

## Specification of the Clearview Woodland under 50m<sup>2</sup>



### Structural Design

The structure is designed and constructed in accordance with the following standards and technical references:-

- BS 5268-2:2002 'Structural Use of Timber'
- BS 5950-2:2001 'Structural use of steelwork in building. Specification for materials, fabrication and erection - Rolled and welded sections'
- BS 5950-5:1998 'Structural use of steelwork in building. Code of practice for design of cold formed thin gauge sections'
- BS 6399-1:1996 'Loading for buildings. Code of practice for dead and imposed loads '
- BS 6399-2:1997 'Loading for buildings. Code of practice for wind loads '
- BS 6399-3:1988 'Loading for buildings. Code of practice for imposed roof loads '
- BS 648:1964 'Schedule of weights of building materials '
- Timber Designers Manual 'Ozelton & Baird'

### Imposed Loadings

Floor – 3.0kN/m<sup>2</sup>

Roof – 0.75 kN/m<sup>2</sup>

### Design Wind Speed

Calculated in accordance with BS 6399: Part 2

## Fire Rating

- External face of walls - Class 3 surface spread of flame
- Internal face of walls and ceiling - Class 0 surface spread of flame.
- Minimum 30min Insulation, Integrity and Stability protection – from inside to out.

## Insulation Values

Walls 'U' = 0.35w/m<sup>2</sup>k

Roof 'U' = 0.22w/m<sup>2</sup>k

Floor 'U' = 0.22w/m<sup>2</sup>k

## Internal Ceiling height

24000mm

## FLOOR STRUCTURE – 'U' VALUE = 0.20 w/m<sup>2</sup> K

**Steel floor frame:** 150 x 75 x 10mm C-Section Hot Rolled Steel Channel perimeter beams with 125 x 50 x 3mm PFC Galvanized steel floor joists at 406mm centres welded between.

**Floor Deck:** 18mm V313 Flooring grade moisture resistant T & G Chipboard glued and nailed to timber joist packing battens.

**Insulation:** Double layer of 'Ecobright' foil insulation membrane laid over galvanized Steel floor joists with airspace above to underside of Chipboard deck.

## EXTERNAL WALLS – 'U' VALUE = 0.35w/m<sup>2</sup>K

**Timber Framing:** Ex 95 x 35mm top and bottom rails with ex 95 x 35mm vertical studding at 400mm centres, with horizontal cross mid rails.

**Cladding:** 9mm WBP Exterior grade plywood glued and nailed to studding timber to form a stressed skin construction.

**Insulation:** 90mm glass fibre min slab insulation quilt fitted in between vertical timber studding.

**Vapour Barrier:** Single layer of 'Ecobrite' foil insulation membrane is fitted directly onto internal side of walls studs.

**Packer Battens:** 44mm timber packing battens are fitted on top of 'Ecobrite' insulation to create air cap behind plasterboard internal lining.

**Internal Lining:** 12.7mm White 'plaster' vinyl faced plasterboard fixed onto timber packer battens, board joints finished with two part white PVC H-section. All skirting are 45 x 10mm two part PVC – in white.

## Wall Bay to Bay

**Joint Cover Strips:** 12.5mm white vinyl faced infill piece for internal flush finished walls.

## **ROOF STRUCTURE – (WARM DECK) – ‘U’ VALUE = 0.25 w/m<sup>2</sup> K**

### **Steel Roof Beams and frame:**

Engineered steel lattice edge beams duo-pitch with steel angle tie bars. Roof beams connect to 80 x 80 x 4mm RHS cold formed full height corner posts, which are connected to the floor perimeter beams at the bottom, creating a rigid steel frame construction. Roof and ceiling are created separately with an air space in between.

### **Roof Deck and Covering:**

Single layer rubberised roof blanket is bonded onto 12mm plywood which is nailed onto timber roof joists 125 x 38mm @ 400mm centres.

### **Ceiling Joists and Lining:**

12.7mm foil backed plasterboard fixed onto 125 x 38mm timber ceiling joists @ 400mm centres.

### **Insulation:**

2 layers of 90mm glass fibre min slab quilt to roof space between roof joists held in place with a reflective foil membrane fixed to the underside of the of the roof joists.

### **Roof Ventilation:**

Warm Deck None required.

### **Rainwater Goods:**

Rainwater is discharged directly from the roof into full length brown PVC square line gutter along each end of the bays. The gutter discharges via PVC square fall pipes to ground levels.

### **Ceiling Bay to Bay Joint cover Strip:**

Joint concealed by 12mm thick twice rounded MDF strip finished with laminated white vinyl to match wallboards, mounted on timber laths.

### **Fascia detail:**

Fascia is built onto the ends of the steel columns, and clad with 9mm WBP plywood. The finish is as per the external wall finish.

## **EXTERNAL DOORS**

### **Doors:**

1300(w) x 2100mm(h) White UPVC frame with an durable wood grain Laminated foil wrap to the external face.

Door type – 2xgg pattern in double glazed in clear laminated safety glass.

## **WINDOWS**

**U value 1.8 w/m<sup>2</sup> K**

### **Specification:**

Double glazed white UPVC framed, top opening vent, windows size 900(w) x 2000(d) glazed in K glass with neoprene glazing gaskets, trickle vents, and opening restrictors. Glazing in compliance with PART N of the building regulations.

Window linings are 6mm PVC window board complete with 45x6mm square Surround.

External finish – Very durable wood grain laminated foil wrap which is Scratch resistant, can be easily cleaned, offers a high performance and Longevity in all types of weather conditions.

## **EXTERNAL CLADDING**

**Walls:** **HEAT TREATED THERMOWOOD CLADDING**  
fixed to treated spacer latte with breather paper.

### **DURABILITY**

The improved durability of ThermoWood makes it an excellent material to use in the production of timber claddings and rain screens. The heat treatment process enables the use of finish pine and spruce in areas requiring a service life of up to 30 years without the need for a chemical preservative.

### **ENVIRONMENT**

The timber used to produce ThermoWood is grown in Finnish forests which are fully certified under the Finnish Forestry Certification System and Pan European Forestry Certification.

As such you can be sure ThermoWood is sourced from well managed and sustainable forests. The heat treatment process requires no chemical additives. The improved performance is achieved simply by the controlled application of heat and steam.

### **STABILITY**

ThermoWood is more stable than untreated softwood. The changes that occur within the timber during heat treatment make it less able to absorb or lose moisture. This restriction of moisture movement limits any potential for swelling, shrinkage or distortion of ThermoWood cladding boards.

### **MAINTENANCE**

Heat treatment removes resin from timber. As a result there is no resin leakage or “bleed” through the surface coatings. The combined effect of this together with the improved stability can lead to a lower maintenance requirement.

**External Corner Trims:** Hand crafted in thermowood timber to match the main body cladding.

**Bay Joint Trims:** Thermowood timber or plastisol steel bonded to plywood in a colour to Be sympathetic with the rest of the building.

**External Plinth Trim:** 400mm deep timber plinth/perimeter skirt trim is supplied.

**Installation:** Each module is factory fitted with lighting, power and heating all protected by MCBs (miniature circuit breakers) within the consumer unit.

**Certification:** All modules are electrically pre-tested to comply with current Regulations, and issued with a NICEIC certificate.