Land and Buildings at Red House Farm, Priory Road, Fressingfield, Suffolk

ENERGY ASSESSMENT REPORTS PLOTS 1-14

Condition 13: Ref: DC/20/0347 (reserved Matters application relating to Hybrid Permission 4410/16

Studio 303 Ltd 2nd January 2024

Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Thu 12 Oct 2023 14:47:41

Project Information					
Assessed By	Alexandru Ardelean	Building Type	House, Semi-detached		
OCDEA Registration	EES/022722	Assessment Date	2023-10-12		

Dwelling Details					
Assessment Type	As designed	Total Floor Area	90 m ²		
Site Reference	Plot 10	Plot Reference	001		
Address	Plot 1 Priory Road, Fressingfie	ld			

Client Details	
Name	Paul Sweeney
Company	studio303
Address	Priory Road, Fressingfield, IP21 5PH

1a Target emission rate and dwelling emission rate					
Fuel for main heating system	Electricity				
Target carbon dioxide emission rate	11.44 kgCO ₂ /m ²				
Dwelling carbon dioxide emission rate	4.37 kgCO ₂ /m ²	OK			
1b Target primary energy rate and dwelling primary energy					
Target primary energy	59.8 kWh _{PE} /m ²				
Dwelling primary energy	45.61 kWh _{PE} /m ²	OK			
1c Target fabric energy efficiency and dwelling fabric energy efficiency					
Target fabric energy efficiency	42.2 kWh/m ²				
Dwelling fabric energy efficiency	41.6 kWh/m ²	OK			

2a Fabric U-values						
Element	Maximum permitted	Dwelling average U-Value	Element with highest			
	average U-Value [W/m ² K]	[W/m ² K]	individual U-Value			
External walls	0.26	0.15	Walls (1) (0.15)	OK		
Party walls	0.2	0	Party Wall (1) (0)	N/A		
Curtain walls	1.6	0	N/A	N/A		
Floors	0.18	0.08	Heatloss Floor 1 (0.08)	OK		
Roofs	0.16	0.12	Roof (1) (0.12)	ОК		
Windows, doors,	1.6	1.49	Folding Door (1.6)	ОК		
and roof windows						
Rooflights	2.2	N/A	N/A	N/A		

2b Envelope elements (better than typically expected values are flagged with a subsequent (!))					
Name	Net area [m ²]	U-Value [W/m ² K]			
Exposed wall: Walls (1)	60	0.15			
Exposed wall: Walls (2)	27.39	0.14 (!)			
Party wall: Party Wall (1)	37.54	0 (!)			
Ground floor: Heatloss Floor 1, Heatloss Floor 1	52.24	0.08 (!)			
Exposed roof: Roof (1)	52.24	0.12			

2c Openings (better than typically expected values are flagged with a subsequent (!))					
Name	Area [m ²]	Orientation	Frame factor	U-Value [W/m ² K]	
Windows-front, Window	7.05	South	0.7	1.4	
Door-entrance, Door	2.14	South	N/A	1.4	
Windows-rear, Window	3.2	North	0.7	1.4	
Folding Door, Folding Door	10	North	0.7	1.6	

2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))					
Building part 1 - I	Main Dwelling: Thermal bridging ca	Iculated from linear thermal transmit	tances for each ju	nction	
Main element	Vain element Junction detail Source Psi value Drawing /				
			[W/mK]	reference	
External wall	E2: Other lintels (including other	Not government-approved	0.222	RCD	
	steel lintels)	scheme			

Main element	Junction detail		Source	Psi value [W/mK]	Drawing / reference
External wall	E3: Sill		Not government-approved scheme	0.023 (!)	RCD
External wall	E4: Jamb		Not government-approved scheme	0.018 (!)	RCD
External wall	E5: Ground floor (normal)		Not government-approved scheme	0.044	RCD
External wall	E10: Eaves (insulation at cei level)	ling	Not government-approved scheme	0.054	RCD
External wall	E12: Gable (insulation at cei level)	ling	Not government-approved scheme	0.027 (!)	RCD
External wall	E16: Corner (normal)		Not government-approved scheme	0.031 (!)	RCD
External wall	E6: Intermediate floor within dwelling	а	Not government-approved scheme	0 (!)	RCD
External wall	E18: Party wall between dwe	ellings	Not government-approved scheme	0.046	RCD
Party wall	P1: Ground floor		Not government-approved scheme	0.172	RCD
Party wall	P2: Intermediate floor within dwelling	а	SAP table default	0 (!)	
Party wall	P4: Roof (insulation at ceiling level)	g	Not government-approved scheme	0.19	RCD
External wall	E24: Eaves (insulation at cei level - inverted)	ling	SAP table default	0.15	
3 Air permeabili	ty (better than typically exp	ected	values are flagged with a subs	equent (!))	
Maximum permit	ted air permeability at 50Pa	00100	$8 m^3/hm^2$		
Dwelling air perm	peability at 50Pa		5 m ³ /bm ² Design value		OK
Air permeability to	est certificate reference				OR
, pooao					
4 Space heating					
Main heating sy	stem 1: Heat pump with radia	ators o	r underfloor heating - Electricity		
Efficiency	260.	0%			
Emitter type	Both	radiat	ors and underfloor		
Flow temperature	e 55°C)			
System type	Heat	Pump			
Manufacturer	Vanutacturer Vaillant Gr		oup UK Ltd		
Model	arol	HERN	I plus 3.5kW + AI-Not valid		
Commissioning					
Secondary neat					
Fuel	N/A				
Commissioning	IN/A				
Commissioning					
5 Hot water					
Cylinder/store -	type: Cylinder				
Capacity	150	litres	-		
Declared heat los	ss 1.88	kWh/c	lay		
Primary pipework	cinsulated Yes				
Manufacturer					
Waste water heat recovery system 1 - type: N/A					
Efficiency	a recovery system 1 - type.	IN/A			
Manufacturer					
Model					
6 Controls					
Main heating 1 -	type: Time and temperature	zone o	control by arrangement of plumbir	and electrical se	ervices
Function				ig and cicotilidal St	
Ecodesign class					
Manufacturer					
Model					

Manufacturer Model 7 Lighting Minimum permitted light source efficacy 75 lm/W					
Model 7 Lighting Minimum permitted light source efficacy 75 lm/W Lowest light source efficacy 75 lm/W					
7 Lighting Minimum permitted light source efficacy 75 lm/W Lowest light source efficacy 75 lm/W					
Minimum permitted light source efficacy 75 lm/W Lowest light source efficacy 75 lm/W					
Lowest light source efficacy 75 lm/W					
External lights control N/A					
8 wechanical ventilation					
A Maximum parmitted apositio fan power N/A					
Specific for nower N/A					
Minimum permitted heat recovery					
Heat recovery efficiency N/A N/A					
Manufacturer/Model					
Commissioning					
9 Local generation N/A					
10 Heat networks					
N/A					
11 Supporting documentary evidence					
N/A					
12 Declarations					
a. Assessor Declaration					
This declaration by the assessor is confirmation that the contents of this BREL Compliance Report					
are a true and accurate reflection based upon the design information submitted for this dwelling for					
the purpose of carrying out the "As designed" assessment, and that the supporting documentary					
evidence (SAP Conventions, Appendix 1 (documentary evidence) schedules the minimum					
documentary evidence required) has been reviewed in the course of preparing this BREL					
Compliance Report.					
Signed: Assessor ID:					
h Oliant Declaration					
b. Client Declaration					



Dwelling type: Date of assessment: Produced by: Total floor area: DRRN: House, Semi-Detached 12/10/2023 Alexandru Ardelean <u>9</u>0.49 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 SAP 10 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.



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.

Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Thu 12 Oct 2023 14:47:42

Project Information				
Assessed By	Alexandru Ardelean	Building Type	Maisonette, Semi-detached	
OCDEA Registration	EES/022722	Assessment Date	2023-10-12	

Dwelling Details			
Assessment Type	As designed	Total Floor Area	50 m ²
Site Reference	Plot 11	Plot Reference	001
Address	Plot 1 Priory Road, Fressingfie	ld	

Client Details	
Name	Paul Sweeney
Company	studio303
Address	Priory Road, Fressingfield, IP21 5PH

1a Target emission rate and dwelling emission rate			
Fuel for main heating system	Electricity		
Target carbon dioxide emission rate	12.99 kgCO ₂ /m ²		
Dwelling carbon dioxide emission rate	4.64 kgCO ₂ /m ²	OK	
1b Target primary energy rate and dwelling primary energy			
Target primary energy	68.3 kWh _{PE} /m ²		
Dwelling primary energy	49.06 kWh _{PE} /m ²	OK	
1c Target fabric energy efficiency and dwelling fabric energy efficiency			
Target fabric energy efficiency	32.4 kWh/m ²		
Dwelling fabric energy efficiency	29.0 kWh/m ²	OK	

2a Fabric U-values	;			
Element	Maximum permitted	Dwelling average U-Value	Element with highest	
	average U-Value [W/m ² K]	[W/m ² K]	individual U-Value	
External walls	0.26	0.15	Walls (1) (0.15)	OK
Party walls	0.2	0	Party Wall (1) (0)	N/A
Curtain walls	1.6	0	N/A	N/A
Floors	0.18	0.08	Heatloss Floor 1 (0.08)	OK
Roofs	0.16	N/A	N/A	N/A
Windows, doors,	1.6	1.4	Windows-front (1.4)	OK
and roof windows				
Rooflights	2.2	N/A	N/A	N/A

2b Envelope elements (better than typically expected values are flagged with a subsequent (!))				
Name	Net area [m ²]	U-Value [W/m ² K]		
Exposed wall: Walls (1)	25.1	0.15		
Party wall: Party Wall (1)	35.14	0 (!)		
Ground floor: Heatloss Floor 1, Heatloss Floor 1	49.95	0.08 (!)		

2c Openings (better than typically expected values are flagged with a subsequent (!))					
Name	Area [m ²]	Orientation	Frame factor	U-Value [W/m ² K]	
Windows-front, Window	2.66	North East	0.7	1.4	
Door-entrance, Door	2.14	North East	N/A	1.4	
Windows-rear, Window	3.4	South West	0.7	1.4	

2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))				
Building part 1 -	Main Dwelling: Thermal bridging ca	alculated from linear thermal trans	smittances for eac	h junction
Main element	Junction detail	Source	Psi value [W/mK]	Drawing / reference
External wall	E2: Other lintels (including other steel lintels)	Not government-approved scheme	0.222	RCD
External wall	E3: Sill	Not government-approved scheme	0.023 (!)	RCD
External wall	E4: Jamb	Not government-approved scheme	0.018 (!)	RCD

Main element	Junction detail		Source	Psi value	Drawing /
External wall	E5: Ground floor (norm	al)	Not government-approved	0.044	RCD
			scheme	0.011	
External wall	E16: Corner (normal)		Not government-approved	0.031 (!)	RCD
			scheme		
External wall	E7: Party floor between dwellings		Not government-approved	0.037 (!)	RCD
	(in blocks of flats)		scheme		
External wall	E18: Party wall between dwellings		Not government-approved	0.046	RCD
			scheme		
Party wall	P1: Ground floor		Not government-approved	0.172	RCD
Dorthywoll	D2. Intermediate fleer b		Scheme	0.(1)	
Party wall	dwollings (in blocks of f	lete)	SAP table delauit	0 (!)	
	dwellings (in blocks of t	ials)			
3 Air permeabili	ty (better than typically	vexpected	values are flagged with a subseq	uent (!))	
Maximum permit	ted air permeability at 50)Pa	8 m³/hm²		1
Dwelling air perm	eability at 50Pa		5 m³/hm², Design value		OK
Air permeability to	est certificate reference				
4 Space heating					
Main heating sy	stem 1: Heat pump with	radiators or	underfloor heating - Electricity		
Efficiency		231.0%			
Emitter type		Underfloor			
Flow temperature)	55°C			
System type		Heat Pump	1		
Manufacturer		Vaillant Gro	oup UK Ltd		
Model		aroTHERM	plus 3.5kW + AI-Not valid		
Commissioning					
Secondary heat	ing system: N/A	N 1/A			
Fuel		N/A			
Efficiency		N/A			
Commissioning					
5 Hot water					
Cylinder/store -	type: Cylinder				
Capacity		150 litres			
Declared heat los	S	1.88 kWh/c	ay		
Primary pipework	insulated	Yes			
Manufacturer					
Commissioning					
Waste water bor	at recovery system 1				
Efficiency	a roovery system I -	ypo. 14/A			
Manufacturer					
Model					
6 Controlo					
Main booting 4	type: Time and tempera		ontrol by arrangement of plumbing	and electrical ear	icoc
Function	type. Time and tempera		onition by an angement of plumbing	and electrical serv	1000
Fcodesian class					
Manufacturer					
Model					
Water heating - type: Cylinder thermostat and HW separately timed					
Manufacturer	, , ,				
Model					
7 Lighting					
Minimum permitte	ed light source efficacy	75 lm/\//			
Lowest light sour	ce efficacy	75 lm/W		0	K
External lights co	ntrol	N/A			

8 Mechanical ventilation				
System type: N/A				
Maximum permitted specific fan power	N/A			
Specific fan power	N/A		N/A	
Minimum permitted heat recovery	N/A			
efficiency				
Heat recovery efficiency	N/A		N/A	
Manufacturer/Model				
Commissioning				
9 Local generation				
N/A				
10 Heat networks				
N/A				
11 Supporting documentary evidence				
N/A				
12 Declarations				
a. Assessor Declaration				
This declaration by the assessor is co	nfirmation that the co	ntents of this BREL Compliance Report		
are a true and accurate reflection bas	ed upon the design ir	formation submitted for this dwelling for		
the purpose of carrying out the "As de	signed" assessment,	and that the supporting documentary		
evidence (SAP Conventions, Append	x 1 (documentary evi	dence) schedules the minimum		
documentary evidence required) has	been reviewed in the	course of preparing this BREL		
Compliance Report.				
Signed: Assessor ID:				
Name				
b. Client Declaration				
N/A				



Dwelling type: Date of assessment: Produced by: Total floor area: DRRN: Maisonette, Semi-Detached 12/10/2023 Alexandru Ardelean 49.95 m²

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Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Thu 12 Oct 2023 14:47:42

Project Information				
Assessed By	Alexandru Ardelean	Building Type	Bungalow, Detached	
OCDEA Registration	EES/022722	Assessment Date	2023-10-12	

Dwelling Details			
Assessment Type	As designed	Total Floor Area	97 m ²
Site Reference	Plot 12	Plot Reference	001
Address	Plot 1 Priory Road, Fressingfie	ld	

Client Details	
Name	Paul Sweeney
Company	studio303
Address	Priory Road, Fressingfield, IP21 5PH

1a Target emission rate and dwelling emission rate				
Fuel for main heating system	Electricity			
Target carbon dioxide emission rate	9.05 kgCO ₂ /m ²			
Dwelling carbon dioxide emission rate	4.2 kgCO ₂ /m ²	OK		
1b Target primary energy rate and dwelling primary energy				
Target primary energy	48.9 kWh _{PE} /m ²			
Dwelling primary energy	43.86 kWh _{PE} /m ²	OK		
1c Target fabric energy efficiency and dwelling fabric energy efficiency				
Target fabric energy efficiency	44.5 kWh/m ²			
Dwelling fabric energy efficiency	40.1 kWh/m ²	OK		

2a Fabric U-values						
Element	Maximum permitted average U-Value IW/m ² K1	Dwelling average U-Value IW/m ² K1	Element with highest individual U-Value			
External walls	0.26	0.15	Walls (1) (0.15)	ОК		
Party walls	0.2	N/A	N/A	N/A		
Curtain walls	1.6	N/A	N/A	N/A		
Floors	0.18	0.08	Heatloss Floor 1 (0.08)	OK		
Roofs	0.16	0.12	Roof (1) (0.12)	ОК		
Windows, doors,	1.6	1.4	Windows-front (1.4)	ОК		
and roof windows						
Rooflights	2.2	N/A	N/A	N/A		

2b Envelope elements (better than typically expected values are flagged with a subsequent (!))					
Name	Net area [m ²]	U-Value [W/m ² K]			
Exposed wall: Walls (1)	88.85	0.15			
Ground floor: Heatloss Floor 1, Heatloss Floor 1	96.59	0.08 (!)			
Exposed roof: Roof (1)	96.59	0.12			

2c Openings (better than typically expected values are flagged with a subsequent (!))				
Name	Area [m ²]	Orientation	Frame factor	U-Value [W/m ² K]
Windows-front, Window	5.28	South	0.7	1.4
Door-entrance, Door	2.04	South	N/A	1.4
Windows-rear, Window	4.79	North	0.7	1.4
Windows-side, Window	4.4	East	0.7	1.4
Windows-side, Window	1.33	West	0.7	1.4

2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))					
Building part 1 - I	Main Dwelling: Thermal bridging ca	Iculated from linear thermal transmit	tances for each ju	nction	
Main element Junction detail Source Psi value Drawing /					
				reierence	
External wall	E2: Other lintels (including other	Not government-approved	0.222	RCD	
	steel lintels)	scheme			
External wall	E3: Sill	Not government-approved	0.023 (!)	RCD	
		scheme			

Main element	Junction detail		Source	Psi value	Drawing /	
External wall	E4: Jamb		Not government-approved		PCD	
			scheme	0.018 (!)	ROD	
External wall	E5: Ground floor (normal)		Not government-approved	0.044	RCD	
			scheme			
External wall	E10: Eaves (insulation at ceiling		Not government-approved	0.054	RCD	
	level)		scheme			
External wall	E12: Gable (insulation	at ceiling	Not government-approved	0.027 (!)	RCD	
	level)		scheme			
External wall	E16: Corner (normal)		Not government-approved	0.031 (!)	RCD	
External wall	E17: Corner (inverted -	internal	Not government-approved	-0.064	RCD	
	area greater than exter	nal area)	scheme			
A A	· () · · · · · · · · · · · · · · · · · ·			((1))		
3 Air permeabili	ty (better than typically	/ expected	values are flagged with a subseq	uent (!))		
Naximum permit	ted air permeability at 50	Pa	8 m/nm		01	
Air pormoshility t	eability at 50Pa		5 m /nm , Design value		UK	
			l			
4 Space heating						
Main heating sy	stem 1: Heat pump with	radiators or	underfloor heating - Electricity			
Efficiency		259.8%				
Emitter type		Underfloor				
Flow temperature	9	55°C				
System type		Heat Pump				
Manufacturer		Vaillant Gro	roup UK Ltd			
Model aroTHERM		aroTHERM	plus 3.5kW + Al			
Commissioning						
Secondary heating system: N/A						
Fuel N/A						
Efficiency		N/A				
Commissioning						
5 Hot water						
Cylinder/store -	type: Cylinder					
Capacity		150 litres				
Declared heat los	SS	1.88 kWh/c	lay			
Primary pipework	c insulated	Yes				
Manufacturer						
Model						
Commissioning						
Waste water hea	at recovery system 1 -	type: N/A				
Efficiency						
Manufacturer						
IVIODEI						
6 Controls						
Main heating 1 -	type: Time and tempera	ature zone c	ontrol by arrangement of plumbing	and electrical serv	ices	
Function						
Ecodesign class						
Manufacturer						
Model						
Water heating - type: Cylinder thermostat and HW separately timed						
Manufacturer						
Model						
7 Lighting						
Minimum permitte	ed light source efficacy	75 lm/W				
Lowest light sour	ce efficacy	75 lm/W		0	К	
External lights control N/A						

8 Mechanical ventilation	8 Mechanical ventilation					
System type: N/A	System type: N/A					
Maximum permitted specific fan power	N/A					
Specific fan power	N/A		N/A			
Minimum permitted heat recovery	N/A					
efficiency						
Heat recovery efficiency	N/A		N/A			
Manufacturer/Model						
Commissioning						
9 Local generation						
N/A						
10 Heat networks						
N/A						
11 Supporting documentary evidence						
N/A						
12 Declarations						
a. Assessor Declaration						
This declaration by the assessor is co	nfirmation that the co	ntents of this BREL Compliance Report				
are a true and accurate reflection bas	ed upon the design ir	formation submitted for this dwelling for				
the purpose of carrying out the "As de	signed" assessment,	and that the supporting documentary				
evidence (SAP Conventions, Append	x 1 (documentary evi	dence) schedules the minimum				
documentary evidence required) has	been reviewed in the	course of preparing this BREL				
Compliance Report.						
Signed: Assessor ID:						
Nama:						
b. Client Declaration		· · · · · · · · · · · · · · · · · · ·				
N/A						



Dwelling type: Date of assessment: Produced by: Total floor area: DRRN: Bungalow, Detached 12/10/2023 Alexandru Ardelean <u>9</u>6.59 m²

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The energy performance has been assessed using the Government approved SAP 10 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.



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.

Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Thu 12 Oct 2023 14:47:43

Project Information					
Assessed By	Alexandru Ardelean	Building Type	Bungalow, Detached		
OCDEA Registration	EES/022722	Assessment Date	2023-10-12		

Dwelling Details			
Assessment Type	As designed	Total Floor Area	97 m ²
Site Reference	Plot 13	Plot Reference	001
Address	Plot 1 Priory Road, Fressingfie	ld	

Client Details	
Name	Paul Sweeney
Company	studio303
Address	Priory Road, Fressingfield, IP21 5PH

1a Target emission rate and dwelling emission rate					
Fuel for main heating system Electricity					
Target carbon dioxide emission rate	9.05 kgCO ₂ /m ²				
Dwelling carbon dioxide emission rate	4.2 kgCO ₂ /m ²	OK			
1b Target primary energy rate and dwelling primary energy					
Target primary energy	48.9 kWh _{PE} /m ²				
Dwelling primary energy	43.86 kWh _{PE} /m ²	OK			
1c Target fabric energy efficiency and dwelling fabric energy efficiency					
Target fabric energy efficiency	44.5 kWh/m ²				
Dwelling fabric energy efficiency	40.1 kWh/m ²	OK			

2a Fabric U-values					
Element	Maximum permitted average U-Value [W/m ² K]	Dwelling average U-Value [W/m ² K]	Element with highest individual U-Value		
External walls	0.26	0.15	Walls (1) (0.15)	OK	
Party walls	0.2	N/A	N/A	N/A	
Curtain walls	1.6	N/A	N/A	N/A	
Floors	0.18	0.08	Heatloss Floor 1 (0.08)	OK	
Roofs	0.16	0.12	Roof (1) (0.12)	ОК	
Windows, doors,	1.6	1.4	Windows-front (1.4)	OK	
and roof windows					
Rooflights	2.2	N/A	N/A	N/A	

2b Envelope elements (better than typically expected values are flagged with a subsequent (!))					
Name	Net area [m ²]	U-Value [W/m ² K]			
Exposed wall: Walls (1)	88.85	0.15			
Ground floor: Heatloss Floor 1, Heatloss Floor 1	96.59	0.08 (!)			
Exposed roof: Roof (1)	96.59	0.12			

2c Openings (better than typically expected values are flagged with a subsequent (!))					
Name	Area [m ²]	Orientation	Frame factor	U-Value [W/m ² K]	
Windows-front, Window	5.28	South	0.7	1.4	
Door-entrance, Door	2.04	South	N/A	1.4	
Windows-rear, Window	4.79	North	0.7	1.4	
Windows-side, Window	4.4	East	0.7	1.4	
Windows-side, Window	1.33	West	0.7	1.4	

2d Thermal brid	2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))					
Building part 1 -	Main Dwelling: Thermal bridging ca	Iculated from linear thermal transmi	ttances for each ju	Inction		
Main element Junction detail Source Psi value Drawing /						
				reference		
External wall	E2: Other lintels (including other	Not government-approved	0.222	RCD		
	steel lintels)	scheme				
External wall	E3: Sill	Not government-approved	0.023 (!)	RCD		
		scheme				

Main element	Junction detail		Source	Psi value	Drawing /	
External wall	E4: Jamb		Not government-approved		PCD	
			scheme	0.018 (!)	ROD	
External wall	E5: Ground floor (norm	al)	Not government-approved	0.044	RCD	
			scheme			
External wall	E10: Eaves (insulation	at ceiling	Not government-approved	0.054	RCD	
	level)		scheme			
External wall	E12: Gable (insulation	at ceiling	Not government-approved	0.027 (!)	RCD	
	level)		scheme			
External wall	E16: Corner (normal)		Not government-approved	0.031 (!)	RCD	
External wall	E17: Corner (inverted -	internal	Not government-approved	-0.064	RCD	
	area greater than exter	nal area)	scheme			
A A	· () · · · · · · · · · · · · · · · · · ·			((1))		
3 Air permeabili	ty (better than typically	/ expected	values are flagged with a subseq	uent (!))		
Naximum permit	ted air permeability at 50	Pa	8 m/nm		01	
Air pormoshility t	eability at 50Pa		5 m /nm , Design value		UK	
			l			
4 Space heating						
Main heating sy	stem 1: Heat pump with	radiators or	underfloor heating - Electricity			
Efficiency		259.8%				
Emitter type		Underfloor				
Flow temperature	9	55°C				
System type		Heat Pump				
Manufacturer		Vaillant Gro	roup UK Ltd			
Model aroTHERM			plus 3.5kW + Al			
Commissioning						
Secondary heat	ing system: N/A					
Fuel		N/A				
Efficiency		N/A				
Commissioning						
5 Hot water						
Cylinder/store -	type: Cylinder					
Capacity	Capacity 150 litres					
Declared heat los	SS	1.88 kWh/c	lay			
Primary pipework	c insulated	Yes				
Manufacturer						
Model						
Commissioning						
Waste water hea	at recovery system 1 -	type: N/A				
Efficiency						
Manufacturer						
IVIODEI						
6 Controls						
Main heating 1 -	type: Time and tempera	ature zone c	ontrol by arrangement of plumbing	and electrical serv	ices	
Function						
Ecodesign class						
Manufacturer						
Model						
Water heating -	type: Cylinder thermosta	it and HW s	eparately timed			
Manufacturer						
Model						
7 Lighting						
Minimum permitte	ed light source efficacy	75 lm/W				
Lowest light sour	ce efficacy	75 lm/W		0	К	
External lights co	ntrol	N/A				

8 Mechanical ventilation					
System type: N/A					
Maximum permitted specific fan power	N/A				
Specific fan power	N/A		N/A		
Minimum permitted heat recovery	N/A				
efficiency					
Heat recovery efficiency	N/A		N/A		
Manufacturer/Model					
Commissioning					
9 Local generation					
N/A					
10 Heat networks					
N/A					
11 Supporting documentary evidence					
N/A					
12 Declarations					
a. Assessor Declaration					
This declaration by the assessor is co	nfirmation that the co	ntents of this BREL Compliance Report			
are a true and accurate reflection bas	ed upon the design ir	formation submitted for this dwelling for			
the purpose of carrying out the "As de	signed" assessment,	and that the supporting documentary			
evidence (SAP Conventions, Append	x 1 (documentary evi	dence) schedules the minimum			
documentary evidence required) has	been reviewed in the	course of preparing this BREL			
Compliance Report.					
Signea:		Assessor ID:			
Nama					
b. Client Declaration		·			
N/A					



Dwelling type: Date of assessment: Produced by: Total floor area: DRRN: Bungalow, Detached 12/10/2023 Alexandru Ardelean <u>9</u>6.59 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 SAP 10 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.



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.

Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Thu 12 Oct 2023 14:47:43

Project Information					
Assessed By	Alexandru Ardelean	Building Type	Bungalow, Detached		
OCDEA Registration	EES/022722	Assessment Date	2023-10-12		

Dwelling Details			
Assessment Type	As designed	Total Floor Area	97 m ²
Site Reference	Plot 14	Plot Reference	001
Address	Plot 1 Priory Road, Fressingfie	ld	

Client Details	
Name	Paul Sweeney
Company	studio303
Address	Priory Road, Fressingfield, IP21 5PH

1a Target emission rate and dwelling emission rate				
Fuel for main heating system	Electricity			
Target carbon dioxide emission rate	8.98 kgCO ₂ /m ²			
Dwelling carbon dioxide emission rate	4.18 kgCO ₂ /m ²	OK		
1b Target primary energy rate and dwelling primary energy				
Target primary energy	48.5 kWh _{PE} /m ²			
Dwelling primary energy	43.66 kWh _{PE} /m ²	OK		
1c Target fabric energy efficiency and dwelling fabric energy efficiency				
Target fabric energy efficiency	44.2 kWh/m ²			
Dwelling fabric energy efficiency	39.8 kWh/m ²	OK		

2a Fabric U-values						
Element	Maximum permitted average U-Value IW/m ² K1	Dwelling average U-Value IW/m ² K1	Element with highest individual U-Value			
External walls	0.26	0.15	Walls (1) (0.15)	ОК		
Party walls	0.2	N/A	N/A	N/A		
Curtain walls	1.6	N/A	N/A	N/A		
Floors	0.18	0.08	Heatloss Floor 1 (0.08)	OK		
Roofs	0.16	0.12	Roof (1) (0.12)	ОК		
Windows, doors,	1.6	1.4	Windows-front (1.4)	ОК		
and roof windows						
Rooflights	2.2	N/A	N/A	N/A		

2b Envelope elements (better than typically expected values are flagged with a subsequent (!))					
Name	Net area [m ²]	U-Value [W/m ² K]			
Exposed wall: Walls (1)	88.85	0.15			
Ground floor: Heatloss Floor 1, Heatloss Floor 1	96.59	0.08 (!)			
Exposed roof: Roof (1)	96.59	0.12			

2c Openings (better than typically expected values are flagged with a subsequent (!))					
Name	Area [m ²]	Orientation	Frame factor	U-Value [W/m ² K]	
Windows-front, Window	5.28	South West	0.7	1.4	
Door-entrance, Door	2.04	South West	N/A	1.4	
Windows-rear, Window	4.79	North East	0.7	1.4	
Windows-side, Window	4.4	South East	0.7	1.4	
Windows-side, Window	1.33	North West	0.7	1.4	

2d Thermal brid	2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))					
Building part 1 -	Main Dwelling: Thermal bridging ca	Iculated from linear thermal transmi	ttances for each ju	Inction		
Main element Junction detail Source Psi value Drawing /						
				reference		
External wall	E2: Other lintels (including other	Not government-approved	0.222	RCD		
	steel lintels)	scheme				
External wall	E3: Sill	Not government-approved	0.023 (!)	RCD		
		scheme				

Main element	Junction detail		Source	Psi value	Drawing /	
External wall	E4: Jamb		Not government-approved		PCD	
			scheme	0.018 (!)	ROD	
External wall	E5: Ground floor (normal)		Not government-approved	0.044	RCD	
			scheme			
External wall	E10: Eaves (insulation	at ceiling	Not government-approved	0.054	RCD	
	level)		scheme			
External wall	E12: Gable (insulation	at ceiling	Not government-approved	0.027 (!)	RCD	
	level)		scheme			
External wall	E16: Corner (normal)		Not government-approved	0.031 (!)	RCD	
External wall	E17: Corner (inverted -	internal	Not government-approved	-0.064	RCD	
	area greater than exter	nal area)	scheme			
A A	· () · · · · · · · · · · · · · · · · · ·			((1))		
3 Air permeabili	ty (better than typically	/ expected	values are flagged with a subseq	uent (!))		
Naximum permit	ted air permeability at 50	Pa	8 m/nm		01	
Air pormoshility t	eat contificate reference		5 m /nm , Design value		UK	
			l			
4 Space heating						
Main heating sy	stem 1: Heat pump with	radiators or	underfloor heating - Electricity			
Efficiency		259.8%				
Emitter type		Underfloor				
Flow temperature	9	55°C				
System type		Heat Pump				
Manufacturer		Vaillant Gro	roup UK Ltd			
Model		aroTHERM	plus 3.5kW + Al			
Commissioning						
Secondary heat	ing system: N/A					
Fuel		N/A				
Efficiency		N/A				
Commissioning						
5 Hot water						
Cylinder/store -	type: Cylinder					
Capacity		150 litres	S			
Declared heat los	SS	1.88 kWh/c	lay			
Primary pipework	c insulated	Yes				
Manufacturer						
Model						
Commissioning						
Waste water hea	at recovery system 1 -	type: N/A				
Efficiency						
Manufacturer						
IVIODEI						
6 Controls						
Main heating 1 -	type: Time and tempera	ature zone c	ontrol by arrangement of plumbing	and electrical serv	ices	
Function						
Ecodesign class						
Manufacturer						
Model						
Water heating -	type: Cylinder thermosta	it and HW s	eparately timed			
Manufacturer						
Model						
7 Lighting						
Minimum permitte	ed light source efficacy	75 lm/W				
Lowest light sour	ce efficacy	75 lm/W		0	К	
External lights co	ntrol	N/A				

8 Mechanical ventilation	8 Mechanical ventilation					
System type: N/A	System type: N/A					
Maximum permitted specific fan power	N/A					
Specific fan power	N/A		N/A			
Minimum permitted heat recovery	N/A					
efficiency						
Heat recovery efficiency	N/A		N/A			
Manufacturer/Model						
Commissioning						
9 Local generation						
N/A						
10 Heat networks						
N/A						
11 Supporting documentary evidence						
N/A						
12 Declarations						
a. Assessor Declaration						
This declaration by the assessor is co	nfirmation that the co	ntents of this BREL Compliance Report				
are a true and accurate reflection bas	ed upon the design ir	formation submitted for this dwelling for				
the purpose of carrying out the "As de	signed" assessment,	and that the supporting documentary				
evidence (SAP Conventions, Append	x 1 (documentary evi	dence) schedules the minimum				
documentary evidence required) has	been reviewed in the	course of preparing this BREL				
Compliance Report.						
Signea:		Assessor ID:				
Nome						
b. Client Declaration		· · · · · · · · · · · · · · · · · · ·				
N/A						



Dwelling type: Date of assessment: Produced by: Total floor area: DRRN: Bungalow, Detached 12/10/2023 Alexandru Ardelean <u>9</u>6.59 m²

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Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Thu 12 Oct 2023 14:47:40

Project Information						
Assessed By	Alexandru Ardelean	Building Type	Bungalow, Detached			
OCDEA Registration	EES/022722	Assessment Date	2023-10-12			

Dwelling Details			
Assessment Type	As designed	Total Floor Area	97 m ²
Site Reference	Plot 1	Plot Reference	001
Address	Plot 1 Priory Road, Fressingfie	ld	

Client Details				
Name	Paul Sweeney			
Company	studio303			
Address	Priory Road, Fressingfield, IP21 5PH			

1a Target emission rate and dwelling emission rate					
Fuel for main heating system	Electricity				
Target carbon dioxide emission rate	9.01 kgCO ₂ /m ²				
Dwelling carbon dioxide emission rate	4.19 kgCO ₂ /m ²	OK			
1b Target primary energy rate and dwelling primary energy					
Target primary energy	48.63 kWh _{PE} /m ²				
Dwelling primary energy	43.73 kWh _{PE} /m ²	OK			
1c Target fabric energy efficiency and dwelling fabric energy efficiency					
Target fabric energy efficiency	44.5 kWh/m ²				
Dwelling fabric energy efficiency	40.4 kWh/m ²	OK			

2a Fabric U-values						
Element	Maximum permitted	Dwelling average U-Value	Element with highest			
	average U-Value [W/m ² K]	[W/m ² K]	individual U-Value			
External walls	0.26	0.15	Walls (1) (0.15)	OK		
Party walls	0.2	N/A	N/A	N/A		
Curtain walls	1.6	N/A	N/A	N/A		
Floors	0.18	0.08	Heatloss Floor 1 (0.08)	OK		
Roofs	0.16	0.12	Roof (1) (0.12)	OK		
Windows, doors,	1.6	1.4	Windows-front (1.4)	OK		
and roof windows						
Rooflights	2.2	N/A	N/A	N/A		

2b Envelope elements (better than typically expected values are flagged with a subsequent (!))					
Name	Net area [m ²]	U-Value [W/m ² K]			
Exposed wall: Walls (1)	85.88	0.15			
Ground floor: Heatloss Floor 1, Heatloss Floor 1	96.59	0.08 (!)			
Exposed roof: Roof (1)	96.59	0.12			

2c Openings (better than typically expected values are flagged with a subsequent (!))					
Name	Area [m ²]	Orientation	Frame factor	U-Value [W/m ² K]	
Windows-front, Window	5.05	East	0.7	1.4	
Door-entrance, Door	2.04	East	N/A	1.4	
Windows-rear, Window	4.79	North	0.7	1.4	
Windows-side, Window	1.33	North	0.7	1.4	
Windows-side, Window	7.6	South	0.7	1.4	

2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))						
Building part 1 -	Main Dwelling: Thermal bridging ca	Iculated from linear thermal transmi	ttances for each ju	nction		
Main element	nent Junction detail Source Psi value Drawing /					
			[W/mK]	reference		
External wall	E2: Other lintels (including other	Not government-approved	0.222	RCD		
	steel lintels)	scheme				
External wall	E3: Sill	Not government-approved	0.023 (!)	RCD		
scheme						

Main element	Junction detail		Source	Psi value	Drawing /	
Extornal wall	Γ4. Jamb		Not government enpressed		PCD	
External wall	E4. Janib		scheme	0.018 (!)	RCD	
External wall	E5: Ground floor (normal)		Not government-approved scheme	0.044	RCD	
External wall	E10: Eaves (insulation	at ceiling	Not government-approved	0.054	RCD	
Forte and a losse ll	level)	- 1 11	scheme	0.007 (1)	DOD	
External wall	level)	at celling	scheme	0.027 (!)	RCD	
External wall	E16: Corner (normal)		Not government-approved scheme	0.031 (!)	RCD	
External wall	E17: Corner (inverted -	internal	Not government-approved	-0.064	RCD	
	area greater than exter		Scheme			
3 Air permeabili	ty (better than typically	/ expected	values are flagged with a subsec	quent (!))		
Maximum permit	ted air permeability at 50)Pa	$8 m^3/hm^2$			
Dwelling air perm	neability at 50Pa		5 m ³ /hm ² , Design value		OK	
Air permeability t	est certificate reference					
1 Space beating						
4 Space heating	stom 1: Hoot numn with	radiatora -	runderfloer besting Electricity			
Filinian neating sy	stem 1: Heat pump with		r undemoor neating - Electricity			
Efficiency		261.7%				
Emitter type		Underfloor				
Flow temperature	9	55°C				
System type		Heat Pump)			
Manufacturer		Vaillant Gro	roup UK Ltd			
Model		aroTHERM	M plus 3.5kW + AI-Not valid			
Commissioning						
Secondary heat	ing system: N/A					
Fuel		N/A				
Efficiency		N/A				
Commissioning						
5 Hot water						
Cylinder/store	type: Cylinder					
Conneity	type. Cyllinder	150 litroc				
Declared heat los	20	1 99 kWb/c				
Declared field to	oo kingulatad		lay			
Primary pipework	Insulated	res				
Manufacturer						
Commissioning						
waste water hea	at recovery system 1 -	type: N/A				
Efficiency						
Manufacturer						
Model						
6 Controls						
Main heating 1 -	type: Time and tempera	ature zone c	ontrol by arrangement of plumbing	and electrical se	rvices	
Function	., F					
Ecodesign class						
Manufacturer						
Modol						
Weter besting type: Cylinder thermostat and LIW experied						
Manufacturor		a anu rivi S	ביסמומוכוי נווופט			
Model						
INIOUEI						
7 Lighting						
Minimum permitt	ed light source efficacv	75 lm/W				
Lowest light sour	ce efficacy	75 lm/W			OK	
		N1/A				

8 Mechanical ventilation	8 Mechanical ventilation					
System type: N/A	System type: N/A					
Maximum permitted specific fan power	N/A					
Specific fan power	N/A		N/A			
Minimum permitted heat recovery	N/A					
efficiency						
Heat recovery efficiency	N/A		N/A			
Manufacturer/Model						
Commissioning						
9 Local generation						
N/A						
10 Heat networks						
N/A						
11 Supporting documentary evidence						
N/A						
12 Declarations						
a. Assessor Declaration						
This declaration by the assessor is co	nfirmation that the co	ntents of this BREL Compliance Report				
are a true and accurate reflection bas	ed upon the design ir	formation submitted for this dwelling for				
the purpose of carrying out the "As de	signed" assessment,	and that the supporting documentary				
evidence (SAP Conventions, Append	x 1 (documentary evi	dence) schedules the minimum				
documentary evidence required) has	been reviewed in the	course of preparing this BREL				
Compliance Report.						
Signea:		Assessor ID:				
Nome						
b. Client Declaration		·				
N/A						



Dwelling type: Date of assessment: Produced by: Total floor area: DRRN: Bungalow, Detached 12/10/2023 Alexandru Ardelean <u>9</u>6.59 m²

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Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Thu 12 Oct 2023 14:47:40

Project Information					
Assessed By	Alexandru Ardelean	Building Type	Bungalow, Detached		
OCDEA Registration	EES/022722	Assessment Date	2023-10-12		

Dwelling Details			
Assessment Type	As designed	Total Floor Area	97 m ²
Site Reference	Plot 2	Plot Reference	001
Address	Plot 1 Priory Road, Fressingfie	ld	

Client Details	
Name	Paul Sweeney
Company	studio303
Address	Priory Road, Fressingfield, IP21 5PH

1a Target emission rate and dwelling emission rate					
Fuel for main heating system	Electricity				
Target carbon dioxide emission rate	8.92 kgCO ₂ /m ²				
Dwelling carbon dioxide emission rate	4.17 kgCO ₂ /m ²	OK			
1b Target primary energy rate and dwelling primary energy					
Target primary energy	48.16 kWh _{PE} /m ²				
Dwelling primary energy	43.58 kWh _{PE} /m ²	OK			
1c Target fabric energy efficiency and dwelling fabric energy efficiency					
Target fabric energy efficiency	44.3 kWh/m ²				
Dwelling fabric energy efficiency	40.4 kWh/m ²	OK			

2a Fabric U-values						
Element	Maximum permitted average U-Value IW/m ² K1	Dwelling average U-Value IW/m ² K1	Element with highest individual U-Value			
External walls	0.26	0.15	Walls (1) (0.15)	ОК		
Party walls	0.2	N/A	N/A	N/A		
Curtain walls	1.6	N/A	N/A	N/A		
Floors	0.18	0.08	Heatloss Floor 1 (0.08)	OK		
Roofs	0.16	0.12	Roof (1) (0.12)	ОК		
Windows, doors,	1.6	1.4	Windows-front (1.4)	ОК		
and roof windows						
Rooflights	2.2	N/A	N/A	N/A		

2b Envelope elements (better than typically expected values are flagged with a subsequent (!))					
Name	Net area [m ²]	U-Value [W/m ² K]			
Exposed wall: Walls (1)	85.75	0.15			
Ground floor: Heatloss Floor 1, Heatloss Floor 1	96.59	0.08 (!)			
Exposed roof: Roof (1)	96.59	0.12			

2c Openings (better than typically expected values are flagged with a subsequent (!))					
Name	Area [m ²]	Orientation	Frame factor	U-Value [W/m ² K]	
Windows-front, Window	5.05	North West	0.7	1.4	
Door-entrance, Door	2.04	North West	N/A	1.4	
Windows-rear, Window	8.14	South East	0.7	1.4	
Windows-side, Window	4.38	South West	0.7	1.4	
Windows-side, Window	1.33	North East	0.7	1.4	

2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))					
Building part 1 - I	Main Dwelling: Thermal bridging ca	Iculated from linear thermal transmit	tances for each ju	nction	
Main element	Iain element Junction detail Source Psi value Drawing /				
				reierence	
External wall	E2: Other lintels (including other	Not government-approved	0.222	RCD	
	steel lintels)	scheme			
External wall	E3: Sill	Not government-approved	0.023 (!)	RCD	
		scheme			

Main element	Junction detail		Source	Psi value	Drawing /
External wall			Not government ennroued		reference
External wall			scheme	0.018 (!)	RCD
External wall	E5: Ground floor (normal)		Not government-approved scheme	0.044	RCD
External wall	E10: Eaves (insulation	at ceiling	Not government-approved	0.054	RCD
Fortana al com	level)		scheme	0.007 (1)	DOD
External wall	level)	at celling	scheme	0.027 (!)	RCD
External wall	E16: Corner (normal)		Not government-approved scheme	0.031 (!)	RCD
External wall	E17: Corner (inverted -	internal	Not government-approved	-0.064	RCD
	area greater than exter		Scheme		
3 Air permeabili	ty (better than typically	v expected	values are flagged with a subseq	uent (!))	
Maximum permit	ted air permeability at 50)Pa	8 m ³ /hm ²		
Dwelling air perm	neability at 50Pa		5 m ³ /hm ² , Design value		OK
Air permeability to	est certificate reference				
4 Space beating					
Main heating ev	stem 1: Heat numn with	radiators or	underfloor heating - Electricity		
Efficiency		261 0%	undernoor nearing - Electricity		
		Lindorfloor			
Elimiter type	<u></u>	55°C			
Flow temperature	;	Do C			
System type		Neillent Om			
Manufacturer			oup UK Ltd		
		aroTHERIN	1 pius 3.5kvv + AI-Not Valid		
Commissioning	N1/A				
Secondary heating system: N/A					
Fuel		N/A			
Efficiency		N/A			
Commissioning					
5 Hot water					
Cylinder/store -	type: Cylinder				
Capacity		150 litres			
Declared heat los	SS	1.88 kWh/c	lay		
Primary pipework	c insulated	Yes			
Manufacturer					
Model					
Commissioning					
Waste water hea	at recovery system 1 -	type: N/A			
Efficiency					
Manufacturer					
Model					
6 Controls					
Main heating 1 -	type: Time and tempera	ature zone c	ontrol by arrangement of plumbing	and electrical serv	ices
Function	y, et time and tempore				
Ecodesign class					
Manufacturer					
Model					
Water heating - type: Cylinder thermostat and HW separately timed					
Manufacturer					
Model					
7 Lighting					
Minimum permitte	ed light source efficacy	75 lm/W			
Lowest light sour	ce efficacy	75 lm/W		0	K
External lights co	ntrol	N/A			

8 Mechanical ventilation	8 Mechanical ventilation				
System type: N/A					
Maximum permitted specific fan power	N/A				
Specific fan power	N/A		N/A		
Minimum permitted heat recovery	N/A				
efficiency					
Heat recovery efficiency	N/A		N/A		
Manufacturer/Model					
Commissioning					
9 Local generation					
N/A					
10 Heat networks					
N/A					
11 Supporting documentary evidence					
N/A					
12 Declarations					
a. Assessor Declaration					
This declaration by the assessor is co	nfirmation that the co	ntents of this BREL Compliance Report			
are a true and accurate reflection bas	ed upon the design ir	formation submitted for this dwelling for			
the purpose of carrying out the "As de	signed" assessment,	and that the supporting documentary			
evidence (SAP Conventions, Append	x 1 (documentary evi	dence) schedules the minimum			
documentary evidence required) has	been reviewed in the	course of preparing this BREL			
Compliance Report.					
Signea: Assessor ID:					
Name:					
b. Client Declaration	b. Client Declaration				
N/A					



Dwelling type: Date of assessment: Produced by: Total floor area: DRRN: Bungalow, Detached 12/10/2023 Alexandru Ardelean <u>9</u>6.59 m²

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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.

Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Thu 12 Oct 2023 14:47:40

Project Information					
Assessed By	Alexandru Ardelean	Building Type	Bungalow, Detached		
OCDEA Registration	EES/022722	Assessment Date	2023-10-12		

Dwelling Details			
Assessment Type	As designed	Total Floor Area	101 m ²
Site Reference	Plot 3	Plot Reference	001
Address	Plot 1 Priory Road, Fressingfie	ld	

Client Details	
Name	Paul Sweeney
Company	studio303
Address	Priory Road, Fressingfield, IP21 5PH

1a Target emission rate and dwelling emission rate				
Fuel for main heating system	Electricity			
Target carbon dioxide emission rate	8.79 kgCO ₂ /m ²			
Dwelling carbon dioxide emission rate	4.09 kgCO ₂ /m ²	OK		
1b Target primary energy rate and dwelling primary energy				
Target primary energy	47.6 kWh _{PE} /m ²			
Dwelling primary energy	42.71 kWh _{PE} /m ²	OK		
1c Target fabric energy efficiency and dwelling fabric energy efficiency				
Target fabric energy efficiency	44.5 kWh/m ²			
Dwelling fabric energy efficiency	40.9 kWh/m ²	OK		

2a Fabric U-values					
Element	Maximum permitted	Dwelling average U-Value	Element with highest		
	average U-Value [W/m ² K]	[W/m ² K]	individual U-Value		
External walls	0.26	0.15	Walls (1) (0.15)	OK	
Party walls	0.2	N/A	N/A	N/A	
Curtain walls	1.6	N/A	N/A	N/A	
Floors	0.18	0.08	Heatloss Floor 1 (0.08)	OK	
Roofs	0.16	0.12	Roof (1) (0.12)	ОК	
Windows, doors,	1.6	1.48	Folding Door (1.6)	OK	
and roof windows					
Rooflights	2.2	N/A	N/A	N/A	

2b Envelope elements (better than typically expected values are flagged with a subsequent (!))				
Name	Net area [m ²]	U-Value [W/m ² K]		
Exposed wall: Walls (1)	93.04	0.15		
Ground floor: Heatloss Floor 1, Heatloss Floor 1	101.44	0.08 (!)		
Exposed roof: Roof (1)	101.44	0.12		

2c Openings (better than typically expected values are flagged with a subsequent (!))				
Name	Area [m ²]	Orientation	Frame factor	U-Value [W/m ² K]
Windows-front, Window	3.24	North West	0.7	1.4
Door-entrance, Door	2.27	North West	N/A	1.4
Windows-rear, Window	1.3	South East	0.7	1.4
Windows-side, Window	0.93	South West	0.7	1.4
Windows-side, Window	3.38	North East	0.7	1.4
Folding Door, Folding Door	7.73	South Fast	0.7	1.6

2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))					
Building part 1 - I	Main Dwelling: Thermal bridging ca	Iculated from linear thermal transmit	tances for each ju	nction	
Main element	ain element Junction detail Source Psi value Drawing /				
			[W/mK]	reference	
External wall	E2: Other lintels (including other	Not government-approved	0.222	RCD	
	steel lintels)	scheme			

Main element	Junction detail		Source	Psi value [W/mK]	Drawing / reference
External wall	E3: Sill		Not government-approved scheme	0.023 (!)	RCD
External wall	E4: Jamb		Not government-approved scheme	0.018 (!)	RCD
External wall	E5: Ground floor (normal)		Not government-approved scheme	0.044	RCD
External wall	E10: Eaves (insulation a level)	at ceiling	Not government-approved scheme	0.054	RCD
External wall	E12: Gable (insulation a level)	at ceiling	Not government-approved scheme	0.027 (!)	RCD
External wall	E16: Corner (normal)		Not government-approved scheme	0.031 (!)	RCD
External wall	E17: Corner (inverted - area greater than extern	internal nal area)	Not government-approved scheme	-0.064	RCD
3 Air permeabili	ity (better than typically	v expected	values are flagged with a subse	auent (!))	
Maximum permit	tted air permeability at 50)Pa	$8 m^3/hm^2$		
Dwelling air pern	neability at 50Pa		5 m ³ /hm ² , Design value		OK
Air permeability t	est certificate reference		, , , , , , , , , , , , , , , , , , , ,		1 -
4 Space heating	1				
Main heating sy	stem 1: Heat pump with	radiators of	r underfloor heating - Electricity		
Efficiency		262.5%			
Emitter type		Underfloor			
Flow temperature	e	55°C			
System type Heat Pumr		Heat Pump)		
Manufacturer		Vaillant Gro	oup UK Ltd		
Model	lodel aroTHERM plus 3.5kW + AI-Not valid				
Commissioning			·		
Secondary heat	ing system: N/A				
Fuel N/A					
Efficiency	Efficiency N/A				
Commissioning					
5 Hot water					
Cylinder/store -	type: Cylinder				
Capacity	<u></u>	150 litres			
Declared heat lo	ss	1.88 kWh/c	lav		
Primary pipewor	k insulated	Yes			
Manufacturer					
Model					
Commissioning					
Waste water he	at recoverv system 1 - 1	type: N/A			
Efficiency	, , , , , , , , , , , , , , , , , , ,	<u> </u>			
Manufacturer					
Model					
6 Controls					
Main heating 1	- type: Time and tempera	ature zone c	ontrol by arrangement of plumbing	g and electrical se	ervices
Function			· · · · ·		
Ecodesign class					
Manufacturer		1			
Model					
Water heating - type: Cylinder thermostat and HW separately timed					
Manufacturer					
Model					
7 Lighting					
Minimum permitt	ted light source efficacy	75 lm/W			
Lowest light sour	rce efficacy	75 lm/W			ОК
External lights co	ontrol	N/A			1

8 Mechanical ventilation				
System type: N/A				
Maximum permitted specific fan power	N/A			
Specific fan power	N/A		N/A	
Minimum permitted heat recovery	N/A			
efficiency				
Heat recovery efficiency	N/A		N/A	
Manufacturer/Model				
Commissioning				
9 Local generation				
N/A				
10 Heat networks				
N/A				
11 Supporting documentary evidence				
N/A				
12 Declarations				
a. Assessor Declaration				
This declaration by the assessor is co	nfirmation that the co	ntents of this BREL Compliance Report		
are a true and accurate reflection bas	ed upon the design ir	formation submitted for this dwelling for		
the purpose of carrying out the "As de	signed" assessment,	and that the supporting documentary		
evidence (SAP Conventions, Append	x 1 (documentary evi	dence) schedules the minimum		
documentary evidence required) has	been reviewed in the	course of preparing this BREL		
Compliance Report.				
Signea:		Assessor ID:		
Name				
b. Client Declaration				
N/A				



Dwelling type: Date of assessment: Produced by: Total floor area: DRRN: Bungalow, Detached 12/10/2023 Alexandru Ardelean 101.44 m²

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Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Thu 12 Oct 2023 14:47:40

Project Information				
Assessed By	Alexandru Ardelean	Building Type	House, Semi-detached	
OCDEA Registration	EES/022722	Assessment Date	2023-10-12	

Dwelling Details			
Assessment Type	As designed	Total Floor Area	68 m ²
Site Reference	Plot 4	Plot Reference	001
Address	Plot 1 Priory Road, Fressingfie	ld	

Client Details	
Name	Paul Sweeney
Company	studio303
Address	Priory Road, Fressingfield, IP21 5PH

1a Target emission rate and dwelling emission rate				
Fuel for main heating system	Electricity			
Target carbon dioxide emission rate	12.7 kgCO ₂ /m ²			
Dwelling carbon dioxide emission rate	4.92 kgCO ₂ /m ²	OK		
1b Target primary energy rate and dwelling primary energy				
Target primary energy	66.5 kWh _{PE} /m ²			
Dwelling primary energy	51.61 kWh _{PE} /m ²	OK		
1c Target fabric energy efficiency and dwelling fabric energy efficiency				
Target fabric energy efficiency	39.4 kWh/m ²			
Dwelling fabric energy efficiency	39.3 kWh/m ²	OK		

2a Fabric U-values						
Element	Maximum permitted	Dwelling average U-Value	Element with highest			
	average U-Value [W/m ² K]	[W/m ² K]	individual U-Value			
External walls	0.26	0.15	Walls (2) (0.17)	OK		
Party walls	0.2	0	Party Wall (1) (0)	N/A		
Curtain walls	1.6	0	N/A	N/A		
Floors	0.18	0.08	Heatloss Floor 1 (0.08)	OK		
Roofs	0.16	0.11	Roof (2) (0.16)	OK		
Windows, doors,	1.6	1.47	Folding Door (1.6)	OK		
and roof windows						
Rooflights	2.2	N/A	N/A	N/A		

2b Envelope elements (better than typically expected values are flagged with a subsequent (!))				
Name	Net area [m ²]	U-Value [W/m ² K]		
Exposed wall: Walls (1)	70.81	0.15		
Exposed wall: Walls (2)	0.73	0.17		
Party wall: Party Wall (1)	33.2	0 (!)		
Ground floor: Heatloss Floor 1, Heatloss Floor 1	34.08	0.08 (!)		
Exposed roof: Roof (1)	30.93	0.1 (!)		
Exposed roof: Roof (2)	4.9	0.16		

2c Openings (better than typically expected values are flagged with a subsequent (!))				
Name	Area [m ²]	Orientation	Frame factor	U-Value [W/m ² K]
Windows-front, Window	5.27	South West	0.7	1.4
Door-entrance, Door	2.14	South West	N/A	1.4
Windows-rear, Window	2.4	North East	0.7	1.4
Folding Door, Folding Door	5	North East	0.7	1.6

2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))						
Building part 1 - I	Building part 1 - Main Dwelling: Thermal bridging calculated from linear thermal transmittances for each junction					
Main element	ent Junction detail Source Psi value Drawing /					
			[W/mK]	reference		
External wall	E2: Other lintels (including other	Not government-approved	0.222	RCD		
steel lintels) scheme						

Main element	Junction detail		Source	Psi value	Drawing /
	F0.0'''				reference
External wall	E3: SIII		Not government-approved scheme	0.023 (!)	RCD
External wall	E4: Jamb		Not government-approved scheme	0.018 (!)	RCD
External wall	E5: Ground floor (normal)	Not government-approved	0.044	RCD
External wall	E10: Eaves (insulation at	t ceiling	Not government-approved	0.054	RCD
External wall	E12: Gable (insulation at	ceiling	Not government-approved	0.027 (!)	RCD
External wall	E16: Corner (normal)		Not government-approved	0.031 (!)	RCD
External wall	E6: Intermediate floor wit	thin a	Not government-approved	0 (!)	RCD
External wall	E11: Eaves (insulation at	t rafter	SAP table default	0.15	
External wall	E13: Gable (insulation at	rafter	SAP table default	0.25	
External wall	E18: Party wall between	dwellings	Not government-approved scheme	0.046	RCD
Party wall	P1: Ground floor		Not government-approved scheme	0.172	RCD
Party wall	P2: Intermediate floor wit dwelling	thin a	SAP table default	0 (!)	
Party wall	P4: Roof (insulation at ce level)	eiling	Not government-approved scheme	0.19	RCD
Party wall	P5: Roof (insulation at ra	fter level)	SAP table default	0.48	
Roof	R6: Flat ceiling		SAP table default	0.12	
2 Air normaabili		over a stard v			
S All permeabili	to d air parmachility at FOE		o m ³ /hm ²		
Dwalling oir parm	a bility of FODo	a	$0 \frac{111}{1111}$		OK
Air parmachility t			4 m /mm , Design value		UK
Air permeability to	est certificate reference				
4 Space heating					
Main heating sy	stem 1: Heat pump with ra	adiators or	underfloor heating - Electricity		
Efficiency	2	250.5%			
Emitter type	E	Both radiate	ors and underfloor		
Flow temperature	e 5	55°C			
System type	ŀ	leat Pump	1		
Manufacturer	V	/aillant Gro	oup UK Ltd		
Model	a	aroTHERM	plus 3.5kW + AI-Not valid		
Commissioning					
Secondary heat	ing system: N/A	1/4			
Fuel		N/A			
Efficiency		N/A			
Commissioning					
5 Hot water					
Cylinder/store -	type: Cylinder				
Capacity	1	50 litres			
Declared heat loss 1.88 kWh/da		lay			
Primary pipework insulated Yes					
Manufacturer					
Model					
Commissioning					
Waste water hea	at recovery system 1 - ty	pe: N/A			
Lificiency					
Madal					
IVIOQEI					

6 Controls					
Main heating 1 - type: Time and temper	ature zone control by	arrangement of plumbing and electrical se	ervices		
Function					
Ecodesign class					
Manufacturer					
Model					
Water heating - type: Cylinder thermost	at and HW separately	^r timed			
Manufacturer					
Model					
7 Lighting					
Minimum permitted light source efficacy	75 lm/W				
Lowest light source efficacy	75 lm/W		OK		
External lights control	N/A				
8 Machanical vantilation					
System type: N/A					
Maximum permitted specific fan power	N/A				
Specific fan power	N/A		N/A		
Minimum permitted heat recovery	N/A				
efficiency					
Heat recovery efficiency	N/A		N/A		
Manufacturer/Model			-		
Commissioning					
	I				
10 Heat networks					
N/A					
11 Supporting documentary evidence					
N/A					
10 Declarations					
12 Declarations					
a. Assessor Declaration	ofirmation that the ac	entents of this PREL Compliance Penert			
This declaration by the assessor is co	oninmation that the co	ontents of this BREL Compliance Report			
the purpose of corpuing out the "Ac do	ed upon the design if	and that the supporting desumptor			
avidence (SAD Conventions Annend	iv 1 (de sum entern, evi	and that the supporting documentary			
desumentary syldence required) has	boon roviewed in the	course of propering this BBEI			
Compliance Report					
Signed:		Assessor ID:			
Name:	Name: Date:				
b. Client Declaration		I			
N/A					



Dwelling type: Date of assessment: Produced by: Total floor area: DRRN: House, Semi-Detached 12/10/2023 Alexandru Ardelean 68.16 m²

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Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Thu 12 Oct 2023 14:47:40

Project Information					
Assessed By	Alexandru Ardelean	Building Type	House, Semi-detached		
OCDEA Registration	EES/022722	Assessment Date	2023-10-12		

Dwelling Details			
Assessment Type	As designed	Total Floor Area	68 m ²
Site Reference	Plot 5	Plot Reference	001
Address	Plot 1 Priory Road, Fressingfie	ld	

Client Details	
Name	Paul Sweeney
Company	studio303
Address	Priory Road, Fressingfield, IP21 5PH

1a Target emission rate and dwelling emission rate				
Fuel for main heating system	Electricity			
Target carbon dioxide emission rate	12.7 kgCO ₂ /m ²			
Dwelling carbon dioxide emission rate	4.92 kgCO ₂ /m ²	OK		
1b Target primary energy rate and dwelling primary energy				
Target primary energy	66.5 kWh _{PE} /m ²			
Dwelling primary energy	51.61 kWh _{PE} /m ²	OK		
1c Target fabric energy efficiency and dwelling fabric energy efficiency				
Target fabric energy efficiency	39.4 kWh/m ²			
Dwelling fabric energy efficiency	39.3 kWh/m ²	OK		

2a Fabric U-values						
Element	Maximum permitted	Dwelling average U-Value	Element with highest			
	average U-Value [W/m ² K]	[W/m ² K]	individual U-Value			
External walls	0.26	0.15	Walls (2) (0.17)	OK		
Party walls	0.2	0	Party Wall (1) (0)	N/A		
Curtain walls	1.6	0	N/A	N/A		
Floors	0.18	0.08	Heatloss Floor 1 (0.08)	OK		
Roofs	0.16	0.11	Roof (2) (0.16)	OK		
Windows, doors,	1.6	1.47	Folding Door (1.6)	OK		
and roof windows						
Rooflights	2.2	N/A	N/A	N/A		

2b Envelope elements (better than typically expected values are flagged with a subsequent (!))				
Name	Net area [m ²]	U-Value [W/m ² K]		
Exposed wall: Walls (1)	70.81	0.15		
Exposed wall: Walls (2)	0.73	0.17		
Party wall: Party Wall (1)	33.2	0 (!)		
Ground floor: Heatloss Floor 1, Heatloss Floor 1	34.08	0.08 (!)		
Exposed roof: Roof (1)	30.93	0.1 (!)		
Exposed roof: Roof (2)	4.9	0.16		

2c Openings (better than typically expected values are flagged with a subsequent (!))					
Name	Area [m ²]	Orientation	Frame factor	U-Value [W/m ² K]	
Windows-front, Window	5.27	South West	0.7	1.4	
Door-entrance, Door	2.14	South West	N/A	1.4	
Windows-rear, Window	2.4	North East	0.7	1.4	
Folding Door, Folding Door	5	North East	0.7	1.6	

2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))						
Building part 1 - I	Main Dwelling: Thermal bridging ca	Iculated from linear thermal transmit	tances for each ju	nction		
Main element	Junction detail	Source	Psi value	Drawing /		
	[W/mK] reference					
External wall	E2: Other lintels (including other	Not government-approved	0.222	RCD		
steel lintels) scheme						

Main element	Junction detail		Source	Psi value	Drawing /
	F0.0'''				reference
External wall	E3: Sill		Not government-approved scheme	0.023 (!)	RCD
External wall	E4: Jamb		Not government-approved scheme	0.018 (!)	RCD
External wall	E5: Ground floor (normal)	Not government-approved	0.044	RCD
External wall	E10: Eaves (insulation at	t ceiling	Not government-approved	0.054	RCD
External wall	E12: Gable (insulation at	ceiling	Not government-approved	0.027 (!)	RCD
External wall	E16: Corner (normal)		Not government-approved	0.031 (!)	RCD
External wall	E6: Intermediate floor wit	thin a	Not government-approved	0 (!)	RCD
External wall	E11: Eaves (insulation at	t rafter	SAP table default	0.15	
External wall	E13: Gable (insulation at	rafter	SAP table default	0.25	
External wall	E18: Party wall between	dwellings	Not government-approved scheme	0.046	RCD
Party wall	P1: Ground floor		Not government-approved scheme	0.172	RCD
Party wall	P2: Intermediate floor wit dwelling	thin a	SAP table default	0 (!)	
Party wall	P4: Roof (insulation at ce level)	eiling	Not government-approved scheme	0.19	RCD
Party wall	P5: Roof (insulation at ra	fter level)	SAP table default	0.48	
Roof	R6: Flat ceiling		SAP table default	0.12	
2 Air normaabili		over a stard v			
S All permeabili	to d air parmachility at FOE		o m ³ /hm ²		
Dwalling oir parm	a bility at 50Da	a	$0 \frac{111}{1111}$		OK
Air parmachility t			4 m /mm , Design value		UK
Air permeability to	est certificate reference				
4 Space heating					
Main heating sy	stem 1: Heat pump with ra	adiators or	underfloor heating - Electricity		
Efficiency	2	250.5%			
Emitter type	E	Both radiate	ors and underfloor		
Flow temperature	e 5	55°C			
System type	ŀ	leat Pump	1		
Manufacturer	V	/aillant Gro	oup UK Ltd		
Model	a	aroTHERM	plus 3.5kW + AI-Not valid		
Commissioning					
Secondary heat	ing system: N/A	1/4			
Fuel		N/A			
Efficiency		N/A			
Commissioning					
5 Hot water					
Cylinder/store -	type: Cylinder				
Capacity	1	50 litres			
Declared heat los	ss 1	1.88 kWh/day			
Primary pipework	c insulated Y	es			
Manufacturer					
Model					
Commissioning					
Waste water hea	at recovery system 1 - ty	pe: N/A			
Lificiency					
Madal					
IVIOQEI					

6 Controls				
Main heating 1 - type: Time and temper	ature zone control by	arrangement of plumbing and electrical se	ervices	
Function				
Ecodesign class				
Manufacturer				
Model				
Water heating - type: Cylinder thermost	at and HW separately	^r timed		
Manufacturer				
Model				
7 Lighting				
Minimum permitted light source efficacy	75 lm/W			
Lowest light source efficacy	75 lm/W		OK	
External lights control	N/A			
8 Machanical vantilation				
System type: N/A				
Maximum permitted specific fan power	N/A			
Specific fan power	N/A		N/A	
Minimum permitted heat recovery	N/A			
efficiency				
Heat recovery efficiency	N/A		N/A	
Manufacturer/Model			-	
Commissioning				
	I			
10 Heat networks				
N/A				
11 Supporting documentary evidence				
N/A				
10 Declarations				
12 Declarations				
a. Assessor Declaration	ofirmation that the as	entents of this PREL Compliance Penert		
This declaration by the assessor is co	oninmation that the co	ontents of this BREL Compliance Report		
the purpose of corpuing out the "Ac do	ed upon the design if	and that the supporting desumptor		
avidence (SAD Conventions Annend	iv 1 (de sum entern, evi	and that the supporting documentary		
desumentary syldence required) has	boon roviewed in the	course of propering this BBEI		
Compliance Depart				
Signed:		Assessor ID:		
Name: Date				
b. Client Declaration		I		
N/A				



Dwelling type: Date of assessment: Produced by: Total floor area: DRRN: House, Semi-Detached 12/10/2023 Alexandru Ardelean 68.16 m²

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Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Thu 12 Oct 2023 14:47:41

Project Information			
Assessed By	Alexandru Ardelean	Building Type	House, Detached
OCDEA Registration	EES/022722	Assessment Date	2023-10-12

Dwelling Details			
Assessment Type	As designed	Total Floor Area	68 m ²
Site Reference	Plot 6	Plot Reference	001
Address	Plot 1 Priory Road, Fressingfie	ld	

Client Details	
Name	Paul Sweeney
Company	studio303
Address	Priory Road, Fressingfield, IP21 5PH

1a Target emission rate and dwelling emission rate					
Fuel for main heating system	Electricity				
Target carbon dioxide emission rate	13.86 kgCO ₂ /m ²				
Dwelling carbon dioxide emission rate	5.05 kgCO ₂ /m ²	OK			
1b Target primary energy rate and dwelling primary energy	IY				
Target primary energy	72.71 kWh _{PE} /m ²				
Dwelling primary energy	52.84 kWh _{PE} /m ²	OK			
1c Target fabric energy efficiency and dwelling fabric energy efficiency					
Target fabric energy efficiency	45.0 kWh/m ²				
Dwelling fabric energy efficiency	42.2 kWh/m ²	OK			

2a Fabric U-values						
Element	Maximum permitted	Dwelling average U-Value	Element with highest			
	average U-Value [W/m ² K]	[W/m ² K]	individual U-Value			
External walls	0.26	0.15	Walls (1) (0.15)	OK		
Party walls	0.2	N/A	N/A	N/A		
Curtain walls	1.6	N/A	N/A	N/A		
Floors	0.18	0.08	Heatloss Floor 1 (0.08)	OK		
Roofs	0.16	0.12	Roof (1) (0.12)	ОК		
Windows, doors,	1.6	1.46	Folding Door (1.6)	OK		
and roof windows						
Rooflights	2.2	N/A	N/A	N/A		

2b Envelope elements (better than typically expected values are flagged with a subsequent (!))					
Name	Net area [m ²]	U-Value [W/m ² K]			
Exposed wall: Walls (1)	106.79	0.15			
Ground floor: Heatloss Floor 1, Heatloss Floor 1	34.08	0.08 (!)			
Exposed roof: Roof (1)	34.08	0.12			

2c Openings (better than typically expected values are flagged with a subsequent (!))					
Name	Area [m ²]	Orientation	Frame factor	U-Value [W/m ² K]	
Windows-front, Window	5.98	South West	0.7	1.4	
Door-entrance, Door	2.14	South East	N/A	1.4	
Windows-rear, Window	3.15	North East	0.7	1.4	
Folding Door, Folding Door	5	North East	0.7	1.6	

2d Thermal brid	Iging (better than typically expect	ed values are flagged with a sι	ibsequent (!))	
Building part 1 -	Main Dwelling: Thermal bridging ca	alculated from linear thermal trans	smittances for each	n junction
Main element	Junction detail	Source	Psi value	Drawing /
			[W/mK]	reference
External wall	E2: Other lintels (including other	Not government-approved	0.222	RCD
	steel lintels)	scheme		
External wall	E3: Sill	Not government-approved	0.023 (!)	RCD
		scheme		

Main element	Junction detail		Source	Psi value	Drawing /		
Extornal wall	E1: lomb		Not any argument approved				
			scheme	0.018 (!)	KCD		
External wall	E5: Ground floor (normal)		Not government-approved scheme	0.044	RCD		
External wall	E10: Eaves (insulation	at ceiling	Not government-approved	0.054	RCD		
External well	level)			0.007 (1)	DOD		
	level)	at ceiling	scheme	0.027 (!)	RCD		
External wall	E16: Corner (normal)		Not government-approved scheme	0.031 (!)	RCD		
External wall	E6: Intermediate floor v dwelling	vithin a	Not government-approved	0 (!)	RCD		
	a						
3 Air permeabili	ty (better than typically	/ expected	values are flagged with a subse	equent (!))			
Maximum permit	ted air permeability at 50)Pa	8 m³/hm²				
Dwelling air perm	eability at 50Pa		5 m³/hm², Design value		OK		
Air permeability to	est certificate reference						
4 Space heating							
Main heating sy	stem 1. Heat nump with	radiators or	r underfloor heating - Electricity				
Efficiency		252 0%	andemoor heating - Electricity				
Emitter type		Both radiat	ors and underfloor				
Elow tomporature	<u>, </u>	55°C					
Suctor type	;	Jo C	<u>,</u>				
System type		Neillent Cr					
Manufacturer		valilant Group UK Ltd					
		aroTHERIN					
Commissioning	A 11/A						
Secondary neating system: N/A		N 1/A					
Fuel		N/A					
Efficiency		N/A					
Commissioning							
5 Hot water							
Cylinder/store -	type: Cylinder						
Capacity		150 litres					
Declared heat los	S	1.88 kWh/c	lay				
Primary pipework	insulated	Yes	,				
Manufacturer							
Model							
Commissioning							
Waste water hea	at recovery system 1 -	type: N/A					
Efficiency		••					
Manufacturer							
Model							
6 Controls							
Main heating 1 -	type: Time and tempera	ature zone c	ontrol by arrangement of plumbin	g and electrical se	rvices		
Function	•••			-			
Ecodesign class							
Manufacturer							
Model							
Water heating -	type: Cylinder thermosta	t and HW s	eparately timed				
Manufacturer	, _, _,						
Model							
7 Lighting							
Minimum permitte	ed light source efficacy	75 lm/W					
Lowest light sour	ce efficacy	75 lm/W			OK		
External lights co	ntrol	N/A					

8 Mechanical ventilation					
System type: N/A					
Maximum permitted specific fan power	N/A				
Specific fan power	N/A		N/A		
Minimum permitted heat recovery	N/A				
efficiency					
Heat recovery efficiency	N/A		N/A		
Manufacturer/Model					
Commissioning					
9 Local generation					
N/A					
10 Heat networks					
N/A					
11 Supporting documentary evidence					
N/A					
12 Declarations					
a. Assessor Declaration					
This declaration by the assessor is co	nfirmation that the co	ntents of this BREL Compliance Report			
are a true and accurate reflection bas	ed upon the design ir	formation submitted for this dwelling for			
the purpose of carrying out the "As de	signed" assessment,	and that the supporting documentary			
evidence (SAP Conventions, Append	x 1 (documentary evi	dence) schedules the minimum			
documentary evidence required) has	been reviewed in the	course of preparing this BREL			
Compliance Report.					
Signea:		Assessor ID:			
Nama					
b. Client Declaration					
N/A					



Dwelling type: Date of assessment: Produced by: Total floor area: DRRN: House, Detached 12/10/2023 Alexandru Ardelean 68.16 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 SAP 10 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.



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.

Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Thu 12 Oct 2023 14:47:41

Project Information			
Assessed By	Alexandru Ardelean	Building Type	House, Semi-detached
OCDEA Registration	EES/022722	Assessment Date	2023-10-12

Dwelling Details			
Assessment Type	As designed	Total Floor Area	76 m ²
Site Reference	Plot 7	Plot Reference	001
Address	Plot 1 Priory Road, Fressingfield		

Client Details	
Name	Paul Sweeney
Company	studio303
Address	Priory Road, Fressingfield, IP21 5PH

1a Target emission rate and dwelling emission rate				
Fuel for main heating system	Electricity			
Target carbon dioxide emission rate	12.15 kgCO ₂ /m ²			
Dwelling carbon dioxide emission rate	4.59 kgCO ₂ /m ²	OK		
1b Target primary energy rate and dwelling primary energy				
Target primary energy	63.48 kWh _{PE} /m ²			
Dwelling primary energy	48.1 kWh _{PE} /m ²	OK		
1c Target fabric energy efficiency and dwelling fabric energy efficiency				
Target fabric energy efficiency	39.6 kWh/m ²			
Dwelling fabric energy efficiency	39.4 kWh/m ²	OK		

2a Fabric U-values	3			
Element	Maximum permitted	Dwelling average U-Value	Element with highest	
	average U-Value [W/m ² K]	[W/m ² K]	individual U-Value	
External walls	0.26	0.15	Walls (1) (0.15)	OK
Party walls	0.2	0	Party Wall (1) (0)	N/A
Curtain walls	1.6	0	N/A	N/A
Floors	0.18	0.08	Heatloss Floor 1 (0.08)	OK
Roofs	0.16	0.12	Roof (1) (0.12)	OK
Windows, doors,	1.6	1.46	Folding Door (1.6)	OK
and roof windows				
Rooflights	2.2	N/A	N/A	N/A

2b Envelope elements (better than typically expected values are flagged with a subsequent (!))				
Name	Net area [m ²]	U-Value [W/m ² K]		
Exposed wall: Walls (1)	75.94	0.15		
Party wall: Party Wall (1)	37.54	0 (!)		
Ground floor: Heatloss Floor 1, Heatloss Floor 1	38.25	0.08 (!)		
Exposed roof: Roof (1)	38.25	0.12		

2c Openings (better than typically expected values are flagged with a subsequent (!))				
Name	Area [m ²]	Orientation	Frame factor	U-Value [W/m ² K]
Windows-front, Window	5.72	South East	0.7	1.4
Door-entrance, Door	2.14	South East	N/A	1.4
Windows-rear, Window	3.2	North West	0.7	1.4
Windows-side, Window	1.71	South West	0.7	1.4
Folding Door, Folding Door	5	North West	0.7	1.6

2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))					
Building part 1 - I	Main Dwelling: Thermal bridging ca	Iculated from linear thermal transmit	tances for each ju	nction	
Main element Junction detail Source Psi value Drawing /					
			[W/mK]	reference	
External wall	E2: Other lintels (including other steel lintels)	Not government-approved scheme	0.222	RCD	

Main element	Junction detail		Source	Psi value	Drawing /
-				[W/mK]	reference
External wall	E3: Sill		Not government-approved scheme	0.023 (!)	RCD
External wall	E4: Jamb		Not government-approved	0.018 (!)	RCD
External wall	E5: Ground floor (normal)	Not government-approved	0.044	RCD
)	scheme	0.044	ROD
External wall	E10: Eaves (insulation at level)	ceiling	Not government-approved scheme	0.054	RCD
External wall	E12: Gable (insulation at level)	ceiling	Not government-approved scheme	0.027 (!)	RCD
External wall	E16: Corner (normal)		Not government-approved	0.031 (!)	RCD
External wall	E6: Intermediate floor wit dwelling	hin a	Not government-approved scheme	0 (!)	RCD
External wall	E18: Party wall between	dwellings	Not government-approved scheme	0.046	RCD
Party wall	P1: Ground floor		Not government-approved scheme	0.172	RCD
Party wall	P2: Intermediate floor within a		SAP table default	0 (!)	
Party wall	P4: Roof (insulation at ceiling level)		Not government-approved scheme	0.19	RCD
3 Air permeabili	ty (better than typically e	expected	values are flagged with a subs	equent (!))	
Maximum permit	ted air permeability at 50P	² a	$8 m^3/hm^2$		
Dwelling air perm	neability at 50Pa		5 m ³ /hm ² , Design value		OK
Air permeability t	est certificate reference		```` ````````````````````````````		L.
A Space heating					
Main heating sy	stem 1: Heat nump with r	adiators or	underfloor beating - Electricity		
Efficiency	2	253.3%	andomool notaring Electricity		
Emitter type		Roth radiate	ors and underfloor		
Flow temperature	. 5	5°C			
Svetom type	, j	loot Dump			
Manufacturar		oillont Cr	, august IK I ta		
Model			$h = \frac{1}{2} $		
Commissioning	a				
Secondary heat	ing system [.] N/A				
Fuel		J/A			
Efficiency		<u>Ι/Δ</u>			
Commissioning					
5 Hot water					
Cylinder/store -	type: Cylinder				
Capacity 150 litres					
Declared heat los	ss 1	.88 kWh/d	lay		
Primary pipework	cinsulated Y	′es			
Manufacturer					
Model					
Commissioning					
Waste water hea	at recovery system 1 - ty	pe: N/A			

	<u> </u>
Efficiency	
Manufacturer	
Model	
6 Controls	
Main heating 1 - type: Time and tempera	ature zone control by arrangement of plumbing and
Function	
Ecodesign class	
6 Controls Main heating 1 - type: Time and tempera Function Ecodesign class	ature zone control by arrangement of plumbing ar

Function			
Ecodesign class			
Manufacturer			
Model			
Water heating - type: Cylinder thermostat and HW separately timed			
Manufacturer			
Model			

electrical services

7 Lighting				
Minimum permitted light source efficacy	75 lm/W			
Lowest light source efficacy	75 lm/W		OK	
External lights control	N/A			
8 Mechanical ventilation				
System type: N/A	T			
Maximum permitted specific fan power	N/A			
Specific fan power	N/A		N/A	
Minimum permitted heat recovery	N/A			
efficiency				
Heat recovery efficiency	N/A		N/A	
Manufacturer/Model				
Commissioning				
9 Local generation				
N/A				
10 Heat networks				
N/A				
11 Supporting documentary evidence				
N/A				
12 Declarations				
a. Assessor Declaration				
This declaration by the assessor is co	onfirmation that the co	ontents of this BREL Compliance Report		
are a true and accurate reflection bas	ed upon the design ir	nformation submitted for this dwelling for		
the purpose of carrying out the "As de	esigned" assessment,	and that the supporting documentary		
evidence (SAP Conventions, Append	ix 1 (documentary evi	idence) schedules the minimum		
documentary evidence required) has	been reviewed in the	course of preparing this BREL		
Compliance Report.				
Signed: Assessor ID:				
Nama		Deter		
b. Client Declaration	h Client Declaration			
N/A				



Dwelling type: Date of assessment: Produced by: Total floor area: DRRN: House, Semi-Detached 12/10/2023 Alexandru Ardelean 76.5 m²

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Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Thu 12 Oct 2023 14:47:41

Project Information					
Assessed By	Alexandru Ardelean	Building Type	House, Semi-detached		
OCDEA Registration	EES/022722	Assessment Date	2023-10-12		

Dwelling Details			
Assessment Type	As designed	Total Floor Area	76 m ²
Site Reference	Plot 8	Plot Reference	001
Address	Plot 1 Priory Road, Fressingfie	ld	

Client Details			
Name	Paul Sweeney		
Company	studio303		
Address	Priory Road, Fressingfield, IP21 5PH		

1a Target emission rate and dwelling emission rate				
Fuel for main heating system	Electricity			
Target carbon dioxide emission rate	12.3 kgCO ₂ /m ²			
Dwelling carbon dioxide emission rate	4.64 kgCO ₂ /m ²	OK		
1b Target primary energy rate and dwelling primary energy				
Target primary energy	64.3 kWh _{PE} /m ²			
Dwelling primary energy	48.55 kWh _{PE} /m ²	OK		
1c Target fabric energy efficiency and dwelling fabric energy efficiency				
Target fabric energy efficiency	40.3 kWh/m ²			
Dwelling fabric energy efficiency	40.1 kWh/m ²	OK		

2a Fabric U-values					
Element	Maximum permitted	Dwelling average U-Value	Element with highest		
	average U-Value [W/m ² K]	[W/m ² K]	individual U-Value		
External walls	0.26	0.15	Walls (1) (0.15)	OK	
Party walls	0.2	0	Party Wall (1) (0)	N/A	
Curtain walls	1.6	0	N/A	N/A	
Floors	0.18	0.08	Heatloss Floor 1 (0.08)	OK	
Roofs	0.16	0.12	Roof (1) (0.12)	ОК	
Windows, doors,	1.6	1.46	Folding Door (1.6)	ОК	
and roof windows					
Rooflights	2.2	N/A	N/A	N/A	

2b Envelope elements (better than typically expected values are flagged with a subsequent (!))					
Name	Net area [m ²]	U-Value [W/m ² K]			
Exposed wall: Walls (1)	75.94	0.15			
Party wall: Party Wall (1)	37.54	0 (!)			
Ground floor: Heatloss Floor 1, Heatloss Floor 1	38.25	0.08 (!)			
Exposed roof: Roof (1)	38.25	0.12			

2c Openings (better than typically expected values are flagged with a subsequent (!))					
Name	Area [m ²]	Orientation	Frame factor	U-Value [W/m ² K]	
Windows-front, Window	5.72	South East	0.7	1.4	
Door-entrance, Door	2.14	South East	N/A	1.4	
Windows-rear, Window	3.2	North West	0.7	1.4	
Windows-side, Window	1.71	North East	0.7	1.4	
Folding Door, Folding Door	5	North West	0.7	1.6	

2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))					
Building part 1 - I	Main Dwelling: Thermal bridging ca	Iculated from linear thermal transmit	tances for each ju	nction	
Main element	Junction detail	Source	Psi value	Drawing /	
			[W/mK]	reference	
External wall	E2: Other lintels (including other steel lintels)	Not government-approved scheme	0.222	RCD	

Main element	Junction detail		Source	Psi value	Drawing /
				[W/mK]	reference
External wall	E3: Sill		Not government-approved scheme	0.023 (!)	RCD
External wall	E4: Jamb		Not government-approved scheme	0.018 (!)	RCD
External wall	E5: Ground floor (norma	l)	Not government-approved scheme	0.044	RCD
External wall	E10: Eaves (insulation a level)	t ceiling	Not government-approved scheme	0.054	RCD
External wall	E12: Gable (insulation a	t ceiling	Not government-approved scheme	0.027 (!)	RCD
External wall	E16: Corner (normal)		Not government-approved scheme	0.031 (!)	RCD
External wall	E6: Intermediate floor wi dwelling	thin a	Not government-approved scheme	0 (!)	RCD
External wall	E18: Party wall between	dwellings	Not government-approved scheme	0.046	RCD
Party wall	P1: Ground floor		Not government-approved scheme	0.172	RCD
Party wall	P2: Intermediate floor wi dwelling	thin a	SAP table default	0 (!)	
Party wall	P4: Roof (insulation at ceiling level)		Not government-approved scheme	0.19	RCD
3 Air permeabili	ty (better than typically	expected	values are flagged with a subs	equent (!))	
Maximum permit	ted air permeability at 50	Pa	$8 m^{3}/hm^{2}$		
Dwelling air perm	neability at 50Pa		5 m ³ /hm ² . Design value		OK
Air permeability t	est certificate reference		,		
1 On and head in a					
4 Space neating	atem 1. Lloot pump with	adiatara a	underfleer besting Electricity		
Filiaianay	stem T: Heat pump with I		undemoti heating - Electricity		
Enclency		203.3% Doth radiat	are and underfloor		
Eliniter type					
Flow temperature					
Monufacturar		Heat Pump			
Madal			bup OK Liu		
Commissioning					
Secondary heat	ing system [.] N/A				
Fuel		NI/A			
Efficiency		Ν/Δ			
commodering					
5 Hot water					
Cylinder/store -	type: Cylinder				
Capacity	icity 150 litres				
Declared heat loss 1.88 kWh/da			lay		
Primary pipework	(insulated	Yes			
Manufacturer					
Model					
Commissioning					
Waste water hea	at recovery system 1 - ty	/pe: N/A			

Main heating 1 - type: Time and temperature zone control by arrangement of plumbing and electrical services

Water heating - type: Cylinder thermostat and HW separately timed

Efficiency Manufacturer Model 6 Controls

Function Ecodesign class Manufacturer Model

Manufacturer Model

7 Lighting				
Minimum permitted light source efficacy	75 lm/W			
Lowest light source efficacy	75 lm/W		OK	
External lights control	N/A			
8 Mechanical ventilation				
System type: N/A	T			
Maximum permitted specific fan power	N/A			
Specific fan power	N/A		N/A	
Minimum permitted heat recovery	N/A			
efficiency				
Heat recovery efficiency	N/A		N/A	
Manufacturer/Model				
Commissioning				
9 Local generation				
N/A				
10 Heat networks				
N/A				
11 Supporting documentary evidence				
N/A				
12 Declarations				
a. Assessor Declaration				
This declaration by the assessor is co	onfirmation that the co	ontents of this BREL Compliance Report		
are a true and accurate reflection bas	ed upon the design ir	nformation submitted for this dwelling for		
the purpose of carrying out the "As de	esigned" assessment,	and that the supporting documentary		
evidence (SAP Conventions, Append	ix 1 (documentary evi	idence) schedules the minimum		
documentary evidence required) has	been reviewed in the	course of preparing this BREL		
Compliance Report.				
Signed: Assessor ID:				
Nama		Deter		
b. Client Declaration	h Client Declaration			
N/A				



Dwelling type: Date of assessment: Produced by: Total floor area: DRRN: House, Semi-Detached 12/10/2023 Alexandru Ardelean 76.5 m²

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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.

Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Thu 12 Oct 2023 14:47:41

Project Information						
Assessed By	Alexandru Ardelean	Building Type	House, Semi-detached			
OCDEA Registration	EES/022722	Assessment Date	2023-10-12			

Dwelling Details					
Assessment Type	As designed	Total Floor Area	76 m ²		
Site Reference	Plot 9	Plot Reference	001		
Address	Plot 1 Priory Road, Fressingfie	ld			

Client Details			
Name	Paul Sweeney		
Company	studio303		
Address	Priory Road, Fressingfield, IP21 5PH		

1a Target emission rate and dwelling emission rate				
Fuel for main heating system	Electricity			
Target carbon dioxide emission rate	12.18 kgCO ₂ /m ²			
Dwelling carbon dioxide emission rate	4.59 kgCO ₂ /m ²	OK		
1b Target primary energy rate and dwelling primary energy				
Target primary energy	63.68 kWh _{PE} /m ²			
Dwelling primary energy	48.05 kWh _{PE} /m ²	OK		
1c Target fabric energy efficiency and dwelling fabric energy efficiency				
Target fabric energy efficiency	39.2 kWh/m ²			
Dwelling fabric energy efficiency	38.4 kWh/m ²	OK		

2a Fabric U-values						
Element	Maximum permitted	Dwelling average U-Value	Element with highest			
	average U-Value [W/m ² K]	[W/m ² K]	individual U-Value			
External walls	0.26	0.15	Walls (1) (0.15)	OK		
Party walls	0.2	0	Party Wall (1) (0)	N/A		
Curtain walls	1.6	0	N/A	N/A		
Floors	0.18	0.08	Heatloss Floor 1 (0.08)	OK		
Roofs	0.16	0.12	Roof (1) (0.12)	OK		
Windows, doors,	1.6	1.46	Folding Door (1.6)	OK		
and roof windows						
Rooflights	2.2	N/A	N/A	N/A		

2b Envelope elements (better than typically expected values are flagged with a subsequent (!))					
Name	Net area [m ²]	U-Value [W/m ² K]			
Exposed wall: Walls (1)	77.65	0.15			
Party wall: Party Wall (1)	37.54	0 (!)			
Ground floor: Heatloss Floor 1, Heatloss Floor 1	38.25	0.08 (!)			
Exposed roof: Roof (1)	38.25	0.12			

2c Openings (better than typically expected values are flagged with a subsequent (!))					
Name	Area [m ²]	Orientation	Frame factor	U-Value [W/m ² K]	
Windows-front, Window	5.72	South	0.7	1.4	
Door-entrance, Door	2.14	South	N/A	1.4	
Windows-rear, Window	3.2	North	0.7	1.4	
Folding Door, Folding Door	5	North	0.7	1.6	

2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))						
Building part 1 -	Main Dwelling: Thermal bridging ca	Iculated from linear thermal transmi	ttances for each ju	Inction		
Main element Junction detail Source Psi value Drawing /						
				reference		
External wall	E2: Other lintels (including other	Not government-approved	0.222	RCD		
	steel lintels)	scheme				
External wall	E3: Sill	Not government-approved	0.023 (!)	RCD		
		scheme				

Main element	Junction detail		Source	Psi value [W/mK]	Drawing / reference
External wall	E4: Jamb		Not government-approved scheme	0.018 (!)	RCD
External wall	E5: Ground floor (normal)		Not government-approved	0.044	RCD
External wall	E10: Eaves (insulation a	at ceiling	Not government-approved scheme	0.054	RCD
External wall	E12: Gable (insulation a level)	at ceiling	Not government-approved scheme	0.027 (!)	RCD
External wall	E16: Corner (normal)		Not government-approved scheme	0.031 (!)	RCD
External wall	E6: Intermediate floor w dwelling	vithin a	Not government-approved scheme	0 (!)	RCD
External wall	E18: Party wall between	n dwellings	Not government-approved scheme	0.046	RCD
Party wall	P1: Ground floor		Not government-approved scheme	0.172	RCD
Party wall	P2: Intermediate floor w dwelling	vithin a	SAP table default	0 (!)	
Party wall	P4: Roof (insulation at o level)	ceiling	Not government-approved scheme	0.19	RCD
3 Air permeabili	ty (better than typically	v expected	values are flagged with a subseq	uent (!))	
Maximum permit	ted air permeability at 50)Pa	$8 m^3/hm^2$		
Dwelling air perm	neability at 50Pa		5 m ³ /hm ² . Design value		OK
Air permeability t	est certificate reference				
			L		
4 Space heating		and the terms of	n en de efferende en tiere - Electriciter		
Main neating sy	stem 1: Heat pump with	radiators of	r underfloor heating - Electricity		
Emiciency		252.1% Poth radiat	are and underfloor		
Elinitier type		55°C			
System type	5	<u>,</u>			
Manufacturer		Vaillant Gr	, oun LIK I td		
Model	Model aroTHEPM		l plus 3.5kW + Al-Not valid		
Commissioning					
Secondary heat	ing system: N/A				
Fuel		N/A			
Efficiency N/A					
Commissioning					
5 Hot water					
Cylinder/store -	type: Cylinder				
Capacity		150 litres			
Declared heat los	ss	1.88 kWh/c	day		
Primary pipework	c insulated	Yes	-		
Manufacturer					
Model					
Commissioning					
Waste water hea	at recovery system 1 - 1	type: N/A			
Efficiency					
Model					
6 Controls					
Main heating 1 - type: Time and temperature zone control by arrangement of plumbing and electrical services					
Function	Function				
Ecodesign class					
Model					
Water hasting	tupo: Culindor thormast	t and LIM -	oparatoly timed		
Manufacturor	type. Cylinder thermosta				
Model					
MOUEI					

7 Lighting					
Minimum permitted light source efficacy	75 lm/W				
Lowest light source efficacy	75 lm/W		OK		
External lights control	N/A				
8 Mechanical ventilation					
System type: N/A					
Maximum permitted specific fan power	N/A				
Specific fan power	N/A		N/A		
Minimum permitted heat recovery	N/A				
efficiency					
Heat recovery efficiency	N/A		N/A		
Manufacturer/Model					
Commissioning					
9 Local generation					
N/A					
10 Heat networks					
N/A					
11 Supporting documentary ovidence					
N/A					
12 Deployed in the second					
a Assessor Declaration					
This declaration by the assessor is confirmation that the contents of this BREL Compliance Report					
are a true and accurate reflection based upon the design information submitted for this dwelling for					
the purpose of carrying out the "As de	esigned" assessment.	and that the supporting documentary			
evidence (SAP Conventions, Append	ix 1 (documentary evi	dence) schedules the minimum			
documentary evidence required) has	been reviewed in the	course of preparing this BREL			
Compliance Report.					
Signed:		Assessor ID:			
Name: Date:					
b. Client Declaration					
N/A					



Dwelling type: Date of assessment: Produced by: Total floor area: DRRN: House, Semi-Detached 12/10/2023 Alexandru Ardelean 76.5 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 SAP 10 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.



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.