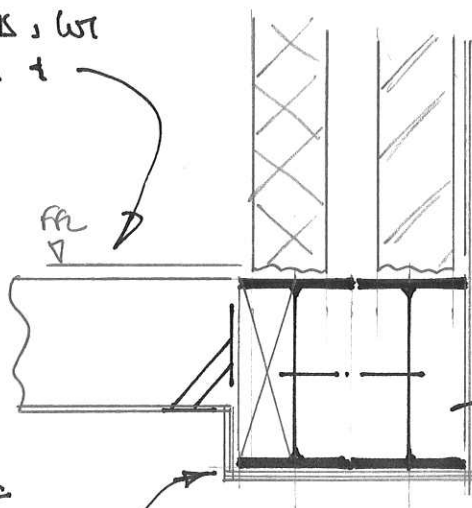
Extension and Alterations

Prepared by

Art 04/12

Checked by

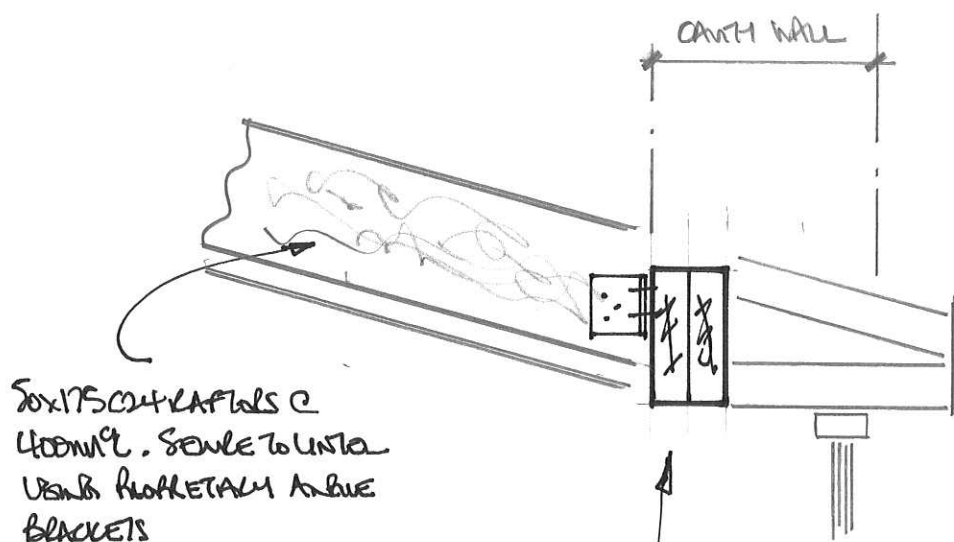
Prop existing floor joists, w/ back finish with beam & support of handrails.



2x 254x146x37 UB beams side-by-side under wall. Connect using M16 bolts & spacers @ 750mm c/c.

Case beams with 2x 12.5mm lapped boards

Section A.



60x175 C44 RAFTERS @ 400mm c/c. Secure to lintel using proprietary angle brackets

Lintel out of 2x 254x146x37 UB beams

Section B.

SCHEME

PAGE No.

SK03

5 Willow Court, Bangor-on-Dee

Initials Date

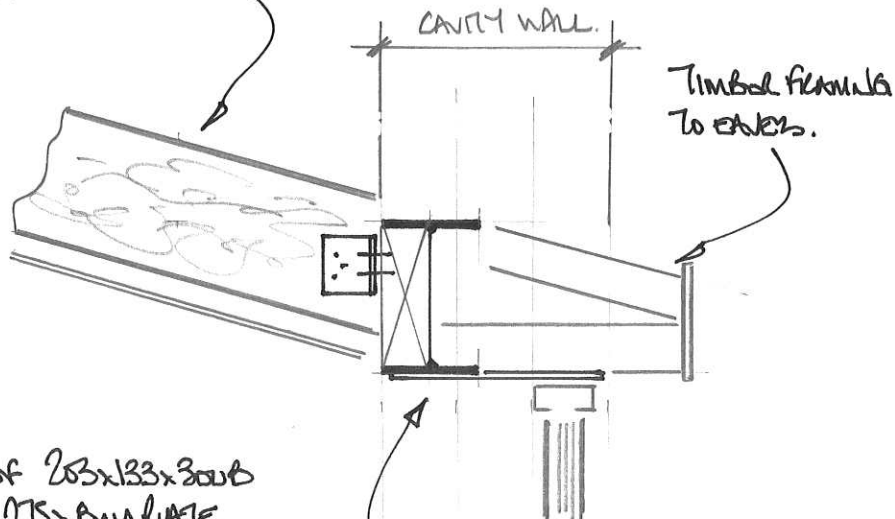
Extension and Alterations

Prepared by

At 04/22

Checked by

50x175 C24 LAPTELS C 40mm²
SEWLE TO LINTEL USING PROPRIETARY
ANGLE BRACKETS.



LINTEL OUT OF 253x133x30UB
BEAM WITH 25x25mm PLATE
STRICH WELDED TO BOTTOM FLANGE
(150KIT, 150MISS)

SPRINT C.

SCHEME

PAGE No.

Sk04

5 Willow Court, Bangor-on-Dee

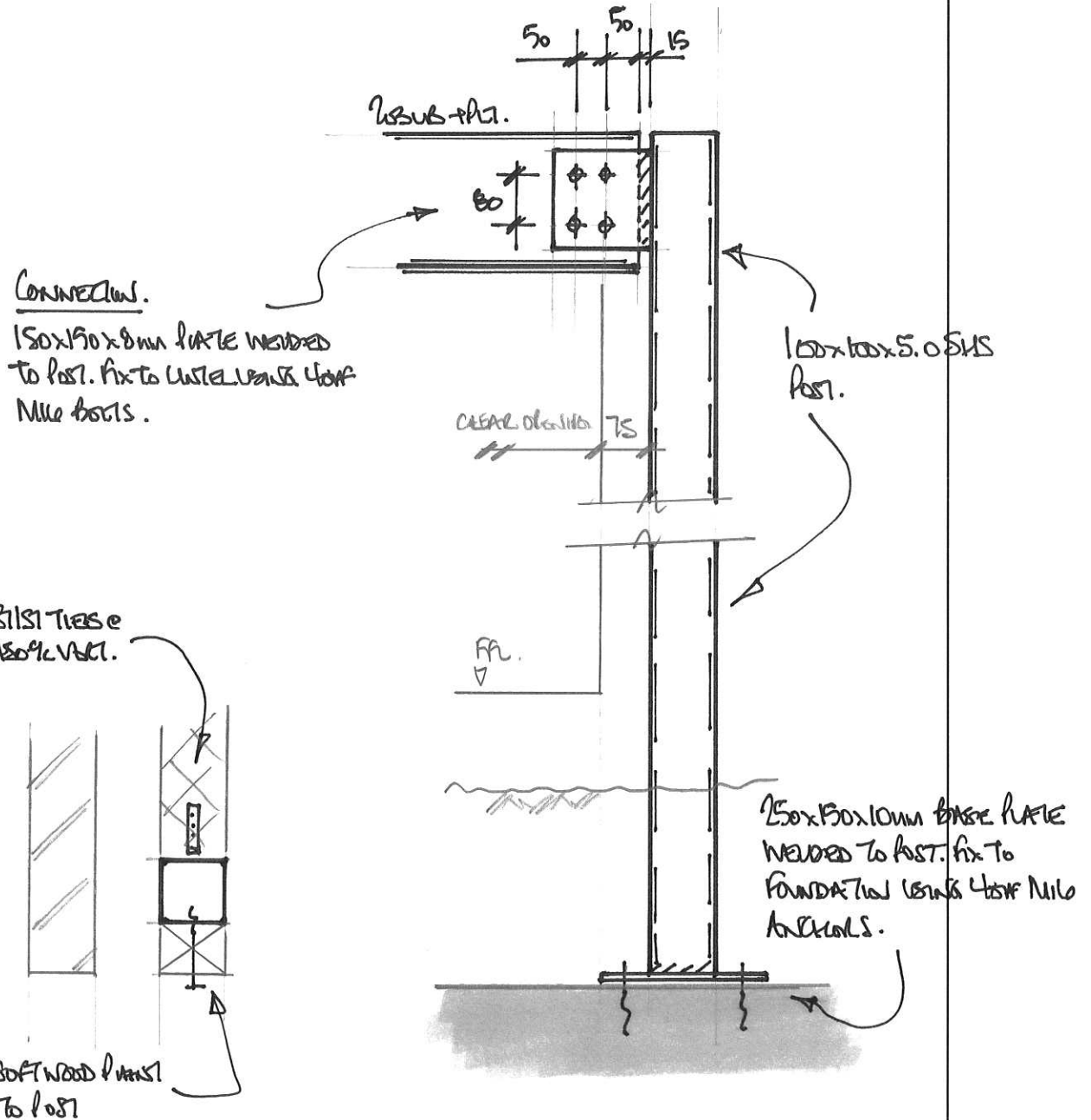
Initials Date

Extension and Alterations

Prepared by

Cut 04/22

Checked by



SETTING OUT.

SECTION D.

5 Willow Court, Bangor-on-Dee

Extension and Alterations

	Initials	Date
Prepared by	AH	04/22
Checked by		

NOTES/SPECIFICATION

General

1. The Structural Design Report is based on information provided by the Architect or on the assumptions as set out within. Should any variation between the information provided or assumed conditions be identified, they should be brought to the attention of the Project Architect or Structural Engineer as soon as possible.
2. All dimensions in millimetres unless noted otherwise. All dimensions shall be checked by the Contractor prior to commencement and any discrepancies brought to the attention of the Project Architect or Structural Engineer as soon as possible.
3. The Contractor shall be responsible for the provision of adequate propping to the existing walls and floors. All propping shall be tight and locked off prior to removal of existing supports, walls or floor construction.

Timber

4. All softwood to be Grade C16 or C24 as shown on the sketches. All timber shall be pressure impregnated with preservative unless noted otherwise.
5. Multiple sections to be bolted together using M10 bolts at 600mm centres max. complete with star or ring washers between sections and oversize washers to external faces.
6. Restraint straps shall comprise galvanised mild steel strip with 6mm diameter holes punched at 15mm offset centres.
7. Lateral Restraint (LR) straps shall be 30x5mm strip secured using No.10x50 plated wood screws. For timber members running parallel with beam/wall, straps should be fixed over at least 3 joists of rafters with two fixings to each member with solid noggins in between. For timbers perpendicular to beam/wall, straps should have a minimum length of 600mm and be fixed with at least 4 fixings at not less than 110mm centres.
8. Vertical Restraint (VR) straps shall be 30x2.5mm strip extending at least 1000mm down the wall and shall be fixed using a minimum of 4 screws in plugged holes. At least one screw should be located within 150mm of the bottom of the strap.

Steelwork

9. The Execution Class for the project is EXC2 to BSEN1090-1.
10. All steelwork shall be Grade S355JR to BSEN10025. Hollow section steelwork shall be Grade S355JR to BSEN10210 (HF) or BSEN10219 (CF). All steelwork shall be thoroughly cleaned and painted with a zinc phosphate primer. Damage incurred during installation shall be repaired by over coating. Steelwork below ground or within cavities shall be additionally protected with two coats of bituminous paint.
11. Exposed steelwork requiring fire protection shall be protected by fire resistant boarding with a minimum fire rating of 1hr as installed.
12. Multiple steel sections shall be placed centrally under each leaf or skin of wall to be supported. Sections shall be connected together using M16 bolts with spacer tubes at maximum 750mm centres to ensure correct spacing of beams.
13. Minimum bearing to be 100mm onto adjacent masonry unless noted otherwise. Bearings onto padstones to be 100mm minimum. Padstones shall be cast using GEN3 concrete to sizes specified.
14. Beams under existing load bearing walls shall be placed centrally under leaf and packed tight to the underside of the wall using semi-dry mortar and slate packs unless noted otherwise.

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15. Steel connections shall be made using bolts and welds as indicated on the sketches. All bolts shall be Grade 8.8 with a BZP or galvanised finish. CSK denotes countersunk head to exposed face of steelwork. Welds shall comprise 6mm FW unless noted otherwise and shall be formed using electrodes suitable for the grade of steelwork.

Lintels

16. Lintels shall comprise proprietary steel or precast concrete elements as detailed on the sketches. Lintels shall be installed in strict accordance with the manufacturer's details.
17. All lintels shall have minimum 150mm long bearings unless noted otherwise.

Foundations

18. Concrete for strip and pad footings to be Designated Mix FND2. Concrete for blinding (where required) shall be Designated Mix GEN1. All concrete to comply with BS8500.
19. Foundation sizes indicated on the drawings are nominal. Should the Contractor elect to cast bases against open excavation then the cost of any over break shall be borne by the Contractor.
20. Holding down fixings shall comprise proprietary expanding anchors to the sizes shown on the drawings. Minimum embedment shall be as specified by the manufacturer subject to a minimum of 75mm. The Contractor may use cast-in or resin anchors as an alternative. All fixings to be Grade 8.8 with a BZP or galvanised finish. All materials shall be subject to the approval of the Structural Engineer.
21. All concrete shall be mechanically vibrated after placing to remove all air from the mix.