

## Property details

<b>MPRN</b>	10300740612	<b>Shared MPRN</b>	No
<b>BER Number</b>	N/A	<b>BER number assigned to shared dwelling</b>	N/A
<b>Address line 1</b>	shannon valley	<b>Type of Rating</b>	New Dwelling - Provisional
<b>Address line 2</b>		<b>Purpose of Rating</b>	Grant Support
<b>Address line 3</b>		<b>Building Regulations</b>	2019 TGD L
<b>County</b>	Co. Roscommon	<b>Planning Reference</b>	
<b>Eircode</b>		<b>Date of Plans</b>	
<b>Dwelling Type</b>	Semi-detached house	<b>Assessor Name</b>	Darren Winston
<b>Year of construction</b>	2008	<b>Assessor Number</b>	110142
<b>Dwelling Extension</b>	No	<b>Date of Assessment</b>	04/11/2025
<b>Storeys</b>	2	<b>Assessor Comments</b>	
		<b>Assessor Description</b>	Type 3 - Unit A (Semi Detached)

## Dimension details

	Area [m <sup>2</sup> ]	Height [m]	Volume [m <sup>3</sup> ]
<b>Ground floor</b>	55.15	2.30	126.85
<b>First floor</b>	55.15	2.59	142.84
<b>Second floor</b>	0.00	0.00	0.00
<b>Third and other floors</b>	0.00	0.00	0.00
<b>Room in Roof</b>	0.00	0.00	0.00
<b>Totals</b>	110.30		269.68
<b>Living Area</b>	19.55 m <sup>2</sup>		
<b>Living Area Percentage</b>	17.72 %		

## Ventilation details

	Number	Air Change Rate [m3/h]
Chimneys	0	0.00
Open Flues	0	0.00
Fans & vents	3	30.00
Flueless combustion room heaters	0	0.00
<b>Manufacturer</b>		Vent Axia Multivent
<b>Model</b>		Multivent
<b>Has a permeability test been carried out</b>	Yes	<b>Is there a draught lobby on main entrance?</b> No
<b>Infiltration rate due to structure [ac/h]</b>	0.15	<b>Draught lobby air change [ac/h]</b> 0.05
<b>Intermediate infiltration rate</b>	0.31	<b>Openings infiltration [ac/h]</b> 0.16
<b>Number of sides sheltered</b>	3	<b>Structure type</b> N/A
<b>Adjusted infiltration rate [ac/h]</b>	0.24	<b>Is there a suspended wooden ground floor?</b> No
<b>Effective air change rate [ac/h]</b>	0.50	<b>Windows/doors/attic hatches draught stripped [%]</b> N/A
<b>Ventilation heat loss [W/K]</b>	44.50	<b>Ventilation method</b> Whole-house extract ventilation
<b>Adjusted result of air permeability test [ac/h]</b>	0.15	<b>How many wetrooms (inc. kitchen)? Is the vent. ducting flexible/rigid/both?</b> k + n = 4
<b>Specific fan power [W/(l/s)]</b>	0.24	<b>Is MVHR ducting uninsulated where outside of insulated envelope?</b> N/A
<b>Heat exchanger efficiency [%]</b>	0.00	<b>Adjusted heat exchanger efficiency</b> 0.00
<b>Electricity for ventilation fans [Kwh/y]</b>	78.96	
<b>Heat gains from ventilation fans [W]</b>	0.00	

## Building Elements - Floors

Type	Description	U/F Heating	Include in compliance check	In Roof	Age Band	Exposed Perimeter [m]	Area [m <sup>2</sup> ]	U-Value [W/m <sup>2</sup> K]	Heat Loss (AU) [W/K]
Ground Floor - Solid	GF	No	Yes	No	2005 -2009	N/A	55.15	0.37	20.41
Non-Heat Loss Floor	FF	N/A	No	No	2005 -2009	N/A	55.15	0.00	0.00
<b>Total area [m<sup>2</sup>]</b>									<b>110.30</b>

## Building Elements - Roofs

Type	Description	Include in compliance check	Insulation Thickness [mm]	Age Band	Area [m <sup>2</sup> ]	U-Value [W/m <sup>2</sup> K]	Heat Loss (AU) [W/K]
Pitched Roof - Insulated on Ceiling		Yes		2005 -2009	55.15	0.27	14.89
<b>Total area [m<sup>2</sup>]</b>							<b>55.15</b>

## Building Elements - Walls

Type	Description	Wall is semi-exposed	Include in compliance check	Age Band	Area [m <sup>2</sup> ]	U-Value [W/m <sup>2</sup> K]	Heat Loss (AU) [W/K]
Unknown		No	Yes	2005 -2009	92.80	0.37	34.34
<b>Total area [m<sup>2</sup>]</b>							<b>92.80</b>

## Building Elements - Doors

Count	Type	Description	Draught Stripped	Area [m <sup>2</sup> ]	U-Value [W/m <sup>2</sup> K]	Heat Loss (AU) [W/K]
1	Solid exposed door	D1 front	Yes	2.10	3.00	6.30
1	Solid exposed door	D2 rear	Yes	2.10	3.00	6.30
<b>Total area [m<sup>2</sup>]</b>						4.20

## Building Elements - Windows

Count	Glazing Type	Frame Type	Frame Factor	Solar Transm.	In Roof	Over shading	Orient.	Area [m <sup>2</sup> ]	U-value [W/m <sup>2</sup> K]
1	Double-glazed, air filled (low-E, en = 0.15, hard coat)	Wood/PVC	0.700	0.720	No	Very Little	South	4.23	2.00
1	Double-glazed, air filled (low-E, en = 0.15, hard coat)	Wood/PVC	0.700	0.720	No	Very Little	North	5.76	2.00
1	Double-glazed, air filled (low-E, en = 0.15, hard coat)	Wood/PVC	0.700	0.720	No	Average or Unknown	East	1.97	2.00
<b>Total area [m<sup>2</sup>]</b>								<b>11.96</b>	

## Heat loss details

<b>Total glazed area [m<sup>2</sup>]</b>	11.96	<b>Glazing ratio</b>	0.05
<b>Total glazed heat loss [W/K]</b>	22.15	<b>Summer solar gain [W/m<sup>2</sup>]</b>	504.12
<b>Total effective collection area [m<sup>2</sup>]</b>	5.22	<b>Total element area [m<sup>2</sup>]</b>	219.26
<b>Total plane heat loss [W/K]</b>	104.38	<b>Thermal bridging factor [W/m<sup>2</sup>K]</b>	0.0800
<b>Fabric heat loss [W/K]</b>	121.92	<b>Total heat loss [W/K]</b>	166.42
<b>Per m2</b>	1.51		

## Lighting and Internal Gains

<b>Lighting Design Calculation Method</b>	Bulb type only	<b>Average Efficacy [lm/W]</b>	66.90
<b>Fixed lighting provision [klmh/y]</b>	3935.34	<b>Top up lighting requirement [klmh/y]</b>	0.00
<b>Energy required for fixed lighting [kWh/y]</b>	104.93	<b>Energy required for top up lighting [kWh/y]</b>	0.00
<b>Energy required for portable lighting [kWh/y]</b>	164.78		
<b>Basic energy consumption for lighting [kWh/y]</b>	893.44	<b>Water heating (In watts [W])</b>	128.59
<b>Annual energy used for lighting [kWh/y]</b>	269.71	<b>Occupants (In watts [W])</b>	140.83
<b>Internal gains from lighting during heating season [kWh/hs] (In watts [W])</b>	206.33 (35.38)	<b>Mechanical ventilation (In watts [W])</b>	0.00
<b>Lighting (In watts [W])</b>	35.38	<b>Heat loss to the cold water network (In watts [W])</b>	-39.35
<b>Appliance and cooking (In watts [W])</b>	222.88	<b>Net internal gains (In watts [W])</b>	488.33

## Lights

Count	Name	Description	Type	Efficiency	Power [W]
1	Default LED/CFL		LED/CFL	66.90	

## Water heating details

<b>Are there distribution losses?</b>	Yes	<b>Is supplementary electric water heating used in summer?</b>	N/A
<b>Are there storage losses?</b>	Yes	<b>Is there a combi boiler?</b>	No
<b>Is there a solar water heating system?</b>	No	<b>Total hot water demand [kWh/y]</b>	2035.24
<b>Standard number of occupants</b>	2.82	<b>Temperature factor unadjusted</b>	0.60
<b>Number of mixer showers</b>	1	<b>Temperature Factor Multiplier</b>	0.90
<b>Number of electric showers</b>	0	<b>Hot water storage loss factor [kWh/l d]</b>	0.00
<b>Number of baths</b>	1	<b>Volume factor</b>	0.00
<b>Daily hot water use [Litres/d]</b>	129.79	<b>Combi-boiler electricity consumption [kWh/y]</b>	0.00
<b>Hot water energy reqs. at taps [kWh/y]</b>	1729.95	<b>Adjusted storage loss [kWh/y]</b>	255.44
<b>Distribution losses [kWh/y]</b>	305.29	<b>Adjusted primary circuit loss [kWh/y]</b>	306.75
<b>Water storage volume [Litres]</b>	200.00	<b>Heat gains from water heating system [W]</b>	128.59
<b>Is manufacturers declared loss factor available?</b>	Yes	<b>Output from supplementary heater [kWh/y]</b>	0.00
<b>Declared loss factor [kWh/d]</b>	1.30		
<b>Manufacturer and Model name</b>	Midea 200LTR		
<b>Insulation type</b>	N/A		
<b>Insulation thickness [mm]</b>	N/A		

Type of mixer shower	Flow restriction	Flow rate [l/min]	HW usage [l/day]	WWHRS Manufacturer/Model	WWHRS efficiency	WWHRS Utilisation Factor	Energy Savings [kWh/yr]
Vented hot water system	No	7.000		Any / Any			
<b>Total :</b>			<b>57.94</b>				<b>0.00</b>

<b>Combi-boiler Type</b>	None	<b>Output from main water heater [kWh/y]</b>	2597.43
<b>Combi-boiler loss [kWh/y]</b>	0.00	<b>Annual Heat gains from water heating system [kWh/y]</b>	1126.47
<b>Keep Hot facility</b>	None	<b>WWHRS input to main system [kWh/y]</b>	0.00
<b>Storage Loss</b>	255.44	<b>WWHRS input to supplementary system [kWh/y]</b>	0.00
<b>Storage Type</b>	Cylinder, indirect		

**Primary Circuit loss type** Boiler / heat pump with insulated primary pipework and with cylinder thermostat

<b>Primary circuit loss [kWh/y]</b>	360.00	<b>Heat Pump Type of DHW</b>	Separate Hot Water Storage
<b>Is hot water storage indoors or in group heating system</b>	Yes		

## Net space heat demand

Required temp. during heated hours	21.00	Length of one unheated period [h]	8
Required temperature rest of dwelling	18.00	Unheated periods per week	14
Living area percentage	17.72	Heat use during heating season [kWh/y]	5107.80
Required mean internal temperature [°C]	18.53	Heat use for full year [kWh/y]	5360.43
Thermal mass category of dwelling	Medium-low		

	Utilisation factor	Intermittent heating
Internal heat capacity of dwelling [per m <sup>2</sup> ]	0.14	0.09
Internal heat capacity [MJ/K]	15.44	9.93

## Space heat demand details

Month	Mean Ext. Temp [°C]	Adj. Int. Temp [°C]	Heat Loss [W]	Heat Use [kWh]	Gain/Loss Ratio	Utilisation Factor	Heat Use [W]	Useful Gains [W]	Solar Gain [W]
January	5.3	16.71	1898	961	0.33	0.97	1292	607	140
February	5.5	16.73	1870	794	0.39	0.95	1181	689	235
March	7.0	16.94	1654	670	0.50	0.92	901	754	332
April	8.3	17.12	1468	482	0.62	0.87	669	799	425
May	11.0	17.49	1081	238	0.93	0.76	320	761	517
June	13.5	17.84	722	83	1.41	0.60	115	607	527
July	15.5	18.11	435	21	2.26	0.41	28	407	495
August	15.2	18.07	478	30	1.97	0.46	41	438	454
September	13.3	17.81	751	119	1.15	0.68	166	585	374
October	10.4	17.41	1167	377	0.66	0.86	506	661	279
November	7.5	17.01	1583	689	0.42	0.94	956	626	176
December	6.0	16.80	1798	898	0.34	0.96	1207	591	124

## Space Heating

Type	Space Heating Standard	Fuel	Design flow temp[°C]	Daily Operation [h]	SH Seasonal eff.	WH Seasonal eff.	Heats water	Source
Heat pumps	I.S. EN 14825	Electricity	45	24	554.06	210.05	Yes	Assessor
<b>Model</b>								MHC-V6W/D2N8-B
<b>Manufacturer</b>								Midea
<b>Back Up Space Heater Fuel</b>	Electricity		<b>Back Up Space Heater Efficiency [%]</b>		100.00			
<b>Back Up Water Heater Fuel</b>	Electricity		<b>Back Up Water Heater Efficiency [%]</b>		100.00			

## Heating System Test data: I.S. EN 14825

Heat Pump Type Air to Water

Test Condition - Low (35°C)

	A (88%) -7°C	B (54%) 2°C	C (35%) 7°C	D (15%) 12°C	E* (100%) TOL
Source	A-7	A2	A7	A12	A-10
Sink	W34	W30	W27	W24	W35
Heating Capacity (kW)	6.03	3.88	2.40	2.00	5.36
Coefficient of Performance (kW/kW)	3.13	6.02	7.40	9.20	2.76

Test Condition - Medium (55°C) \*

	A (88%) -7°C	B (54%) 2°C	C (35%) 7°C	D (15%) 12°C	E* (100%) TOL
Source	A-7	A2	A7	A12	A-10
Sink	W52	W42	W36	W30	W55
Heating Capacity (kW)	5.05	3.22	2.20	1.78	4.52
Coefficient of Performance (kW/kW)	2.17	4.01	5.10	6.15	1.91

## Heating System Test data: I.S. EN 16147

<b>Source of Data</b>	Water heating energy efficiency [%]
<b>Co-efficient of Performance [kW/kW]</b>	0.00
<b>Water heating energy efficiency [%]</b>	135.10
<b>Reference Hot water Temperature [°C]</b>	49.29
<b>Hot water Rated Heat output <math>P_{rated}</math> [kW]</b>	5.70
<b>Declared load profile</b>	L
<b>Standing heat loss of test storage tank [kWh/day]</b>	1.29
<b>Volume of DHW accounted for in test [litre]</b>	200
<b>Heat Pump Type</b>	Air to Water

## Dist. System Losses and Gains

Temperature adjustment [°C]	0	Additional heat emissions due to non ideal control and responsiveness [kWh/y]	0.00
Heating system control category	3	Gross heat emission to heated space [kWh/y]	5107.80
Heating system responsiveness category	1	Mean internal temperature [°C]	17.03
Mean internal temperature during heating hours [°C]	18.53		

	Number present	Boiler controlled by thermostat	Inside dwelling	Electricity consumption [kWh/y]	Heat gain [W]
Central heating pumps	1	Yes	Yes	130	10
Oil boiler pumps	0	No	No	0	0
Gas boiler flue fan	0			0	
Warm air heating or fan coil radiators present	Yes			161.8101	16.18101
<b>Totals</b>				291.8101	26.18101

Note: Wet central heating systems are likely to have one or more central heating pumps.

Gains from fans and pumps associated with space heating system [kWh/y]	153	Is there underfloor heating on the ground floor?	No
Average utilisation factor, October to May	0.90	U-Value of ground floor [W/m <sup>2</sup> K]	0.00
Useful net gain [kWh/y]	138	Fraction of heating system output from ground floor	0.67
Net heat emission to heated space [kWh/y]	4970	Additional heat loss via envelope element [kWh/y]	0.00
Annual space heating requirement [kWh/y]	4970		

## Energy Requirements: Individual Heating Systems

<b>Manufacturer name</b>			Midea
<b>Model name</b>			MHC-V6W/D2N8-B
<b>Brand name</b>			N/A
<b>Model Qualifier</b>			N/A
<b>Indoor unit identifier</b>			N/A
<b>Outdoor unit identifier</b>			N/A
<b>Efficiency of main heating system [%]</b>	554.06	<b>Fraction of heat from secondary system</b>	N/A
<b>Efficiency adjustment factor</b>	1.00	<b>Efficiency of secondary system [%]</b>	N/A
<b>Adjusted efficiency of main heating system [%]</b>	554.06	<b>Energy required for main heating system [kWh/y]</b>	896.95
<b>Product index number</b>	N/A	<b>Energy required for secondary heating system [kWh/y]</b>	0
<b>Manufacturer's reference number</b>	N/A	<b>Low temperature test condition (35°C)</b>	N/A
<b>Appliance ID</b>	N/A	<b>Intermediate temperature test condition (45°C)</b>	N/A
<b>Rated air flow rate [m<sup>3</sup>/h]</b>	N/A	<b>Medium temperature test condition (55°C)</b>	N/A
		<b>High temperature test condition (65°C)</b>	N/A

<b>Fraction of main space and water heat from CHP</b>	N/A	<b>Efficiency adjustment factor</b>	1.0000
<b>Heat demand from CHP</b>	0.0	<b>Adj. efficiency of main water heating system [%]</b>	210.05
<b>Efficiency of main water heating system [%]</b>	210.05	<b>Water Heating Efficiency [%]</b>	135.1
<b>Manufacturer name</b>	Midea	<b>Energy req. for main water heater [kWh/y]</b>	2164.01
<b>Model name</b>	MHC-V6W/D2N8-B	<b>Energy req. for secondary water heater [kWh/y]</b>	0.00
<b>Heat Pump Type</b>	Air to Water		
<b>Water Heating Standard</b>	I.S. EN 16147		

	<b>Fuel Type</b>	<b>Primary energy conversion factor</b>	<b>CO<sub>2</sub> emission factor</b>
<b>Main space heating system</b>	Electricity	1.75	0.224
<b>Secondary space heating system</b>	None	0.00	0.000
<b>Main water heating system</b>	Electricity	1.75	0.224
<b>Supplementary water heating system</b>	Electricity	0.00	0.000
<b>Cooling System</b>	None	0.00	0.000
<b>Pumps, fans</b>	Electricity	1.75	0.224
<b>Energy for lighting</b>	Electricity	1.75	0.224

### CHP data

<b>Heat output from CHP [kWh/y]</b>	0.00	<b>CHP Fuel type</b>	N/A
<b>Electrical efficiency of CHP</b>		<b>Energy delivered to CHP [kWh/y]</b>	0
<b>Heat efficiency of CHP</b>		<b>Electrical output from CHP [kWh/y]</b>	0

## Summer internal gains

Dwelling volume [m <sup>3</sup> ]	269.684	Total gains in summer [W]	992.45
Effective air change rate for summer period [ac/h]	0.1	Temperature increment due to gains [°C]	7.59
Ventilation heat loss coefficient [W/K]	8.90	Summer mean external temperature [°C]	15
Fabric heat loss coefficient [W/K]	121.92	Heat capacity parameter	0.14
Heat loss coefficient under summer conditions [W/K]	130.82	Temperature increment related to thermal mass [°C]	1.02
Total Solar Gain for Summer Period [W]	504.12	Threshold internal temperature [°C]	23.61
Internal gains [W]	488.33		

## Results

	Delivered energy [kWh/y]	Primary energy [kWh/y]	CO <sub>2</sub> emissions [kgCO <sub>2</sub> /y]
Main space heating system	897	1570	201
Secondary space heating system	0	0	0
Main water heating system	1237	2164	277
Supplementary water heating system	0	0	0
Cooling	0	0	0
Pumps and fans	371	649	83
Energy for lighting	270	472	60
CHP input (individual heating systems only)	0	0	0
CHP electric output (individual heating systems only)	0	0	0
<b>Renewable and energy saving technologies</b>			
Energy produced and saved	0	0	0
Energy consumed by the technology	0	0	0
<b>Total</b>	<b>2774</b>	<b>4855</b>	<b>621</b>
<b>Per m<sup>2</sup> floor area</b>	<b>25.15</b>	<b>44.01</b>	<b>5.63</b>
<b>Energy Rating</b>	<b>A2</b>		