

Drawing based on original Architect's Building Regulation Drawing showing the orientation of the existing timber beams. It is essential that site dimensions are taken. The new steel works have been designed to current structural standards, but being a Listed Building it has not been possible to replace / upgrade to all areas of the work. However, a reasonable repair has been achieved wherever possible.

Vertical 125 * 65 PFC bolted with 8mm resin anchor bolts Rawplug R-KEM 11 with threaded rods for masonry at 150 vertical centres to c/l of bricks to give vertical support, particularly during erection of the lightweight steelwork.

Old brickwork is often weaker than 20 N/mm² - the minimum strength for resin anchor bolts. To overcome this a pocket in the brickwork must be formed to react the vertical and horizontal loads from the 60 * 60 S355 Hot rolled SHS t=5 mm. Also this has been designed to provide a means of support for the existing timber joist support beam positioned over a weak brick corbel.

Notes Continued

The Horizontal 60 * 60 SHS is to be bolted 12mm grade 8.8 to the capping plate to the vertical PFC. To provide the support restraint a 50 * 50 Angle 6mm thick is to be welded to the end 10mm plate to the 60 * 60 SHS. This angle is to be embedded into the masonry to a depth of 100mm, and secured by min. 30 N/mm² grouting / cementing into the pocket in the brickwork.

At the other end of the 60 * 60 SHS the connection to the 150 * 150 SHS t=6.3mm S355 Hot rolled square hollow section beam. End angles with slotted horizontal holes for 2 No 12mm grade 8.8 threaded rods through the 150 * 150 SHS shall be used.

If required the capping plate to the 80 * 80 SHS column may be offset towards the blockwork column to allow a bolt on extension piece to be used to aid erection of the steelwork.

Similarly the base plate may be modified to allow a prop to be placed over the foundation shown dotted - if required by the temporary works designer.

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Registered office: Edwin Smith 32 Queens Road, Reading, Reg.No. 1257345 England.

General Notes:

Read with other drawings.

All work subject to site conditions, opening up, Building Regulation / Statutory Authority Approval and our terms and conditions.

Do not scale these drawings. Site dimensions to be used.

CDM 2015 Designers Envisaged Method of Construction these parts of the Works.

Modify temporary works as necessary to ensure the safety of Personnel and the Works at all times. **Note that the existing timber joists appear to support the existing first floor level gable, and it is essential that the temporary works support the timber beam and the party wall end of this beam at all times.**

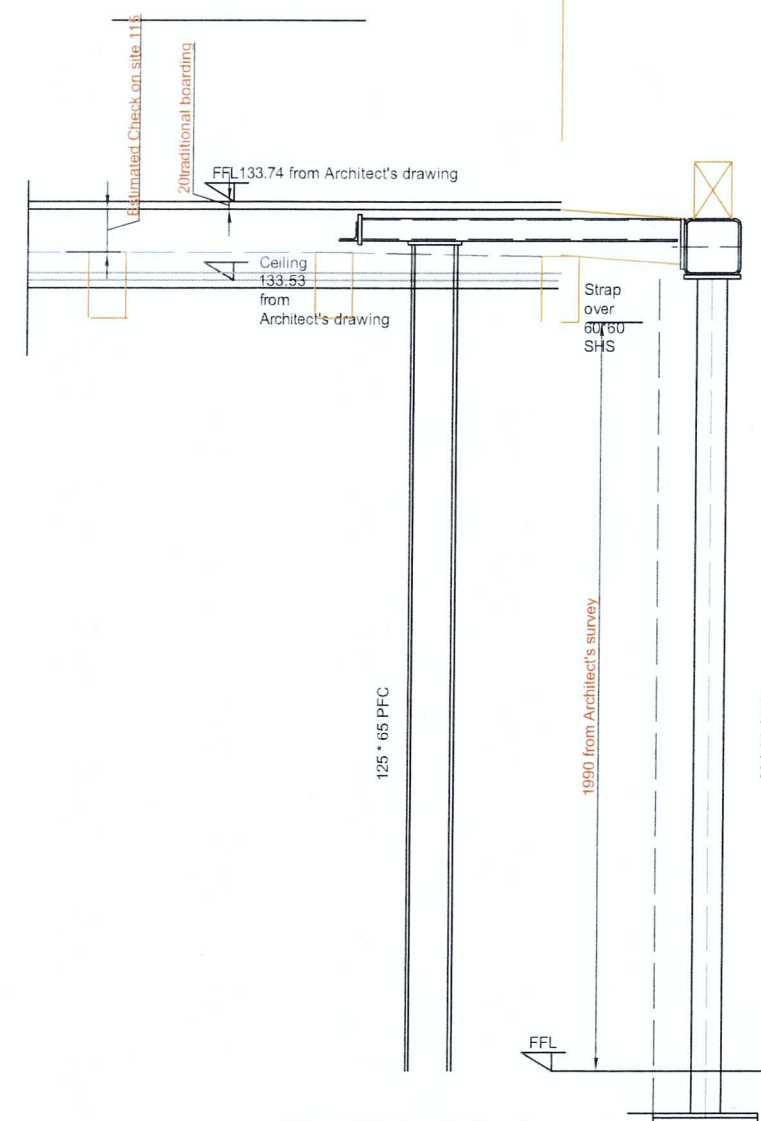
Provide prepared base for the forked ends of the SHS beam. The supports have been raised as far as possible, and it may be necessary to cut down the top of the concrete block column to allow the forks to fit each side of the timber beam to be retained. Similarly if necessary the ends of the timber beam may need to be chamfered / fettled a small amount to allow the forked end beam to be lifted into position without affecting the existing beam.

Erect the tubular steel column with its base plate and capping plate.

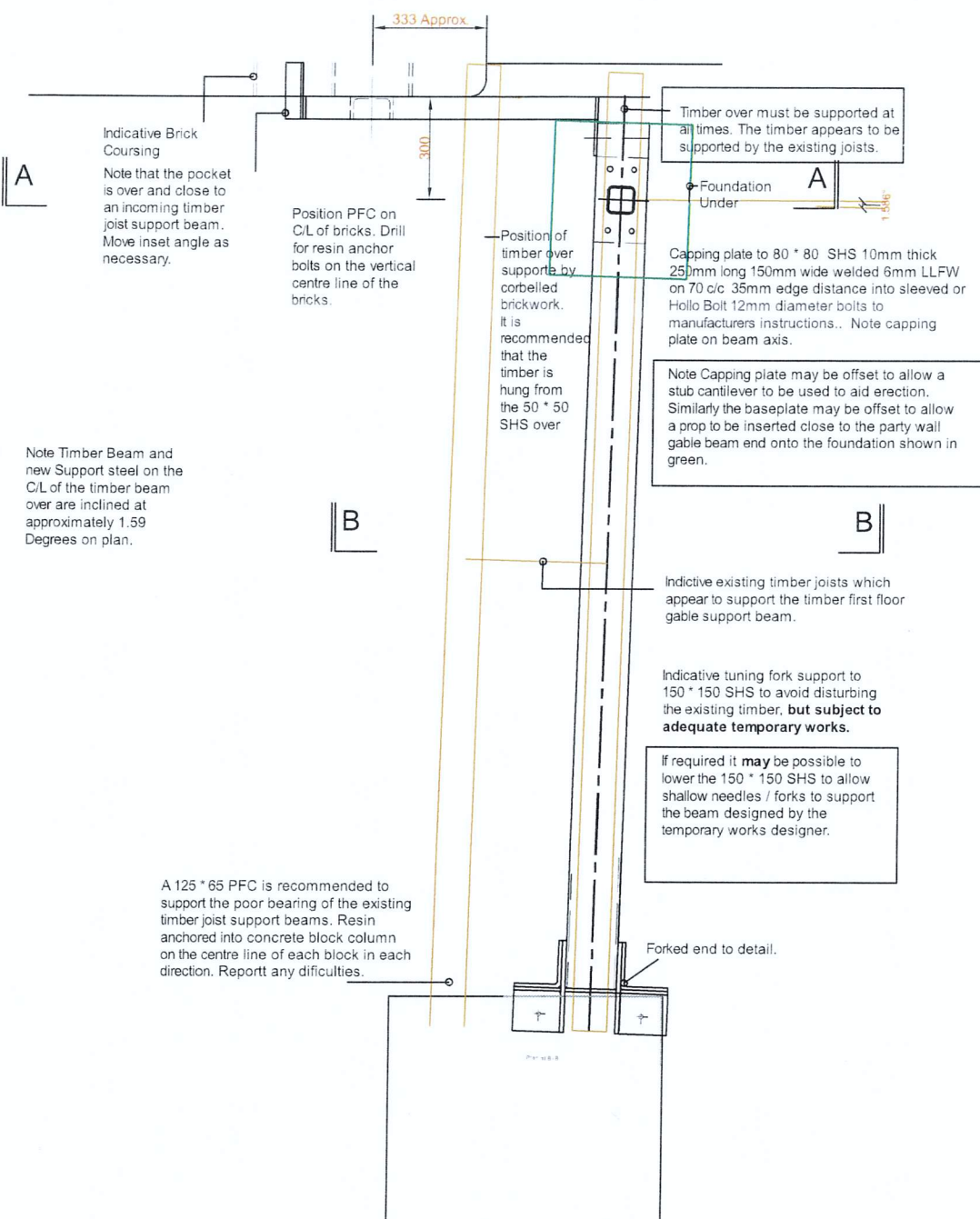
The base plate is to be 12mm thick onto Conbextra HF grout onto the concrete 25mm thick. The holding down bolts to be Resin Anchor 12mm threaded rod into 150mm concrete. Provide temporary bracing to column as necessary.

Erect SHS beam. Note if required a stub cantilever extension can be provided to the main 150 * 150 SHS beam.

Construct vertical PFC column. Use the column to provide support for the horizontal 60 * 60 SHS with the restraint 50 * 50 * 6mm angle embedded angle into masonry. Fill in pocket with 30 N/mm² concrete. Bolt 60 * 60 SHS to SHS beam, and provide timber hanger support to the existing timber floor support beam which has an inadequate corbel on the masonry end.



Elevation on A - A



Plan of New Support Steelwork

Section on B - B

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2 / 3 Silverless Street
Marlborough, Wilts SN8 1JQ

Tel 01672 514092
office@atkinsmartin.com

Project: Structural Repairs 30 High Street, Marlborough, Wilts

Drawing Title: New Steelwork to support existing timber gable beam

Date: Sept 2025

Scale: A3 @ 1 to 20

Drawing Number: S2780 / D3 A

Revision: A Scale Bar Added

For Discussion