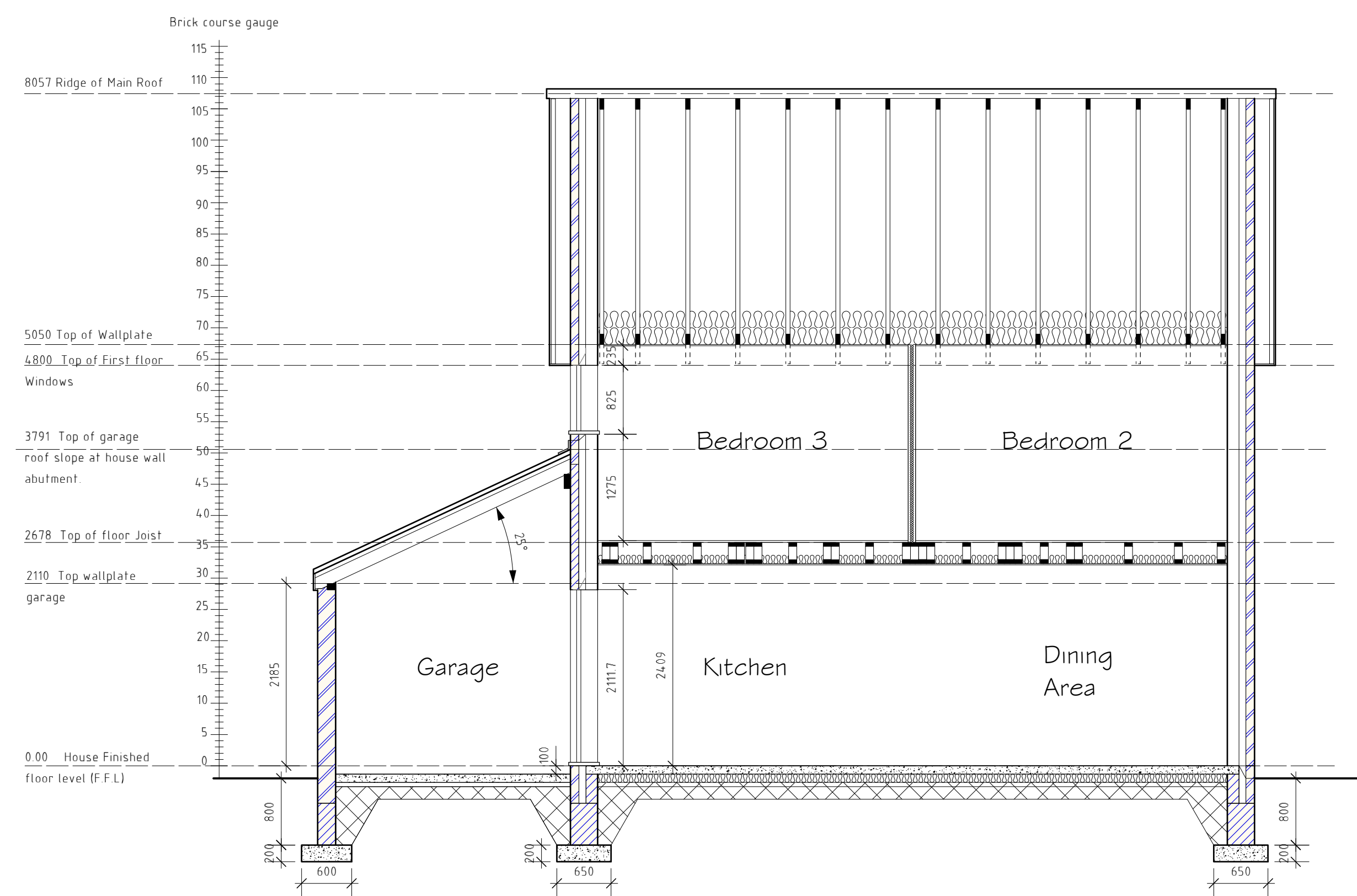




Section Y-Y

TIMBER FRAME WALL CONSTRUCTION
External leaf of walls are to comprise of 103mm facing brickwork, 84mm wide clear cavity, with a 140mm wide timber frame to the internal leaf, timber frame to be designed and specified by specialist manufacturer. Timber frame to be fully insulated using knauf 32 insulation, internal face of timber frame finished 12.5mm thick plasterboard with 3mm thick nominal skim finish. Wall construction to achieve a minimum U-value of 0.21W/m²K. Lintels over openings specified by timber frame manufacturer. Provide stainless steel wall ties across cavity. Ties fixed to stud of timber frame at 600mm horizontal and 375mm vertical centre's, ties fixed to stainless steel angular nails. 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 adequately.
Timber formers installed to external windows to create arched brickwork openings as illustrated on elevations.

Walls below DPC level and above finished ground level are to be constructed with facing brick, below ground level use class B engineering brick. Inner leaf of wall to be formed with class B 140mm engineering brick to be minimum 7kN. All walls are to be constructed centrally on supporting foundations. Stone cills/headers to be Forticrete cast stone products, cills/headers can be supplied by Huws Gray (01978 264269).

Internal loadbearing walls below slab to be 100mm thick to support 89mm loadbearing stud. Brickwork/blockwork to be minimum 7kN.

GROUND FLOOR CONSTRUCTION (Garage Floor Slab)
100mm thick concrete slab on 1200G visqueen DPM with all joints to have 300mm minimum overlap and be securely taped. 50mm sand blinding on 150mm minimum well consolidated hardcore.

GROUND FLOOR CONSTRUCTION (house)
Ground floor construction to comprise of 100mm thick concrete slab which is to be continued over inner leaf of cavity wall, allow for A193 mesh around perimeter ensuring adequate concrete cover is provided. 100mm thick Celotex tuff-R GA4.000 rigid polyisocyanurate foam insulation to ensure U-value <0.16 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 750mm wide x 200mm deep foundation below brick plinth & cavity walls. Provide 650mm wide x 200mm deep concrete foundations below cavity walls, 600mm wide x 200mm deep foundations below solid walls of garage, and 450mm wide x 200mm deep foundations below internal loadbearing walls *unless otherwise specified by structural engineer*. All foundations are to be cast onto suitable load bearing strata to the satisfaction of the Building Control Inspector. Foundations are to be cast in one pour to prevent joints in concrete. Concrete can be supplied by Huws Gray (01978 759516).

GARAGE ROOF CONSTRUCTION
Roof coverings are to be roofing tiles to Local Authority approval. Tiles to be fixed to 50mm x 25mm treated softwood battens over Tyvek Supro permeable underslating membrane or similar (Tyvek membrane to be draped. Approximately 10mm between the rafters for ventilation purposes). Tyvek to be laid on 150mm x 50mm (24 softwood loose cut rafters supported between Wallplate and poleplate. Poleplates to be raw bolted to masonry wall at 600mm maximum centres. 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 masonry of supporting walls, fixings are to be screwed or plugged and screwed. Cavity tray and code 4 lead flashing to be installed at all roof/wall abutments.

WINDOWS / DOORS / GLAZING
All windows are to comprise sealed double glazed units set within good quality uPVC frames. Sealed double glazed units are to achieve a minimum U-value of 1.2 W/m²K. Doors to achieve a U value of 1.5W/m²K. Opening areas of windows are to be equal to at least 5% of enclosed floor area with part of the opening set at 1750mm above floor level. Provide background ventilation to habitable rooms by means of 8000mm² controllable trickle ventilators set in head frame member of windows or locking mechanism that provides adequate background ventilation. Windows to bedrooms at first floor level to have opening lights of at least 0.33m² with a minimum clear opening of 750mm high x 450mm wide. Window sill is to be positioned to ensure that sill level is within 1100mm of floor level. Window Cills positioned within 800mm of First Floor level to have removable guarding fitted. Glazing in critical locations such as within 800mm of floor level to windows, within 1500mm of floor level to doors, and windows adjacent to doors is to consist of laminated toughened safety glass in accordance with BS 6206 and permanently marked. External doors to have a minimum clear opening of 775mm with door in open position.

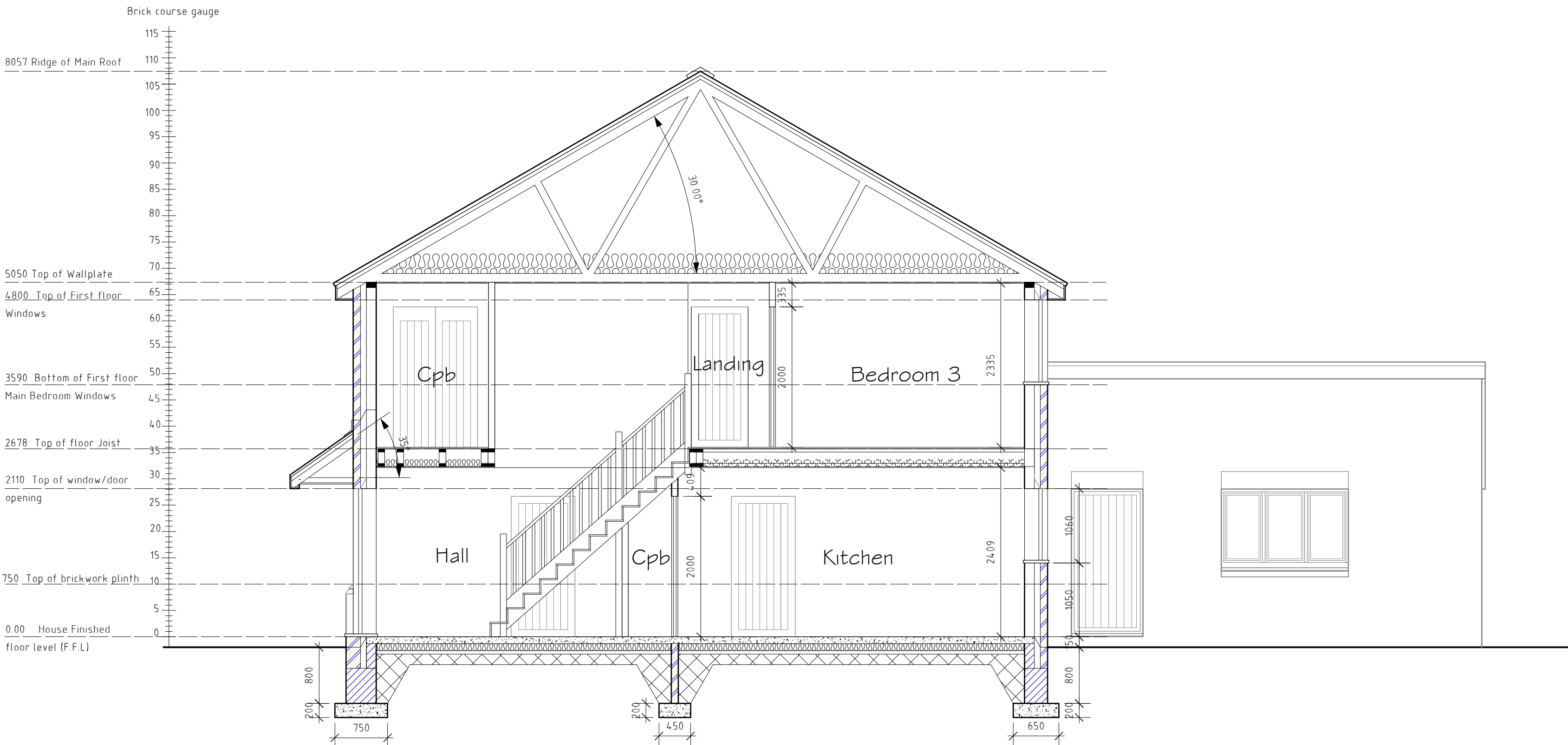
SANITATION, HOT WATER SAFETY & WATER EFFICIENCY. (Approved Document G 2010)
The supply of water for domestic use and plumbing services shall comply with BS 6700:2009. In accordance with regulation 17k water consumption for the new dwelling shall not exceed 125 litres per person per day when calculated in accordance with 'The Water Efficiency Calculator for New Dwellings'. Thermostatically controlled hot water delivered to baths should not exceed 48°C.

FIRST FLOOR CONSTRUCTION
Floor boarding is to comprise 22mm thick tongued and grooved Weyroc board on floor joists specified by timber frame manufacturer. Allow for doubled up joists below stud partitions, at support points of bath, softwood trimmers around stairs as indicated. Ceilings are to comprise 12.5mm plasterboard with 3mm nominal skim plaster finish. Provide single layer of 100mm thick mineral wool, minimum density 10kg/m³ to ensure passage of sound is minimised.

STAIRCASE
Staircase to be purpose made in softwood to the design indicated. Staircase total rise is to be 2700mm with 13No. equal risers of 207.6mm. Staircase to comprise of 12 equal 235mm treads as indicated on floor plans. Tapered turning treads to be provided with 50mm min going at newel. Angle of pitch to be 42° maximum. Flight to be 925mm wide measured from wall to center of handrail. Treads are to be out of 30mm minimum thick softwood. Stringers are to be out of 330mm x 30mm minimum section softwood. Provide handrail to flight and around landing set at 900mm above nosings, handrail to be supported on balustrade. Balustrade is to be formed out of softwood turned balusters. Balustrade supporting handrail is to be positioned at intervals restricting the passage of a 100mm diameter ball. Provide newel posts out of 90mm x 90mm section softwood at changes in direction of handrail. Structural newel to be designed and specified to staircase manufacturer. *All dimensions to be checked on site prior to manufacture.* Stairs to have 2000mm clear vertical headroom throughout.

STUD FRAMED PARTITIONS
Stud framed partitions are to comprise 12.5mm thick plasterboard fixed to both sides of partitions. Framework to be specified by timber frame manufacturer. Additional framing to be installed where required i.e. around openings. *Structural studs to have 19mm ply fixed to one side prior to fixing of plasterboard.* All joints in boards are to be filled and scrimmed prior to the application of skim plaster. Allow for absorbent layer of 25mm thick wire reinforced mineral wool quilt to be suspended in cavity of stud framing to walls as indicated on floor plans to resist the passage of sound.

SOLID WALL CONSTRUCTION (Garage Walls)
External solid walls are to comprise of 225mm. Provide Keystone lintels 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). Walls below finished ground level to be constructed using concrete common brickwork down to thermalite trench block. Walls above finished ground level to be constructed using facing brick as indicated on elevations to local authority approval. All walls to be constructed centrally on supporting foundations. Above garage door to front elevation contractor to allow for battens and tile hanging to match front gable projection of main house.



Section Z-Z

PLANS HAVE NOT YET GAINED LOCAL AUTHORITY APPROVAL AND MAY BE SUBJECT TO CHANGE

SHOULD ANY VARIATIONS BETWEEN TIMBER FRAME DRAWINGS AND ARCHITECTURAL PLANS BE FOUND CONTRACTOR TO CONTACT TIMBER FRAME MANUFACTURER

PLANS MUST BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERS DETAILS & SAP ASSESSORS DETAILS

DO NOT SCALE OFF DRAWING. If in doubt, ask.

Rev	Date	Detail	Initial

Project: Plot 8 Proposed residential development at Willow Cottage, Ruabon, Wrexham. LL14 6LE.	
Title: Sections	Scale: (A2) 1:50

Drawn By: D.J.Edwards	Date: March 2021
Drawing No: G080/024	Sheet: 2 of 3

Office 3K4,
Redwither Business Tower,
Wrexham. LL13 9XT
Tel: 01978 356500
www.blueprintarchitectural.com
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