

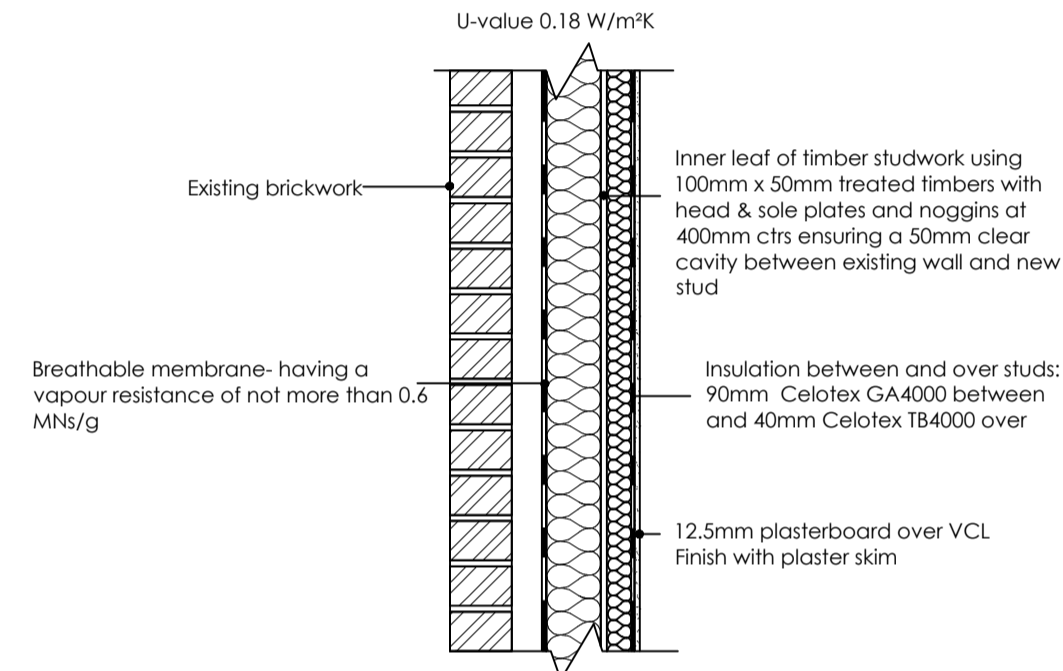


EXISTING FRONT ELEVATION
SCALE 1:100



PROPOSED FRONT ELEVATION
SCALE 1:100

UPGRADE OF SINGLE BRICK WALL



HEATING

Extend all heating and hot water services from existing and provide new TRVs to radiators. Heating system to be designed, installed, tested and fully certified by a GAS SAFE registered specialist. All work to be in accordance with the Local Water Authorities bye laws, the Gas Safety (Installation and Use) Regulations 1998 and IEE Regulations. The energy performance of the new components to be assessed. The results should be recorded and given to the building owner. All accessible pipes to be insulated to the standards in Table 4.4 Approved Document L.

PURGE VENTILATION

Minimum total area of opening in accordance with Table 1.4 Approved Document F1. Hinged or pivot windows with an opening angle of 15 to 30 degrees to have an openable area in excess 1/10 of the floor area of the room. External doors and sash, hinged or pivot windows with an opening angle of equal to or greater than 30 degrees to have an openable area in excess of 1/20 of the floor area of the room. Purge ventilation should be capable of extracting at least 4 air changes per hour per room directly to the outside. Internal doors should be provided with a 10mm gap below the door to aid air circulation.

PIPEWORK THROUGH WALLS

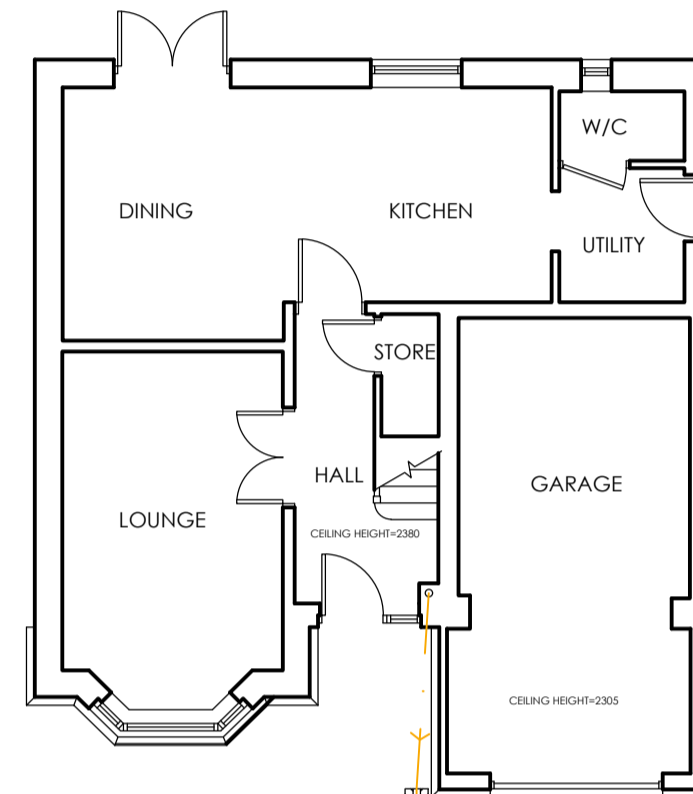
Where new pipework passes through external walls the pipework is to be provided with 'rocker pipes' at a distance of 150mm either side of the wall face. The 'rocker pipes' must have flexible joints and be a maximum length of 600mm. Alternatively provide 75mm deep pre-cast concrete plank lintels over drain to form an opening in the wall which gives 50mm space all round pipe. Mask the opening both sides with rigid sheet material and compressible sealant to prevent entry of fill or vermin.

UNDERGROUND FOUL DRAINAGE

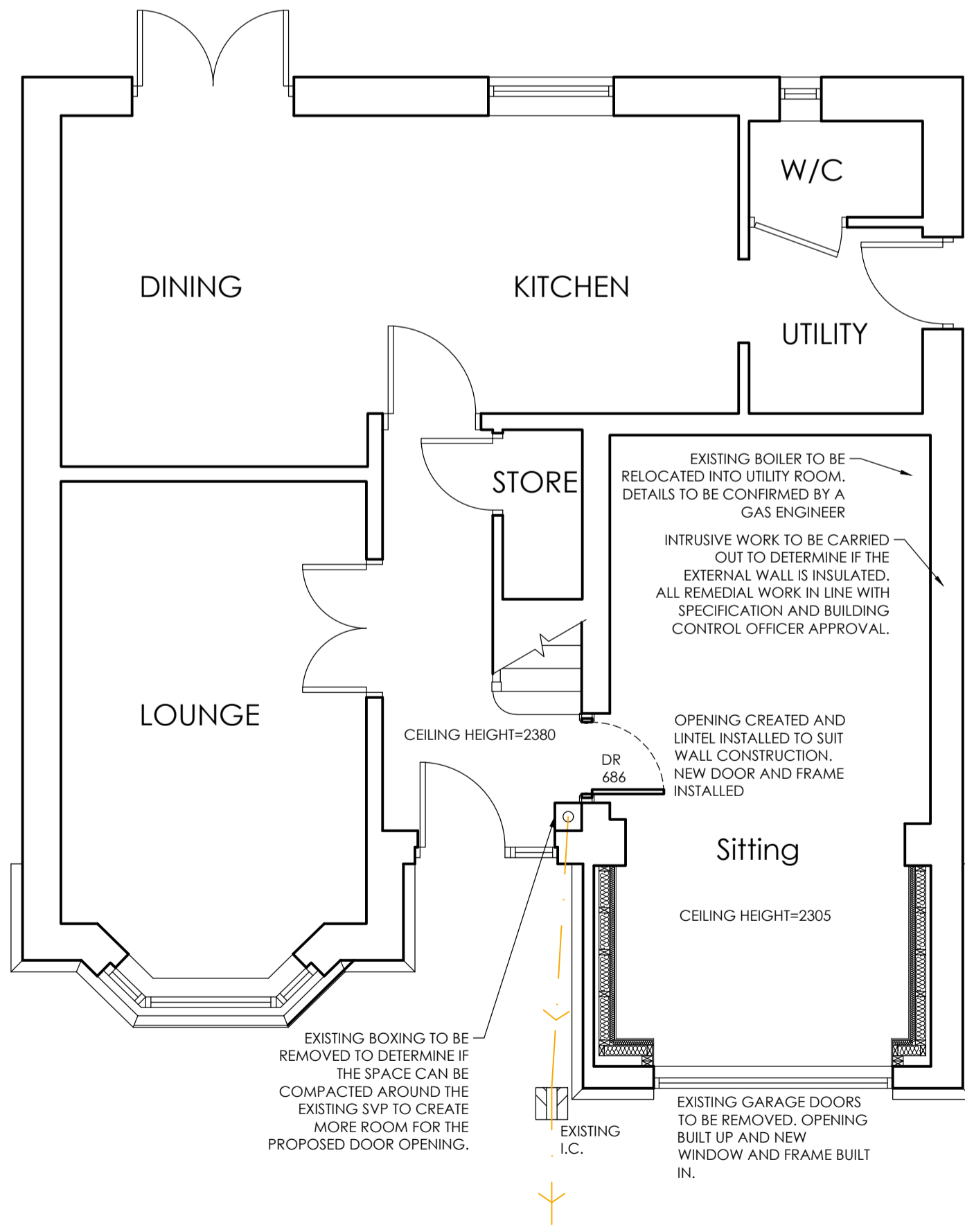
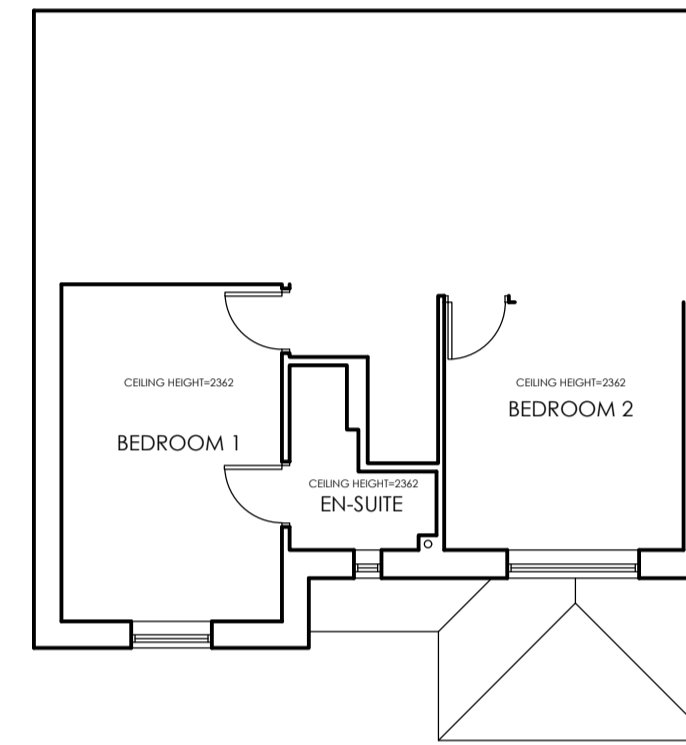
Underground drainage to consist of 100mm diameter UPVC proprietary pipework to give a 1:40 fall. Surround pipes in 100mm pea shingle. Provide 600mm suitable cover (900mm under drives). Shallow pipes to be covered with 100mm reinforced concrete slab over compressible material. Provide ridding access at all changes of direction and junctions. All below ground drainage to comply with BS EN 1401-1 (+A1:2023).

NEW AND REPLACEMENT WINDOWS

New and replacement windows to be double glazed with 16-20mm argon gap and soft coat low-E glass. Window Energy Rating to be Band B or better and to achieve U-value of 1.4 W/m²K. The door and window openings should be limited to 25% of the extension floor area plus the area of any existing openings covered by the extension. Insulated plasterboard to be used in reveals to abut jamb and to be considered within reveal soffits. Fully insulated and continuous cavity coats to be used around reveals. Windows and door frames to be taped to surrounding openings using air sealing tape.

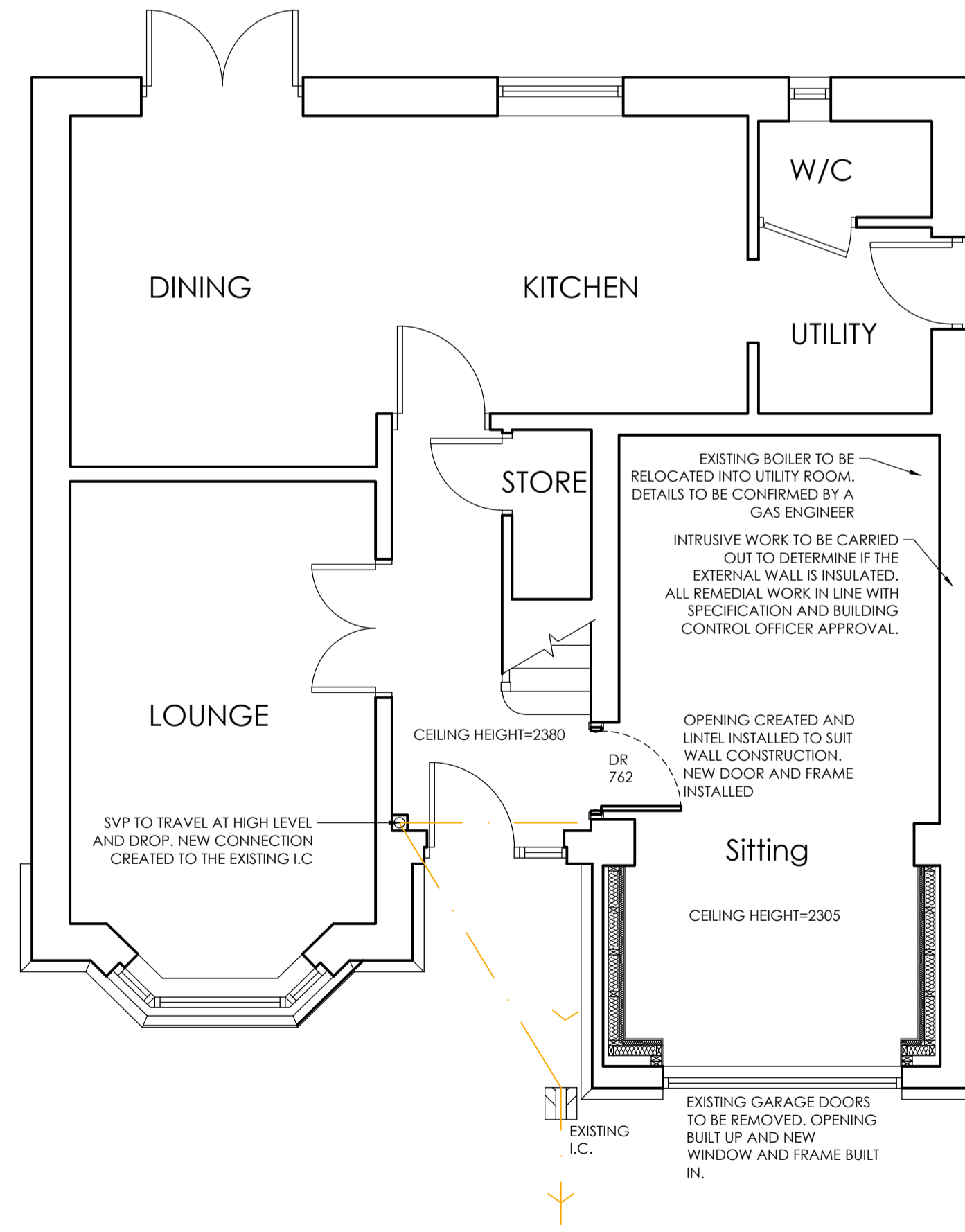


EXISTING PLANS
SCALE 1:100



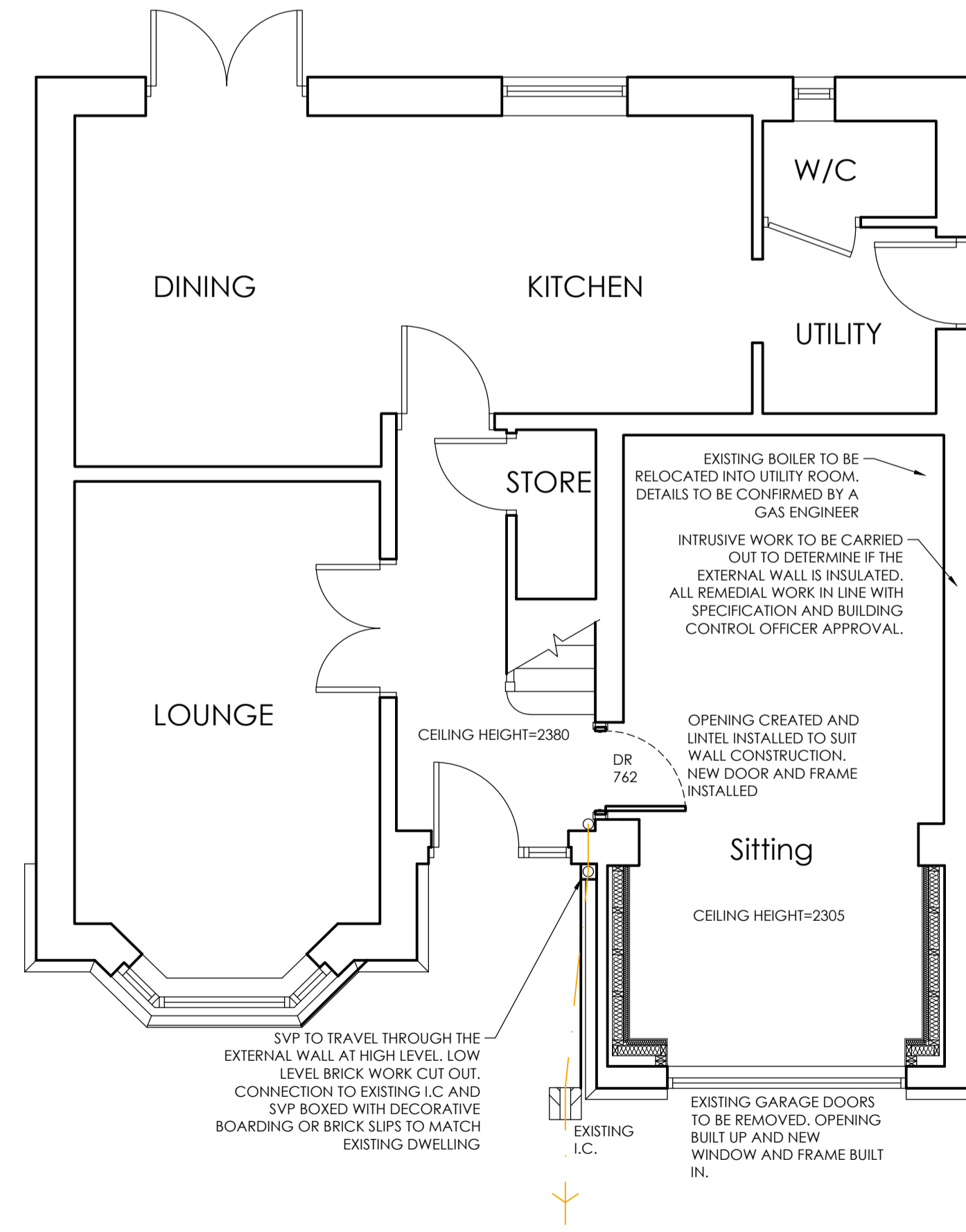
OPTION ONE

PROPOSED GROUND FLOOR PLAN
SCALE 1:50



OPTION TWO

PROPOSED GROUND FLOOR PLAN
SCALE 1:50



OPTION THREE

PROPOSED GROUND FLOOR PLAN
SCALE 1:50

NOTICE OF COMPLETION
A Notice of Completion to be given to Building Control not more than 5 days after the work has been completed. The notice to contain the following information:
• The name, address, telephone number and (if available) email address of the client, principal contractor, and principal designer.
• A statement from the applicant to say that the works have been completed and complies with all the applicable regulations to the best of their knowledge.
• A statement from both the principal contractor and principal designer to confirm they have fulfilled their duties under Part 2A (duty holders and competence).

THERMAL BRIDGING
Care shall be taken to limit the occurrence of thermal bridging in the insulation layers caused by gaps within the thermal element (i.e. around windows and door openings).

MATERIALS AND WORKMANSHIP
All works are to be carried out in a workmanlike manner. All materials and workmanship must comply with Regulation 7 of the Building Regulations, all relevant British Standards, European Standards, Agreement Certificates, Product Certification of Schemes (Kite Marks) etc. Products conforming to a European technical standard or harmonised European product should have a CE marking. The latest edition of the British Standard (including any amendments) applies to any untested references within these specifications.

EXISTING STRUCTURE
Existing structure including foundations, floor, beams, walls, roof and lintels are to be exposed and checked for adequacy prior to commencement of work and as required by the Building Control Officer. Particular care must be taken if the existing external wall is single leaf construction with piers, checks for stability and defects must be performed.

LINTELS
For uniformly distributed loads and standard 2 storey domestic loadings only
Lintel widths are to be equal to wall thickness. All lintels over 750mm sized internal door openings to be 65mm deep pre-stressed concrete plank lintels. 150mm deep lintels are to be used for 900mm sized internal door openings. Lintels to have a minimum bearing of 150mm on each end. Any existing lintels carrying additional loads are to be exposed for inspection of commencement of work on site. All pre-stressed concrete lintels to be designed and manufactured in accordance with BS EN 1192-1:2023 Eurocode 2, with a concrete strength of 50 or 40 N/mm² and incorporating steel strands to BS 5896 to support loadings assessed to BS EN 845-2:2013. For other structural openings provide proprietary insulated steel lintels suitable for spans and loadings in compliance with Approved Document A and lintel manufacturer's standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels. Independent lintels to have an insulated cavity closure between the inner and outer lintel.

FULL FILL CAVITY WALL
To achieve minimum U Value of 0.18 W/m²K (actual U Value achieved 0.17 W/m²K)
New cavity wall to comprise of 103mm suitable facing brick. Fill full the cavity with 90mm Kingspan Kooltherm K106 full fill insulation as manufacturer's details, leaving 10mm cavity between the insulation and outer skin. Inner leaf constructed using 100mm lightweight block, 0.15 W/m²K, e.g. Celcon solar, Thermaite turbo. Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1.6 cement mortar. Vertical joints in the board must be staggered and all joints tightly butted. All details including corner and junction to be as relevant BBA certificate. Location to be assessed for suitability of insulation boards.

EXISTING TO NEW WALL
Cavities in new wall to be made continuous with existing, where possible, to ensure continuous weather break. If a continuous cavity cannot be achieved, where new walls abut the existing walls provide a movement joint with vertical DPC. All tied into existing construction with suitable proprietary stainless steel profiles.

FOUNDATIONS
Trial hole to be excavated to ascertain whether the garage has a continuous foundation across the infill which is adequate to build off. If there is no foundation provide 225mm x 600mm concrete foundation, mix to conform to BS EN 204:2013 (+A2:2021) and BS 8500-2. Depth to be a minimum of 1000mm below ground level, to existing foundation depth or to be agreed on site with Building Control Officer to suit site conditions. All constructed in accordance with 2004 Building Regulations A1/2 and BS 8004:2015 Code of practice for foundations (+A1:2020). Ensure foundations are constructed below invert level of any adjacent drains. Sulphate resistant cement to be used if required. Please note that should adverse soil conditions, or any major tree roots in excavations be discovered, the Building Control Officer is to be contacted and the advice of a Structural Engineer should be sought.

EXTERNAL WALL UPGRADE
To achieve minimum U Value of 0.18 W/m²K
Existing garage floor to be exposed and checked for suitability to carry the load from the new stud wall prior to commencement of work and as required by the Building Control Officer. Construct an inner leaf of timber studwork using 100mm x 50mm treated timbers with head and sole plates and noggins at 400mm cts, ensuring a 50mm clear cavity between existing wall and new stud. Provide a breathable membrane (having a vapour resistance of not more than 0.6 MNs/g) on cavity side of studwork. Insulation to be 90mm Celotex GA4000 between studs with 40mm Celotex TB4000 over. Provide vcl and 12.5mm plasterboard over internal face of insulation. Finish with 3mm skim coat of finishing plaster. All junctions to have water tight construction, seal all perimeter joints with tape internally and with silicon sealant externally. Provide a cavity tray at the base with weep holes at 600 cts. Provide horizontal strip polymer (hyloadd) damp proof course to new leaf minimum. An injected DPC may also be required if one is not already present and working in existing wall. New DPC to be made continuous with floor DPM. A lesser provision of insulation may be appropriate where meeting such a standard would result in a reduction of more than 5% in the internal floor area of the room.

DPC
Provide horizontal strip polymer (hyloadd) damp proof course to both internal and external skins, minimum 150mm above external ground level. New DPC to be made continuous with existing DPCs and with floor DPM. Vertical DPC to be installed at all reveals where cavity is closed. The cavity should extend to at least 225mm below the DPC or where this is not possible provide a cavity tray at the base with weep holes at 600 cts. Existing walls may require an injected DPC if one is not already present and working.

WALL TIES
All walls constructed using stainless steel vertical twist type retaining wall ties built in at 750mm cts horizontally, 450mm vertically and 225mm cts at reveals and corners in staggered rows. Wall ties to be suitable for cavity width and in accordance with BS EN 845-1:2013. Wall ties for cavities over 150mm to be suitable for cavity width, and installed as manufacturer's details.

CAVITIES
Provide cavity trays over openings. All cavities to be closed at eaves and around openings using Thermabate or similar non combustible insulated cavity closers. Provide vertical DPCs around openings and abutments. All cavity trays must have 150mm upstands and suitable cavity weep holes (min 2) at max 900mm centres.

UPGRADING EXISTING SOLID FLOOR
To meet min U value required of 0.18 W/m²K
The existing solid floor slab must be checked for stability and be free from defects as required by Building Control. The existing floor will need upgrading to ensure adequate damp protection and to prevent heat loss. Provide 1200 gauge polythene DPM or 3 coats RW over existing concrete slab (if required). DPM to be lapped in with DPC in walls. Floor to be insulated over slab and DPM with min 90mm thick PIR insulation, e.g. Celotex GA4000, 25mm Celotex insulation to continue around floor perimeters to avoid thermal bridging. A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped 150mm and sealed. Finish with 65mm sand/cement finishing screed with light mesh reinforcement. Care should be taken to ensure any existing airbricks for the main house are not obstructed by this work. If so, they should be extended through the new floor to external air. Where drain runs pass under floor provide A142 mesh 1.0m wide and min 50mm concrete cover over length of drain. A lesser provision may be appropriate where meeting such a standard would create significant problems in relation to adjoining floor level.

UPGRADE OF EXISTING PITCHED ROOF
To achieve U value of 0.15 W/m²K
The existing roof must be checked for stability and be free from defects as required by the Building Control Officer. Provide 2 layers of Rockwool insulation to total 300mm laid between and over ceiling joists, cross laid at right angles. Provide opening at eaves level at least equal to continuous strip 25mm wide in two opposite sides to promote cross ventilation. Mono pitched roofs to have ridge/high level ventilation equivalent to a 5mm gap via proprietary tile vents spaced in accordance with manufacturer's details. Finished internally with 12.5mm plasterboard and min 3mm thistle multi-finish plaster. Provide polythene vapour barrier between insulation and plasterboard. Note: Some pitched roofs are constructed using breathable roofing felt and do not require ventilation if installed in strict accordance with their test certificate. Loft hatches should be suitable designed and installed to ensure optimum air tightness.

ELECTRICAL
All electrical work required to meet the requirements of Part P (electrical safety) must be designed, installed, inspected and tested by a Competent Person registered under a Competent Person Self Certification Scheme such as BRE certification Ltd, BSI, NICEIC Certification Services or Zurich Ltd. An appropriate BS7671 Electrical Installation Certificate is to be issued for the work by a person competent to do so. A copy of a certificate will be given to Building Control on completion.

INTERNAL LIGHTING
Install low energy light fittings that only take lamps having a luminous efficiency better than 80 lumens per circuit watt. All fixed to have lighting capacity (lm) 185 x total floor area, to comply with Part L of the current Building Regulations and the Domestic Building Services Compliance Guide.

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Drawing Title: PLANS AND ELEVATIONS		Date: APRIL 2024	Scale: 1:50 & 1:100 @ A1		
Ref: 23-218	Dwg. No.: 01	Rev.: A			
Date: 15/04/2024	Suffix: A	Description: REVISED TO CLIENTS REQUIREMENTS	Date: 23-	Suffix: 01	Description: REVISED TO CLIENTS REQUIREMENTS