

# PREDICTED ENERGY ASSESSMENT



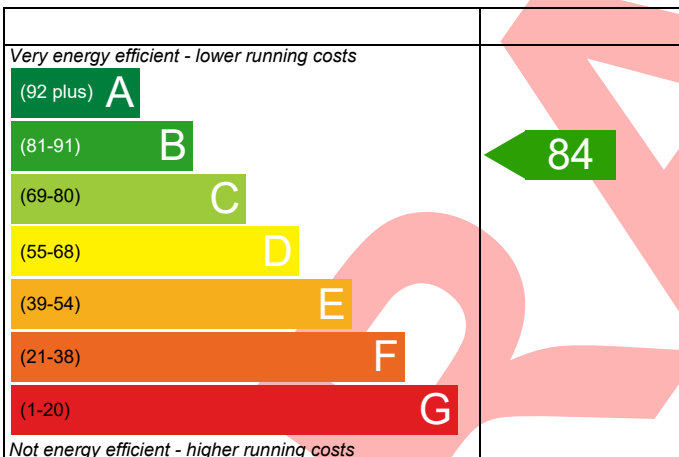
Plot 164, Siskin Park, Off Hartlepool Road,  
Wynyard,  
Billingham,  
TS22 5GS

Dwelling type: House, Semi-Detached  
Date of assessment: 21/07/2021  
Produced by: Jake Eaton  
Total floor area: 101.62 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.

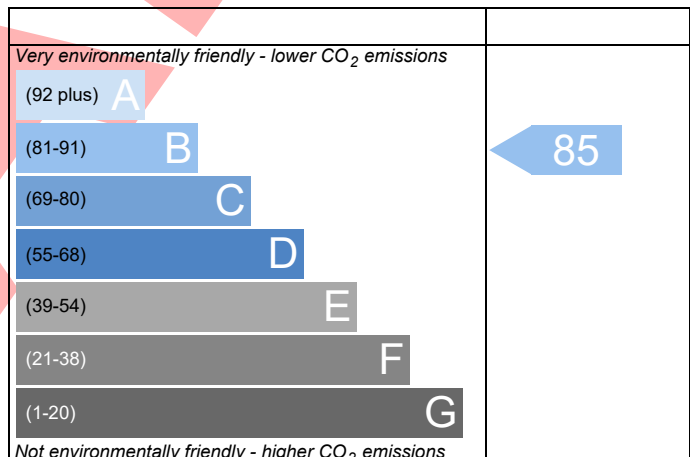
## Energy Efficiency Rating



**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.

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# BUILDING REGULATION COMPLIANCE

## Calculation Type: New Build (As Designed)



Property Reference	TS22 5GS Plot 164	Issued on Date	21/07/2021
Assessment Reference	001	Prop Type Ref	New Stamford
Property	Plot 164, Siskin Park, Off Hartlepool Road, Wynyard, Billingham, TS22 5GS		
SAP Rating	84 B	DER	16.72
Environmental	85 B	TER	17.04
CO <sub>2</sub> Emissions (t/year)	1.58	% DER<TER	1.86
General Requirements Compliance	Pass	DFEE	48.20
		TREE	53.76
		% DFEE<TFEE	10.34
Assessor Details	Mr. Jake Eaton, Jake Eaton, Tel: 01400283471, jake@aeratech.co.uk	Assessor ID	P711-0001
Client	Countryside Properties, CPPLC		

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

#### Criterion 1 – Achieving the TER and TFE rate

##### 1a TER and DER

Fuel for main heating	Mains gas		
Fuel factor	1.00 (mains gas)		
Target Carbon Dioxide Emission Rate (TER)	17.04	kgCO <sub>2</sub> /m <sup>2</sup>	
Dwelling Carbon Dioxide Emission Rate (DER)	16.72	kgCO <sub>2</sub> /m <sup>2</sup>	Pass
	-0.32 (-1.9%)	kgCO <sub>2</sub> /m <sup>2</sup>	

##### 1b TFE and DFEE

Target Fabric Energy Efficiency (TFEE)	53.76	kWh/m <sup>2</sup> /yr	
Dwelling Fabric Energy Efficiency (DFEE)	48.20	kWh/m <sup>2</sup> /yr	
	-5.6 (-10.4%)	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	0.22 (max. 0.30)	0.23 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.15 (max. 0.25)	0.15 (max. 0.70)	Pass
Roof	0.13 (max. 0.20)	0.17 (max. 0.35)	Pass
Openings	1.30 (max. 2.00)	1.30 (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	4.00 (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

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Main heating system	Boiler system with radiators or underfloor - Mains gas Data from database Baxi ASSURE 15 SYSTEM  Efficiency: 89.1% SEDBUK2009 Minimum: 88.0%	Pass
Secondary heating system	None	

### 5 Cylinder insulation

Hot water storage	Measured cylinder loss: 1.42 kWh/day Permitted by DBSCG 2.30	Pass
Primary pipework insulated	Yes	Pass

### 6 Controls

Space heating controls	Time and temperature zone control	Pass
Hot water controls	Cylinderstat	Pass
	Independent timer for DHW	Pass
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 (North East England)	Medium	Pass
Based on:		
Overshading	Average	
Windows facing North East	1.77 m <sup>2</sup> , No overhang	
Windows facing South East	3.69 m <sup>2</sup> , No overhang	
Windows facing North West	8.89 m <sup>2</sup> , No overhang	
Air change rate	2.50 ach	
Blinds/curtains	Light-coloured curtain or roller blind, closed 50% of daylight hours	

## Criterion 4 – Building performance consistent with DER and DFEE rate

### Party Walls

Type	U-value	W/m <sup>2</sup> K	
Filled Cavity with Edge Sealing	0.00		Pass

### Air permeability and pressure testing

#### 3 Air permeability

Air permeability at 50 pascals	4.00 (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

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### 10 Key features

External wall U-value	0.12	W/m <sup>2</sup> K
Party wall U-value	0.00	W/m <sup>2</sup> K
Roof U-value	0.10	W/m <sup>2</sup> K

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