

BEAMS

flange of steel beam

Roof joists to sit into flange of steel beam

or into hangers fixed to timber bolted into

150mm concrete slab with finish to

60mm Kingspan Kooltherm K103

150mm consolidate hardcore

insulation over DPM laid on 25mm

clients specification

sand blinding

1000 x 1500 Velux CFP flat roof skylight

25mm insulation upstand to floor slab

laid to manufactures instruction

Ensure cavity insulation extends above

roof insulation to avoid cold bridging

50 x 100mm sw wallplate tied down to

steel straps extending down the wall

Cavity tray formed above steel

structural engineers details

to achieve 1.8 U Value

wall at max 1200 centres using stainless

Steel beam with welded plate to support rear

doors and concrete padstone supports all to

3000 x 2100mm white uPVC bi-fold doors

Cavity tray formed with DPC at min

150mm above external ground level

Concrete trench foundations to be minimum

Ensure foundation is taken down below level

of adjacent drains to prevent loads been

Final depth to be decided by BCO on site

of 750mm below ground level

transfered onto drain

Supply and install new structural elements such as new beams, roof structure, floor structure, bearings, and padstones in accordance with the Structural Engineer's calculations and details. New steel beams to be encased in 12.5mm Gyproc FireLine board with staggered joints, Gyproc FireCase or painted in Nullifire S or similar intumescent paint to provide 1/2 hour fire resistance as agreed with Building Control. All fire protection to be installed as detailed by specialist manufacturer.

LINTELS

Bottom of steel beams to be level with new

to be battened out to form dropped ceiling

beam 01

ceiling to allow for flush finish. Existing ceiling is

hiding steel beam down stand and existing steel

Steel beams sizes, bolting detail and padstones

Encase steel work in 12.5mm plasterboard and skim finish to provide 30 mins fire resistance

New concrete slab to be taken over

existing wall to avoid cold bridging

to be specified by structural engineer

- For uniformly distributed loads and standard 2 storey domestic loadings only. Lintel widths are to be equal to wall thickness. All lintels over 750mm sized internal door openings to be 65mm deep pre-stressed concrete plank lintels. 150mm deep lintels are to be used for 900mm sized internal door openings. Lintels to have a minimum bearing of 150mm on each end. Any existing lintels carrying additional loads are to be exposed for inspection at commencement of work on site. All pre-stressed concrete lintels to be designed and manufactured in accordance with BS 8110, with a concrete strength of 50 or 40 N/mm² and incorporating steel strands to BS 5896 to support loadings assessed to BS 5977 Part 1.

For other structural openings provide proprietary insulated steel lintels suitable for spans and loadings in compliance with Approved Document A and lintel manufactures standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels.

OPENINGS AND RETURNS

An opening or recess greater than 0.1m² shall be at least 550mm from the supported wall (measured internally).

TRENCH FOUNDATION

Provide 750mm x 600mm trench fill foundations, concrete mix to conform to BS EN 206-1 and BS 8500-2. All foundations to be a minimum of 1000mm below ground level, exact depth to be agreed on site with Building Control Officer to suit site conditions. All constructed in accordance with 2004 Building Regulations A1/2 and BS 8004:1986 Code of Practice for Foundations. Ensure foundations are constructed below invert level of any adjacent drains. Base of foundations supporting internal walls to be min 600mm below ground level. Sulphate resistant cement to be used if required. Please note that should any adverse soil conditions or difference in soil type be found or any major tree roots in excavations, the Building Control Officer is to be contacted and the advice of a structural engineer should be sought.

SOLID FLOOR INSULATION UNDER SLAB

To meet min U value required of 0.22 W/m²K

Solid ground floor to consist of 150mm consolidated well-rammed hardcore. Blinded with 50mm sand blinding. Provide a 1200mm gauge polythene DPM, DPM to be lapped in with DPC in walls. Floor to be insulated over DPM with 60mm thick Kingspan Kooltherm K103 insulation.

25mm insulation to continue around floor perimeters to avoid thermal bridging. A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped 150mm and sealed, provide 150mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2 over VCL. Finish to clients specification.

DPC

Provide horizontal strip polymer (hyload) damp proof course to both internal and external skins minimum 150mm above external ground level. New DPC to be made continuous with existing DPC's and with floor DPM. Vertical DPC to be installed at all reveals where cavity is closed.

All walls constructed using stainless steel vertical twist type retaining wall ties built in at 750mm ctrs horizontally, 450mm vertically and 225mm ctrs at reveals and corners in staggered rows. Wall ties to be suitable for cavity width and in accordance with BS 5268-6.1: 1996 and BS EN 845-1: 2003

Provide cavity trays over openings. All cavities to be closed at eaves and around openings using Thermabate or similar non combustible insulated cavity closers. Provide vertical DPCs around openings and abutments. All cavity trays must have 150mm upstands and suitable cavity weep holes (min 2) at max 900mm centres. **EXISTING TO NEW WALL**

Cavities in new wall to be made continuous with existing where possible to ensure continuous weather break.

If a continuous cavity cannot be achieved, where new walls abuts the existing walls provide a movement joint

with vertical DPC. All tied into existing construction with suitable proprietary stainless steel profiles. WARM FLAT ROOF

(imposed load max 1.0 kN/m² - dead load max 0.75 kN/m²) To achieve U value 0.18 W/m²K

Flat roof to be single ply membrane roofing providing aa fire rating for surface spread of flame with a current BBA or WIMLAS Certificate and laid to specialist specification. Single ply membrane to be fixed to 22mm exterior quality plywood over 110mm Kingspan Thermaroof TR26 insulation.

Insulation bonded to vcl on 22mm external quality plywood decking or similar approved on sw firings to minimum 1 in 80 fall on sw treated 50 x 170 C24 timber flat roof joists at 450 centres max 3.83m span or as Structural Engineer's details and calculations. Underside of joists to have 12.5mm foil backed plasterboard and skim. Provide cavity tray to existing house where new roof abuts existing house.

Provide restraint to flat roof by fixing of 30 x 5 x 1000mm ms galvanised lateral restraint straps at maximum 2000mm centres fixed to 100 x 50mm wall plates and anchored to wall.

LEAD WORK AND FLASHINGS

INTERNAL STUD PARTITIONS

All lead flashings, any valleys or soakers to be Code 5 lead and laid according to Lead Development Association. Flashings to be provided to all jambs and below window openings with welded upstands. Joints to be lapped min 150mm and lead to be dressed 200mm under tiles, etc. All work to be undertaken in accordance with the Lead Development Association recommendations.

100mm x 50mm softwood treated timbers studs at 400mm ctrs with 50 x 100mm head and sole plates and

soundproof quilt tightly packed (eg. 100mm Rockwool or Isowool mineral fibre sound insulation) in all voids

the full depth of the stud. Partitions built off doubled up joists where partitions run parallel or provide noggins

where at right angles, or built off DPC on thickened concrete slab if solid ground floor. Walls faced throughout

solid intermediate horizontal noggins at 1/3 height or 450mm. Provide min 10kg/m³ density acoustic

with 12.5mm plaster board with skim plaster finish. Taped and jointed complete with beads and stops.

0 2 4 6 8 10 12 14 16 18 20 [m] **Building Regulations**

Single-Storey Rear Extension

Elevations

25 North Brook Road Hadfield Glossop SK13 2EZ

Scale - 1:100 @ A1 unless stated Drawn By - EH Date - 08.2018

Description Date A Depth reduced by 300mm 14/08

DRAWING REF: 25NB/BR/01/A

