

ENERGY STATEMENT

Land of Barrington Road

Beswick

Manchester

M1 4F

For Bamboo Property Development Ltd

Ref: B0029.01

Introduction

This statement sets out the approach adopted to the sustainability and energy strategy for the proposed development which is the proposed construction of two new build residential properties.

The scheme will be designed to reduce energy demand where possible through passive design measures resulting in lower energy bills for the occupiers.

The scheme will also be designed to minimise its environmental impact where possible.

The properties will be constructed in accordance with current Building Regulation Standards.

Design Measures

The following design measures have been considered and adopted:

- Maximising daylight where possible
- Use of developing technologies where technically and economically feasible
- Increased airtightness of the buildings

All areas shall be ventilated to ensure compliance with TM59 and to mitigate overheating.

Daylight will be utilised to reduce reliance on artificial lighting and luminaires.

Energy efficient lamps and LED lighting will be utilised throughout the scheme.

Consideration was given to using an electric heating system rather than gas combi boilers but this was rejected. Whilst the latest figures indicate that the carbon content of off-grid electricity is now slightly lower than that for gas (210g CO₂/kwh compared to 136g C₂/kwh), electricity is at least four times the price of gas.

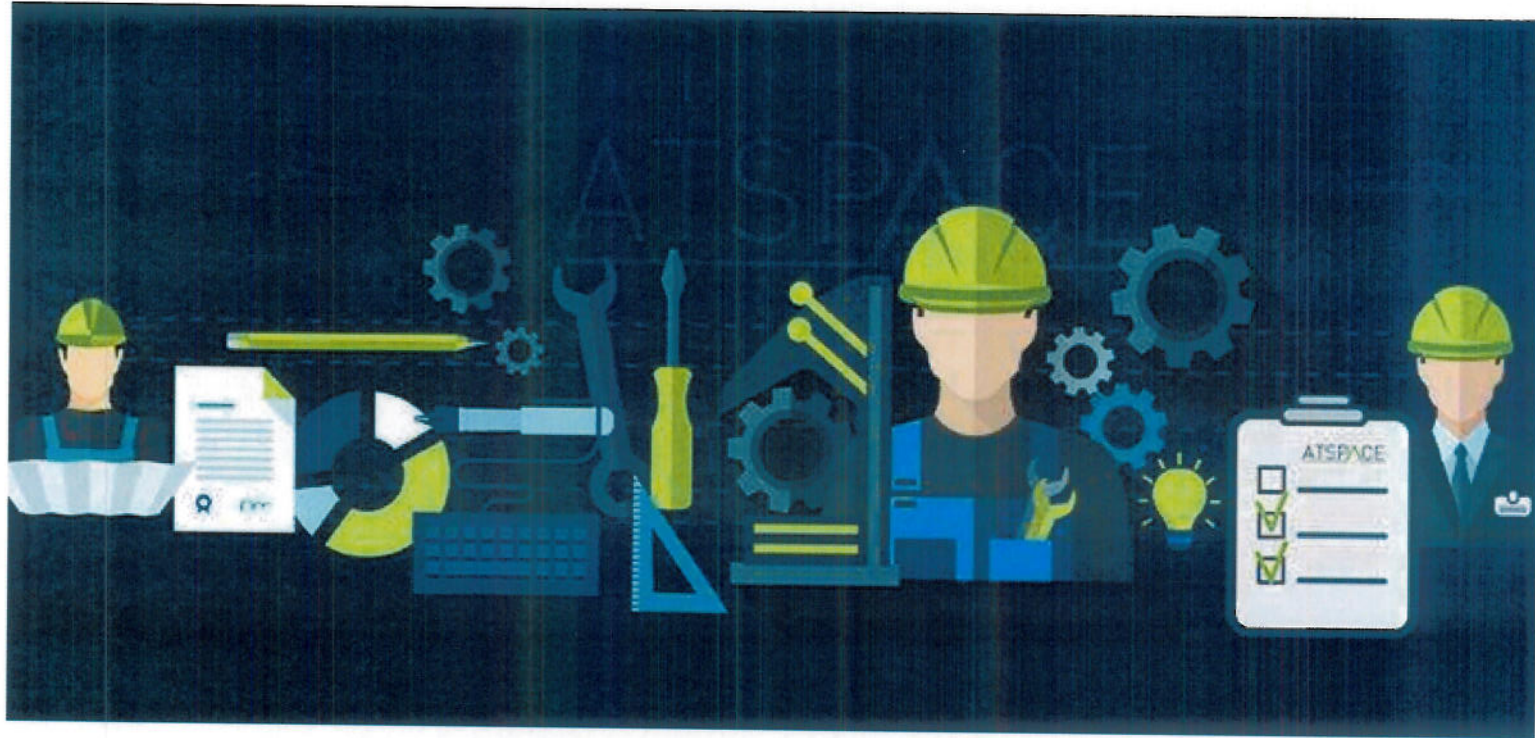
Therefore, homes with electric heating – even those with heat pumps – would be paying far more than the same house with a gas boiler. This flies in the face of the Government's proposals to rid us of fuel poverty which is particularly relevant in the area of Manchester in which this project is proposed which has historically been somewhat economically deprived.

Accordingly gas combi boilers will be utilised in both properties with time and temperature controls.

A full, provisional, SAP Report and Predicted Energy Assessment is attached and the rating shown are in line with Building Regulations requirements.

Dated: 16/07/2020

Schedule



SAP Report Submission for Building Regulations Compliance

Client: Gavin Brindle

Project: Barrington Street
Manchester, Greater Manchester

Contact: Jonathon Stone
Jon Stone
jos@atspaceltd.co.uk

Report Issue Date: 15/07/2020

PREDICTED ENERGY ASSESSMENT

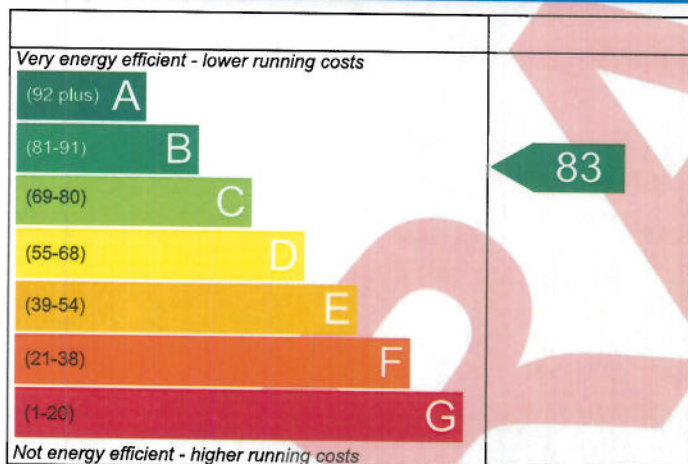
Barrington Street,
Manchester,
Greater Manchester

Dwelling type: House, Semi-Detached
Date of assessment: 15/07/2020
Produced by: Jon Stone
Total floor area: 71.7 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

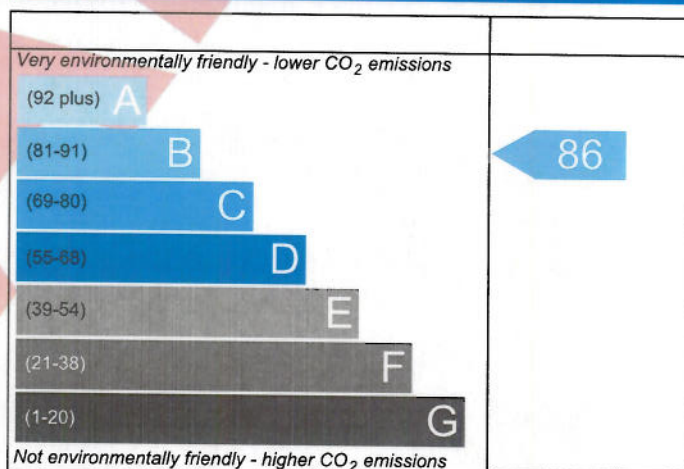


England

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	JB-016633		Issued on Date	15/07/2020	
Assessment Reference	Design Suggestions	Prop Type Ref	New Build		
Property	Barrington Street, Manchester, Greater Manchester				

SAP Rating	83 B	DER	19.30	TER	19.43
Environmental	86 B	% DER<TER	0.67		
CO ₂ Emissions (t/year)	1.11	DFEE	51.97	TFEE	54.29
General Requirements Compliance	Pass	% DFEE<TFEE	4.27		

Assessor Details	Mr. Jonathon Stone, Atspace, Tel: 01763 268685, energy@atspaceltd.co.uk		Assessor ID	Y315-0001	
Client	Gavin Brindle, JB-016633				

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)	19.43	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	19.30	kgCO ₂ /m ²	Pass
	-0.13 (-0.7%)	kgCO ₂ /m ²	

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	54.29	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DFEE)	51.97	kWh/m ² /yr	
	-2.3 (-4.2%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.21 (max. 0.30)	0.21 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.16 (max. 0.25)	0.16 (max. 0.70)	Pass
Roof	0.15 (max. 0.20)	0.15 (max. 0.35)	Pass
Openings	1.40 (max. 2.00)	1.40 (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 33
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

Programmer, room thermostat and TRVs

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)

Slight

Pass

Based on:

Overshading

Average

Windows facing North East

6.38 m², No overhang

Windows facing South West

4.06 m², No overhang

Windows facing North West

0.50 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

Solid Wall

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

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BASIC COMPLIANCE REPORT

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6 Controls

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Yes

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Type

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W/m²K

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Air permeability at 50 pascals

5.01 (design value)

Maximum

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