

SAP ASSESSMENT SUMMARY

Project Address : 01, Mayfair Gardens, London, N17 7LP

Prepared by : Heyare Jayantha
Chartered Building Services Engineer
Domestic & Non-Domestic Energy Assessor

HARITHA CONSULTANTS LIMITED
6, Sutton Plaza, Sutton Point
Sutton Crt Rd
Sutton
SM1 4FS
United Kingdom

1. INTRODUCTION

This report provides a summary of the SAP assessment input for the new build detached bungalow at 01, Mayfair Gardens, London, N17 7LP.

The specifications outlined in this document are solely intended for SAP input and serve as a summary for auditing purposes under Part L1A or Part L1B of the Building Regulations. This document does not constitute a design specification. It remains the responsibility of the design team to ensure the provision of adequate weatherproofing, vapour control layers, structural integrity, and any other construction elements that may be impacted by these specifications.

Any changes to the specification must be communicated to **Haritha Consultants Limited**, as such changes may affect the SAP assessment.

2. SAP INPUT DATA

2.1 Table 1: Building Fabric

Item	Standard	Specification
WALLS		
External Wall Cavity Wall	U Value – 0.16 W/m ² K	– Cavity wall: dense plaster, dense block, filled cavity, any outside structure – refer Annexure A
Internal Wall	-	– Plasterboard on Timber Frame
ROOFS		
Cold Pitched Roof insulated Flat Ceiling	N/A	– Not applicable – dwelling has a single (warm, sloping) roof construction only
Warm Pitched Roof insulated Sloping Ceiling	U Value – 0.09 W/m ² K	– Plasterboard, insulated slope – refer Annexure C
Internal Ceiling	-	– Plaster Board Ceiling
FLOORS		
Ground Floor Slab on Ground, Screed Over Insulation	U Value – 0.11 W/m ² K	– Slab on ground, screed over insulation – refer Annexure D
Internal Floor	-	– Not applicable – single storey bungalow, no intermediate floor
WINDOWS		
Double Glazed – Low-E	U Value – 1.20 W/m ² K G – Value – 0.63	– Frame Factor – 0.7
DOORS		
Solid Door	U Value – 1.0 W/m ² K	– Solid Door

2.2 Table 2: Building Services

Item	Standard	Specification
MAIN HEATING		
Heat Pump	Air Source Heat pump for space heating & hot Water	– Manufacture – Vaillant Group UK Ltd – Brand – Vaillant – Model – aroTHERM 5kW – Heating Control – Time & Temperature zone control by arrangement – Flow Temperature – 35 deg C
Heating Arrangement	Radiators	– Pump in heated space, 2013 or later, flow temperature 35°C
HOT WATER		
Hot Water Cylinder	Volume – 210 Liters Loss - 1.63 kwh/day	– Hot Water Cylinder connected to air source heat pump – Fully insulated primary pipework – Cylinder Stat – Yes – Cylinder in Heated Space - Yes
Showers	Flow rate – 7.5 l/min	– Connected to Storage System (Hot Water Cylinder) – No Electric Showers – 01 no. shower – no baths (bath count = 0)
LIGHTING SYSTEM		
Low energy Lighting	Bulb – 5W Efficacy – 85 lumens/circuit watt	– Total 20 nos Lamps
VENTILATION		
Intermittent Extract Ventilation	System 1a – Intermittent Extract Fans	– Kitchen intermittent extract fan – 01 no. – Wetroom/bathroom intermittent extract fan – 01 no.
PRESSURE TEST		
Air Permeability Test	Designed AP50 – 5.0 m ³ /(h.m ²) @ 50 Pa	– Pressure tested – Blower Door method (results confirm compliance with design air permeability)
RENEWABLE ENERGY		
Photovoltaic (PV) Panels	12.00 kWp Solar PV Array	– North orientation, 30° elevation, modest overshadowing – Connected to dwelling, no export capable meter – 8.00 kWh battery storage capacity
METERS		
Smart Meters	Smart Electricity Meter	– Smart electricity meter fitted;

Note :

- The heating and hot water system is assumed at this stage and must be confirmed by a qualified heating engineer.
- Ventilation design is subject to confirmation by a specialist.
- All building services must be verified and approved by the SAP assessor prior to procurement to ensure compliance.

3. PHOTOGRAPHIC EVIDENCE

Reference : **Appendix B of AD L: Volume 1 (2021) for England and AD L: Volume 1 (2022) for Wales**

- Photographs should be taken for each dwelling on a development as a record during the construction of a property. The photographs should be made available to the energy assessor and the building control body. Anyone may take the photographs. [B6].
- Photographs should be taken of typical details as listed below and should be unique to each property. One photograph per detail should be recorded. Additional images, such as a closeup detail, should be provided only when necessary (see below). Photographs should be taken at appropriate construction stages for each detail when completed, but prior to closing-up works. [B7]
 1. Foundations/substructure and ground floor, to show thermal continuity and quality of insulation in the following places.
 - a. At ground floor perimeter edge insulation.
 - b. At external door threshold.
 - c. Below damp-proof course on external walls.
 2. External walls: for each main wall type, to show thermal continuity and quality of insulation for the following.
 - a. Ground floor to wall junction.
 - b. Structural penetrating elements.

NOTE: For blown fill, photos should show clean cavities and clean brick ties with very limited mortar droppings.

3. Roof: for each main roof type, to show thermal continuity and quality of insulation at the following.
 - a. Joist/rafter level.
 - b. Eaves and gable edges.
4. Openings: for each opening type (one image per wall or roof type is sufficient), to show thermal continuity and quality of insulation with photographs of the following.
 - a. Window positioning in relation to cavity closer or insulation line.
 - b. External door set positioning in relation to cavity closer or insulation line
5. Airtightness: additional photographs for all details 1-4 to show airtightness details (only if not included or visible in continuity of insulation image).
6. Building services: for all plant associated with space heating, hot water, ventilation and low or zero carbon technology equipment within or on the building, show the following.
 - a. Plant/equipment identification label(s), including make/model and serial number.

- b. Primary pipework continuity of insulation.
 - c. Mechanical ventilation ductwork continuity of insulation (for duct sections outside the thermal envelope).
- Photographs should be digital and of sufficient quality and high enough resolution to allow a qualitative audit of the subject detail. Close-up photographs may be needed where a long shot image provides insufficient detail. More than one image of each detail may be needed. Geolocation should be enabled to confirm the location, date and time of each image. Each image file name should include a plot number and detail reference according to the numbers used in paragraph B7. For example, Plot 1 eaves detail would be PI/3b. [B8]

In accordance with the new Approved Document Part L (2021), photographic evidence must be provided to demonstrate compliance with accredited construction details.

Responsibilities:

- It is the responsibility of the **builder** or **site coordinator** to ensure photographic evidence is collected.
- This evidence will be included in the **Home User Pack** and passed on to the homeowner.
- **Building Control** and the **SAP Energy Assessor** require photographic records. Each relevant detail must have at least **one photo**, though additional images may be necessary.
- Photographic evidence must be submitted for **each individual dwelling**, and can be taken by **any responsible party**.

Photograph Requirements:

- Images must be of **sufficient quality** to clearly display the detail.
- **Close-up shots** may be needed if wider images do not capture enough detail.
- **Multiple images** may be required per detail.
- Each photo must include:
 - **Geolocation data** (to verify the location)
 - **Date and time stamp**
 - **Plot number**
 - **Construction detail reference**

Guidance on Capturing and Recording Photographs:

There are several mobile applications available for iOS and Android that can assist with capturing compliant photographs.

Recommended App for iOS (iPhone):

- **App Name:** *DateStamper*
- **Price:** £4.99 to unlock full functionality
- **App Store Link:** [DateStamper on App Store](#)

How to Set Up DateStamper:

1. Enable **Time** under the 'Date & Time' settings.
2. Enable **Address** under Location settings.
3. Before each photo, activate **Caption** to input a short description (note: the caption **cannot** be edited after the photo is taken).

Alternative Method:

Use DateStamper (or similar) to capture the timestamp and location, then add descriptions manually using **Apple Notes** or a similar app. Photos can be shared directly to these apps using the share button for each image.

When should photographs be taken?

AD L: Volume 1 lists a number of photographs that will be required to be taken during construction, whilst others could be taken closer to completion. It will be imperative that the builder understands the requirements and the correct timeframe to take the photographs.

The below is a guide as to at what construction stage each photo should be taken based on an example of typical build stages of a new dwelling.

Build Stage	Typical elements constructed	AD L Photo Reference
Oversite	Foundations	1A, 1B, 1C
	Sub masonry	
	Drains	
	Oversite	
Roofed	Masonry to Joists	2A, 2B, 3A, 3B, 4A, 4B, 6
	Joists	
	Second floor	
	Third floor	
	Masonry to plate	
	Gables/roof carcass	
	Roof coverings	
1st fix	1st fix carpentry	
	1st fix plumbing	
	1st fix electrics	
	Plastering	
Completion	2nd fix carpentry	6A, 6B, 6C
	2nd fix plumbing	

	2nd fix electrics	
	Kitchen	
	Ceramics	
	Decorations	
	Finals	
	QCFI	
	CML	
	Completion	

Useful Link for Photographic Evidence

- [Part L Photographic Evidence - Masonry](#)
- [Part L Photographic Evidence - Timber](#)
- [Elmhurst – Assessors Guide to Reviewing Photographic Evidence](#)

Predicted Energy Assessment

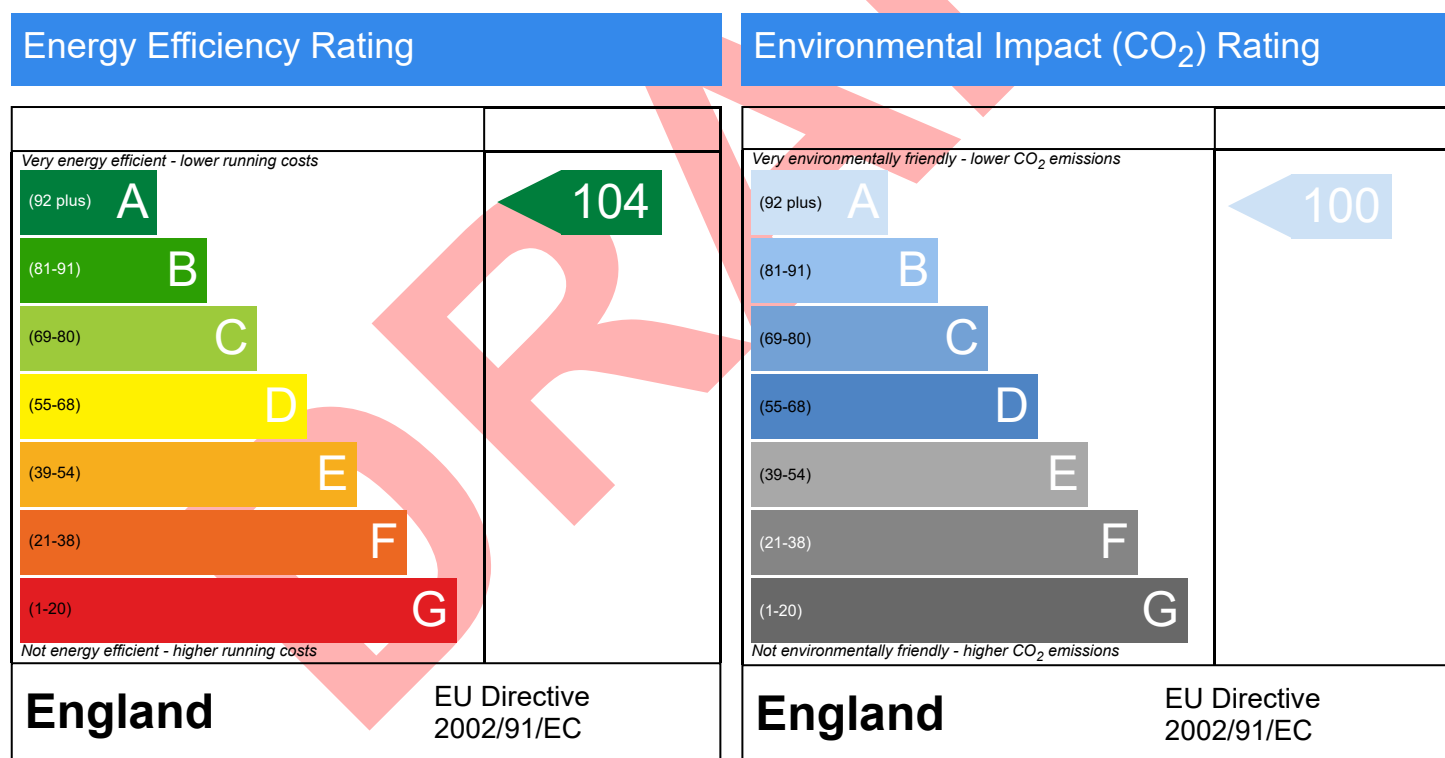


01, MAYFAIR GARDENS, LONDON, N17 7LP

Dwelling type: Bungalow, Detached
Date of assessment: 11/08/2026
SAP Version: 10.2
Produced by: Heyare Jayantha
Total floor area: 44.16 m²
DRRN:

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 SAP 10 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.



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.

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.

Summary for Input Data

Plot Reference	0003	Issued on Date	11/08/2026
Assessment Reference	00001	Plot Type Ref	
Plot Address	01, MAYFAIR GARDENS, LONDON, N17 7LP	SAP Version	10.2

SAP Rating	104 A	DER	-0.56	TER	15.49
Environmental	100 A	% DER < TER			103.62
CO ₂ Emissions (t/year)	-0.06	DFEE	56.26	TFEE	59.23
Compliance Check	See BREL	% DFEE < TFEE			5.01
% DPER < TPER	111.81	DPER	-9.78	TPER	82.80

Assessor Details	Mr. Heyare Jayantha	Assessor ID	DW98-0001
Client			

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

Orientation	North	
Property Tenture	ND	
Transaction Type	6	
Terrain Type	Urban	
1.0 Property Type	Bungalow, Detached	
2.0 Number of Storeys	1	
3.0 Date Built	2026	
4.0 Sheltered Sides	0	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	390.88	kJ/m²

7.0 Electricity Tariff	Standard
Smart electricity meter fitted	Yes
Smart gas meter fitted	No

7.0 Measurements	Ground floor:	Heat Loss Perimeter 27.40 m	Internal Floor Area 44.16 m²	Average Storey Height 2.80 m
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8.0 Living Area	25.97	m²
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Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
External Wall 1	Cavity Wall	Cavity wall : dense plaster, dense block, filled cavity, any outside structure	0.16	190.00	68.50	61.24	0.00	None	7.26	Enter Gross Area

Description	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Wall 1	Plasterboard on timber frame	9.00	40.33

Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
External Roof	External Slope Roof	Plasterboard, insulated slope	0.09	9.00	45.96	45.00	None	0.00	Enter Gross Area	0.96

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Heatloss Floor 1	Ground Floor - Solid	Lowest occupied	Slab on ground, screed over insulation	0.11	None	0.00	110.00	44.16

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Windows	Manufacturer	Window	Double Low-E Soft 0.05			0.63		0.70	1.20
Door	Manufacturer	Solid Door				0.00			1.00
Roof Window	Manufacturer	Roof Window	Double Low-E Soft 0.05			0.63		0.70	1.20

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
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Summary for Input Data

Window_N	Windows	External Wall 1	North	5.88	
Window_S	Windows	External Wall 1	South	1.38	
Roof Light_S	Roof Window	External Roof	South	0.96	0

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Gov Approved Scheme	5.10	0.30	0.30	Yes
E3 Sill	Gov Approved Scheme	4.20	0.04	0.04	No
E4 Jamb	Gov Approved Scheme	11.90	0.05	0.05	Yes
E5 Ground floor (normal)	Gov Approved Scheme	27.40	0.16	0.16	Yes
E16 Corner (normal)	Gov Approved Scheme	12.50	0.09	0.09	No
R1 Head of roof window	Gov Approved Scheme	0.80	0.08	0.08	Yes
R2 Sill of roof window	Gov Approved Scheme	0.80	0.06	0.06	Yes
R3 Jamb of roof window	Gov Approved Scheme	2.40	0.08	0.08	Yes
E11 Eaves (insulation at rafter level)	Gov Approved Scheme	27.40	0.04	0.04	No
E17 Corner (inverted – internal area greater than external area)	Gov Approved Scheme	2.50	-0.09	-0.09	No
R4 Ridge (vaulted ceiling)	Gov Approved Scheme	21.09	0.08	0.08	No
R5 Ridge (inverted)	Gov Approved Scheme	2.07	0.04	0.04	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys

Number of open flues

Number of chimneys/flues attached to closed fire

Number of flues attached to solid fuel boiler

Number of flues attached to other heater

Number of blocked chimneys

Number of intermittent extract fans

Number of passive vents

Number of flueless gas fires

21.0 Fixed Cooling System

22.0 Pressure Testing

Designed AP₅₀ m³/(h.m²) @ 50 Pa

Test Method

22.0 Lighting

No Fixed Lighting

Name	Efficacy	Power	Capacity	Count
Lighting 1	85.00	5.00	425.00	20

24.0 Main Heating 1

Percentage of Heat %

Database Ref. No.

Fuel Type

In Winter

In Summer

Model Name

Manufacturer

System Type

Controls SAP Code

Controls description

Summary for Input Data

Is MHS Pumped	Pump in heated space
Heating Pump Age	2013 or later
Heat Emitter	Radiators
Flow Temperature	Enter value
Flow Temperature Value	35.00

25.0 Main Heating 2	None
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26.0 Heat Networks	None
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27.0 Secondary Heating	None
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28.0 Water Heating	
Water Heating	Main Heating 1
SAP Code	901
Flue Gas Heat Recovery System	No
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
Cold Water Source	From mains
Bath Count	0
Immersion Only Heating Hot Water	No

28.1 Showers							
Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To		
1	Combi boiler or unvented hot water system	7.50		Yes	Storage System		

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	Hot Water Cylinder	
Cylinder Stat	Yes	
Cylinder In Heated Space	Yes	
Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	210.00	L
Loss	1.63	kWh/day
Pipes insulation	Fully insulated primary pipework	

31.0 Thermal Store	None
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32.0 Photovoltaic Unit	One Dwelling
Export Capable Meter?	No
Connected To Dwelling	Yes
Diverter	No
Battery Capacity [kWh]	8.00

PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer
12.00	North	30°	Modest		No	0.80		

34.0 Small-scale Hydro	None
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Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Recommendations
 Lower cost measures
 None
 Further measures to achieve even higher standards

Ratings after improvement

Summary for Input Data



	Typical Cost	Typical savings per year	SAP rating	Environmental Impact
Solar water heating			A 104	A 100
Photovoltaic			0	0
Wind turbine			0	0

Energy Report



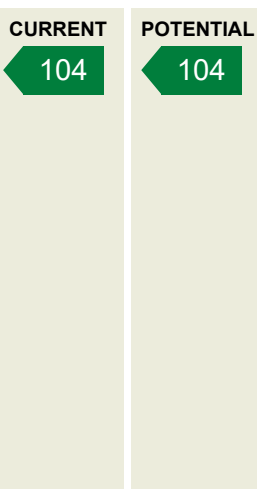
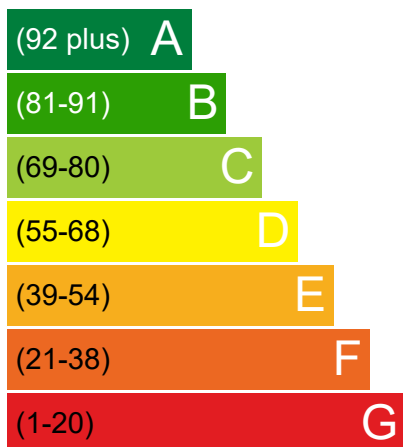
Dwelling Address	01, MAYFAIR GARDENS, LONDON, N17 7LP
Reference	0003-00001
SAP Version	10.2
Assessment Date	04/08/2026
Submission Date	
Property Type	Bungalow, Detached
Total Floor Area	44

This Energy Report has been generated using the UK's National Calculation Methodology for dwellings, Standard Assessment Procedure (SAP). This methodology is used to assess the energy efficiency of dwellings which is calculated based on a dwelling's heating, hot water, ventilation and lighting usage.

This document is not an Energy Performance Certificate (EPC) as required by the Energy Performance of Buildings Regulations

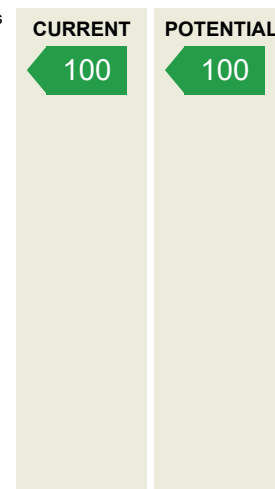
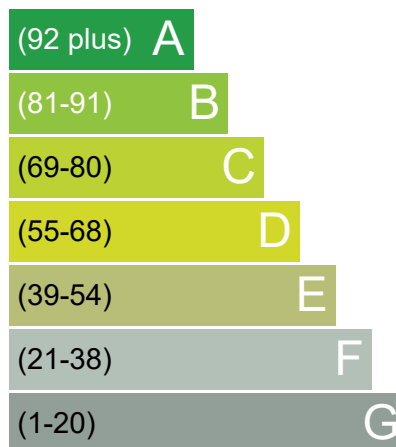
Energy Efficiency Rating

Most energy efficient - lower running costs



Carbon Dioxide (CO2) Emissions Rating

Very environmentally friendly - lower CO2 emissions



Additional ratings for your home

	Primary Energy	Energy	Carbon	Cost	HTC
CURRENT	-16.88 kWh	-540 kWh	-56 kg	-149.43 £	63 W/K
POTENTIAL	-16.88 kWh	-540 kWh	-56 kg	-149.43 £	63 W/K

Breakdown of property's energy performance

Each feature is assessed as one of the following:

Very Poor	Poor	Average	Good	Very Good
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Feature	Description	Energy Performance
Walls	Average thermal transmittance 0.16 W/m ² K	Very Good
Roof	Average thermal transmittance 0.09 W/m ² K	Very Good
Floor	Average thermal transmittance 0.11 W/m ² K	Very Good
Windows	High performance glazing	Very Good
Main heating	Air source heat pump, radiators, electric	Very Good
Main heating controls	Time and temperature zone control	Very Good
Secondary heating	None	
Hot water	From main system	Poor
Lighting	Good lighting efficiency	Good
Air tightness	Air permeability [AP50] = 5.0 m ³ /h.m ² (assumed)	Good

Recommendations

The recommended measures provided below will help to improve the energy efficiency of the dwelling. To reach the dwelling's potential energy rating all of the recommended measures shown below would need to be installed. Having these measures installed individually or in any other order may give a different result when compared with the cumulative potential rating.

Recommended measures	Cumulative savings (per year)	Cumulative rating	Typical costs	Incremental savings (per year)	Cumulative CO2 rating
Solar water heating	£-24	A 104			A 100

The typical cost is based on average installation prices across the country so may not be representative of the actual costs in your area.

Estimated energy costs of the dwelling

The table below shows the estimated running costs of the space and water heating and lighting within the dwelling. It does not include the energy used from household appliances. The estimated annual costs after potential improvements indicates the total energy cost if all recommended measures named above were installed.

		Estimated annual costs	Estimated annual costs after potential improvements	Potential future savings
Lighting		£31	£31	
Heating		£124	£124	
Hot Water		£343	£343	
New Technologies e.g. Impact of PV		-(£647)	-(£647)	
TOTAL		-(£149)	-(£149)	

Estimated energy use and potential savings



Space Heating

448
kWh per year



Water Heating

1240
kWh per year

About this document

Created by:
Company/Trading name:
Phone number:
Email address:

Disclaimer

This Energy Report should not under any circumstances be treated as a Condition Survey and cannot be used to indicate that any element of the dwelling (e.g. heating system) is working correctly.
This Energy Report must not be used in situations where an Energy Performance Certificate (EPC) is required.
This Energy Report is generated from a set of data inputs which may not reflect the actual dimensions, services or construction of the dwelling.
The calculation used to generate this report reflects the SAP Methodology current at the time of report generation.

Glossary terms for additional metrics

Primary Energy	The measure of the energy required for lighting, heating and hot water in a property. This includes the efficiency of the property's heating system, power station efficiency for electricity and the energy used to produce the fuel and deliver it to the property.
Energy Used	The estimated amount of fuel energy for lighting, heating and hot water for the property. The estimate is based on typical usage which is likely to be different to actual consumption.
Carbon (CO ₂)	The current emissions based on the energy estimates.
Cost	The estimated cost of energy. The cost of each unit of fuel is based on an industry standard which is likely to be different to those the occupier actually pays.
Heat Transfer Coefficient	Heat flow through the property envelope where internal and external temperatures are different.