

Proposed Two Storey and Single Storey Rear Extension
at 15 The Island Upper Tean ST10 4JE

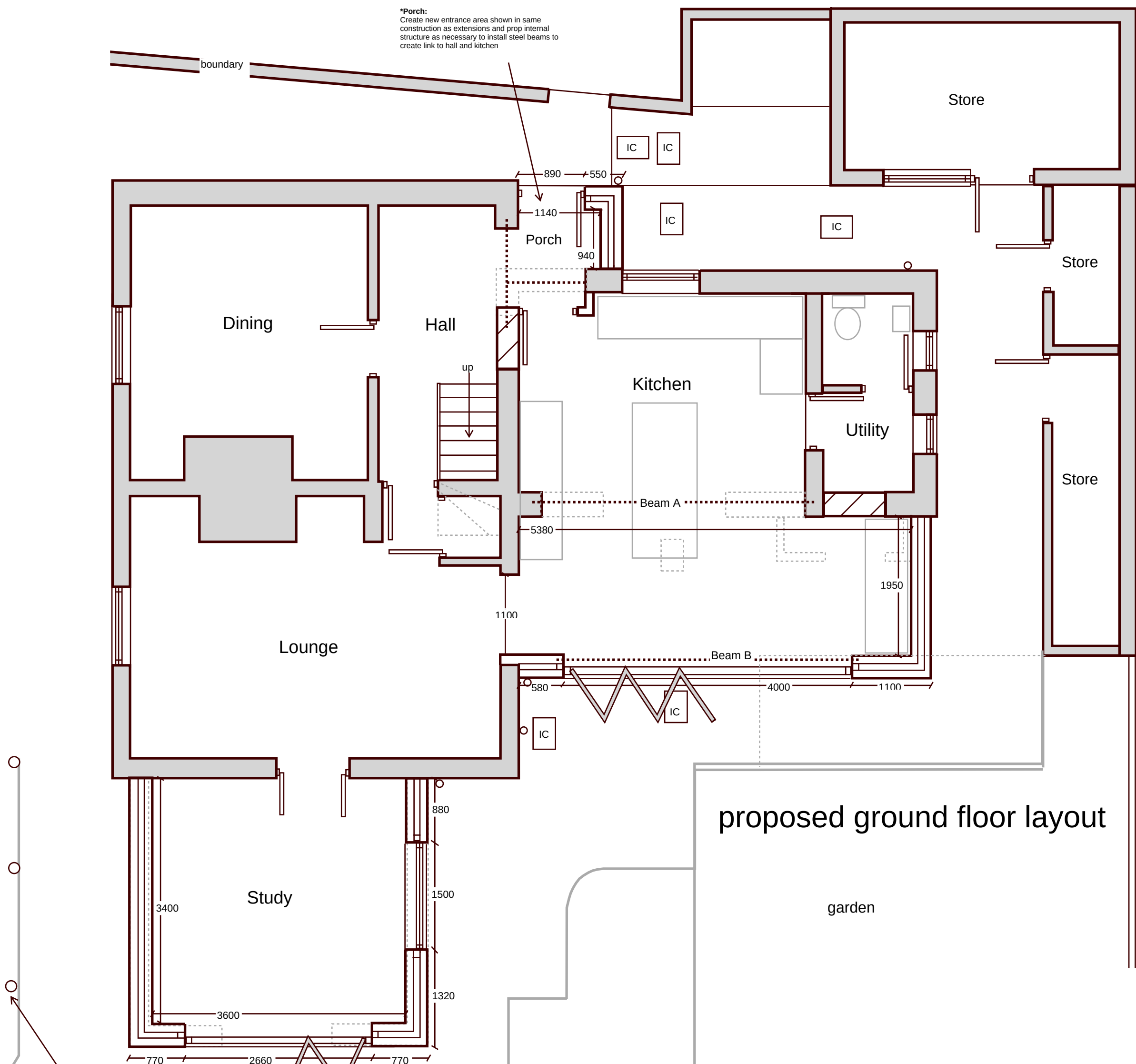
Scale 1-50 (A1) - proposed layout Dwg ref TI2e Oct 2025

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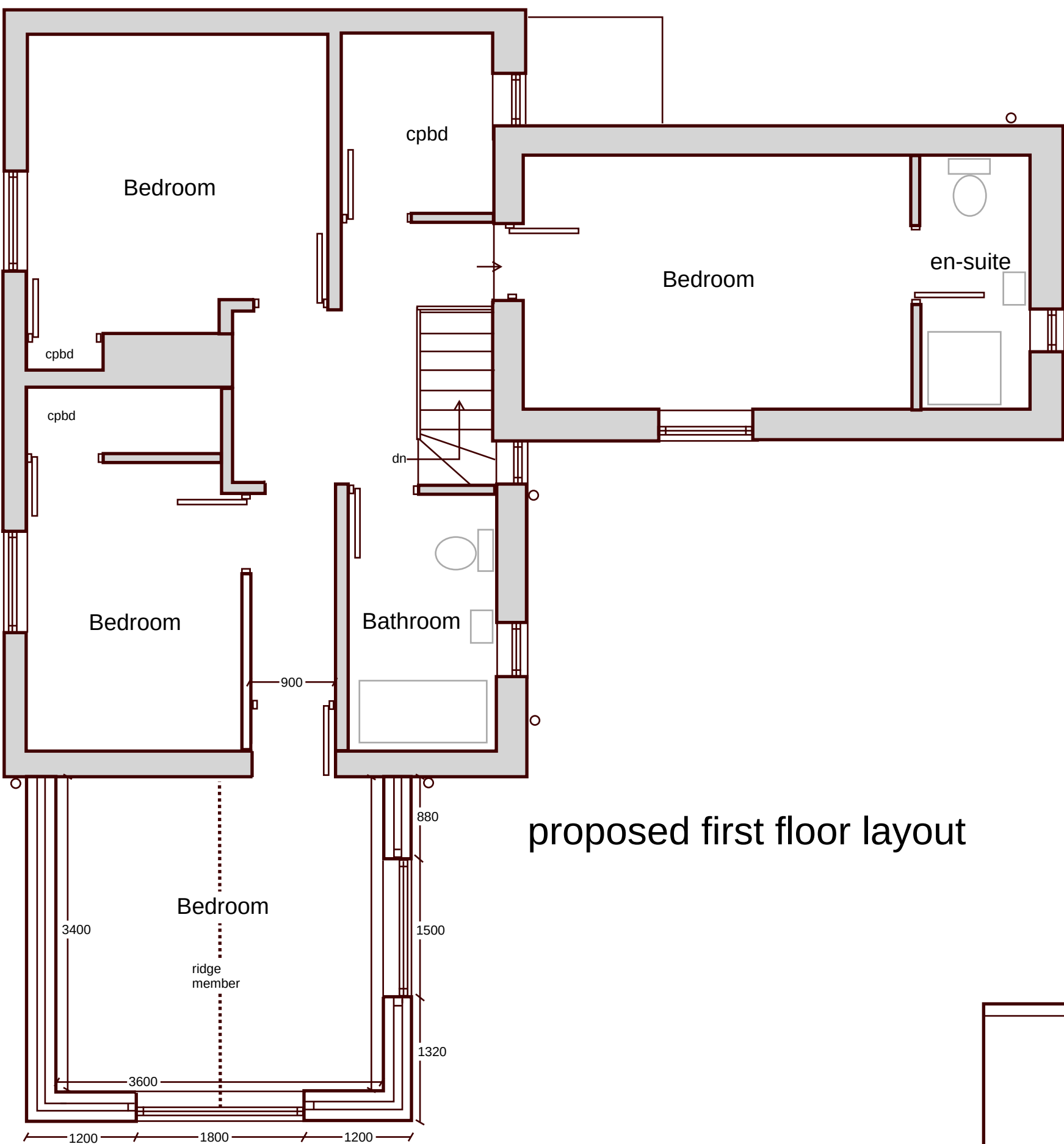


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*Porch:
Create new entrance area shown in same construction as extensions and prop internal structure as necessary to install steel beams to create link to hall and kitchen



proposed ground floor layout



proposed first floor layout

***General Specification:**

***Preliminary Works**
Carefully dismantle existing conservatory structure (shown dotted) and remove from site. examine floor and substructure to assess suitability to retain subject to prior discussion with inspecting authority.
Plan extensions programme to ensure minimum disturbance and exposure to rear living space. Remove all rubble from site to approved tip facility. Expose existing house foundation to assess type of base and ground conditions. Examine and expose as necessary existing drainage lines and inverts etc to assess location and prepare for extension excavation work.

***Walls (External):**
Faced brick to match existing and to satisfaction of planning authority. Min 100mm cavity enclosing Dritherm 32 insulation fill to manufacturer specification and internal leaf of approved 100mm load bearing thermal block work (maximum 0.15W/mK) faced internally with 52.2mm PBR plasterboard finish (40mm PBR+12.5mm plasterboard) on treated battens or cement dabs. This or similar construction to achieve max 0.18W/m2 K U-Value.
Install Thermabate or similar insulated cavity obscures at all opening joints.
*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 100mm cavity width and compliant with DQ148, set at 5 per m2 and at each block course at joints.

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

***Extensions Roof:**
Main double lap ties to match main house colour and suitable for pitch (lowest approx. 14 degrees to kitchen extension eg Sandholt 2020 with 100mm headlap) fixed in place in accord with manufacturer specification and BSS534 on treated battens on approved breathable membrane over 190x47mm sw C15 rafters at 450mm centres birds-mouthed and screwed through truss type steel clips to continuous 100x75mm sw wall plate anchored to supporting wall by galvanized ms straps at max 1200mm centres.
Head of rafters screwed to ridge beam (see engineer notes) and members tied with continuous galvanized metal sling fixings to restrict spread - see notes.
The glazed gable frame will be housed within a fabricated cranked beam supporting the proposed ridge beam with a welded plate connection (See notes on beam design sheets).

***Roof Insulation:**
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 (60mm) 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.

***Fenestration:**
Install high performance double glazed window and doors etc. at rear shown max 1.40 w/m2 K U-Value.
Total window and door opening casements to represent minimum 9% of adjacent floor as natural vent plus min 8000mm2 trickle ventilators to head of frame. Ensure that all doors and critical window areas are fitted with laminated or toughened safety glazing compliant with current BS EN 12150. *Escape Windows: Where required provide opening casements to habitable rooms capable of safe egress in emergency i.e. min 0.33m2 clear opening (say 800x450mm) set within 1100mm of internal floor level.

***Foundation Detail:**
Subject to prior exposure of existing house foundation lay 600x300mm concrete strip foundation 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 and depth to have due regard to proximity of trees and potential root growth

***Floor:**
Extension floor slab to comprise floor finish to client requirement on min 60mm screed or power float finish to 100mm concrete slab reinforced with A193 steel mesh on 1200g dpm over Celotex GA 4000 (100mm) or similar approved insulation board turned up in 25mm thickness at floor perimeter to avoid cold bridge. Lay further dpm over well blinded 150mm min. compacted natural stone sulphate free hardcore.
*Note incorporate approved under floor heating if required by client subject to advice of Approved Heating Engineer. *U-Value max 0.18W/m2K

***First Floor:**
22mm lag boarding across 180x50mm sw C16 joists at max 450mm centres supported off heavy duty galvanised ms jist 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 and enclosing 200mm Rockwool Flexi between joists to achieve maximum 0.18W/m2K. *Note any notching of floor joists for services to be minimal and compliant with BSS268 part 2-1991.

***Drainage:**
See preliminary work notes - expose existing drain runs at rear at outset of work. Replace existing pipe work across rear yard if required in 100mm pvc on granular bed and surround at falls to match existing subject to prior assessment of condition of pipe work.
Ensure adequate support and protection to all pipes passing through walls and under new floor to complete satisfaction of inspecting authority.
All new drainage will comply with the requirements of the inspecting authority and BS EN 12056.
The existing drainage lines will be traced and exposed prior to building work commencing on site - see preliminary work notes above.
Pvc rainwater girds (discharging to accessible, trapped gutters with drain branch to existing system as above or approved garden soak away chamber sized and sited to satisfaction of inspecting authority surveyor and subject to a suitable percolation test. Internal plumbing to satisfy BSS5072 with 75mm deep steel traps as required.

***Flashings:**
Install Code 4 lead cover flash and soakers at tiled roof abutment with house wall ensuring min 150mm up-stand dressed into mortar joints and made good. Subject to assessment of exposure and requirements of inspecting authority install 2000g dpc cavity tray to existing external wall to discharge over flashing up stand from new roof.

***Heating:**
Any 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.

***Ventilation:**
Natural ventilation from opening casements plus install mechanical extract fan to kitchen area set to achieve min 60 litres/sec extract rate. DO lintlock if over cooker hood) plus install mechanical extract fan to new utility room set to achieve min 15 litres/sec extract rate.

***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. and suitable provision will be made for fixed lighting with a luminous efficacy of 45 lumens per circuit - wall.
Install sockets to extension area to requirements of client and provide co-axial and satellite ports if needed.
*Subject to assessment of existing alarm in situ install a mains operated inter-linked smoke alarm system with battery back up to circulation area and critical locations in compliance with BSS5039 and to satisfaction of inspecting authority surveyor.

***Structural Works:**
Check direction of existing first floor joists and first floor walling to ensure assumed loadings in steel work calculations are verified.
*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 greater pied stores to full satisfaction of inspecting authority.
*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 front elevation to road (south east)



proposed side elevation (north east)



proposed rear elevation (north west)



proposed side elevation (south west)