

NEW EXTERNAL WALLS (Insulated Cavity)
Masonry external walls to consist of insulated cavity construction achieving an overall U-value of 0.28 W/m²K U-value subject to a maximum 25% of glazed openings (calculations required for over 25%).
Use vertical twist type wall ties, to BS 1243, to be fitted as work proceeds at 450mm centres and 750mm horizontal centres reducing to 300mm centres at cavity closures and movement joints.
Lintels to be insulated and be "top hat" style, or have a perforated baseplate with a maximum effective conductivity of 30W/m²K. Provide suitable stop ends to outer skin to suit perp joints and a minimum 2no weep vents (at maximum 450mm c/o's). Openings to be provided with prefabricated insulated cavity closer profiles achieving 0.45m²/W thermal resistance path. Refer to Robust Details 3.09-3.12.
Cavity insulation to be taken at least 150mm below the top of the ground floor insulation and, for gable ends of pitched roofs, at least 250mm above the underside of the roof insulation. Insulation to be fitted in accordance with manufacturers recommendations and Robust Details.

External wall construction as follows:
Dense blockwork outer skin suitable for render application, rendered externally (bricwork outer skin to front elevation at low level - refer to elevations), 100mm cavity full filled with Knuf Ditrux Cavity Slab 32 Ultimate insulation, 100mm Durux Supabloc (3.5N/mm²) inner skin, Lightweight plaster or plasterboard on dabs internal finish.
Alternative products can be used subject to achieving required U-values and minimum compressive strengths required by Structural Engineer. All external walls to achieve 0.28 U-value

RENDER
External cement render to be one 12mm thick 1:1.6 cement/lime/sand undercoat with a dry scratch keyed finish to take 8mm thick finishing coat.
The top coat must be weaker and thinner than the undercoat and generally render must not be stronger than the background material.
Use coarse sharp sand to BS 1199/1200 for undercoat and avoid excessive proportions of very fine material for finish coats. Use hydrated limes to BS890. Refer to BS 5252 for recommended application details.

EXISTING / NEW EXTERNAL WALL ABUTMENT
Provide Furix wall extension profiles, or similar approved, where new and existing walls adjoin. Bed wall ties into mortar joints and maximum 300mm centres and provide external sealing strip or mastic sealant to manufacturers recommendations.

WALL PLATES
Bed minimum 100 x 50mm treated softwood wall plates, with half lapped joints, for fixing of roof timbers.
Provide minimum 1000mm long 30 x 2.5mm galvanized steel straps at a maximum of 2.0m centres to anchor wall plate.
Screw fix straps to walls with a minimum of 3no fixings (1st fixing maximum 150mm from bottom). Top of strap to be turned over and nailed to the wall plate.

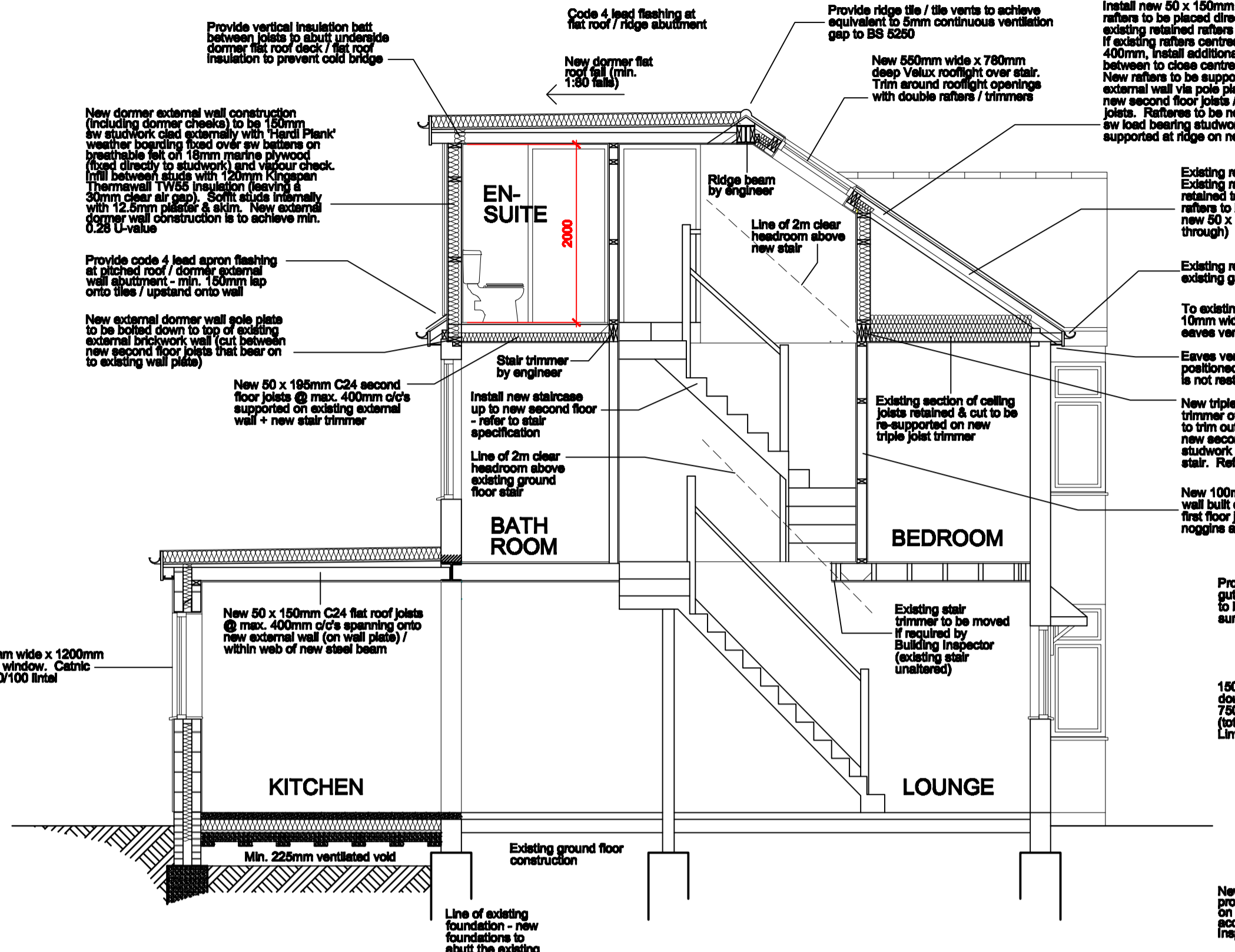
PLASTER (lightweight)
Internal plaster finish to be one 11mm thick coat of Carlite Standard undercoat lightly keyed to take 2mm thick, steel float finished, Carlite Finish top coat applied in accordance with BS 1191 and manufacturers guidelines.

NEW STRUCTURAL STEEL BEAMS
Install structural steelwork i.e. beams, peditones / bearings, frame etc in accordance with structural engineers drawings/calculations. Downstand beams to be protected on three sides with 15mm Glasroc S frameless encasement, fitted in strict accordance with manufacturers details, to achieve half hour fire resistance.

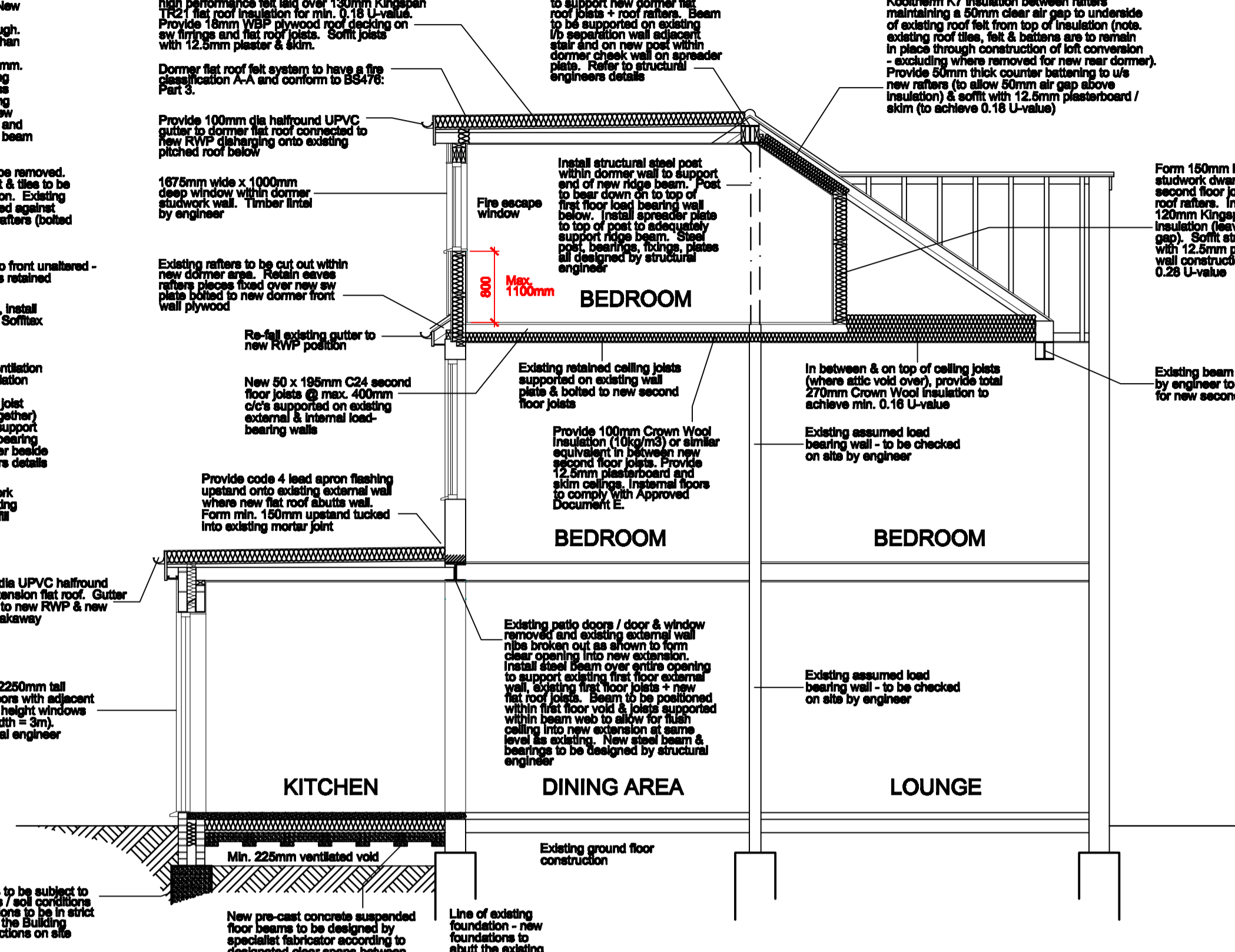
NEW WINDOWS & DOORS
Windows/door area of 25% or less of the floor area (plus any openings enclosed by extensions).
All new timber, aluminium or PVC-U windows and rooflights to be double glazed to achieve 1.6 W/m²K U-value, Window Energy Rating (WER) Band C.
Glazed doors (glazed more than 50%) to achieve 1.8 W/m²K U-value. Other external doors to achieve 1.8 W/m²K U-value.
Opening elements of windows, doors and rooflights to be provided with draught strips and be fitted in strict accordance with Robust Details (typically details 3.10 and 3.12).
Frames to be provided with trickle vents to achieve a total of 8000mm² area of ventilation in habitable rooms and 4000mm² elsewhere.
Windows and external doors, to habitable rooms, to provide a minimum total opening area equivalent to 1/20th of the room floor area for rapid ventilation.
All glazing within critical locations to be provided with safety glazing to BS 6206:1981.
Critical locations are defined as the following:
* All glazing within 800mm of internal or external finished floor levels.
* All glazing in doors, and glazing within 300mm of doors, that is within 1500mm of internal or external finished floor levels.

FIRE ESCAPE WINDOWS
New second floor bedroom is to have a fire escape window.
Window provided for escape purposes should be fitted with an opening light which provides an unobstructed opening of at least 0.33m², and is at least 450mm wide and 450mm high. The bottom of the opening should be installed at a maximum of 1100mm above finished floor level.

NEW SECOND FLOOR CONSTRUCTION (timber)
New second floor to be 22mm Caberfloor P5 or similar Type C4 1&G moisture resisting flooring grade chipboard (minimum mass 15kg/m²) laid staggered with glued joints, on floor joists, as shown, supported on suitable joist hangers to BS 5689 and BS 4071 or built into walls (with voids sealed) subject to Local Authority acceptance.
Double joists, where installed, to be bolted together 150mm from each end and at 450mm centres, at mid depth, using M12 bolts, toothed plate connectors and 35mm square washers prior to installation. Double up joist centres and provide bearers under baths, appliances and other areas where excessive loads may occur. Provide 38 x 38mm herringbone trussing at mid span centrally for joists spanning 2.5-4.5m, with timber block between wall and last joist at the end of run of strutting.
Provide solid sitting where joists are supported on steelwork, hangers or loadbearing intermediate walls. Infill between joists with 100mm Crown Wool (or similar insulation of a minimum density of 10kg/m³) and softm floor with 12.5mm Gyproc Wallboard 10 (minimum mass 10kg/m²), with staggered scrimmed and paper taped joints, and skm finish to achieve sound insulation and 1/2hr overall fire resistance. Provide 10mm gap to edges of chipboard at room perimeters and support on joists or nogginns nailed with min 55mm long ring shank nails at 200-300mm c/c's and 400-500mm o/c's elsewhere.



SECTION A-A 1:50



SECTION B-B 1:50

LATERAL RESTRAINT (floors/ceiling)
Where joists span parallel with external walls, provide 30 x 5mm galvanized steel lateral restraint straps and solid timber nogginns at a maximum of 2.0m centres, carried over 3no joists, for lateral restraint to BS5263.
Provide solid timber packing between end joist and external wall. Notch joists, top or bottom, and fix straps with minimum 2no screws or nails into each joist. Straps to be positioned centrally, built into, and turned over, a full block within the inner skin of the external wall.
Where joists run perpendicular to wall use fully nailed restraint type joists hangers or ensure minimum 90mm bearing of joists built into walls.

NEW STAIRS (maximum 1000mm wide)
All stair details shown on drawings are indicative. Prior to fabrication the fitting contractor is to carry out a detailed measured survey on site and ensure compliance with BS 585 and the following:
The sum of twice the rise plus the going should not be more than 700mm or less than 550mm. Overall stair dimensions to be divided equally into tread sizes.
Pitch - 42 degrees maximum.
Headroom - minimum 2000mm above pitch line.
Going - 223mm minimum, 300mm maximum.
Rise - 202mm maximum, 165mm minimum.
OR
Going - 245mm minimum, 280mm maximum.
Rise - 220mm maximum, 165mm minimum.

For stairs with tapered treads the minimum going of any part of the tread shall not be less than 50mm.

Balustrading to be fitted on open sides of stairs and landings. Handrails to be fitted, with at least 25mm clearance from wall, on one side of enclosed stairs and to outside edge of tapered tread stairs.
Handrails/balustrading to be fitted at 900-1000mm above floor level/pitch line.

Open riser stair treads should overlap at least 16mm.

There should be no opening in any part of the stair which would allow the passage of a 100mm diameter sphere.

NEW EXTERNAL DORMER WALLS
External dormer walls to consist of 150 x 50mm sw vertical studs at 450mm centres, and nogginns as appropriate, on 150 x 50mm SW sole plate up to 150 x 50mm sw head plate.
Sole plate to be fixed to top of new first floor joists / existing external wall and restrained using galvanised metal straps.
Provide double studs where double joists are to be supported. Provide timber lintels over door openings as shown and support on additional "cripple studs".
Walls to be finished with "Hardi Plank" fibre cement weatherboarding (non-combustible material) fixed to 38 x 18mm laminated battens fixed over breathable felt on 16mm Supalux joist (to dormer cheek where half hour fire resistance required) + 18mm marine plywood fixed directly to studwork for strength, stiffness & stability.
Infill between studs with 120mm Kingspan Thermawool TW65 insulation to achieve min. 0.28 U-value.
Dormer studwork external wall insulation to be taken full height to underside roof felt. Provide 12.5mm plaster board with skm finish internally on 1000 gauge vapour barrier

FIRST / SECOND FL. INTERNAL WALLS (non loadbearing partitions)
Internal partition walls to be Gyproc Metal Stud Partition (minimum 45mm thick), or similar prefabricated metal studwork system, fixed in accordance with manufacturers details, including 15mm deflection head detail. For timber walls, studs are to be minimum 75mm thick.
Infill walls with 50mm Quiet Zone partition roll insulation (minimum density 18kg/m³), screw fix tapered edge 12.5mm Gyproc Wallboard 10 (minimum mass 10kg/m²) and finish with plaster skim (achieving sound insulation and half hour fire resistance).
Provide coving, fixed to ceiling only, to work in conjunction with, and cover, deflection detail.
Install double joists/nogginns to support partitions on timber floor.
Partition walls shown on drawings are based on an overall thickness of 100mm. Stated dimensions to be adjusted to suit selected studwork system.
All joints to be well sealed in order to provide required sound insulation particularly to Bedroom walls and walls to rooms containing a water closet.

PLUMBING
All PVC-U fittings to BS EN 1565 and fitted to CP304.
Provide rodding eyes to all changes of direction in new pipe work. All appliances to be fitted with 75mm deep seal traps and non ferrous fixings.
WC systems to be fitted with 100mm diameter outlet, cold water supply and cistern warning overflows.
Wash hand basins to be fitted with hot & cold water supply, 75mm anti-siphon deep seal traps.
Baths & showers to be fitted with hot & cold water supply and 50mm anti-siphon deep seal traps.

Sanitary appliances to discharge via PVC-U waste pipes to bottle gullies, 100mm diameter PVC-U stub stacks/soil & vent pipes (SVP's), as shown on drawings. Connections to discharge pipes must be offset to avoid crossover. Stub stacks to be fitted with air admittance valves. SVP's to terminate with a basket a minimum of 900mm above head of any windows within 3000mm.
Soil and vent pipes fitted internally to be wrapped in 25mm insulation and boxed in with 25mm plasterboard covered timber framing with access panel serving rodding access at base.

NEW ALTERED ELECTRICAL WORKS
All new and extended electrical work (including lighting) is to be designed, installed, inspected and tested in accordance with BS 7671 (I.E.E. Wiring Regulations 16th Edition) and Approved Document P and M.
The works are to be undertaken by an installer registered under a suitable electrical self-certification scheme, or alternatively by a suitable qualified person, with a certificate of compliance produced by that person to Building Control on completion of the works.
Lighting (internal and external) is to include a minimum proportion of energy efficient fittings in accordance with Approved Document L1B.
A commissioning certificate, showing compliance, should be issued to Building Control on completion of works.
Operating and maintenance instructions, demonstrating controls/adjustments and service/maintenance schedules, to be provided to the building occupier as part of the installation.

HEATING
Existing gas boiler serving wet system is to be checked for capacity for new radiators.
All work carried out to boiler / heating system is to be done by a CORGI registered engineer / installer who shall provide signed test certificate to Building Control.
All new radiators are to be fitted with Thermostatic Radiator Valves (TRVs).
MECHANICAL VENTILATION
Provide Vent-Axia or similar mechanical extractor fans ducted independently to external air to serve Bathrooms / en-suites (minimum 15 l/s).
Sanitary accommodation separate from bathroom and without opening windows of 1/20th of the floor area, to be provided with minimum 6 l/s.
Rooms without windows to have minimum 15 minute fan overrun operated by the light switch or sensor.

FIRE DOOR FD20 (STAIRWELL ENCLOSURE)
Provide 20 minute fire door and frame to new door between new second floor left room and new stairwell enclosure as noted on the plans (with intumescent strips). Door to comply with BS 476-22: 1987 and be fitted with self Closing device and face fixed hardware suitable for Fire situations.

SMOKE DETECTORS
Provide mains operated smoke detectors, to BS 5446 part 1, connected to separately fused circuit.
Detectors to be situated to ground floor hall, and first / second floor landing areas no more than 3.0m from bedroom doors.
LIGHTING
25% of internal lights fittings must only accept compact fluorescent lamps (CFL), or similar energy efficient fittings of greater than 40 lumens per circuit-watt.
All external lighting to be fitted with photo-cell and movement sensors and/or energy efficient fittings of greater than 40 lumens per circuit-watt.

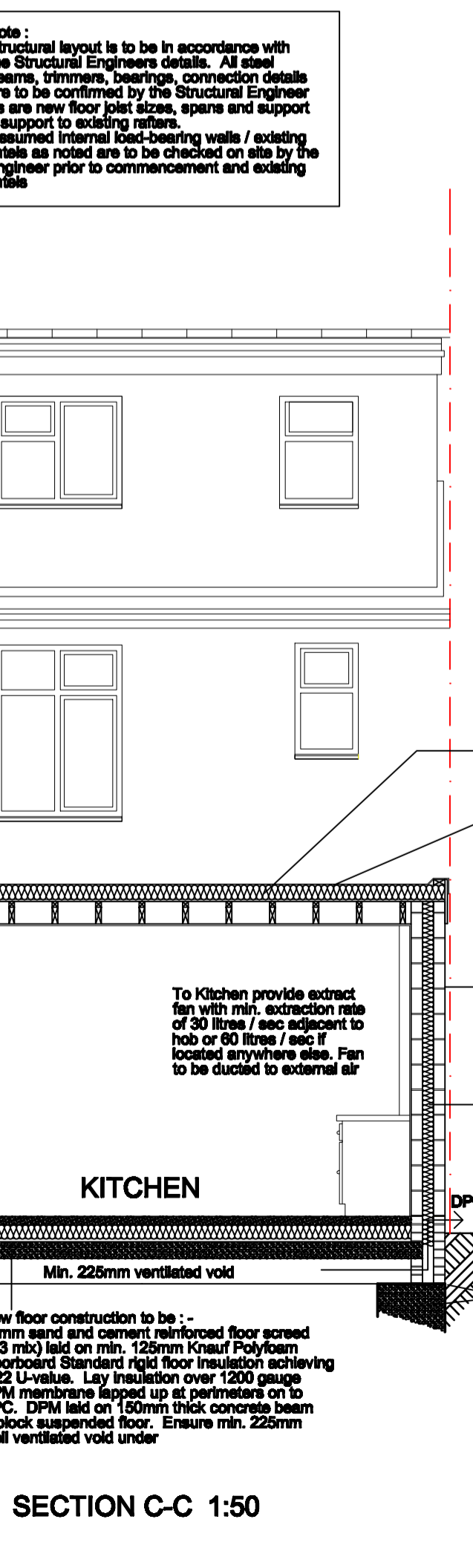
Note:
Structural layout is to be in accordance with the Structural Engineers details. All steel beams, trusses, connections details are to be confirmed by the Structural Engineer as are new floor joist sizes, spans and supports + support to existing rafters.
Assumed internal load-bearing walls / existing lintels as noted are to be checked on site by the engineer prior to commencement and existing lintels.

NEW EXTERNAL WALL CONSTRUCTION
New external wall construction to be 300mm cavity blockwork comprising 100mm dense blockwork outer skin rendered externally (blockwork to be suitable for render application). 100mm filled cavity with Knuf Earthwool Ditrux Cavity Slab 32 Ultimate insulation to achieve min. 0.28 U-value. Inner skin to be 100mm blockwork finished internally with 12.5mm plaster and skm.

PROPOSED CAVITY WALLS (100mm cavity)
To have vertical twist type wall ties placed at max. 750mm horizontal centres. Ensure adequate embedment into each wall skin.

Provide truncated air bricks and perceptive vents to maintain cross flow ventilation to underfloor void

External side walls to fill flush with edge of new foundations (due to proximity of boundaries). Foundations under side walls to be 800mm wide



SECTION C-C 1:50

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Do not copy from this drawing, use figured dimensions only.
The drawing must be read in conjunction with all other related drawings and documentation.
It is the contractor's responsibility to ensure compliance with the Building Regulations.
It is the contractor's responsibility to check all dimensions on site, any discrepancy to be reported immediately.
Details and sizes shown are indicative only and are subject to confirmation by the relevant Specialist Sub-contractor.
This drawing is not to be for Land Registry purposes.

Revision	Date

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PROPOSED REAR EXTENSION AND LOFT CONVERSION WITH DORMER

PROPOSED SECTIONS A-A, B-B, C-C AND SPEC

Status
CONSTRUCTION

Sheet	Drawn	Date
A16:150	PDE	JUL 2012
Job number	Drawing no.	Revision
ADP164BRG	04	