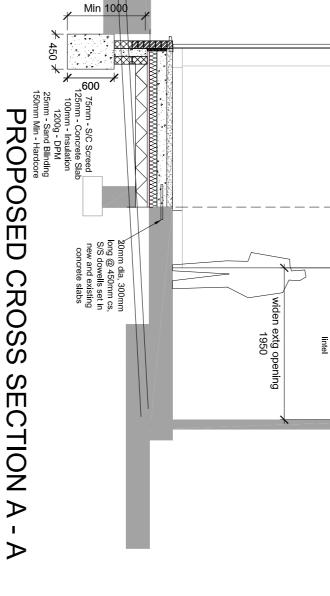


# REAR **ELEVATION**

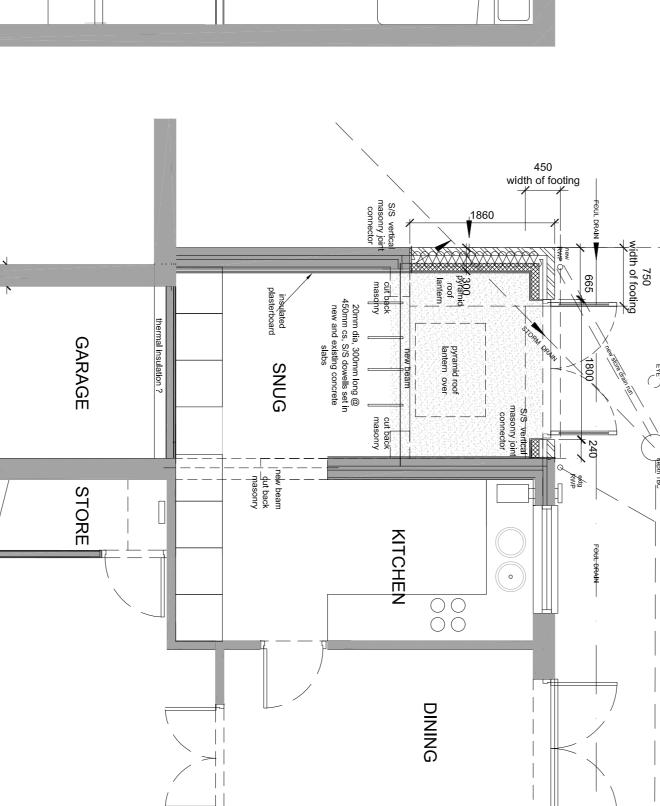
900

BEDROOM 3

BEDROOM 2



### SECTION $\triangleright$ PROPOSED CROSS



### ROP OSED **GROUND FLOOR**

PROPOSED

ROOF

/ FIRST FLOOR

PLAN

GARAGE

Rainwater disposal (Calculated to BS 12056; 2000)
100mm 1/2 round pvcu gutters, supported on brackets at min 1.4mm cs, max gradient 1:100. centerline of gutter to be vertically beneath roof edge, sarking felt to be dressed into gutter. Min 63mm diameter rwp to discharge into / over trapped access gullies. Flat roofs to into / over tramin fall 1:60.

Ventilation of rooms
All rooms, (other than kitchen, wc & puch to have background ventilation by controllable trickle vents of min area 8000 sqmm achieved by air brick & duct, or proprietary slot ventilator in window frame or glazing. Rapid ventilation of Cath (5%) of the floor area at min 1.75m

All works to be carried out in accordance with BS301. System to have minimum changes in direction & gradient. Access points for rodding to be at head of all drain runs & at all changes in direction & gradient all drains to be in straight lines; with slight curves in short lengths, & only with the approval of B.C.O/Al. Minimum diameter of pipes to be 100mm. Minimum gradient 1:80. rigid pipes with flexible joints. clay ipes to be 2760 & bs65; pvcu to bs4660 & 5481. granular fill to bs 882 able 4 (max10mm aggregate). Width of trenches min 400mm. Drains be bed as class N i.e. pipe on 100mm granular fill & covered by elected fill (max 40mm), compacted in 100mm layers to 300mm above pe. Drains with less than 300mm cover & under paved areas to be cased in 150mm thick, hand compacted selected fill & lean mix ncrete to level of paving. Drains less than 1m from new <sup>8</sup> itings to be encased in concrete grade 20. Drains or walls to have concrete linto it in the property of the paving of the pa DRAINAGE BELOW GROUND Layout is preliminary, for information &

uipe, at each side. Any new manholes to be preformed poly-prometed with min 150mm 1:2:4 concrete bed & side

EXCAVATIONS:
Site to be free of all vegetable matter & levelled to the underside of the new hard-core. No excavations adjacent to existing walls are to be carried out until the foundation depth is established by digging by hand small trial holes & inspected by the Building Control Officer (B.C.O) / Approved Inspector (AI). Any underpinning or stabilising concrete infill required is to be confirmed by the B.C.O./ AI

POUNDATIONS:

Designed to sustain & transmit the loads safely, & not deform the ground as BS8103pt1 & to counter swelling, shrinking & freezing. Design to account for any adjacent trees within 30m, using National House Builders Council Practice Note 3. Foundations not to encroach over boundaries without prior permission of owners. Deep strip (trench fill) concrete footings to be min 1m depth below ground level or 150mm below the invert level of any adjacent drains. Actual depth to satisfaction of the B.C.O./ Al Masonry wall footings to have footings positioned centrally. Width plus 300mm, Excentrically loaded footings, min pluss 400mm Concrete mix M10, BS 12. mix 1:3:6 (50kg cement: 0.1 cu. m fine: 0.2 cu. m coarse & 36 lt water.) Cement BS 12, aggregate BS 882.

MASONRY WALLS TO DPC:
Width as wall above. Clay bricks (5n/sqmm) or proprietary trench blocks approved by the B.C.O. Mortar 1:6 mix, cavity fill 1:3:6 mix, to 225mm below DPC, sloped to weepholes at 900mm cs. DPC min 150mm above gl, installed as CP 102, to be 5mm polythene to BS6515, or bitumen based BS639, or 2 coarse Staffordshire blue bricks. DPC fully lapped at joints & with DPM, & external edge projecting beyond the face of the wall.

## LOADBEARING WALLS;

Facing brick / blockwork cavity walls and solid walls to BS628 'Structural use of masonry.

centres, & extra ties extra ties at 300mm vertical co 225mm of all opening jambs, Cavity Wall ties BS1243, at 750mm horizontal centres, & 450mm vertical centres, staggered. extra ties at 300mm vertical centres within

brick, block or slate. Fully cut, tooth, & bond each leaf to existing wall or mechanically fix with proprietary stainless steel brackets.Close cavity at top with

Lintels to have loads assessed as BS5977, to be "Catnic" or similar, with min 150mm end bearing. voids filled with insulation. external perpend joints weepholes at 450mm cs. (min 2 per lintel) max masonry overhang 25mm.

DPC cavity trays to direct rainwater to outside leaf of cavity wall at all obstructions. i.e. openings at lintels, jambs & cills; & where new internal wall is carried up as external wall. mastic sealents around all window & door frames.

Thermal performance u value NEW INSULATED CAVITY WALLS w/sq m k.

External leaf / Internal leaf 100mm concrete blocks bs6073, density 430 kg/cu m.

Min strength: single storey 2.8 n/sq mm;

Iambda value 0.15 or lower. 'celcon solar,

Celcon standard or thermalite turbo or similar Internal leaf 100mm blockwork Density 694/783 kg/cu m. Min strength 3.5N/mm:

100mm cavity, Full cavity fill resin-bonded rock mineral wool batts, by 'Crown Dritherm 34 / 37', or ;'Gyproc Isowool', or 'Rockwool'

12mm plasterboard on dabs internally.

CONCRETE FLOOR: plan dimensions

performance u value to be max 0.22 w/m²k.

Min 50mm, 1:3 cement/sand screed.(min 75mm reinforced screed if above insulation).Min 100mm, concrete ground bearing slab.

Perimeter / area ratio = 0.46;
Insulation to be:
125mm 'Jablite' hi-perormance plus (expanded polystyrene-EPS) insulation board or similar

urethane phenolic) insulation board or similar on1200g polythene dpm on 25mm sand blinding throughout all new works, fully lapped to new n dpc's and existing dpm's.

min 150mm sub base of hardcore in min 150mm well compacted 150mm thick layers 90 mm 'Kingspan K103 kooltherm' (rigid

to be max 0.18

are less than 9m, thermal

enlarged building.

 $\frac{1}{2}$  HR Fire protection to steel to be 2 layers of 9mm plasterboard, with staggered joints, & skim coat, or two coats of intumescent paint.

E S TEEL BEAM SIZES AS STRUCTURAL NGINEER'S CALCULATIONS & DETAILS

Grades, species & workmanship in accordance with BS5268, CP 112, BS478, & Table B1
Approved Document 'A' of the Building Regs.
Sizes for components selected from Tables B2 to 24 (Column 3, SC3 & SC4 GRADES). See Structural Engineers calculation as necessary.
Max moisture content of timber 22%. all timbers double vacuum preservative treatment. Roofs & floors to be restrained to restrict lateral movement of supporting & non-supporting masonry walls.

SW wall plates secured at 1.8mm cs with 30 x 5 x 1200mm long galv. ms. straps with min 800mm leg screwed to inner leafface of masonry wall.

Floor & flat roof joists use straps, at 1800mm cs with min 200mm screwed to masonry & 1200mm to face of joist, with sw packing between wall and parallel joists. 4 x no 8 screws / strap. Joist hangers to BS6178 38 x 38mm.

Notches no deeper than 1/8th depth, no closer than 0.07 of span to supports, or further away than 1/4 span. Holes to have diameter no greater than 1/4 depth at center span, & no closer than 3 x diameter located between 0.25 & 0.4 times the span from supports.

FLAT ROOF;
WARM DECK single ply non- bitumious
waterproof layer, 'Sarnafil' or silmilar approved,

waterproof layer, 'Sarnafil' or silmilar approved, fitted as manufacturers recomendations to insulation layer.

min 120mm thick PIR insulation boards (K value 0,002) 'Kingspan TR27 (fibre glass coated) or similar approved, fixed using telescopic tube fasteners as manufactirers recomendations,

on vapour control layer, with sealed joints and sealed all around perimeter on 18mm WBP plywood deck fully screwed to min 50mm 1:80 firrings, fully srewed to SW joist structure, 125 x 47mm SW joists @ 450

Rev

Date

Description

Glazing
First floor habitable rooms to be fitted with egress windows, with unobstructed openabe lights (no locking mechanisms) area0.33sqm, with min width 450mm and 750mm height.cill to be min 800 & 1100mm above floor level.

To be as BS6262 critical locations i.e. windows below 800mm from ffl & doors/side panels (300mm either side), below 1500mm; glazing to be: glass that breaks safely (as set out in bs6206, i.e. laminated or toughened).

Glass that is robust, in small panes max width 250mm, area not exceeding 0.55sqm (250 x 2000mm) i.e. annealed or polycarbonate Permanently protected to a height 800mm above ffl with a robust screen preventing a 75mm sphere contacting to glass & which is difficult to climb i.e. no horizontal members.

The area of the openings in the enlarged building shall not exceed 25% of the area of the

All glazing to be double unless otherwise specified. Windows to be timber or PVCu. Reg L1 SEC.1.14 extensions to existing.:U value to be 1.4 W/sqm K. Double glazing units for all windows to be as L1 appendix A1. ie 12mm gap, low E (0.05) emissivity, Pilkington K glass (soft coated) or pilkington 'energyKare' 4mm optiwhite-16mm gap / argon gas -4mm K glass or similar approved

STEEL STRUCTURAL DESIGN/MEMBERS; In accordance with BS449, BS4360 & BS5950 (GRADE 43) as necessary (see calculations/details set out elsewhere). Hot rolled steel beam, angles and hollow sections to BS4848, & BS4, protection as BS5493.

All beams to have min end bearing of 150mm, resting on concrete pad stones or steel spreaders as approved by the B.C.O. Pad stone min strength 10 N/sqmm..

All beams to have one coat high build zinc phosphate primer & one coat bituminous paint corrosion protection. BS5493.

1/2 HR Fire protection to steel to be 2 layers of 9mm plasterboard, with staggered joints, &

systems must be designed, installed, tested and certified to BS 7671 or with the current editions of the IEE regulations by a competent person in compliance with Approved Document P of the Building Regulations. ELECTRICAL INSTALLATION: PART P: ELECTRICAL SAFETY

A competent electrician or a member of a competent person scheme must test and certify all such works. The electrician must provide signed copies of an electrical installation certificate conforming to BS 7671 for the owner of the property and a copy must be forwarded to the Building Control surveyor for approval at completion, so the Building Control completion certificate can be issued.

All switches and sockets including the consumer unit, ventilation & service co

etc, should be fixed between 450-1200mm above floor level. Accessible consumer units should be fitted with a child proof cover or installed in a lockable cupboard.

Light Fittings Energy efficient light fittings provided, min 1 per 25m² of floor area or 1 per 4 fixed light fittings.

06-04-23 drainage details added. notes added



Marc Worrall Associates

Woodcote, Tanwood Close, Callow Hill, Redditch, Worcester, B97 5YU tel: 01527 546855

Mr. & Mrs. McSkeane **EXISTING &** 

Title 2 Dellow Grove

Client

Alvechurch, Worcestershire,

PROPOSED Date: 27-01-23 Scale: 1:50@ A1 ONLY

Drawn: NTS

Drawing No: Checked:MW CAD Ref: 7625-01.dwg

7656-06A