

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Designed)



Property and Energy
Services Ltd.

Property Reference	3604-1	Issued on Date	16/12/2020
Assessment Reference	36.4-1ds	Prop Type Ref	
Property	105, Addington Road, Reading, RG1 5PZ		
SAP Rating	91 B	DER	8.51
Environmental	92 A	TER	18.96
CO ₂ Emissions (t/year)	1.15	% DER<TER	55.11
General Requirements Compliance	Pass	DfEE	35.31
		TfEE	42.32
		% DfEE<TfEE	16.55
Assessor Details	Mr. Ian Lloyd, Property and Energy Services Limited, Tel: 01367240212, ianl@propertyandenergy.co.uk		Assessor ID
			H044-0001
Client			

SUMMARY FOR INPUT DATA FOR New Build (As Designed)

Criterion 1 – Achieving the TER and TfEE rate

1a TER and DER

Fuel for main heating	Electricity		
Fuel factor	1.55 (electricity)		
Target Carbon Dioxide Emission Rate (TER)	18.96	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	8.51	kgCO ₂ /m ²	Pass
	-10.45 (-55.1%)	kgCO ₂ /m ²	

1b TfEE and DfEE

Target Fabric Energy Efficiency (TfEE)	42.32	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DfEE)	35.31	kWh/m ² /yr	
	-7.0 (-16.5%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.18 (max. 0.30)	0.18 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.13 (max. 0.25)	0.13 (max. 0.70)	Pass
Roof	0.13 (max. 0.20)	0.16 (max. 0.35)	Pass
Openings	1.46 (max. 2.00)	1.50 (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	5.00 (design value)	
Maximum	10.0	Pass

Limiting System Efficiencies

4 Heating efficiency

Main heating system	Heat pump with radiators or underfloor - Electric Vaillant aroTHERM plus 7kW + hydraulic module VWL75/6A230VS2+VWZMEH97/5MB2	
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Secondary heating system

None

5 Cylinder insulation

Hot water storage

Measured cylinder loss: 1.60 kWh/day
Permitted by DBSCG 2.56

Pass

Primary pipework insulated

Yes

Pass

6 Controls

Space heating controls

Time and temperature zone control

Pass

Hot water controls

Cylinderstat

Pass

Independent timer for DHW

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 (Thames Valley)

Not significant

Pass

Based on:

Overshading

Average

Windows facing North

14.67 m², No overhang

Windows facing South

8.22 m², No overhang

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

Filled Cavity with Edge Sealing

0.00

W/m²K

Pass

Air permeability and pressure testing

3 Air permeability

Air permeability at 50 pascals

5.00 (design value)

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

0.11

W/m²K

Door U-value

1.00

W/m²K

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