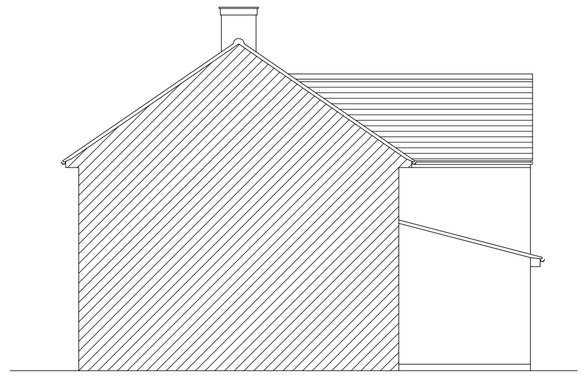
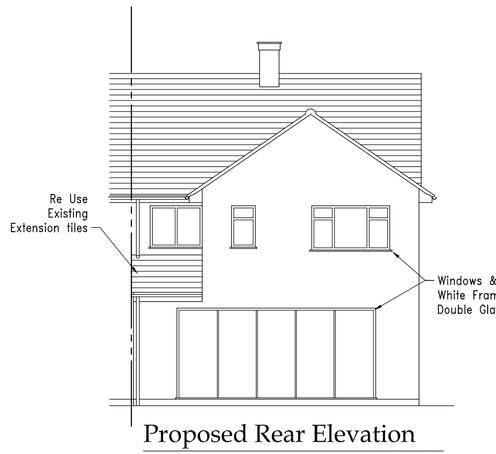


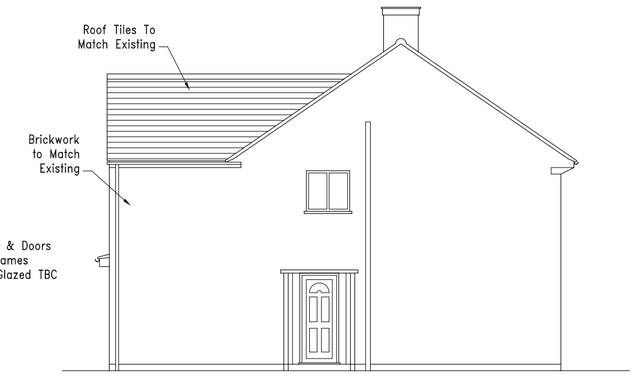
Proposed Side Elevation

Scale 1 : 100



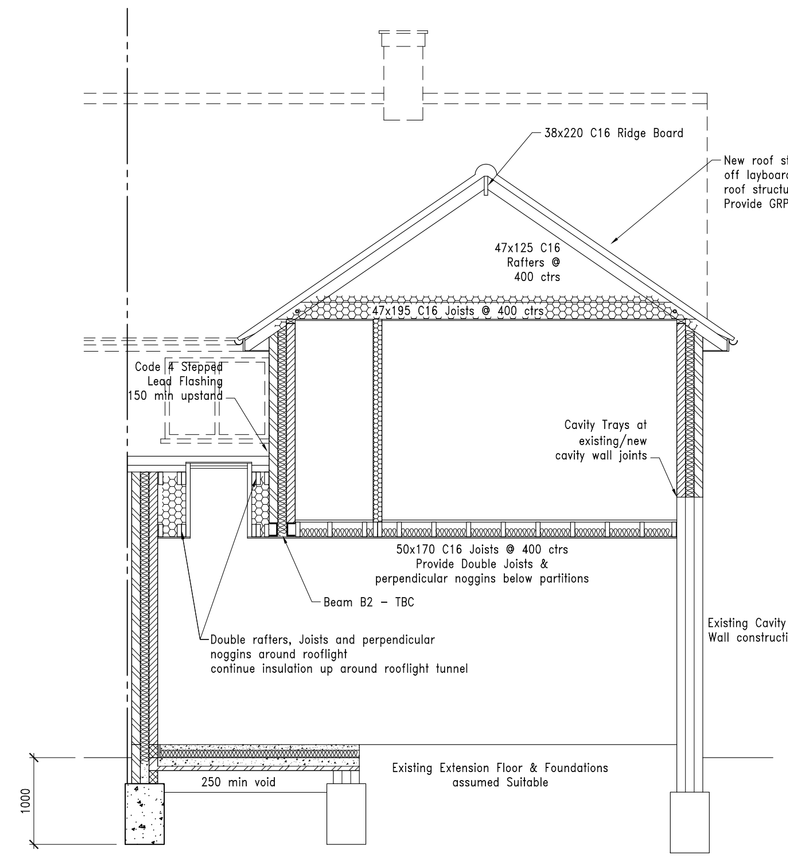
Proposed Rear Elevation

Scale 1 : 100



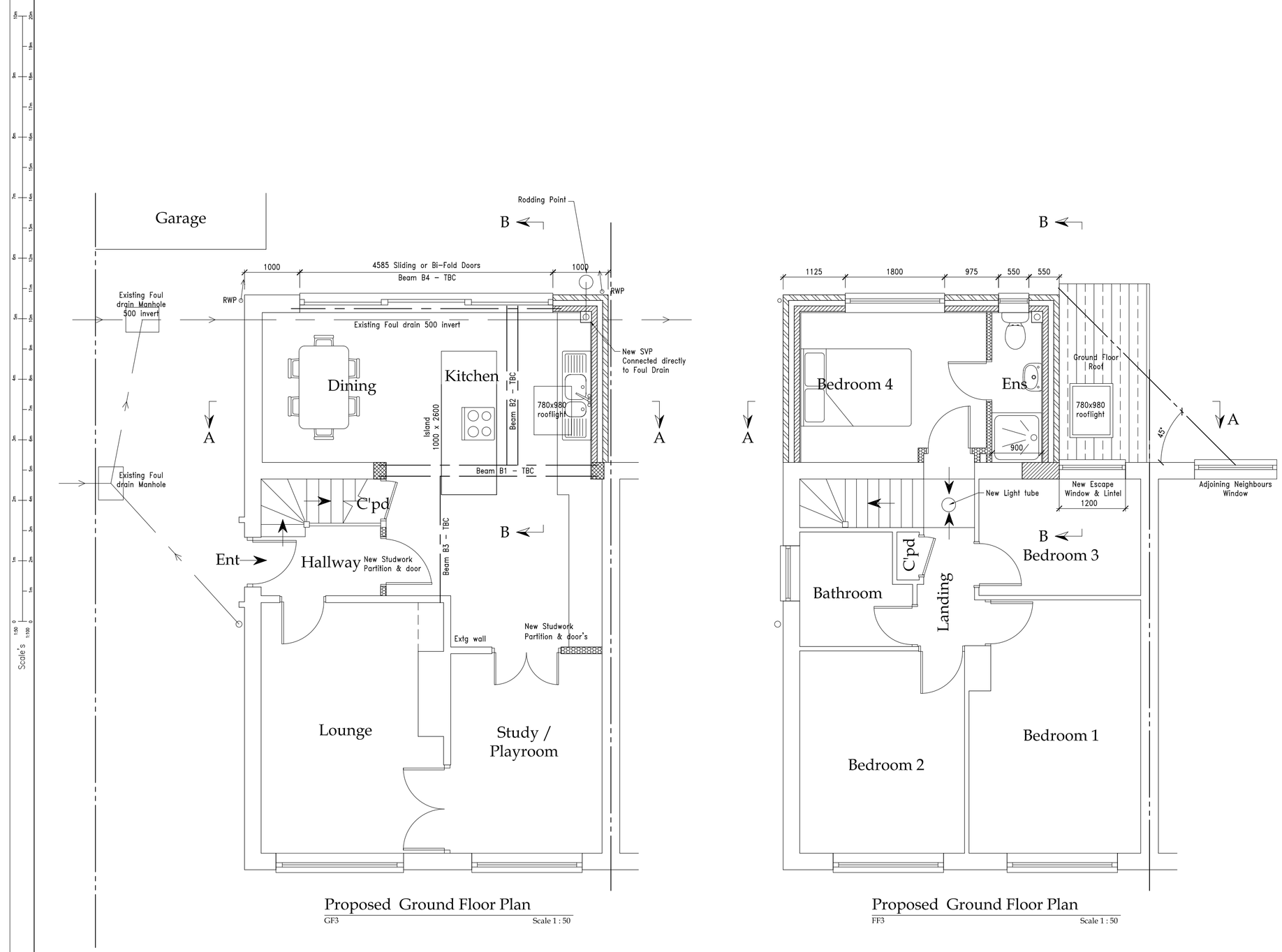
Proposed Side Elevation

Scale 1 : 100



Section A-A

Scale 1 : 50

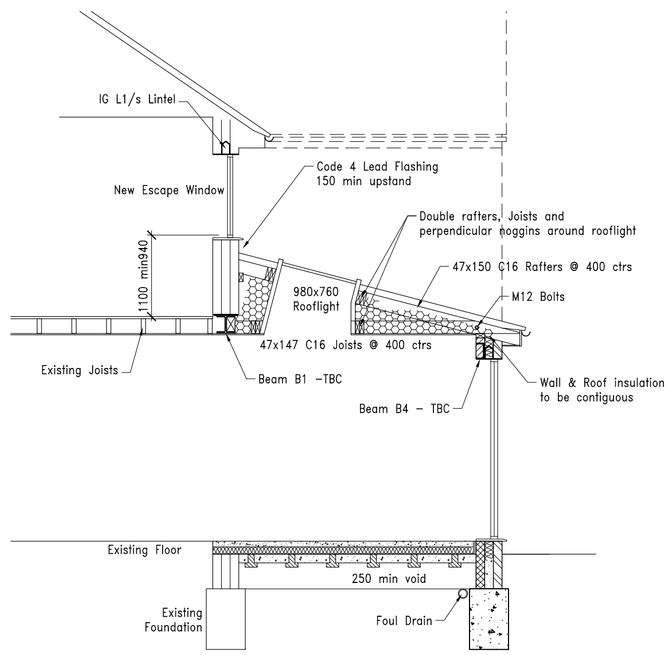


Proposed Ground Floor Plan

GF3 Scale 1 : 50

Proposed Ground Floor Plan

FF3 Scale 1 : 50



Section B-B

Scale 1 : 50

These Plans are supported by
Structural Calculations
Job No. ????
The information therein must be
strictly adhered to.

CDM 2015
AAC Design, have taken all reasonable steps to ensure the design on these plans and materials or products specified are as safe as can be expected for all concerned.
Once plans are issued to the client, AAC Design no longer has any on-going responsibilities regarding the construction methods and procedures adopted
AAC Design Do Not agree to be either the Ongoing Principal Designer, nor the Principle Contractor.
The Client Must appoint a Principal designer or contractor in writing, who will be responsible for all aspects of CDM compliance and health and safety of all involved.

SPECIFICATION

Building Contractor to check all dimensions prior to commencement, Any changes, omissions or discrepancies to be reported immediately, Construction details to comply with Robust Details as published by D.T.L.R.

Existing Structure & Foundations: –
Assumed Cavity wall, on trench fill foundations, with ground bearing oversite floor.
Expose & check Foundations with Local Authority suitability for additional loading, underpin / extend as required.

New Foundations 450x1m deep in C20p Concrete. Local Soil is assumed Medium shrinkage. Nearby trees are far enough away to not affect foundation design.
A trial hole must be dug and foundation depths based on local conditions must be agreed with local authority inspector.
Foundations must be to full depth of any adjacent drain invert, drains to be surrounded with pea shingle & have bridging lintels inserted over.

Drainage: –
Existing foul drain run under the proposed extension (as shown)
A build over agreement with Anglian Water will have to be agreed.
Entire existing shared drain, to be retained as clay pipe
Existing Gulley from Kitchen is to be demolished.
A new SVP is to be provided as shown. This will connect directly to the existing Foul drain, an external Rodding point is to be provided.
SVP of 100mm uPVC pipe, terminating at least 900mm above window opening, or with AIV in loft space.
Pipework to be boxed in with 2 layers of 9.5 p/bd to provide 30 mins fire protection.

Floor Construction: –
To achieve 0.22 W/m²K
65mm min. sand/cement screed with wire mesh reinforcing, to bring level with existing, on 1200g polythene vapour barrier directly over 80mm Celotex GA3000z insulation board, lay 20mm Celotex vertically at perimeter to screed level on 100mm C20P concrete, 1200g polythene d.p.m turned up at edges & linked to d.p.c.
Proprietary beam & block floor (full details below) Maintain a 250mm void between underside of floor beams and oversite.
Beam & block floor Details – Span 2700mm
Normal Domestic Loading = 1.5 kN/m² – screed & coverings (say 1.8kN/m²)
Rackham House floor 175mm S5 beams @ 388ctrs
maximum permitted span for the above = 4533mm
Floor beams on Hi-Load DPC, set into brickwork

Wall Construction: – To achieve 0.28 W/m²K
Outer leaf of clay face brick, inner leaf of 100mm Toplite Standard blocks (or similar with a value of at least 0.20 W/m²K), 100mm Cavity, concrete filled to within 225 below dpc. Remainder of cavity fully filled with Rockwool Cavity insulation batts (insulation to be at least 150 below top of floor insulation) Stainless steel wall ties, 225 min length (Ancon Stafix or similar) to be @ 750 horizontal and 450 vertical centres (300 at reveals). Fit Proprietary Cavity Closers to reveals.
New Brickwork Work to tie into extg. with Furfix battens.
Blockwork supporting beams/lintels to be 7N/mm² min.
Provide Cavity tray with weep holes over lintels. Internal walls to be shielded with a 13mm two coat plaster finish.

Existing ground floor appears to be concrete, contractor to check if any existing sub floor ventilation requires extending to new outer walls.
Partitions: –
Studwork 75x50 C16 @ 400 ctrs raised off a 75x50 sole plate.
Fill void with mineral wool (10 Kg/m³ min) to provide combined acoustic insulation of 15 Kg/m³

First Floor Constuction: –
22mm T&G chipboard (type ii/iii) to line up with existing floor, nailed down with 65mm annular ring nails & glued at edges over joists (as shown) with timber noggins as shown. Joists Hung from heavy duty galvanised ms joist hangers. Provide a vertical damp proof membrane (synthaproof or similar) behind hangers.
Lateral restraint provided by 30x5 galvanised mild steel straps at least 1200mm long (or across 3 joist with 38x100 noggins between) fixed to joists & turned down into cavity, held tight against masonry, @ 2000 ctrs (max). 12.5mm plasterboard Ceiling (foil backed). With plaster skim coat.
Lay 100mm mineral wool (10 Kg/m³ min) to provide combined acoustic insulation of 15 Kg/m³

Roof Construction: –
Note: all timber specifications are taken from TRADA span tables,
Tiles (to match existing) on 50x25 treated softwood battens, on one layer Tyvek Supra (or similar), Draped over rafters, which are birdsmouthed & truss clipped over 50x100 C16 wall plate.
Wallplates strapped to walls @ 1200 ctrs
Install proprietary Eaves Carrier to protect breathable felt from UV light.
Insulate ceiling. By laying 270mm quilted f/glass insulation to achieve 0.16 W/m²K,
50mm clear ventilation over insulation & across new loft area,
Lateral Resraint provided by 30x5 Galvanised steel restraint straps @ 2m max ctrs, anchored vertically to walls & rafter,
Ceiling finished with 12.5mm P/bd

Facias to be 20mm uPVC. Soffits to be 10mm uPVC with 10mm continuous air gap & fitted with an insect grill. all to match existing.

Rainwater Disposal: –
Ø100mm gutters & 70mm downpipes to match existing.
Provide a new soakaway, designed in accordance with BRE digest 365. of at least 2 cubic metres, below invert & filled with clean hardcore 5M min from building. Served by Ø100mm uPVC drains laid to fall 1 : 40 min with pea shingle bed & surround.
Alternatively connect to existing surface water system if acceptable to Water Company.

Windows: –
To achieve a U value of 1.6 W/m²K
All new windows to match existing in appearance. Units of uPVC or Aluminium frames, double glazed with low E-glass En 0.5 with a 20mm air gap, frames to incorporate trickle vents of 5,000sq.mm (equivalent area) to Habitable rooms
Provide escape windows to new Habitable rooms with an unobstructed openable area of 0.33sqM (min) & be at least 450mm in any direction, fitted with suitable escape hinges if required, max openable height 1100mm from floor finish.

Glazing in doors, side panels & other critical locations to be safety glass as defined in BS6206: 1981.
Rear of Window frame to overlap cavity closer by 30mm, apply sealant to front & rear of frames. (see Robust construction details).
All openings to be measured prior to manufacture of windows.

Ventilation/extraction : –
Mechanically ventilated, & ducted to external air, fan to have an extract rates as follows.
Kitchen = 60L/sec or 30L/sec via cooker hood Bathrooms = 15L/sec
All new internal doors to have 7600mm² air gap (10mm clear gap over floor covering).

Plumbing: –
New above ground waste = 38 dia uPVC pipe via S'traps. Combined wastes = 50 dia uPVC pipe. Shower trap 40 dia x 50 dp (min)
all work to BS5572 & CP301. W/C's to have rear outlet P'trap, to connect stub stack & SVP as shown using 100 dia uPVC pipe min fall 1:40. Provide accessible rodding points at any change in direction (all pipes)
Any waste runs in excess of 4m to be fitted with a 50mm air admittance valve and be permanently accessible.

Electrical: –
All electrical work to comply with Part P (Electrical Safety) & carried out by qualified individual Registered under Self-competent scheme. Work to be available for inspection as required by local Authority.
Installation certificate BS7671 to be provided.
Electricity meter to be relocated to a suitable external wall

Lighting: –
75% of all new light fittings to fitted with bulbs of at least 45 lumens per circuit-Watt,

Smoke Detection: –
Provide a self-contained mains powered inter connected smoke alarms, with battery backup, at all hall / landing levels, min 300mm from any light fittings or walls, & a heat detector in Kitchen area,
Alarms to be permanently wired to a separately fused circuit at the distribution board. Wiring to be to IEE wiring regulations.

Space Heating: –
Additional new radiators to be fitted with individual Thermostatic valves. System to be professionally commissioned & proved to be adequate & is working at maximum efficiency. Proper operational instruction to owners must be provided.

General: –
Particular care to prevent air leakage, Seal all service penetrations with expanding foam or suitable sealant, for large voids mineral wool or other material may be used to provide backing for the sealant.

partner LABC

AAC Design

House Extension Design Specialists

Title: Proposed Two Storey Rear Extension

Property: 105 Wellingham Avenue Hitchin Herts SG5 2UN

Client: Mr Cortrage & Mrs Macrae

Drawing size A1

Scale's: 1:50 1:100

Date: Oct 2017

Drawing No. 0630-2

Rev A

3rd ANGLE

Sheet: 2 of 2

Important: These Plans are designed for use by competent construction contractors that are familiar with current Building Regulations And Who are capable of making alternative decisions should the need arise.

Scale's 1:50 1:100