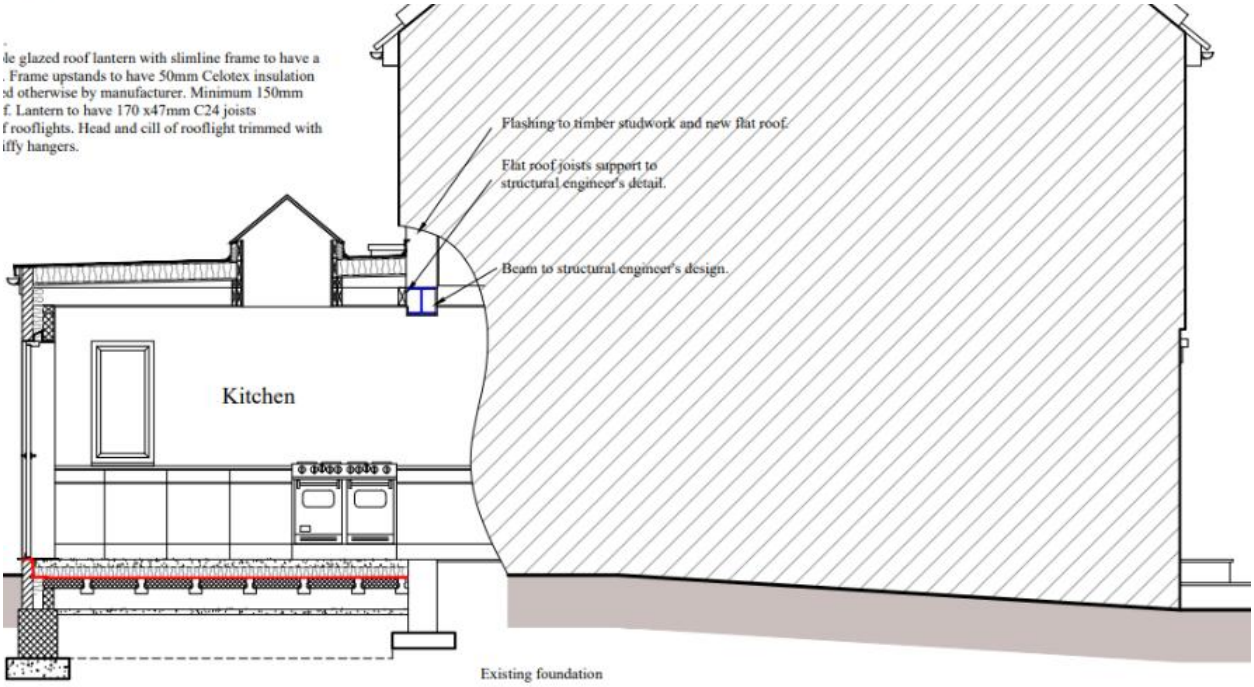
Side extension from 25 Bridge Street - section D-D

Ground Floor:
75mm cement/sand screed on 500 gauge polythene separation layer on 100mm CelotexGA4000 insulation on 1600 gauge sheet visqueen combined DPM and Radon barrier membrane over concrete beam and block floor to BS110 to manufacturers specification and installation details. Radon membrane to be continuous with radon cavity barrier and existing damp proof membrane. Minimum 150mm void below floor to 50mm sand blinding on 1200g sheet polythene vapour barrier. Maximum U-value for Ground Floor 0.18W/m²K (actual required 0.18W/m²K). Ground below floor treated with pre-emergent weed killer. 225mm brickwork below internal load bearing walls. Damp courses below all floor bearings. 225x75mm telescopic air bricks at 1.8m centres to ventilate suspended floor void. Cavity trays to be provided over the telescopic sub floor vents.

Floor ventilation to existing suspended floor void to be maintained and continuous with extension floor ventilation.

Beam and block floor design to be submitted to and approved by Building Control prior to installation.

Slimline Roof Lantern.
2000 x 1000mm Double glazed roof lantern with slimline frame to have a U-value of 1.2W/m²K. Frame upstands to have 50mm Celotex insulation to sides unless specified otherwise by manufacturer. Minimum 150mm upstand above flat roof. Lantern to have 170 x47mm C24 joists 'doubled-up' at sides of rooflights. Head and cill of rooflight trimmed with joists doubled-up on Jiffy hangers.



Section c-c


Ceiling level to match existing dining
Kitchen
Floor level to match existing

Flat Roof over Kitchen Extension:
Flat roof of single ply membrane on 18mm ply decking over 150mm Kingspan Thermaroof TR26 LPC/FM K on high performance vapour control layer over 18mm ply decking to provide warm roof construction and U-value of 0.14W/m²K. All on firring pieces to falls of 1 in 40 on 170 x 47mm C24 tanalised timber joists on 100x75mm wall plate strapped down to wall construction with 30x 5mm galvanised steel straps at maximum 2m centres. Lateral restraint straps 30x5mm at 2m centres along gables fixed to cavity wall and across 3no. rafters. Solid timber noggins below straps between rafters. At existing external wall of house a 75x120mm wall plate is to be bolted to wall using expanding rawlbolts and the joists are to be fixed to the plate with Simpson Strong -Tie stainless steel angle brackets. 12.5mm foil backed plasterboard ceiling on polythene vapour barrier, 3mm plaster skim coat.

Flashings:
All flashings at roof/wall abutments to be Code 4 lead cut and dressed as necessary with cavity tray built in above.
Code 5 lead to valley gutters where applicable.

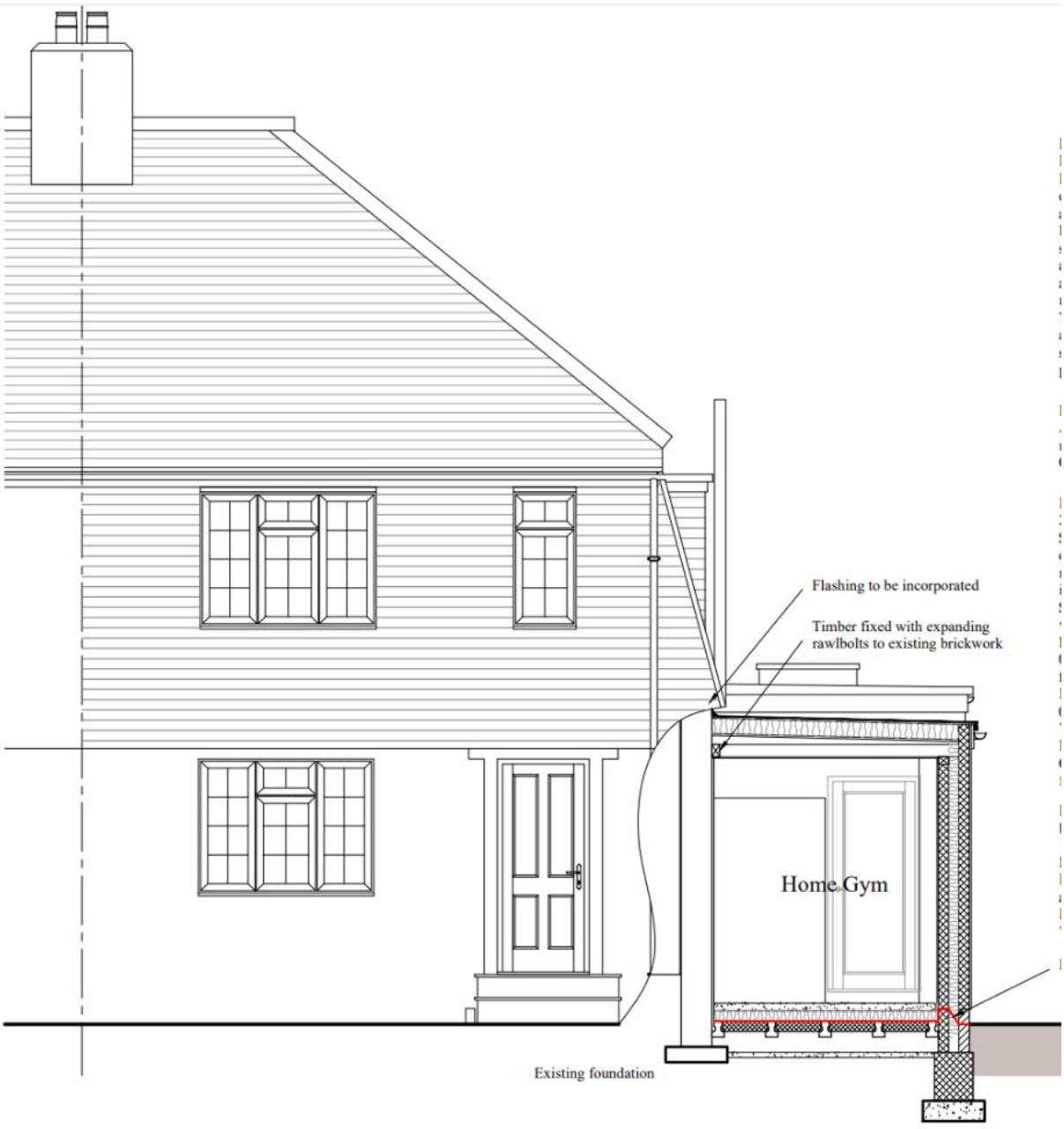
Brick Block Cavity Walls:
102mm facing brickwork with 100mm cavity filled with 90mm Celotex

Thermaclass Cavity Wall 21 (10mm residual gap) insulation built in as the work proceeds in accordance with manufacturers specification.
K-value of insulation 0.021W/mK.
Stainless steel wall ties at 750mm centres horizontally, 450mm centres vertically staggered, 225mm centres at reveals.
100mm Celcon Standard or similar inner blockwork (K-value 0.15W/mK) with 12.5mm plasterboard on dabs finish.
Maximum U-value for cavity walls 0.18W/m²K, Actual required 0.18W/m²K
Vertical pvcu insulated cavity closers at window and door reveals and cill, K-value 0.02W/mK to provide maximum U value of 1.2W/m²K.
Cavities closed at head. Cavities filled to 225mm below lowest DPC from foundations with lean mix concrete.

Damp Proof Course:
Damp proof courses to be "Hyload" or similar approved minimum 150mm above ground level.
DPC to inner block leaf to be continuous with floor damp membrane. Vertical dpc at all window and door reveals unless pvcu closers closed.

Foundations:
Foundations to structural engineer's design Foundation design to take into account of trees or shrubs within 40m.

Trees:
Details of any trees or shrubs within 35m of the extension that may affect the depth or design of the foundations are to be notified to the building inspector. Information to include: type of tree, distance from foundations and proposed depth of foundations.


Flashing to be incorporated
Timber fixed with expanding rawlbolts to existing brickwork
Home Gym
Existing foundation

A-A section

Flat Roof over Home Gym:
Flat roof of single ply membrane on 18mm ply decking over 150mm Kingspan Thermaroof TR26 LPC/FM K on high performance vapour control layer over 18mm ply decking to provide warm roof construction and U-value of 0.14W/m²K. All on firring pieces to falls of 1 in 40 on 120 x 47mm C24 tanalised timber joists on 100x75mm wall plate strapped down to wall construction with 30x 5mm galvanised steel straps at maximum 2m centres. Lateral restraint straps 30x5mm at 2m centres along gables fixed to cavity wall and across 3no. rafters. Solid timber noggins below straps between rafters. At existing external wall of house a 75x120mm wall plate is to be bolted to wall using expanding rawlbolts and the joists are to be fixed to the plate with Simpson Strong -Tie stainless steel angle brackets. 12.5mm foil backed plasterboard ceiling on polythene vapour barrier, 3mm plaster skim coat.

Flashings:
All flashings at roof/wall abutments to be Code 4 lead cut and dressed as necessary with cavity tray built in above.
Code 5 lead to valley gutters where applicable.

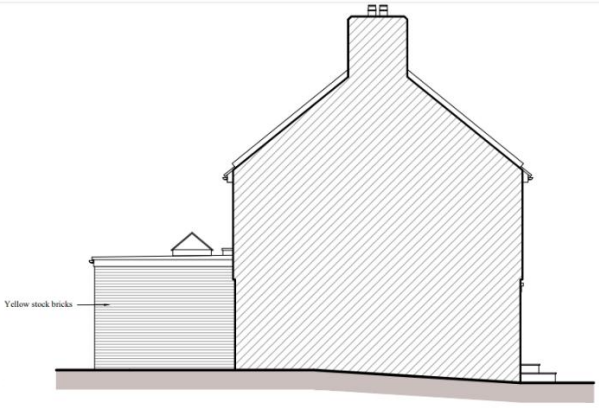
Rendered Cavity Walls:
20mm two coat external render on render mesh over 100mm Celcon 'Hi-Strength Grade' facing blockwork (K-value 0.18W/mK) with 100mm cavity filled with 90mm Celotex Thermaclass Cavity Wall 21 (10mm residual gap) insulation built in as the work proceeds. K-value of insulation 0.021W/mK.
Stainless steel wall ties at 750mm centres horizontally, 450mm centres vertically staggered, 225mm centres at reveals.
100mm Celcon 'Standard Grade' or similar inner blockwork (K-value 0.15W/mK) with 12.5mm plasterboard on dabs with 3mm skim plaster finish.
Maximum U-value for cavity walls 0.18W/m²K, Actual required 0.16W/m²K.
Vertical pvcu insulated cavity closers at window and door reveals and cill, K-value 0.02W/mK to provide maximum U value of 1.2W/m²K.
Cavities closed at head. Cavities filled to 225mm below lowest DPC level from foundations with lean mix concrete.

Render break in the form of bell cast render stop bead to be provided at bottom of render at DPC height.

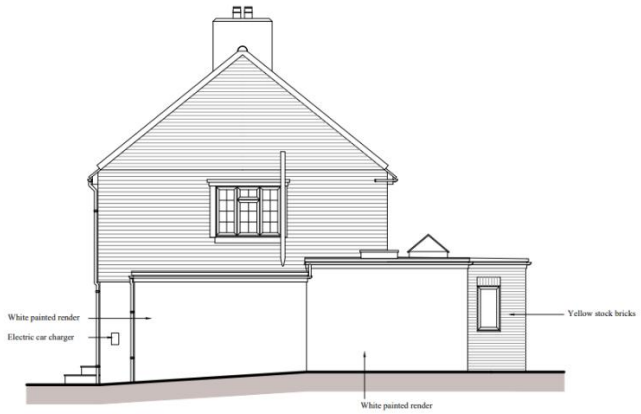
Damp Proof Course:
Damp proof courses to be "Hyload" or similar approved minimum 150mm above ground level.
DPC to inner block leaf to be continuous with floor damp membrane. Vertical dpc at all window and door reveals unless pvcu closers closed.

Radon cavity barrier

SOUTH WEST
ELEVATION

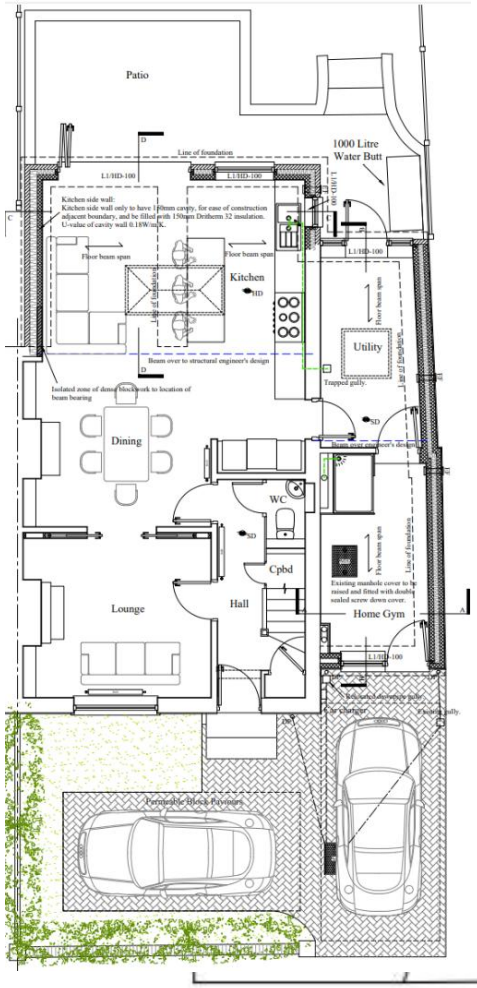


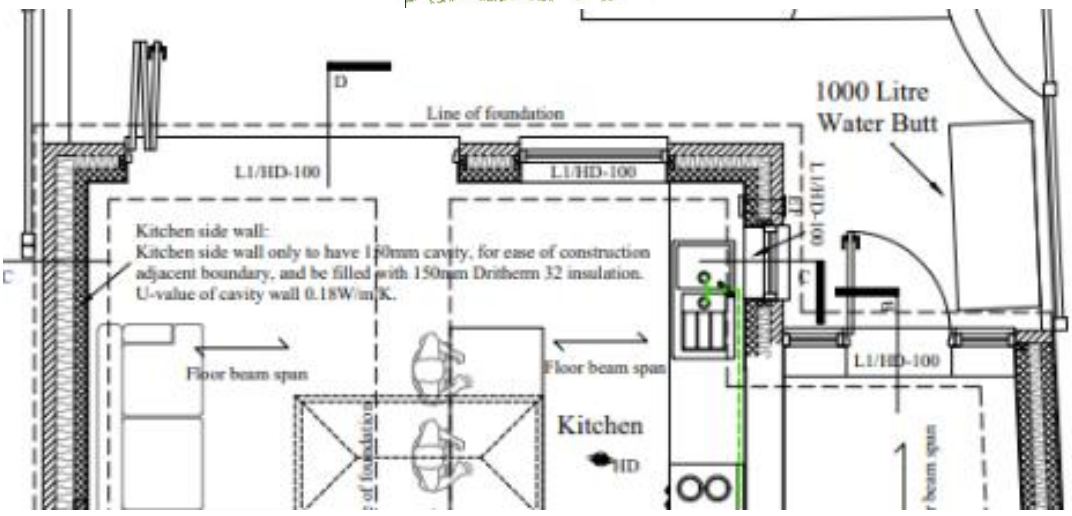
NORTH WEST
ELEVATION



SOUTH EAST
ELEVATION

NORTH EAST
ELEVATION


Patio
1000 Litre Water Butt
Line of foundation
L1/HD-100
Kitchen side wall:
Kitchen side wall only to have 150mm cavity, for ease of construction adjacent boundary, and be filled with 150mm Dritherm 32 insulation.
U-value of cavity wall 0.18W/m2K.
Floor beam span
Kitchen
HD
Utility
Trapped gully.
Beam over to structural engineer's design
Isolated zone of dense blockwork to location of beam bearing
Dining
WC
SD
Cpbd
Hall
Lounge
Home Gym
Existing manhole cover to be raised and fitted with double sealed screw down cover.
Permeable Block Pavours


D
Line of foundation
1000 Litre Water Butt
L1/HD-100
Kitchen side wall:
Kitchen side wall only to have 150mm cavity, for ease of construction adjacent boundary, and be filled with 150mm Dritherm 32 insulation.
U-value of cavity wall 0.18W/m2K.
Floor beam span
Kitchen
HD