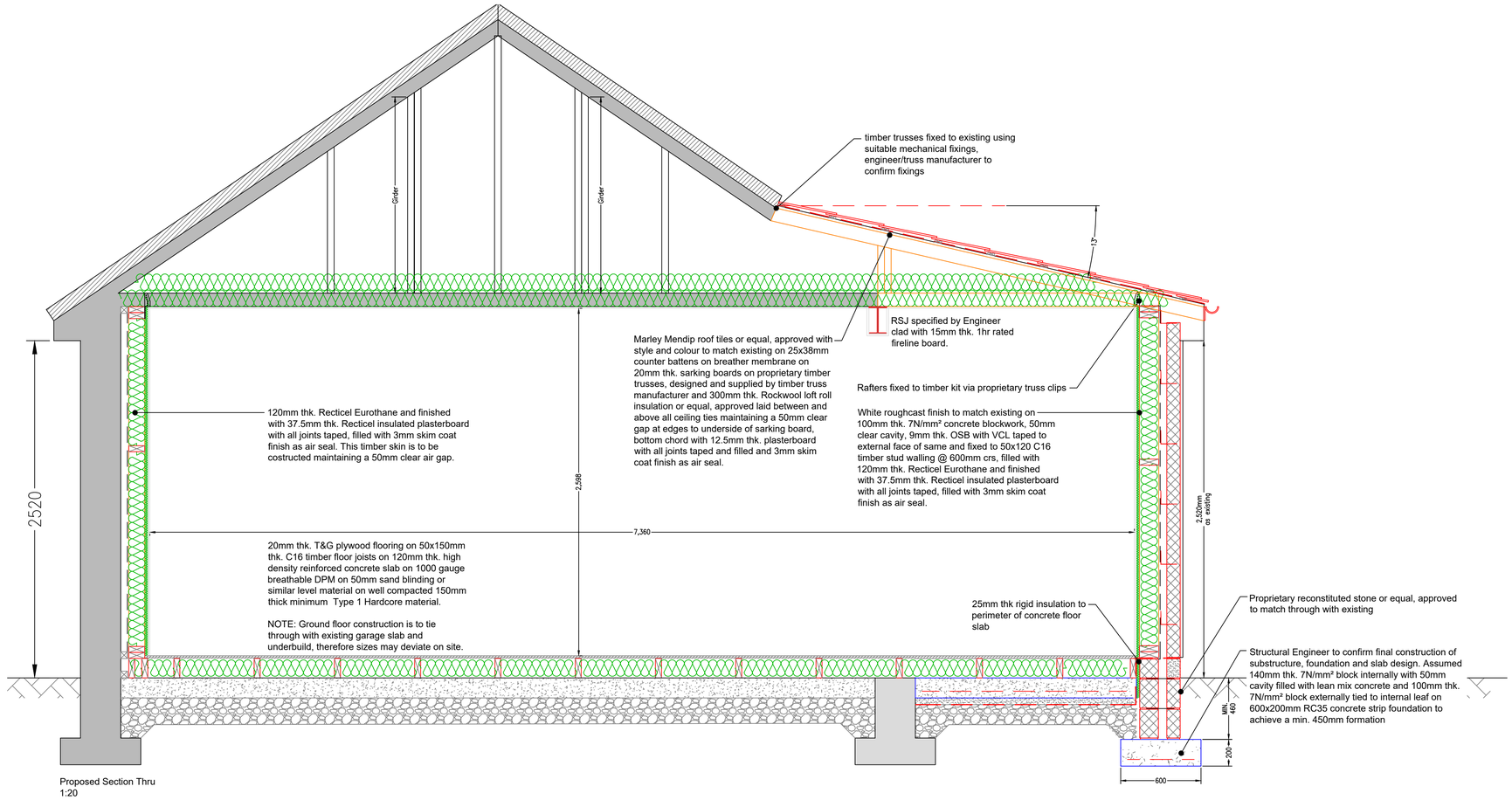
DO NOT SCALE THIS DRAWING. IF IN DOUBT ASK

NOTES:

1. All dimensions are in millimeters unless stated otherwise.
2. The contractor is to verify all dimensions on site and is responsible for the accurate setting-out.
3. All sizes scaled from this drawing will be approximate and should be checked on site by the user.
4. Contractor must not alter any details on these drawings without the prior consent of the engineer. Failure to do this will result in additional design work and time and correspondingly, additional cost for the client.
5. All care & attention has been taken to ensure all details are correct based on the information available at the time of design. The contractor has a duty of care and if anything on site is found to differ, the Engineer MUST be informed immediately.



Proposed Section Thru
1:20

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 and 2020 Domestic Technical Handbook.

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.

New detectors are to be compliant with Grade D LD2, BS 5839: Part6: 2004 on a protected circuit with battery backup

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

12,000sq.mm (minimum) trickle ventilation to be provided,

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

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 unlined 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 DPC's/DPM's to be continuous throughout, any penetrations to be sleeved.

Floor Construction: Ground Floor (U value 0.18W/m2K)
20mm thk. T&G plywood flooring on 50x150mm thk. C16 timber floor joists on 120mm thk. high density reinforced concrete slab on 1000 gauge breathable DPM on 50mm sand blinding or similar level material on well compacted 150mm thick minimum Type 1 Hardcore material.

NOTE: Ground floor construction is to tie through with existing garage slab and underbuild, therefore sizes may deviate on site.

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.

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.

Wall Construction: (U Value 0.20 W/m2K)

White roughcast finish to match existing on 100mm thk. 7N/mm² concrete blockwork, 50mm clear cavity, 9mm thk. OSB with VCL taped to external face of same and fixed to 50x120 C16 timber stud walling @ 600mm crs, filled with 120mm thk. Recticel Eurothane and finished with 37.5mm thk. Recticel insulated plasterboard with all joints taped, filled with 3mm skim coat finish as air seal.

Timber kit tied to external masonry by using Ancon staifix timber frame wall ties or equal, approved.

U value: 0.20 W/m²k
Spread of flame: low risk
Fire rating: 30 minutes

Roof Construction (U Value 0.15 W/m2K)
Marley Mendip roof tiles or equal, approved with style and colour to match existing on 25x38mm counter batters on breather membrane on 20mm thk. sarking boards on proprietary timber trusses, designed and supplied by timber truss manufacturer and 300mm thk. Rockwool loft roll insulation or equal, approved laid between and above all ceiling ties maintaining a 50mm clear gap at edges to underside of sarking board, bottom chord with 12.5mm thk. plasterboard with all joints taped and filled and 3mm skim coat finish as air seal.

Form Q to be provided to Engineer or review and then provided to Architect for completion.

U value: 0.15 W/m²k
Spread of flame: low risk
Fire rating: 30 minutes

Timber frame details

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.

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.

Low level roof ventilation to be by means of full length soffit ventilator to provide the equivalent of 25mm continuous ventilation.

Cavity ventilation
To ensure ventilation and drainage of cavity, provide open perpends at maximum 1200mm centres at the base of wall, at horizontal cavity barriers, over lintols at maximum 900mm centres (minimum 2 open perpends over window or door) and at cavity trays.

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 house 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 / jambs 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.

Windows/Door: (U Value 1.4 W/m2K)
All windows to be uPVC framed with double glazing comprising low e glass with argon filled 16mm cavity and fitted with feature mid bars & a trickle ventilator in the window head of area 12000mm min. All windows to provide a minimum of 1/30th of the floor area of the room they serve as openable ventilation & 1/15th day lighting.

Windows to be side hung tilt and turn inward opening casements with escape facility and for safe cleaning form inside. All low level, door and screen glazing to be toughened or laminated to BS6262. All glazing to be double glazed units of 4-16-4 configuration with low e coating and argon filling to give a u value of 1.4w/m2K.

Central heating:

Existing A rated boiler to be retained and new pipes/radiators heated from same.

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 'O' 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.

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.

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 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.

Smoke detectors to be hard-wired and complete with mounting block, optional sensor, and rechargeable batteries and kite marked. To BS 5839 Part 6 1995 Grade D type LD3. Protective covers to alarms until completion of construction.

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

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.

Underground pipes to be 100mmØ PVCu laid to a fall of 1:80 and pipes enacsed with type 2 material and top soil finish.

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

Mechanical extract fans to the en-suite and bathroom to be ceiling mounted with a 15 litre/second extraction rate as shown on plan and ducted to a grill in the soffit via 100mm flexi duct.

Kitchen fan to be expelair DX400 or equal to give an intermittent extraction rate of 60 litres/second.

Bathroom/toilet fans to give an extraction rate of 15 litres/second and utility fan to give 30 litres/sec.

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

Energy: Fixed internal lighting:
All 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 lake 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.

PLANNING/WARRANT

PROJECT:
SINGLE STOREY EXTENSION TO DETACHED GARAGE.

CLIENT:
MR. & MRS. GILMOUR

LOCATION:
23 TEUCHEEN CIRCLE
ERSKINE
RENFREWSHIRE
PA8 7EB

SCALE: AS SHOWN	DATE: 14/05/21
JOB NO: J18	DRAWN BY: CJF
DRAWING NO: 20	REVISION: