BASIC COMPLIANCE REPORT
Calculation Type: New Build (As Built)

Design SAP
elmhurst energy

Property Reference	4270	**Issued on Date**	05/06/2023
Assessment Reference	002	**Prop Type Ref**	Affordable
Property	3 Poppy Crescent, HUNSTANTON, PE36 6FE		

SAP Rating	86 B	**DER**	(E) 15.41	**TER**	17.79
Environmental	89 B	**% DER<TER**	13.40		
CO_2 Emissions (t/year)	1.05	**DFEE**	37.99	**TFEE**	50.29
General Requirements Compliance	Pass	**% DFEE<TFEE**	24.44		

Assessor Details	Mr. Roderick Moore, Rod Moore, Tel: 07947 930650, rodjmoore@gmail.com	**Assessor ID**	N060-0001
Client			

SUMARY FOR INPUT DATA FOR New Build (As Built)

Criterion 1 – Achieving the TER and TFEE rate

1a TER and DER

Fuel for main heating	Mains gas		
Fuel factor	1.00 (mains gas)		
Target Carbon Dioxide Emission Rate (TER)	17.79	$kgCO_2/m^2$	

Dwelling 'CO2' Emission Rate (DERs)

DER (N)	14.90
DER (NE)	15.24
DER (E)	15.41 (highest value)
DER (SE)	15.24
DER (S)	14.90
DER (SW)	14.78
DER (W)	14.75
DER (NW)	14.78

Dwelling Carbon Dioxide Emission Rate (DER)	(E) 15.41	$kgCO_2/m^2$	Pass
	-2.38 (-13.4%)	$kgCO_2/m^2$	

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	50.29	$kWh/m^2/yr$	
Dwelling Fabric Energy Efficiency (DFEE)	37.99	$kWh/m^2/yr$	

Dwelling Fabric Energy Efficiency (DFEEs)

DFEE (N)	35.64
DFEE (NE)	37.24
DFEE (E)	37.99 (highest value)
DFEE (SE)	37.23
DFEE (S)	35.64
DFEE (SW)	35.39
DFEE (W)	35.40
DFEE (NW)	35.39

	-12.3 (-24.5%)	$kWh/m^2/yr$	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.12 (max. 0.30)	0.12 (max. 0.70)	Pass

Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.12 (max. 0.25)	0.12 (max. 0.70)	Pass
Roof	0.09 (max. 0.20)	0.09 (max. 0.35)	Pass
Openings	1.52 (max. 2.00)	2.35 (max. 3.30)	Pass

2a Thermal bridging

Thermal bridging calculated from linear thermal transmittances for each junction

3 Air permeability

Air permeability at 50 pascals	3.60 (measured in this dwelling)	
Maximum	10.0	Pass

Limiting System Efficiencies

4 Heating efficiency

Main heating system	Boiler system with radiators or underfloor - Mains gas Data from database Vaillant ecoFIT sustain 830 VUW 306/6-3 (H-GB) Combi boiler Efficiency: 89.3% SEDBUK2009 Minimum: 88.0%	Pass
Secondary heating system	None	

5 Cylinder insulation

Hot water storage	No cylinder	

6 Controls

Space heating controls	Programmer, room thermostat and TRVs	Pass
Hot water controls	No cylinder	
Boiler interlock	Yes	Pass

7 Low energy lights

Percentage of fixed lights with low-energy fittings	100	%	
Minimum	75	%	Pass

8 Mechanical ventilation

Not applicable

Criterion 3 – Limiting the effects of heat gains in summer

9 Summertime temperature

Overheating risk (East Anglia)		
Orientation (N)	Slight	
Orientation (NE)	Slight	
Orientation (E)	Slight	
Orientation (SE)	Slight	
Orientation (S)	Slight	
Orientation (SW)	Slight	
Orientation (W)	Slight	
Orientation (NW)	Slight	
Overheating risk (East Anglia)	Slight	Pass

Based on:

Overshading	Very little
Orientation unspecified	
Air change rate	4.00 ach

Blinds/curtains	Dark-coloured curtain or roller blind, closed 100% of daylight hours

Criterion 4 – Building performance consistent with DER and DFEE rate

Party Walls

Type	U-value		
Solid Wall	0.00	W/m²K	Pass

Air permeability and pressure testing

3 Air permeability

Air permeability at 50 pascals	3.60 (measured in this dwelling)	
Maximum	10.0	Pass

10 Key features

External wall U-value	0.12	W/m²K
Party wall U-value	0.00	W/m²K
Roof U-value	0.09	W/m²K
Floor U-value	0.12	W/m²K
Thermal bridging y-value	0.034	W/m²K
Air permeability	3.6	m³/m²h

This report has not been submitted through the Elmhurst Energy members' portal, therefore results are subject to change when the dwelling is completed.