



SAP Report Submission for Building Regulations Compliance

Client: Dave Cottle Civil Engineering

Project: Plot 3, Land adjacent to Dolwar

Pentre Llanrhaeadr, Denbigh, Denbighshire, LL16 4NT

Contact: Stuart Hatherall

Blueprint Planning & Design Ltd stuart@blueprintarchitectural.com

Report Issue Date: 11/07/2022

EXCELLENCE IN ENERGY ASSESSMENT

PREDICTED ENERGY ASSESSMENT



Plot 3, Land adjacent to Dolwar, Pentre Llanrhaeadr, Denbigh, Denbighshire,

LL16 4NT

Dwelling type: House, End-Terrace

Date of assessment: 11/07/2022

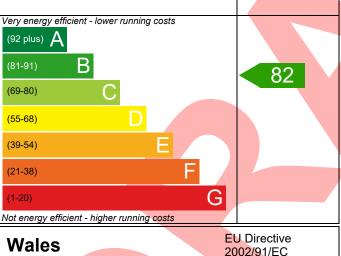
Produced by: Blueprint Planning & Design Ltd

Total floor area: 86.56 m²

This document is a Predicted Energy Assessment for properties marketed when they are incomplete. It includes a predicted energy rating which might not represent the final energy rating of the property on completion. Once the property is completed, this rating will be updated and an official Energy Performance Certificate will be created for the property. This will include more detailed information about the energy performance of the completed property.

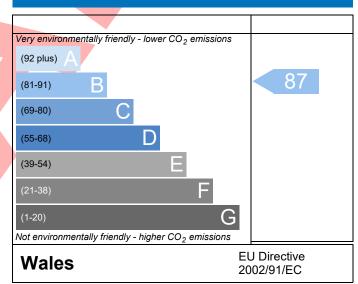
The energy performance has been assessed using the Government approved SAP2012 methodology and is rated in terms of the energy use per square meter of floor area; the energy efficiency is based on fuel costs and the environmental impact is based on carbon dioxide (CO₂) emissions.

Energy Efficiency Rating



The energy efficiency rating is a measure of the overall efficiency of a home. The higher the rating the more energy efficient the home is and the lower the fuel bills are likely to be.

Environmental Impact (CO₂) Rating



The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide (CO₂) emissions. The higher the rating the less impact it has on the environment.



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



Property Reference	C102 Plot 3				Issued on Date	11/07/2022
Assessment	As Designed		Pr	rop Type Ref		
Reference						
Property	Plot 3, Land adjacent to D	olwar, Pentre	Llanrhaeadr, Der	nbigh, Denbigh	nshire, LL16 4NT	
SAP Rating		82 B	DER	16.59	TER	17.82
Environmental		87 B	% DER <ter< th=""><th></th><th>6.89</th><th></th></ter<>		6.89	
CO₂ Emissions (t/yea	ar)	1.17	FEE	56.82	TFEE	N/A
General Requiremer	nts Compliance	Pass	% DFEE <tfee< th=""><th></th><th>N/A</th><th></th></tfee<>		N/A	
Assessor Details	Mr. Stuart Hatherall, Blueprir	nt Planning & [Design Ltd, Tel: 01	1978 356 500,	Assessor ID	N887-0001
	stuart@blueprintarchitectura					
Client	Dave Cottle Civil Engineering,	Dave Cottle C	ivil Engineering			
SUMARY FOR INPUT	DATA FOR New Build (As Des	signed)				
Criteria 1 – The DER r	must be no greater than the '	ΓER				
1a TER and DER						
Fuel for main heat	ting	Mains ga	is .			
Fuel factor		1.00 (ma	ins gas)			
Target Carbon Dio	oxide Emission Rate (TER)	17.82			kgCO ₂ /m ²	
Dwelling Carbon [Dioxide Emission Rate (DER)	16.59			kgCO ₂ /m ²	Pass
		-1.23 (-6	.9%)		kgCO ₂ /m ²	
Criteria 2 – Limits on	design flexibility					
Building Fabric						
2 Fabric U-values						
Element	Aver	age	Н	lighest		
External wa		(max. 0.21)	0).21 (max. 0.70	0)	Pass
Party wall		(max. 0.20)	-	-		Pass
Floor		(max. 0.18)		0.14 (max. 0.70	,	Pass
Roof		(max. 0.15)).15 (max. 0.35	•	Pass
Openings		(max. 1.60)	1	40 (max. 3.30))	Pass
2a Thermal bridgi						
_	ing calculated from linear the	rmal transmitt	ances for each ju	inction		
3 Air permeability					2.44	
	ty at 50 pascals		sign value)		m ³ /(h.m ²) @ 50 Pa	
Maximum		10.0			m ³ /(h.m ²) @ 50 Pa	Pass
Fixed Building Ser						
4 Heating efficien		D 11				
Main heating s	system		stem with radiato m database	ors or underflo	or - Mains gas	Pass
			er Greenstar 400	0 GR4700iW 3	0 C NG	
		Combi b				
		Efficienc Minimur	y: 89.3% SEDBUK n: 88.0%	2009		
Secondary hea	ating system	None	00.070			=

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



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

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



<u>5 Cylinder insulation</u>			
Hot water storage	No cylinder		
<u>6 Controls</u>			
Space heating controls	Programmer, TRVs and flow switch		Pass
Hot water controls	No cylinder		
Boiler interlock	Yes		Pass
7 Low energy lights			
Percentage of fixed lights with low-energy fittings	100	%	
Minimum	75	%	Pass
8 Mechanical ventilation			
Not applicable			
Criterion 3 – Limiting overheating due to solar and	other gains		
9 Summertime temperature			
Overheating risk (Wales)	Not significant		Pass
Based on:			
Overshading	Average		
Windows facing East	6.52 m ² , No overhang		
Windows facing South	0.96 m ² , No overhang		
Windows facing West	6.05 m ² , No overhang		╛
Air change rate	8.00 ach		
Blinds/curtains	None		
Criterion 4 – Building performance consistent with	DER		
Party Walls			
Туре	U-value		
Unfilled Cavity with Edge Sealing	0.20	W/m²K	Pass
Air-pressure testing			
3 Air permeability			
Air permeability at 50 pascals	6.00 (design value)	m³/(h.m²) @ 50 Pa	
Maximum	10.0	m³/(h.m²) @ 50 Pa	Pass
10 Key features			
Door U-value	1.20	W/m²K	
Roof window U-value	1.10	W/m²K	
Photovoltaic array	0.96	kW	



RECOMMENDATIONS



	Typical cost	Typical savings per year	Energy efficiency	Environmental impact	Result
Low energy lights			0	0	Already installed
Solar water heating	£4,000 - £6,000	£26	B 83	B 89	Recommended
Photovoltaic			0	0	Already installed
Wind turbine	£15,000 - £25,000	£695	A 104	A 108	Recommended
Totals	£19,000 - £31,000	£721	A 104	A 108	





THERMAL BRIDGING

Calculation Type: New Build (As Designed)



Property Reference	C102 Plot 3				Issued on Date	11/07/2022
Assessment	As Designed			Prop Type Ref		
Reference						
Property	Plot 3, Land adjacent to D	olwar, Pentre	Llanrhaeadr,	Denbigh, Denbig	hshire, LL16 4NT	
SAP Rating		82 B	DER	16.59	TER	17.82
Environmental		87 B	% DER <ter< th=""><th></th><th>6.89</th><th></th></ter<>		6.89	
CO ₂ Emissions (t/ye	ear)	1.17	FEE	56.82	TFEE	N/A
General Requireme	ents Compliance	Pass	% DFEE <tfe< th=""><th>E</th><th>N/A</th><th></th></tfe<>	E	N/A	
Assessor Details	Mr. Stuart Hatherall, Blueprin stuart@blueprintarchitectura	_	Design Ltd, Tel	: 01978 356 500,	Assessor ID	N887-0001
Client	Dave Cottle Civil Engineering	Dave Cottle C	Civil Engineerir	ng		

	Junction detail	Source Type	Psi (W/mK)	Length (m)	Result	Reference
External wall	E1 Steel lintel with perforated steel base plate	Table K1 - Approved	0.500	7.41	3.71	
External wall	E3 Sill	Table K1 - Approved	0.040	8.30	0.33	
External wall	E4 Jamb	Table K1 - Approved	0.050	24.78	1.24	
External wall	E5 Ground floor (normal)	Table K1 - Approved	0.160	18.72	3.00	
External wall	E6 Intermediate floor within a dwelling	Table K1 - Approved	0.070	18.72	1.31	
External wall	E10 Eaves (insulation at ceiling level)	Table K1 - Approved	0.060	3.94	0.24	
External wall	E11 Eaves (insulation at rafter level)	Table K1 - Approved	0.040	6.48	0.26	
External wall	E12 Gable (insulation at ceiling level)	Table K1 - Approved	0.240	6.62	1.59	
External wall	E13 Gable (insulation at rafter level)	Table K1 - Approved	0.040	1.96	0.08	
External wall	E16 Corner (normal)	Table K1 - Approved	0.090	8.67	0.78	
External wall	E25 Staggered party wall between dwellings	Table K1 - Default	0.120	8.67	1.04	
Party wall	P1 Party wall - Ground floor	Table K1 - Default	0.160	8.34	1.33	
Party wall	P2 Party wall - Intermediate floor within a dwelling	Table K1 - Default	0.000	8.34	0.00	
Party wall	P4 Party wall - Roof (insulation at ceiling level)	Table K1 - Default	0.240	6.62	1.59	
Party wall	P5 Party wall - Roof (insulation at rafter level)	Table K1 - Default	0.080	1.96	0.16	
External roof	R1 Head of roof window	Table K1 - Default	0.080	1.10	0.09	
External roof	R2 Sill of roof window	Table K1 - Default	0.060	1.10	0.07	
External roof	R3 Jamb of roof window	Table K1 - Default	0.080	3.92	0.31	
External roof	R6 Flat ceiling	Table K1 - Default	0.060	6.48	0.39	

Total: 17.50 W/mK: Y-Value: 0.098 W/m²K:



BASIC COMPLIANCE REPORT Calculation Type: New Build (As Designed)



Property Reference	C102 Plot 3				Issued on Date	11/07/2022
Assessment	As Designed		Pro	op Type Ref		
Reference						
Property	Plot 3, Land adjacent to I	Dolwar, Pentr	e Llanrhaeadr, Denl	bigh, Denbighs	shire, LL16 4NT	
SAP Rating		82 B	DER	16.59	TER	17.82
Environmental		87 B	% DER <ter< td=""><td></td><td>6.89</td><td></td></ter<>		6.89	
CO ₂ Emissions (t/y	year)	1.17	FEE	56.82	TFEE	N/A
General Requirem	nents Compliance	Pass	% DFEE <tfee< td=""><td></td><td>N/A</td><td></td></tfee<>		N/A	
Assessor Details	Mr. Stuart Hatherall, Bluepri stuart@blueprintarchitectur	_	Design Ltd, Tel: 019	978 356 500,	Assessor ID	N887-0001
Client	Dave Cottle Civil Engineering	, Dave Cottle	Civil Engineering			
SUMARY FOR INPL	JT DATA FOR New Build (As De	signed)				
Criteria 1 – The DE	R must be no greater than the	TER				
1a TER and DER						
Fuel for main h	eating	Mains g	gas			

Fuel factor Target Carbon Dioxide Emission Rate (TER) Dwelling Carbon Dioxide Emission Rate (DER)

Mains gas		
1.00 (mains gas)		
17.82	kgCO₂/m²	
16.59	kgCO ₂ /m ²	Pass
-1.23 (-6.9%)	kgCO ₂ /m ²	

Criteria 2 - Limits on design flexibility

Building Fabric

2 Fabric U-values

Element	Average	Highest	
External wall	0.20 (max. 0.21)	0.21 (max. 0.70)	Pass
Party wall	0.20 (max. 0.20)	-	Pass
Floor	0.14 (max. 0.18)	0.14 (max. 0.70)	Pass
Roof	0.13 (max. 0.15)	0.15 (max. 0.35)	Pass
Openings	1.36 (max. 1.60)	1.40 (max. 3.30)	Pass

2a Thermal bridging

Thermal bridging calculated from linear thermal transmittances for each junction

3 Air permeability

Air permeability at 50 pascals 6.00 (design value) Maximum 10.0

Fixed Building Services

4 Heating efficiency

Main heating system Boiler system with radiators or underfloor - Mains gas Pass Data from database Worcester Greenstar 4000 GR4700iW 30 C NG Combi boiler Efficiency: 89.3% SEDBUK2009 Minimum: 88.0% Secondary heating system None

5 Cylinder insulation

No cylinder Hot water storage



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

Pass

BASIC COMPLIANCE REPORT Calculation Type: New Build (As Designed)



<u>6 Controls</u>			
Space heating controls	Programmer, TRVs and flow switch		Pass
Hot water controls	No cylinder		
Boiler interlock	Yes		Pass
7 Low energy lights			
Percentage of fixed lights with low-energy fittings	100	%	
Minimum	75	%	Pass
8 Mechanical ventilation			
Not applicable			
Criterion 3 – Limiting overheating due to solar and	other gains		
9 Summertime temperature			
Overheating risk (Wales)	Not significant		Pass
Based on:			
Overshading	Average		
Windows facing East	6.52 m ² , No overhang		7
Windows facing South	0.96 m ² , No overhang		
Windows facing West	6.05 m², No overhang 8.00 ach		\dashv
Air change rate Blinds/curtains	None		\exists
Criterion 4 – Building performance consistent with			
	DER		
Party Walls			
Type	U-value	NA / / 21/	Date
Unfilled Cavity with Edge Sealing	0.20	W/m²K	Pass
Air-pressure testing 3 Air permeability			
Air permeability at 50 pascals	6.00 (design value)		7
Maximum	10.0		 Pass
	10.0		PdSS
10 Key features	1.20	VAL / 214	
Door U-value	1.20	W/m²K	
Roof window U-value	1.10	W/m²K	
Photovoltaic array	0.96	kW	





									7/2022
Property Reference	C102 Plot 3					Iss	ued on Da	te 11/0	1//2022
Assessment	As Designed	l l			Prop Type	Ref			
Reference									
Property	Plot 3, Land	adjacent to	Dolwar, Pentre	e Llanrhaeadr, I	Denbigh, De	nbighshi	re, LL16 4N	JT	
SAP Rating			82 B	DER	16	.59	TER		17.82
Environmental			87 B	% DER <ter< td=""><td></td><td></td><td>6.89</td><td></td><td></td></ter<>			6.89		
CO ₂ Emissions (t/yea	ar)		1.17	FEE	56.	.82	TFEE		N/A
General Requiremen	nts Compliance		Pass	% DFEE <tfe< td=""><td>E</td><td></td><td>N/A</td><td></td><td></td></tfe<>	E		N/A		
	Mr. Stuart Hath stuart@bluepri	-	rint Planning & ıral.com	Design Ltd, Tel	01978 356	500,	Assessor I	D N88	37-0001
			ng, Dave Cottle (Civil Engineerin	g				
SUMMARY FOR INPU	T DATA FOR: N	ew Build (A	s Designed)						
Orientation		South]				
Property Tenure		Unknown			Ī				
Transaction Type		Marketed s	sale		Ī				
Terrain Type		Rural			i				
1.0 Property Type		House, End	-Terrace		Ī				
2.0 Number of Storeys		2			Ī				
					╡				
•		2022							
3.0 Date Built		0			<u> </u> 				
3.0 Date Built 4.0 Sheltered Sides 5.0 Sunlight/Shade			unknown						
3.0 Date Built 4.0 Sheltered Sides 5.0 Sunlight/Shade		0 Average or	ı	Heat Loss Perime	ter Inte	rnal Floo		werage Stor	
3.0 Date Built 4.0 Sheltered Sides 5.0 Sunlight/Shade		0 Average or		Heat Loss Perime 18.72 m 18.72 m	ter Inte	e rnal Floo r 43.28 m 43.28 m	2	verage Stor 2.40 (2.48 (m
3.0 Date Built 4.0 Sheltered Sides 5.0 Sunlight/Shade 6.0 Measurements		0 Average or	Fround Floor:	18.72 m	ter Inte	43.28 m	2	2.40	m
3.0 Date Built 4.0 Sheltered Sides 5.0 Sunlight/Shade 6.0 Measurements 7.0 Living Area	meter	O Average or	Fround Floor: 1st Storey:	18.72 m		43.28 m	2	2.40	m
3.0 Date Built 4.0 Sheltered Sides 5.0 Sunlight/Shade 6.0 Measurements 7.0 Living Area	neter	O Average or G	Fround Floor: 1st Storey:	18.72 m		43.28 m	2	2.40	m
3.0 Date Built 4.0 Sheltered Sides 5.0 Sunlight/Shade 6.0 Measurements 7.0 Living Area 8.0 Thermal Mass Paral	neter	O Average or G 17.00 Precise calc	Fround Floor: 1st Storey:	18.72 m	m²	43.28 m	2	2.40	m
3.0 Date Built 4.0 Sheltered Sides 5.0 Sunlight/Shade 6.0 Measurements 7.0 Living Area 8.0 Thermal Mass Paral	meter Type	Average or 17.00 Precise calco 254.07	Fround Floor: 1st Storey:	18.72 m	m²	43.28 m	2 2 Kappa	2.40	m m
3.0 Date Built 4.0 Sheltered Sides 5.0 Sunlight/Shade 6.0 Measurements 7.0 Living Area 8.0 Thermal Mass Paral Thermal Mass		Average or 17.00 Precise calco 254.07 Cor	Ground Floor: 1st Storey: culation nstruction	18.72 m 18.72 m	m² kJ/m²K	43.28 m 43.28 m	2 2 Kappa	2.40 (2.48 (m m
3.0 Date Built 4.0 Sheltered Sides 5.0 Sunlight/Shade 6.0 Measurements 7.0 Living Area 8.0 Thermal Mass Paral Thermal Mass 9.0 External Walls Description	Туре	Average or 17.00 Precise calco 254.07 Cor fille	Ground Floor: 1st Storey: culation	18.72 m 18.72 m	m² kJ/m²K gregate block,	43.28 m 43.28 m U-Value (W/m²K)	Kappa	2.40 (2.48)	n Nett Are (m²)
3.0 Date Built 4.0 Sheltered Sides 5.0 Sunlight/Shade 6.0 Measurements 7.0 Living Area 8.0 Thermal Mass Paral Thermal Mass 9.0 External Walls Description External Cavity Walls Dormer Cheeks	Type Cavity Wa	Average or 17.00 Precise calco 254.07 Cor fille	Ground Floor: 1st Storey: culation instruction wity wall; dense plased cavity, any outside	18.72 m 18.72 m	m² kJ/m²K gregate block,	43.28 m 43.28 m U-Value (W/m²K) 0.20	Kappa (kJ/m²K) 140.00	2.40 (2.48 (2.48 (Gross Area (m²) 85.78	Nett Are. (m²) 71.44
3.0 Date Built 4.0 Sheltered Sides 5.0 Sunlight/Shade 6.0 Measurements 7.0 Living Area 8.0 Thermal Mass Paral Thermal Mass 9.0 External Walls Description External Cavity Walls Dormer Cheeks	Type Cavity Wa	Average or 17.00 Precise calco 254.07 Cor fille ame Tim	Ground Floor: 1st Storey: culation instruction wity wall; dense plased cavity, any outside	18.72 m 18.72 m	m² kJ/m²K gregate block,	43.28 m 43.28 m U-Value (W/m²K) 0.20	Kappa (kJ/m²K) 140.00	2.40 (2.48 (2.48 (Gross Area (m²) 85.78	Nett Area (m²)
3.0 Date Built 4.0 Sheltered Sides 5.0 Sunlight/Shade 6.0 Measurements 7.0 Living Area 8.0 Thermal Mass Paral Thermal Mass 9.0 External Walls Description External Cavity Walls Dormer Cheeks 9.1 Party Walls	Type Cavity Wa Timber Fra	Average or 17.00 Precise calco 254.07 Cor II Cav fille ame Tim Cor evity with Sing	Ground Floor: 1st Storey: culation instruction wity wall; dense plased cavity, any outsigned framed wall (or	18.72 m 18.72 m	m² kJ/m²K gregate block,	U-Value (W/m²K) 0.20 0.21	Kappa (kJ/m²K) 140.00 9.00	2.40 (2.48 (Nett Area (m²) 71.44 0.89
3.0 Date Built 4.0 Sheltered Sides 5.0 Sunlight/Shade 6.0 Measurements 7.0 Living Area 8.0 Thermal Mass Parameter Mass 9.0 External Walls Description External Cavity Walls Dormer Cheeks 9.1 Party Walls Description	Type Cavity Wa Timber Fra Type Unfilled Ca Edge Seali	Average or 17.00 Precise calco 254.07 Cor II Cav fille ame Tim Cor evity with Sing	Ist Storey: 1st Storey: culation instruction vity wall; dense plased cavity, any outsinher framed wall (on the following of the plasterboard or gle plasterboard or the struction of the plasterboard or the struction of the s	18.72 m 18.72 m	m² kJ/m²K gregate block,	U-Value (W/m²K) 0.20 0.21	Kappa (kJ/m²K) 140.00 9.00 U-Value (W/m²K)	2.40 (2.48 (Nett Are (m²) 71.44 0.89 Area (m²) 40.77
3.0 Date Built 4.0 Sheltered Sides 5.0 Sunlight/Shade 6.0 Measurements 7.0 Living Area 8.0 Thermal Mass Paral Thermal Mass 9.0 External Walls Description External Cavity Walls Dormer Cheeks 9.1 Party Walls Description Party Wall 1	Type Cavity Wa Timber Fra Type Unfilled Ca Edge Seali	Average or 17.00 Precise calce 254.07 Cor Il Cav fille ame Tim Cor avity with Sing blo struction	Ist Storey: 1st Storey: culation instruction vity wall; dense plased cavity, any outsinher framed wall (on the following of the plasterboard or gle plasterboard or the struction of the plasterboard or the struction of the s	18.72 m 18.72 m	m² kJ/m²K gregate block,	U-Value (W/m²K) 0.20 0.21	Kappa (kJ/m²K) 140.00 9.00 U-Value (W/m²K)	2.40 (2.48 (Nett Are (m²) 71.44 0.89 Area (m²) 40.77



10.0 External Roofs

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



Description	Тур	e C	Construction				U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area (m²)	Nett Are (m²)
Flat Ceiling	Exte	ernal Plane Roof P	lasterboard, insulat	ed at ceilin	ig level		0.13	9.00	41.07	41.07
Sloping Ceiling	Exte	ernal Slope Roof P	lasterboard, insulat	ed slope			0.15	9.00	6.33	5.25
10.2 Internal Ceili Description	ngs	Construction							Kappa (kJ/m²K)	Area (m²)
Internal Ceiling		Plasterboard ceil	ing, carpeted chipbo	oard floor					9.00	43.28
11.0 Heat Loss Flo	ors									
Description	Тур	e C	Construction					U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)
Heat Loss Floor	1 Gro	und Floor - Solid C	Other					0.14	0.00	43.28
L1.2 Internal Floo Description	rs	Construction							Kappa (kJ/m²K)	Area (m²)
Internal Floor 1		Plasterboard ceil	ing, carpeted chipbo	oard floor					18.00	43.28
12.0 Opening Type Description	es Data Sourc	е Туре	Glazing		Glazing Gap	Argon Filled	G-value	e Frame Type	Frame Factor	U Value (W/m²K
Windows		re Window	Double Low-E	Soft 0.05	Gup	Tilled	0.63	Турс	0.70	1.40
Doors		re Half Glazed Do	or Double Low-E	Soft 0.05			0.63		0.70	1.20
Rooflights	r Manufactu r	re Roof Window	Double Low-E	Soft 0.05			0.63		0.70	1.10
13.0 Openings										
Name	Opening Type	Location	Orientation	Curtain Type	Overhang Ratio	Wide Overhang		Height Cou (m)	nt Area (m²)	Curtain Closed
Front Windows	Window	[1] External Cavit Walls	West	None	0.00				5.26	
Rooflights	Roof Window	[2] Sloping Ceilin	g East	None					1.08	
Door	Half Glazed Door	[1] External Cavit Walls	South						1.96	
Front Window Dorm	Window	[2] Dormer Chee	ks West	None	0.00				0.79	
Rear Window Dorm	Window	[2] Dormer Chee	ks East	None	0.00				0.36	
Rear Windows	Window	[1] External Cavit Walls	East	None	0.00				6.16	
Side Window	Window	[1] External Cavit Walls	South	None	0.00				0.96	
14.0 Conservatory	1	None								
15.0 Draught Proc	ofing	100				%				
16.0 Draught Lobb	_	No								
17.0 Thermal Brid	ging	Calculate	Bridges							



17.1 List of Bridges



Table K1 - Approved	Source Type	Bridge Typ	e		Length	Psi	Imported
Table K1 - Approved	**			el hase nlate	_		-
Table K1 - Approved							
Table K1 - Approved							
Table K1 - Approved E6 Intermediate floor within a dwelling 18.72 0.070 No Table K1 - Approved E10 Eaves (Insulation at ceiling level) 3.94 0.060 No Table K1 - Approved E11 Eaves (Insulation at rafter level) 6.48 0.040 No Table K1 - Approved E12 Gable (Insulation at rafter level) 6.62 0.240 No Table K1 - Approved E13 Gable (Insulation at rafter level) 1.96 0.040 No Table K1 - Approved E16 Gorner (normal) 8.67 0.090 No Table K1 - Operation E16 Corner (normal) 8.67 0.090 No Table K1 - Default E25 Staggered party wall between dwellings 8.67 0.120 No Table K1 - Default P1 Party wall - Fround floor E70 Fround			floor (normal)				
Table K1 - Approved	• •						
Table K1 - Approved			_				
Table K1 - Approved E13 Cable (insulation at ceiling level) 6.62 0.240 No Table K1 - Approved E15 Cable (insulation at rafter level) 1.96 0.040 No Table K1 - Approved E15 Corner (normal) 8.67 0.090 No Table K1 - Approved E15 Corner (normal) 8.67 0.090 No Table K1 - Default E25 Staggered party wall between dwellings 8.67 0.120 No Table K1 - Default P1 Party wall - Fround floor R.34 0.160 No Table K1 - Default P2 Party wall - Fround floor R.34 0.000 No R.34 0.000 No R.34 R.34 0.000 No R.34 R.			_				
Table K1 - Approved E13 Gable (insulation at rafter level) 1.96 0.040 No Table K1 - Approved E16 Corner (normal) 8.67 0.090 No Table K1 - Default E125 Staggered party wall between dwellings 8.67 0.120 No Table K1 - Default P1 Party wall - Ground floor 8.34 0.160 No Table K1 - Default P2 Party wall - Intermediate floor within a 8.34 0.000 No dwelling Table K1 - Default P4 Party wall - Roof (insulation at ceiling level) 6.62 0.240 No Table K1 - Default P4 Party wall - Roof (insulation at ceiling level) 6.62 0.080 No Table K1 - Default R1 Head of roof window 1.10 0.080 Yes Table K1 - Default R2 Sill of roof window 1.10 0.060 Yes Table K1 - Default R3 Jamb of roof window 1.10 0.060 Yes Table K1 - Default R3 Jamb of roof window 3.92 0.080 Yes Table K1 - Default R3 Jamb of roof window 3.92 0.080 Yes Table K1 - Default R6 Flat ceiling 6.48 0.060 No Yes Table K1 - Default R6 Flat ceiling R7 Flat R7 Fl				,			
Table K1 - Approved E16 Corner (normal) 8.67 0.990 No Table K1 - Default E25 Staggered party wall between dwellings 8.67 0.120 No Table K1 - Default P1 Party wall - Ground floor 8.34 0.000 No Table K1 - Default P2 Party wall - Ground floor 8.34 0.000 No Mowelling			-				
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Table K1 - Default R3 Jamb of roof window R6 Flat celling 6.48 0.060 No Y-value 0.098 W/m²k 18.0 Pressure Testing Yes Designed AP ₅₀ 6.000 m³/(h.m²) @ 50 Pa Property Tested ? As Built AP ₅₀ m³/(h.m²) @ 50 Pa 19.0 Mechanical Ventilation Summer Overheating Yes Windows open in hot weather Cross ventilation possible Yes Air change rate 8.000 m³/(h.m²) @ 50 Pa Wechanical Ventilation Nechanical Ventilation System Present No 20.0 Fans, Open Fireplaces, Flues Number of Chimneys 0 0 0 0 Number of open flues 0 0 0 Number of intermittent fans 4 Number of passive vents 0 0 0 Number of flueless gas fires 0 21.0 Fixed Cooling System No External External lights fitted Yes							
Table K1 - Default R6 Flat ceiling 6.48 0.060 No Y-value 0.098 W/m²K 18.0 Pressure Testing Yes		R3 Jamb of	roof window				
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Designed AP ₅₀ 6.00 m³/(h.m²) @ 50 Pa Property Tested? As Built AP ₅₀ m³/(h.m²) @ 50 Pa 19.0 Mechanical Ventilation Summer Overheating Windows open in hot weather Cross ventilation possible Night Ventilation Air change rate Mechanical Ventilation Mechanical Ventilation Mechanical Ventilation System Present No 20.0 Fans, Open Fireplaces, Flues Number of Chimneys 0 0 0 0 Number of open flues 0 0 0 0 Number of intermittent fans Number of passive vents Number of flueless gas fires 21.0 Fixed Cooling System No 22.1 Lighting Internal Total number of L.E.L. fittings Percentage of L.E.L. fittings External External lights fitted Yes	18.0 Pressure Testing		Yes]	
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Percentage of L.E.L. fittings 100.00 % External External lights fitted Yes	Total number of ligh	nt fittings	29				
Percentage of L.E.L. fittings 100.00 % External External lights fitted Yes	Total number of L.E	.L. fittings	29	<u> </u>		7	
External lights fitted Yes		_				%	
	External					_	
Light and motion sensor Yes	External lights fitted	l	Yes				
0	Light and motion se	nsor	Yes			1	
			L				





23.0 Electricity Tariff	Standard	
24.0 Main Heating 1	Database	
Description	Main Gas Boiler	
Percentage of Heat	100	%
Database Ref. No.	18907	
Fuel Type	Mains gas	
Main Heating	BGW	
SAP Code	104	
In Winter	90.2	
In Summer	87.6	
Controls	CBG Programmer, TRVs and flow switch	
PCDF Controls	0	
Delayed Start Stat	Yes	
Sap Code	2108	
Flue Type	Balanced	
Fan Assisted Flue	Yes	
Is MHS Pumped	Pump in heated space	
Heat Emitter	Radiators	
Flow Temperature	Normal (> 45°C)	
Combi boiler type	Standard Combi	
Combi keep hot type	None	
25.0 Main Heating 2	None	

29.0 Hot Water Cylinder	None
SAP Code	901
Water use <= 125 litres/person/day	Yes
Solar Panel	No
Waste Water Heat Recovery Storage System	No
Waste Water Heat Recovery Instantaneous System 2	No
Waste Water Heat Recovery Instantaneous System 1	No
Flue Gas Heat Recovery System	No
Water Heating	Main Heating 1
28.0 Water Heating	HWP From main heating 1
Community Heating	None

32.0 Photovoltaic Unit

One Dwelling

PV Cells kWp 0.96

Overshading Orientation Elevation East 30° None Or Little

Recommendations

Lower cost measures

None

Further measures to achieve even higher standards



Connected to Dwelling

Solar water heating

Wind turbine



Typical Cost

£4,000 - £6,000

Typical Cost

£15,000 - £25,000

Typical savings per year £26

Typical savings per year £695 Ratings after improvement

SAP rating Environmental Impact

B 83

Ratings after improvement

SAP rating Environmental Impact

A 104

