

PREDICTED ENERGY ASSESSMENT

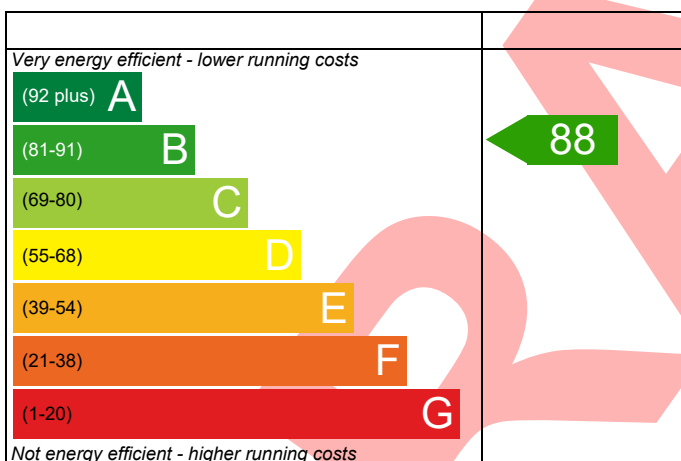
Flat 3, 20 , Shinfield Road,
Reading,
RG2 7BW

Dwelling type: Flat, Semi-Detached
Date of assessment: 30/06/2023
Produced by: Paul Whiffin
Total floor area: 70.7 m²

This document is a Predicted Energy Assessment for properties marketed when they are incomplete. It includes a predicted energy rating which might not represent the final energy rating of the property on completion. Once the property is completed, this rating will be updated and an official Energy Performance Certificate will be created for the property. This will include more detailed information about the energy performance of the completed property.

The energy performance has been assessed using the Government approved SAP2012 methodology and is rated in terms of the energy use per square meter of floor area; the energy efficiency is based on fuel costs and the environmental impact is based on carbon dioxide (CO₂) emissions.

Energy Efficiency Rating

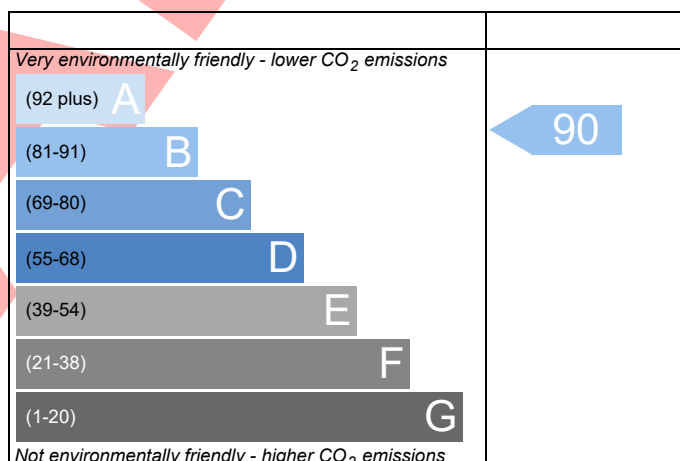


England

EU Directive
2002/91/EC

The energy efficiency rating is a measure of the overall efficiency of a home. The higher the rating the more energy efficient the home is and the lower the fuel bills are likely to be.

Environmental Impact (CO₂) Rating



England

EU Directive
2002/91/EC

The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide (CO₂) emissions. The higher the rating the less impact it has on the environment.

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BUILDING REGULATION COMPLIANCE

Calculation Type: New Build (As Designed)

Property Reference	Q09487 - Flat 3	Issued on Date	30/06/2023
Assessment Reference	Design V2 (Gas & PV)	Prop Type Ref	
Property	Flat 3, 20, Shinfield Road, Reading, RG2 7BW		
SAP Rating	88 B	DER	14.35
Environmental	90 B	TER	19.34
CO ₂ Emissions (t/year)	0.71	% DER<TER	25.78
General Requirements Compliance	Pass	DLEE	51.19
		TLEE	52.99
		% DLEE<TLEE	3.40
Assessor Details	Mr. Paul Whiffin, Paul Whiffin, Tel: 01763 268685, energy@atspaceltd.com		Assessor ID
Client			y314-0001

SUMMARY FOR INPUT DATA FOR New Build (As Designed)

Criterion 1 – Achieving the TER and TLEE rate

1a TER and DER

Fuel for main heating	Mains gas		
Fuel factor	1.00 (mains gas)		
Target Carbon Dioxide Emission Rate (TER)	19.34	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	14.35	kgCO ₂ /m ²	Pass
	-4.99 (-25.8%)	kgCO ₂ /m ²	

1b TLEE and DLEE

Target Fabric Energy Efficiency (TLEE)	52.99	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DLEE)	51.19	kWh/m ² /yr	
	-1.8 (-3.4%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.18 (max. 0.30)	0.19 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.22 (max. 0.25)	0.22 (max. 0.70)	Pass
Roof	0.14 (max. 0.20)	0.15 (max. 0.35)	Pass
Openings	1.50 (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	5.01 (design value)	m ³ /(h.m ²) @ 50 Pa	
Maximum	10.0	m ³ /(h.m ²) @ 50 Pa	Pass

Limiting System Efficiencies

4 Heating efficiency

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BUILDING REGULATION COMPLIANCE

Calculation Type: New Build (As Designed)

Main heating system

Boiler system with radiators or underfloor - Mains gas
Data from database
Ideal LOGIC CODE COMBI ESP1 26
Combi boiler
Efficiency: 89.6% SEDBUK2009
Minimum: 88.0%

Pass

Secondary heating system

None

5 Cylinder insulation

Hot water storage

No cylinder

6 Controls

Space heating controls

Time and temperature zone control

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 (Thames Valley)

Medium

Pass

Based on:

Overshading

Average

Windows facing North East

8.47 m², No overhang

Windows facing South East

1.09 m², No overhang

Windows facing North West

1.11 m², No overhang

Air change rate

3.00 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

5.01 (design value)

m³/(h.m²) @ 50 Pa

Maximum

10.0

m³/(h.m²) @ 50 Pa

Pass

10 Key features

Party wall U-value

0.00

W/m²K

Photovoltaic array

1.20

kW

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THERMAL BRIDGING

Calculation Type: New Build (As Designed)

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Environmental	90 B	% DER<TER	25.78		
CO ₂ Emissions (t/year)	0.71	DFEE	51.19	TFEE	52.99
General Requirements Compliance	Pass	% DFEE<TFEE	3.40		
Assessor Details	Mr. Paul Whiffin, Paul Whiffin, Tel: 01763 268685, energy@atspaceltd.com			Assessor ID	y314-0001
Client					

	Junction detail	Source Type	Psi (W/mK)	Length (m)	Result	Reference
External wall	E2 Other lintels (including other steel lintels)	Table K1 - Approved	0.300	8.26	2.48	E2 - ACD
External wall	E3 Sill	Table K1 - Approved	0.040	5.45	0.22	E3 - ACD
External wall	E4 Jamb	Table K1 - Approved	0.050	20.22	1.01	E4 - ACD
External wall	E20 Exposed floor (normal)	Table K1 - Default	0.320	1.50	0.48	E20 - Default
External wall	E21 Exposed floor (inverted)	Table K1 - Default	0.320	1.19	0.38	E21 - Default
External wall	E10 Eaves (insulation at ceiling level)	Table K1 - Approved	0.060	18.92	1.14	E10 - ACD
External wall	E11 Eaves (insulation at rafter level)	Table K1 - Approved	0.040	4.97	0.20	E11 - ACD
External wall	E12 Gable (insulation at ceiling level)	Table K1 - Approved	0.240	10.44	2.51	E12 - Default
External wall	E13 Gable (insulation at rafter level)	Table K1 - Approved	0.040	1.33	0.05	E13 - ACD
External wall	E16 Corner (normal)	Table K1 - Approved	0.090	6.70	0.60	E16 - ACD
External wall	E17 Corner (inverted – internal area greater than external area)	Table K1 - Approved	-0.090	6.70	-0.60	E17 - ACD
External wall	E18 Party wall between dwellings	Table K1 - Approved	0.060	9.60	0.58	E18 - ACD
Party wall	P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	Table K1 - Default	0.000	37.35	0.00	P3 - Default
Party wall	P4 Party wall - Roof (insulation at ceiling level)	Table K1 - Default	0.240	4.51	1.08	P4 - Default
External roof	R6 Flat ceiling	Table K1 - Default	0.060	4.97	0.30	R6 - Default
External roof	R8 Roof to wall (rafter)	Table K1 - Default	0.060	1.33	0.08	R8 - Default

Total: **10.50** W/mK:
Y-Value: **0.069** W/m²K:

U-VALUE CALCULATOR REPORT

Property Reference	Q09487 - Flat 3	Issued on Date	30/06/2023
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Calculation Type	New Build (As Designed)		

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Environmental	90 B	% DER<TER	25.78		
CO ₂ Emissions (t/year)	0.71	DFEE	51.19	TFEE	52.99
General Requirements Compliance	Pass	% DFEE<TFEE	3.40		

Assessor Details	Mr. Paul Whiffin, Paul Whiffin, Tel: 01763 268685, energy@atspaceltd.com	Assessor ID	y314-0001
Client			

Building Elements

Roof Insulated Ceiling - Pitched roof - insulated at ceiling

Roof Type: Pitched Roof, insulated flat ceiling

Layer	Description	Thickness (mm)	Conductivity (W/m ² K)	Resistance (m ² K/W)	Fraction (%)
Ext surface				0.0400	
Layer 1	Roof space				
	Main construction	0	0.2000	0.2000	100.00
Layer 2	Rockwool				
	Main construction	170	0.0440	3.8636	100.00
	Corrections - Air Gap: Level 0, Fasteners: None or plastic				
Layer 3	Rockwool // Joists				
	Main construction	150	0.0440	3.4091	87.50
	Main construction	150	0.1300	1.1538	12.50
	Corrections - Air Gap: Level 1, Fasteners: None or plastic				
Layer 4	Plasterboard				
	Main construction	12.5	0.2100	0.0595	100.00
Layer 5	Skim				
	Main construction	3	0.4000	0.0075	100.00
Int surface				0.1000	

Total resistance: Upper limit = 7.300 m² K/W Lower limit = 7.010 m² K/W Average = 7.155 m² K/W
Total correction = 0.0045 m² K/W U-value (unrounded) = 0.14 W/m² K

Unheated space: None

Total thickness: 336 mm

U-value: 0.14 W/m² K

Kappa: n/a

U-VALUE CALCULATOR REPORT

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Environmental	90 B	% DER<TER	25.78		
CO ₂ Emissions (t/year)	0.71	DFEE	51.19	TFEE	52.99
General Requirements Compliance	Pass	% DFEE<TFEE	3.40		

Assessor Details	Mr. Paul Whiffin, Paul Whiffin, Tel: 01763 268685, energy@atspaceltd.com	Assessor ID	y314-0001
Client			

Building Elements

Roof Pitched Roof - pitched roof - insulated slope, sloping

Roof Type: Pitched Roof, insulated sloping ceiling

Layer	Description	Thickness (mm)	Conductivity (W/m ² K)	Resistance (m ² K/W)	Fraction (%)
Ext surface				0.0400	
Layer 1	Tiles, slate				
	Main construction	10	1.0000	0.0100	100.00
Layer 2	Roof Battens				
	Main construction	25	17.0000	0.0015	94.44
	Main construction	25	0.1300	0.1923	5.56
Layer 3	Breather membrane				
	Main construction	0.5	0.0000	0.0000	100.00
Layer 4	Plywood				
	Main construction	9	0.1300	0.0692	100.00
Layer 5	Air Space // Rafters				
	Main construction	50	0.3125	0.1600	88.25
	Main construction	50	0.1300	0.3846	11.75
	Corrections - Cavity Unventilated, Emissivity: Normal				
Layer 6	Kingspan K107 // Rafters				
	Main construction	150	0.0190	7.8947	88.25
	Main construction	150	0.1300	1.1538	11.75
	Corrections - Air Gap: Level 1, Fasteners: None or plastic				
Layer 7	Kooltherm K18 Insulated Plasterboard (37.5mm)				
	Main construction	37.5	0.0300	1.2500	100.00
	Corrections - Air Gap: Level 1, Fasteners: None or plastic				
Layer 8	Skim				
	Main construction	3	0.4000	0.0075	100.00
Int surface				0.1000	

Total resistance:	Upper limit = 7.474 m ² K/W	Lower limit = 6.331 m ² K/W	Average = 6.903 m ² K/W
	Total correction = 0.0049 m ² K/W	U-value (unrounded) = 0.15 W/m ² K	

Unheated space: None

Total thickness: 285 mm

U-value: 0.15 W/m² K

Kappa: n/a

U-VALUE CALCULATOR REPORT

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Project	Flat 3, 20, Shinfield Road, Reading, RG2 7BW		
Calculation Type	New Build (As Designed)		

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Environmental	90 B	% DER<TER	25.78		
CO ₂ Emissions (t/year)	0.71	DFEE	51.19	TFEE	52.99
General Requirements Compliance	Pass	% DFEE<TFEE	3.40		

Assessor Details	Mr. Paul Whiffin, Paul Whiffin, Tel: 01763 268685, energy@atspaceltd.com	Assessor ID	y314-0001
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Building Elements

Wall External Wall - Masonry wall full cavity fill-slabs

Wall Type: Standard Wall

Layer	Description	Thickness (mm)	Conductivity (W/m ² K)	Resistance (m ² K/W)	Fraction (%)
Ext surface				0.0400	
Layer 1	Render				
	Main construction	5	1.0000	0.0050	100.00
Layer 2	Medium Density Block (0.45)				
	Main construction	100	0.4500	0.2222	93.43
	Main construction	100	0.8803	0.1136	6.57
Layer 3	Dritherm 32				
	Main construction	150	0.0320	4.6875	100.00
	Corrections - Air Gap: Level 1, Fasteners: Wall ties, Cross sectional area: 12.50 mm ² , Lambda: 17.000 W/m.K, per m ² : 2.500				
Layer 4	Medium Density Block (0.45)				
	Main construction	100	0.4500	0.2222	93.43
	Main construction	100	0.8803	0.1136	6.57
Layer 5	airspace/plaster dabs				
	Main construction	15	0.0882	0.1700	80.00
	Main construction	15	0.0882	0.1700	20.00
	Corrections - Cavity Unventilated, Emissivity: Normal				
Layer 6	Plasterboard (standard wallboard)				
	Main construction	12.5	0.2100	0.0595	100.00
Layer 7	Plaster				
	Main construction	3	0.4000	0.0075	100.00
Int surface				0.1300	

Total resistance:	Upper limit = 5.529 m ² K/W	Lower limit = 5.518 m ² K/W	Average = 5.524 m ² K/W
	Total correction = 0.0092 m ² K/W	U-value (unrounded) = 0.19 W/m ² K	

Unheated space: None

Total thickness: 386 mm

U-value: 0.19 W/m² K

Kappa: n/a

U-VALUE CALCULATOR REPORT

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Calculation Type	New Build (As Designed)		
SAP Rating	88 B	DER	14.35
Environmental	90 B	TER	19.34
CO ₂ Emissions (t/year)	0.71	% DER<TER	25.78
General Requirements Compliance	Pass	DFEE	51.19
		TFEE	52.99
		% DFEE<TFEE	3.40
Assessor Details	Mr. Paul Whiffin, Paul Whiffin, Tel: 01763 268685, energy@atspaceltd.com	Assessor ID	y314-0001
Client			

Building Elements

Wall Sheltered Wall - Masonry wall full cavity fill-slabs

Wall Type: Standard Wall

Layer	Description	Thickness (mm)	Conductivity (W/m ² K)	Resistance (m ² K/W)	Fraction (%)
Ext surface				0.0400	
Layer 1	Plaster				
	Main construction	3	0.4000	0.0075	100.00
Layer 2	Plasterboard (standard wallboard)				
	Main construction	12.5	0.2100	0.0595	100.00
Layer 3	airspace/plaster dabs				
	Main construction	15	0.0882	0.1700	80.00
	Main construction	15	0.0882	0.1700	20.00
	Corrections - Cavity Unventilated, Emissivity: Normal				
Layer 4	Medium Density Block (0.45)				
	Main construction	100	0.4500	0.2222	93.43
	Main construction	100	0.8803	0.1136	6.57
Layer 5	Dritherm 32				
	Main construction	150	0.0320	4.6875	100.00
	Corrections - Air Gap: Level 1, Fasteners: Wall ties, Cross sectional area: 12.50 mm ² , Lambda: 17.000 W/m.K, per m ² : 2.500				
Layer 6	Medium Density Block (0.45)				
	Main construction	100	0.4500	0.2222	93.43
	Main construction	100	0.8803	0.1136	6.57
Layer 7	airspace/plaster dabs				
	Main construction	15	0.0882	0.1700	80.00
	Main construction	15	0.0882	0.1700	20.00
	Corrections - Cavity Unventilated, Emissivity: Normal				
Layer 8	Plasterboard (standard wallboard)				
	Main construction	12.5	0.2100	0.0595	100.00
Layer 9	Plaster				
	Main construction	3	0.4000	0.0075	100.00
Int surface				0.1300	

Total resistance:	Upper limit = 5.761 m ² K/W	Lower limit = 5.750 m ² K/W	Average = 5.756 m ² K/W
	Total correction = 0.0085 m ² K/W	U-value (unrounded) = 0.18 W/m ² K	

U-VALUE CALCULATOR REPORT

Unheated space: None

Total thickness: 411 mm

U-value: 0.18 W/m² K

Kappa: n/a

U-VALUE CALCULATOR REPORT

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Calculation Type	New Build (As Designed)		

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Environmental	90 B	% DER<TER	25.78		
CO ₂ Emissions (t/year)	0.71	DFEE	51.19	TFEE	52.99
General Requirements Compliance	Pass	% DFEE<TFEE	3.40		

Assessor Details	Mr. Paul Whiffin, Paul Whiffin, Tel: 01763 268685, energy@atspaceltd.com	Assessor ID	y314-0001
Client			

Building Elements

Floor Exposed Floor

Floor Type: Exposed Floor

Layer	Description	Thickness (mm)	Conductivity (W/m ² K)	Resistance (m ² K/W)	Fraction (%)
Ext surface				0.0400	
Layer 1	Chipboard				
	Main construction	22	0.1300	0.1692	100.00
Layer 2	Joists				
	Main construction	25	0.1316	0.1900	87.50
	Main construction	25	0.1300	0.1923	12.50
	Corrections - Cavity Unventilated, Emissivity: Normal				
Layer 3	Mineral wool // Joists				
	Main construction	175	0.0400	4.3750	87.50
	Main construction	175	0.1300	1.3462	12.50
	Corrections - Air Gap: Level 1, Fasteners: None or plastic				
Layer 4	Plasterboard, standard				
	Main construction	12.5	0.2100	0.0595	100.00
Layer 5	Plaster, standard				
	Main construction	3	0.4000	0.0075	100.00
Int surface				0.1700	

Total resistance: Upper limit = 4.208 m² K/W Lower limit = 4.051 m² K/W Average = 4.130 m² K/W
Total correction = 0.0068 m² K/W U-value (unrounded) = 0.24 W/m² K

Unheated space: None

Total thickness: 238 mm

U-value: 0.24 W/m² K

Kappa: n/a

BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Designed)

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Environmental	90 B	TER	19.34
CO₂ Emissions (t/year)	0.71	% DER<TER	25.78
General Requirements Compliance	Pass	DFEE	51.19
		TFEE	52.99
		% DFEE<TFEE	3.40
Assessor Details	Mr. Paul Whiffin, Paul Whiffin, Tel: 01763 268685, energy@atspaceltd.com		Assessor ID
Client	y314-0001		

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)	19.34	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	14.35	kgCO ₂ /m ²	Pass
	-4.99 (-25.8%)	kgCO ₂ /m ²	

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	52.99	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DFEE)	51.19	kWh/m ² /yr	
	-1.8 (-3.4%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.18 (max. 0.30)	0.19 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.22 (max. 0.25)	0.22 (max. 0.70)	Pass
Roof	0.14 (max. 0.20)	0.15 (max. 0.35)	Pass
Openings	1.50 (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	5.01 (design value)	
Maximum	10.0	Pass

Limiting System Efficiencies

4 Heating efficiency

Main heating system	Boiler system with radiators or underfloor - Mains gas Data from database Ideal LOGIC CODE COMBI ESP1 26 Combi boiler Efficiency: 89.6% SEDBUK2009 Minimum: 88.0%	Pass
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BASIC COMPLIANCE REPORT

Calculation Type: New Build (As Designed)

Secondary heating system

None

5 Cylinder insulation

Hot water storage

No cylinder

6 Controls

Space heating controls

Time and temperature zone control

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 (Thames Valley)

Medium

Pass

Based on:

Overshading

Average

Windows facing North East

8.47 m², No overhang

Windows facing South East

1.09 m², No overhang

Windows facing North West

1.11 m², No overhang

Air change rate

3.00 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

5.01 (design value)

Maximum

10.0

Pass

10 Key features

Party wall U-value

0.00

W/m²K

Photovoltaic array

1.20

kW

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General Requirements Compliance	Pass	DfEE	51.19
		TfEE	52.99
		% DfEE<TfEE	3.40
Assessor Details	Mr. Paul Whiffin, Paul Whiffin, Tel: 01763 268685, energy@atspaceltd.com		Assessor ID
Client			y314-0001

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	South West
Property Tenure	Unknown
Transaction Type	New dwelling
Terrain Type	Urban
1.0 Property Type	Flat, Semi-Detached
2.0 Number of Storeys	1
3.0 Date Built	2023
4.0 Sheltered Sides	1
5.0 Sunlight/Shade	Average or unknown

6.0 Measurements

	Ground Floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
		34.33 m	70.70 m ²	2.38 m

7.0 Living Area	27.47	m ²
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8.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	176.74	kJ/m ² K

9.0 External Walls

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area (m ²)	Nett Area (m ²)
Cavity Wall	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.19	110.00	61.53	48.75
Sheltered Wall	Cavity Wall	Cavity wall : plasterboard on dabs, dense block, filled cavity, any outside structure	0.18	150.00	18.37	18.37

9.1 Party Walls

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Area (m ²)
Party Wall 1	Filled Cavity with Edge Sealing	Single plasterboard on both sides, dense cellular blocks, cavity	0.00	70.00	10.84

9.2 Internal Walls

Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
Stud Partitions	Plasterboard on timber frame	9.00	96.24

10.0 External Roofs

Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area (m ²)	Nett Area (m ²)
Insulated Ceiling	External Plane Roof	Plasterboard, insulated at ceiling level	0.14	9.00	64.55	64.55
Sloped Roof	External Slope Roof	Plasterboard, insulated slope	0.15	9.00	6.63	6.63

SUMMARY FOR INPUT DATA

Calculation Type: New Build (As Designed)

11.0 Heat Loss Floors

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)
Exposed Floor	Exposed Floor - Timber	Timber exposed floor, insulation between joists	0.24	20.00	0.89

11.1 Party Floors

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Party Floor	Timber I-joists, carpeted	30.00	69.81

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Argon Filled	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Windows	Manufacturer	Window	Double Low-E Soft 0.1			0.63		0.70	1.50
Glazed Door	Manufacturer	Window	Double Low-E Soft 0.1			0.63		0.70	1.50
Solid Door	Manufacturer	Solid Door							1.50

13.0 Openings

Name	Opening Type	Location	Orientation	Curtain Type	Overhang Ratio	Wide Overhang	Width (m)	Height (m)	Count	Area (m²)	Curtain Closed
RW	Window	[1] Cavity Wall	North East	None	0.00					4.69	
LSW	Window	[1] Cavity Wall	North West	None	0.00					1.11	
RSW	Window	[1] Cavity Wall	South East	None	0.00					1.09	
RGD	Window	[1] Cavity Wall	North East	None	0.00					3.78	
FSD	Solid Door	[1] Cavity Wall	South West							2.11	

14.0 Conservatory

None

15.0 Draught Proofing

100

%

16.0 Draught Lobby

No

17.0 Thermal Bridging

Calculate Bridges

17.1 List of Bridges

Source Type	Bridge Type	Length	Psi	Imported	Reference:
Table K1 - Approved	E2 Other lintels (including other steel lintels)	8.26	0.300	No	E2 - ACD
Table K1 - Approved	E3 Sill	5.45	0.040	No	E3 - ACD
Table K1 - Approved	E4 Jamb	20.22	0.050	No	E4 - ACD
Table K1 - Default	E20 Exposed floor (normal)	1.50	0.320	No	E20 - Default
Table K1 - Default	E21 Exposed floor (inverted)	1.19	0.320	No	E21 - Default
Table K1 - Approved	E10 Eaves (insulation at ceiling level)	18.92	0.060	No	E10 - ACD
Table K1 - Approved	E11 Eaves (insulation at rafter level)	4.97	0.040	No	E11 - ACD
Table K1 - Approved	E12 Gable (insulation at ceiling level)	10.44	0.240	No	E12 - Default
Table K1 - Approved	E13 Gable (insulation at rafter level)	1.33	0.040	No	E13 - ACD
Table K1 - Approved	E16 Corner (normal)	6.70	0.090	No	E16 - ACD
Table K1 - Approved	E17 Corner (inverted – internal area greater than external area)	6.70	-0.090	No	E17 - ACD
Table K1 - Approved	E18 Party wall between dwellings	9.60	0.060	No	E18 - ACD
Table K1 - Default	P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	37.35	0.000	No	P3 - Default
Table K1 - Default	P4 Party wall - Roof (insulation at ceiling level)	4.51	0.240	No	P4 - Default
Table K1 - Default	R6 Flat ceiling	4.97	0.060	No	R6 - Default
Table K1 - Default	R8 Roof to wall (rafter)	1.33	0.060	No	R8 - Default

Y-value	0.069	W/m²K
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18.0 Pressure Testing

Yes

Designed AP ₅₀	5.01	m³/(h.m²) @ 50 Pa
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Property Tested ?	
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SUMMARY FOR INPUT DATA

Calculation Type: New Build (As Designed)

As Built AP₅₀

m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Summer Overheating

Windows open in hot weather	Windows half open
Cross ventilation possible	Yes
Night Ventilation	No
Air change rate	3.00

Mechanical Ventilation

Mechanical Ventilation System Present	No
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20.0 Fans, Open Fireplaces, Flues

	MHS	SHS	Other	Total
Number of Chimneys	0		0	0
Number of open flues	0		0	0
Number of intermittent fans				3
Number of passive vents				0
Number of flueless gas fires				0

21.0 Fixed Cooling System

No

22.0 Lighting

Internal

Total number of light fittings	20	
Total number of L.E.L. fittings	20	
Percentage of L.E.L. fittings	100.00	%

External

External lights fitted	No
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23.0 Electricity Tariff

Standard

24.0 Main Heating 1

	Database	
Percentage of Heat	100	%
Database Ref. No.	18121	
Fuel Type	Mains gas	
Main Heating	BGW	
SAP Code	104	
In Winter	90.5	
In Summer	87.3	
Controls	CBI Time and temperature zone control	
PCDF Controls	0	
Delayed Start Stat	Yes	
Sap Code	2110	
Flue Type	Balanced	
Fan Assisted Flue	Yes	
Is MHS Pumped	Pump in heated space	
Heat Emitter	Underfloor	
Underfloor Heating	Yes - Pipes in Concrete	
Flow Temperature	<= 35°C	
Combi boiler type	Standard Combi	
Combi keep hot type	None	

25.0 Main Heating 2

None

SUMMARY FOR INPUT DATA

Calculation Type: New Build (As Designed)

Community Heating	None
28.0 Water Heating	HWP From main heating 1
Water Heating	Main Heating 1
Flue Gas Heat Recovery System	Yes
Waste Water Heat Recovery Instantaneous System 1	No
Waste Water Heat Recovery Instantaneous System 2	No
Waste Water Heat Recovery Storage System	No
Solar Panel	No
Water use <= 125 litres/person/day	Yes
SAP Code	901

28.1 Flue Gas Heat Recovery System

29.0 Hot Water Cylinder	None
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32.0 Photovoltaic Unit	One Dwelling			
PV Cells kWp	Orientation	Elevation	Overshading	Connected to Dwelling
1.20	South East	45°	Modest	Yes

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards

None