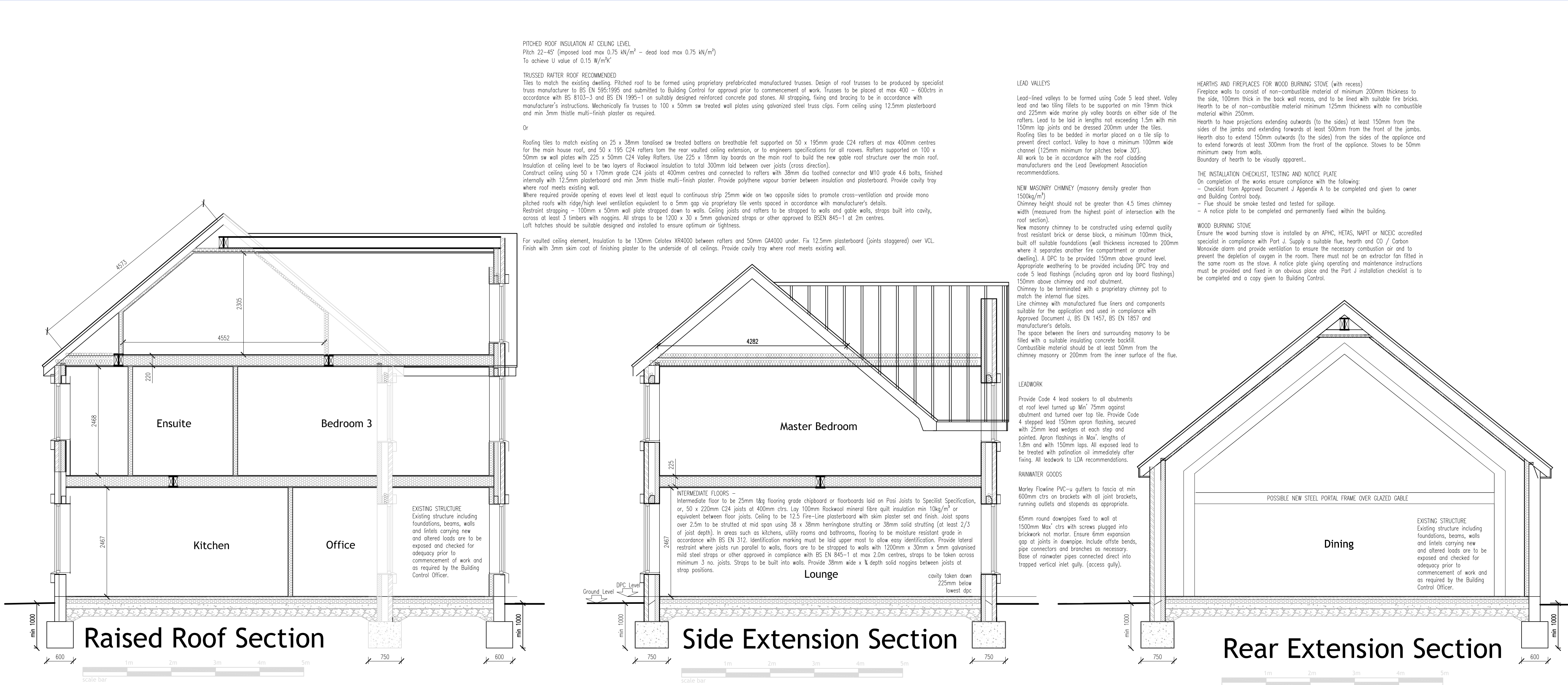




FOUNDATIONS

TRENCH FOUNDATION
If BCO confirm ground conditions are suitable for standard foundations, provide 750mm x 600mm trench fill foundations, concrete mix to conform to BS EN 206 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 2010 Building Regulations A1/2 and BS 8004 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. Subsoile 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.

PIPES PASSING THROUGH TRENCH FOUNDATIONS
The load-bearing capability of foundations must not be affected where services pass through.
The pipe work should be sleeved and be provided with 'rocker pipes' at a distance of 150mm either side of the foundation concrete. The 'rocker pipes' should have flexible joints and be a maximum length of 600mm.
Alternatively
Pipework should pass through a suitably strengthened opening in the foundation, i.e. foundation shuttered and a provided with suitable lintel over the pipe allowing for sufficient space for movement to ensure that the drain is capable of maintaining line and gradient. Opening should be masked with granular backfill (pea shingle) around pipe.
DPC to be provided as required by BCO.
Advice from Building Control to be sought on suitability of pipe running through foundation before construction.

Where Foundations are in close proximity to trees and hedges the foundation depths and ground floor construction to be in accordance with NHBC Publication/Chapter 4.2, Building near trees.

FULL FILL CAVITY WALL WITH INTERNAL INSULATION

To achieve minimum U Value of 0.18 W/m²K
New cavity wall to comprise of 100mm suitable facing brick with a cavity to match the existing wall being built on. Full fill the cavity with 50mm Rockwool Cavity insulation, inner leaf constructed using 100mm lightweight block, 0.15 W/m²K, e.g. Celcon solar, Thermatec turbo.
Insulate internal using 100mm Celotex GA4000 insulation board fixed to 25 x 50mm battens at 600mm centres to provide a nominal 25mm cavity between the masonry and insulation. Fix a vapour control layer on the warm side of the insulation. Finish with 12.5mm plasterboard with a plaster skim.
All work to be in accordance with BS 8000-8:2023 Design and installation of dry lining systems.

all new walls off new foundations to be:

FULL FILL CAVITY WALL

To achieve minimum U Value of 0.18 W/m²K
New cavity wall to comprise of 100mm suitable facing brick. Full fill the cavity with 150mm Ditherm 32 insulation as manufacturer's details. Inner leaf constructed using 100mm lightweight block, 0.15 W/m²K, e.g. Celcon solar, Thermatec turbo. Internal finish to be 12.5mm plasterboard or dabs. Walls to be built with 1:1.6 cement mortar.
DRY LINING EXISTING CAVITY WALL
To achieve min U-value 0.18W/m²K
The existing external walls must be checked for stability and be free from defects as required by the Building Control Officer. Insulate existing wall on the inside using 100mm Celotex GA4000 insulation board fixed to 25 x 50mm battens at 600mm centres to provide a nominal 25mm cavity between the masonry and insulation (50mm cavity to be provided if required by building control).
Fix a vapour control layer on the warm side of the insulation. Finish with 12.5mm plasterboard with a plaster skim.
All work to be in accordance with BS 8000-8:2023 Design and installation of dry lining systems.

WALL TIES
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 EN 845

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.

CAVITIES

Provide cavity trays over openings. All cavities to be closed at eaves and around openings using Thermabote or similar non combustible insulated cavity closers. Provide vertical DPC's 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 abut the existing walls provide a movement joint with vertical DPC. All tied into existing construction with suitable proprietary stainless steel profiles.

CAVITY BARRIERS

30 minute fire resistant cavity barriers to be provided around openings, at joints of walls, gable end walls, vertically at junctions with separating walls and horizontally at separating floors. Cavity trays to be provided over barrier where required. Trays and cavity barriers to be installed according to manufacturer's details.

SOLID FLOOR INSULATION OVER SLAB

To meet min U value required of 0.18 W/m²K
P/A ratio 0.5
Solid ground floor to consist of 150mm consolidated well-rammed hardcore, blinded with 50mm sand blinding. Provide 100mm S12 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2 over a 1200 gauge polythene DPM. DPM to be lapped in with DPC in walls. Floor to be insulated over slab and DPM with min 100mm thick Celotex GA4000 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 by 150mm and sealed. Finish with 65mm sand/cement finishing screed with light mesh reinforcement. Where drain runs pass under new floor, provide A142 mesh 1.0m wide and min 50mm concrete cover over length of drain.
Where existing suspended timber floor or bricks are covered by new extension, ensure cross-ventilation is maintained by connecting to 100mm dia UPVC pipes with 100mm concrete cover laid under the extension. Pipes to terminate at new 65mm x 215mm air bricks with cavity tray over.

STAIRS

Dimensions to be checked and measured on site prior to fabrication of stairs. Timber stairs to comply with BS585 and with Part K of the Building Regulations. Max rise 220mm, min going 220mm. Two risers plus one going should be between 550 and 700mm. Tapered treads to have going in centre of tread at least the same as the going on the straight. Min 50mm going of tapered treads measured at narrow end. Pitch not to exceed 42 degrees. The width and length of every landing should be at least as great as the smallest width of the flight. Doors which swing across a landing at the bottom of a flight should leave a clear space of at least 400mm across the full width of the flight. Cupboard doors may open across a top landing where the swing is a minimum of 400mm from the tread. Min 2.0m headroom measured vertically above pitch line of stairs and landings. Handrail on staircase to be 900mm above the pitchline, handrail to be at least one side if stairs are less than 1m wide and on both sides if they are wider. Ensure a clear width between handrails of minimum 600mm. Balustrading designed to be unclimbable and should contain no space through which a 100mm sphere could pass.

EXTRACT TO UTILITY ROOM

To utility room provide mechanical ventilation ducted to external air capable of extracting at a rate of 30 l/s. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermitent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

EXTRACT TO KITCHEN

Kitchen to have mechanical ventilation with an extract rating of 60 l/s, or 30 l/s if adjacent to hob to external air. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermitent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

EXTRACT FOR SHOWER ROOM

Provide mechanical extract ventilation to shower room ducted to external air capable of extracting at a rate of not less than 15 l/s. Vent to be connected to light switch and to have 15 minute over run if no window in the room. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermitent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

EXTRACT TO BATHROOM

Bathroom to have mechanical vent ducted to external air to provide min 15 l/s. Vent to be connected to light switch and to have 15 minute over run if no window in room. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermitent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

MEANS OF ESCAPE – Fire doors

Form a protected escape stairway by providing half hour fire resistance to all partitions. Ceiling to be upgraded to provide half hour fire resistance or modified half hour fire resistance as appropriate. Stairway to be protected at all levels – from the loft room/rooms then leading directly to an external door at ground level (no inner rooms allowed). All doors on to the stairway must be FD20 rated fire doors to BS 476 or the European equivalent BS EN 1634 (fitted with intumescent strips rebated around sides & top of door or frame if required by BCO). Where applicable, any glazing in fire doors to be half hour fire resisting and glazing in the walls forming the escape route enclosure to have 30 minutes fire resistance to at least 1.1m above the floor level or stair pitch line.

MEANS OF ESCAPE – Door upgrade

Form a protected escape stairway by providing half hour fire resistance to all partitions as well as floors and ceilings above and below rooms. Stairway to be protected at all levels – from the loft room/rooms then leading directly to an external door at ground level (no inner rooms allowed). Existing doors on to protected route to be upgraded with proprietary intumescent paint/paper products with relevant BBA certificate applied as manufacturer's details to achieve 20 minutes fire resistance (check suitability of doors as agreed with building control before works commence on site). A copy of the purchase invoice will be required by building control on completion to confirm product used and manufacturer to confirm fire resistance achieved. Doors to be fitted with intumescent strips rebated around sides & top of door or frame if required by BCO. Where applicable, any glazing in fire doors to be half hour fire resisting and glazing in the walls forming the escape route enclosure to have 30 minutes fire resistance and be at least 1.1m above the floor level or stair pitch line.

Or:

MEANS OF ESCAPE – SDs in all rooms and retaining existing doors

Fire Engineer's justification for proposal to be provided if required.
The following 3 conditions should All be met:

- Provide smoke detectors at every storey level, at half landing levels adjacent to habitable rooms and in all habitable rooms. An additional heat detector is also required in the kitchen. Smoke detection to be mains operated linked smoke alarm detection system to BS 5446 – 1:2000 mains powered with battery back up.
- Provide an egress window at first floor level with an unobstructed operable area that complies with:
 - minimum height of 450mm and minimum width of 450mm.
 - minimum area 0.3m²
 - the bottom of the operable area should be not more than 1100mm above the floor.
 - The window should enable the person to reach a place free from danger from fire.
- Provide a protected escape route requiring doors to be min standard of traditional timber panel type at least 32mm thick, with steel hinges, not warped and fitting well into its frame with no visible defects particularly in the panels, (hardboard or other lightweight flush doors are not acceptable). Walls throughout stair enclosure and frames around doors must be checked and be free from defects as required by the Building Control Officer. Any glazing in doors to be half hour fire resisting and glazing in the walls forming the escape route enclosure to have 30 minutes fire resistance and be at least 1.1m above the floor level or stair pitch line.

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PIPES PASSING THROUGH TRENCH FOUNDATIONS

The load-bearing capability of foundations must not be affected where services pass through.
The pipe work should be sleeved and be provided with 'rocker pipes' at a distance of 150mm either side of the foundation concrete. The 'rocker pipes' should have flexible joints and be a maximum length of 600mm.
Alternatively
Pipework should pass through a suitably strengthened opening in the foundation, i.e. foundation shuttered and a provided with suitable lintel over the pipe allowing for sufficient space for movement to ensure that the drain is capable of maintaining line and gradient. Opening should be masked with granular backfill (pea shingle) around pipe.
DPC to be provided as required by BCO.
Advice from Building Control to be sought on suitability of pipe running through foundation before construction.

Where Foundations are in close proximity to trees and hedges the foundation depths and ground floor construction to be in accordance with NHBC Publication/Chapter 4.2, Building near trees.

LEAD VALLEYS

Lead-lined valleys to be formed using Code 5 lead sheet. Valley lead and two tiling fillets to be supported on min 19mm thick and 225mm wide marine ply valley boards on either side of the rafters. Lead to be laid in lengths not exceeding 1.5m with min 150mm lap joints and be dressed 200mm under the tiles.
Roofing tiles to be bedded in mortar placed on a tile slip to prevent direct contact. Valley to have a minimum 100mm wide channel (125mm minimum for pitches below 30°).
All work to be in accordance with the roof cladding manufacturers and the Lead Development Association recommendations.

NEW MASONRY CHIMNEY (masonry density greater than 1500kg/m³)

Chimney height should not be greater than 4.5 times chimney width (measured from the highest point of intersection with the roof section).
New masonry chimney to be constructed using external quality frost resistant brick or dense block, a minimum 100mm thick, built off suitable foundations (wall thickness increased to 200mm where it separates another fire compartment or another dwelling). A DPC to be provided 150mm above ground level. Appropriate weathering to be provided including DPC tray and code 5 lead flashings (including apron and key board flashings) 150mm above chimney and roof abutment.
Chimney to be terminated with a proprietary chimney pot to match the internal flue sizes.
Line chimney with manufactured flue liners and components suitable for the application and used in compliance with Approved Document J, BS EN 1457, BS EN 1857 and manufacturer's details.
The space between the liners and surrounding masonry to be filled with a suitable insulating concrete backfill.
Combustible material should be at least 50mm from the chimney masonry or 200mm from the inner surface of the flue.

LEADWORK

Provide Code 4 lead sakers to all abutments of roof level turned up min 75mm against abutment and turned over top tile. Provide Code 4 stepped lead 150mm apron flashing, secured with 25mm lead wedges at each step and pointed. Apron flashings in Max lengths of 1.8m and with 150mm laps. All exposed lead to be treated with patination oil immediately after fixing. All leadwork to LDA recommendations.

RAINWATER GOODS

Morley Flowline PVC-u gutters to fascia at min 600mm ctrs on brackets with all joint brackets, running outlets and standoffs as appropriate.
60mm round downpipes fixed to wall at 1500mm Max ctrs with screens plugged into brickwork not mortar. Ensure 6mm expansion gap at joints in downpipe. Include offset bends, pipe connectors and branches as necessary. Base of rainwater pipes connected direct into trapped vertical inlet gully (access gully).

HEARTHIS AND FIREPLACES FOR WOOD BURNING STOVE (with recess)

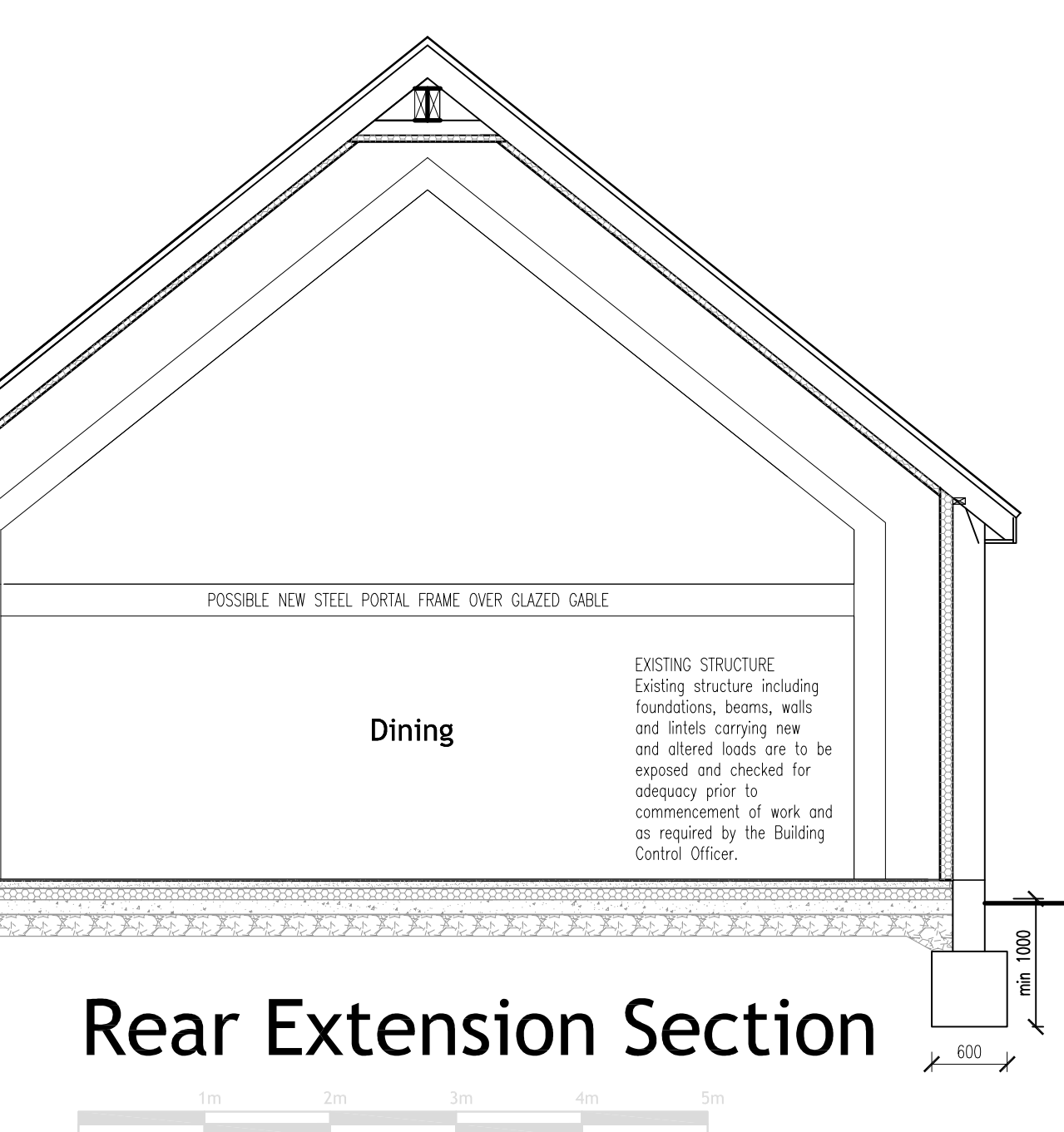
Fireplace walls to consist of non-combustible material of minimum 200mm thickness to the side, 100mm thick in the back wall recess, and to be lined with suitable fire bricks.
Hearth to be of non-combustible material minimum 125mm thickness with no combustible material within 250mm.
Hearth to have projections extending outwards (to the sides) at least 150mm from the sides of the joints and extending forwards at least 500mm from the front of the joints.
Hearth also to extend 150mm outwards (to the sides) from the sides of the appliance and to extend forwards at least 300mm from the front of the appliance. Stoves to be 50mm minimum away from walls.
Boundary of hearth to be visually apparent..

THE INSTALLATION CHECKLIST, TESTING AND NOTICE PLATE

On completion of the works ensure compliance with the following:
– Checklist from Approved Document J Appendix A to be completed and given to owner and Building Control body.
– Flue should be smoke tested and tested for spillage.
– A notice plate to be completed and permanently fixed within the building.

WOOD BURNING STOVE

Ensure the wood burning stove is installed by an APHC, HETAS, NAPIT or NIDCD accredited specialist in compliance with Part J. Supply a suitable flue, hearth and CO / Carbon Monoxide alarm and provide ventilation to ensure the necessary combustion air and to prevent the depletion of oxygen in the room. There must not be an extractor fan fitted in the same room as the stove. A notice plate giving operating and maintenance instructions must be provided and fixed in an obvious place and the Part J installation checklist is to be completed and a copy given to Building Control.



Rear Extension Section

Part 'B' Fire Safety

New walls and ceilings to provide 30min separate to adjoining areas

FD30 fire door with self closing device and fitted with heat activated seals in conjunction with flexible edge seals installed between garage and dwelling.

All new ceilings to be 12.5mm plasterboard with skim finish to give 30min fire protection.

All new steelwork to be encased in 2 layers of 12.5mm plasterboard to give 30 min fire protection

A Fire Detection and Alarm System designed and installed in accordance with BS 5839 part 6:2004 comprising Ceiling mounted smoke alarms provided on each floor to BS 5446-part 1:2000, situated max 4.5m from habitable rooms and min 300mm off adjacent walls and light fittings. Permanently wired to a separate fused circuit at the distribution board. Alarms to be linked together and have a battery back up supply. Provide a fire detector to kitchen.

New FD20 fire doors to have a minimum 25mm rebate, an additional 12mm planted stop to be screwed to the existing door frame/lining if required.

Part 'F' Ventilation

Kitchens and Utility Rooms to be ventilated to provide Min' 60 l/s second and operated by an intermittent timer and light switch with a 20 minute over-run.

Bathrooms, Ensuites and wc to be ventilated to provide 15 l/s second extraction, operated by an intermittent timer and humidistat. Over-run to be 20 minutes.

Internal rooms to be ventilated to 3 air changes/hr, unless kitchen or bathroom operated by an intermittent timer and also operated by the light switch and over-run for 20 minutes after room has been in use.

Part 'F' Drainage

Internal

Showers, bath and sink waste pipes are to be fitted with 40mm Min' dia' waste pipes. Wash hand basins to be fitted with 32mm Min' dia' waste pipe. WCs to be fitted with 100mm Min' dia' waste pipes. Where 40mm dia' wastes exceed 3m in length or 32mm dia' wastes exceed 1.7m in length, anti-siphon traps must be fitted. 40mm and 32mm dia' waste shall be installed at a gradient of 1:80 (min 150mm dia' have less than 600mm of cover the pipes shall be installed at a Min' gradient of 1:80mm/m run. All new showers, baths, sinks and wash basins be fitted with 75mm deep seal traps. Any new SVP to terminate not less than 900mm above any window where within 3m of the pipe.

Below Ground

New drainage to conform with part H of the Building regulations and BS 8301:1985 and to be formed in 100mm dia' (unless otherwise stated) Hepworth Supersleeve, laid in straight and even falls of Min' 1:40 for foul and 1:80 for surface water, with flexible water joints.

Drains to have Class N bedding, consisting of 100mm regulating granular material to BS 8301:1985 and Min' cover of selected fill free from stones larger than 40mm, lumps of clay over 100mm, timber, frozen material or other vegetable matter. Where rigid pipes of less than 150mm dia' have less than 600mm of cover the pipes shall be surrounded with concrete with a thickness of at least the dia' of the pipe.

Drains under Buildings

Drains under buildings to be surrounded with a Min' 100mm granular material. Drains within 300mm of the underside of the floor slab should be surrounded in 150mm Min' of concrete. 'Spundie' prestressed concrete linings to be used above all openings where drains run through a wall or under foundations. Maintain a 50mm clearance around pipes to openings. Openings in walls need to be masked either side with rigid sheet material.

Where a trench containing a drain is within 1m of the building, fill with concrete to the lowest level of the building or where more than 1m from the building, fill with concrete to a level equal to the distance from the building less 150mm.

New Manholes are to be constructed in 215mm Class B engineering brickwork to BS 3921, laid in english bond in 1:3 cement/sand mortar flush pointed. Concrete base to be 150mm thick in C25 grade concrete. Covers to be heavy duty to BS 497. Inspection chambers in accordance with manufacturers instructions. Covers to be medium duty to BS 497.

Part 'P' Combustion Appliances

Existing gas heating equipment to be extended into new rooms. All new radiators to have TRVs's.

Part 'N' Glazing

Windows to match existing, fitted with trickle vents to give 8000mm sq ventilation area or 4000mm sq The windows shall be as scheduled or as otherwise described on the drawings. All windows to have locking handles. New glazing to have low E coating to give U-value of 1.4W/m²K. New Glazing to be max 25% of floor area. If above the ratio calculations for whole house glazing to be supplied. Doors between house and conservatories to be external grade with a U Value of 1.4W/m²K.

Part 'L1' Conservation of Fuel and Power

For extensions which create 3 new rooms 1 No Energy efficient light fitting which will only take a lamp having a luminous efficiency greater than 40 lumens per circuit-watt must be provided.

New Condensing boiler to have a SEDBUK value of 92% or more

Part 'M' Disabled Access

Switched Socket Outlets to be 450mm above Finished Floor Level. New light switches to be 1200mm above Finished Floor Level. All as outlined in Approved Document M2 diagram 22.

Part 'P' Electrical Installations

All new Electrical work to be installed, inspected and tested in accordance with BS 7671:2018 I.E.E Wiring Regulations (18th Edition) The works are to be undertaken by an installer registered under a suitable electrical self-certification scheme, with a Certificate of compliance produced to Building Control on completion of the works.

Before works begin

Contractors must verify all dimensions on site before commencing works on site. Any discrepancies must be reported to EP Architecture before works are undertaken or materials are ordered.



46 Shrubbery St,
Kildersmore
Worcestershire, DY10 2QY

Telephone 01562 630767

project

Proposed Extension
323 Rugby Road,
Burbage, Leicestershire,
LE10 2NB

drawing

Proposed Sections

scale 1:50/1:100 date 22/05/23 drawn DS

Job no 23127-04M

Copyright

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NOTE:

These drawings are subject to inspection by a Qualified Structural Engineer to identify any structural elements that may be required. Beam and trimmer locations that are already marked on the drawings are suggested locations only.