

2.0 EXTERNAL WALLS

To achieve min. U-Value of 0.20W/m²K

To achieve min. 60min. Fire Rating where required (see Fire Engineers report)

Refer to A615_T_2000 series for details

NB: All insulation to be Rockwool or equal approved.

All membranes to have BBA accreditation for combustibility class B-s3,d0 or better.

Where pattering is required within external wall build-up, boards used to have BBA accreditation for combustibility class A2,s1-d0 or better (12mm Magply A1 rated board OEA by Architect).

Cavity trays to be formed using Visqueen Zedex non-combustible DPC, to meet A2-S1,d0.

2.1 METSEC SFS INTERNAL WALLING GENERALLY

Metsec SFS Continuous Walling inner leaf, typical span 2650mm. Maximum stud size 100mm. C/w suitable base, head, lintel, cill tracks and cantilever posts. Facing materials vary.

Subcontractor to complete detailed design of SFS Infill Walling in accordance with this specification and the preliminary design drawings and submit before commencement of fabrication.

2.2 EXTERNAL BRICK WALL - **TYPE A_2** - 76mm CAVITY

102.5mm Forterra Westcroft Red Multi brick outer leaf in stretcher bond with natural mortar and flush, bagged joints (raked joints to where panels are recessed), 75mm cavity, 80mm Rockwool Rainscreen Duo Slab Insulation, Tyvek FireCurb breather Membrane on 12.5mm Siniat Weather Defence Board, SFS Walling - see 2.1 - with 100mm full-fill Rockwool Steel Frame Slab insulation between studs, Cortex 0230FR Class A2 VCL Membrane, 2No. Layers 12.5mm Plasterboard, 3mm Plaster Skim. **Where 60 min fire resistance is required from internal face and in both directions separately, amend 2No. Layers 12.5mm plasterboard to 2No. 12.5mm Knauf Fire Board. Refer to Fire Strategy GA Plans for locations: A615_C_140-144.**

Soldier coursing, recessed panels and projecting flemish bond as per elevations.

C/w suitable wall ties, dpc's etc.

2.3 EXTERNAL BRICK WALL - **TYPE A_3** - 50mm CAVITY

102.5mm Forterra Westcroft Red Multi brick outer leaf in stretcher bond with natural mortar and flush bagged joint (raked joints to where panels are recessed), 50mm cavity, 80mm Rockwool Rainscreen Duo Slab Insulation, Tyvek FireCurb breather Membrane on 12.5mm Siniat Weather Defence Board, SFS Walling - see 2.1 - with 100mm full-fill Rockwool Steel Frame Slab insulation between studs, Cortex 0230FR Class A2 VCL Membrane, 2No. Layers 12.5mm Plasterboard, 3mm Plaster Skim. **Where 60 min fire resistance is required from internal face and in both directions separately, amend 2No. Layers 12.5mm plasterboard to 2No. 12.5mm Knauf Fire Board. Refer to Fire Strategy GA Plans for locations: A615_C_140-144.**

Soldier coursing, recessed panels and projecting flemish bond as per elevations.

C/w suitable wall ties, dpc's etc.

2.4 EXTERNAL BRICK WALL - PROJECTING FLEMISH BOND

Flemish bond details as per areas on elevations. Heads to project 18mm.

2.5 EXTERNAL BRICK WALL - SOLDIER COURSE

450mm high double stacked soldier course brickwork course with reinforcement mesh between each course and cavity ties at every course to S.E. details. As per areas on elevations.

2.6 CORTEN CLAD DORMER CHEEKS - **TYPE C_2**

3mm thick Kingspan Metallic Facade (Corten) with 42mm well vented cavity behind rainscreen, on 100mm Kingspan K-Roc Karrier, fixed back to primary structure by subcontractor (Primary steel and support bracket design by S.E). Prefabricated panels to be fixed in front Breather Membrane on 12.5mm Siniat Weather Defence Board on SFS walling (max. Stud size 100mm), 2No. Layers 12.5mm Plasterboard, 3mm Plaster Skim.

To achieve U-value of 0.20 W/m²K.

2.7 METAL CLAD WALLS - **TYPE C_1**

Ash & Lacy VariAl-H aluminium cladding in "Timeless Rust" finish, fixed back to primary structure by subcontractor (Primary steel and support bracket design by S.E). Prefabricated panels to be fixed in front of thermal wall element with minimum 38mm ventilated cavity, comprising 80mm Rockwool Rainscreen Duo Slab Insulation, Tyvek FireCurb breather Membrane on 12.5mm Siniat Weather Defence Board, SFS Walling - see 2.1 - with 100mm full-fill Rockwool Steel Frame Slab insulation between studs, Cortex 0230FR Class A2 VCL Membrane, 2No. Layers 12.5mm Plasterboard, 2.5mm Plaster Skim.

NB: The Breather Membrane specification (Tyvek Firecurb) is identified within the fire classification report for VariAl-H Aluminium cladding. As the test report is for the full system, an alternative breather membrane product should not be used unless evidence can be attained that the aluminium cladding is A2 rated in isolation.

To achieve U-value of 0.20 W/m²K.

2.8 CAVITY CLOSERS

Install vertical and horizontal cavity barriers to achieve 30min integrity/15min insulation fire rating along all party wall and floor lines, and to close cavities around window and door openings. Siderise EW I Cavity Barriers and fire stops to masonry external walls. SideRise RH & RV I Rainscreen Cavity Barriers to cladding.

2.7 BRICK FIXINGS TO MAIN STRUCTURE

Metal fixings to support brickwork to be in accordance with Structural Engineer's design. Supports to fix back to the main load bearing structure of the building.

2.8 PPC COPINGS/CILLS

PPC Aluminium profiles secret fixed to framed substrate to subcontractors details. Kytun dry verge system for natural slate to verges.

2.9 EXTERNAL CONCRETE SHEAR WALL - **TYPE B_1**

102.5mm Forterra Westcroft Red Multi brick outer leaf in stretcher Bond, 50mm cavity, 200mm Rockwool High Performance Partial Fill Insulation, Tyvex FireCurb breather membrane, concrete shear wall to S.E. details. Plasterboard on dabs to internal face of concrete, with 2.5mm plaster skim finish.

C/w suitable wall ties, dpc's etc.

2.10 EXTERNAL BRICK WALL - **TYPE A_1** - 97mm CAVITY

102.5mm Forterra Westcroft Red Multi brick outer leaf in stretcher Bond with natural mortar and flush joints, 97mm cavity, 80mm Rockwool Rainscreen Duo Slab Insulation, Tyvex FireCurb breather membrane on 12.5mm Siniat Weather Defence Board, SFS Walling - see 2.1 - with 100mm full-fill Rockwool Steel Frame Slab insulation between studs, Cortex 0230FR Class A2 VCL Membrane, 2No. Layers 12.5mm Gyproc Soundbloc Plasterboard, 3mm Plaster Skim. **Where 60 min fire resistance is require from internal face and in both directions separately, amend 2No. Layers 12.5mm plasterboard to 2No. 12.5mm Knauf Fire Board. Refer to Fire Strategy GA Plans for locations: A615_C_140-144.**

Soldier coursing, recessed panels and projecting flemish bond as per elevations.

C/w suitable wall ties, dpc's etc.

2.11 EXTERNAL CONCRETE SHEAR WALL - **TYPE B_2**

102.5mm Forterra Westcroft Red Multi brick outer leaf in stretcher bond, 50mm cavity, 80mm Rockwool High Performance Partial Fill Insulation, Tyvex FireCurb breather membrane, concrete shear wall to S.E. details, Cortex 0230FR Class A2 VCL Membrane, 2 x 12.5mm plasterboard on IWL system, 3mm plaster skim. To achieve min. U-Value of 0.36W/m²K

2.12 EXTERNAL CONCRETE SHEAR WALL - **TYPE B_3**

102.5mm Forterra Westcroft Red Multi brick outer leaf in stretcher Bond, 76mm cavity, 80mm Rockwool High Performance Partial Fill Insulation, Tyvex FireCurb breather membrane, concrete shear wall to S.E. details, Cortex 0230FR Class A2 VCL Membrane, 2 x 12.5mm plasterboard on IWL system, 3mm plaster skim. **Where 60 min fire resistance is require from internal face and in both directions separately, amend 2No. Layers 12.5mm plasterboard to 2No. 12.5mm Knauf Fire Board. Refer to Fire Strategy GA Plans for locations: A615_C_140-144.**

To achieve min. U-Value of 0.36W/m²K

2.13 OPAQUE GLAZING WITH INSULATION - **TYPE A_4**

140mm deep Ideal Combi Glazing unit with opaque treatment to glass, cavity to suit depth of adjacent wall type A_3, 80mm Rockwool Rainscreen Duo Slab Insulation, Tyvex FireCurb breather Membrane on 12.5mm Siniat Weather Defence Board, SFS Walling - see 2.1 - with 100mm full-fill Rockwool Steel Frame Slab insulation between studs, Cortex 0230FR Class A2 VCL Membrane, 2No. Layers 12.5mm Gyproc Soundbloc Plasterboard, 3mm Plaster Skim.

2.14 EPDMs

Interfaces to be sealed with Cortex 0500FR with Gasket Class B Membrane, using Cortex 0771FR Class B Paste Adhesive.

3.0 ROOF

To achieve min. U-Value of 0.15W/m²K

Refer to A615_T_2000 drawing series for details

NB: All insulation to be Kingspan or equal approved

3.1 PITCHED SLATE ROOFS

Kentdale Blue/Grey Spanish slate fixed to 25mm thk. treated SW battens. Kingspan Nilvent breather membrane draped over counter battens ~~on 18mm ply sheathing (S.E. to confirm)~~. 70mm Kingspan Kooltherm K7 Rigid Insulation fixed over 195mm timber joists to S.E.'s design, 70mm Kingspan Kooltherm K7 Rigid Insulation between rafters. VCL, 2 No. layers 15mm Gyproc SoundBloc fixed to underside of timbers on resilient rails w/ 2.5mm plaster skim. Roof to incorporate box gutter detail flush with external line of wall below.

3.2 FLAT ROOF - CONCRETE DECK

Triflex liquid applied membrane system to subcontractor design, installed over 150mm Kingspan TR27 insulation bonded to screed with water-based inhibitor to 1:40 fall, on concrete deck to S.E.'s design (BSEN13670 plain finish), service zone (depth of which varies), British Gypsum Casoline MF Ceiling Construction (consisting of Primary Support Channel, Ceiling Section Channel, 12.5mm Plasterboard w/ 2.5mm plaster skim). Roofs to incorporate valley gutters w/ outlets as per GA plans.

Additional Triflex wear layer to be provided to locations of planters at 4th floor level and potential location of hot tubs TBC.

3.3 FLAT ROOF TERRACES TO THIRD AND FOURTH FLOOR

Geotiles Ceramica ADZ Ground Gris 610x610x20mm porcelain tiles supplied by CTC on Ryno adjustable non-combustable pedestals to sit level above Specification Item 3.2. Aluminium planters on raised feet to edge of fourth floor roof terraces, as per Specification item 16.11. 1100mm high structural, frameless glass balustrades to third floor roof terraces, fixed into Q-railing F type Prime Channel fixed down to upstand with Aluminium flashing, RAL 7021 Black Grey. Guardings to resist, as a minimum, the loads given in BS EN 1991-1-1 with its UK National Annex and PD 6688-1-1.

3.4 RAINWATER GOODS - GUTTERS TO PITCHED ROOFS

130x100mm Aluminium gutter flush with front face of brickwork, RAL 7021. Marley Alutec Contemporary Hoppers (Standard 250mm x 240mm x 200mm) to end of gable, as per elevations RAL 7021.

3.5 RAINWATER GOODS - INTERNAL OUTLETS

82mm dia. PVCu Pushfit rainwater downpipes (TBC by Aberla) boxed out internally with 2 No. layers 15mm **Knauf Soundshield Plus** as per GA plans, wrapped with acoustic mineral wool insulation (min. 25mm). Min. gap of 10mm to be maintained between pipes and wall studs.

3.6 RAINWATER VALLEY GUTTERS TO FLAT ROOF AREAS

Valley gutters to flat roof areas roofs to suit. Falls as per GA plans. Downpipes as per Specification Item 3.5

3.7 ROOF PENETRATIONS

Make provision for vent tiles and ridge vents. Suitably flash all penetrations. Requirements for TV aerial and siting to be confirmed by M&E.

3.8 MANSAFE

Fixing points to manufacturer's recommendations, as per locations shown on GA Roof Plan. Location and quantity to be confirmed by CDM consultant.

3.9 FLAT ROOF - DORMERS

Triflex liquid applied membrane system to subcontractor design, installed over 150mm Kingspan TR27 insulation on breather membrane, on 18mm thick WBP plywood on firing pieces at 1 in 40 falls, on 18mm plywood, on timber joists to S.E. design. 2 no. layers 15mm **Knauf Soundshield Plus** plasterboard on resilient bars fixed to underside of timber joists. 3mm plaster skim.

4.0 WINDOWS & EXTERNAL DOORS

To achieve min. U-Value of 0.80W/m²K

All windows must be compliant with and certified to BS PAS 24. All external doors and windows at ground and first floor level (including doors to balconies) should be compliant with and certified to BS PAS 24, STS 201 or LPS 1175 SR2.

Refer to A615_T_800 series for details

4.1 GLAZED EXTERNAL DOORS - OUTWARD OPENING

Ideal Combi Futura+ Triple Glazed Casement Doors (or equal approved), openings as indicated on elevations. Powder coated paint finish low gloss RAL 7021 Black Grey, w/ matching painted internal finish (complete by and to manufacturer specification). Glass to be triple-glazed units with warm-edge spacers. No trickle vents.

Enlarged fixing points to provide structure to powder coated aluminium vertical fins (to match window frame finish).

Refer to elevations for dimensions as sizes vary. Subcontractor to complete detailed design in accordance with this specification and the preliminary design drawings and submit before commencement of fabrication.

Balustrades provided internally to all outward opening windows.

To achieve U-value of 0.80 W/m²K.

4.2 GLAZED EXTERNAL DOORS - INWARD OPENING

Ideal Combi Futura+ Triple Glazed Casement Doors (or equal approved), openings as indicated on elevations. Powder coated paint finish low gloss RAL 7021 Black Grey, w/ matching painted internal finish (complete by and to manufacturer specification). Glass to be triple-glazed units with warm-edge spacers. No trickle vents.

Enlarged fixing points to provide structure to powder coated aluminium vertical fins (to match window frame finish).

Refer to elevations for dimensions as sizes vary. Subcontractor to complete detailed design in accordance with this specification and the preliminary design drawings and submit before commencement of fabrication.

Powder-coated steel balustrade provided externally to all inward opening windows.

To achieve U-value of 0.80 W/m²K.

4.3 GLAZED EXTERNAL DOUBLE SLIDING DOORS

Ideal Combi Futura+ Triple Glazed Double Sliding Doors (or equal approved), openings as indicated on elevations. Powder coated paint finish low gloss RAL 7021 Black Grey, w/ matching painted internal finish (complete by and to manufacturer specification). Glass to be triple-glazed units with warm-edge spacers. No trickle vents.

Enlarged fixing points to provide structure to powder coated aluminium vertical fins (to match window frame finish).

Refer to elevations for dimensions as sizes vary. Subcontractor to complete detailed design in accordance with this specification and the preliminary design drawings and submit before commencement of fabrication.

Powder-coated steel balustrade provided externally or internally - refer to elevations.

To achieve U-value of 0.80 W/m²K.

4.4 ENTRANCE DOORS

STII aluminium framed glazed door with fixed side lights. Compliant with and certified to BS PAS 24, STS 201, or LPS 1175 SR2, including a multi-point electronic lock permitted as part of the certification, capable of being operated via an electronic access control system.

To achieve U-value of 0.80 W/m²K.

4.5 BIN STORE LOUVRED DOORS

Side hung double aluminium, louvred doors (left hand side first leaf opening). Subcontractor to complete detailed design in accordance with this specification and the preliminary design drawings and submit before commencement of fabrication.

Doors to be fitted with weatherboards, double security hasp and staple to accept padlocks and locks all in line with Electricity Northwest requirements. 0.4m² minimum free area for ventilation.

4.6 FIXED GLAZING

Ideal Combi Futura+ Triple Glazed Windows (or equal approved) as indicated on elevations. Powder coated paint finish low gloss RAL 7021 Black Grey, w/ matching painted internal finish (complete by and to manufacturer specification). Glass to be triple-glazed units with warm-edge spacers. No trickle vents.

Refer to elevations for dimensions as sizes vary. Triangular and raked glazing units and 140mm corner posts required to North elevation of dormers. Subcontractor to complete detailed design in accordance with this specification and the preliminary design drawings and submit before commencement of fabrication.

To achieve U-value of 0.80 W/m²K.

4.7 FIXED OPAQUE GLAZING

Ideal Combi Futura+ Triple Glazed Windows **with Satinato glass** (or equal approved) as indicated on elevations. Powder coated paint finish low gloss RAL 7021 Black Grey, w/ matching painted internal finish (completed by and to manufacturer specification).

Refer to elevations for dimensions as sizes vary. Subcontractor to complete detailed design in accordance with this specification and the preliminary design drawings and submit before commencement of fabrication.

4.8 REMOVABLE PERFORATED SCREENS TO PLANT ROOM

Aluminium louvres to provide 0.4m² minimum free area for ventilation to plant room. Subcontractor to complete detailed design in accordance with this specification and the preliminary design drawings and submit before commencement of fabrication.

4.9 PITCHED ROOF LIGHTS FOR TERRACE ACCESS

Velux Roof Terrace GEL + VEA/VEB/VEC triple glazed roof lights (or equal approved), openings as indicated on elevations. White painted internal finish. Glass to be triple-glazed units with warm-edge spacers.

To achieve U-value of 1.10 W/m²K.

4.10 PITCHED ROOF LIGHTS

Velux MK08 roof lights, openings as per roof plan. Make provision for openings to be electronically controlled. White painted internal finish. Glass to be triple-glazed units with warm-edge spacers.

To achieve U-value of 1.10 W/m²K.

Fixed ladder with vertical fall arrest system to be provided, fixed to wall below top hung roof light in stair core.

4.11 FLAT ROOF LIGHTS

2000mmx1000mm Glazing Vision Flushglaze roof lights as indicated on GA plans. 25.5mm Clear heat soaked toughened laminated outer, 14mm Black silicone sealed argon filled cavity, 6mm Clear toughened soft coat low E inner.

Subcontractor to complete detailed design in accordance with this specification and the preliminary design drawings and submit before commencement of fabrication.

To achieve U-value of 1.30 W/m²K.

4.12 AOV ROOF LIGHT

Velux MK08 New Generation (V22) Roof Window supplied as smoke ventilation window, centre pivot. White painted internal finish.