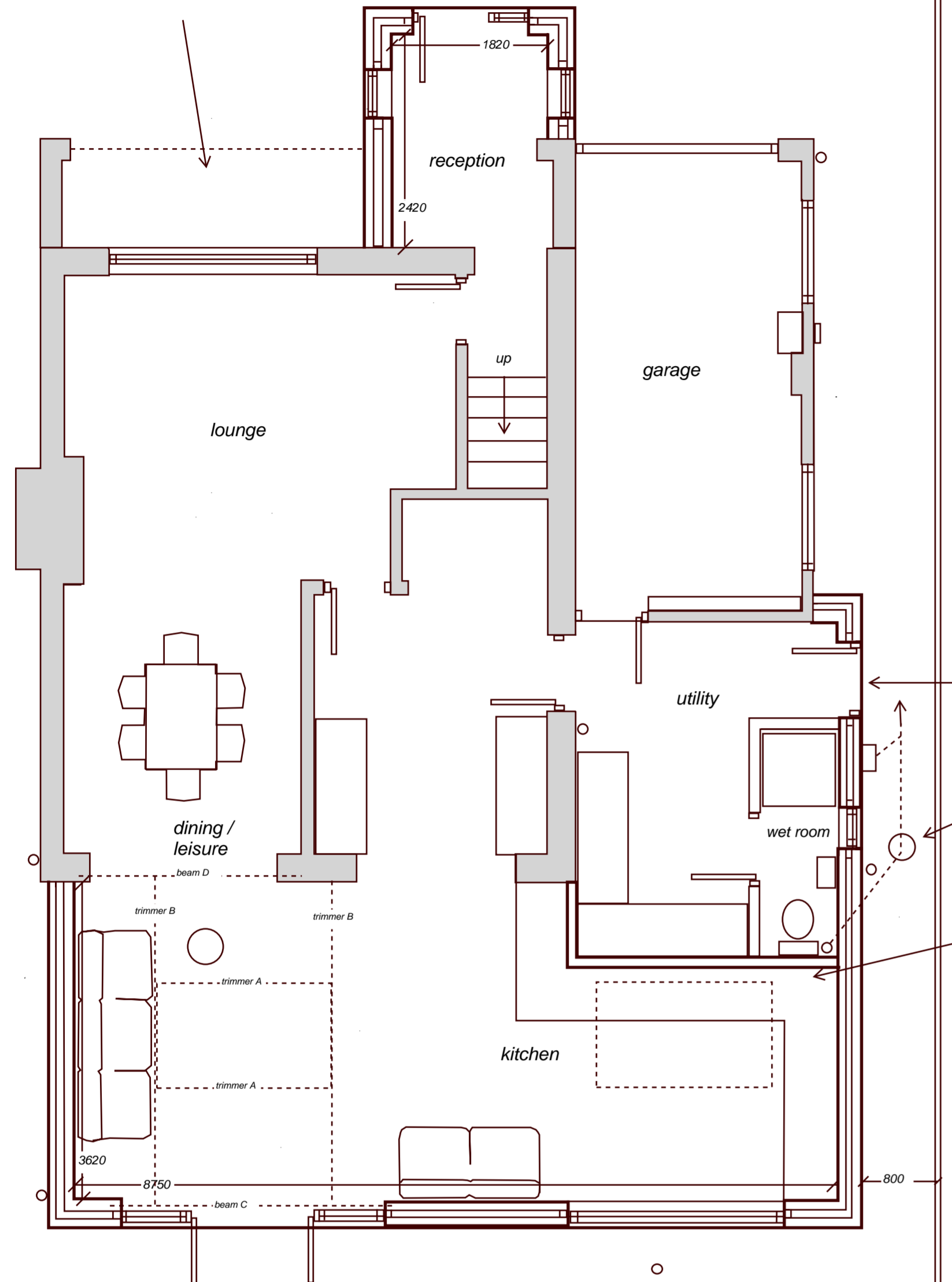


* Strip out existing glazed frame to front porch and examine existing wall plate support to assess if fit for purpose to retain in situ. If necessary refer to structural check to determine required support.



proposed ground floor layout plan

* Note external door and frame within 1000mm of boundary to be 30 minutes fire resistant as unprotected area exceeding 1000mm²

* New wet room area wastes to discharge to drains serving existing toilet and utility wastes. install new preformed access chamber if required to ensure cleaning access to satisfaction of inspecting authority.

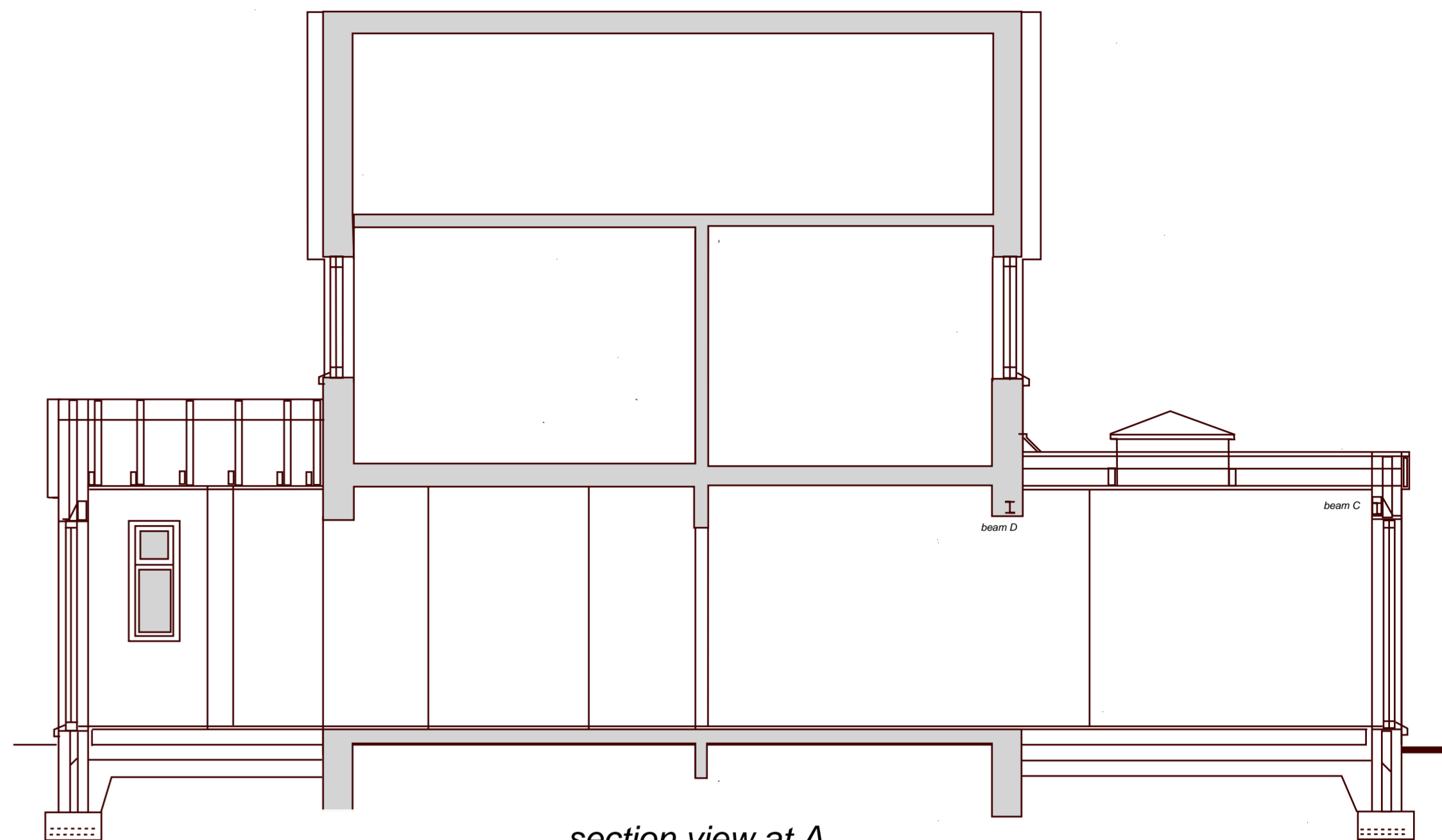
* Dividing wall between utility and living area to be 100mm load bearing concrete block built off 450x225mm concrete strip foundation to general spec to provide support to flat roof joists etc.

* Structural Works
Carefully examine existing lintel support over rear openings at assess if fit for purpose to support new flat roof joists and trimmer beams B. If necessary needle and prop existing first floor at rear to allow safe access to install new support beam to engineers design (Beam D)
See Engineer's design sheets for all structural beam etc information.

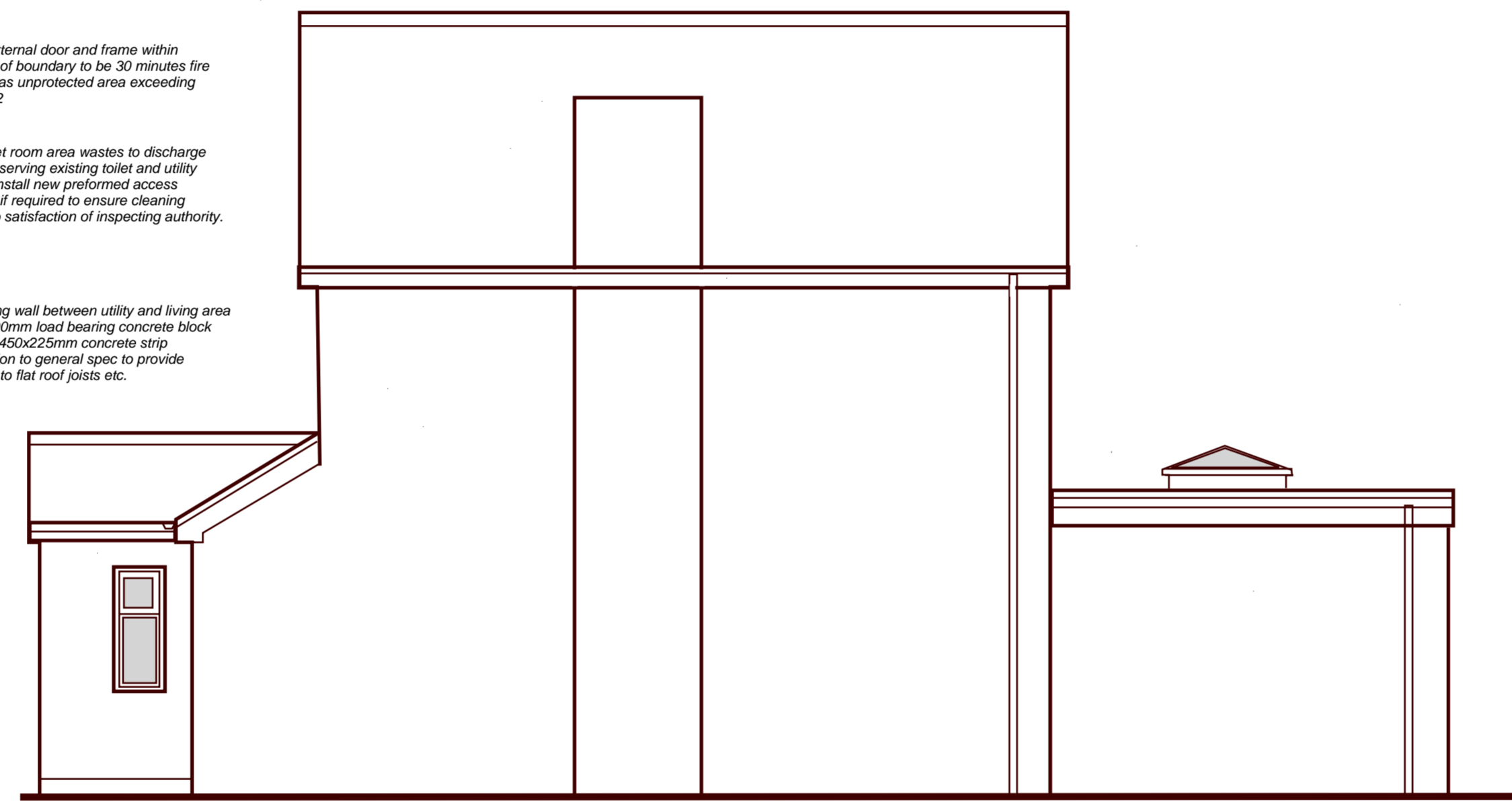
*Beam schedule (steel grade S355)
Trimmer Beams A - 150x75mm C24 grade trimmer
Trimmer Beams B - 2no 195x75 C24 grade trimmers bolted together
Beam C - 152x89x16kg UB
Beam D - 178x102x19kg UB



proposed front elevation



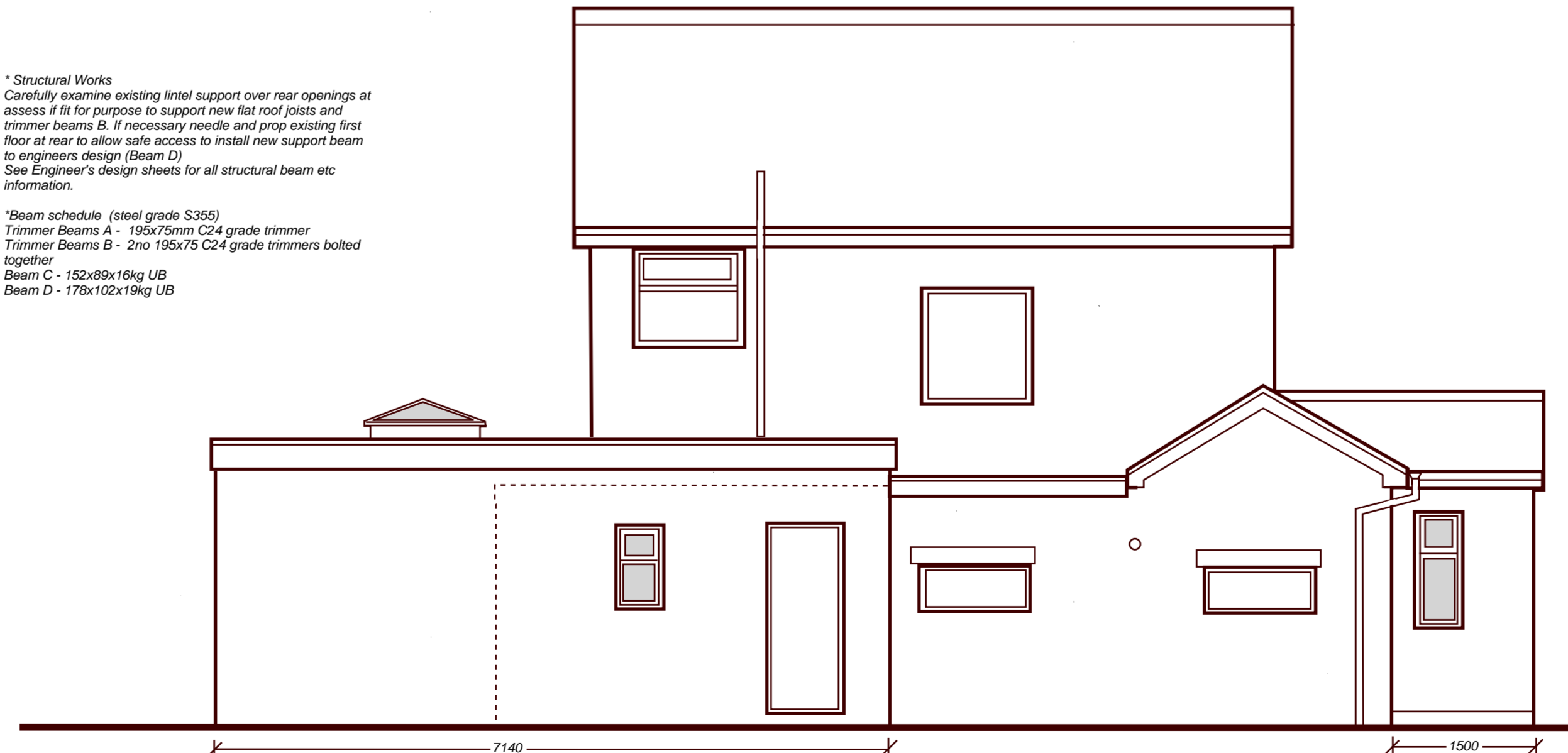
section view at A



proposed side elevation



proposed rear elevation



proposed side elevation

*General specification

*Preliminary Works
Prepare existing extension walls at rear for part demolition to accommodate extension footprint. 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.
Examine existing lintels over rear openings to assess if fit for purpose to retain to support flat roof joists and trimmers. (see structural notes).
Examine and expose as necessary existing drainage lines and inverts etc to assess location and any issues raised by new extension footprint.

*Walls (External):
Selected faced brickwork to match existing. min 100mm cavity enclosing Dritherm 32 insulation fill to manufacturer specification and internal leaf of 100mm load bearing thermal blockwork (egg: Calcon 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 local authority surveyor and wall ties to be stainless steel suitable for 100mm cavity width and compliant with DD140.

*Lintels
Install Castic or similar combined steel lintels over new openings with minimum 150mm end bearings to manufacturer spec. Ensure heavy duty lintel or Engineer specified steel beam over rear doors designed to allow for top hung door track if Bi-Fold door option is chosen by client.

*Flat Roof
Approved AA rated single ply membrane by specialist contractor on min 18mm ext ply deck over Celotex TD4000 (126mm) or similar approved insulation and composite deck incorporating vapour control layer and bonded 5mm deck ply face. Ensure all joints are tight with vapour sealant to manufacturer spec. Secure Td 4000 with helical fixings to correct spec. and lay to fall 1:60 across 195x47mm sw C24 joists at 400mm max centres. Form aperture to receive lantern frames with trimmer arrangement as specified on structural design sheets. Joists to be anchored to external supporting walls with galv ms straps at 1500mm max centres.
*This or similar construction to achieve max 0.18 w/m² k U-Value
*Note install built up fascia shown in v-joint lapped pvc cladding.

*Porch Roof
Concrete or clay plain tiles suitable for pitch (approx 30 degrees) to match existing fixed in place in accord with manufacturer specification and BS5534 on treated battens on approved breathable membrane over 125x47mm sw C16 rafters at 450mm 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 500mm centres.
100x47mm ceiling joists at 450mm centres bolted with dog tooth connecting washers to rafter feet throughout
Head of rafters notched and screwed to 170x38mm ridge member.
Horizontal Ceilings to have 100mm rock wool between joists and a further 200mm thickness laid across joists
Note: This or similar construction to achieve max 0.16 w/m² k U-Value.

*Flashings
Install Code 4 lead cover flash and soakers at abutment of roof finish with house wall ensuring min 150mm upstand dressed into mortar joints and made good.
*Note subject to assessment of site exposure and recommendations of inspecting authority install min 2000g dpc cavity tray to end existing wall to discharge over flashing up-stand to flat roof.
Ensure weather tight up stand of roof finish to trimmed roof around roof lantern.
Strip back garage roof at abutment with new roof consider replacement of existing garage roof membrane on new deck as for main spec.

*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. *New foundation to create no surcharge on drainage lines at any point.
*Note assess ground strata in relation to shrub hedge at side boundary and subject to recommendation and approval of inspecting authority ensure that the foundation is suitably protected from the influence of any tree root growth.

*Floor
Floor finish to client requirement on min 60mm screed or power float finish to 100mm concrete slab on 120g 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 150mm min. compacted natural stone sulphate free hardcore.
*U-Value max 0.22 w/m² k P/A ratio = 0.53

*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 authorities.
Pvc rainwater goods discharging to accessible, trapped gullies with drain branch to existing system as above. Internal plumbing to satisfy BS5572 with 75mm deep seal traps as required.

*Fenestration
Install high performance double glazed windows and doors at rear as shown and to client requirements with max 1.40 w/m² k U-Value
Total window and door opening casements to represent minimum 5% of adjacent floor as natural vent plus min 8000mm² trickle ventilators to head of frame.
Check that lounge windows achieve 5% total ventilation combined with extension openings.
Ensure that all doors and critical window areas are fitted with laminated or toughened safety glazing compliant with current BS-EN 12150.
*Install double hip type lantern light (2000x1200mm) in aluminium frame by specialists with thermally broken frame arrangement and double glazed safety glass as general spec. above. Form aperture to receive lantern frames with trimmer arrangement as specified on structural design sheets and roof spec. Follow manufacturer spec. for installation and weathering to up-stand from roof membrane.
Install new UB (beam C) over new rear doors.

*Heating
Any boiler alterations plus any extended space heating to be to the full requirements of current GasSafe and Building Regulations (Part J) and subject to a suitably qualified heating engineer's assessment of existing heating system etc.
Install thermostatic control valves as necessary.

*Ventilation
natural ventilation from opening casements plus install mechanical extract fan to kitchen set to achieve min 60 litres/sec extract rate (30 litres/sec if over cooker hood). Similarly provide an extract fan to the utility room (30litres/sec) and wet room (15 litres/sec)

*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.
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.

*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. All works to be carried out with full agreement of adjoining neighbours and any disturbance to boundary line to be made good to satisfaction of all parties.

Proposed Porch and Rear Extension at
1, Wilton Avenue, Cellarhead ST9 0HZ

Scale 1-50 (A1) - proposed layout
Dwg ref WA 1b June 2018

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