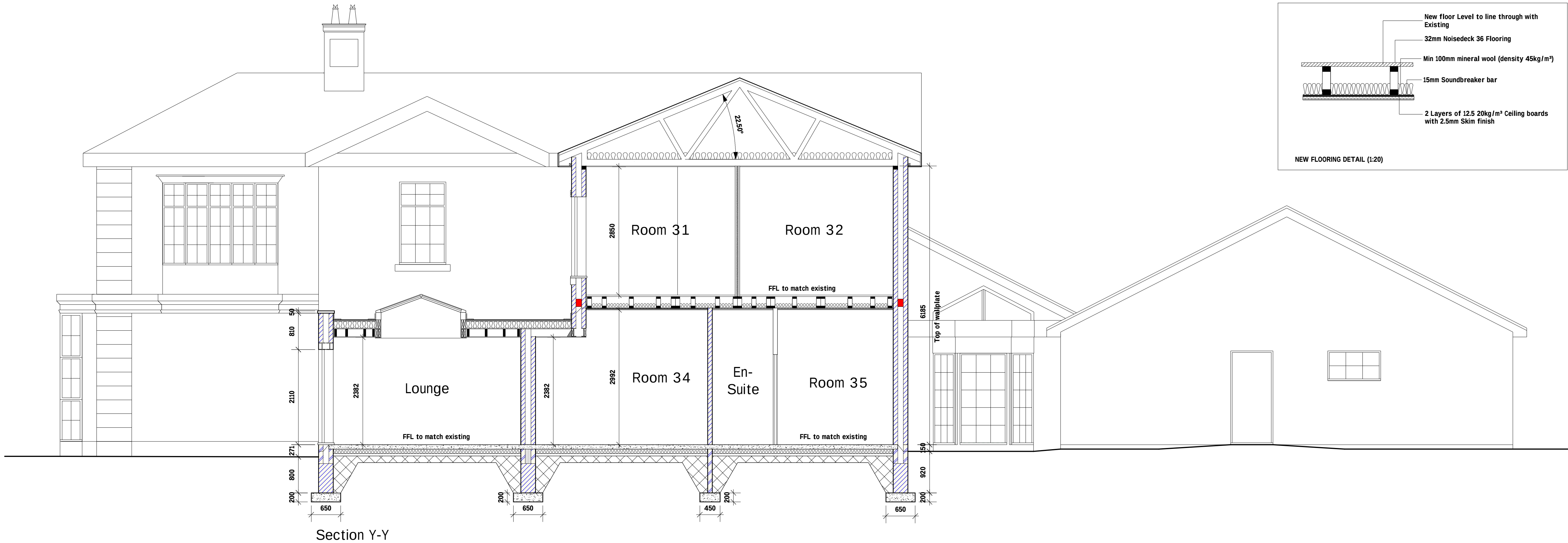




Section Y-Y

GLASS ATRIUM
Specialist manufacturer to specify glass atrium. Glass atrium to sit on steel beams doubled up joists/trimmers (*as specified by Structural Engineer*) as indicated. Glass atrium to be fitted in strict accordance with manufacturer's details. Measurements to be taken on site prior to commissioning of work.

FLAT ROOF CONSTRUCTION
Provide softwood firings over roof to discharge surface water, Rainwater to discharge to RWG in position as indicated on ground floor plan. Roof coverings to be Polyroof 185 flat roofing system from Polyroof Products Ltd. Liquid base coat resin applied evenly over substrate. Polymat laid to overlap by 50mm minimum with additional resin coat to be applied and consolidated to eliminate air bubbles. Liquid top coat resin with appropriate colour pigmentation applied over entire surface including all trims. Substrate to consist of 19mm thick external quality ply over 150mm thick Celotex XR4000 insulation on 19mm exterior grade plywood over 170mm x 50mm C16 softwood joists set at 400mm Flat roof construction to achieve a minimum U-Value of 0.15W/m²K. 12.5mm of knauf wallboard fixed to the underside of joists with 3mm nominal skim plaster finish. Allow for doubled up flat roof joists and trimming to support glass atrium. *Steel beams to be designed and calculated by Structural Engineer.* Joists to have 90mm minimum embedment within new cavity walls or be supported off steel beams off joist hangers as indicated on section Y-Y where applicable. Allow for cavity tray and code 4 lead flashing at all roof/wall abutments.

MAIN ROOF CONSTRUCTION
Roof coverings are to match existing roof & Local Authority approval. Slates to be fixed to 50mm x 25mm treated softwood battens over Tyvek Supro permeable underlating membrane or similar (Tyvek membrane to be draped Approximately 10 mm between the rafters for ventilation purposes). Tyvek to be laid on roof trusses designed and manufactured by specialists in accordance with BS 5268:1985 and set at 600mm maximum centres. Trusses to be braced longitudinally between all unsupported node points and diagonally to underside of top chord of trusses. Bracing to be out of 100mm x 25mm sawn softwood double nailed at each fixing point. Trusses are to bear onto 100mm x 75mm/100mm x 50mm softwood wallplates and are to be fixed by means of galvanised mild steel truss clips. Wallplates are to be anchored to walls at 1800mm centres with 30mm x 6mm mild steel straps. Straps are to be of sufficient length to be fixed to existing masonry of supporting walls, fixings are to be screwed or plugged and screwed. Gable wall straps to be 1350mm long x 30mm x 6mm galvanised mild steel and positioned at rafter level at 1800mm centres. Valleys are to be formed with diminishing trusses. *Rafter depth and positioning of wallplates may vary following Truss Manufacturer's specification.* Allow for 150mm x 25mm valley boards lined with code 5 lead flashings, maximum length of flashing to be 1800mm, overlap of lead flashings to be 150mm where necessary. Alternatively use pre-formed fiberglass valleys. Manufacturer to specify, girder trusses, flat top trusses, hip rafters, diminishing trusses, Allow for 100mm fibreglass quilt insulation to be between ceiling member of truss with an additional 200mm layer laid across ceiling members to achieve a minimum U-value of 0.15W/m²K. All other Ceilings to comprise of 2 layers of 12.5mm plasterboard with joints staggered to provide 1hr fire protection 3mm nominal skim finish. Eaves carrier is to be provided to allow roof membrane to sag ensuring adequate ventilation. Code 4 lead flashing with cavity tray above is to be provided at all roof wall abutments.

TIMBER FIRST FLOOR CONSTRUCTION
Floor deck to comprise 32mm Noisedeck 36 flooring laid on WS250 Wolf easi-joists manufactured to B.S5268 set at 600mm centres. Where spans do not exceed spans of 5400mm chord dimensions to be 97mm x 47mm. Joists doubled up below partition walls. Floor joist layout plan and calculations to be submitted to Local Authority. All bracing, straps and fitting of joist system to be fitted in accordance with manufacturers instruction. Ceilings are to comprise of 15mm soundbreaker bar with 2 layers of 12.5mm plasterboard with minimum mass per unit area of at least 20kg/m² as indicated within detail above with 3mm nominal skim plaster finish. Provide single layer of 100mm thick minimum density 45kg/m³ mineral wool insulation to provide suitable sound barrier within floor void.

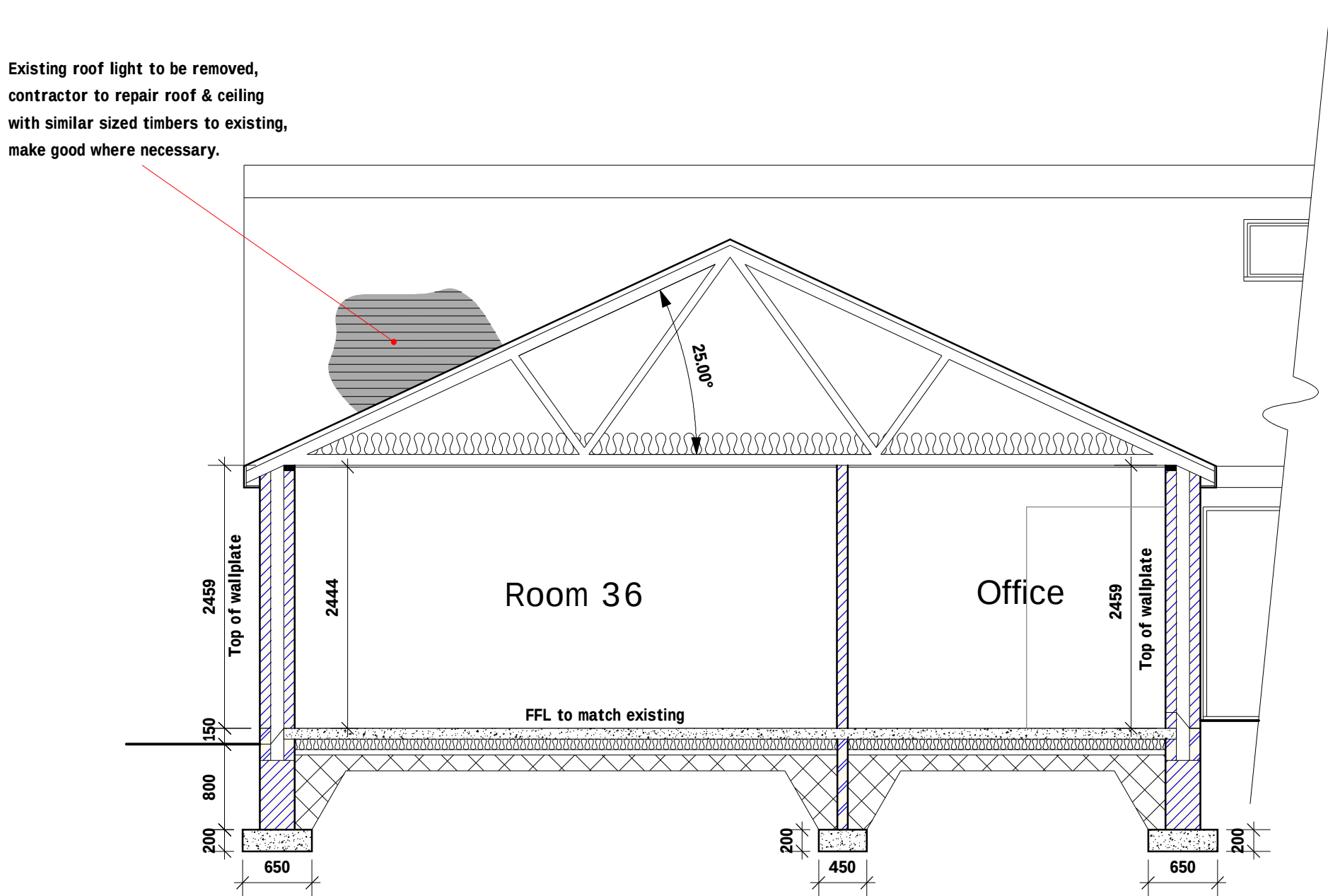
INTERNAL BLOCKWORK WALLS
Internal Blockwork walls to comprise 100mm Thermalite Medium Density Blockwork with 12.5mm plasterboard fixed to both sides and 3mm nominal skim finish. Existing ground floor walls to be increased in height to underside of new ceiling. *Walls to be taken down to foundations where required & specified by lift manufacturer.*

CAVITY WALL CONSTRUCTION
External cavity walls are to comprise of 20mm sand and cement render decorated to Local Authority approval. Render applied to 100mm thick blockwork, 125mm wide cavity fully filled with 125mm thick DrTherm 0.032-lambda, with an inner leaf of 100mm thick thermolite turbo block. Internal face of blockwork to be finished with 12.5mm thick plasterboard with 3mm thick nominal skim finish. Wall construction to achieve a minimum U-value of 0.21W/m²K. Contractor to allow for stonework quoins to front corner of 2 storey extension as indicated on elevations. Quoins to be white to match existing building and to Local Authority approval. Provide insulated Keystone lintels *steel beams designed and calculated by structural engineer* over openings as specified on plans. All lintels to have a minimum of 150mm end bearing length. Keystone lintels can be supplied by Huws Gray (01978 264269). Stone cills to be Forticrete cast stone products in white, cills can be supplied by Huws Gray (01978 264269). Provide stainless steel wall ties across cavity, ties are to be based on double triangle ties as per BR443. Wall ties set at 750mm horizontal and 450mm vertical staggered centre's. Provide additional wall ties at 300mm vertical centres within 225mm of all openings and roof verges. All openings in cavity, ie, around window and door openings, are to be closed with Thermabate 125 insulated cavity closers to prevent thermal bridging. DPC to be installed in new cavity wall as indicated, Cavity trays to be lapped onto DPC with weep holes installed at 900mm centres to outer leaf of wall to ensure any moisture within cavity is dispersed of adequately.

Walls below DPC level and above finished ground level are to be constructed with facing brick, below ground level use class B engineering brick down to Thermalite trench block. Cavity insulation is to continue in 125mm cavity to prevent thermal bridging down to trench block. All walls are to be constructed centrally on supporting foundations.

NEW GROUND FLOOR CONSTRUCTION
100mm thick concrete slab which is to be continued over inner leaf of cavity wall, allow for 1000mm wide A193 mesh to perimeter of slab. 100mm thick Celotex tuff-R GA4000 rigid polyisocyanurate foam insulation (to ensure U-value <0.18 W/m²K), with 1200G visqueen DPM below, all joints to have 300mm minimum overlap and be securely taped. 50mm sand blinding on 150mm minimum well consolidated hardcore. Build 650x650x450 high radon protection sump form with 50mm thick concrete paving slab. Walls of sump to be 100mm brick laid honeycomb bond with perpends left open. Cover with another 50mm concrete paving slab. 100mm diameter uPVC pipe to run from sump to duct to outside air, outlet to be capped at finished ground level. Additionally provide cavity tray as indicated in section bridging the two masonry courses to seal cavity against ingress of radon gas.

FOUNDATION CONSTRUCTION
Provide 650mm wide x 200mm deep concrete foundation below new cavity wall construction, 450mm wide x 200mm deep concrete foundations below 100mm loadbearing/buttress walls. All foundations are to be cast onto suitable load bearing strata to the satisfaction of the Local Authority Building Inspector. Foundations are to be cast in one pour to prevent joints in concrete. Contractor to ensure new Foundations do not undermine existing Foundations on site. Concrete can be supplied by Huws Gray (01978 759516).



Section Z-Z

PLANS HAVE NOT YET GAINED BUILDING CONTROL APPROVAL AND MAY BE SUBJECT TO CHANGE.

DO NOT SCALE FROM DRAWINGS IF IN DOUBT ASK.

Please read in conjunction with Structural Engineer's Specification.

Rev	Date	Detail		Initial

Project: Proposed alterations at The White House, Grove Road, Wrexham. LL11 1DY	
Title: Sections	Scale: (A1) 1:50
Drawn By: D.J.Edwrads	Date: Jan 2020
Drawing No: T071/005	Sheet: 3 of 5

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