PREDICTED ENERGY ASSESSMENT

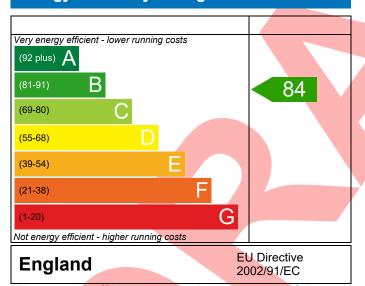


Plot 152, 2 Bed, K+B Dwelling type: Flat, Detached
Date of assessment: 22/09/2020
Produced by: Kieran Davies
Total floor area: 70.93 m²

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.

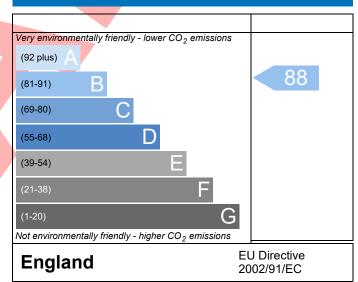
The energy performance has been assessed using the Government approved SAP2012 methodology and is rated in terms of the energy use per square meter of floor area; the energy efficiency is based on fuel costs and the environmental impact is based on carbon dioxide (CO₂) emissions.

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)



Property Property Property Plot 152, 2 Bed, K+B	Property Reference 4907-0012-4592-152				Issued on Date	22/09/2020
Property Plot 152, 2 Bed, K+B SAP Rating 84 B DER 15.81 TER 16.82 15.81 TER 16.82 15.81 TER 16.82			Pro	op Type Ref	Flat Type 27 1F	
SAP Rating Environmental 88 B W DER 15.81 TER 16.82 Environmental 88 B W DER <ter (t="" 40.18="" 41.77="" 5.98="" co2="" compliance="" dfee="" dfee<="" emissions="" general="" pass="" requirements="" td="" tfee="" w="" year)=""> Assessor ID T716-0001 Kieran.davies@aessc.co.uk Client South, Countryside NH & C 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 Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE) Target Fabric Energy Efficiency (DFEE) Limiting Fabric Standards 2 Fabric U-values</ter>						
Environmental 88 B % DER <ter %="" &="" (-6.0%)="" (as="" (der)="" (dfee)="" (t="" (ter)="" (tfee)="" -="" -1.01="" 0.98="" 01884="" 1="" 15.81="" 1a="" 1b="" 2="" 242050,="" 3.80="" 40.18="" 41.77="" 5.98="" achieving="" and="" assessor="" build="" c="" carbon="" client="" co2="" compliance="" countryside="" criterion="" data="" davies,="" der="" design="" designed)="" details="" dfee="" dfee<tfee="" dioxide="" dwelling="" efficiency="" emission="" emissions="" energy="" fabric="" factor="" flexibility="" for="" fuel="" general="" heating="" input="" kgco2="" kieran="" kieran.davies@aessc.co.uk="" kwh="" limiting="" limits="" main="" mr.="" m²="" new="" nh="" on="" pass="" rate="" requirements="" south,="" standards="" sumary="" target="" tel:="" ter="" tfee="" th="" the="" u-values<="" year)="" yr=""><th></th><th></th><th></th><th>1</th><th></th><th></th></ter>				1		
CO2 Emissions (t/year) General Requirements Compliance Pass ** DFEE 3.80 Assessor Details Mr. Kieran Davies, Kieran Davies, , Tel: 01884 242050, Kieran.davies@aessc.co.uk Client South, Countryside NH & C 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 Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE) Target Fabric Energy Efficiency (DFEE) Criterion 2 - Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values				15.81		16.82
General Requirements Compliance Pass Mr. Kieran Davies, Kieran Davies , Tel: 01884 242050, Kieran.davies@aessc.co.uk Client South, Countryside NH & C 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 Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE) Criterion 2 - Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values				10.10	_	44.77
Assessor Details Mr. Kieran Davies, Kieran Davies , Tel: 01884 242050, Kieran.davies@aessc.co.uk Client South, Countryside NH & C 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 Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE) Augusta 1.00 (Mains gas) 4.77 4.70 4.70 4.77 5.70 6.70 7.70 8.70				40.18		41.//
Kieran.davies@aessc.co.uk South, Countryside NH & C 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) 16.82 kgCO ₂ /m² pass -1.01 (-6.0%) kgCO ₂ /m² Pass 1b TFEE and DFEE Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE) 41.77 kWh/m²/yr Jumiting Fabric Standards 2 Fabric U-values						
Client South, Countryside NH & C 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 Fue		ies , Tel: 0188	4 242050,		Assessor ID	T716-0001
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 Fu						
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) 15.81 Fuel factor 1.00 (mains gas) 15.81 Fuel factor Fuel factor 1.00 (mains gas) Fuel factor Fuel factor Fuel factor 1.00 (mains gas) Fuel factor Fuel facto		: d\				
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) Criterion 2 – Limits on design flexibility Mains gas Mains gas 1.00 (mains gas) 16.82 kgCO ₂ /m² Pass kgCO ₂ /m² Pass kgCO ₂ /m² 41.77 kWh/m²/yr 40.18 kWh/m²/yr Pass Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values	·	ignea)				
Fuel for main heating Fuel factor Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER) 15.81 Location Carbon Dioxide Emission Rate (DER) Location Carbon Dioxide Emission Rate (DER) 15.81 Location Carbon Dioxide Emission Rate (DER) Location Carbon Dioxide Emission Rat	•					
Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER) 16.82 Section 1.00 (mains gas) Section 1.00 (mains gas)		24				_
Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER) 15.81 Limiting Fabric Standards 16.82 Liniting Fabric Standards 15.81 Liniting Fabric Standards	9					
Dwelling Carbon Dioxide Emission Rate (DER) 15.81			ins gas)		kgCO /m²	
Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE) Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values						Pacc
1b TFEE and DFEE Target Fabric Energy Efficiency (TFEE) Dwelling Fabric Energy Efficiency (DFEE) 41.77 40.18 kWh/m²/yr kWh/m²/yr Fass Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values	bwelling earbori bloxide Ellission Rate (bER)		0%)			1 433
Dwelling Fabric Energy Efficiency (DFEE) 40.18 -1.6 (-3.8%) Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values	1b TFEE and DFEE	1.02 (0.	0.01			
-1.6 (-3.8%) kWh/m²/yr Pass Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values	Target Fabric Energy Efficiency (TFEE)	41.77			kWh/m²/yr	
Criterion 2 – Limits on design flexibility Limiting Fabric Standards 2 Fabric U-values	Dwelling Fabric Energy Efficiency (DFEE)	40.18	7	7	kWh/m²/yr	
Limiting Fabric Standards 2 Fabric U-values		-1.6 (-3.8	%)		kWh/m²/yr	Pass
2 Fabric U-values	Criterion 2 – Limits on design flexibility					
	Limiting Fabric Standards					
Flement Average Highest	2 Fabric U-values					
There's There's	Element Avera	ge	Hi	ighest		
External wall 0.17 (max. 0.30) 0.18 (max. 0.70) Pass	External wall 0.17 (max. 0.30)	0.	.18 (max. 0.70))	Pass
Party wall 0.00 (max. 0.20) - Pass	Party wall 0.00 (max. 0.20)	-			Pass
Openings 1.25 (max. 2.00) 1.63 (max. 3.30) Pass	Openings 1.25 (max. 2.00)	1.	.63 (max. 3.30))	Pass
2a Thermal bridging						
Thermal bridging calculated from linear thermal transmittances for each junction		mal transmitt	ances for each jur	nction		
3 Air permeability						
		5.00 (design value)			. , , , -	
Maximum 10.0 m³/(h.m²) @ 50 Pa Pass		10.0			m ³ /(h.m ²) @ 50 Pa	Pass
Limiting System Efficiencies						
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.



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



Main heating system	Boiler system with radiators or underfloor - Mains gas	Pass
	Data from database	
	Potterton ASSURE 36 COMBI	
	Combi boiler	
	Efficiency: 89.0% SEDBUK2009	
	Minimum: 88.0%	
Secondary heating system	None	
5 Cylinder insulation		
Hot water storage	No cylinder	
<u>6 Controls</u>		
Space heating controls	Time and temperature zone control	Pass
Hot water controls	No cylinder	
Boiler interlock	Yes	Pass
7 Low energy lights	163	1 433
	100 %	
Percentage of fixed lights with low-energy fittings	100 %	
Minimum	75 %	Pass
8 Mechanical ventilation	7.5	1 433
Continuous extract system (decentralised)		
Specific fan power	0.1900 0.1800	\neg
Maximum	0.7	Pass
		Pass
Criterion 3 – Limiting the effects of heat gains in sur	mmer	
9 Summertime temperature		
Overheating risk (South East England)	Slight	Pass
	Slìght	Pass
Overheating risk (South East England)	Slight	Pass
Overheating risk (South East England) Based on:		Pass
Overheating risk (South East England) Based on: Overshading	Average	Pass
Overheating risk (South East England) Based on: Overshading Windows facing South	Average 9.30 m², Overhang twice as wide as window, ratio 0.85	Pass
Overheating risk (South East England) Based on: Overshading Windows facing South Windows facing West	Average 9.30 m², Overhang twice as wide as window, ratio 0.85 7.18 m², No overhang	Pass
Overheating risk (South East England) Based on: Overshading Windows facing South Windows facing West Air change rate	Average 9.30 m², Overhang twice as wide as window, ratio 0.85 7.18 m², No overhang 4.00 ach None	Pass
Overheating risk (South East England) Based on: Overshading Windows facing South Windows facing West Air change rate Blinds/curtains	Average 9.30 m², Overhang twice as wide as window, ratio 0.85 7.18 m², No overhang 4.00 ach None	Pass
Overheating risk (South East England) Based on: Overshading Windows facing South Windows facing West Air change rate Blinds/curtains Criterion 4 – Building performance consistent with	Average 9.30 m², Overhang twice as wide as window, ratio 0.85 7.18 m², No overhang 4.00 ach None	Pass
Overheating risk (South East England) Based on: Overshading Windows facing South Windows facing West Air change rate Blinds/curtains Criterion 4 – Building performance consistent with I	Average 9.30 m², Overhang twice as wide as window, ratio 0.85 7.18 m², No overhang 4.00 ach None DER and DFEE rate	Pass
Overheating risk (South East England) Based on: Overshading Windows facing South Windows facing West Air change rate Blinds/curtains Criterion 4 – Building performance consistent with I	Average 9.30 m², Overhang twice as wide as window, ratio 0.85 7.18 m², No overhang 4.00 ach None DER and DFEE rate U-value	
Overheating risk (South East England) Based on: Overshading Windows facing South Windows facing West Air change rate Blinds/curtains Criterion 4 – Building performance consistent with Party Walls Type	Average 9.30 m², Overhang twice as wide as window, ratio 0.85 7.18 m², No overhang 4.00 ach None DER and DFEE rate U-value	
Overheating risk (South East England) Based on: Overshading Windows facing South Windows facing West Air change rate Blinds/curtains Criterion 4 – Building performance consistent with Party Walls Type Air permeability and pressure testing	Average 9.30 m², Overhang twice as wide as window, ratio 0.85 7.18 m², No overhang 4.00 ach None DER and DFEE rate U-value	
Overheating risk (South East England) Based on: Overshading Windows facing South Windows facing West Air change rate Blinds/curtains Criterion 4 – Building performance consistent with Party Walls Type Air permeability and pressure testing 3 Air permeability	Average 9.30 m², Overhang twice as wide as window, ratio 0.85 7.18 m², No overhang 4.00 ach None DER and DFEE rate U-value W/m²K	
Overheating risk (South East England) Based on: Overshading Windows facing South Windows facing West Air change rate Blinds/curtains Criterion 4 – Building performance consistent with Party Walls Type Air permeability and pressure testing 3 Air permeability Air permeability at 50 pascals	Average 9.30 m², Overhang twice as wide as window, ratio 0.85 7.18 m², No overhang 4.00 ach None DER and DFEE rate U-value W/m²K 5.00 (design value) m³/(h.m²) @ 50 Pa	Pass
Overheating risk (South East England) Based on: Overshading Windows facing South Windows facing West Air change rate Blinds/curtains Criterion 4 – Building performance consistent with Party Walls Type Air permeability and pressure testing 3 Air permeability Air permeability at 50 pascals Maximum 10 Key features	Average 9.30 m², Overhang twice as wide as window, ratio 0.85 7.18 m², No overhang 4.00 ach None DER and DFEE rate U-value W/m²K 5.00 (design value) m³/(h.m²) @ 50 Pa	Pass
Overheating risk (South East England) Based on: Overshading Windows facing South Windows facing West Air change rate Blinds/curtains Criterion 4 – Building performance consistent with Party Walls Type Air permeability and pressure testing 3 Air permeability Air permeability at 50 pascals Maximum 10 Key features Party wall U-value	Average 9.30 m², Overhang twice as wide as window, ratio 0.85 7.18 m², No overhang 4.00 ach None	Pass
Overheating risk (South East England) Based on: Overshading Windows facing South Windows facing West Air change rate Blinds/curtains Criterion 4 – Building performance consistent with Party Walls Type Air permeability and pressure testing 3 Air permeability Air permeability at 50 pascals Maximum 10 Key features	Average 9.30 m², Overhang twice as wide as window, ratio 0.85 7.18 m², No overhang 4.00 ach None DER and DFEE rate U-value W/m²K 5.00 (design value) m³/(h.m²) @ 50 Pa 10.0 m³/(h.m²) @ 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.

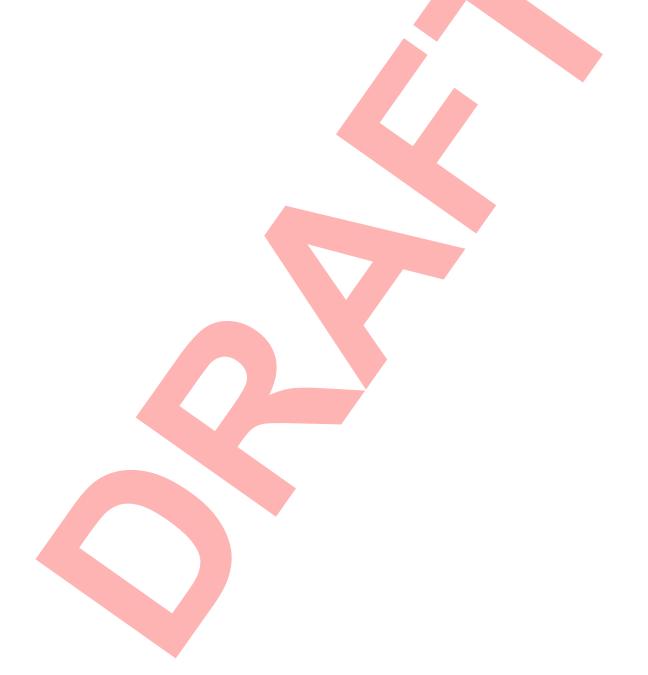


Regs Region: England Elmhurst Energy Systems SAP2012 Calculator (Design System) version 4.12r02

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 84	B 88	



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

