

BUILDING REGULATION COMPLIANCE

Calculation Type: New Build (As Built)

| | | | | | |
|------------------------------------|--|---------------|----------------|-------------|-----------|
| Property Reference | S6251 1 | | Issued on Date | 29/09/2023 | |
| Assessment Reference | AB v1 | Prop Type Ref | Top floor flat | | |
| Property | 25 Carol Street, LONDON, NW1 0HT | | | | |
| SAP Rating | 84 B | DER | 11.99 | TER | 24.54 |
| Environmental | 86 B | % DER<TER | 51.15 | | |
| CO ₂ Emissions (t/year) | 4.25 | DFEE | 68.98 | TFEE | 73.42 |
| General Requirements Compliance | Pass | % DFEE<TFEE | 6.05 | | |
| Assessor Details | Mr. Peter Kinsella, Base Energy Services Ltd, Tel: 0151 933 0328, peter@baseenergy.co.uk | | | Assessor ID | L770-0002 |
| Client | | | | | |

SUMMARY FOR INPUT DATA FOR New Build (As Built)

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) | 24.54 | kgCO ₂ /m ² | |
| Dwelling Carbon Dioxide Emission Rate (DER) | 11.99 | kgCO ₂ /m ² | Pass |
| | -12.55 (-51.1%) | kgCO ₂ /m ² | |

1b TFEE and DFEE

| | | | |
|--|--------------|------------------------|------|
| Target Fabric Energy Efficiency (TFEE) | 73.42 | kWh/m ² /yr | |
| Dwelling Fabric Energy Efficiency (DFEE) | 68.98 | kWh/m ² /yr | |
| | -4.4 (-6.0%) | kWh/m ² /yr | Pass |

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

| Element | Average | Highest | |
|---------------|------------------|------------------|------|
| External wall | 0.17 (max. 0.30) | 0.33 (max. 0.70) | Pass |
| Floor | 0.14 (max. 0.25) | 0.14 (max. 0.70) | Pass |
| Roof | 0.11 (max. 0.20) | 0.15 (max. 0.35) | Pass |
| Openings | 1.43 (max. 2.00) | 1.80 (max. 3.30) | Pass |

2a Thermal bridging

Thermal bridging calculated using default γ -value of 0.15

3 Air permeability

| | | | |
|--------------------------------|----------------------------------|---|------|
| Air permeability at 50 pascals | 3.75 (measured in this dwelling) | m ³ /(h.m ²) @ 50 Pa | |
| Maximum | 10.0 | m ³ /(h.m ²) @ 50 Pa | Pass |

Limiting System Efficiencies

4 Heating efficiency

| | | | |
|---------------------|--|--|--|
| Main heating system | Heat pump with radiators or underfloor - Electric Stiebel Eltron WPE-I 12 H 230 Premium 238612 | | |
|---------------------|--|--|--|

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Secondary heating system

None

5 Cylinder insulation

Hot water storage

Nominal cylinder loss: 2.55 kWh/day
Permitted by DBSCG 2.86

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

Continuous supply and extract system

Specific fan power

0.79

Maximum

1.5

Pass

MVHR efficiency

92 %

Minimum

70 %

Pass

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 East

14.10 m², No overhang

Windows facing East

9.11 m², No overhang

Windows facing South East

10.69 m², No overhang

Windows facing South West

18.56 m², No overhang

Windows facing West

16.91 m², No overhang

Windows facing North West

8.74 m², No overhang

Air change rate

4.00 ach

Blinds/curtains

None

Criterion 4 – Building performance consistent with DER and DFEE rate

Air permeability and pressure testing

3 Air permeability

Air permeability at 50 pascals

3.75 (measured in this dwelling) m³/(h.m²) @ 50 Pa

Maximum

10.0 m³/(h.m²) @ 50 Pa

Pass

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10 Key features

| | | |
|-----------------------|------|----------------------------------|
| External wall U-value | 0.13 | W/m ² K |
| External wall U-value | 0.11 | W/m ² K |
| Roof U-value | 0.11 | W/m ² K |
| Roof U-value | 0.11 | W/m ² K |
| Roof U-value | 0.11 | W/m ² K |
| Roof U-value | 0.11 | W/m ² K |
| Air permeability | 3.8 | m ³ /m ² h |

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