

Proposed Two Storey Side and Single Storey Rear Extension
at 3 Kaydor Close Werrington ST9 ONA

Scale 1-50 (A1) - proposed layout Dwg ref KC2d April 2026

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***Important Note:**
The author of this drawing may be considered the Principal Designer only in so far as obtaining formal statutory approvals including Building Regulation consent. The Designer will not inspect, supervise or instruct the works on site and such responsibility must not be inferred, assumed or supposed from the drawings and any supporting documents.
The Client and their Principal Contractor as Duty Holders have a responsibility to verify all dimensions either written or scaled from the drawings and identifying existing covered foundation and drainage lines on site and any discrepancies or changes in the design or specifications are to be referred to the Designer to check for compliance.
The construction of the development in accordance with this drawing does not constitute or imply any guarantee, latent defect assurance or warranty.
The Client and the Principal Contractor must understand and accept their responsibilities in their role as Duty Holders under The Building Regulations 2010 (as amended) and The Building Safety Act 2022.
Relevant requirements of CDM or Health and Safety Legislation are the responsibility of the Principal Contractor.
All works are to be carried out with full agreement of the Client and any disturbance to existing structures or boundary features are to be made good to satisfaction of all parties.
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***General Specification:**

***Preliminary Works:**
*NOTE - Prior to any work on site check existing drainage runs at site to assess falls and lines and verify new drainage layout. Carefully demolish existing conservatory etc room and maintain boundary lines throughout.
Prepare for setting out and excavation at rear and removal of all spoil from site to an authorised and licensed tip facility.
Check existing foundations to assess ground bearing conditions etc. and assess soil type to verify new foundation type.

***Walls (External):**
Selected facing brick outer leaf to match existing dwelling 100mm cavity filled with an approved insulation enclosing 90mm Kingspan Kooltherm K106 Cavity Board and 100mm thermal block inner leaf (max thermal conductivity 0.13 W/mK) and 12.5mm plasterboard finish.
This or similar construction to achieve max 0.18W/m2K U-Value.
*Note: new walling to be effectively bonded to existing structure to satisfaction of inspecting authority surveyor and wall ties to be stainless steel suitable for 150mm cavity width and compliant with DD140. set at 5 per m2 and at each block course at jambos. Install continuous 2000g pvc horizontal and vertical dpc throughout.
Install Thermabate or similar insulated cavity closures at all opening jambos

***Internal Walls (non load bearing):**
100x47 sw timber stud faced on 100x75mm sole plate and dpc faced with plasterboard incorporating vapour check and enclosing 100mm rockwool acoustic grade insulation.

***First Floor Roof:**
Single lap concrete tiles to match existing fixed in place in accord with manufacturer specification and BS5534 on treated battens on approved breathable membrane over prefabricated trussed rafter units by specialist design and supply compliant with BS5588 secured with purpose made steel clips to continuous 100x75mm sw wall plate anchored to supporting walls by approved galvanised ms straps at maximum 1000mm centres.
Ensure all necessary handling, bracing and lateral restraint strapping to roof frame and adjacent structure is completed in accordance with manufacturer specification and compliant with BS5588.
Horizontal ceilings to have 150mm rock wool between joists and a further 150mm thickness laid across joists.
Note: This or similar construction to achieve max 0.15 W/m2K U-Value
Form insulated roof hatch access to requirements of client.

***Flat Roof over existing Garage Conversion**
Form new cold deck with approved AA rated single ply membrane by specialist contractor on min 18mm ext ply deck with new pvc fascias allowing 25mm continuous air gap (with fly screens fitted) to ensure 50mm cross ventilation and lining strips laid to fall 1:80 across 170x50mm C24 joists at 450mm ctrs with Celotex 120mm XR4000 between joists and 72.5mm PL4060 under drawing to ceiling.
This or similar construction to achieve max 0.15 W/m2K U-Value.
Ensure that where the new flat roof abuts the tiled roof the waterproof single ply membrane extends a minimum of 400mm behind new tiles on the continuous 18mm ply base over a saw cocking fillet piece.
Similarly the tiled roof breacheable membrane will overlap over the flat above the flat roof membrane to maintain the weathered break.

***First Floor:**
21mm t&g boarding across 170x50mm sw C16 joists at max 450mm centres supported off heavy duty galvanised ms joist hangers fixed to comply with manufacturer specification. Provide suitable strutting at mid span with end wedges as necessary. Under draw joists with plasterboard to achieve min 30 minutes fire resistance incorporating vapour control membrane where required and enclosing 200mm Rockwool Flex between joists to achieve maximum 0.18W/m2K. *Note any notching of floor joists for services to be minimal and compliant with BS5268 part 2:1991.

***Foundation Details:**
Subject to prior exposure of existing house foundation lay 600x300mm deep concrete strip foundations to new walls at depth to suit site conditions and to satisfactory bearing strata to approval of inspecting authority. Reinforce throughout with 2 no layers B503 steel mesh.
*New foundation to create no surcharge on drainage lines at any point.
All works to be carried out with full agreement of client and adjoining neighbours and any disturbance to existing structures to be made good to satisfaction of all parties.

***Fenestration:**
Install high performance double glazed upvc or aluminium window units to match existing style using Pilkington Low E 'K' glass and min 25mm cavity - max 1.40 W/m2K U-Value.
Note : Combined openings to new leisure room and Kitchen to represent minimum 5% of combined floor areas.
*Escape Window: Where required provide opening casements to habitable rooms capable of safe egress in emergency i.e. min 0.35m2 clear opening (say 600x450mm) set within 1100mm of internal floor level.
Ensure that all doors and critical window areas are fitted with laminated or toughened safety glazing compliant with current BS EN122150.
*Install new Velux type roof lights to new roof to client requirements and in accord with manufacturer instruction ref: double rafter trimming to existing rafters and adequate weathering to roof finish etc.

***Ventilation:**
Natural ventilation from opening casements as above plus install mechanical extract fan to new utility room set to achieve min 15 litres/sec extract rate and new wc 6 litres/sec both in conjunction with continuous 2mm air gap at base of wc door to maintain air flow.
Similarly install mechanical extract fan to kitchen area set to achieve min 60 litres/sec extract rate (30 litres/sec if over cooker hood) - bath / shower rooms 30 litres/sec.

***Drainage:**
See preliminary work notes to identify and locate existing drain runs on site prior to commencement of works.
Ensure adequate support and protection to all drains passing through walls and building footprint.
Upvc rainwater goods to match existing carried to existing system as required.
Internal waste plumbing to satisfy BS5512 with 75mm deep seal traps as required. Wastes to discharge to 100mm stub stack where required fitted with Durgos or similar air admittance valve positioned above flood level of fittings to full satisfaction of inspecting authority surveyor.
*Install screwed down double seal air tight cover and frame to existing IC in new covered way.
NOTE - obtain necessary Water Authority consent for any lateral shared drains within 3000mm of new extension footprint.
New foundation to be placed below zone of influence of 45 degree splay projected from existing 150mm diameter sewer pipe. Ensure that foundation and associated walls place no surcharge on to pipes at any point to full satisfaction of inspecting Authority Surveyor and Water Authority. Trench excavation and concrete fill etc to meet Health and Safety standards for good working practice

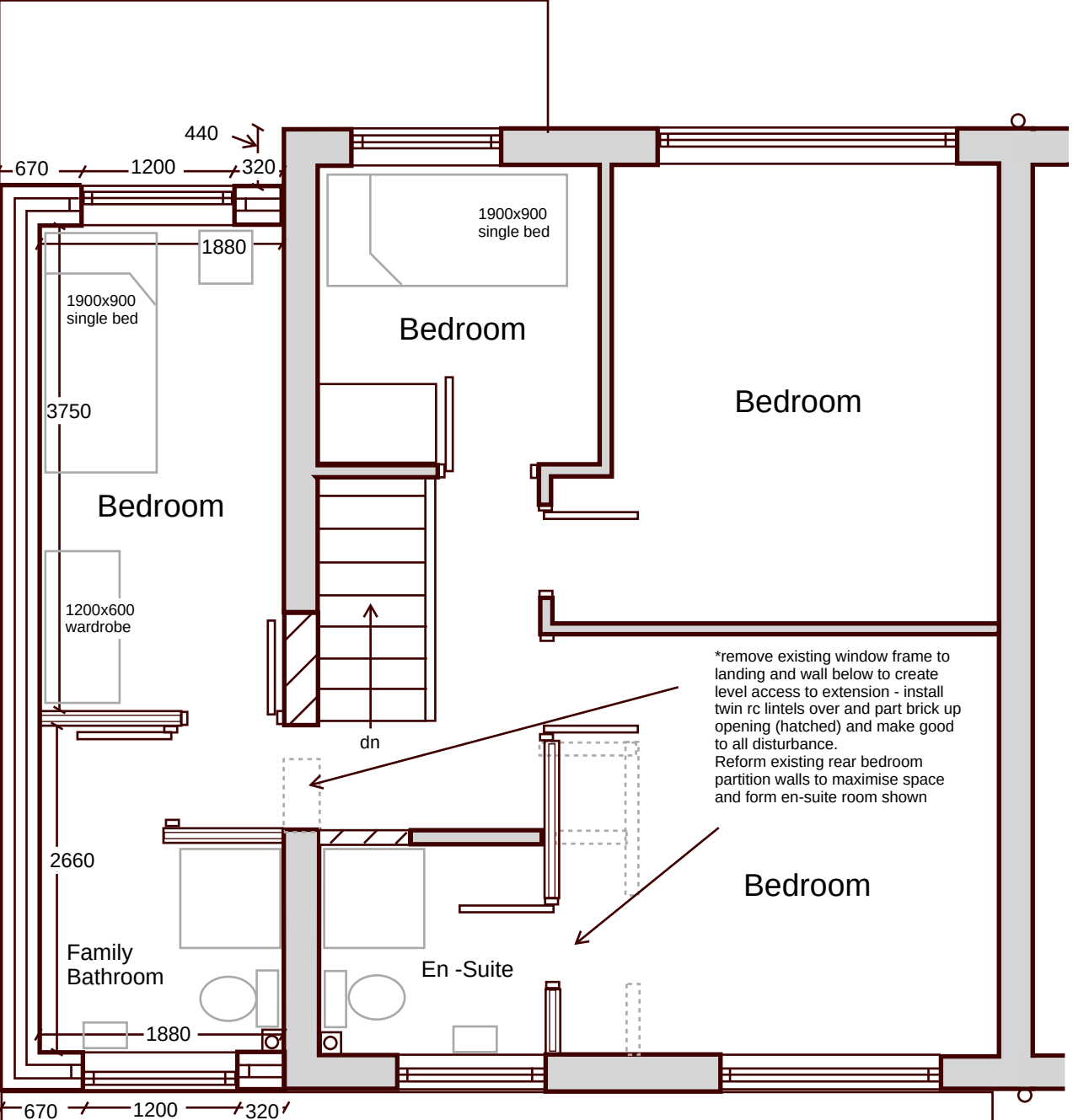
***Heating:**
Existing or new boiler to be repositioned in rear per area subject to client requirements and all boiler alterations and flue discharge criteria plus any extended space heating to be to the full requirements of a suitably qualified heating engineer and assessment of existing heating system plus compliant with current Part J Building Regulations.
Install thermostatic control valves as necessary throughout.

***Electrical Work:**
All notifiable electrical work to be carried out by a suitably qualified contractor registered with an approved national body. A formal completion certificate to be issued in compliance with current Part P building regulations and to satisfaction of inspecting authority surveyor.
Note: all lighting to be low energy type to client spec.
*Install sockets to extension area to requirements of client and provide co-axial and satellite ports as needed.
*Install a mains operated inter-linked smoke alarm system with battery back up to circulation areas and critical locations in compliance with BS5839 and to satisfaction of inspecting authority surveyor.

***New Lean To Roof over Rear Extension and Porch etc**
Single lap concrete tiles to match existing house fixed in place in accord with manufacturer specification and BS5534 on treated battens on approved breathable membrane all suitable for pitch (approx. 17.5 degrees subject to restricted height of first floor window cill) with a minimum 100mm head-lap over 170x47mm sw C24 rafters at 400mm centres birds-mouthed and screwed through truss type steel clips to continuous 100x75mm sw wall plate anchored to supporting wall by galvanised ms straps at max 1000mm centres.
Head of rafters screwed to 170x63mm sw pole plate rawl bolted to wall at maximum 600mm centres.
*Provide high level ceiling ties supported from pole plate shown with 100x47mm sw C24 joists with M16 bolt and dog tooth washer connections to each rafter.
Pitched ceilings to have Celotex GA400 (100mm) insulation board between rafters ensuring min 50mm air gap behind roof membrane and under draw with Celotex PL 4060 insulation backed plasterboard (600mm+12.5mm plasterboard)incorporating vapour check membrane all to manufacturer specification - insulate to full length of rafters.
Note: This or similar construction to achieve max 0.15 W/m2K U-Value.
*Ensure that where the roof abuts new brickwork Code 4 stepped lead flashing and soakers are installed plus the flashing is linked to a continuous 2000g dpc cavity tray at abutment with new fist floor extension wall if required and subject to exposure assessment.

***Structural Works:**
*Note Contractor to assess bearing capacity of existing retained masonry to receive ends of new Beams and if necessary rebuild in bonded 7N/mm2 engineering quality concrete brick/ block to required bearing capacity beneath spreader pad stones to full satisfaction of inspecting authority and in accord with Engineer's design sheets.
*Install steel beams encased in gyproc fire line board to achieve min. 30 minutes fire resistance. See Engineer's design sheets for all structural beam etc information.

proposed side elevation to boundary (1:100)



proposed first floor layout



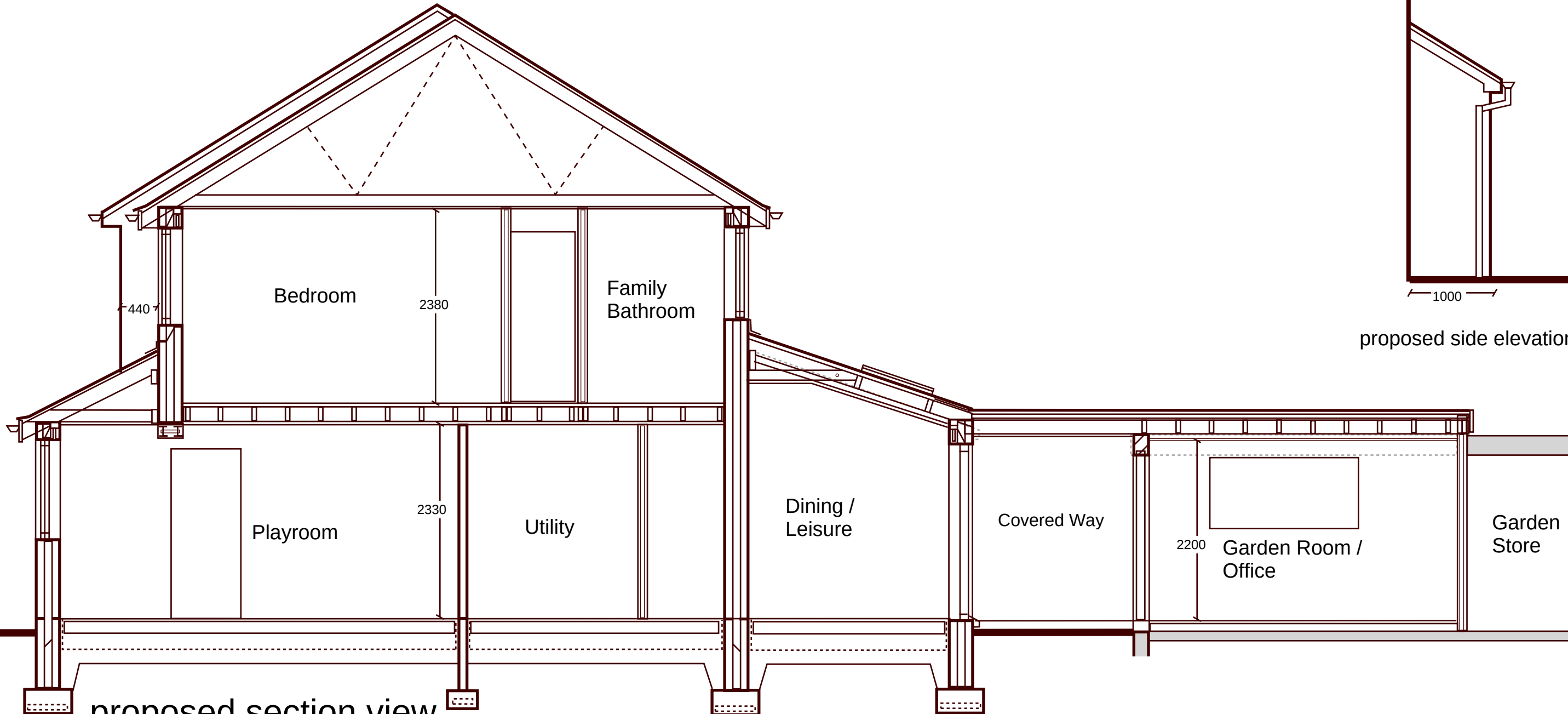
proposed front elevation

proposed side elevation to rear

proposed side elevation to front



proposed rear elevation



proposed section view

proposed ground floor layout

***Existing Garage External Wall:**
Part brick up existing garage door opening (hatched)
*Set additional courses of brickwork to existing external wall to level out with new ceiling height (minimum 2200mm) as required (first check foundation as fit for purpose for extra loading). Examine existing walls for any damp penetration and if necessary install all existing mortar joints are filled and surface meets all manufacturer standards to treat walls with brush applied dpm tanking solution (eg Sovereign K11 or similar approved system) linked continuously to floor slab treatment to manufacturer specification and to satisfaction of inspecting Authority Surveyor.
Internal lining wall set 25mm from existing wall face comprising 100x50mm timber stud frame enclosing 100mm GA4000 between studs incorporating continuous vapor check membrane to room side with 50 mm GA4000 lining and 12.5mm plasterboard finish (or similar approved insulation board to manufacturer specification). ensure all lightly butted joints with taped, vapour sealed finish to manufacturer specification. This or similar construction to achieve max 0.18 W/m2K U-Value.

***New Wall between Garden Store and Office:**
Construct new partition with 100mm X 47mm, 600cc studs off 2000g dpc. Install 100mm GA4000 between studs + 50 mm GA4000 lining and 12.5mm plasterboard finish to office side (or similar approved insulation board to manufacturer specification). ensure all lightly butted joints with taped, vapour sealed finish to manufacturer specification. This or similar construction to achieve max 0.18 W/m2K U-Value.
*Note fire out store side of partition with 18mm ext ply faced with 6mm supalite panel or similar approved fire resistant board to ensure minimum 30 minutes fire break between rooms with full fire stopping to manufacturer specification.

***Existing Garage Floor to Office:**
Assess slab as for walls and if necessary treat slab with brush applied dpm tanking solution (eg Sovereign K11 or similar approved system) linked continuously to wall dpc to manufacturer specification and to satisfaction of inspecting Authority Surveyor ensuring that system is compatible with floor insulation product.
Install Celotex GA4000 continuous insulation board over levelled floor butt jointed and sealed to manufacturer spec. with 21mm t&g flooring deck over (10mm expansion joint to perimeter). NB contractor to verify actual make up dimension to level new floor throughout and adjust insulation depth if required.
Floor finish to client requirements. This or similar construction to achieve max 0.15 W/m2K U-Value if practical to do so based upon restrictive levels available.