

**General Specifications**

All sizes to be checked by Contractor on site prior to construction

All new drainage to comply with BS 5572: 1994

All drainage to be carried out in accordance with the manufacturers instructions and to the satisfaction of the Local Authority.

All building works to be carried out in accordance with Building Standards (Scotland) Regulations 2015

All electrical installations are to comply with the relevant requirements of BS 7671:2018 (Am+3:2015) and to be undertaken by a contractor with membership to SELECT or NICEIC.

Ventilator with an opening area of at least 1/30th of floor area of the floor it serves to be provided.

12,00sq.m (minimum) trickle ventilation to be provided, 10,000sq.m to kitchen, en-suite & bathroom.

Glazing below 800mm to be laminated glass per BSEN 12543 and BS 6262.

No High alumina cement to be used in the works.

Boilers will have suitable identification labels

All swags must be boxed in plywood and have access at base for cleaning and testing.

All the internal door widths to be a min. of 775mm clear. Moisture resistant boards at locations where constantly wetted.

**Setting out.**

Contractor to check all setting out and all existing dimensions prior to commencement of works, the contractor is responsible for the accuracy of all dimensions and correct setting out, any discrepancies to be brought to the immediate attention of the architect, all setting out (unless stated otherwise) to unified faces, all dimensions are in millimetres unless noted otherwise, no dimensions to be scaled off drawings.

**DPC**

Horizontal DPC to be minimum 150mm above adjacent ground level and to be UPVC felt to BS 6398 1983 OR Visqueen. Vertical DPC with insulation to be provided to all openings in external walls. All DPCs/DPMs to be continuous throughout, any penetrations to be sleeved.

**Timber frame details**

Timber frame to be designed, fabricated and erected in accordance with BS EN 1995-1-1:2004+A1:2008.

All structural and permanent exterior timber to be pressure impregnated against rot and fungal attack after cutting and prior to delivery.

All site cut timbers to be site treated.

All structural timber to be stress graded kiln dried CLS.

**Dormer wall Construction: (U Value 0.17 W/m2K)**

Horizontal timber cladding on 50mm battens on 50mm counter battens, 50mm cavity with 1 layer breather membrane 9mm plywood sheathing, 145x45 C16 Timber frame Ø 600mm crs with 140mm Celotex XR4000 between studs, 1000 gauge vapor control layer and 9mm plywood sheathing to inside face. 1 layer 37.5mm thk Celotex PL4025 insulated plasterboard to inside face with board joints sealed with skim coat as VCL.

U value: 0.17 W/m<sup>2</sup>K  
Spread of flame: low risk  
Fire rating: 30 minutes

**Dormer Roof Construction: (U Value 0.13 W/m2K)**

Single ply roofing membrane (Sarna or equal), on 175mm thk (80+85mm) Kingspan thermaroof TR27 LFC/FM insulation on bitumenous vapour check 18mm exterior grade plywood decking 45x95 C16 rafters. Internal finish to be 12.5mm thk plasterboard with all boards sealed as air leakage barrier with 3mm skim coat.

U value: 0.13W/m<sup>2</sup>K  
Spread of flame: low risk  
Fire rating: 30 minutes

**Fire Stops**

Fire stops to be located at every opening within external wall, change in direction and separating floorwall junctions, eaves level, TCB cavity barrier or equal, 8m centres maximum and around all window and door openings.

TCB cavity barriers (or equal) to be installed in newly formed openings in existing walls.

**Limiting Infiltration**

all works to be carried out such as to limit air infiltration, including the following:

- a. sealing the gaps; at roof space openings, between dry linings and masonry walls at the edges of window and door openings, and at the junctions between walls, floors and ceilings.
- b. sealing vapour control membranes in timber framed and other framed panel constructions.
- c. sealing at service penetrations of the fabric or around boxing/ducting for services.
- d. fitting draught seals to the openable parts of windows, doors, access hatches and rooflights.

the extension shall have vapour barrier (also acting as air tightness barriers) to the new external walls & roofs, form using visqueen 1000 gauge vapour barrier (or equal) stapled to the timber framing / underside of roof timbers, all laps in the barrier to be a minimum of 150mm, with all joints sealed with firstly double sided tape (50mm wide) and a secondary 50mm wide tape to the room face of the lap.

roof barriers to lap a minimum of 100mm over the external wall barriers with joints sealed as before.

The fitting of all barriers to be neat, tight to the timber and without bulges or ripples.

carefully fold barrier in to window and door heads / cills / joints and staple in place, add additional lap of barrier to corners and seal as before to maintain air tightness.

apply air tightness tape between vapour barrier and face of window frame or door frame prior to application of wallboard.

ensure precise workmanship to limit thermal heat loss through gaps.

**Thermal Bridging**

Structural steelwork to be enclosed in insulation so as to limit the effects of thermal bridging in accordance with section 6.2.3 of the technical standards.

**Transmission of sound**

All party walls to be constructed in accordance with section 5.2 of the technical hand book and the BSD standard details as noted below.

**Internal walls (Type 1A)**

Single layer of gypsum based board of minimum mass per unit area 10 kg/m<sup>2</sup>. Timber frame minimum 75 mm studs at maximum 600 mm centres.

Absorbent layer of mineral wool (minimum thickness 25 mm and minimum density 10 kg/m<sup>3</sup>) that may be wire reinforced and suspended in the cavity. All joints sealed.

**Roof ventilation, fascias & soffits**

Roof fascia & bargeboards to be in 16mm PVCu boards, soffits to be in 9mm PVCu boards, all fixed in strict accordance with the manufacturer's site work instructions.

High level ventilation to be the equivalent of 5mm continuous strip ventilation.

Low level roof ventilation to be by means of full length soffit ventilator to provide the equivalent of 10mm continuous ventilation.

**Internal timber finishing:**

Skirting – 150 x 25mm in M.D.F to take paint finish.

Door Facings – 95 x 25mm in moulded M.D.F to take paint finish.

Sillboards – 19mm in M.D.F cut to length with 45 x 12mm uprons to take paint finish.

**Ceiling:**

1 No. layer 12.5mm wallboard nailed to u/s of trusses. Sheets nailed at 150mm ctrs.

**Windows: (U Value 1.4 W/m2K)**

Any glazing below the height of 800mm or in danger of collision to be toughened to BS 6262: part 4: 1994.

U-value through windows and doors to not exceed 1.4W/m2K (combined)

All new windows to be uPVC, coloured and styled to match existing double glazed fitted with low E glass, laminated externally.

All glass to comply with BS 6262 and all windows to be clean light and labelled.

All windows to be fitted with restrictor stays.

All windows to be reversible to facilitate external cleaning from inside.

Window (glazed) areas to be a min. of 1/15th of the floor area. Opening area to be 1/30th of room floor area minimum.

**Security:**

All new windows and doors are to be designed and installed in full compliance with section 2 of 'Secure by design' scheme. (ACPO 2009). All fixings are to be designed to the recommendations given in section 8 of BS 8213-4: 2007 and undertaken by a specialist contractor.

**Fire Protection To Steel**

All steelwork to be surrounded in 1 no. layer 15mm thk fireline board (or 2no. layers 12.5mm thk plasterboard – staggered joints), all joints taped and filled to provide a 60 minute resistance to fire.

**Central heating:**

Design of the installation to be the responsibility of the plumbing sub-contractor.

Position of new radiators are to be treated as provisional until plumbing sub-contractor confirms radiator sizes.

New radiators to be fitted with thermostatic radiator valves.

Pipework in solum, voids & ducts or above ceilings & within walls to be insulated with 15mm class '0' foam, all as per BS 5422: 2009

All pipework to be securely fixed to building structure with metal pipeclip and backplate.

All new pipework to be copper to BS 2871 or pex barrier pipe.

**Dewatering/demolition notes:**

all scaffolding and barricades to be erected and checked in accordance with bs 5973 and bs 5974, all demolitions to be carried out in strict accordance with the health and safety at work etc. act 2000 and bs 6187 : 2000.

The contractor shall be responsible for all temporary works necessary to ensure the stability of the existing structure at all times.

The existing structure must be securely propped prior to removal of walls, the props must remain in position until the load can be carried by the new beam packed to the underside of brickwork and mortar cured, all masonry to be saw cut with diamond tipped blade prior to removal of masonry to avoid disruption to remaining walls.

Any unsound masonry should be removed and rebuilt using class b engineering brick set in 1:3 mortar, cross bonded or tied to existing with proprietary wall start systems, if in doubt about support consult engineer for direction.

Any unusual unforeseen features exposed during works effecting proposals different from that shown on the detailed proposals should be referred to the architect/engineer for direction prior to progressing further, upon removal of plasterboard finishes walls should be inspected for any unforeseen structural elements prior to commencement of works to confirm nature of structure shown on the drawings.

**Combustion Appliances: Gas Boiler**

Existing gas to be retained unaltered. Should this change, all works are to be designed and installed by specialist contractor in full compliance with section 3.21 (air for combustion) of the technical standards.

A sufficient air supply in accordance with BS EN 5440-2:2000 must be maintained to ensure safe and efficient boiler use inclusive of cooling.

**Electrical Specification:**

All electrical installations are to comply with the relevant requirements of BS 7671:2018 (Am+3:2015) and to be undertaken by a contractor with membership to SELECT or NICEIC.

All electrical work to comply with the up to date IEE Regulations

sockets for appliances to be single at low level and switched above worktop in a location to suit appliance, fitted with a neon light and labelled.

**Electrical fixtures:**

Outlets and controls of electrical fixtures and systems should be positioned at least 350mm from any internal corner, projecting wall or similar obstruction and, unless the need for a higher location can be demonstrated, not more than 1.2m above floor level.

This would include fixtures such as sockets, switches, fire alarm call points and timer controls or programmers. Within this height range:

- 1. Light switches should be positioned at a height of between 900mm and 1.1m above floor level.
- 2. Standard switched or unswitched socket outlets and outlets for other services such as telephone or television should be positioned at least 400mm above floor level.
- 3. Above an obstruction, such as a worktop, fixtures should be at least 150mm above the projecting surface.
- 4. Where sockets are concealed, such as to the rear of white goods in a kitchen, separate switching should be provided in an accessible position, to allow appliances to be isolated.

**Smoke Detectors:**

Smoke/Co2 detector to be mains operated with 72 hour standby supply and audible warning that mains supply is off with capacity for warning of smoke for a further 4 minutes.

Audible warning to be given every minute when standby supply falls below that required to satisfy necessary duration.

Alarm to be ceiling mounted, at least 300mm from any wall or light fitting and located not more than 7m from door to living room or kitchen and not more than 3m from door to room intended to be used as sleeping accommodation to be measured horizontally.

Smoke detectors to be hard-wired and complete with mounting block, optional sensor, and rechargeable batteries and kite marked. To BS 5839 Part 6 2019 Grade D type LD3. Protective covers to alarms until completion of construction.

**Carbon Monoxide Detectors:**

new battery operated carbon monoxide detectors to BS EN 50291-1: 2010

**Light fittings:**

All lighting to be installed in accordance with manufacturers written instructions.

**Recessed downlighters:**

Where recessed light fittings are to be used, LED compact fluorescent or low voltage tungsten lamps are to be used to minimise heat build up.

The fittings are to be fitted in non combustible enclosures that provide at least 75mm clearance around the fitting for air to circulate. The enclosure is to be sealed to prevent air leakage into the attic space.

Light switches to be located 900-1050 from FFL

**Ventilation**

Ventilation to all rooms to be via opening windows to 1/30th of the floor area, trickle ventilation of 12,000mm2 to all apartments.

Mechanical ventilation to WC to achieve 15 litres/second fitted with a humidistat and wired back to the light switch and fitted with a 20 minute over run. Vent-axia Ltd. 'Silhouette 100H, or equal and approved, complete with flexible duct kit, condensing trap, grille. Wired through unswitched fused connection unit at high level, colour: white.

Mechanical ventilation to the utility room to achieve 30 litres/second and fitted with a humidistat, located above the Hob/Cooker area. Vent-axia Ltd. 'Silhouette150', or equal and approved, with telescopic wall fit accessories and external grille

**Hot & cold water:**

all new distribution pipework, required to achieve new layout, to be sized to suit.

draw off valves should be located at low points of the system to ensure that the system can be fully drained down.

hot water points of delivery to be fitted with anti-scald devices that prevents hot water discharge exceeding 48 degrees c.

**General pipework:**

all new pipework to be fully supported.

all new pipework to be fully insulated in accordance with BS5422: 2009.

holes for pipe runs shall be of the minimum diameter necessary and shall be centered in the neutral axis of timbers, notching and drilling of joists to be within the limitations set out in the nhbc good craftsmanship guide (carpentry and joinery – carcassing).

**Plumbing:**

Feed from mains to all appliances to be in copper pipework. All hot water services to be insulated as per BS 5422: 2009.

All Pipework in solum, voids & ducts or above ceilings & within walls to be insulated with 15mm class '0' foam.

Hot water supply pipework should be insulated over its entire length as far as the appliance it serves.

All pipework to be securely fixed to building structure with metal pipeclip and backplate.

All new pipework to be copper to BS EN 1057:1996. Thermostatic shower mixer valve connected to be boiler to be installed within ensuite.

Taps to wash hand basin to have a flow rate of not more than 6/litres per minute.

Dual flush WC cistern should have an average flush volume of not more than 4.5litres to ensure water efficiency.

**Internal drainage**

Where SVP is enclosed in a duct a removable panel shall be provided adjacent to the SVP access point.

Wastewater drainage installation to be in accordance with BS EN 12056-2:2000.

**Rainwater drainage**

Rainwater drainage to consist of half round PVCu guttering and fittings connected to 68mm circular downpipes, all by Marley Plumbing & Drainage. PVCu downpipes. All gutters and downpipes to match existing.

**Heating:**

New dormer to be heated with radiators fed from existing 'A' rated boiler.

All new radiators to be fitted with TRV's. \*\*TRV's to be located at the top of radiator at a height of 600-800mm from FFL.

**Energy: Hot water supply pipes:**

All new hot water supply pipes to be wrapped in insulation to protect against heat loss.

All alterations to existing hot water supply pipework to be wrapped in insulation to protect against heat loss.

Existing hot water supply pipes to be wrapped in insulation as far as reasonably practical.

**Energy: Fixed internal lighting:**

75% of the fixed light fittings and lamps installed within the dwelling should be low energy type, with a luminous efficiency at least 45 lumens/circuit watt, for example tubular fluorescent and compact fluorescent fittings, these fittings may be either:

dedicated fittings which will have a separate control gear and will only take low energy lamps (e.g. pin based lamps); or standards fittings supplied with low energy lamps with integrated control gear (e.g. bayonet or edison screw base lamps).

all recessed light fittings to be fitted with galvanised steel downlight guards to prevent overheating.

**Energy: Fixed external lighting:**

fixed external lighting should either:

be rated at not more than 100 lamp watts per light fitting with automatic control by movement detection (e.g. pir) and photocell to ensure operation only when needed; or

have fittings with an efficiency of at least 45 lumens per circuit-watt, with automatic control by photocell to ensure operation only when needed.

in addition to the above, manual switching may be provided to override operation of automatic controls.

**Energy: Mechanical Ventilation:**

All new mechanical extract fans to be compliant with section 6.6.3 of the domestic building regulations and have a power of:

Intermittent extract ventilation: 0.5W/l/s

Continuous supply ventilation: 0.5W/l/s

Continuous extract ventilation: 0.5W/l/s

**GENERAL NOTES:**

- 1. This drawing is to be read in conjunction with all relevant engineering drawings and specifications.
- 2. All dimensions are in millimetres unless stated otherwise.
- 3. The contractor is to verify all dimensions on site and is responsible for the accurate setting-out.
- 4. Do not scale from this drawing, all sizes scaled from this drawing will be approximate and should be checked on site by the user, if in doubt ask.