SPECIFICATION

GROUND FLOOR
Existing setts, concrete taken up and new floor installed 75mm thick concrete screed, on 140mm Xtratherm Thin-R rigid insulation, 150mm concrete slab on 2000 gauge DPM, on sand blinding, on 150mm well compacted hardcore.
Specification achieves a u-value of 0.12 w/m2K

EXTERNAL WALLS
Existing construction is solid stone, which is to be repaired and re-pointed as necessary.
50mm cavity maintained internally and perimeter walls dry lined with 45x145mm timber studs at 600mm centres, with 140mm Earthwool Frametherm 32 mineral wool insulation installed between. Finished internally with 1 layer 27.5mm insulated plasterboard with joints taped and filled, on Visqueen vapour barrier. Specification achieves a u-value of 0.22 w/m2K

BUILT UP OPENINGS
Openings in exfiing walls to be built up using reclaimed stone and lime mortar, tied to existing stone openings with wall starter bars to Engineers specification at 450mm vertical centres

PLANT ROOM WALLS
100mm thk. dense block, 150mm cavity partially filled with lean mix concrete to extents shown and to engineers specification, 100mm thk dense block inner leaf

SOUTH BOUNDARY WALL
Inner face of existing stone wall treated internally with waterproofing render/slurry up to 150mm above finished ground level, 50mm cavity, 140mm medium density block to Engineers specification up to roof level and returned 1m down both end walls. 90mm mineral wool insulation between timber battens and finished with 12.5mm foil backed plasterboard

NEW TIMBER KIT WALLS
100mm thk. reconstituted stone outer leaf , 50mm clear cavity, 9mm OSB with high performace foil back breather membrane, 45x145mm timber studs at 600mm centres, with 140mm Earthwool Frametherm 32 mineral wool insulation installed between. Finished internally with 1 layer 30mm insulated plasterboard with joints taped and filled, on Visqueen vapour barrier. Cavity ventilated with weep vents at max 1200mm centres at top and bottom and above and below openings. Specification achieves a u-value of 0.22 w/m2K.
Built of new concrete foundation to Engineers specification

CAVITY BARRIERS
38X50mm timber battens as 30minute fire rated cavity closers to be fitted around all window and door openings, all builind corners, at perimeter of mid floor, at wall heads, edges of separating walls,eaves and verges and vertically at 8m intervals within external walls. Roof void to be split with fire curtain so no cavity exceeds 12m

MID FLOOR
18mm T&G Chipboard floor on Posi-joists at maximum 400mm centres, fully dwanged at outer edges and mid points. 12mm plywood and 10mm rigid insulation between joists as part of underfloor heating system
100mm accoustic mineralwool insulation 10-60kg/m3 between joists . 45x45mm plasterboard dwangs installed at 600mm centres. Ceiling to underside finished in 1 layers of 12.5mm plasterboard, with joints taped and filled.

ROOF CONSTRUCTION
Redland Cambrian mock slatelor equall, on 25x38mm battens, on 19x38mm counterbattens, on Proctor Roof Shield membrane on 9.5mm exterior grade plywood sheathing, on pre-manufactured roof trusses at maximum 600mm centres. Roof trusses to BS EN 1995-1-1: 2004, BS EN 1995-1-2: 2004 and BS 4978: 2007, with bracing to BS EN 1995-1-1: 2004. 45x45mm plasterboard dwangs installed at 600mm centres. Ceiling to underside finished in 2 layers 12.5mm plasterboard, with joints taped and filled.
Valleys to be pre-formed GRP.
Roof ventilated at high level by installing ventilated dry ridge system to suit tile profile, giving equivalent of 5,000mm2 free air gap.
Roof ventilated at low level by installing an over-fascia ventilation system, giving equivalent of 25,000mm2 free air gap.
Fascia and soffit in timber.

Flat ceiling areas to have 300mm Earthwool Loft Roll 40 mineral wool insulation cross-laid in roofspace in 2 layers. 45x45mm plasterboard dwangs installed at 600mm centres. Ceiling to underside finished in 1 layer 12.5mm plasterboard, with joints taped and filled.

Coombed ceiling areas to have 120mm Kingspan rigid insulation installed between rafters, allowing 50mm air gap to be maintained between insulation and sarking layer.
Ceiling finished internally with 1 layer 32.5mm insulated plasterboard, with joints taped and filled, on Visqueen vapour barrier, on rafter, with 45x45mm plasterboard dwangs installed at 600mm centres.
All roof flashings to be formed using code 5 dressed lead to BS EN 12588 and to British Steel association details

DORMERS
Dormers constructed with reclaimed stone 500mm thick built of existing wall head, lintelled at window head with concrete lintels to Engineers specification
Ventilated through roof with tile vents

WINDOWS
Timber windows, fitted with Neoprene draught seals. Kitchen, and shower room windows to have trickle ventilators, giving minimum 10,000mm2 free air.
Other rooms to have trickle ventilators giving 12,000mm2 free air. Trickle ventilators to be set minimum 1750mm above floor level.
Windows to meet minimum daylighting requirement of 1/15th of the floor area of the room. Window openings to meet minimum ventilation requirement of 1/30th of the floor area of the room.
Upper floor windows to be hinged to allow safe cleaning from the inside.
Window handles to be positioned at least 350mm from any internal corner or projecting wall and no higher than 1700mm above floor level in an unobstructed area, no higher than 1500mm above floor level where access is limited by a fixed obstruction and no higher than 1200mm above floor level in accessible sanitary accommodation or an enhanced apartment.
New windows to be designed and robustly installed to resist forced entry and manufactured in accordance with BS 7412:2007. Openable windows to be fitted with key locking system with removable key, and to be tested and certified by a notified body as meeting a recognised standard for security such as BS 7950: 1997 for windows. To ensure a robust installation, fixing of a doorset or window should be in accordance with the recomendations given in section 8 of BS 8213-4: 2007, or manufacturer's written instructions where these meet or exceed the recommendation within this British Standard.
Maximum u-value of the windows to be 1.4 w/m2K
Toughened glass pedestrian protective barrier to Master bedroom window constructed in accordance with bs en 1991-1-1 and the associated pd 6688-1-1

GLAZING
All windows to be minimum double glazed with clear glazing, except bathroom, en-suite and shower room, which are to have obscure glazing to the inner pane. All low level glazing (-800mm above finished floor level) to be toughened or laminated to comply with BS6262-4:2005 and BS EN 12600:2002.

EMERGENCY ESCAPE WINDOWS
Escape windows to have an unobstructed openable area that is at least 0.33m2 and be minimum 450mm wide x 450mm deep.
The bottom of the escape aperture is to be no higher than 1100mm above finished floor level and no lower than 800mm above finished floor level.

EXTERNAL DOORS
Exterior quality doors, set in rebated frame and fully draught stripped, fitted with security lock and external quality door furniture.
Low level glazing (-800mm above finished floor level) to be toughened or laminated to comply with BS6262-4:2005 and BS EN 12600:2002.
New doors to be designed and robustly installed to resist forced entry and manufactured in accordance with BS 7412:2007.
Front and rear door fitted with multi point deadlocking system, with 3 or more bolts. Lock cylinder to BS EN 1303:2005, minimum Grade 5 key security and Grade 2 attack resistance. Front door hinges to BS EN 1935:2002 minimum Grade 11.
Maximum u-value of the doors to be 1.4 w/m2K

DAMP PROOF COURSE
DPCs to be black polyethylene to BS 6565: 1984 and BS 8215: 1991. DPCs to be linked to DPMs where appropriate. Existing stone work to have chemical injection dpc.

AIR INFILTRATION
Air infiltration to be limited as much as possible by:
i) Draught sealing around all window and door jambs
ii) Sealing all dry-lining junctions including floors and ceilings
iii) Vapour barriers to be overlapped to seal joints
iv) Service penetrations to be sealed where they penetrate the fabric

INTERNAL NON LOADBEARING PARTITIONS
45x75mm timber studs at maximum 600mm centres, with one staggered row of dwangs at mid height. 60mm absorbent layer of mineral wool insulation installed between studs, with a density of 15kg/m³. Finished both sides with 1 layer 12.5mm plasterboard with a density of 10kg/m² with joints taped and filled. Moisture resistant plasterboard to be used in bathrooms, shower rooms and WC.

SEPARATING WALL
Existing construction is solid stone, which is to be repaired and re-pointed as necessary.
50mm cavity maintained internally and perimeter walls dry lined with 45x145mm timber studs at 600mm centres, with 140mm Earthwool Frametherm 32 mineral wool insulation installed between. Finished internally with 2 layers 12.5mm plasterboard with joints taped and filled, on Visqueen vapour barrier. Specification achieves a u-value of 0.22 w/m2K
All sockets to be fitted with intumescent back boxes to maintain fire integrity

INTERNAL DOORS
Internal doors to client's specification, set in softwood frames.
Low level glazing (-800mm above finished floor level) to be toughened or laminated to comply with BS6262-4:2005 and BS EN 12600:2002.

LINTELS
Refer to structural engineer's details for lintel specification

STAIRS
13 rise staircases, with equal goings at 240mm and equal rises at 197.3mm, pitch 39 degrees. Minimum 900mm clear width across the treads. Minimum 50mm going at inside edge of tapered treads. The going of tapered treads should be uniform and should not be less than the going of the straight treads.
Handrail to be set between 840 and 1000mm above the pitchline of the staircase, having a profile and projection that will allow a firm grip, plus balustrade designed to prevent the passage of a 100mm diameter sphere.
Newel post at corners to provide a safe handhold, by means of suitably shaped newel cap
2m clear headroom maintain across the entire effective width of the stair and landing.
700x400mm clear space maintained at the bottom of the stair for future installation of a stairlift. 400x200mm space maintained at the top landing, allowing for the projection of a future stairlift track.
900x900mm landing maintained at the top and bottom of the staircase, clear of any door swing or other obstruction.

ACTIVITY SPACES/ACCESSIBLE SANITARY PROVISION
A minimum of one accessible sanitary facility to be provided on the principal living level of the house and containing an accessible toilet, wash hand basin and either a shower or bath.
Minimum activity spaces are required in front of the following appliances :
WC - 800mm wide x 1100mm long (or 800mm wide x 800mm long, plus 1000mm wide x 1100mm long if allowing for side transfer)
WHB - 800mm wide x 700mm long
Door manoeuvring space of 800mm wide x 1100mm long provided, clear of door swing or any obstruction.
Walls within accessible shower room to be lined with 18mm plywood between studs

ELECTRICS
New installation to comply with 18th Edition IEE Regulations and BS 7671: 2018.
Minimum one lighting point provided to each circulation space, apartment, kitchen and bathroom. A minimum of 75% of the lightbulbs installed to be low energy type.
External light at main entrance door to be fitted with a PIR sensor.
Outlets and controls of electrical fixtures to be positioned at least 350mm from any internal corner or projecting wall, and not more than 1200mm above floor level. Light switches to be positioned between 900mm and 1100mm above floor level. Sockets and outlets to be at least 400mm above floor level and 150mm above worktops. Where socket outlets are concealed separate switches are to be provided.

FIRE ALARM SYSTEM
New fire detection and alarm system designed and installed in accordance with BS 5839-6: 2004 for a Grade D system.
At least one smoke detector/sounder should be installed in every principal habitable room, in every circulation space such as hallways and landings and at least one heat alarm should be installed in every kitchen. Smoke detectors to be fitted to relevant standard:
- Optical smoke alarms to conform to BS EN 14604
- Ionisation smoke alarms to conform to BS EN 14604
- Multi-sensor alarms to conform to BS 5839-6: 2004
- Heat alarms to conform to BS 5446

All smoke alarms and heat alarms in a dwelling should be interconnected so that detection of a fire in any alarm operates the alarm signal in all of them.
Smoke alarms and heat alarms should be interconnected in accordance with BS 5839-6: 2004. The system should be installed in accordance with the manufacturer's written instructions.
Standby power supply should be sufficient to power the system for at least 72 hours when the mains power supply is off, while giving a visual warning of mains power supply being off. This standby supply should also provide a warning of smoke for a minimum of 4 minutes upon activation of alarm.
A smoke alarm must be located in a circulation space which is used as an escape route at maximum 7.5m intervals; within 7m of principal living spaces at maximum 7.5m intervals, within 3m of a bedroom and
within 7m of a kitchen. No point within a kitchen should be more than 5.3m from the nearest heat detector.
Alarms should be ceiling mounted and be at least 300mm from any wall or light fitting. Smoke alarms are to be fitted between 25mm and 600mm below the ceiling. Heat alarms are to be fitted between 25mm and 150mm below the ceiling.

VENTILATION
Kitchen, bathroom and en-suite windows (plus utility door) to have trickle ventilators, giving minimum 10,000mm2 free air. WC to have 10,000mm2 trickle ventilator ducted through partition to utility room.
Other apartment windows have trickle ventilators giving 12,000mm2 free air. Trickle ventilators to be set minimum 1750mm above floor level.
Kitchen to have mechanical vent capable of intermittent extraction rate of 60 litres per second (30 litres/second where installed directly over a cooker hob); utility 30 litres per second; bathroom, en-suite and WC 15 litres per second.
Fans to have isolator switches positioned between fans and lights. Fans to be ducted as shown on plans and extract grilles to be insect and vermin proof.

SURFACE WATER DRAINAGE
Replacennt 110mm uPVC deepflow gutters, with 63mm dia uPVC downpipes, connected into underground drainage system, with flexible gaiter joints. All new RWPs to have handhole access at base and connected into the existing SW drainage.

All rainwater goods to BSEN 12056-3:2000 and installed in accordance with the manufacturer's instructions

INTERNAL DRAINAGE
Internal drainage pipework to be:
- WC 100mm dia. PVCu
- WHB 32mm dia. ABS
- Shower 40mm dia. ABS
- Sink 50mm dia. ABS

All connected to 110mm dia. PVCu drainage pipework and into underground drainage system. Pipework laid at 1 in 40 gradient. Pipework ventilated by means of soil vent pipes, terminating externally at a minimum of 900mm vertically above any window opening via a ridge tile, vent tile or vent stack with birdcage. Any air admittance valves to terminate above the flood level of the appliances connected.
Handhole access provided at the base of all stacks.

SANITARY FITTINGS
New shower rooms to have water efficient fittings installed:
Dual flush WC to have an average flush volume not exceeding 4.5 litres.
Single flush WC to have a flush volume not exceeding 4.5 litres.
Taps to wash hand basin to have a flow rate not exceeding 6 litres/minute.
Showers and baths to be fitted with an anti-scald valve to BSEN 111:1999 or BSEN 1287:1999. Valves to be fitted as close to the point of delivery as possible. Showers to be fitted with a top access trap.

UNDERGROUND DRAINAGE
Underground drainage to be 110mm dia. PVCU pipework to BSEN 1401-1999, laid at 1 in 40 gradient and bedded in pea gravel.
Drainage to be sleeved and lintolled where passing through building, using Robeslee concrete lintols.
Handhole Access, to be provided at any change in direction

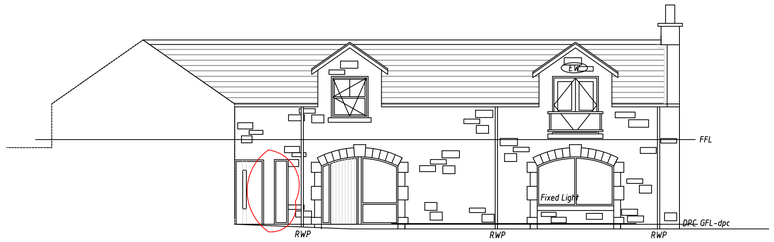
Underground drainage discharges into waste water treatment plant, out through filter trench and outfalls to water course. Labelling to be presented adjacent to electrical consumer unit stating 'The drainage system from this property discharges to a waste water treatment plant. The owner is legally responsible for routine maintenance and to ensure that the system complies with any discharge consent issued by SEPA and that it does not present a health hazard or nuisance'

HEATING
Central heating system with Grant Vortex oil fired combi boiler. Boiler to be SEDBUK rated 'A'.
Boiler fitted with an interlock/automatic bypass valve and fully programmable timer.
Hot water overflow discharge to be in a visible location and positioned at a maximum 100mm above external ground level. A wire cage guard to be fitted to prevent contact with the discharge.
Boiler fitted with balanced flue, with terminal positioned at least 600mm horizontally from a window or door opening, 300mm horizontally or 1500mm vertically from another terminal on the same wall, 600mm from an external corner and 600mm below eaves.
Radiators/heated towel rails provided to all rooms and circulation spaces, fitted with thermostatic radiator valves. Heaters within living rooms to have a minimum output of 3kW.
All hot water pipes to be insulated in accordance with BS5422:2009, using Tubolit polyethylene/polyolefin pipe insulation.
All heating and hot water systems to be inspected and commissioned in accordance with the manufacturer's instructions to ensure optimum efficiency. Tian integrally bunded oil tank with a maximum capacity of 2500 litres installed on either 100mm thick concrete plinth, or 42mm thick concrete paving slabs, extending 300mm beyond all edges of tank. Tank installed in accordance with BS5410-Part 1:1997 and Oftec Standard OFS 1100/T200.

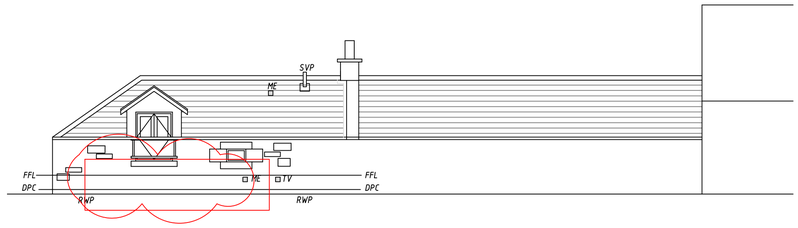
WOODBURNING STOVE
New wood burning stove recess in existing fire place on 125mm constructional hearth with offsets to combustible materials in line with regulation 3.19.4.
With flexible 316 Aluminium chimney liner through existing stone chimney in accordance with BS6461:Part 1:1984

POST CONSTRUCTION CERTIFICATION
An Energy Performance Certificate (EPC) is to be produced on completion of construction work and the certificate permanently displayed in an easily accessible, weatherproof location, such as a meter cupboard.
Every building must be designed and constructed in such a way that a Statement of Sustainability is achieved.
A Sustainability Certificate outlining the level achieved must be applied for and affixed to the dwelling prior to completion.
The sustainability label should be indelibly marked and located in a position such as a meter cupboard that is readily accessible, profected from weather and not easily obscured.
Air tightness and sound transmission testing to be carried out by a suitably qualified person, on completion of construction work.
Any construction elements supplied and certified by a specialist contractor are normally excluded from the structural engineer's original certification (e.g. roof trusses). Full design information to be forwarded to the structural engineer for verification and issue of a Form Q prior to completion.

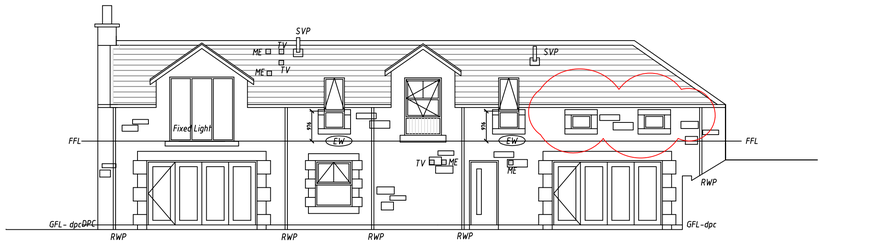
GENERAL
These architectural drawings are to be read in conjuction with the structural engineer's design information and any other relevant specialist design information.
The engineering and foundation details contained in these drawings are superceded by the structural engineer's information.
The roof truss details contained in these drawings are superceded by the roof truss manufacturer's information.
The timber frame kit details contained in these drawings are superceded by the timber frame manufacturer's information.
All critical dimensions to be checked on site, prior to construction.
Any discrepancies/deviations to be notified to Hardie Associates.



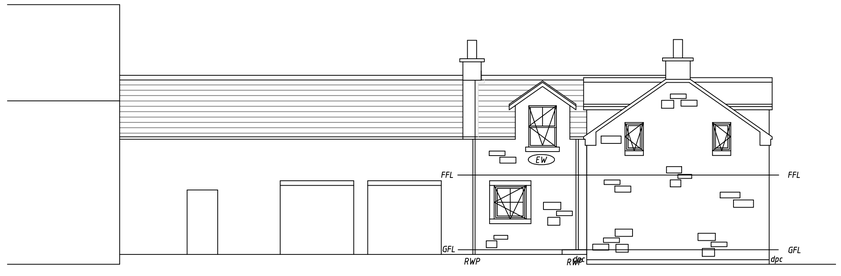
East Elevation 1:100



South Elevation 1:100



West Elevation 1:100



North Elevation 1:100

title: Prop. Elevations & Specification
client: Mr & Mrs A Ross
project: Proposed Steading Development
Cleish Mill Farm
Cleish
scale: 1:50@A1
date: Jan 21
drawing number: 19/073/BW03 A

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