WARM FLAT ROOF
(imposed load max 1.0 kN/m² - dead load max 0.75 kN/m²)
To achieve U value 0.18 W/m²K
Flat roof to be single ply membrane roofing providing aa fire rating for surface spread of flame with a current BBA or WIMLAS Certificate and laid to specialist specification.
Single ply membrane to be fixed to 22mm exterior quality plywood over 140mm Celotex TA4000.
Insulation bonded to vcl on 22mm external quality plywood decking or similar approved on sw firings to minimum 1 in 80 fall on sw treated 47 x 195mm C24 flat roof joists at 400mm ctrs to give a max span of 3.9m or as Structural Engineer's details and calculations. Underside of joists to have 12.5mm foil backed plasterboard and skim.
Provide restraint to flat roof by fixing of 30 x 5 x 1000mm ms galvanised lateral restraint straps at maximum 2000mm centres fixed to 100 x 50mm wall plates and anchored to wall.

All first floor external wall lintels to be 3No. 47 x 147mm C24 bolted together with M10 Gr. 4.6 bolts @ 400mm ctrs. (2No. bolts over supports).

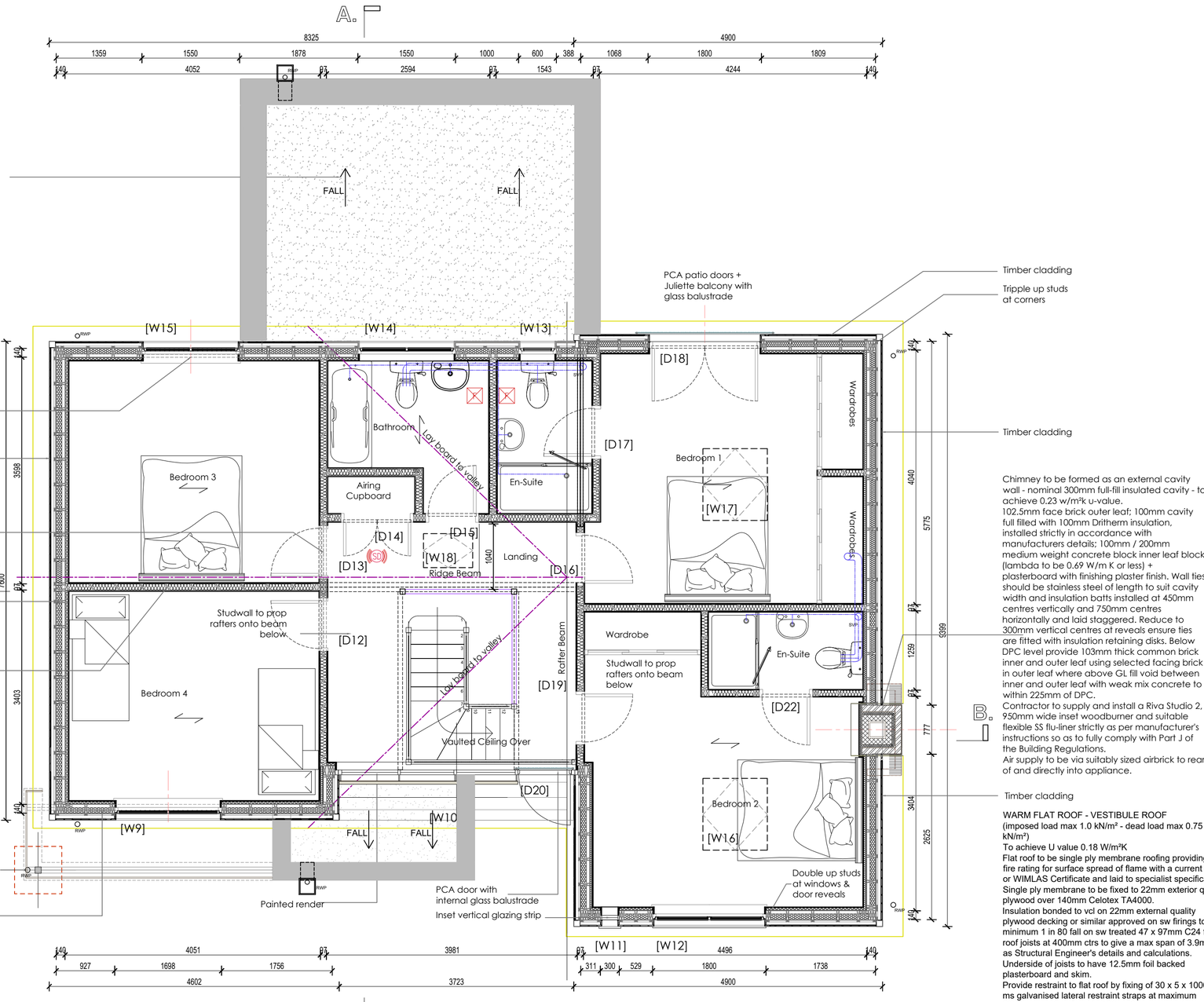
Timber cladding

All first floor internal wall lintels to be 2No. 47 x 147mm C24 bolted together with M10 Gr. 4.6 bolts @ 400mm ctrs. (2No. bolts over supports).

First floor external walls to be 38 x 140mm C16 studs at 400mm ctrs. with 9mm OSB/3 sheathing fixed to studs with 4mm dia. nails/screws @ 150mm ctrs.

First floor internal walls to be 47 x 97mm C16 studs @ 400mm ctrs. with 9mm OSB/3 sheathing fixed to both sides with 4mm dia. nails/screws @ 150mm ctrs.

TIMBER FRAME WALL - Vertical Timber Cladding
To achieve minimum U Value of 0.28W/m²K
New timber frame walls to consist of external vertical timber cladding Western Red Cedar 18 x 143mm (125mm face) Matchboard t & g treated with specialist coloured preservative applied on site prior to fixing boards and strictly as per manufacturer's recommendations on 38 x 38mm horizontal preservative treated battens at 600mm centres with chamfered top (15 degree) - falling towards cavity on min 25x38mm vertical preservative treated battens at 600mm centres - with insect mesh to top and bottom of ventilation path over Tyvek Housewrap or other similar approved breather membrane over 9mm OSB fixed back to 38 x 140mm C16 timbers at 400mm centres. 90mm Celotex GA4000 or FR5000 insulation fixed between studs to line with outer face thereby forming a 50mm service void. Clad inside face of studwork in 9mm OSB with 37.5mm Celotex PL4000 insulation bonded plasterboard fixed over strictly as per manufacturer's specification so as to act as VCL with joints between boards tightly butted to maintain vapour seal using self-adhesive foil tape.
U-Value of 0.14 W/m²K designed.



First Floor Plan

Scale 1:50

True Scale at 1:50 Printed at A1.

0mm 1000mm 2000mm 3000mm 4000mm 5000mm 6000mm

GLASS BALUSTRADING INTERNALLY TO DOOR D20
All balcony balustrades to be min 1.1m in height.
Balustrades to be in toughened glass in accordance with Part K (Part N in Wales) of the Building Regulations and designed to resist the horizontal force given in BS 6180:2011. No openings in any balustrading should allow the passage of a 100mm sphere and children should not readily be able to climb the guarding.