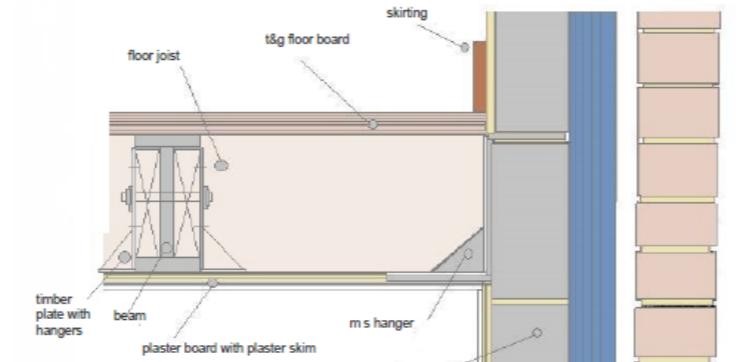
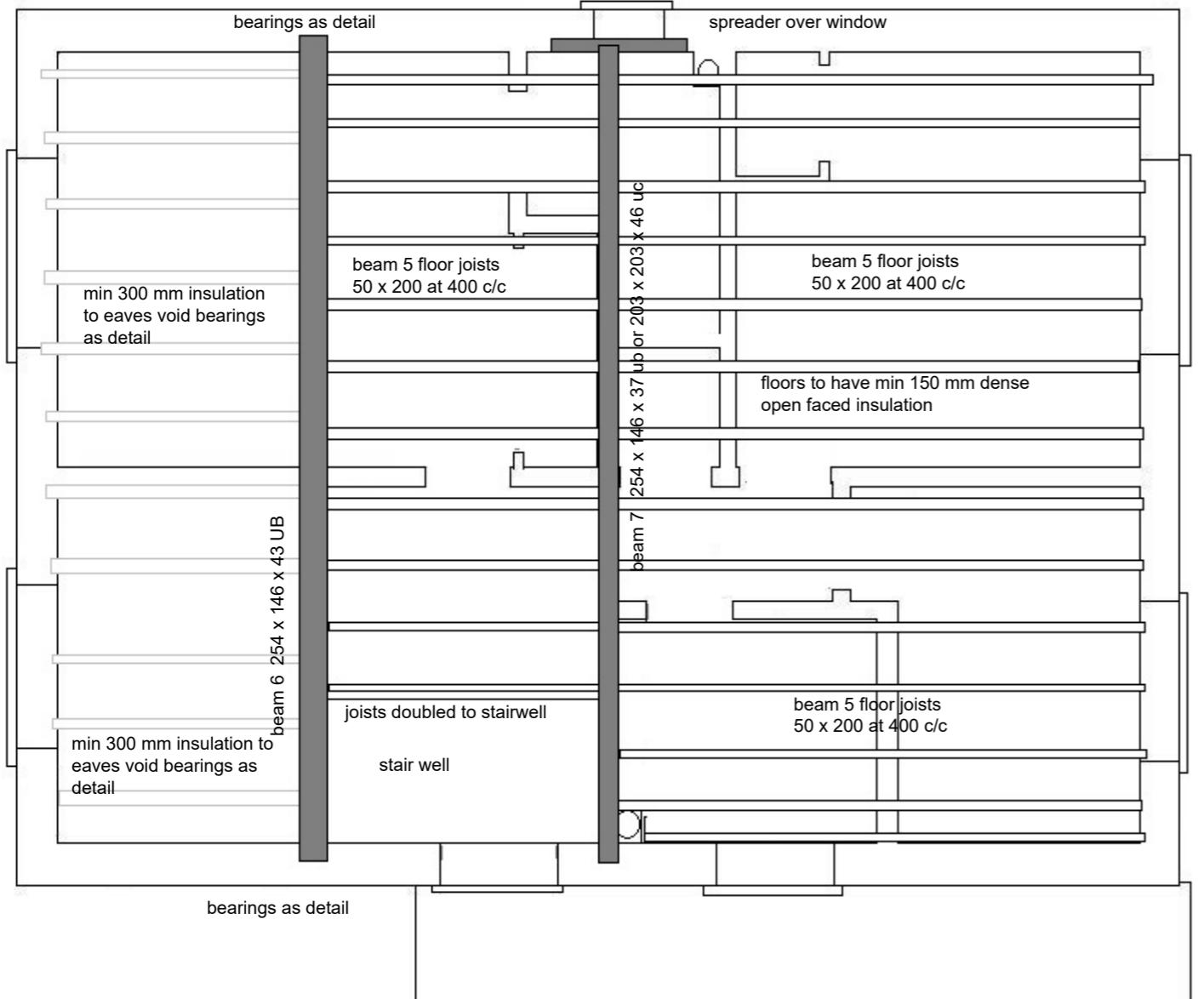


beam detail with plate



beam detail to floor

## PROPOSED JOIST FLOOR PLAN 1 : 50



• Should Any Conflict Between Details And Measurements On This Drawing Or On Other Drawings, Then Surrey Building Services Should Be Informed Prior To Construction On Site  
 • Until Full Approval Of Both Planning And Building Regulations (And Any Other Approval Applicable) Has Been Granted From The Relevant Authorities, It Should Be Understood That All Drawings Are Preliminary And Are Not For Construction. Should Work Commence Prior To Such Approvals Being Granted It Is Entirely At His Or Her Own Risk  
 • Copyright All Drawings Remain The Copyright Of Surrey Building Services And May Not Be Copied, Altered Or Reproduced In Anyway Without Written Authority.

0 1 2 3 4 5m  
1 : 100 @ A3

0 1 2m  
1 : 50 @ A3

**SBS**

Surrey Building Services

Architectural & Building Consultants

James Templeman : 07793433353 Email : [surreybuildingservices@gmail.com](mailto:surreybuildingservices@gmail.com)

Client No.	No.	Revision
11381	11	BR

Client Name : Mrs Howe

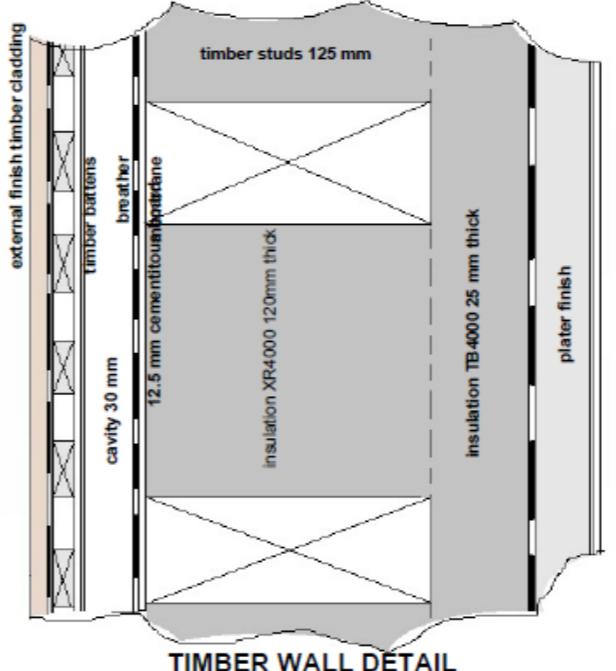
Address  
12 Heather Close  
Finchampstead  
Berks  
RG40 4 PX

Proposal  
PROPOSED LOFT CONVERSION WITH REAR DORMER  
Paper Size A3

Scale 1:100 1:50

	Thickness (mm)	Thermal conductivity (W/mK)	Thermal resistance (m <sup>2</sup> K/W)	Bridge details air tight
Outside surface resistance	0.0	0.8000	0.1000	—
External Finish	—	—	—	—
Insulation	—	—	—	—
Battens	—	—	—	—
Drained and vented cavity between battens	—	—	—	—
Weather membrane	—	—	—	—
Generous board	12.5	0.2200	0.0543	—
Insulation between studs	120.0	0.0220	5.4545	0.0580
Timber stud depth (mm)	120.0	0.1300	0.9231	0.1580
Cavity	30.0	0.8000	0.6661	0.6580
Timber stud depth (mm)	90.0	0.1300	0.2268	0.1580
Insulation inside studs	25.0	0.0220	1.1364	—
12.5mm gypsum wallboard	12.5	0.1900	0.0658	—
Inside surface resistance	0.0	0.8000	0.1000	—

U-value = 0.18 W/m<sup>2</sup>K (condensed method - 0.179 W/m<sup>2</sup>K, upper limit - 0.871 W/m<sup>2</sup>K, lower limit - 0.177 W/m<sup>2</sup>K)



Job number: 11381

ITEMS:

- 1: Beam: DORMER ROOF JOISTS  
Span: 4.2 m.  
Reactions (unfactored/factored): R1: 1.80/1.80 kN; R2: 1.80/1.80 kN  
Use 50 x 200 C24
- 2: Beam: RIDGE BEAM  
Span: 6.3 m.  
Reactions (unfactored/factored): R1: 22.48/22.48 kN; R2: 22.48/22.48 kN  
Use 203 x 203 x 46 UC S355  
Bearing R1: 20 mm m.s. bearing plate, size 450 x 100 mm  
Bearing R2: As R1
- 3: Beam: RafterS TO EACH SIDE OF ROOF WINDOWS  
Span: 2.5 m.  
Reactions (unfactored/factored): R1: 2.74/2.74 kN; R2: 2.24/2.24 kN  
Use 2no 50 x 150 C16
- 4: Beam: EXISTING RAFTER  
Span: 2.5 m.  
Reactions (unfactored/factored): R1: 1.59/1.59 kN; R2: 1.59/1.59 kN  
Use 50 x 150 C16  
RUN ALONG SIDE EXISTING TRUSS TIMBER
- 5: Beam: FLOOR JOISTS TO LOFT FLOOR  
Span: 4.0 m.  
Reactions (unfactored/factored): R1: 1.80/1.80 kN; R2: 1.80/1.80 kN  
Use 50 x 200 C16
- 6: Beam: BEAM BELOW FRONT PARTITION WALL  
Span: 6.3 m.  
Reactions (unfactored/factored): R1: 25.55/25.55 kN; R2: 25.55/25.55 kN  
Use 254 x 148 x 43 UB S355  
Bearing R1: 25 mm m.s. bearing plate, size 550 x 100 mm  
Bearing R2: As R1
- 7: Beam: CENTRAL BEAM TO FLOOR  
Span: 6.3 m.  
Reactions (unfactored/factored): R1: 23.04/23.04 kN; R2: 21.47/21.47 kN  
Use 254 x 148 x 37 UB S355  
Bearing R1: 20 mm m.s. bearing plate, size 500 x 100 mm  
Bearing R2: 20 mm m.s. bearing plate, size 450 x 100 mm
- 8: Beam: CENTRAL BEAM TO FLOOR  
Span: 6.3 m.  
Reactions (unfactored/factored): R1: 23.04/23.04 kN; R2: 21.47/21.47 kN  
Use 203 x 203 x 46 UC S355  
Bearing R1: 20 mm m.s. bearing plate, size 500 x 100 mm  
Bearing R2: 20 mm m.s. bearing plate, size 450 x 100 mm