Energy Assessment / SAP Details Applied

For the proposed development at:

10 Kindersley Way, Abbots Langley

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5th February 2024
Property reference: SAP 10 – 00809
10 Kindersley Way, Abbots Langley

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1. Introduction

The calculations provided, draw upon the detailed SAP 10 assessment. This gives as accurate a guide as possible to the energy usage of the final development in operation, to comply with part L 2021. The Energy Assessment relates to a new dwellings at, 10 Kindersley Way, Abbots Langley.

The Calculations show the dwelling achieves a reduction of 70.68% in the Target emissions rate over the 2021 building regulations.

2: Services & Thermals

The total CO_2 emissions has been calculated taking full account of energy demands for space heating and hot water, and electricity for pumps, fans, lights.. using the orientation and the use of building elements (walls, windows etc.) with U-values and other reference values and in most cases consistent with achieving compliance with Approved Document Part L: 2021.

2.1) SAP Details applied

Element	U – Value Element	Element	U – Value Element
Main Walls - details to be confirmed	0.18	Floor - details to be confirmed	0.11
Windows - details to be confirmed	1.40 (g- value 0.63)	Doors details to be confirmed	1.40
Roof Slope - details to be confirmed	0.12	Roof lights to achieve - (g- value 0.63) details to be confirmed	1.40
Roof plane - details to be confirmed	0.10	Flat roof -details to be confirmed	0.12
Dormer Wall -details to be confirmed	0.18	Dwarf Wall -details to be confirmed	0.18

PSI values – applied from Table independently - RCD and default – please see PSI values separate sheet.
Air pressure test 4.50 or less
Lighting = Efficacy 90 lm/w
Ventilation – intermittent extract fans
Space heating Air to water heat pump – Daikin Europe ERGA06EVA + EHVH08SU18E6V
Water cylinder minimum heat loss
Emitters – under floor & Radiators

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Controls – Time & Temperature zone control
Electricity Tariff – Standard
Showers – 9 litres per minute
Cold Water storage – From Header tank

3: Results - shows the summary for the calculations

TER = Target Emission Rate kgCO2/yr/m2
DER = Dwelling Emission Rate kgCO2/yr/m2
TFEE = Target Fabric Energy Efficiency kWh/m2/yr
DFEE = Dwelling Fabric Energy Efficiency kWh/m2/yr
TPER = Target Primary Energy Rate kWh/m2/yr
DPER = Dwelling Primary Energy Rate kWh/m2/yr

Table 1

TER	DER	% Reduction	TFEE	DFEE	% Reduction	TPER	DPER	% Reduction	SAP Rating
10.06	2.95	70.68	41.50	41.19	0.74	52.59	30.65	41.72	86 B

With reference to the heat pump these have been applied for the efficiency only and needs to be clarified that its suitable for use, if an alternative is used please inform us and we will check the efficiencies as an alternative could make the calculations fail L1A building regulations. Please check the make and model with us for the

With reference to the construction details a full specification / u – value calculations will be required before the As built SAP and EPC can be issued, including photograph evidence (date and location stamped - of construction, services, thermal bridging, and insulation levels and type. (see example)

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