

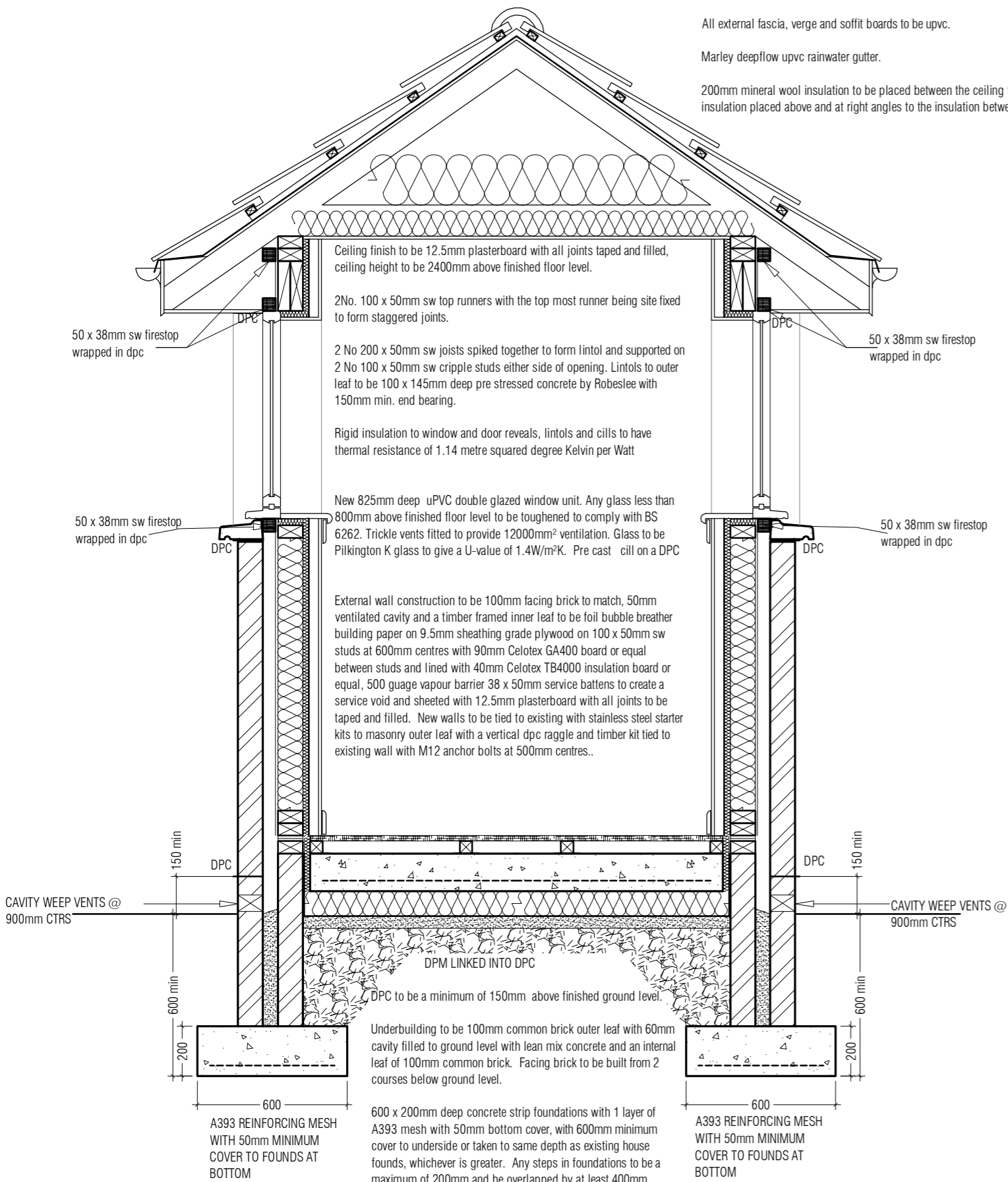
Where roof meets existing wall install a code 5 lead flashing 150mm high to be ragged 38mm in to the wall and dressed down in to a code 5 lead secret valley gutter.

Roof to be Marley Plain concrete roof tiles, colour and type to match existing on 50 x 38mm sw battens and counter-battens on 1No. layer of Kingspan Nilvent breathable roofing membrane, installed in accordance with manufacturers written instructions on 12.5mm timber sarking boards on pre-manufactured roof trusses at 600mm centres. Design certificate for roof trusses to be submitted to Building Control and or structural engineer prior to works being completed on site. Roof pitch to be 35°. Trusses to be tied down with Bat truss clips. Roof bracing to be in accordance with truss manufacturers recommendations and BS EN 1995 -1-1. All roofing for ridge, verge etc. to be dry fixed in accordance with manufacturers details. Roof tiling to be carried out in accordance with BS 5534

All external fascia, verge and soffit boards to be upvc.

Marley deepflow upvc rainwater gutter.

200mm mineral wool insulation to be placed between the ceiling ties of the trusses with a further 200mm mineral wool insulation placed above and at right angles to the insulation between ties.



TYPICAL SECTION 1:20

MAIN SPECIFICATION

FOUNDATIONS

Ground make up and depth of existing foundations to be checked prior to the commencement of any works. All foundations to be on a sub soil with a bearing capacity of 100kN/m<sup>2</sup> with 600mm minimum cover to underside or to same depth as existing house founds, whichever is greater. Foundations to be 200mm deep concrete strip foundations with one layer A393 mesh with 50mm bottom cover. Concrete to be 35 Newton and to BS 5328. Cement to be Ordinary Portland to BS 12. Aggregates both coarse and fine to be BS 882. Nominal maximum size of aggregate to be 20mm. No concrete to be placed against frozen or frost covered surfaces.

UNDERBUILDING

To be 100mm common brick outer leaf with a 60mm cavity filled to ground level with lean mix concrete and an inner leaf of 100mm thick common brick. All underbuilding to be in good quality common brick. A DPC to be inserted 150mm minimum above finished ground level. New walls tied to existing with stainless steel starter kits. Facing brick to be built from 2 courses below ground level.

DAMP PROOF COURSES AND LEAD.

To cavity walls, cavity closures, firestops, steps and cills to be bituminous felt or PVC to BS 743. All leadwork for flashings, valley gutters etc to be in accordance with BS6915 : 2001

FLOOR

Floor level in extension to be continuous from existing building into proposed extension and consist of 22mm moisture resistant T&G chipboard flooring on 50 x 50mm tanalised sw battens on a DPC on 150mm thick float finished concrete with 1 layer of A252 mesh with 50mm top cover on 120mm thick Kingspan Thermalfloor TF70 insulation on 1200 gauge Visqueen DPM on 50mm sand blinding on 100mm well compacted and consolidated hardcore. 50mm rigid insulation around perimeter of floor slab to prevent cold bridging.

Floor in converted garage to be level with existing house floor level and consist of 22mm moisture resistant tongued and grooved chipboard flooring on 120mm thick Kingspan TF70 rigid insulation. Existing concrete floor on DPM to remain and to be reinstated to original condition on completion of excavation works for new foundations. Existing DPM to be extended and linked to new dpc.

SUPERSTRUCTURE

External wall construction to be 100mm facing brick, 50mm ventilated cavity and a timber framed inner leaf to be foil bubble breather building paper on 9.5mm sheathing grade plywood on 100 x 50mm sw studs at 600mm centres with 90mm Celotex GA400 board or equal between studs and lined with 40mm Celotex TB4000 insulation board or equal, 500 gauge vapour barrier 38 x 50mm service battens to create a service void and sheathed with 12.5mm plasterboard with all joints to be taped and filled. New walls to be tied to existing with stainless steel starter kits and a vertical dpc raggle and timber kit tied to existing wall with M12 anchor bolts at 500mm centres. Stainless steel chevron wall ties fixed to slope away from sheathing and nailed with 2No. 50 x 3mm stainless steel ring shank nails. Wall ties fixed at 600mm centres horizontally and 450mm centres vertically, increased locally around door and window openings. Timber frame to have 2No. 100 x 50mm sw top runners with the uppermost top runner to be site fixed and 2No. 100 x 50mm sw bottom runners. Holding down straps to be 1100 x 38 x 3mm galvanised metal straps to every second stud and at every corner, straps fixed to studs using 5No. 90 x 4mm wide nails. Straps to be built into external leaf of common brick. Firestops to be 50 x 38mm sw timbers wrapped in DPC and positioned around window openings, at every corner, at eaves level and at ceiling and floor levels. Cavity ventilation to be provided at 1200mm centres by perpendicular cavity vents, situated in the brick course below dpc level, at eaves and above and below horizontal cavity barriers. Cavity weep vents at 900mm centres at ground level. Skirtings and facings to match existing. Existing external walls in partial garage conversion to have plasterboard removed and 70mm Kingspan K12 rigid insulation board added between studs and lined with 52.5mm Kingspan K18 insulated plasterboard with integral vapour barrier, all joints to be taped and filled.

INTERNAL PARTITIONS

Internal partitions to be formed with 75 x 50mm sw studs at 600mm centres with a minimum 25mm thick mineral wool insulation (minimum density of 10kg/m<sup>3</sup>) laid between studs and lined both sides with 12.5mm plasterboard (minimum mass per unit area 10kg/m<sup>2</sup>), all joints taped and filled. Internal partitions to provide a minimum airborne sound insulation level of 43Rw. Interior quality timber doors to be installed with the requisite ironmongery and to have a minimum clear opening width of 775mm. Plasterboard within wc and kitchen to be moisture resistant. All gaps and junctions on walls and floors to be sealed to limit air infiltration, including perimeters at windows. Wall between garage and utility and toilet to be formed with 100 x 50mm sw studs at 600mm centres and sheathed on garage side with 2 layers of 12.5mm plasterboard, laid crossbonded with all joints taped and filled. 70mm Kingspan K12 rigid insulation board between studs and lined with 52.5mm Kingspan K18 insulated plasterboard with integral vapour barrier, all joints to be taped and filled. Door between garage and utility to be a half hour self closing fire resistant door fitted with the requisite ironmongery and to give a clear opening width of 775mm.

WINDOWS AND DOORS

Install new uPVC window units/ doors with a U-value of 1.4W/m<sup>2</sup>K. A trickle vent to be fitted to the head, capable of providing 12000mm<sup>2</sup> ventilation. Any glass less than 800mm above FFL to be toughened in accordance with BS 6262. New doors and window units to meet the recommendations for physical security as set out in Section 2 of 'Secured by Design' (ACPO, 2009), or to be in accordance with BS PAS 24: 2007 for doorsets and BS 7950: 1997 for windows. uPVC units to be designed and constructed in accordance with BS 7412: 2007. All external doors to be fitted with laminated glass or a similarly robust glazing material.

MANUAL CONTROLS - WINDOWS

An operable window, rooflight or other ventilator, that provides natural ventilation to meet Standard 3.14, should have controls for opening, positioned at least 350mm from any internal corner, projecting wall or similar obstruction and at a height of: not more than 1.7m above floor level, where access to controls is unobstructed or not more than 1.5m above floor level, where access to controls is limited by a fixed obstruction, not more than 900mm high which projects not more than 600mm in front of the position of the controls, such as a kitchen base unit. Where obstruction is greater, a remote means of opening, in an unobstructed location, should be provided or not more than 1.2m above floor level, in an unobstructed location, within an enhanced apartment (see clause 3.11.2) or within accessible sanitary accommodation (see clause 3.12.3) not provided with mechanical ventilation

ROOF

Where roof meets existing wall install a code 5 lead flashing 150mm high to be ragged 38mm in to the wall and dressed down in to a code 5 lead secret valley gutter. Roof to be Marley Plain concrete roof tiles, colour and type to match existing on 50 x 38mm sw battens and counter-battens on 1No. layer of Kingspan Nilvent breathable roofing membrane, installed in accordance with manufacturers written instructions on 12.5mm timber sarking boards on pre-manufactured roof trusses at 600mm centres. Design certificate for roof trusses to be submitted to Building Control and or structural engineer prior to works being completed on site. Roof pitch to be 35°. Trusses to be tied down with Bat truss clips. Roof bracing to be in accordance with truss manufacturers recommendations and BS EN 1995 -1-1. All roofing for ridge, verge etc. to be dry fixed in accordance with manufacturers details. Roof tiling to be carried out in accordance with BS 5534 All external fascia, verge and soffit boards to be upvc. Marley deepflow upvc rainwater gutter. 200mm mineral wool insulation to be placed between the ceiling ties of the trusses with a further 200mm mineral wool insulation placed above and at right angles to the insulation between ties.

KITCHEN

Kitchen to have a sink with the necessary piped supply of hot and cold water, with the cold water supply being taken direct from the rising main. Final kitchen layout to be to client's specifications. A minimum of one cubic metre of storage to be provided within kitchen area. A mechanical extract fan to be installed in kitchen capable of an extraction rate of 60 litres per second and one air change per hour and ducted to a suitable terminal at external air. Kitchen layout to include an unobstructed manoeuvring space of 1.5m x 1.5m square or an ellipse of 1.4m x 1.8m in front of oven. Kitchen to have 6 x 13amp socket outlets, at least three of which should be located above worktop level in addition to any socket outlets provided for floor standing white goods or built in appliances. A heat alarm to be installed within the kitchen in accordance with BS 5446: Part 2 : 2003 and ceiling mounted between 25 mm and 150mm below the ceiling.

TOILET

Toilet to be fitted with the appropriate sanitaryware, and to have the necessary piped supply of hot and cold water. An activity space of 800 x 1100mm to WC, 700 x 800mm to wash hand basin(wall hung), clear of door swings to be provided within toilet. 38mmØ uPVC waste pipe outlets with 75mm deep seal traps to all appliances and 100mmØ uPVC waste pipe from wc connected to existing drain via 100mmØ waste pipe. Waste pipe to be laid with a minimum fall of 1 in 40. WC and whb to be fitted with water efficient fittings and average flush volume not more than 4.5 litres for WC and wash hand basin to have flow rate not more than 6 litres per minute. Sanitary pipework to comply with BSEN12056-2:20

ELECTRICAL FITTINGS

Mains operated smoke alarms with battery back-up to be installed as shown in accordance with BS 5446: Part 1 (2000). Smoke alarm to be no more than 7 metres from living room and kitchen doors and no more than 3 metres from bedroom doors. All smoke alarms to be interconnected. Ceiling mounted alarm to be more than 300mm from walls and light fittings. A heat alarm to be installed within the kitchen in accordance with BS 5446: Part 2 : 2003 and ceiling mounted between 25 mm and 150mm below the ceiling. A carbon monoxide monitor to be installed with 1-3m of the boiler. The detector should comply BS EN 50291-1:2010 and be powered in accordance with this standard and sited in accordance with BS EN 50292:2002.

The fire detection and fire alarm system that should alert occupants to the outbreak of fire, a Grade D system should be installed in all dwellings, comprising of:

- at least 1 smoke alarm installed in the principal habitable room
- at least 1 smoke alarm in every circulation space on each storey such as hallways and landings
- at least 1 smoke alarm in every access room serving an inner room
- at least 1 heat alarm installed in every kitchen. The principal habitable room is the most frequented. Existing house to be upgraded as required to meet this criteria, with compliant fittings being retained where appropriate.

Outlets and controls of electrical fixtures and fittings should be positioned at least 350mm from any internal corner, projecting wall or similar obstruction. Light switches should be positioned between 900 and 1100mm above floor level. Standard switched or unswitched sockets should be positioned at least 400mm above floor level and 150mm above the projecting surface such as a worktop obstruction. Where sockets are concealed, separate switching to be provided in an accessible position to allow appliances to be isolated. New light fittings to be low energy type.

GENERAL

Sanitary pipework to comply with BS EN 12056-2:2000. External waste water drainage to comply with BSEN 12056-1:2000, BS EN 752:2008 and BS EN 1610: 1998. Surface water drainage to comply with BS EN 12056-3: 2000

All gaps and junctions on walls and floors to be sealed to limit air infiltration, including perimeters at windows. All heating pipes to be adequately insulated when running outside the insulated envelope of the house.

Radiators to be fitted with a thermostatic radiator control valve.

At door jambs proprietary insulated cavity closure and a vertical DPC inserted.

All finishes to be made good on completion of works.

U-VALUES

Roof	-	0.12W/m <sup>2</sup> K
Glazing	-	1.4W/m <sup>2</sup> K
Floor	-	0.15W/m <sup>2</sup> K
Walls	-	0.17W/m <sup>2</sup> K

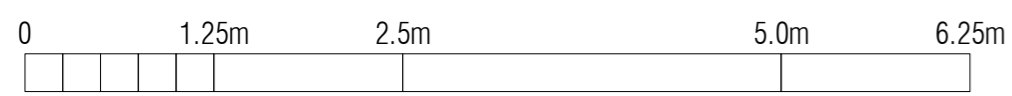
ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THOSE PREPARED BY THE STRUCTURAL ENGINEER WITH THEIR DRAWINGS TAKING PRECEDENCE IN ALL STRUCTURAL MATTERS.

ALL DIMENSIONS IN MILLIMETRES.

ALL MATERIALS AND WORKMANSHIP TO BE THE BEST OF THEIR RELEVANT KIND AND COMPLY WITH ALL BRITISH STANDARDS AND CODES OF PRACTICE. ALL ELECTRICAL WORK TO COMPLY WITH B.S. 7671 2018, 18th EDITION OF IEE REGULATIONS AND TO BE CARRIED OUT BY A SELECT OR NICEIC APPROVED ELECTRICIAN. ALL WORK TO COMPLY WITH THE BUILDING STANDARDS (SCOTLAND) REGULATIONS 2004 AS AMENDED. ALL DRAINAGE TO BE TO THE SATISFACTION OF THE BUILDING CONTROL DEPARTMENT. BUILDING CONTROL TO BE NOTIFIED 24 HOURS BEFORE WORK COMMENCES AND WITHIN 2 WEEKS OF COMPLETION OF THE WORKS.

DO NOT SCALE FROM DRAWINGS, IF IN DOUBT ASK.

ALL DIMENSIONS, LEVELS AND PITCHES TO BE CHECKED ON SITE PRIOR TO THE ORDERING OF ANY MATERIALS, FABRICATION OF ANY UNITS AND COMMENCEMENT OF ANY WORKS. CONTRACTOR IS DEEMED TO HAVE VISITED THE SITE TO ASCERTAIN THE FULL EXTENT OF THE WORKS. ALL DRAWINGS AND DESIGNS REMAIN THE PROPERTY OF AYRSHIRE ARCHITECTURE AND MAY NOT BE STORED OR REPRODUCED IN ANY FORM WITHOUT THE PRIOR WRITTEN CONSENT OF AYRSHIRE ARCHITECTURE. ANY DISCREPANCIES AND MISSING INFORMATION MUST BE IMMEDIATELY NOTIFIED WRITING TO AYRSHIRE ARCHITECTURE. ALL DRAWINGS MUST BE READ IN ACCORDANCE WITH ALL THE OTHER DRAWINGS PREPARED FOR THIS PROJECT



scale 1:50



scale 1:20

## AYRSHIRE ARCHITECTURE

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**PROJECT DETAILS:**  
 Proposed alterations, extension and partial garage conversion  
 at  
 31 Birklands Wynd, Kilwinning  
 for  
 Mr & Mrs Richardson

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**PROJECT REFERENCE:**  
 Richardson 2255

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**REVISIONS:**