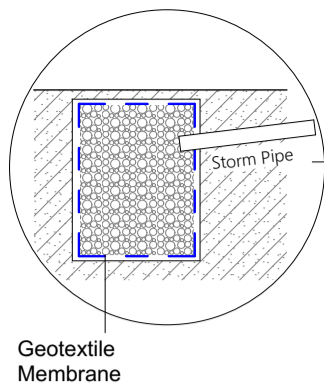


**OPTION A**  
 Small soakaways are holes filled with granular material, eg broken brick, crushed rock or gravel, with particle size 10mm to 150mm. PVC sheet or concrete blinding should be laid over the fill to prevent topsoil being washed down into the soakaway.  
 Recommended volume - 1.5m<sup>3</sup>.  
 1x2x2m  
 Volume = Roof area being drained x (50mm rainfall rate per hr/3000).  
 24 x 50/3000 = 0.4  
 To calculate the size/volume of a rubble filled soakaway, the same calculation can be used but the result divided by 0.3  
 = 1.12 m<sup>3</sup>  
 Ground percolation test to be conducted to determine if suitable.



**OPTION B**  
 Connect storm into existing drainage subject to Severn Trent Approval.

EXISTING MANHOLE

Soakaway in Garden  
 1.12 m<sup>3</sup>

Min 5m From Building

Storm 1:80 Min Fall

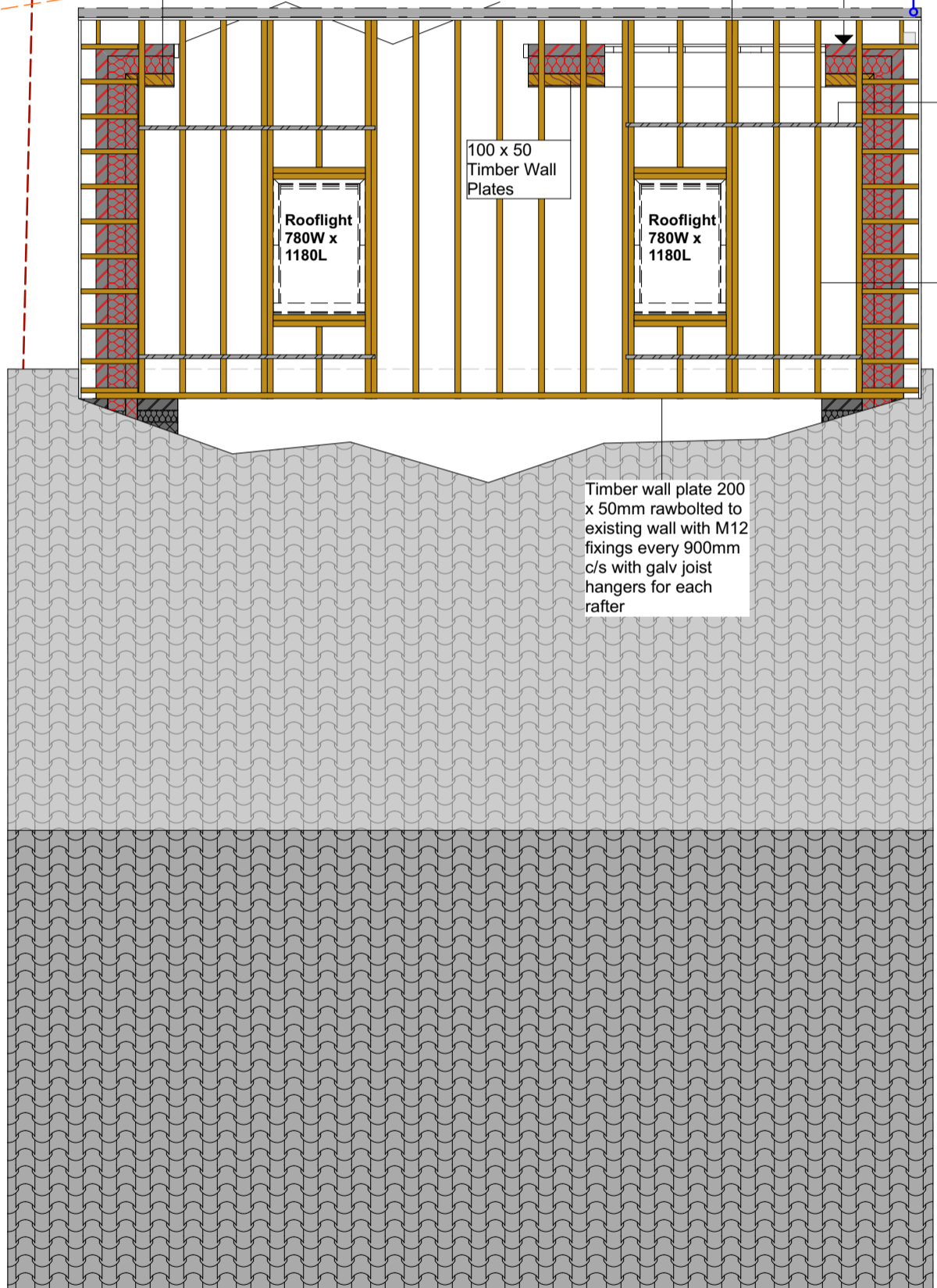
New Rainwater Downpipe to run underground and discharge into new soakaway

Double up rafters either side of rooflights. Rooflights 0.8m (w) x 1.2m keylite or similar.

Strap rafters to walls at 90 deg with 2m long 30 x 5mm galv m/s straps nailed to rafters and screwed into walls

All new rafters to be C24 grade 47x170mm set at max 400mm spacings

Wall plate strapped to inner leaf as shown using 1200mm long 30x5mm mild steel galvanised straps @ max. 2m centers. Straps screwed to wall plate. Provide min 5no fixings to wall per strap.



100 x 50 Timber Wall Plates

Rooflight 780W x 1180L

Rooflight 780W x 1180L

Timber wall plate 200 x 50mm rawbolted to existing wall with M12 fixings every 900mm c/s with galv joist hangers for each rafter

**SINGLE PITCH ROOF SPECIFICATION**

Concrete Marley or similar low pitch roof tiles to match existing on 50x25mm s/w battens on vapour permeable underlay on new timber rafters @400mm c/s onto new 100 x 50mm timber wallplates.  
 Use PVC underlay support tray at eaves for protection from UV and ponding.  
 Use galv. steel straps to rafters to provide verticle and lateral restraint.  
 All rafters to be 170mm x47mm set at min 400mm centres and to be mechanically fixed at bearings. Use Celotex rigid insulation between rafters as shown in Detail 2.  
 Fix 19mm facia board with PVC overlaid to match existing.  
 Insulation from cavity wall to roof via eaves to be continuous to prevent thermal bridging.  
 Whole of roof construction to provide a max. U value of 0.15W/m<sup>2</sup>.

All timbers min C24 strength grade.

Roof Pitch circa 16 Degrees.

**NOTE:**

Please read in conjunction with Structural Engineer report once issued.

To be reviewed by Building Control before starting works on site.

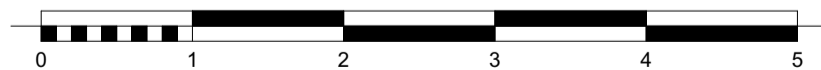
All dimensions are taken to face of brick/ block masonry walls. All dimensions to be checked by contractor on site. We should be notified immediately if there are any discrepancies from the drawings.

Drainage layout to be agreed with Contractor prior to commencement of works and agreed with Local Authority Building Inspector.

Allow for possible modification/re-routing of existing foul/storm and additional manholes as required.

Existing drainage to be fully investigated and diverted as required in accordance with Severn Trent approval and requirements where appropriate.

SCALE 1:50@A3



**Roof Structure Plan**  
**FreeForm**  
 Architectural Services

Project

Client

Layout Title

Drw No.

Project No.

Scale

2448

1:50

40 Faray Drive, Hinckley  
 Leicestershire, LE10 0WZ

Mr Angus  
 Richardson

Building  
 Regulation  
 Plans 3

2448-09

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