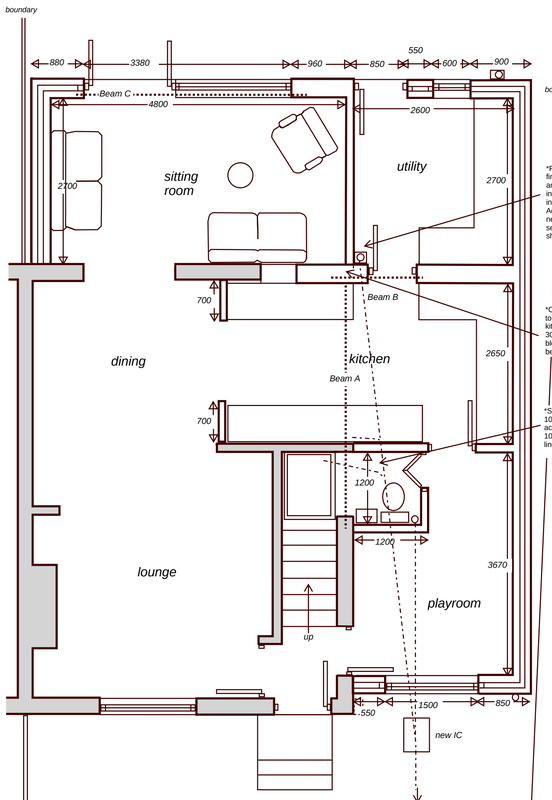
Proposed Side and Rear Extensions at 12,Woodlands Ave.,Cheddleton ST13 7BZ

Scale 1-50 (A1) - proposed layout
Dwg ref WA1d June 2019

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proposed ground floor layout plan

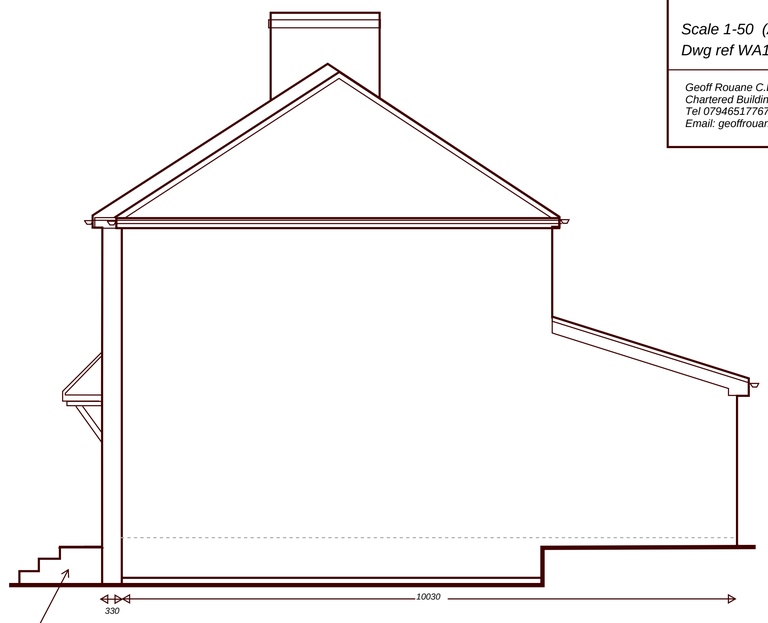


proposed front elevation

*Replace existing soil and vent pipe from first floor bathrooms in new 100mm pvc and move to rear wall as shown - encase in acoustic rockwool packing and enclose in plasterboard on sw frame. Adjust line of drain to discharge direct to new external IC at front shown with separate junction from new ground floor shower room.

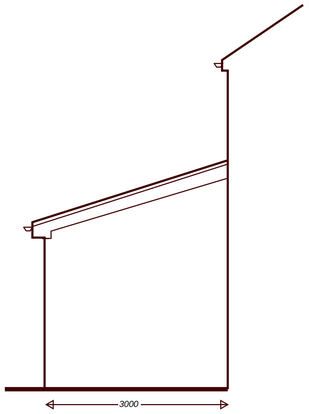
*Carefully prop existing first floor structure to allow complete rebuild of exist rear kitchen wall section and new utility wall in 300mm bonded solid concrete brick or block to receive beams A and spreader beam B over.

*Shower and kitchen waste to discharge to 100mm running trap with screw down accessible double sealed cover and 100mm branch connection to main drain line shown.

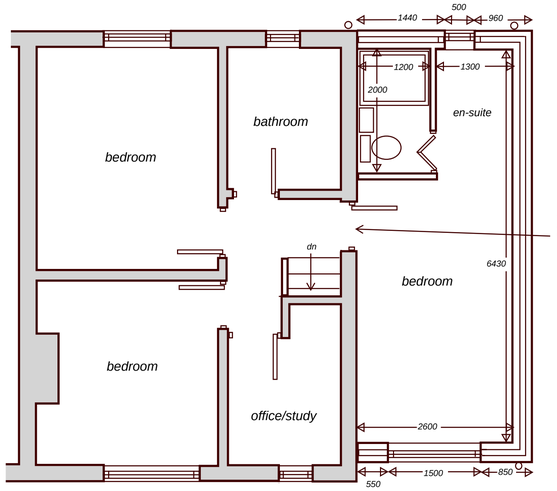


proposed side elevation

*Remove existing ramped access to front door and reconstruct in feature stepped approach to satisfaction of client and approval of inspecting authority



proposed side elevation at rear



*Carefully remove existing landing window and widen opening to form new access doorway with approved rc lintel over. Make good to all disturbance.

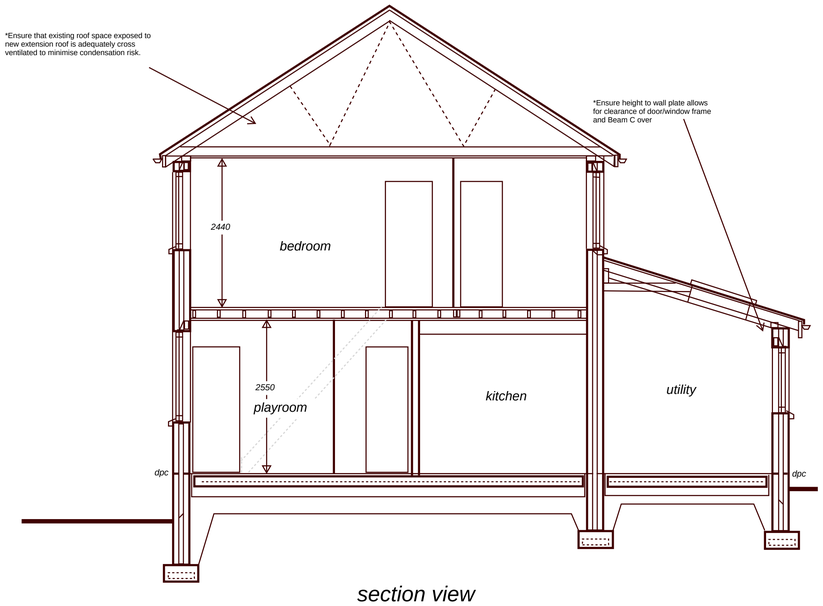
proposed first floor layout plan



proposed rear elevation

*Ensure that existing roof space exposed to new extension roof is adequately cross ventilated to minimise condensation risk.

*Ensure height to wall plate allows for clearance of door/window frame and Beam C over



section view

*Structural Works
*Carefully prop and needle existing first floor structure to form new opening shown. Install steel universal beams to engineer design seated on concrete spreader pad stones ensuring minimum disturbance to existing walls. Encase beams in gyproc fireline board to achieve min. 30 minutes fire resistance.
Make good all disturbance and remove rubble from site.
Refer to Engineers Design Sheets for full Beam and padstone spec.

*Beam schedule (All steel grade S355)

Beam A - 2no 203x133x30kg UB
Beam B - 1no 127x76x13kg UB
Beam C - 1no 178x102x19kg UB

*General Specification

*Preliminary Works:
Carefully prepare the existing attached garage for full demolition.
Examine existing drainage runs and inverts at site to assess falls and lines and verify new drainage layout. Seal off existing wc drain under stairs and replace to new layout shown.
Plan work programme to minimise disturbance to main dwelling.
Remove all rubble from site to an authorised and licensed tip facility.
Check existing foundations to assess ground bearing conditions etc.

*Walls (External);
Selected brickwork finish to match existing, min 100mm cavity enclosing Dritherm 32 insulation fill to manufacturer specification and internal leaf of 100mm load bearing thermal block work (eg: Celcon Solar) faced internally with plasterboard on treated battens or cement dabs.This or similar construction to achieve max 0.28 w/m2 k 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 100mm cavity width and compliant with DD140. Install Thermabate or similar insulated cavity closures at all opening jambs.

*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 rock wool insulation.

*Lintels
Install Catnic or similar combined steel lintels over new openings with minimum 150mm end bearings to manufacturer spec. Carefully form new access doorways to extension as indicated and install precast concrete lintels over to manufacturer spec. Make good to all disturbed surfaces.

*Main New Roof :
Selected plain double lap tiles to match existing fixed in place in accord with manufacturer specification and BS5534 on treated battens on approved breathable membrane over prefabricated trussed hip rafter units by specialist design and supply compliant with BS5268 secured with purpose made steel clips to continuous 100x75mm sw wall plate anchored to supporting walls by approved galvanised ms straps at maximum 1500mm 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 BS5268.
Lay new 300mm continuous insulation layer across new ceiling to achieve max 0.16 w/m2k U-Value

*Ground Floor Roof
Concrete single lap tiles suitable for pitch (approx.17 degrees) individually fixed in place in accord with manufacturer specification and BS5534 on treated battens on approved breathable membrane over 170x47mm sw C16 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. 2000mm centres.
head of rafters notched and screwed to 150x63mm pole plate rawl bolted to brickwork at max. 600mm centres.
100x47mm sw C16 ceiling ties at 400mm centres bolted to rafters using M16 bolts and dog tooth connector washers and supported off galv ms joist hangers from pole plate secured as for rafters.
* install high performance velux type roof lights to new area to client requirements and to manufacturer spec. with double trimmer rafters etc. as required. (U-Value 1.3 w/m2k) .

*Floor - Ground ;
Floor finish to client requirement on min 60mm screed or power float finish to 100mm concrete slab reinforced with A193 steel mesh (double mesh to playroom area) on 1200g dpm over Celotex GA 4000 (75mm) or similar approved insulation board turned up in 25mm thickness at floor perimeter to avoid cold bridge.Lay further dpm over well blinded min 150mm min. compacted natural stone sulphate free hardcore.
*U-Value max 0.22 w/m2k

*Floor - First:
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 150mm Acoustic Grade Rockwool between joists. *Note any notching of floor joists for services to be minimal and compliant with BS5268 part 2:1991.
Install double joists beneath partition line bolted together with M16 bolts and steel dog tooth washers at 600mm max centres.

*Foundation Detail:
Subject to prior exposure of existing house foundation lay 600x225mm concrete strip foundation at depth to to suit site conditions and to satisfactory bearing strata to approval of inspecting authority. Reinforce throughout with 2 no layers B503 steel mesh.

*Fenestration:
Install high performance double glazed upvc window units to match existing style using Pilkington Low E 'K' glass and min 25mm cavity – max 1.60 w/m2 k U-Value
Opening casements to represent minimum 5% of adjacent floor as natural vent plus min 10000mm2 trickle ventilators to head of frame.
*Escape Window: 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. Ensure that all doors and critical window areas are fitted with laminated or toughened safety glazing compliant with current BS:EN:12150.

*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.
*Note install sockets to extension area to requirements of client and provide co-axial and satellite ports if 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.

*Ventilation
Natural ventilation from opening casements plus install mechanical extract fan to new bathrooms set to achieve min 15 litres/sec extract rate and provide minimum 25mm continuous gap under door to maintain air replenishment. Similar 30 litres/sec (utility) and 60 litres/sec kitchen (30 litres/sec if used with cooker hood).

*Heating
All extended space heating to be to the full requirements of a suitably qualified heating engineer and assessment of existing heating system. Install thermostatic control valves as necessary.

*Drainage:
Lay new 100mm replacement pvc drains on granular bed at min 1:40 falls to connect to existing system on site. 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 BS5572 with 75mm deep seal traps as required. Ground floor shower room wastes to discharge to 100mm stub stack fitted with Durgo or similar air admittance valve positioned above flood level of fittings. First floor existing and new wastes to discharge to new soil and vent pipe connected to new/repositioned Inspection Chamber all to satisfaction of inspecting authority.
*Note alter existing bathroom wastes as necessary to discharge to new soil and vent pipe at rear shown.

*Important Note:
This drawing has been prepared for submission to the local authority for necessary statutory approvals. Nominated contractor to verify all dimensions either written or scaled together with drainage lines and inverts etc. prior to commencement of formal construction work on this site and any discrepancies to be referred to the Client and Agent. All works to be carried out with full agreement of client and any disturbance to existing structures or neighbour boundary line to be made good to satisfaction of all parties