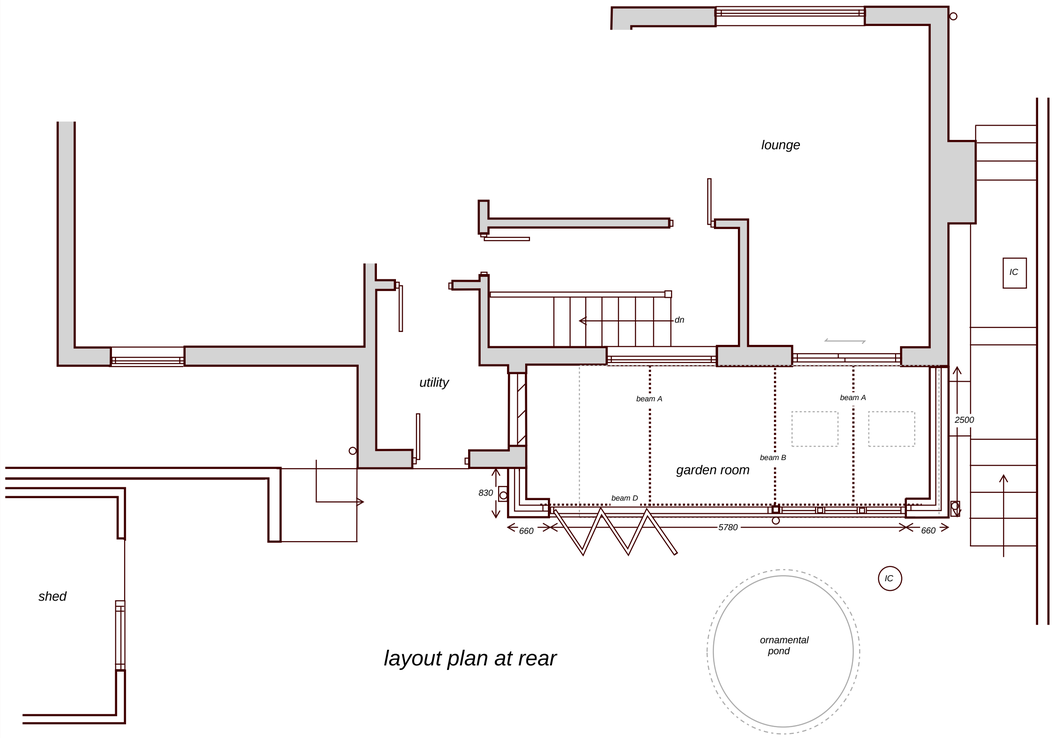
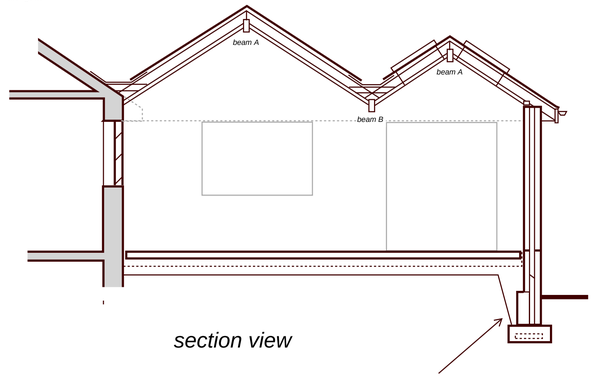


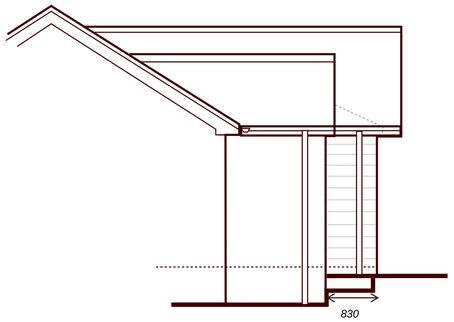
layout plan at rear

* Note - extend roof and gable ladder over higher gable further than smaller gable as feature and to allow effective formation of valley gutter and discharge to rainwater gutter and downpipe shown.

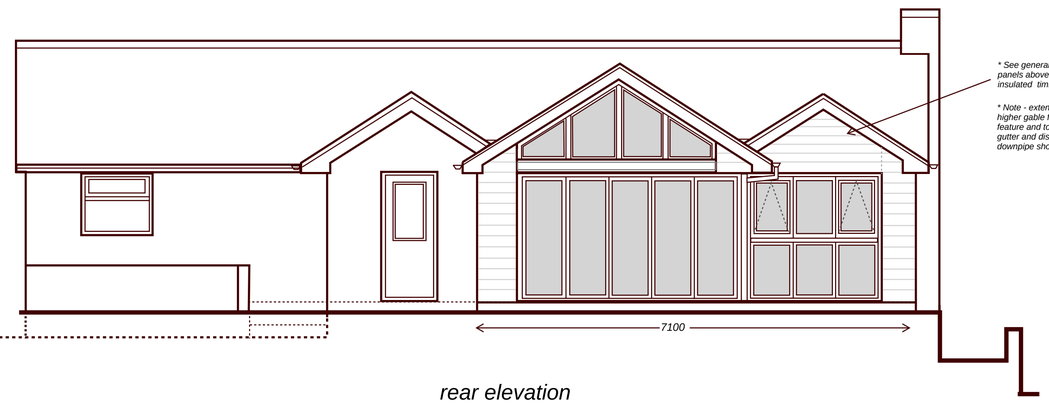


section view

*Note Subject to foundation excavation and If depth of hardcore fill beneath new extension floor exceeds 400mm - thicken out internal block leaf below dpc to 150mm to end wall and returns as indicated



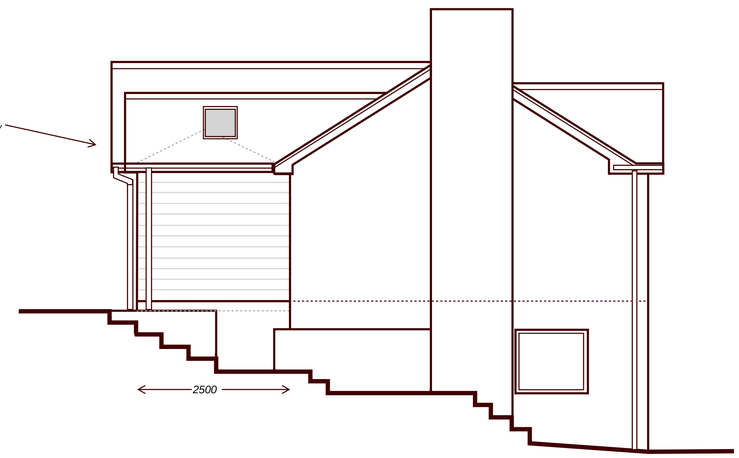
side elevation at rear



rear elevation

* See general spec notes to infill new gable panels above line of Beam D with ply clad insulated timber frame

* Note - extend roof and gable ladder over higher gable further than smaller gable as feature and to allow effective formation of valley gutter and discharge to rainwater gutter and downpipe shown.



side elevation to gable

Important Note:
This drawing has been prepared for submission to the Inspecting Authorities 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 adjoining neighbours and any disturbance to existing structures to be made good to satisfaction of all parties.
This drawing is not to be reproduced without prior consent.

General Specification:

Preliminary Works:
Carefully dismantle existing conservatory structure to accommodate new extension footprint. Prepare existing rear patio area to accommodate extension footprint.
Check existing lintels over main house rear windows to ensure fit for purpose to build support over to new ridge and valley beams to satisfaction of Inspecting Authority Surveyor.
Plan extension 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 prior to commencement of construction works. Any variance from the strip foundation specified below to be referred to a specialist engineer for redesign.
Expose existing conservatory base and check if fit for purpose to retain subject to consultation with Inspecting Authority Surveyor or if necessary grub and remove rubble from site.
Examine and expose as necessary existing drainage lines and inverts etc to assess location and prepare for extension excavation work.

Walls (External):
Selected v-joint pvc cladding system to client requirements secured to treated battens spaced to manufacturer specification on 100mm concrete block work, min 100mm cavity enclosing Dritherm 32 insulation fill to manufacturer specification and internal leaf of 100mm load bearing thermal blockwork (eg: Celcon Solar) faced internally with plasterboard on treated battens or cement dabs.
Cavity walls to be closed at periphery with Thermabate or similar approved cavity closures to avoid cold bridging.
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.*
**Note external leaf visible below dpc to be constructed in faced brick to match dwelling or contrasting engineering quality facings to satisfaction of client.*

**Infill non glazed gable panels above Beam B in cladding as specified above secured to treated sw battens on approved breathable membrane on external quality 18 mm plywood bracing to 100x47mm sw studs at 600mm max. centres. Install Celotex FR5000 (75mm) or similar approved insulation board between studs with 25mm air gap maintained behind external ply face plus room side facing of Celotex PL4000 (52.5mm) with 12.5mm plasterboard laminate and vapour check membrane on further internal lining of 18mm external quality ply bracing to stud frame as support to ridge beam etc*
(U-Value 0.20 w/m2K).

Roof
Profiled single lap concrete tiles to match colour and type of main dwelling and suitable for pitch (approx. 33 degrees) individually fixed in place in accord with manufacturer specification and BS5534 on treated battens on approved breathable membrane over 150x47mm sw C16 rafters at 400mm centres birds-mouthed and screwed through truss type steel clips to valley beam and continuous 100x75mm sw wall plate anchored to supporting wall by galvanised ms straps at max. 1000mm centres.
Head of rafters secured to 200x75mm C24 sw ridge
**Note screw fix 1000x2.5mm galvanised ms straps extended equally to each side of ridge on to rafters to resist spread.*
The glazed gable frame will be housed within a Cranked Beam (Beam C) supporting the proposed ridge beam with a welded fin plate connection. (See notes on beam design sheets).
**Form valley gutter at intersection between new roof frames and with existing roof viz: Code 5 lead dressed over 18mm external grade ply laid to falls 1:60 over sw cradles between rafters . Ensure lead work is carried min 300mm behind adj. tiles on ply base.*

Construct new 100mm load bearing block wall off existing rear house wall and lintels to form end bearings for new ridge and valley beams to satisfaction of Inspecting Authority Surveyor. Construct new sw frame faced with plaster board as infill between extension and existing roof void (ensure existing house ceiling is adequately insulated throughout affected area to max 1.16 w/m2K U-Value standard - eg 300mm rockwool insulation roll over ceiling).

Roof Insulation:
Pitched ceilings to have Celotex XR4000 (120mm) insulation board between rafters ensuring min 25mm air gap behind roof membrane and under-draw with Celotex PL 4050 insulation backed plasterboard (50mm+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 0.16 w/m2k U-Value.

Foundation Detail:
Subject to prior exposure of existing house foundation and assessment of existing conservatory base (see prelim work notes) lay 600x300mm 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 BS03 steel mesh.
**Note If depth of hardcore fill to new extension floor exceeds 400mm thicken out internal block leaf below dpc to 150mm to end wall and returns if required.*
**New foundation to create no surcharge on drainage lines at any point.*

Floor:
Subject to assessment of conservatory floor slab as fit for purpose to retain in situ and as necessary lay new floor comprising:
Floor finish to client requirement on min 60mm screed or power float finish to 125mm concrete slab reinforced with A193 steel mesh on 1200g dpm over Celotex GA4000 (75mm) 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. vibro compacted natural stone sulphate free hardcore.
**U-Value max 0.22 w/m2k*

Drainage:
See preliminary work notes - expose existing drain runs at rear at outset of work.
Ensure adequate support and protection to any pipes passing through walls and under new floor to complete satisfaction of inspecting authority surveyor.
Pvc rainwater goods discharging to accessible, trapped gullies with drain branch to existing system as above.

Heating:
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 (see fenestration notes).

Fenestration:
Install high performance double glazed windows and doors etc. at rear shown max 1.20 w/m2 k U-Value
Total window and door opening casements to represent minimum 5% of adjacent floor as natural vent (combined with existing rooms) plus min 10000mm2 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.
** Install high performance velux type roof lights to extension roof to client requirements and to manufacturer spec. with double trimmer rafters etc. as required. (U-Value 1.2 w/m2k) .*

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.*

Structural Work:
Check existing lintels over main house rear windows to ensure fit for purpose to build support over to new ridge and valley beams shown.

Refer to Engineers Design Sheets for full beam and pad stone spec. including cranked steel frame to glazed gable and structural ridge and valley support beams etc.

Beam Schedule :-

Ridge Beams A *- 200x75mm SC24 timber*
Valley Beam B *- 200x75mm SC24 timber*
Cranked Gable Frame C *- 180 x 90 x 26 PFC S355*
Steel Beam D *- 203 x 133 x 30 UB S355 (+6mm steel plate welded to bottom flange if required to fix door frame and support gable panel infill).*

**Design allows for maximum clear span therefore contractor to verify actual order length for installation*
New main ridge beam A to have bolted connection with 2no M16 bolts to 120x100x8mm fin plate welded on to cranked gable support frame with base plates. Block out cranked frame with timber or provide 6mm plate welded to frame as bearing for fixing of glazed frame. Glazing supplier to allow for encasement of steel frame members with common profiles to new glazed units.
**Note examine existing lintel over window/door openings to dwelling to ensure fit for purpose to receive point load of new ridge beams and supporting masonry built up from existing lintels and wall.*

Proposed Rear Extension at 3, Cheddleton Park Avenue, Cheddleton ST13 7NS

Scale 1-50 (A1) - proposed layout Dwg ref CPA1c September 2020

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