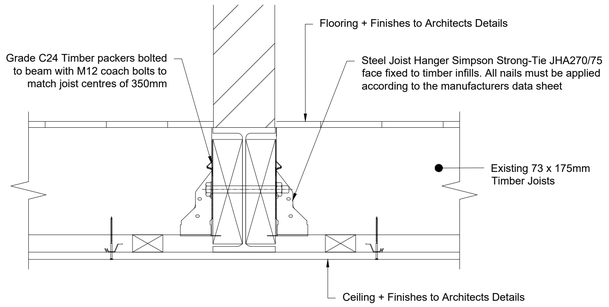
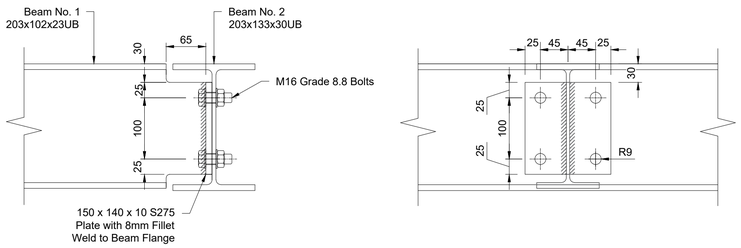


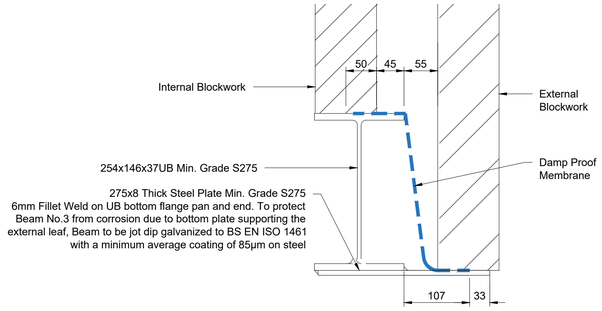
DETAIL 1 - BEAM NO. 1 TO JOIST CONNECTION

Scale 1:5



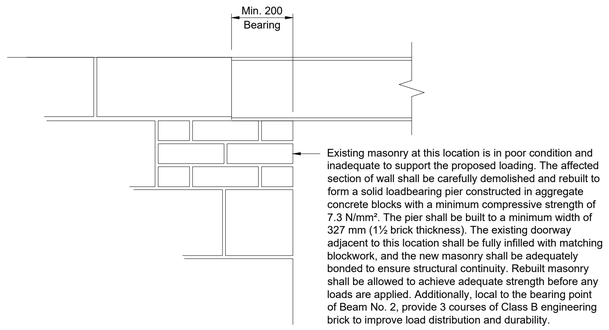
DETAIL 2 - BEAM NO. 1 TO BEAM NO. 2

Scale 1:5



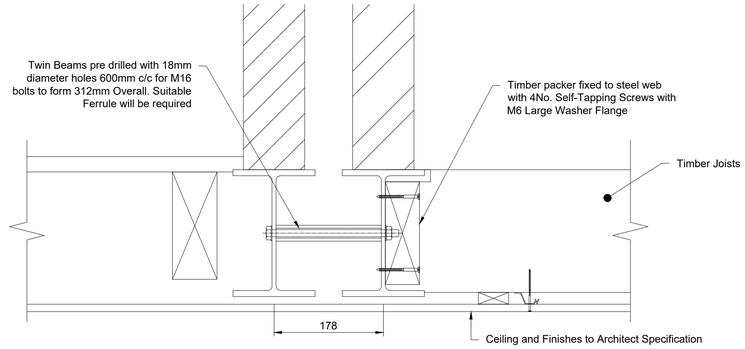
DETAIL 3 - BEAM NO. 3

Scale 1:5



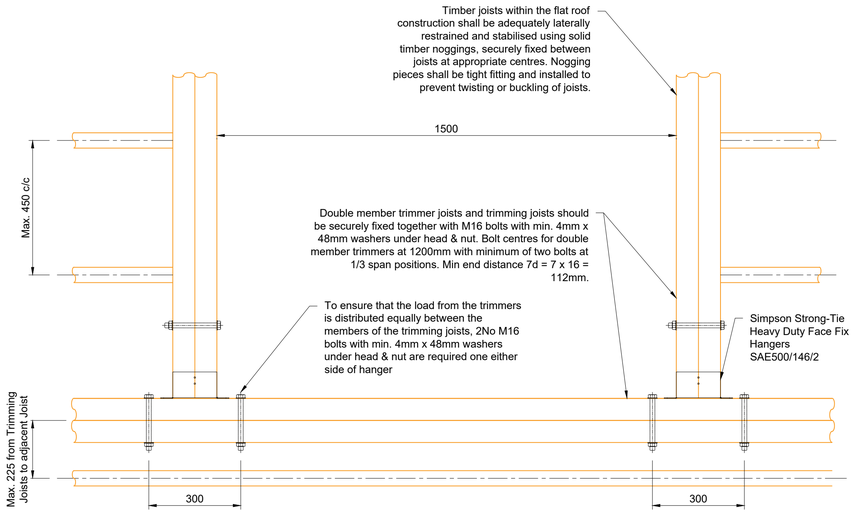
DETAIL 4 - TYPICAL BEAM NO. 2 BEARING DETAIL ON PIER

Scale 1:5



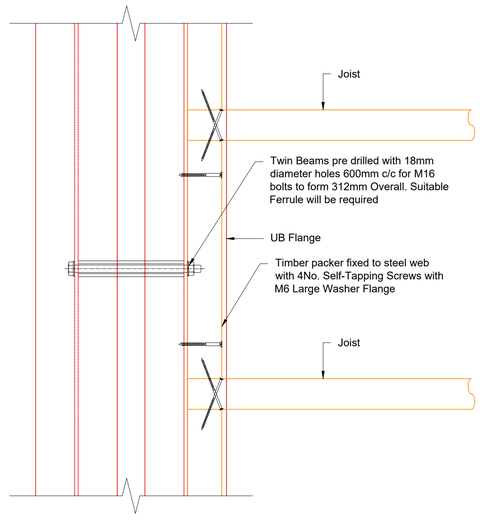
DETAIL 5 - BEAM NO. 2 TO NEW JOIST SECTION

Scale 1:5



DETAIL 6 - TRIMMING TIMBERS TO TIMBER JOISTS

Scale 1:5



DETAIL 5 - BEAM NO. 2 TO NEW JOIST PLAN

Scale 1:5

Technical note on foundations for new extension

Final foundation Widths/depths shall be confirmed on site following excavation and inspection by Building Control, and shall be adjusted where necessary to suit actual ground conditions encountered. Below guidance is to provide typical guidance.
On this project the unfactored load per m is as follows:

15kN/m on single side walls of single story extension
40kN/m for the piers either side of rear opening for Beam No.3

Minimum Depth of Strip Foundations

Strip foundations shall be constructed to a depth sufficient to prevent damage from frost action and to ensure adequate load transfer to suitable bearing ground, in accordance with Building Regulations Approved Document A. Except where foundations are taken down to competent rock, the underside of strip foundations shall be provided at a minimum depth of 450 mm below finished ground level. This depth shall be increased where necessary to account for local ground conditions, including areas subject to prolonged frost exposure, or where deeper excavation is required to achieve satisfactory bearing strata.

In clay soils susceptible to volume change (shrinkable clays, generally defined as having a Modified Plasticity Index of 10% or greater), foundations shall be taken to a depth which anticipated ground movement will not adversely affect the stability of the structure. As per NHBC Standards Chapter 4.2, the influence of nearby vegetation, particularly trees and hedging, shall be taken into account when determining foundation depth. As a minimum, the underside of foundations in clay soils shall not be less than:

- 750 mm in low shrinkage clays,
- 900 mm in medium shrinkage clays, and
- 1000 mm in high shrinkage clays

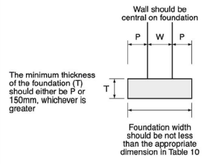
With greater depths provided where required to accommodate tree influence, moisture variation, or to transfer loads onto suitable ground.

Minimum Width of Strip Foundations

The width of strip foundations shall be determined based on the load-bearing requirements of the structure and the allowable bearing capacity of the ground, in accordance with Approved Document A of the Building Regulations.

Indicative minimum widths for strip foundations may be adopted based on ground conditions and loading, in line with recognised guidance table 10 Approved Document A.

In weaker soils, such as loose sands or soft clays, substantially greater foundation widths may be necessary, and the simplified guidance may no longer apply where loading exceeds 30 kN/m. Very soft soils are not suitable for standard strip foundations and shall require specialist design input. Where ground conditions are variable or of low bearing capacity, alternative foundation solutions such as reinforced strip, trench fill, or raft foundations shall be considered.



Trench fill foundations may be used as an alternative to strip foundations.

Safe Excavations

Where abnormal conditions are encountered, including:

- Poor ground bearing capacity
- Nearby structures or services
- Significant water ingress

A Structural Engineer should be consulted prior to proceeding.

Concrete Specification for Foundations

Concrete used in foundations shall be appropriate for the ground conditions and shall comply with the requirements of the Building Regulations and relevant British Standards. In non-aggressive soils, concrete shall be composed of Portland cement conforming to BS EN 197-1, with fine and coarse aggregates complying with BS EN 12620. The concrete mix shall be selected to provide adequate strength and durability for the intended application.

The concrete mix may be specified using either a designated mix or a prescribed mix. As guidance, a prescribed mix may consist of approximately 50 kg of Portland cement to not more than 200 kg (0.1 m³) of fine aggregate and 400 kg (0.2 m³) of coarse aggregate. Alternatively, a designated concrete such as GEN1 or GEN3 to BS 8500 may be used, subject to the exposure conditions and ground classification.

Concrete shall be placed in accordance with good practice, ensuring that excavations are clean and free from loose material or standing water prior to pouring. The selected concrete specification shall be suitable for the prevailing ground conditions, and where aggressive ground conditions are identified, an enhanced specification shall be adopted in accordance with Approved Document C and BRE guidance.

Technical note on Existing Foundations – Unknown Condition

The depth, extent, and condition of existing foundations are unknown and cannot be confirmed without further investigation. No assessment of their adequacy can be undertaken until localised excavation has been carried out to expose the existing foundation details and determine ground conditions.

The Contractor shall allow for trial excavations to be undertaken in liaison with Building Control to establish foundation depth, width, and bearing strata. Should the existing foundations be found inadequate to support the proposed works, appropriate remedial measures shall be implemented.

Such measures may include, but are not limited to, localised underpinning to increase bearing capacity and ensure structural stability. All underpinning works shall be designed and carried out in accordance with the requirements of Building Regulations and to the approval of Building Control and/or the Structural Engineer.

Notes:
It is the Contractors responsibility to communicate the information contained within this design to all relevant parties.

1. All dimensions are in millimetres (mm) unless noted. Elevations are in m AOD. DO NOT SCALE FROM THIS DRAWING, USE FIGURED DIMENSIONS ONLY.
2. UNLESS THE REVISION OF THIS DRAWING IS DENOTED BY THE PREFIX C THEN THIS DRAWING IS NOT FOR CONSTRUCTION.
3. These drawings are intended to present the structural requirements only and do not include the level of detail typically associated with architectural working drawings. Where no separate architectural drawings are provided, the Contractor shall be responsible for coordinating all dimensional setting out, construction detailing, and finishes, and for ensuring compliance with the Building Regulations. Any discrepancies, omissions, or uncertainties shall be brought to the attention of the Designer or Structural Engineer prior to construction.
4. The Contractor shall be responsible for verifying all dimensions on site prior to the ordering, fabrication, or installation of any structural steelwork. No dimensions shall be scaled from drawings. All critical dimensions, including opening sizes, bearing lengths, levels, and interface with existing structure, shall be checked and confirmed against site conditions.
5. All structural steelwork shall be grade S275 in accordance with BS EN 10025, unless noted otherwise on the drawings or structural engineer's details. Steel sections shall be fabricated and installed in accordance with relevant British Standards and good practice. Protection unless otherwise stated shall comprise a minimum shop-applied primer coating system suitable for internal, dry conditions, such as heated residential buildings with negligible moisture exposure.
6. Provide lateral restraint straps at floors and roof levels in accordance with Approved Document A.
7. Welding of connection details and bottom plate of beam No.3 shall be carried out in accordance with BS EN 1090_2:2018.
8. Masonry shall be constructed using mortar appropriate to the exposure and loading conditions (typically M4 designation unless noted otherwise).

Rev	Description	Drawn	Des	Chkd	Date
A01	For Approval	CS	CG	CS	31/05/2026

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PROJECT
10 ABBERTON ROAD

DRAWING TITLE
SINGLE STOREY REAR EXTENSION & INTERNAL ALTERATIONS DETAILS

SCALE (A1)
VARIES

STATUS
FOR APPROVAL

DRAWING NO.
000101-LFC-PW-XX-DR-W-0003

REV.
A01