#### PREDICTED ENERGY ASSESSMENT



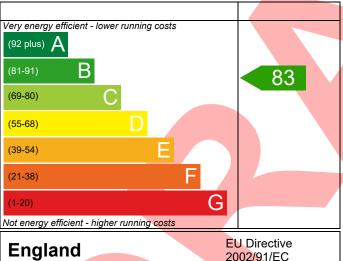
K, WC, 1B, 1Ba Dwelling type: Flat, End-Terrace

Date of assessment: 15/10/2020
Produced by: Ross Elliott
Total floor area: 51.09 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.

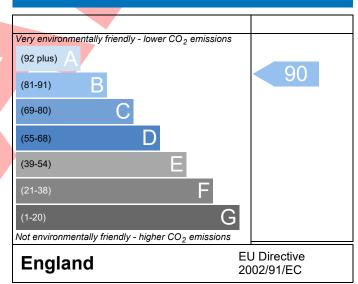
The energy performance has been assessed using the Government approved SAP2012 methodology and is rated in terms of the energy use per square meter of floor area; the energy efficiency is based on fuel costs and the environmental impact is based on carbon dioxide (CO<sub>2</sub>) emissions.

### 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 (CO<sub>2</sub>) Rating



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 4907-0025-4352	-240				Issued on Date	15/10/2020	
Assessment Plot 240			P	rop Type Ref	2FF End V1 (As)		
Reference K, WC, 1B, 1Ba							
			1				
SAP Rating		83 B	DER	16.40	TER	19.23	
Environmental		90 B	% DER <ter< td=""><td>40,02</td><td>14.71</td><td>45.44</td></ter<>	40,02	14.71	45.44	
CO <sub>2</sub> Emissions (t/year)		0.68	DFEE OF DEEE OF TEEE	49.03	TFEE	46.14	
General Requirements Compliance Fail % DFEE <tfee -6.26<="" td=""></tfee>							
	Mr. Andrew McManus, Andrew McManus, Tel: 01455 883250, andrew.mcmanus@aessc.co.uk						
Client	dessc.co.u	K					
	-1 /A - D:	1\					
SUMARY FOR INPUT DATA FOR New Buil		gnea)					
Criterion 1 – Achieving the TER and TFEE	rate						
1a TER and DER						_	
Fuel for main heating		Mains ga				=	
Fuel factor	/TED\	1.00 (ma	ains gas)		kgCO /m²		
Target Carbon Dioxide Emission Rate ( Dwelling Carbon Dioxide Emission Rat		16.40			kgCO₂/m² kgCO₂/m²	Pass	
Dwelling Carbon Dioxide Linission Nat	e (DLN)	-2.83 (-1	4 7%)		kgCO <sub>2</sub> /m <sup>2</sup>	Fass	
1b TFEE and DFEE		2.03 ( 1	4.770)		1,8002/111		
Target Fabric Energy Efficiency (TFEE)		46.14			kWh/m²/yr		
Dwelling Fabric Energy Efficiency (DFE	E)	49.03	7		kWh/m²/yr		
Excess energy		2.9 (6.3%	6)		kWh/m²/yr	Fail	
Criterion 2 – Limits on design flexibility							
Limiting Fabric Standards							
2 Fabric U-values							
Element	Avera	ge	ı	Highest			
External wall	0.22 (r	max. 0.30)	(	0.28 (max. 0.7	0)	Pass	
Party wall	0.00 (r	max. 0.20)		-		Pass	
Openings	1.22 (r	nax. 2.00)	=	1.36 (max. 3.3	0)	Pass	
2a Thermal bridging							
Thermal bridging calculated from I	inear ther	nal transmitt	tances for each ju	unction			
3 Air permeability							
Air permeability at 50 pascals		4.00 (de	sign value)		m³/(h.m²) @ 50 Pa		
Maximum		10.0			m³/(h.m²) @ 50 Pa	Pass	
Limiting System Efficiencies							
4 Heating efficiency							

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



Secondary heating system None  5 Cylinder insulation Hot water storage  6 Controls  Space heating controls Hot water controls Boiler interlock Yes Percentage of fixed lights with low-energy fittings Minimum Percentage of fixed lights with low-energy fittings Security Minimum Percentage of fixed lights with low-energy fittings Security Minimum Percentage of fixed lights with low-energy fittings Percentage of fixed lights with l	Main heating system	Boiler system with radiators or underfloor - Ma Data from database Vaillant ecoFIT sustain 830 VUW 306/6-3 (H-GB Combi boiler Efficiency: 89.3% SEDBUK2009 Minimum: 88.0%		
Hot water storage	Secondary heating system			
Space heating controls   Time and temperature zone control   Pass   Hot water controls   No cylinder	5 Cylinder insulation			
Space heating controls Hot water controls Boiler interlock Yes Pess  7 Low energy lights Percentage of fixed lights with low-energy fittings Minimum 75 8 Mechanical ventilation Continuous extract system Specific fan power Specific fan power Specific fan power Outrion 3 - Limiting the effects of heat gains in summer  9 Summertime temperature Overheating risk (Thames Valley) Slight Pass Based on: Overshading Windows facing North East Air change rate Blinds/curtains Criterion 4 - Building performance consistent with DER and DFEE rate  Party Walls Type U-value Filled Cavity with Edge Sealing Solid Wall Air permeability and pressure testing 3 Air permeability and pressure testing 10 None  10 Key features Party wall U-value	Hot water storage	No cylinder		
Space heating controls Hot water controls Boiler interlock Yes Pess  7 Low energy lights Percentage of fixed lights with low-energy fittings Minimum 75 8 Mechanical ventilation Continuous extract system Specific fan power Specific fan power Specific fan power Outrion 3 - Limiting the effects of heat gains in summer  9 Summertime temperature Overheating risk (Thames Valley) Slight Pass Based on: Overshading Windows facing North East Air change rate Blinds/curtains Criterion 4 - Building performance consistent with DER and DFEE rate  Party Walls Type U-value Filled Cavity with Edge Sealing Solid Wall Air permeability and pressure testing 3 Air permeability and pressure testing 10 None  10 Key features Party wall U-value	6 Controls			
Hot water controls Boiler interlock Yes Pass  Z Low energy lights  Percentage of fixed lights with low-energy fittings Minimum 75 % Pass  8 Mechanical ventilation Continuous extract system Specific fan power Maximum 0.7 Pass  Criterion 3 – Limiting the effects of heat gains in summer  9 Summertime temperature Overheating risk (Thames Valley) Based on: Overshading Windows facing North East Windows facing South East Air change rate Blinds/curtains None  Criterion 4 – Building performance consistent with DER and DFEE rate  Party Walls Type U-value Filled Cavity with Edge Sealing Solid Wall 0.00 W/m²K Pass  Air permeability and pressure testing 3 Air permeability and pressure testing 3 Air permeability and pressure testing 10 Key features Party wall U-value O.00 W/m²K Pass  10 Key features Party wall U-value Party wall U-value Party wall U-value O.00 W/m²K Pass  10 Key features Party wall U-value O.00 W/m²K Pass Party wall U-value O.00 W/m²K Pass Party wall U-value O.00 W/m²K Pass		Time and temperature zone control	Pass	
7 Low energy lights  Percentage of fixed lights with low-energy fittings  Minimum 75 % % Pass  8 Mechanical ventilation  Continuous extract system Specific fan power 0.17 Maximum 0.7 Pass  Criterion 3 – Limiting the effects of heat gains in summer  9 Summertime temperature  Overshading Average Windows facing North East 9.76 m², No overhang Windows facing South East 1.18 m², No overhang Windows facing South East 4.00 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/m²k Pass Solid Wall 0.00 W/m²k Pass  Air permeability and pressure testing  3 Air permeability and pressure testing  Air permeability and	-			
Percentage of fixed lights with low-energy fittings Minimum 75 % 9% Pass  8 Mechanical ventilation Continuous extract system Specific fan power Maximum 0.7 Pass  Criterion 3 – Limiting the effects of heat gains in summer  9 Summertime temperature Overheating risk (Thames Valley) Based on: Overshading Windows facing North East Windows facing South East Air change rate Blinds/curtains  Criterion 4 – Building performance consistent with DER and DFEE rate  Party Walls Type U-value Filled Cavity with Edge Sealing Solid Wall O.00 W/m²K Pass Air permeability Air permeability and pressure testing 3 Air permeability Air permeability and pressure testing 3 Air permeability Air permeability and pressure testing 10.00 My²K Pass 10 Key features Party wall U-value O.00 W/m²K W/m²K Party wall U-value O.00 W/m²K W/m²K W/m²K	Boiler interlock		Pass	
fittings Minimum 75 Minimum 75 Mechanical ventilation  Continuous extract system Specific fan power Maximum 0:7 Maximum 0:7 Pass  Criterion 3 - Limiting the effects of heat gains in summer  9 Summertime temperature Overheating risk (Thames Valley) Based on: Overshading Windows facing North East Windows facing North East 2.18 m², Overhang Windows facing South East 2.18 m², Overhang width less than twice window, ratio 0.55 Air change rate Blinds/curtains None  Criterion 4 - Building performance consistent with DER and DFEE rate  Party Walls Type U-value Filled Cavifty with Edge Sealing 0.00 W/m²k Pass Solid Wall 0.00 W/m²k Pass Air permeability and pressure testing 3 Air permeability and pressure testing 3 Air permeability and pressure testing 10.00 Maximum 10.0 Maximum 10.0 Mym²k Pass 10 Key features Party wall U-value Party wall U-value 0.00 W/m²k	7 Low energy lights			
8 Mechanical ventilation Continuous extract system Specific fan power Maximum  0.7  Pass  Criterion 3 - Limiting the effects of heat gains in summer  9 Summertime temperature Overheating risk (Thames Valley) Based on: Overshading Windows facing North East Windows facing South East Windows facing South East Air change rate Blinds/curtains  Criterion 4 - Building performance consistent with DER and DFEE rate  Party Walls Type U-value Filled Cavity with Edge Sealing Solid Wall  Air permeability Ai		100	%	
Continuous extract system Specific fan power Maximum  0.7  Maximum  0.7  Pass  Criterion 3 - Limiting the effects of heat gains in summer  9 Summertime temperature  Overheating risk (Thames Valley)  Based on:  Overshading Windows facing North East Windows facing South East Windows facing South East Air change rate Blinds/curtains  None  Criterion 4 - Building performance consistent with DER and DFEE rate  Party Walls  Type U-value  Filled Cavity with Edge Sealing Solid Wall  Air permeability and pressure testing 3 Air permeability Air permeability Air permeability Air permeability Air permeability Air permeability at 50 pascals Maximum  10.0  0.00  W/m²K Pass  10 Key features Party wall U-value  0.00  W/m²K Pass  10 Key features Party wall U-value  0.00  W/m²K	Minimum	75	% Pass	
Specific fan power Maximum  0.7  Maximum  0.7  Pass  Criterion 3 - Limiting the effects of heat gains in summer  9 Summertime temperature  Overheating risk (Thames Valley)  Based on:  Overshading Windows facing North East Windows facing South East Air change rate Blinds/curtains  Criterion 4 - Building performance consistent with DER and DFEE rate  Party Walls  Type U-value Filled Cavity with Edge Sealing Solid Wall  0.00  W/m²K Pass  Air permeability at 50 pascals Maximum  10.00  M/m²K Pass  10 Key features  Party wall U-value  Party wall U-value  0.00  W/m²K Pass  10 Key features  Party wall U-value  0.00  W/m²K Pass  10 Key features  Party wall U-value  0.00  W/m²K Pass  10 Key features  Party wall U-value  0.00  W/m²K Pass  10 Key features  Party wall U-value  0.00  W/m²K Pass	8 Mechanical ventilation			
Criterion 3 – Limiting the effects of heat gains in summer  9 Summertime temperature Overheating risk (Thames Valley)  Based on: Overshading Windows facing North East Windows facing South East Windows facing South East Air change rate Blinds/curtains  Criterion 4 – Building performance consistent with DER and DFEE rate  Party Walls  Type U-value Filled Cavity with Edge Sealing Solid Wall  Air permeability Air permeability Air permeability Air permeability at 50 pascals Maximum  10.00  Mym²k Pass  10 Key features  Party Wall U-value  Party wall U-value  D.00  W/m²k Pass  10 Key features  Party wall U-value D.00  W/m²k Pass  W/m²k Pass  Party wall U-value D.00  W/m²k Pass  W/m²k Pass  W/m²k Pass  W/m²k Pass	Continuous extract system			
Criterion 3 — Limiting the effects of heat gains in summer  9 Summertime temperature  Overheating risk (Thames Valley)  Based on:  Overshading  Windows facing North East  Windows facing South East  Air change rate  Blinds/curtains  Criterion 4 — Building performance consistent with DER and DFEE rate  Party Walls  Type  U-value  Filled Cavity with Edge Sealing  Solid Wall  O.00  W/m²K  Pass  Air permeability and pressure testing  3 Air permeability  Air permeability at 50 pascals  Maximum  10.0  Mym²K  Pass  10 Key features  Party wall U-value  O.00  W/m²K  Pass  Party wall U-value  O.00  W/m²K  Pass	Specific fan power	0.17		
9 Summertime temperature Overheating risk (Thames Valley) Based on: Overshading Windows facing North East Windows facing South East Air change rate Blinds/curtains  Criterion 4 – Building performance consistent with DER and DFEE rate  Party Walls  Type U-value Filled Cavity with Edge Sealing Solid Wall O.00 W/m²K Pass  Air permeability Air permeability Air permeability Air permeability at 50 pascals Maximum Minum Min	Maximum	0.7	Pass	
Overheating risk (Thames Valley)  Based on:  Overshading Windows facing North East Windows facing South East Air change rate Blinds/curtains  Criterion 4 — Building performance consistent with DER and DFEE rate  Party Walls  Type Filled Cavity with Edge Sealing Solid Wall Air permeability and pressure testing  3 Air permeability and pressure testing Maximum  10.0  Uw/m²K Pass  10.0  W/m²K Pass  Pass  10.00  W/m²K Pass	Criterion 3 – Limiting the effects of heat gains in sur	mmer		
Based on:  Overshading Windows facing North East Windows facing South East Air change rate Blinds/curtains  Criterion 4 – Building performance consistent with DER and DFEE rate  Party Walls  Type U-value Filled Cavity with Edge Sealing Solid Wall Air permeability and pressure testing 3 Air permeability Air permeability at 50 pascals Maximum Mone  10.00 Mym²K Pass  4.00 (design value) Maximum Maximum Mone  D-76 m², No overhang Mone Mone  10.00 ach Mone  D-76 m², No overhang Mone Mone  10.00 Mone Mone  D-76 m², No overhang Mone Mone Mone  10.00 Mone Mone Mone Mone Mone Mone Mone Mone	9 Summertime temperature			
Overshading Windows facing North East Windows facing South East Windows facing South East Air change rate Blinds/curtains  Criterion 4 – Building performance consistent with DER and DFEE rate  Party Walls  Type U-value Filled Cavity with Edge Sealing Solid Wall 0.00 W/m²K Pass  Air permeability and pressure testing 3 Air permeability Air permeability at 50 pascals Maximum  10.0  Maximum  Maximum  Maximum  Double  Mym²K Pass  10 Key features Party wall U-value  0.00 W/m²K Pass  W/m²K Pass  W/m²K Pass	Overheating risk (Thames Valley)	Slight	Pass	
Windows facing North East Windows facing South East Air change rate Blinds/curtains  Criterion 4 – Building performance consistent with DER and DFEE rate  Party Walls  Type U-value Filled Cavity with Edge Sealing Solid Wall O.00 W/m²K Pass  Air permeability and pressure testing 3 Air permeability Air permeability at 50 pascals Maximum Maximum Maximum Maximum Maximum Maximum Mym²K Mym²K Maximum M	Based on:			
Windows facing South East Air change rate Blinds/curtains  None  Criterion 4 – Building performance consistent with DER and DFEE rate  Party Walls  Type U-value Filled Cavity with Edge Sealing Solid Wall  O.00 W/m²K Pass  Air permeability and pressure testing  Air permeability Air permeability at 50 pascals Maximum  10.0  Maximum  10.0  Mym²K  Pass  10 Key features  Party wall U-value  O.00  W/m²K  Pass  Party wall U-value  O.00  W/m²K  Pass  Party wall U-value  O.00  W/m²K  W/m²K	_			
Air change rate 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/m²K Pass  Solid Wall 0.00 W/m²K Pass  Air permeability and pressure testing  3 Air permeability Air permeability at 50 pascals Maximum 10.0 Maximum 10.0 Maximum 10.0 Mym²K Pass  10 Key features  Party wall U-value 0.00 W/m²K  W/m²K	9	<u> </u>	***** 0.55	
Criterion 4 – Building performance consistent with DER and DFEE rate  Party Walls  Type  Filled Cavity with Edge Sealing  Solid Wall  Air permeability and pressure testing  3 Air permeability  Air permeability at 50 pascals  Maximum  Max			w, ratio 0.55	
Criterion 4 – Building performance consistent with DER and DFEE rate  Party Walls  Type  U-value  Filled Cavity with Edge Sealing  0.00  W/m²K  Pass  Air permeability and pressure testing  3 Air permeability  Air permeability at 50 pascals  Maximum  10.0  M³/(h.m²) @ 50 Pa  Pass  Party wall U-value  0.00  W/m²K  W/m²K  Pass  Party wall U-value  0.00  W/m²K  W/m²K				
Party Walls  Type  Filled Cavity with Edge Sealing  0.00  W/m²K  Pass  Solid Wall  0.00  W/m²K  Pass  Air permeability and pressure testing  3 Air permeability  Air permeability at 50 pascals  Maximum  10.0  M³/(h.m²) @ 50 Pa  Pass  10 Key features  Party wall U-value  0.00  W/m²K  W/m²K				
Type  Filled Cavity with Edge Sealing  0.00  W/m²K  Pass  Solid Wall  Air permeability and pressure testing  3 Air permeability  Air permeability at 50 pascals  Maximum  10.0  M/m²K  Pass  10 Key features  Party wall U-value  0.00  W/m²K  Pass  V/m²K  Pass  Party wall U-value  0.00  W/m²K  W/m²K		DEN AND DEEL FACE		
Filled Cavity with Edge Sealing  0.00  W/m²K  Pass  Air permeability and pressure testing  3 Air permeability  Air permeability at 50 pascals  Maximum  10.0  M/m²K  Pass  4.00 (design value)  m³/(h.m²) @ 50 Pa  m³/(h.m²) @ 50 Pa  Pass  10 Key features  Party wall U-value  0.00  W/m²K  Party wall U-value  0.00  W/m²K		Hyalua		
Solid Wall  O.00  W/m²K  Pass  Air permeability and pressure testing  3 Air permeability  Air permeability at 50 pascals  Maximum  10.0  M³/(h.m²) @ 50 Pa  Pass  10 Key features  Party wall U-value  O.00  W/m²K  W/m²K  W/m²K			M/m²K Pass	
Air permeability  Air permeability  Air permeability at 50 pascals  Maximum  10.0  Maximum  M	, ,			
Air permeability  Air permeability at 50 pascals  Maximum  10.0  M³/(h.m²) @ 50 Pa  Pass  10 Key features  Party wall U-value  Party wall U-value  0.00  W/m²K  Party wall U-value		0.00	1 d33	
Air permeability at 50 pascals       4.00 (design value)       m³/(h.m²) @ 50 Pa         Maximum       10.0       m³/(h.m²) @ 50 Pa       Pass         10 Key features       0.00       W/m²K         Party wall U-value       0.00       W/m²K         Vy/m²K       0.00       W/m²K				
Maximum         10.0         m³/(h.m²) @ 50 Pa         Pass           10 Key features         0.00         W/m²K           Party wall U-value         0.00         W/m²K           Party wall U-value         0.00         W/m²K		4 00 (design value) m <sup>3</sup> /(h r	m²) @ 50 Pa	
Party wall U-value  Party wall U-value  0.00  W/m²K  0.00  W/m²K				
Party wall U-value 0.00 W/m²K Party wall U-value 0.00 W/m²K			, 0 00	
Party wall U-value 0.00 W/m²K		0.00	W/m²K	
			•	
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Regs Region: England Elmhurst Energy Systems SAP2012 Calculator (Design System) version 4.14r10

### **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 83	B 90	



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