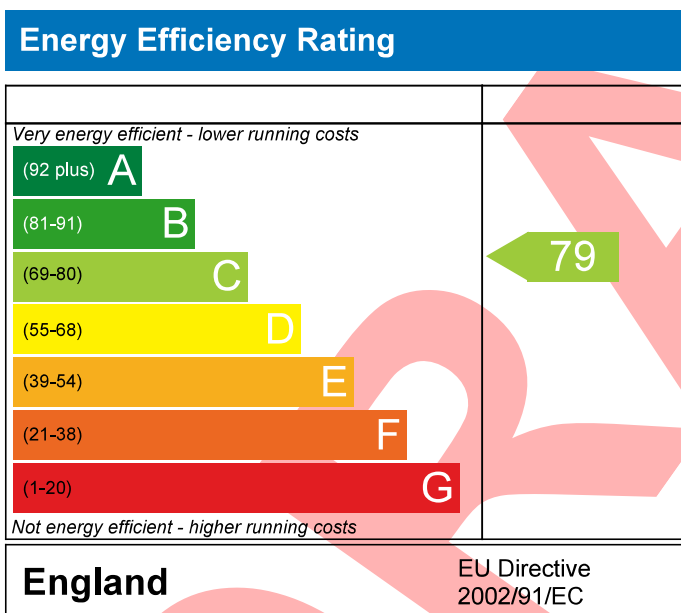


The Star, Uxbridge Road,  
Uxbridge,  
UB10 0LY

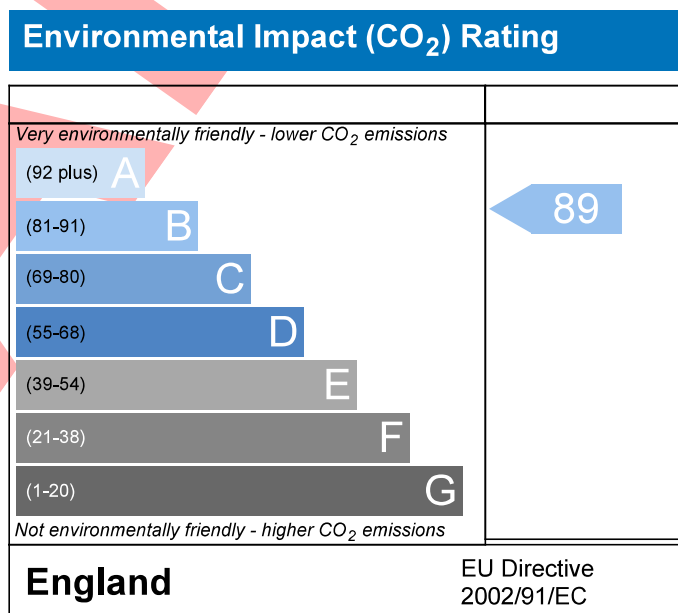
Dwelling type: Flat, Semi-Detached  
Date of assessment: 21/07/2022  
Produced by: Paul Whiffin  
Total floor area: 77.67 m<sup>2</sup>

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.



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 (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   | Q-03466 APT.09                              | Issued on Date | 21/07/2022 |
| Assessment Reference | Design V3                                   | Prop Type Ref  | New Build  |
| Property             | The Star, Uxbridge Road, Uxbridge, UB10 0LY |                |            |

|                                    |      |             |       |      |       |
|------------------------------------|------|-------------|-------|------|-------|
| SAP Rating                         | 79 C | DER         | 14.81 | TER  | 24.99 |
| Environmental                      | 89 B | % DER<TER   | 40.74 |      |       |
| CO <sub>2</sub> Emissions (t/year) | 0.87 | DFEE        | 36.60 | TFEE | 46.57 |
| General Requirements Compliance    | Pass | % DFEE<TFEE | 21.40 |      |       |

|                  |  |             |           |
|------------------|--|-------------|-----------|
| Assessor Details | Mr. Paul Whiffin, Paul Whiffin, Tel: 01763 268685, paul.whiffin@atspaceltd.com | Assessor ID | y314-0001 |
| Client           | Harjeet Suri, 33244  |             |           |

### 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)   | 24.99              | kgCO <sub>2</sub> /m <sup>2</sup> |      |
| Dwelling Carbon Dioxide Emission Rate (DER) | 14.81              | kgCO <sub>2</sub> /m <sup>2</sup> | Pass |
|   | -10.18 (-40.7%)    | kgCO <sub>2</sub> /m <sup>2</sup> |      |

##### 1b TFEE and DFEE

|  |                |                        |      |
|--|----------------|------------------------|------|
| Target Fabric Energy Efficiency (TFEE)   | 46.57          | kWh/m <sup>2</sup> /yr |      |
| Dwelling Fabric Energy Efficiency (DFEE) | 36.60          | kWh/m <sup>2</sup> /yr |      |
|  | -10.0 (-21.5%) | kWh/m <sup>2</sup> /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) | 0.20 (max. 0.70) | Pass |
| Party wall    | 0.00 (max. 0.20) | -                | Pass |
| Roof          | 0.16 (max. 0.20) | 0.16 (max. 0.35) | Pass |
| Openings      | 1.24 (max. 2.00) | 1.80 (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 | 3.00 (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 | Boiler system with radiators or underfloor - Electric Direct-acting boiler |  |
|---------------------|--|--|

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# BUILDING REGULATION COMPLIANCE

## Calculation Type: New Build (As Designed)

Secondary heating system

None

### 5 Cylinder insulation

Hot water storage

Measured cylinder loss: 1.90 kWh/day  
Permitted by DBSCG 2.24

Pass

Primary pipework insulated

No primary pipework

### 6 Controls

Space heating controls

Time and temperature zone control

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

0.62

Maximum

1.5

Pass

MVHR efficiency

94 %

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 East

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

Windows facing South

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

Air change rate

6.00 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

### Air permeability and pressure testing

#### 3 Air permeability

Air permeability at 50 pascals

3.00 (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

### 10 Key features

External wall U-value

0.13

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

Party wall U-value

0.00

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

Air permeability

3.0

m<sup>3</sup>/m<sup>2</sup>h

Photovoltaic array

1374.95

kWh/Year

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

# SUMMARY FOR INPUT DATA

## Calculation Type: New Build (As Designed)

|                      |   |                |            |
|----------------------|---|----------------|------------|
| Property Reference   | Q-03466 APT.09                              | Issued on Date | 21/07/2022 |
| Assessment Reference | Design V3                                   | Prop Type Ref  | New Build  |
| Property             | The Star, Uxbridge Road, Uxbridge, UB10 0LY |                |            |

|                                    |      |             |       |      |       |
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| General Requirements Compliance    | Pass | % DFEE<TFEE | 21.40 |      |       |

|                  |  |             |           |
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| Assessor Details | Mr. Paul Whiffin, Paul Whiffin, Tel: 01763 268685, paul.whiffin@atspaceltd.com | Assessor ID | y314-0001 |
|------------------|--|-------------|-----------|

|        |                     |
|--------|---------------------|
| Client | Harjeet Suri, 33244 |
|--------|---------------------|

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

|                       |                     |
|-----------------------|---------------------|
| Orientation           | North               |
| Property Tenure       | Unknown             |
| Transaction Type      | New dwelling        |
| Terrain Type          | Suburban            |
| 1.0 Property Type     | Flat, Semi-Detached |
| 2.0 Number of Storeys | 1                   |
| 3.0 Date Built        | 2022                |
| 4.0 Sheltered Sides   | 2                   |
| 5.0 Sunlight/Shade    | Average or unknown  |

#### 6.0 Measurements

|               | Heat Loss Perimeter | Internal Floor Area  | Average Storey Height |
|---------------|---------------------|----------------------|-----------------------|
| Ground Floor: | 32.04 m             | 77.67 m <sup>2</sup> | 2.41 m                |

|                 |       |                |
|-----------------|-------|----------------|
| 7.0 Living Area | 28.19 | m <sup>2</sup> |
|-----------------|-------|----------------|

|                            |                             |                     |
|----------------------------|-----------------------------|---------------------|
| 8.0 Thermal Mass Parameter | Simple calculation - Medium |                     |
| Thermal Mass               | 250.00                      | kJ/m <sup>2</sup> K |

#### 9.0 External Walls

| Description    | Type         | U-Value (W/m <sup>2</sup> K) | Gross Area (m <sup>2</sup> ) | Nett Area (m <sup>2</sup> ) |
|----------------|--------------|------------------------------|------------------------------|-----------------------------|
| External Wall  | Timber Frame | 0.20                         | 60.61                        | 26.20                       |
| Sheltered Wall | Cavity Wall  | 0.13                         | 16.60                        | 16.60                       |

#### 9.1 Party Walls

| Description  | Type                            | Construction | U-Value (W/m <sup>2</sup> K) | Area (m <sup>2</sup> ) |
|--------------|---------------------------------|--------------|------------------------------|------------------------|
| Party Wall 1 | Filled Cavity with Edge Sealing |              | 0.00                         | 15.52                  |

#### 10.0 External Roofs

| Description | Type               | U-Value (W/m <sup>2</sup> K) | Gross Area (m <sup>2</sup> ) | Nett Area (m <sup>2</sup> ) |
|-------------|--------------------|------------------------------|------------------------------|-----------------------------|
| Flat Roof   | External Flat Roof | 0.16                         | 77.67                        | 77.67                       |

#### 12.0 Opening Types

| Description | Data Source | Type             | Glazing               | Glazing Gap | Argon Filled | G-value | Frame Type | Frame Factor | U Value (W/m <sup>2</sup> K) |
|-------------|-------------|------------------|-----------------------|-------------|--------------|---------|------------|--------------|------------------------------|
| Glazing     | BFRC data   | Window           | Double Low-E Soft 0.1 |             |              | 0.50    |            |              | 1.20                         |
| Solid Door  | Manufacture | Door to Corridor |                       |             |              |         |            |              | 1.80                         |

# SUMMARY FOR INPUT DATA

## Calculation Type: New Build (As Designed)

### 13.0 Openings

| Name | Opening Type     | Location          | Orientation | Curtain Type | Overhang Ratio | Wide Overhang | Width (m) | Height (m) | Count | Area (m²) | Curtain Closed |
|------|------------------|-------------------|-------------|--------------|----------------|---------------|-----------|------------|-------|-----------|----------------|
| FSD  | Door to Corridor | [1] External Wall | North       |              |                |               |           |            |       | 2.09      |                |
| LSW  | Window           | [1] External Wall | East        | None         | 0.00           |               |           |            |       | 12.11     |                |
| RW   | Window           | [1] External Wall | South       | None         | 0.00           |               |           |            |       | 20.21     |                |

### 14.0 Conservatory

### 15.0 Draught Proofing

%

### 16.0 Draught Lobby

### 17.0 Thermal Bridging

### 17.1 List of Bridges

| Source Type            | Bridge Type   | Length | Psi    | Imported | Reference: |
|------------------------|---|--------|--------|----------|------------|
| Independently assessed | E2 Other lintels (including other steel lintels)                          | 14.44  | 0.040  | No       | LABC       |
| Independently assessed | E3 Sill   | 13.44  | 0.027  | No       | LABC       |
| Independently assessed | E4 Jamb   | 32.97  | 0.029  | No       | LABC       |
| Independently assessed | E7 Party floor between dwellings (in blocks of flats)                     | 32.04  | 0.039  | No       |            |
| Table K1 - Default     | E14 Flat roof   | 32.04  | 0.080  | No       |            |
| Independently assessed | E16 Corner (normal)   | 9.64   | 0.050  | No       | LABC       |
| Independently assessed | E17 Corner (inverted – internal area greater than external area)          | 2.52   | -0.091 | No       |            |
| Table K1 - Approved    | E18 Party wall between dwellings  | 2.52   | 0.060  | No       |            |
| Table K1 - Default     | E25 Staggered party wall between dwellings                                | 2.52   | 0.120  | No       |            |
| Table K1 - Default     | P3 Party wall - Intermediate floor between dwellings (in blocks of flats) | 6.44   | 0.000  | No       |            |
| Table K1 - Default     | P4 Party wall - Roof (insulation at ceiling level)                        | 6.44   | 0.240  | No       |            |
| Y-value                | <input type="text" value="0.051"/>  |        |        |          | W/m²K      |

### 18.0 Pressure Testing

Designed AP<sub>50</sub>

m³/(h.m²) @ 50 Pa

Property Tested ?

As Built AP<sub>50</sub>

m³/(h.m²) @ 50 Pa

### 19.0 Mechanical Ventilation

#### Summer Overheating

Windows open in hot weather

Cross ventilation possible

Night Ventilation

Air change rate

#### Mechanical Ventilation

Mechanical Ventilation System Present

Approved Installation

Mechanical Ventilation data Type

Type

MV Reference Number

Configuration

MVHR Duct Insulated

Manufacturer SFP

Duct Type

MVHR Efficiency

Wet Rooms

# SUMMARY FOR INPUT DATA

## Calculation Type: New Build (As Designed)

### 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  |     |     |       | 0     |
| 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  | Yes |
| Light and motion sensor | Yes |

### 23.0 Electricity Tariff

Standard

### 24.0 Main Heating 1

|                        |                                       |   |
|------------------------|---------------------------------------|---|
|                        | SAP table                             |   |
| Percentage of Heat     | 100                                   | % |
| Main Heating           | BEE                                   |   |
| SAP Code               | 191                                   |   |
| Efficiency (SAP Table) | 100.0                                 | % |
| Controls               | CBI Time and temperature zone control |   |
| PCDF Controls          | 0                                     |   |
| Delayed Start Stat     | Yes                                   |   |
| Sap Code               | 2110                                  |   |
| Is MHS Pumped          | Pump in heated space                  |   |
| Heat Emitter           | Underfloor                            |   |
| Underfloor Heating     | Yes - Pipes in thin screed            |   |

### 25.0 Main Heating 2

None

Community Heating

None

### 28.0 Water Heating

|  |                         |
|--|-------------------------|
|  | HWP From main heating 1 |
| Water Heating                                    | Main Heating 1          |
| 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                     |
| SAP Code   | 901                     |
| Immersion Heater                                 | Dual                    |

### 29.0 Hot Water Cylinder

Hot Water Cylinder

# SUMMARY FOR INPUT DATA

## Calculation Type: New Build (As Designed)

|                               |                           |          |
|-------------------------------|---------------------------|----------|
| Cylinder In Heated Space      | Yes                       |          |
| Insulation Type               | Measured Loss             |          |
| Cylinder Volume               | 200.00                    | L        |
| Loss                          | 1.90                      | kWh/day  |
| <b>31.0 Thermal Store</b>     | None                      |          |
| <b>32.0 Photovoltaic Unit</b> | More Dwellings, One Block |          |
| Apportioned                   | 1374.95                   | kWh/Year |

### Recommendations

#### Lower cost measures

None

#### Further measures to achieve even higher standards

None