

# PREDICTED ENERGY ASSESSMENT

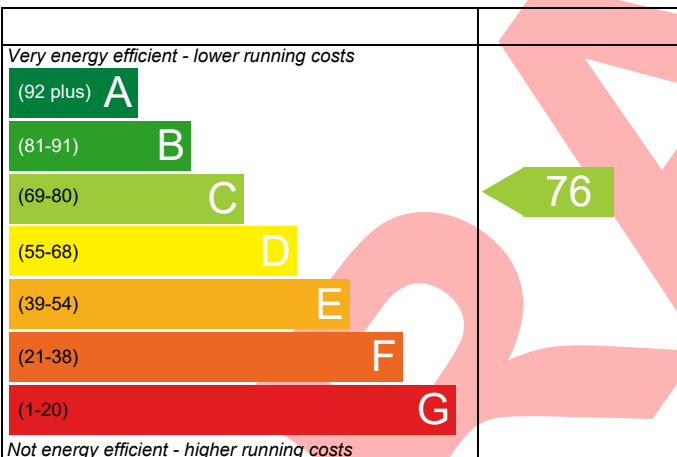
Plot 238, 2 bed,  
K, B, ES,  
2

Dwelling type: Flat, Semi-Detached  
Date of assessment: 12/05/2023  
Produced by: Eloise Utley  
Total floor area: 70.52 m<sup>2</sup>

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 (CO<sub>2</sub>) emissions.

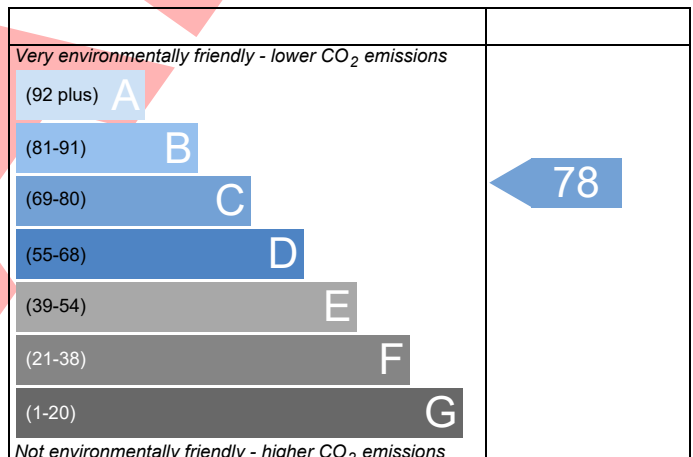
## Energy Efficiency Rating



**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 (CO<sub>2</sub>) 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 (CO<sub>2</sub>) emissions. The higher the rating the less impact it has on the environment.

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

# BUILDING REGULATION COMPLIANCE

## Calculation Type: New Build (As Designed)



Property Reference	4907-0015-4290-238	Issued on Date	12/05/2023
Assessment Reference	Plot 238	Prop Type Ref	Flat Type 2A
Property	Plot 238, 2 bed, K, B, ES, 2		

SAP Rating	76 C	DER	30.51	TER	25.26
Environmental	78 C	% DER<TER	-20.81		
CO <sub>2</sub> Emissions (t/year)	1.71	DFEE	46.88	TFEE	46.27
General Requirements Compliance	Fail	% DFEE<TFEE	-1.32		

Assessor Details	Ms. Eloise Utley, Eloise Utley , Tel: 01884 242 050, Eloise.Utley@aessc.co.uk	Assessor ID	T714-0001
------------------	---	-------------	-----------

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	Electricity		
Fuel factor	1.55 (electricity)		
Target Carbon Dioxide Emission Rate (TER)	25.26	kgCO <sub>2</sub> /m <sup>2</sup>	
Dwelling Carbon Dioxide Emission Rate (DER)	30.51	kgCO <sub>2</sub> /m <sup>2</sup>	
Excess emissions	5.25 (20.8%)	kgCO <sub>2</sub> /m <sup>2</sup>	Fail

##### 1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	46.27	kWh/m <sup>2</sup> /yr	
Dwelling Fabric Energy Efficiency (DFEE)	46.88	kWh/m <sup>2</sup> /yr	
Excess energy	0.6 (1.3%)	kWh/m <sup>2</sup> /yr	Fail

#### Criterion 2 – Limits on design flexibility

##### Limiting Fabric Standards

##### 2 Fabric U-values

Element	Average	Highest	
External wall	0.20 (max. 0.30)	0.24 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.11 (max. 0.25)	0.11 (max. 0.70)	Pass
Openings and curtain wall	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	3.80 (design value)	m <sup>3</sup> /(h.m <sup>2</sup> ) @ 50 Pa	
Maximum	10.0	m <sup>3</sup> /(h.m <sup>2</sup> ) @ 50 Pa	Pass

##### Limiting System Efficiencies

##### 4 Heating efficiency

Main heating system	Room heaters - Electric Panel, convector or radiant heaters	
---------------------	---	--

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

# BUILDING REGULATION COMPLIANCE

## Calculation Type: New Build (As Designed)

Secondary heating system

None

### 5 Cylinder insulation

Hot water storage

Measured cylinder loss: 1.18 kWh/day  
Permitted by DBSCG 1.85

Pass

Primary pipework insulated

No primary pipework

### 6 Controls

Space heating controls

Programmer and appliance thermostats

Pass

Hot water controls

Cylinderstat

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

0.61

Maximum

1.5

Pass

MVHR efficiency

93 %

Minimum

70 %

Pass

## 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 South

10.98 m<sup>2</sup>, No overhang

Windows facing West

10.20 m<sup>2</sup>, Overhang width less than twice window, ratio 0.57

Air change rate

2.00 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/m<sup>2</sup>K

Pass

Filled Cavity with Edge Sealing

0.00

W/m<sup>2</sup>K

Pass

### Air permeability and pressure testing

#### 3 Air permeability

Air permeability at 50 pascals

3.80 (design value)

m<sup>3</sup>/(h.m<sup>2</sup>) @ 50 Pa

Maximum

10.0

m<sup>3</sup>/(h.m<sup>2</sup>) @ 50 Pa

Pass

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

# BUILDING REGULATION COMPLIANCE

## Calculation Type: New Build (As Designed)

### 10 Key features

External wall U-value	0.14	W/m <sup>2</sup> K
Party wall U-value	0.00	W/m <sup>2</sup> K
Party wall U-value	0.00	W/m <sup>2</sup> K
Floor U-value	0.11	W/m <sup>2</sup> K
Door U-value	1.10	W/m <sup>2</sup> K
Door U-value	1.09	W/m <sup>2</sup> K
Air permeability	3.8	m <sup>3</sup> /m <sup>2</sup> h

**DRAFT**

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

# RECOMMENDATIONS

	Typical cost	Typical savings per year	Energy efficiency	Environmental impact	Result
Low energy lights			0	0	Already installed
Solar water heating			0	0	Not applicable
Photovoltaic			0	0	Not applicable
Wind turbine			0	0	Not applicable
<b>Totals</b>	<b>£0</b>	<b>£0</b>	<b>C 76</b>	<b>C 78</b>	

**DRAFT**

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