PREDICTED ENERGY ASSESSMENT



Plot 046, 2 Bed,

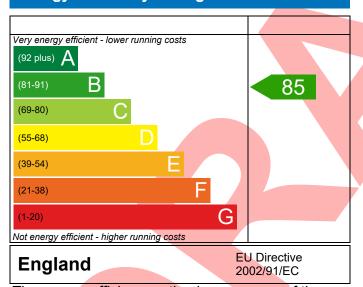
K, B, First Floor Dwelling type: Flat, End-Terrace

Date of assessment: 29/09/2022
Produced by: Silvio Junges
Total floor area: 70.54 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.

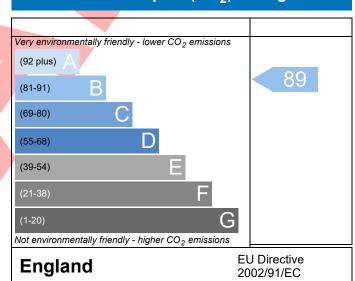
The energy performance has been assessed using the Government approved SAP2012 methodology and is rated in terms of the energy use per square meter of floor area; the energy efficiency is based on fuel costs and the environmental impact is based on carbon dioxide (CO₂) emissions.

Energy Efficiency Rating



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



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.

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)



Assessment Reference Property Property Plot 046, 2 Bed, K, B, First Floor SAP Rating 85 B DER 15.26 TER 16.43 Environmental 89 B S DERCTER 7.15 CO; Emissions (t/year) 0.86 DFEE 35.87 TEE 37.95 General Requirements Compliance Pass S DFEE-TFEE 5.47 Assessor Details Mr. Silvio Junges, Silvio Junges, Tel: 01884 242050, silvio Junges, Silvio Junges, Tel: 01884 242050, silvio Junges Massessor ID P637-0001 Client SUMARY FOR INPUT DATA FOR New Build (As Designed) Criterion 1 – Achieving the TER and TFEE rate 1a TER and DER Fuel for main heating Fuel factor Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER) Dwelling Carbon Dioxide Emission Rate (DER) Dwelling Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE) 25.37 S.37 S.37 S.Wh/m²/yr Pass Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values Element Average Highest External wall 0.26 (max. 0.30) 0.27 (max. 0.70) Pass Party wall 0.00 (max. 0.20) - Pass Openings 1.25 (max. 2.00) 1.30 (max. 3.30) Pass 2a Thermal bridging Thermal bridging Thermal bridging calculated from linear thermal transmittances for each junction 3 Air permeability 4 50 pascals Maximum 10.0 m²/(h.m²) @ 50 Pa Pass Limiting System Efficiences 4 Heating efficiences	Property Reference 4907-P637-622	5-046				Issued on Date	29/09/2022
Property				Pi	rop Type Ref	Lathe-CT-AS-END	
SAP Rating							
Environmental 89 B	Property Plot 046, 2 Bed,	K, B, First	Floor				
Coremissions (t/year) General Requirements Compliance Pass	SAP Rating		85 B	DER	15.26	TER	16.43
Assessor Details Mr. Silvio Junges, Silvio Junges, Tel: 01884 242050, silvio Junges Mr. Silvio Junges, Tel: 01884 242050, silvio Junges Mr. Silvio Junges, Silvio Junges, Tel: 01884 242050, silvio Junges Mr. Silvio			89 B	% DER <ter< td=""><td></td><td></td><td></td></ter<>			
Assessor Details Mr. Silvio Junges, Silvio Junges, Tel: 01884 242050, silvio.junges@aessc.co.uk SUMARY FOR INPUT DATA FOR New Build (As Designed) Criterion 1 – Achieving the TER and TFEE rate 1a TER and DER Fuel for main heating Fuel factor Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER) Target Aphric Standards 1.00 (mains gas) 1.17 (-7.1%) 1.5.26 1.17 (-7.1%) 1.5.26 1.17 (-7.1%) 1.5.26 1.17 (-7.1%) 1.5.26 1.			0.86		35.87		37.95
Silvio, junges@aessc.co.uk SUMARY FOR INPUT DATA FOR New Build (As Designed) Criterion 1 - Achieving the TER and TFEE rate 1a TER and DER Fuel for main heating Fuel factor Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER) 15.26 10.00 (mains gas) 15.26 15.20 15.25 15.26 15.26 15.26 15.26 15.26 15.26 15.26 15.20 15.25 15.20 15.25 15.20 15.25 15.20 15.25 15.20 15.25 15.20	General Requirements Compliance		Pass	% DFEE <tfee< td=""><td></td><td>5.47</td><td></td></tfee<>		5.47	
SUMARY FOR INPUT DATA FOR New Build (As Designed) Criterion 1 - Achieving the TER and TFEE rate 1a TER and DER Fuel for main heating Fuel factor Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER) 15.26 1.17 (-7.1%) 15.75 1.17 (-7.1%) 15.75 15.87 15.87 15.87 15.87 15.86 15.87 15.88 16.8		_	s, Tel: 01884	242050,		Assessor ID	P637-0001
SUMARY FOR INPUT DATA FOR New Build (As Designed) Criterion 1 - Achieving the TER and TFEE rate 1a TER and DER Fuel for main heating Fuel factor Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER) 15.26 1.17 (-7.1%) 15 TEE and DFEE Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE) 35.87 Wwh/m²/yr Pass Criterion 2 - Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values Element Average Highest External wall 0.26 (max. 0.30) 0.27 (max. 0.70) Pass Party wall 0.000 (max. 0.20) - Denings 1.25 (max. 2.00) 1.30 (max. 3.30) Pass 2a Thermal bridging Thermal bridging Thermal bridging calculated from linear thermal transmittances for each junction 3 Air permeability Air permeability Air permeability at 50 pascals Maximum 10.0 m³/(h.m²) @ 50 Pa Pass Limiting System Efficiencies		c.co.uk					
Criterion 1 — Achieving the TER and TFEE rate 1a TER and DER Fuel for main heating Fuel factor Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER) 15.26 1.17 (-7.1%) 15.26 1.17 (-7.1%) 15.26 1.17 (-7.1%) 15.26 15.26 12.20 (-5.3%) 15.26 12.20 (-5.3%) 15.26 12.20 (-5.3%) 15.26 12.20 (-5.3%) 15.26 12.20 (-5.3%) 15.26 12.20 (-5.3%) 15.26 16.43 1							
Fuel for main heating Fuel factor Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER) Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE) Target Fabric Standards 2 Fabric U-values Element External wall D.26 (max. 0.30) Openings 1.25 (max. 2.00) 1.30 (max. 3.30) Pass 2 Thermal bridging Thermal bridging Thermal bridging Thermal bridging Thermal bridging calculated from linear thermal transmittances for each junction 3 Air permeability ILimiting System Efficiencies			igned)				
Fuel for main heating Fuel factor Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER) I5.26 -1.17 (-7.1%) Ib TFEE and DFEE Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE) Iss.87 Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values Element External wall O.26 (max. 0.30) Openings 1.25 (max. 2.00) 1.30 (max. 3.30) Pass Party wall O.00 (max. 0.20) Openings 1.25 (max. 2.00) 1.30 (max. 3.30) Pass 2 Thermal bridging Thermal bridging Thermal bridging Thermal bridging calculated from linear thermal transmittances for each junction 3 Air permeability Air permeability Air permeability at 50 pascals Maximum 10.0 m³/(h.m²) @ 50 Pa Pass Limiting System Efficiencies	Criterion 1 – Achieving the TER and TFEE	rate					
Fuel factor Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER) Is.26 -1.17 (-7.1%) kgCO ₂ /m² Pass kgCO ₂ /m² Pass bTFEE and DFEE Target Fabric Energy Efficiency (DFEE) Dwelling Fabric Energy Efficiency (DFEE) Is.87 -2.0 (-5.3%) Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values Element External wall 0.26 (max. 0.30) 0.27 (max. 0.70) Pass Party wall 0.00 (mains gaš) 2 Target Fabric kwh/m²/yr Pass Pass Openings 1.25 (max. 2.00) 1.30 (max. 3.30) Pass 2 Thermal bridging Thermal bridging Thermal bridging Thermal bridging calculated from linear thermal transmittances for each junction 3 Air permeability Air permeability at 50 pascals Maximum 10.0 m³/(h.m²) @ 50 Pa Pass Pass Pass Limiting System Efficiencies	1a TER and DER						
Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER) 15.26 -1.17 (-7.1%) kgCO ₂ /m² kgCO ₂ /m² Pass kgCO ₂ /m² 15.26 -1.17 (-7.1%) kgCO ₂ /m² Pass kgCO ₂ /m² 15.26 -1.17 (-7.1%) kgCO ₂ /m² Pass kgCO ₂ /m² 15.26 -1.17 (-7.1%) kgCO ₂ /m² Pass kWh/m²/yr Dwelling Fabric Energy Efficiency (DFEE) 37.95 kWh/m²/yr Avwh/m²/yr Pass Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values Element Average Highest External wall 0.26 (max. 0.30) 0.27 (max. 0.70) Pass Party wall 0.00 (max. 0.20) - Openings 1.25 (max. 2.00) 1.30 (max. 3.30) Pass 2 Thermal bridging Thermal bridging calculated from linear thermal transmittances for each junction 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 Limiting System Efficiencies	Fuel for main heating		Mains ga	as			
Dwelling Carbon Dioxide Emission Rate (DER) 15.26 -1.17 (-7.1%) kgCO ₂ /m² kgCO ₂ /m² 1b TFEE and DFEE Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE) 37.95 kWh/m²/yr Pass Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values Element External wall 0.26 (max. 0.30) 0.27 (max. 0.70) Pass Party wall 0.00 (max. 0.20) - Openings 1.25 (max. 2.00) 1.30 (max. 3.30) Pass 2 Thermal bridging Thermal bridging calculated from linear thermal transmittances for each junction 3 Air permeability Air permeability at 50 pascals Maximum 10.0 m³/(h.m²) @ 50 Pa Pass Pass Limiting System Efficiencies	Fuel factor 1.00 (mains gas)						
Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE) Target Fabric Energy Efficiency (DFEE) 37.95 kWh/m²/yr -2.0 (-5.3%) Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values Element External wall 0.26 (max. 0.30) Party wall 0.00 (max. 0.20) - Openings 1.25 (max. 2.00) 1.30 (max. 3.30) Pass 2a Thermal bridging Thermal bridging Thermal bridging calculated from linear thermal transmittances for each junction 3 Air permeability Air permeability at 50 pascals Maximum 10.0 m³/(h.m²) @ 50 Pa Pass Limiting System Efficiencies	Target Carbon Dioxide Emission Rate	16.43 kgCO ₂ /m ²					
Target Fabric Energy Efficiency (TFEE) Target Fabric Energy Efficiency (DFEE) 37.95 kWh/m²/yr 35.87 kWh/m²/yr Pass Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values Element External wall 0.26 (max. 0.30) 0.27 (max. 0.70) Pass Party wall 0.00 (max. 0.20) - Openings 1.25 (max. 2.00) 1.30 (max. 3.30) Pass 2a Thermal bridging Thermal bridging Thermal bridging calculated from linear thermal transmittances for each junction 3 Air permeability Air permeability at 50 pascals Maximum 10.0 m³/(h.m²) @ 50 Pa Pass Limiting System Efficiencies	Dwelling Carbon Dioxide Emission Ra	te (DER)					Pass
Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE) 35.87 kWh/m²/yr -2.0 (-5.3%) Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values Element Average Highest External wall 0.26 (max. 0.30) 0.27 (max. 0.70) Pass Party wall 0.00 (max. 0.20) - Pass Openings 1.25 (max. 2.00) 1.30 (max. 3.30) Pass 2 Thermal bridging Thermal bridging Thermal bridging calculated from linear thermal transmittances for each junction 3 Air permeability Air permeability at 50 pascals Maximum 10.0 m³/(h.m²) @ 50 Pa Pass Limiting System Efficiencies			-1.17 (-7	.1%)		kgCO₂/m²	
Dwelling Fabric Energy Efficiency (DFEE) 35.87 kWh/m²/yr kWh/m²/yr Pass Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values Element Average Highest External wall 0.26 (max. 0.30) 0.27 (max. 0.70) Pass Party wall 0.00 (max. 0.20) - Pass Openings 1.25 (max. 2.00) 1.30 (max. 3.30) Pass 2 Thermal bridging Thermal bridging Thermal bridging calculated from linear thermal transmittances for each junction 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 Limiting System Efficiencies							
Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values Element Average Highest External wall 0.26 (max. 0.30) 0.27 (max. 0.70) Pass Party wall 0.00 (max. 0.20) - Pass Openings 1.25 (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 50 pascals Maximum 10.0 m³/(h.m²) @ 50 Pa Pass Limiting System Efficiencies							
Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values Element Average Highest External wall 0.26 (max. 0.30) 0.27 (max. 0.70) Pass Party wall 0.00 (max. 0.20) - Pass Openings 1.25 (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 5.01 (design value) m³/(h.m²) @ 50 Pa Maximum 10.0 m³/(h.m²) @ 50 Pa Pass Limiting System Efficiencies	Dwelling Fabric Energy Efficiency (DFI	EE)		20(1)			
Limiting Fabric Standards 2 Fabric U-values Element Average Highest External wall 0.26 (max. 0.30) 0.27 (max. 0.70) Pass Party wall 0.00 (max. 0.20) - Pass Openings 1.25 (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 5.01 (design value) m³/(h.m²) @ 50 Pa Maximum 10.0 m³/(h.m²) @ 50 Pa Pass Limiting System Efficiencies	Citation 2 House and down floathills		-2.0 (-5.3	3%)		Kvvn/m²/yr	Pass
Element Average Highest External wall 0.26 (max. 0.30) 0.27 (max. 0.70) Pass Party wall 0.00 (max. 0.20) - Pass Openings 1.25 (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 Maximum 5.01 (design value) m³/(h.m²) @ 50 Pa m³/(h.m²) @ 50 Pa Maximum 10.0 m³/(h.m²) @ 50 Pa Pass Limiting System Efficiencies							
Element External wall O.26 (max. 0.30) O.27 (max. 0.70) Pass Party wall O.00 (max. 0.20) Openings 1.25 (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 Maximum 10.0 Maximum 10.0 Mighest Pass Pass Pass Limiting System Efficiencies							
External wall O.26 (max. 0.30) Party wall O.00 (max. 0.20) Openings 1.25 (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 Maximum D.26 (max. 0.30) Pass 1.30 (max. 3.30)							
Party wall Openings 1.25 (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 Maximum 5.01 (design value) m³/(h.m²) @ 50 Pa Pass Limiting System Efficiencies			-		_		
Openings 1.25 (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 Maximum 10.0 m³/(h.m²) @ 50 Pa Pass Limiting System Efficiencies				0	0.27 (max. 0.7)	0)	
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) m³/(h.m²) @ 50 Pa Maximum 10.0 m³/(h.m²) @ 50 Pa Limiting System Efficiencies				-		2)	
Thermal bridging calculated from linear thermal transmittances for each junction 3 Air permeability Air permeability at 50 pascals Maximum 10.0 m³/(h.m²) @ 50 Pa Pass Limiting System Efficiencies		1.25 (max. 2.00)	1	30 (max. 3.3)	J)	Pass
Air permeability Air permeability at 50 pascals Maximum 5.01 (design value) 10.0 m³/(h.m²) @ 50 Pa Pass Limiting System Efficiencies		lines of					
Air permeability at 50 pascals Maximum 5.01 (design value) 10.0 m³/(h.m²) @ 50 Pa Pass Limiting System Efficiencies		linear thei	mai transmiti	cances for each ju	inction		
Maximum 10.0 m³/(h.m²) @ 50 Pa Pass Limiting System Efficiencies						2.44	
Limiting System Efficiencies							
			10.0			m³/(h.m²) @ 50 P	a Pass
4 Heating efficiency							
	4 Heating efficiency						

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



Regs Region: England Elmhurst Energy Systems SAP2012 Calculator (Design System) version 4.14r19

BUILDING REGULATION COMPLIANCE Calculation Type: New Build (As Designed)



Main heating system	Boiler system with radiators or underfloor - Mains & Data from database Ideal LOGIC COMBI ESP1 30 Combi boiler Efficiency: 89.6% SEDBUK2009 Minimum: 88.0%	gas Pass
Secondary heating system	None	
5 Cylinder insulation		
Hot water storage	No cylinder	
<u>6 Controls</u>		
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		
Continuous extract system (decentralised)		
Specific fan power	0.1800 0.1900	
Maximum	0.7	Pass
Criterion 3 – Limiting the effects of heat gains in sum	mer	
9 Summertime temperature		
Overheating risk (Thames Valley)	Not significant	Pass
Based on:		
Overshading	Average	
Windows facing South East	6.66 m², No overhang	
Windows facing South West	0.67 m², No overhang	
Windows facing North West	2.62 m ² , No overhang	
Air change rate	6.00 ach	
Blinds/curtains	None	
Criterion 4 – Building performance consistent with D	ER and DFEE rate	
Party Walls		
Туре	U-value	
Filled Cavity with Edge Sealing	0.00 W/m	n²K Pass
Air permeability and pressure testing		
3 Air permeability		
Air permeability at 50 pascals	5.01 (design value) m ³ /(h.m ²)	@ 50 Pa
Maximum		
10 Key features	10.0 $m^3/(h.m^2)$	@ J0 1 d 1 d J J
10 Key leatures	10.0 m-/(n.m-)	@ 301 a 1 u33
Party wall U-value Door U-value	0.00 W/m 1.00 W/m	n²K

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



Regs Region: England Elmhurst Energy Systems SAP2012 Calculator (Design System) version 4.14r19

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
Totals	£0	£0	B 85	B 89	



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



Regs Region: England Elmhurst Energy Systems SAP2012 Calculator (Design System) version 4.14r19