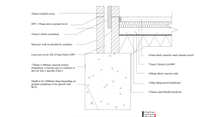
FOR PLANNING ONLY

WALLS BELOW GROUND
All new walls to have Class A blockwork below ground level or alternatively semi engineering brickwork in 1:4 masonry cement or equal approved specification. Cavities below ground level to be filled with lean mix concrete min 225mm below damp proof course. Or provide lean mix backfill at base of cavity wall (150mm below damp course) laid to fall to weepholes.

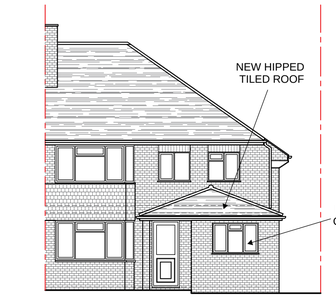
PIPEWORK THROUGH WALLS
Where new pipework passes through external walls form rocker joints either side wall face of max length 600mm with flexible joints with short length of pipe bedded in wall.
Alternatively provide 75mm deep pre-cast concrete plank lintels over drain to form opening in wall to give 50mm space all round pipe: mask opening both sides with rigid sheet material and compressible sealant to prevent entry of fill or vermin.

TRENCH FOUNDATION
Provide 750mm x 600mm trench fill foundations, concrete mix to conform to BS EN 206-1 and BS 8500-2. All foundations to be a minimum of 1000mm below ground level, exact depth 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 8004:1986 Code of Practice for Foundations. Ensure foundations are constructed below invert level of any adjacent drains. Base of foundations supporting internal walls to be min 600mm below ground level. Sulphate resistant cement to be used if required. Please note that should any adverse soil conditions or difference in soil type be found or any major tree roots in excavations, the Building Control Officer is to be contacted and the advice of a structural engineer should be sought.

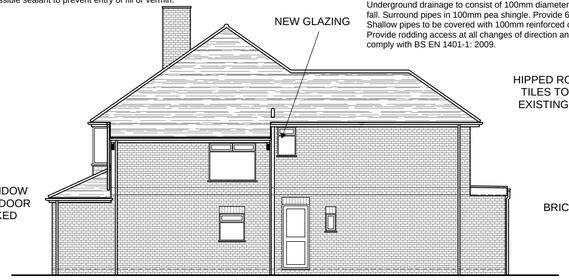
UNDERGROUND FOUL DRAINAGE
Underground drainage to consist of 100mm diameter UPVC proprietary pipe work to give a 1:40 fall. Surround pipes in 100mm pea shingle. Provide 600mm suitable cover (900mm under drives). Shallow pipes to be covered with 100mm reinforced concrete slab over compressible material. Provide rodding access at all changes of direction and junctions. All below ground drainage to comply with BS EN 1401-1: 2009.



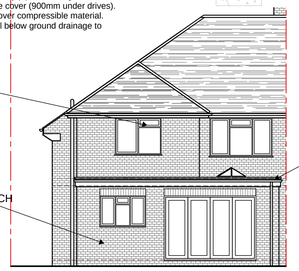
SOLID FLOOR INSULATION UNDER SLAB
To meet min U value required of 0.18 W/m²K
P/A ratio 0.5
Solid ground floor to consist of 150mm consolidated well-rammed hardcore. Blinded with 50mm sand blinding. Provide a 1200 gauge polythene DPM, DPM to be lapped in with DPC in walls. Floor to be insulated over DPM with 90mm thick Celotex GA4000 insulation. 25mm 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, provide 100mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2 over VCL. Finish with 65mm sand/cement finishing screed with light mesh reinforcement.
Where drain runs pass under new floor, provide A142 mesh 1.0m wide within bottom of slab min 50mm concrete cover over length of drain.
Where existing suspended timber floor air bricks are covered by new extension, ensure cross-ventilation is maintained by connecting to 100mm dia UPVC pipes to terminate at new 65mm x 215mm air bricks built into new cavity wall with 100mm concrete cover laid under the extension. Ducts to be sleeved through cavity with cavity tray over.



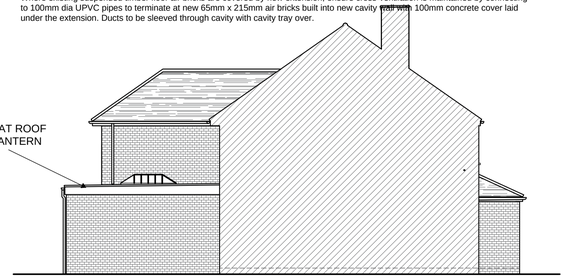
FRONT ELEVATION - 1:100



SIDE ELEVATION - 1:100

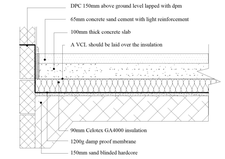


REAR ELEVATION



END ELEVATION

SOLID GROUND FLOOR
U-value 0.18 W/m²K
P/A Ratio 0.5



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.

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 at commencement of work on site. All pre-stressed concrete lintels to be designed and manufactured in accordance with BS 8110, with a concrete strength of 50 or 40 N/mm² and incorporating steel strands to BS 5896 to support loadings assessed to BS 5977 Part 1.
For other structural openings provide proprietary insulated steel lintels suitable for spans and loadings in compliance with Approved Document A and lintel manufactures standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels.

FULL FILL CAVITY WALL
To achieve minimum U Value of 0.18 W/m²K
100mm lightweight block, 0.15 W/m²K, e.g. Celcon solar, Toplite Standard. Fully fill the cavity with 150mm Dritherm 32 cavity insulation as manufacturer's spec. Inner leaf to be 100mm lightweight, 0.15 W/m²K, e.g. Celcon solar, Toplite standard. Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1:6 cement mortar.

0 1 2 3 4 5

THIS BAR SHOULD SCALE 5M @ 1:50

AS PROPOSED GROUND FLOOR PLAN - 1:50

0 1 2 3 4 5

THIS BAR SHOULD SCALE 5M @ 1:50

AS PROPOSED FIRST FLOOR PLAN - 1:50

NEW AND REPLACEMENT DOORS
New and replacement doors to achieve a U-Value of 1.4W/m²K. Glazed areas to be double glazed with 16-20mm argon gap and soft low-E glass. Glass to be toughened or laminated safety glass to BS 6206, BS EN 14179 or BS EN ISO 12543-1 and Part K (Part N in Wales) of the current Building Regulations.
Insulated plasterboard to be used in reveals to abut jambs and to be considered within reveal soffits. Fully insulated and continuous cavity closers to be used around reveals.
Windows and door frames to be taped to surrounding openings using air sealing tape.

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 jambs and to be considered within reveal soffits. Fully insulated and continuous cavity closers to be used around reveals.
Windows and door frames to be taped to surrounding openings using air sealing tape.
Windows to be fitted with trickle vents to provide adequate background ventilation in accordance with Approved Document F.

INTERMEDIATE FLOORS
Intermediate floor to be 25mm t&g flooring grade chipboard or floorboards laid on C24 joists at 400mm ctrs (see engineer's calculation for sizes and details). Lay 100mm Rockwool mineral fibre quilt insulation min 10kg/m³ or equivalent between floor joists. Ceiling to be 12.5 FireLine plasterboard with skim plaster set and finish. Joist spans over 2.5m to be strutted at mid span using 38 x 38mm herringbone strutting or 38mm solid strutting (at least 2/3 of joist depth). In areas such as kitchens, utility rooms and bathrooms, flooring to be moisture resistant grade in accordance with BS EN 312:2010. Identification marking must be laid upper most to allow easy identification. Provide lateral restraint where joists run parallel to walls, floors are to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps or other approved in compliance with BS EN 845-1 at max 2.0m centres, straps to be taken across minimum 3 no. joists. Straps to be built into walls. Provide 38mm wide x ¾ depth solid noggins between joists at strap positions.

INTERNAL STUD PARTITIONS
100mm x 50mm softwood treated timbers studs at 400mm ctrs with 50 x 100mm head and sole plates and solid intermediate horizontal noggins at 1/3 height or 450mm. Provide min 10kg/m³ density acoustic soundproof quilt tightly packed (eg. 100mm Rockwool or Isowool mineral fibre sound insulation) in all voids the full depth of the stud. Partitions built off doubled up joists where partitions run parallel or provide noggins where at right angles, or built off DPC on thickened concrete slab if solid ground floor. Walls faced throughout with 12.5mm plaster board with skim plaster finish. Taped and jointed complete with beads and stops.

EXTRACT TO KITCHEN
Kitchen to have mechanical ventilation with an extract rating of 60l/sec or 30l/sec if adjacent to hob to external air, sealed to prevent entry of moisture. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermittent extract fans to BS EN 13141-4. Cooker hoods to BS EN 13141-3. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

EXTRACT TO WC
WC to have mechanical ventilation ducted to external air with an extract rating of 15l/s operated via the light switch. Vent to have a 15min overrun if no window in room. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermittent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

HEATING
Extend all heating and hot water services from existing and provide new TVRs 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.

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 greater than 45 lumens per circuit watt and a total output greater than 400 lamp lumens. Not less than three energy efficient light fittings per four of all the light fittings in the main dwelling spaces to comply with Part L of the current Building Regulations and the Domestic Building Services Compliance Guide.

ABOVE GROUND DRAINAGE
All new above ground drainage and plumbing to comply with BS EN 12056-2:2000 for sanitary pipework. All drainage to be in accordance with Part H of the Building Regulations. Wastes to have 75mm deep anti vac bottle traps and rodding eyes to be provided at changes of direction.

Size of wastes pipes and max length of branch connections (if max length is exceeded then anti vacuum traps to be used)
Wash basin - 1.7m for 32mm pipe 4m for 40mm pipe
Bath/shower - 3m for 40mm pipe 4m for 50mm pipe
W/c - 6m for 100mm pipe for single WC
All branch pipes to connect to 110mm soil and vent pipe terminating min 900mm above any openings within 3m.
Or to 110mm upvc soil pipe with accessible internal air admittance valve complying with BS EN 12380, placed at a height so that the outlet is above the trap of the highest fitting.
Waste pipes not to connect on to SVP within 200mm of the WC connection.
Supply hot and cold water to all fittings as appropriate.

(HIPPED ROOFS)

WARM PITCHED ROOF
Pitch 22-45°
To achieve min U-value required of 0.15 W/m²K
Timber roof structures to be designed by an Engineer in accordance with NHBC Technical Requirement R5 Structural Design. Calculations to be based on BS EN 1995-1-1. Roofing tiles to match existing fixed to tile battens secured over breathable sarking felt to relevant BBA Certificate allowing the breather felt to sag at least 10mm over preservative-treated counter battens (min 38mm x 50mm). Provide 100mm Celotex GA4000 insulation boards under the counter battens and 40mm Celotex TB4000 between 47 x 195mm timber rafters strength class C24 at 400 c/c – span to engineer's details. A vapour control layer should be provided to the underside of the rafters. Finish with 12.5mm plasterboard and skim.
Restraint strapping - Ceiling joists tied to rafters (if raised collar roof consult structural engineer). 100mm x 50mm wall plate strapped down to walls. Ceiling joists and rafters to be strapped to walls and gable walls, straps built into cavity, across at least 3 timbers with noggins. All straps to be 1000 x 30 x 5mm galvanized straps or other approved to BSEN 845-1 at 2m centres.
THIS IS A GENERAL GUIDE BASED ON NORMAL LOADING CONDITIONS FOUND IN DOMESTIC CONSTRUCTION. IT IS YOUR RESPONSIBILITY TO ASSESS YOUR DESIGN TO ASCERTAIN WHETHER ENGINEER'S DETAILS/CALCULATIONS ARE REQUIRED. PLEASE REFER TO THE TRADA DOCUMENT – 'SPAN TABLES FOR SOLID TIMBER MEMBERS IN FLOORS, CEILINGS AND ROOFS FOR DWELLINGS' OR ASK YOUR BUILDING CONTROL OFFICER FOR ADVICE.

EXTRACT TO BATHROOM
Bathroom to have mechanical vent ducted to external air to provide min 15 litres / sec extraction. Vent to be connected to light switch and to have 15 minute over run if no window in room. Internal doors should be provided with a 10mm gap below the door to aid air circulation. Ventilation provision in accordance with the Domestic Ventilation Compliance Guide. Intermittent extract fans to BS EN 13141-4. All fixed mechanical ventilation systems, where they can be tested and adjusted, shall be commissioned and a commissioning notice given to the Building Control Body.

WARM FLAT ROOF
(imposed load max 1.0 kN/m² - dead load max 0.75 kN/m²)
To achieve U value 0.15 W/m²K
Flat roof to be single ply membrane roofing providing aa fire rating for surface spread of flame with a current BBA or WIMLAS Certificate and laid to specialist specification. Single ply membrane to be fixed to 22mm exterior quality plywood over 165mm Celotex XR4000 insulation.

Insulation bonded to vcl on 22mm external quality plywood decking or similar approved on sw firings to minimum 1 in 80 fall on sw treated 47 x 220mm C24 flat roof joists at 400mm ctrs to give a max span of 5.08m or as Structural Engineer's details and calculations. Underside of joists to have 12.5mm foil backed plasterboard and skim. Provide cavity tray to existing house where new roof abuts existing house.
Provide restraint to flat roof by fixing of 30 x 5 x 1000mm ms galvanised lateral restraint straps at maximum 2000mm centres fixed to 100 x 50mm wall plates and anchored to wall.
THIS IS A GENERAL GUIDE BASED ON NORMAL LOADING CONDITIONS FOUND IN DOMESTIC CONSTRUCTION. IT IS YOUR RESPONSIBILITY TO ASSESS YOUR DESIGN TO ASCERTAIN WHETHER ENGINEER'S DETAILS/CALCULATIONS ARE REQUIRED. PLEASE REFER TO THE TRADA DOCUMENT – 'SPAN TABLES FOR SOLID TIMBER MEMBERS IN FLOORS, CEILINGS AND ROOFS FOR DWELLINGS' OR ASK YOUR BUILDING CONTROL OFFICER FOR ADVICE.

UPGRADING EXISTING SOLID FLOOR
To meet min U value required of 0.25 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 RIW 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 105m thick 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 over the insulation with a floating layer of min 20mm softwood tongue and groove softwood boards or moisture resistant particle/chipboard grade type C4 to BS EN 312:2010. Lay with staggered joints. 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 GROUND FLOOR

WARM PITCHED ROOF
U-value 0.15 W/m²K

NOTES
1) ALL DIMENSIONS TO BE CHECKED ONSITE PRIOR TO CONSTRUCTION (INTERNAL
DIMS MAY CHANGE DEPENDING ON EXTERNAL WALL CONSTRUCTION METHOD)

2) A STRUCTURAL ENGINEER MUST BE CONSULTED FOR ALL STRUCTURAL WORKS

3) WORKS TO BE CARRIED OUT BY COMPETENT, QUALIFIED CONTRACTORS

4) ALL WORKS TO BE CARRIED OUT UNDER ALOCAL AUTHORITY BUILDING NOTICE
ALL BUILD NOTES ARE GIVEN BASED ON STANDARD BUILDING REGULATIONS DETAILS
AND MAY VARY, CONSTRUCTION METHODS MAY VARY ACCORDING TO BUILDERS
PREFERENCE AND BUILDING CONTROL OFFICER REQUIREMENTS.
THESE DRAWINGS ARE PRODUCED FOR PLANNING ONLY

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CLIENT/PROJECT:

CARLY WORGAN

17 BISLEY ROAD, CHELTENHAM, GL51 6AB
PROPOSED REAR EXTENSION AND GARAGE CONVERSION

TITLE:

AS PROPOSED PLANS

SCALE:

1:50, 1:100 @ A1

DATE:

JAN 2024

17BR-CW-C-002A