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Our Reference : AL-10

Sent By : E-Mail

Software: Stroma FSAP 2012

24/01/2022

Dear Emmanuel

Re : 4 New Flats, Manor Court, 152 Abbey Road, London NW6 4ST - Thermal Calculations (F

Further to receipt of your email (together with drawings), and subsequent correspondence, please find enclosed thermal calculation reference AL-10.

This confirms the SAP energy rating and Environmental Impact rating of the dwelling, and the DER<TER and DFEE<TFEE (Part L1A compliance), all in accordance with Approved Document L1A (2013 edition), effective 6th April 2014.

The DER (dwelling emission rate, CO₂) is at least 19% lower than the TER (target emission rate, CO₂) as required by Planning.

Attached is the specification upon which the calculations are based.

Yours sincerely

A handwritten signature in black ink, appearing to read "A. Leighton", on a light-colored background.

Construction and Insulation	
<u>Element</u>	<u>U-Value</u> (W/m ² K)
<u>Exposed Wall</u> (main cavity) Exposed timber frame or block cavity walls to achieve a U-Value of 0.18W/m ² K or better.	0.18
<u>Party Walls</u> All party walls to be either solid walls or fully filled cavity walls with effective edge sealing at all exposed edges and in line with insulation layers in abutting elements.	0.00
<u>Exposed Wall</u> (semi exposed between stair common areas and dwelling) Cavity construction or timber stud construction achieve a U-Value of 0.22W/m ² K or better.	0.22
<u>Roof</u> (warm flat roof) Main flat roof construction a U-Value of 0.16W/m ² K or better,	0.16
<u>Ground Floor</u> Assumed heated dwellings below.	0.14
<u>Windows/Roof Glazing</u> PVC-u or timber frame double/triple-glazed + 16mm cavity (air or argon gas fill) + low-E soft coat glass, to achieve a U-value of 1.40W/m ² K or better.	1.40
<u>Front Door Glazing</u> PVC-u or timber frame double-glazed + 16mm cavity (air or argon gas fill) + low-E soft coat glass, to achieve a U-value of 1.40W/m ² K.	1.40
*** A Copy of the Window Energy Rating Certificate will be required for our records on completion***	
Heating & Ventilation	
<u>Main Heating System</u> Conventional (mains) gas-fired central heating with radiators/underfloor in screed. Condensing boiler - annual efficiency rating 88% or higher.	
<u>Secondary Heating System</u> (where applicable) Not applicable.	
<u>Water Heating</u> From central heating combi-boiler	
<u>Heating Controls</u> Fully independent time and temperature zone control (<i>note: separate plumbing circuits required, either with its own programmer, or separate channels in the same programmer</i>).	
<u>Ventilation</u> Background ventilators + intermittent extract fans (Approved Document F1, 2010, amended 2013).	
Other	
<u>Detailing</u> Accredited construction details (limiting thermal bridging and air leakage) fully adopted : see www.planningportal.gov.uk . The dwelling must be constructed to this standard, and the relevant forms must be completed as building work progresses. <i>Note : Therm Energy may not be able to produce EPCs on completion unless all forms are completed as work progresses.</i>	
<u>Lighting</u> 100% Low-energy light fittings in accordance with Part L1 (<i>Note: This is over and above Part L minimum standards</i>).	
<u>Renewables</u> Solar PV panels, 1 kW/peak (4 standard 250W panels = approx 7m ²), placed horizontally on flat roof areas tilted approx south (modest over-shading) to each Flat.	
<u>Floor-Ceiling Heights</u> Ground Floor = 2400mm.	
<u>Air Tightness</u> Design air permeability is 5m ³ /h/m ² - to be achieved by air pressure test to comply with AD Part L1 2010). Note : Therm Energy Can Provide Air Leakage Testing.	