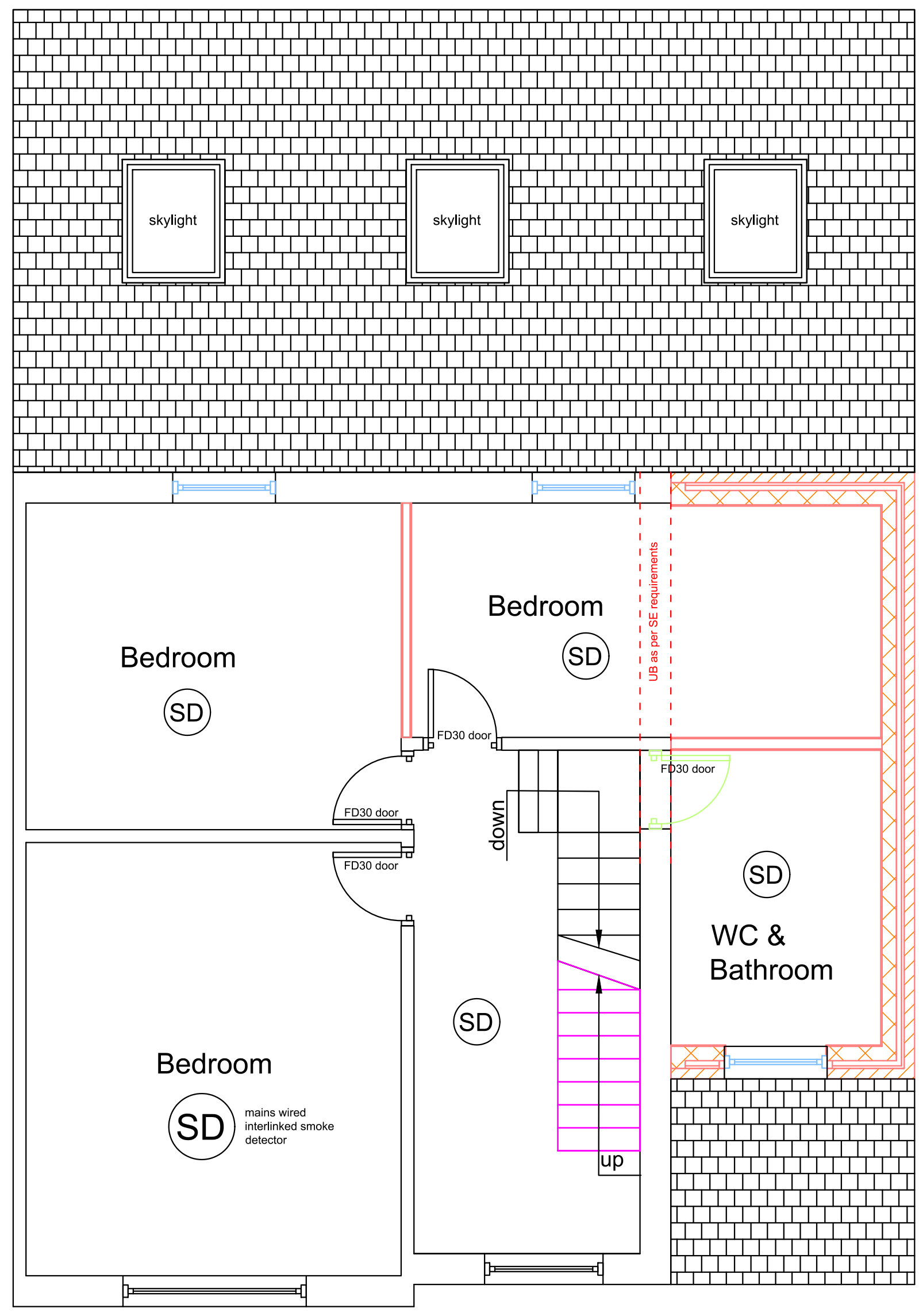


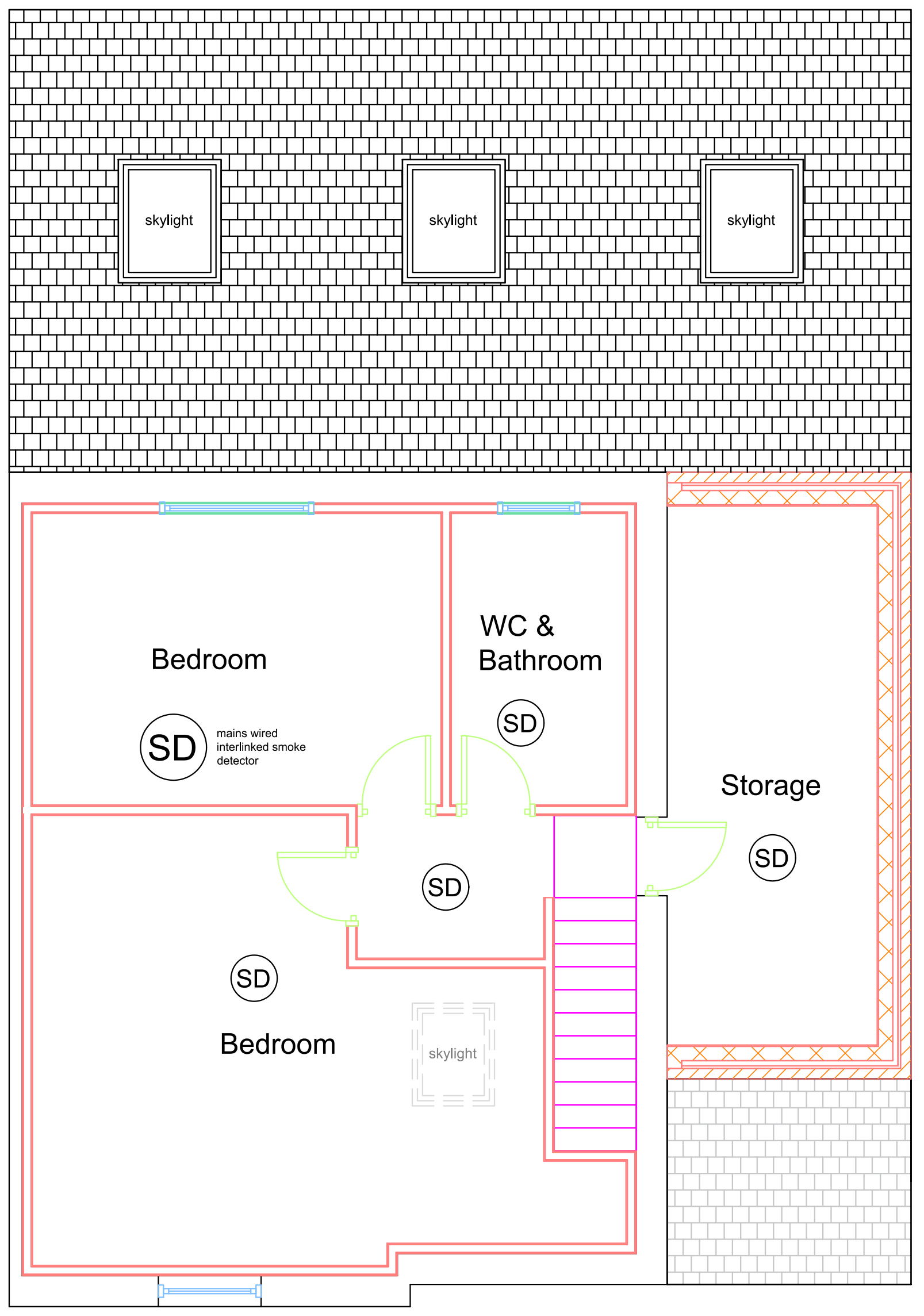
Proposed First Floor

VENTILATION
Windows and are to provide a minimum of 1/20th floor area natural ventilation.
Background ventilation minimum 8000 sq mm to each room.
Provide mechanical extract ducted to the outside air to the following-

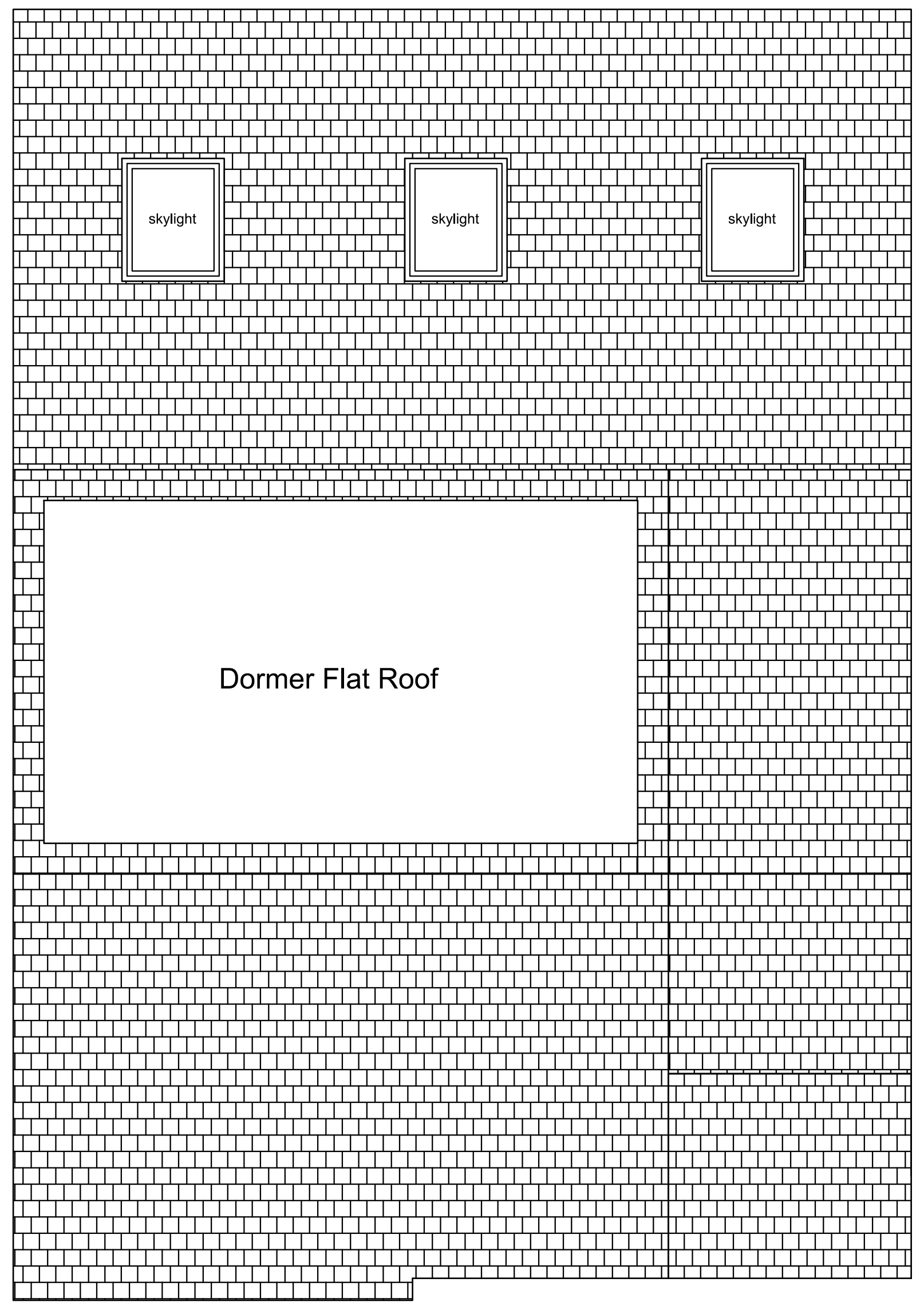
Bathrooms [with or without wc]- 15 litres/sec
Sanitary Accommodation- 6 litres/sec.

Any existing sub floor ventilation measures in place to the existing dwelling will need to be maintained within the proposed extension

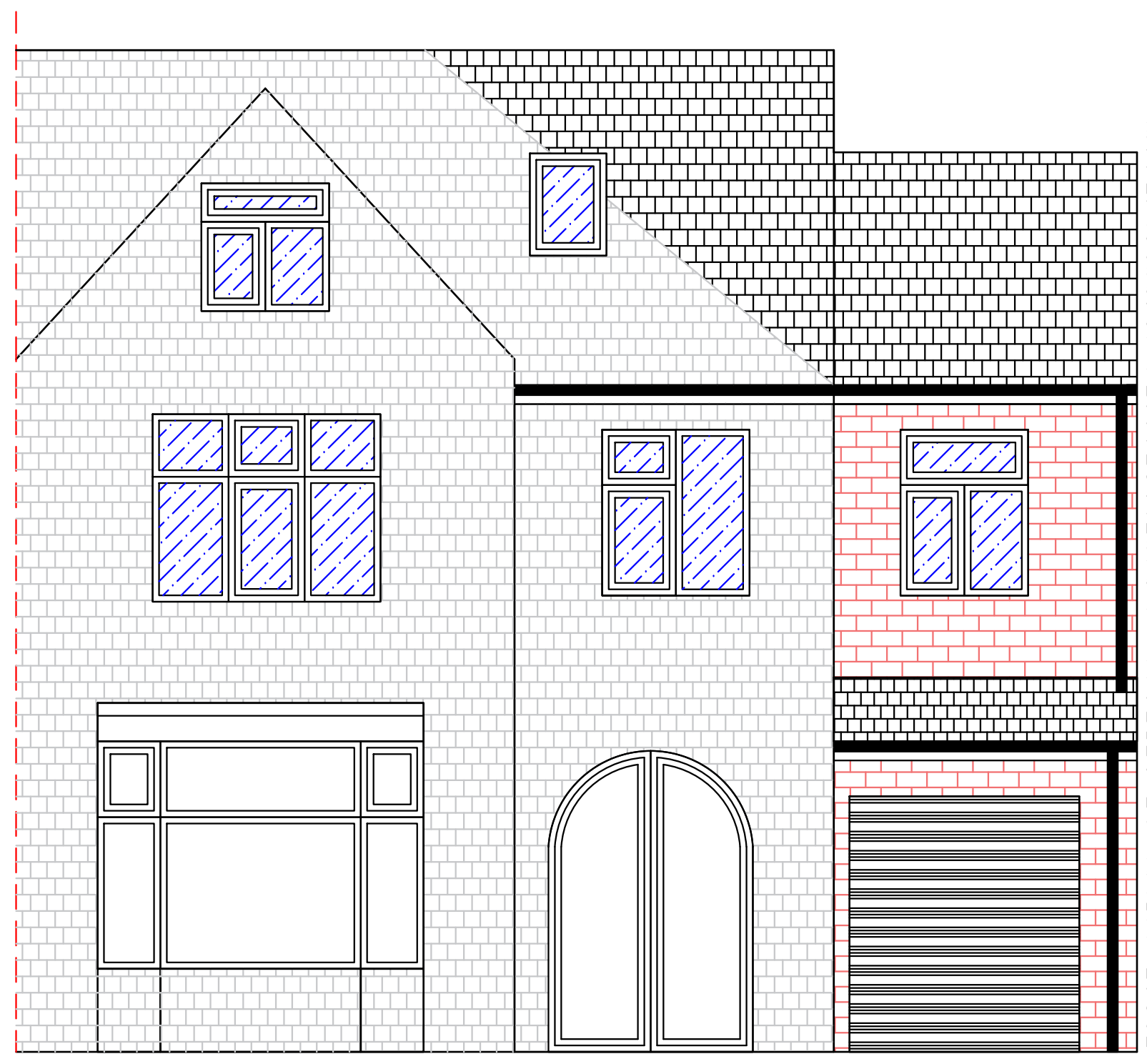
Any glazing under a height of 800mm to be safety glass.
All glazing to be double glazed units with a minimum 16mm air gap
with low E coating to achieve a minimum U value of 1.40W/m2.K



Proposed Second Floor



Proposed Roof Plan



Proposed Front Elevation

ANCHOR STRAPS
30 x 5mm galvanised anchor straps to be fixed at rafter,
floor and ceiling joist levels where running parallel
to any external or separating walls.
All to be securely fixed at maximum 1800mm centres
and tied down wall minimum 225mm.
30 x 5mm galvanised steel straps to be fixed at
1800mm centres along wall plate and tied down
wall minimum 450mm.

Wall Construction
EXTERNAL WALLS 'U' Value 0.18w/m2k
102mm facing brick to match existing.
100mm cavity with BBA approved or similar full fill insulation quilt.
Lightweight blockwork 'K' value not less than 0.11w/mk and a density not less than 450Kg/m3. 13mm lightweight plaster.
Stainless steel Wall ties at 750mm horizontally, 450mm vertically,
300mm around openings. All cavities closed with insulated cavity closer. DPC 150mm above finished ground level, cavity trays to lintels. fitted as per manufacturers guidlines.
Weak mix concrete cavity fill to ground level.

VENTILATION
Windows and are to provide a minimum of 1/20th floor area natural ventilation.
Background ventilation minimum 8000 sq mm to each room.
Provide mechanical extract ducted to the outside air to the following-

Bathrooms [with or without wc]- 15 litres/sec
Sanitary Accommodation- 6 litres/sec.

Any glazing under a height of 800mm to be safety glass.
All glazing to be double glazed units with a minimum 16mm air gap
with low E coating to achieve a minimum U value of 1.40W/m2.K

RAINWATER
100mm half round upvc gutters,
68mm dia downpipe to
discharge into sealed
back inlet gully.

NOTE

All dimensions are to be checked on site prior to the commencement of works. Any modifications considered an improvement by the builder are to be submitted to the Local Authority and comply with any approval necessary. All work to comply with current Building Regulations and good building practice.

The builder may use alternative materials to the ones specified above but these must be to the satisfaction of the Building Control Officer and comply fully with the current Building Regulations.

Specification.

All materials and workmanship to comply with the recommendations and requirements of the current British Standards Codes of Practice, Building Regulations. Health & Safety must be adhered to in accordance with CDM Regulation. All proprietary products to be used in accordance to manufacturer's instructions. All structural timber to be SC3 Grade and preservative treated. Site to be left clean and tidy on completion of works and all deleterious materials to be removed of site.

Chimney Stack & Chimney Breast Removal.
Option 1. Remove all chimney breasts to property, make good to ceiling and floors as required.
Remove Chimney stack to both properties and make good roofs as required.

Option 2. Remove all chimney breasts to property, make good to ceiling and floors as required. Support chimney stack on existing load bearing wall. RSJ's calcs to be submitted if this option is used.

Loft Conversion.

Dormer Ridge RSJ. As per Structural Engineers Calculations
Dormer Face RSJ. As per Structural Engineers Calculations
Floor Joist 75mm x 195mm (3" x 8") or As per Structural Engineers Calculations

STEEL BEAMS:
New steel beams to be encased in 12.5mm Gyproc Fireline board with staggered joints nailed to timber cradles or painted in Nullifire S or similar intumescent paint to provide 1/2-hour fire resistance.

Existing roof.
increase depth of rafter to receive 50mm air gap, 75mm Kingspan or similar insulation slab, batten across and overboard with 50mm Kingspan or similar insulation slab and plasterboard and skim. to achieve a minimum U value of 0.15W/m2.K in accordance to Approved Document L Table 4.2

VENTILATED DORMER FLAT ROOF.

STRUCTURAL ENGINEER TO CONFIRM STRUCTURE WITH APPROVED DETAILS AND CALCULATIONS.

BUILD UP BELOW INDICATIVE TO ACHIEVING BUILDING REGULATIONS COMPLIANCE.

To achieve maximum U Value of 0.15 W/m2K.

Flat roof to be single ply membrane roofing with aa fire rating as specialist specification, with a current BBA or WIMLAS Certificate on 22mm exterior grade plywood, laid on furrings to give a 1:40 fall on 47 x 195 grade C24 joists at 400mm centres max span 4.2m. Cross-ventilation to be provided on opposing sides by a proprietary eaves ventilation stip equivalent to 25mm continuous ventilation, with fly proof screen. Flat roof insulation is to be continuous with the wall insulation but stopped back to allow a continuous 50mm air gap above the insulation for ventilation. Insulation to be 140mm Kingspan Thermaroof or similar approved between joists and 50mm Kingspan under joists. Ceilings to be lined with 125mm fireline plasterboard over vapour barrier with skim plaster finish. Provide restraint to flat roof by fixing 30 x 5 x 1000mm ms galvanized lateral restraint straps at maximum 2000mm centres fixed to 100 x 50mm wall plates and anchored to wall.

Form opening for Velux type roof lights as per BREGS & manufacturer's instructions.

Distance of Roof lights from eaves to meet Building Regulation criteria.

All frames to include for trickle vents as per Building Regulation Requirements.

DORMER CONSTRUCTION:

STRUCTURAL ENGINEER TO CONFIRM STRUCTURE WITH APPROVED DETAILS AND CALCULATIONS. BUILD UP BELOW INDICATIVE TO ACHIEVING BUILDING REGULATIONS COMPLIANCE.

Dormer walls to achieve maximum IJ Value of 0.18Wlm2K. Cladding panels to clients requirements hung horizontally on 25 x 38mm pressuative treated battens (horizontal counter battens to be provided to ensure vented and drained cavity if required) fixed to breathable membrane (having a vapour resistance of not more than 0.6 MNslg) and 12mm thick W.B.P external quality plywood sheathing (or other approved). Ply fixed to treated timber frame studs constructed using: 150 x 50mm head and sole plates and vertical studs (with noggins) at 400mm centres or to structural engineers details and calculations. Insulation between studs to be 100mm Celotex GA4000 or similar approved, provide VCL and 62.5mm Celotex PI-4000 insulated plasterboard over studs. Finish with 3mm skim coat of finishing plaster. All junctions to have water tight construction, seal all perimeter joints with tape internally and with silicon sealant externally. Dormer walls built off of exiting masonry walls to have galvanised mild steel straps placed at 900mm centres. Dormer cheeks within 1 m of the boundary to be lined externally with 12.5m Supalux and 125mm Gyproc FireLine board internally to achieve 30 min fire resistance from both sides.

Code 5 lead flashings, valleys and apron to dormer abutments to roof. The requirement to install a cavity tray is subject to a number of factors including type of brickwork, render, exposure to the weather etc. Therefore must be installed as per manufacturers guidelines.

Staircase.

In accordance with Approved Document K.

New staircase to be 225 x 32mm SW strings, 25mm sw treads, 19mm sw risers with SW blocks and wedges. Treads 7200mm wide with min 2000mm headroom, 900mm high mop stick handrail fixed at 840mm above nosing line and 900mm above any landings. Balustrade gaps not to exceed 100mm.

Any stair winders to have min 50mm.

In accordance with AD K.

Plastering.

Ceilings throughout using 12.5mm fire line plasterboard and skim finish. All lintels and purlins to have min 1hr fire resistance.

Walls to be drylined and skim finish or direct plastering to walls as required to match existing finish.

SUSPENDED TIMBER FLOORS TO SECOND FLOOR.

As per drawing. To be C16 floor joists spanning from left to right @ 400mm c/c, strutting at 2000mm c/c. fixed to sleeper joist with Simpson timber to timber joist hangers. Floor void to be filled with min 150mm Insulation.

Sleeper joist resin fixed with M12 bolt to existing brickwork

Staircase trimmer detail.

2no trimmer staircase detail, bolted max 1000 c/c. hung on joist hangers. as per layout.

Joists to be under boarded using 12.5mm Fireline plasterboard to achieve a minimum 30-minute fire resistance in accordance to Approved Document b.

ANCHOR STRAPS

30 x 5mm galvanised anchor straps to be fixed at rafter, floor and ceiling joist levels where running parallel to any external or separating walls. All to be securely fixed at maximum 1800mm centres and tied down wall minimum 225mm.

30 x 5mm galvanised steel straps to be fixed at 1800mm centres along wall plate and tied down wall minimum 450mm.

ROLLED STEEL JOISTS.

Sizes to be checked with Structural Engineers Calculations and recommendations to sit on spreader padstones and bolted as recommended by structural engineer. Packed out boarded over and skim finished.

Extension.

FOUNDATIONS

New foundations min 600 X 300 c30 mix to be taken down to min depth of 750mm or onto suitable ground bearing strata or underpinning if required to Structural Engineers design.

Foundation within 1.0m of drains to be taken below invert level.

As per Building Regulations AD A1/2, final depth to be agreed onsite with BCO

foundations 600x300 C30 mix

EXTERNAL WALLS

Build new 100mm medium density Hi strength 7 blockwork inner leaf with 75mm "Crown Dritherm cavity plus slab" fulfil cavity insulation and 100mm facing brick/block outer leaf off new foundation. Provide stainless steel cavity wall ties at 750mm horizontal and 450mm vertical centres, decreased to 225mm centres vertically around openings. Close cavities at openings including insulated vertical dpc. 9mm Supalux board as cavity closer.

Provide Catnic insulated steel lintels or similar over all new openings

All lintels to existing ground floor openings are to be exposed and inspected for suitability prior to works commencing.

INTERNAL WALLS

To consist of 75 x 50mm timber studs with 75mm glass fibre insulation between. 900mm horizontal noggins. 12.5mm Fireline board with plaster skim finish to both sides. Dwarf stud partitions at roof eaves to be lined with 12.5mm Fireline board to room side, 100mm Rockwool RW2 insulation (or similar approved) between studs (Studs to be 100x50mm) with chicken wire to rear of partition stapled to studs.

Ensure that internal walls that run parallel to the floor joists should be provided with adequate lateral restraint. Therefore, if the floor joists are not tight up against the face of the wall ensure that wooden blocks are fitted to fill the gaps. These should be provided at 2m centres and they should be in pairs (one each side of the wall).

CEILINGS

Generally, to be 12.5mm Fireline plasterboard and 3mm skim to underside.

Roof.

'U' value 0.15 w/m2 K.

New pitched roof warm to be tiles as existing on 40mm x 25mm treated battens on sarking felt on 100mm x 38mm roof joists at 400mm c/c.

Roof void to be cross vented via permanent vents to be equivalent to a 10mm continuous strip. Provide preformed rafter trays to preserve air space to roof adjacent to insulation.

SUSPENDED TIMBER FLOORS TO SECOND FLOOR.

To be SW floor joists spanning from front to back @ 400mm c/c, strutting at 2000mm c/c. Second floor joist to rest on sleeper joists at mid wall intersection. Floor void to be filled with min 150mm Insulation.

ANCHOR STRAPS

30 x 5mm galvanised anchor straps to be fixed at rafter, floor and ceiling joist levels where running parallel to any external or separating walls. All to be securely fixed at maximum 1800mm centres and tied down wall minimum 225mm.

30 x 5mm galvanised steel straps to be fixed at 1800mm centres along wall plate and tied down wall minimum 450mm.

FLOOR JOISTS

C16 grade joists at 400mm centres, as per TRADA table, supported at positions shown on plan, laid level with existing first floor level, with 19mm moisture resistant chipboard flooring.

Joists to have solid strutting at mid length to resist twisting.

VENTILATION

Windows and are to provide a minimum of 1/20th floor area natural ventilation. Background ventilation minimum 8000 sq. mm to each room.

Provide mechanical extract ducted to the outside air to the following-

Bathrooms [with or without wc]- 15 litres/sec

Sanitary Accommodation- 6 litres/sec.

Glazing in critical locations

Glazing in critical locations should either be robust or break into small pieces.

Critical locations are -

Windows - glazing within 800mm of the finished floor level

Doors and sidelights within 300mm - glazing within 1.5m from the finished floor level

Glass that breaks into small pieces should be as BS EN 12600 section 4 and BS 6206 clause 5.3.

Annealed glass gains strength through thickness. The thickness of glass can be determined dependant on the size of glazing by using Diagram 5.2 in Approved Document K.

Please note that if the glass is also acting as guarding at a floor edge it also needs to designed as such as requirement K2.

Any glazing under a height of 800mm to be safety glass.

All glazing to be double glazed units with a minimum 16mm air gap with low E coating to achieve a minimum U value of 1.40W/m2.K

DRAINAGE BELOW GROUND

Provide separate foul and storm drainage. All pipe work to be uPVC and to comply with BS7158 and BS8012005.

Installation to be in accordance with HNBC guidance note 5.3 Min drain cover to be 750mm in grassed areas, 900mm in pedestrian areas and 1200mm in vehicular areas. Any drain higher than the minimum to be wrapped in polythene and encased in 150mm concrete. Any drain within 1m of the foundations and requiring excavation below foundation level shall be concrete trench filled to the level of the foundations. Any drain which is less than 1m from the building, the trench is to be filled with concrete to within the vertical distance below the bottom of the foundation not more than the horizontal distance from foundation less 150mm. see diagram at clause 5.3-6.3 HNBC guidance.

PIPEWORK THROUGH WALLS

Where new pipework passes through external walls form rocker joints either side wall face of max length 600mm with flexible joints with short length of pipe bedded in wall. Alternatively provide 75mm deep pre-cast concrete plank lintels over drain to form opening in wall to give 50mm space all round pipe: mask opening both sides with rigid sheet material and compressible sealant to prevent entry of fill or vermin. As the pipe emerges from the building a flexible coupier is to be used on either side of the wall wrapped in compressible material and back filled with pea gravel to a min 150mm.

INTERNAL SOIL VENT PIPES

Soil pipes to be boxed in with 12mm bonding and skim finish on two layers 9.5 plasterboard on 50x50 softwood framing. Pipe to be wrapped in 25mm unfaced mineral fibre.

INSPECTION CHAMBERS

Underground quality proprietary UPVC 450mm diameter inspection chambers to be provided at all changes of level, direction, connections and every 45m in straight runs. Inspection chambers to have bolt down double sealed covers in buildings and be adequate for vehicle loads in driveways. Provide inspection chamber within 12m of the connection to a sewer INTERNAL SOIL VENT PIPES Soil pipes to be boxed in with 12mm bonding and skim finish on two layers 9.5 plasterboard on 50x50 softwood framing. Pipe to be wrapped in 25mm unfaced mineral fibre.

BRANCH PIPES TO SOIL STACKS

All soil stacks 110dia with 32dia wastes to wash hand basins,40dia wastes to showers, bathes and sinks, all with deep seal traps. Provide accessible traps to shower trays

RAINWATER GOODS

uPVC 112mm high-capacity stormwater system completes with 68mm diameter downpipes. Install rainwater goods in accordance with manufacturers recommendations. Black colour.

All electrical work required to meet the requirements of Part P (Electrical Safety) will be designed, installed, inspected and tested by a person competent to do so in accordance with BS7671. A copy of the certificate should be forwarded to the Council immediately following the completion of the electrical installation.

All new drainage to be to Building Control approval with new RWP and ensuite drainage into new back inlet gully subject to confirmation by Building Control. All to connect into existing combined drainage run. To be agreed between builder and BC officer.

FIRE/SMOKE DETECTION

Provide proprietary mains powered smoke and heat detectors with battery back up to BS 5446 Part 1:2000and Part 3:2004at least a Grade D category LD3standard. The self-contained smoke and heat alarm deceives shall be permanently wired to a circuit which is separately fused at the distribution board. to which no other equipment is connected, and which where a residual current device is to be used in connection therewith, is not connected to a residual current device which is also connected to another circuit. Detectors shall be located as shown on drawings. NOTE- smoke and heat detectors to be interlinked. A smoke or heat detector shall be located so that it is;

- Either on a ceiling and not less than 300mm from wall or light fitting, or where designed for wall mounting, on a wall and not less than 150mm and not more than 300mm from the ceiling.
- Not less than 300mm from, and not directly above a heater or air conditioning ventator.
- On a surface which is normally at the ambient temperature for the space it bounds.
- Easily and safely accessible.

Any existing radon / Gas protection measures in place to the existing dwelling will need to be maintained within the proposed extension.

Any existing sub floor ventilation measures in place to the existing dwelling will need to be maintained within the proposed extension.

ANCHOR STRAPS
30 x 5mm galvanised anchor straps to be fixed at rafter,
floor and ceiling joist levels where running parallel
to any external or separating walls.
All to be securely fixed at maximum 1800mm centres
and tied down wall minimum 225mm.
30 x 5mm galvanised steel straps to be fixed at
1800mm centres along wall plate and tied down
wall minimum 450mm.

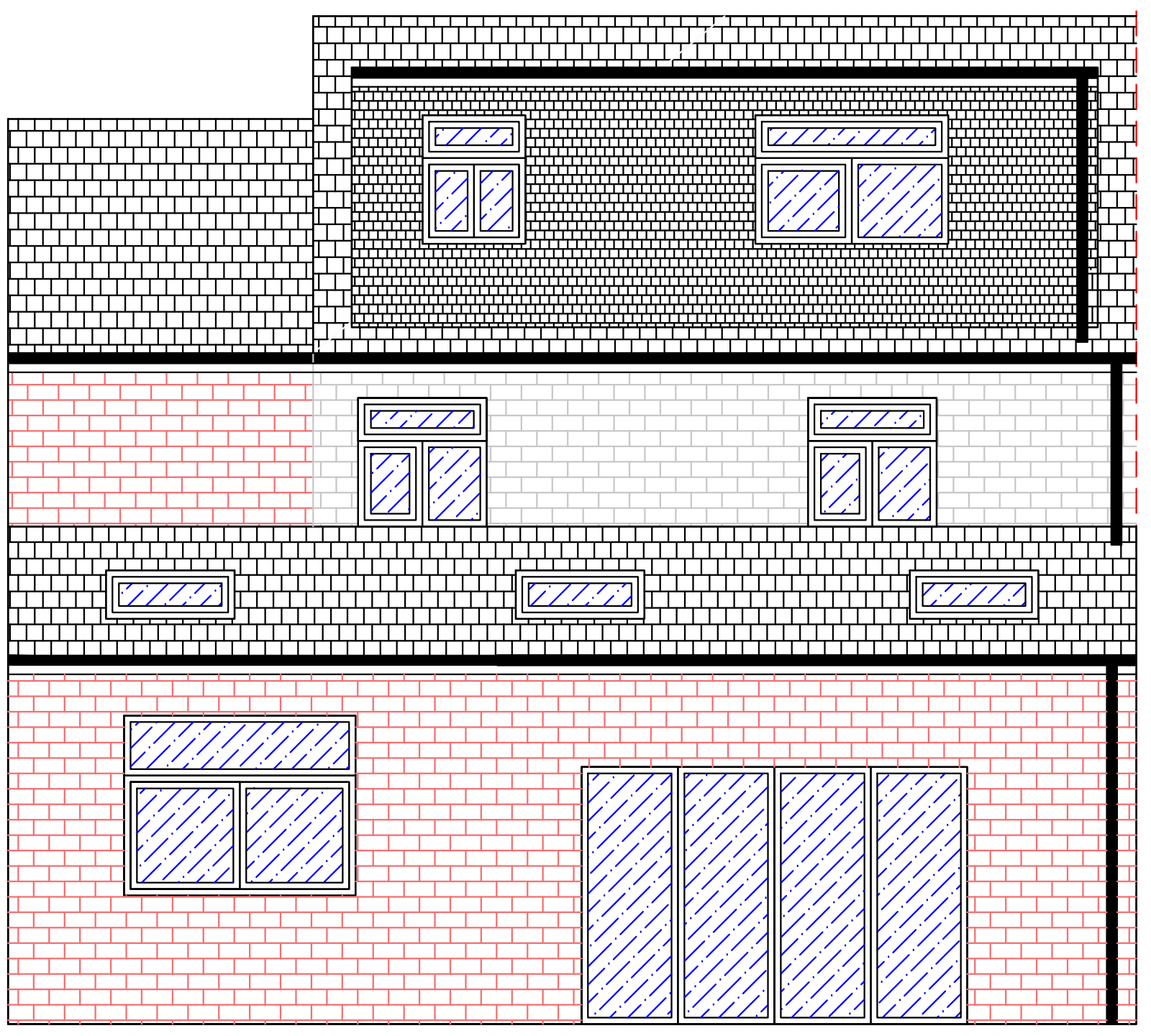
Wall Construction
EXTERNAL WALLS 'U' Value 0.18w/m2k
102mm facing brick to match existing.
100mm cavity with BBA approved or similar full fill insulation quilt.
Lightweight blockwork 'K' value not less than 0.11w/mk and a density not less than 450Kg/m3. 13mm lightweight plaster.
Stainless steel Wall ties at 750mm horizontally, 450mm vertically,
300mm around openings. All cavities closed with insulated cavity closer. DPC 150mm above finished ground level, cavity trays to lintels. fitted as per manufacturers guidlines.
Weak mix concrete cavity fill to ground level.

VENTILATION
Windows and are to provide a minimum of 1/20th floor area natural ventilation.
Background ventilation minimum 8000 sq mm to each room.
Provide mechanical extract ducted to the outside air to the following-

Bathrooms [with or without wc]- 15 litres/sec
Sanitary Accommodation- 6 litres/sec.

Any glazing under a height of 800mm to be safety glass.
All glazing to be double glazed units with a minimum 16mm air gap
with low E coating to achieve a minimum U value of 1.40W/m2.K

RAINWATER
100mm half round upvc gutters,
68mm dia downpipe to
discharge into sealed
back inlet gully.



Proposed Rear Elevation

PITCHED ROOF
Tiles to match existing on 38 x 25mm sw battens on sheathing felt on roof trusses as specified below.100mm glass fibre insulation laid between ceiling joists,150mm laid over joists opposite way to first layer.
Provide proprietary rafter trays to ensure insulation does not obstruct air flow.
VENTILATION TO PITCHED ROOF
Provide continuous 25mm wide ventilation gap to eaves and the equivalent of 5mm continuous ventilation gap (2no tile vents) at ridge level.

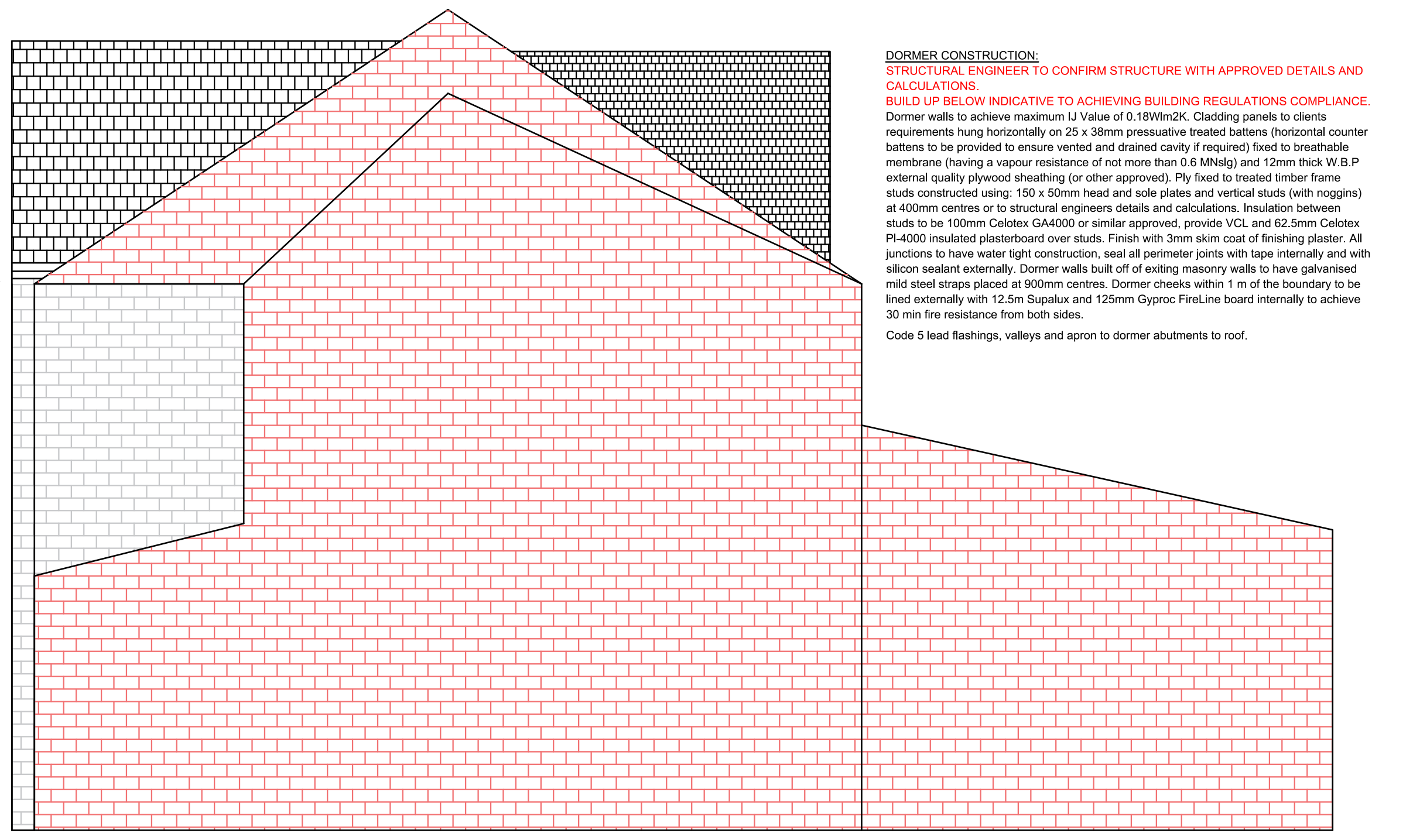
All open ventilation to receive proprietary anti vermin mesh.

12.5 mm fireline plasterboard and skim to ceiling.

Roof rafters 150 x 50 max span 3.74m @ 400mm c/c
resting on wall plate with metal straps mechanically fixed to wall, pitch to suit roof tiles/ sltes

RAINWATER
100mm half round upvc gutters,
68mm dia downpipe to
discharge into sealed
back inlet gully.

Dormer to be finished in slate to match the roofing tiles/slate colour.



Proposed Side Elevation

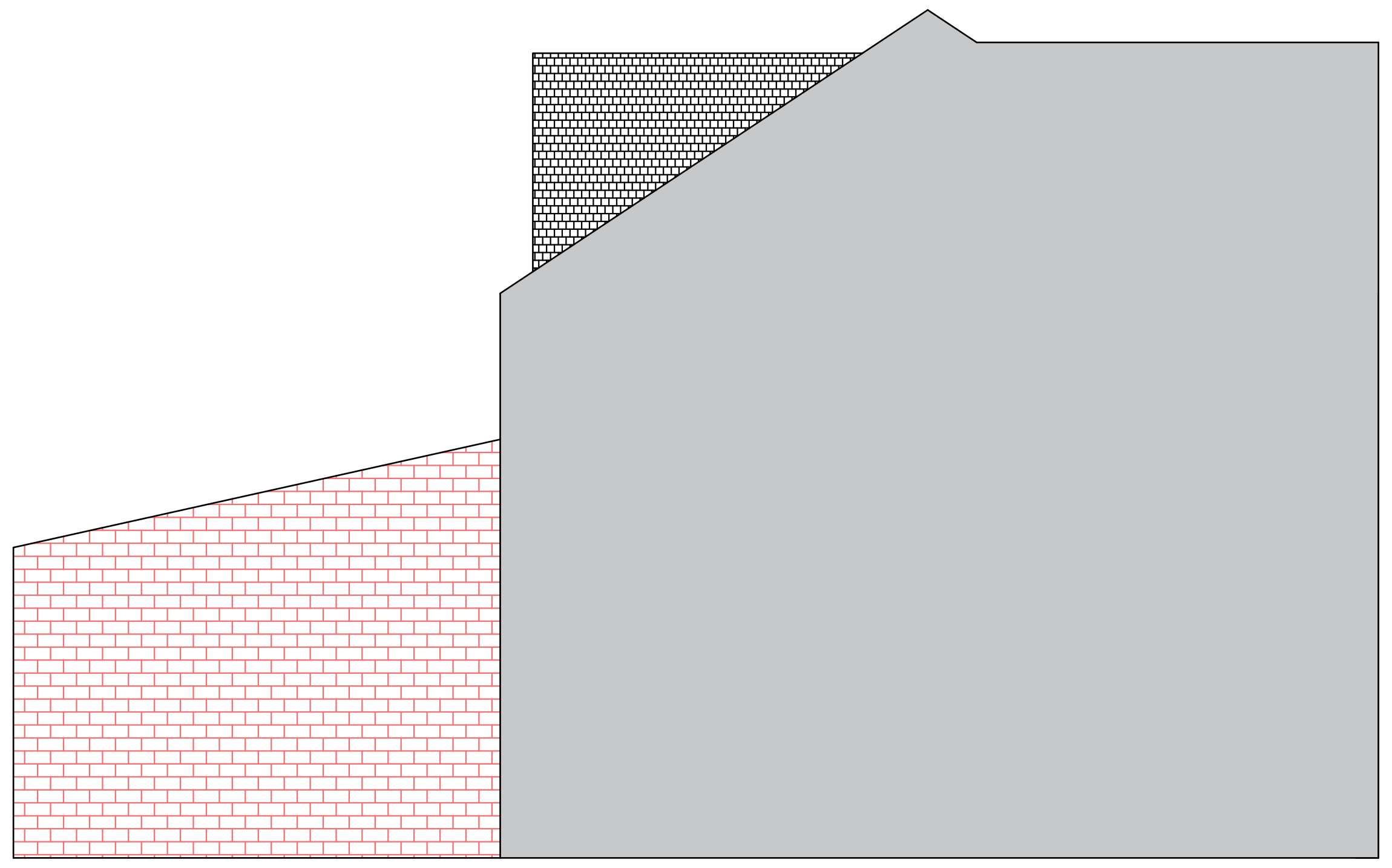
DORMER CONSTRUCTION:

STRUCTURAL ENGINEER TO CONFIRM STRUCTURE WITH APPROVED DETAILS AND CALCULATIONS.

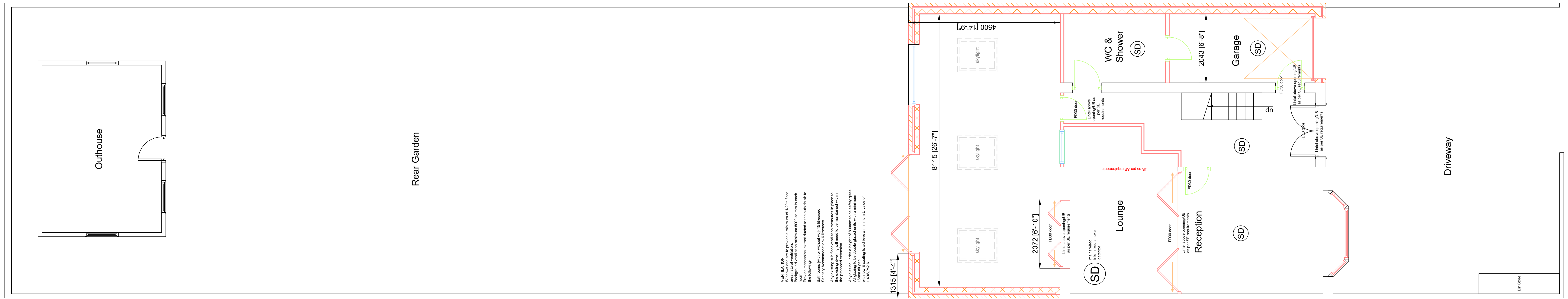
BUILD UP BELOW INDICATIVE TO ACHIEVING BUILDING REGULATIONS COMPLIANCE.

Dormer walls to achieve maximum IJ Value of 0.18Wlm2K. Cladding panels to clients requirements hung horizontally on 25 x 38mm pressuative treated battens (horizontal counter battens to be provided to ensure vented and drained cavity if required) fixed to breathable membrane (having a vapour resistance of not more than 0.6 MNslg) and 12mm thick W.B.P external quality plywood sheathing (or other approved). Ply fixed to treated timber frame studs constructed using: 150 x 50mm head and sole plates and vertical studs (with noggins) at 400mm centres or to structural engineers details and calculations. Insulation between studs to be 100mm Celotex GA4000 or similar approved, provide VCL and 62.5mm Celotex PI-4000 insulated plasterboard over studs. Finish with 3mm skim coat of finishing plaster. All junctions to have water tight construction, seal all perimeter joints with tape internally and with silicon sealant externally. Dormer walls built off of exiting masonry walls to have galvanised mild steel straps placed at 900mm centres. Dormer cheeks within 1 m of the boundary to be lined externally with 12.5m Supalux and 125mm Gyproc FireLine board internally to achieve 30 min fire resistance from both sides.

Code 5 lead flashings, valleys and apron to dormer abutments to roof.



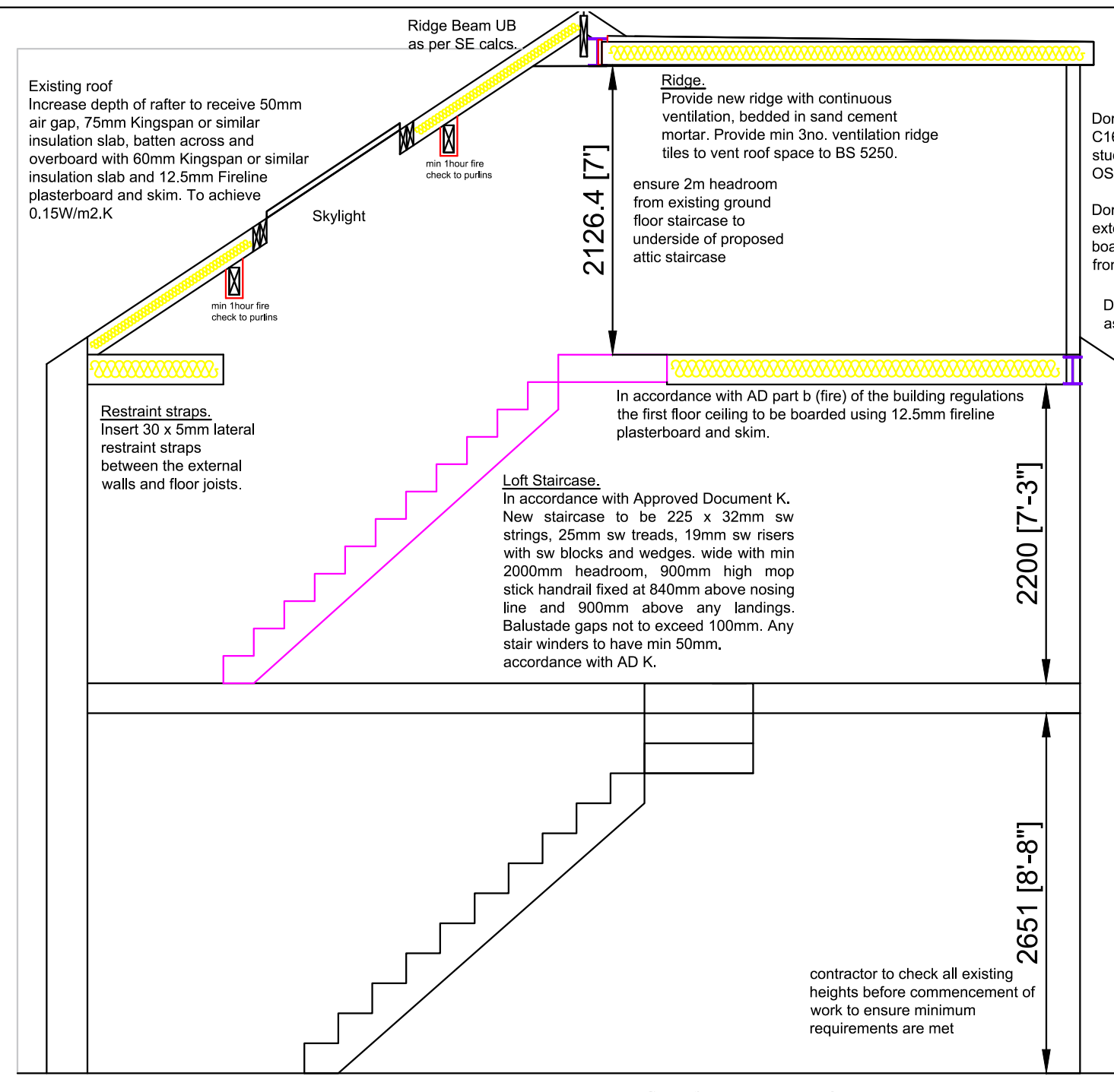
Proposed Side Elevation



Proposed Ground Floor

LOFT FLOOR F UPGRADES:
STRUCTURAL ENGINEER TO CONFIRM STRUCTURE WITH APPROVED DETAILS AND CALCULATIONS. BUILD UP BELOW INDICATIVE.
New 195x75mm CIS floor joists to span onto existing wall plate. Provide 150mm Rockwool insulation or similar between existing joists sat on 25mm dia wire mesh fixed to underside of existing ceiling joists. Min. 22mm tongue and groove timber flooring covering. Provide mid span strutting. In areas with higher moisture content the flooring is to be moisture resistant grade in accordance with SS EN 312:2010. Underside to be lined 1 layer of 12.5mm Gyproc fireboard, or 2 x 12.5mm Gyproc plasterboard with staggered joints and skimmed.

SMOKE DETECTION:
Mains operated linked smoke alarm detection system to SS EN 14604 and to at least Grade D category 1-23 standard to be mains powered with battery back up to be placed on each floor with an additional interlinked heat detector at ceiling level in the kitchen f required by BCO. Smoke alarms should be sited so that there is a smoke alarm in the circulation space on all floors and within 75m of the door to every habitable room. If ceiling mounted, they should be 300mm away room the walls and light fittings.



Existing roof
Increase depth of rafter to receive 50mm air gap, 75mm Kingspan or similar insulation slab, batten across and overboard with 60mm Kingspan or similar insulation slab and 12.5mm Fireline plasterboard and skim. To achieve 0.15W/m2.K

Ridge.
Provide new ridge with continuous ventilation, bedded in sand cement mortar. Provide min 3no. ventilation ridge tiles to vent roof space to BS 5250.

ensure 2m headroom from existing ground floor staircase to underside of proposed attic staircase

Dormer face.
C16 grade 150 x 50
studs max 600mm c/c. Outer face overboarded with 9.5mm OSB. As per SE report

Dormer cheeks within 1m of the boundary to be lined externally with 12.5m Supalux and 12.5mm Gyproc FireLine board internally to achieve 30 min fire resistance from both sides.

Restraint straps.
Insert 30 x 5mm lateral restraint straps between the external walls and floor joists.

In accordance with AD part b (fire) of the building regulations the first floor ceiling to be boarded using 12.5mm fireline plasterboard and skim.

Existing rafters.
Trim as required and fix to wall plate and dormer face.

Loft Staircase.
In accordance with Approved Document K. New staircase to be 225 x 32mm sw strings, 25mm sw treads, 19mm sw risers with sw blocks and wedges. wide with min 2000mm headroom, 900mm high mop stick handrail fixed at 840mm above nosing line and 900mm above any landings. Balustade gaps not to exceed 100mm. Any stair winders to have min 50mm. accordance with AD K.

Restraint straps.
Insert 30 x 5mm lateral restraint straps between the external walls and floor joists.

contractor to check all existing heights before commencement of work to ensure minimum requirements are met

Proposed Dormer Loft Cross Section

DO NOT SCALE FROM THIS DRAWING - ALL DIMENSIONS INM/MM

SCALE BAR 1:50

0 1 2 3 4 5 10

Scale 1:50	Project 25 Northfield Rd, Manchester, M40 3SY
Drawn	
Checked	
Date 20.06.2025	Title **Proposed Single Storey Rear Extension, Double Storey Side Extension with Dormer Loft Conversion**
CAD File AA/25NORTHFIELD/250573	
Dwg No 001	
Revision 000	

AM ARCHITECTURAL & SURVEYING