thermenergy

CA-24

Construction Specification for Part L1A Compliance 2021 Building Regulations		
Project: 8 new dwellings: **Plot 1 & 8 – house end terrace. Plot 2/3/6/7 – house mid-terrace** **Plot 4 – flat FF/SF (2 storeys). Plot 5 – flat TF (1 storey)**	**Address: Land between 76 and 78 Brighton Road, Lancing, BN15 8LW**	
Date: 14 March 2024	**SAP Assessor: Dominic Bibby**	**Building Regulations: 2021**

Construction and insulation	
Element	**U-Value (W/m²K)**
Ground floor (houses only) 65mm screed + 100mm concrete + 150mm PIR	0.13
Exposed floor (houses over garage area) 12.5mm PB + 22mm chipboard + 200mm PIR (between joists)	0.17
Exposed floor (houses over bay window area) 12.5mm PB + 22mm chipboard + 150mm PIR (between joists)	0.22
Exposed floor (flat 4 over GF & flat 5 over corridor area) 12.5mm PB + 22mm chipboard + 200mm PIR (between joists)	0.17
External wall - BRICK 15.5mm PB + 15mm plaster dabs + 100mm block + 100mm PIR + 25mm cavity + 102mm brick	0.18
External wall – METAL (Houses only) 15.5mm PB + 9mm ply + 22mm battens + 12mm board + 50mm PIR + 100mm PIR (between studs) + 4mm aluminium	0.17
External wall – semi party garage wall with shelter factor (Houses only) 2 x 15mm plaster + 100mm block + 100mm isover roll + 100mm block. With shelter factor*	0.25*
External wall – garage walls – walls around garage – houses only) 15.5mm PB + 9mm ply + 22mm battens + 12mm board + 50mm PIR + 100mm PIR (between studs)	0.17
External wall – stairwell/corridor walls (flats only) 12.5mm PB + 100mm PIR (between studs). Stairwell facing wall – not exposed* resultant UV of 0.25*	0.25*
Exposed wall - Party Solid/Fully filled cavity walls.	0.0
Roof – Flat roof 15.5mm PB + 150mm PIR + 22mm chipboard	0.15
Glazing Windows/Glazed doors/Roof lights. **NOTE: WINDOWS NEED TO ACHIEVE THE U-VALUE SPECIFIED TO PASS THE SAP**	1.2
Front door/external doors	1.0

Photographic Evidence

Building Regulations Part L 2021 requires that the builder/developer collates photographic evidence of all construction elements and junctions throughout the build process. BCB may request this on completion and may be needed to enable the as-built SAP and EPC to be produced.

Air tightness

A design air permeability of 4.0m³/h/m² to be confirmed by air pressure testing.

Heating, Ventilation, Lighting, Renewables

Main Heating System

Houses - Air Source Heat Pump (ASHP) minimum 250% efficiency. MCS certified. Heat emitter: UFH. ASHP flow temperature: 35.

Flats - Gas boiler minimum 89% efficiency. Delayed start thermostat + boiler interlock. Heat emitter: UFH.

Heating Controls: Time and temperature zone control.

Water Heating

Houses - 300 litre water cylinder with declared loss factor of 2.36. Heat transfer area: tbc m2. **Flats** - From main heating.

Showers

Shower type: unknown (TBC at As Built stage). Shower flow rate: 9 litres/min. (Assumed 9 if unknown)

Ventilation

System 4 - Mechanical Supply & Extract Ventilation with Heat Recovery (MVHR). Balanced supply and extract ventilation - no requirement for background ventilators. Centrally mounted system ducted to all rooms in dwelling. MVHR. Specific fan power: 0.5. Heat exchanger efficiency: 90%.

Lighting

Light fittings to have a minimum luminous efficacy of 75 light source lumens per circuit watt.
Electricity Tariff Standard Tariff.
Photovoltaic panels (PV) **Flats only** - To be installed at South elevation with a peak of: Flat 4 – 3.5kwp. Flat 5 – 2.5kwp.