

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Designed)

Property Reference	P2 Riley	Issued on Date	12/09/2022
Assessment Reference	P2 Riley	Prop Type Ref	
Property	Plot 2, Riley Road, Reading		
SAP Rating	88 B	DER	13.39
Environmental	90 B	TER	16.93
CO ₂ Emissions (t/year)	0.93	% DER<TER	20.90
General Requirements Compliance	Pass	DfEE	44.48
		TfEE	49.08
		% DfEE<TfEE	9.38
Assessor Details	Mr. Alan Ironmonger, Forum Energy Consultants, Tel: 01303 260656, forumenergy@btinternet.com		Assessor ID
			L609-0001
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	Mains gas		
Fuel factor	1.00 (mains gas)		
Target Carbon Dioxide Emission Rate (TER)	16.93	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	13.39	kgCO ₂ /m ²	Pass
	-3.54 (-20.9%)	kgCO ₂ /m ²	

1b TfEE and DfEE

Target Fabric Energy Efficiency (TfEE)	49.08	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DfEE)	44.48	kWh/m ² /yr	
	-4.6 (-9.4%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.20 (max. 0.30)	0.20 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.11 (max. 0.25)	0.11 (max. 0.70)	Pass
Roof	0.10 (max. 0.20)	0.10 (max. 0.35)	Pass
Openings	1.27 (max. 2.00)	1.30 (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

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Main heating system

Boiler system with radiators or underfloor - Mains gas
Data from manufacturer
X X

Efficiency: 90%
Minimum: 88%

Pass

Secondary heating system

None

5 Cylinder insulation

Hot water storage

Nominal cylinder loss: 2.01 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

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 (Thames Valley)

Slight

Pass

Based on:

Overshading

Average

Windows facing North

5.35 m², Overhang width less than twice window, ratio 0.05

Windows facing South

8.82 m², Overhang width less than twice window, ratio 0.05

Windows facing West

2.08 m², Overhang width less than twice window, ratio 0.05

Air change rate

4.00 ach

Blinds/curtains

None

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

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10 Key features

Party wall U-value	0.00	W/m ² K
Roof U-value	0.10	W/m ² K
Floor U-value	0.11	W/m ² K
Door U-value	1.00	W/m ² K
Photovoltaic array	1.00	kW

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