

Property details

MPRN	0	Shared MPRN	No
BER Number	N/A	BER number assigned to shared dwelling	N/A
Address line 1	Muckross	Type of Rating	Existing Dwelling
Address line 2		Purpose of Rating	Major Renovation
Address line 3		Building Regulations	None
County	Co. Kerry	Planning Reference	
Eircode		Date of Plans	01/07/2026
Dwelling Type	Semi-detached house	Assessor Name	Kerry Corkery
Year of construction	1890	Assessor Number	109926
Dwelling Extension	Yes	Date of Assessment	08/06/2026
Storeys	2	Assessor Comments	
		Assessor Description	Muckross Cottage No. 22

Dimension details

	Area [m ²]	Height [m]	Volume [m ³]
Ground floor	65.41	2.21	144.56
First floor	29.64	2.26	66.99
Second floor	0.00	0.00	0.00
Third and other floors	0.00	0.00	0.00
Room in Roof	0.00	0.00	0.00
Totals	95.05		211.54
Living Area	29.00 m ²		
Living Area Percentage	30.51 %		

Ventilation details

	Number	Air Change Rate [m3/h]
Chimneys	0	0.00
Open Flues	0	0.00
Fans & vents	6	60.00
Flueless combustion room heaters	0	0.00
Manufacturer		N/A
Model		N/A
Has an air permeability test been carried out?	No	Is there a draught lobby on main entrance? No
Infiltration rate due to structure [ac/h]	0.50	Draught lobby air change [ac/h] 0.05
Intermediate infiltration rate	0.83	Openings infiltration [ac/h] 0.33
Number of sides sheltered	1	Structure type Masonry
Adjusted infiltration rate [ac/h]	0.77	Is there a suspended wooden ground floor? No
Effective air change rate [ac/h]	1.02	Number of openings 12
Ventilation heat loss [W/K]	71.28	Number of draught stripped openings 12
Adjusted result of air permeability test [ac/h]	0.00	Windows/doors/attic hatches draught stripped [%] 100.00
Specific fan power [W/(l/s)]	0.80	Ventilation method Whole-house extract ventilation
Heat exchanger efficiency [%]	0.00	How many wetrooms (inc. kitchen)? Is the vent. ducting flexible/rigid/both? N/A
Electricity for ventilation fans [Kwh/y]	206.47	Is MVHR ducting uninsulated where outside of insulated envelope? N/A
Heat gains from ventilation fans [W]	0.00	Adjusted heat exchanger efficiency 0.00

Type	Description	U/F Heating	Include in compliance check	In Roof	Age Band	Exposed Perimeter [m]	Area [m²]	U-Value [W/m²K]	Heat Loss (AU) [W/K]
Ground Floor - Solid		Yes	No	No	2014 onwards	35.67	65.41	0.23	15.04
Non-Heat Loss Floor		N/A	No	No	1900 – 1929	N/A	29.64	0.00	0.00
Total area [m²]									95.05

Building Elements - Roofs

Type	Description	Include in compliance check	Insulation Thickness [mm]	Age Band	Area [m ²]	U-Value [W/m ² K]	Heat Loss (AU) [W/K]
Pitched Roof - Insulated on Ceiling	Above bedrooms FF	No	250	2014 onwards	5.72	0.13	0.74
Pitched Roof - Insulated on Rafter		No		1900 – 1929	30.99	0.30	9.30
Flat Roof	flat roof on rear extension	No		1978 - 1982	40.09	0.17	6.82
Pitched Roof - Insulated on Ceiling	dormer window roof	No		1900 – 1929	1.28	0.38	0.49
Total area [m ²]							78.08

Building Elements - Walls

Type	Description	Wall is semi-exposed	Include in compliance check	Age Band	Area [m ²]	U-Value [W/m ² K]	Heat Loss (AU) [W/K]
300mm Cavity	with 120mm EPS to exterior	No	No	2014 onwards	55.23	0.21	11.60
Stone	walls minus winds + doors	No	No	1900 – 1929	53.15	0.59	31.36
Stone	dormer window walls	No	No	1900 – 1929	0.96	0.91	0.87
Other	knee walls	No	No	2014 onwards	2.36	0.74	1.75
Total area [m ²]							111.70

Building Elements - Doors

Count	Type	Description	Area [m ²]	U- Value [W/m ² K]	Heat Loss (AU) [W/K]
1	Solid exposed door	front door	1.96	1.40	2.74
1	Solid exposed door	back door	1.96	1.40	2.74
Total area [m ²]					3.92

Building Elements - Windows

Count	Glazing Type	Frame Type	Frame Factor	Solar Transm.	In Roof	Over shading	Orient.	Area [m²]	U-value [W/m²K]
1	Triple-glazed, argon filled (low-E, en = 0.05, soft coat)	Wood/PVC	0.700	0.570	No	More Than Average	West	1.08	1.40
1	Triple-glazed, argon filled (low-E, en = 0.05, soft coat)	Wood/PVC	0.700	0.570	No	More Than Average	North	1.03	1.40
1	Triple-glazed, argon filled (low-E, en = 0.05, soft coat)	Wood/PVC	0.700	0.570	No	Very Little	North	1.31	1.40
1	Triple-glazed, argon filled (low-E, en = 0.05, soft coat)	Wood/PVC	0.700	0.570	No	Average or Unknown	North	1.99	1.40
1	Triple-glazed, argon filled (low-E, en = 0.05, soft coat)	Wood/PVC	0.700	0.570	No	Average or Unknown	East	1.06	1.40
1	Triple-glazed, argon filled (low-E, en = 0.05, soft coat)	Wood/PVC	0.700	0.570	No	Average or Unknown	South	0.72	1.40
1	Triple-glazed, argon filled (low-E, en = 0.05, soft coat)	Wood/PVC	0.700	0.570	No	More Than Average	East	0.72	1.40
1	Triple-glazed, argon filled (low-E, en = 0.05, soft coat)	Wood/PVC	0.700	0.570	No	Very Little	West	0.96	1.40
1	Triple-glazed, argon filled (low-E, en = 0.05, soft coat)	Wood/PVC	0.700	0.570	No	Very Little	North	0.96	1.40
1	Triple-glazed, argon filled (low-E, en = 0.05, soft coat)	Wood/PVC	0.700	0.570	No	Very Little	East	1.02	1.40
Total area [m²]									10.85

Heat loss details

Total glazed area [m ²]	10.85	Glazing ratio	0.04
Total glazed heat loss [W/K]	14.38	Summer solar gain [W/m ²]	297.81
Total effective collection area [m ²]	3.12	Total element area [m ²]	269.96
Total plane heat loss [W/K]	97.84	Thermal bridging factor [W/m ² K]	0.1500
Fabric heat loss [W/K]	138.33	Total heat loss [W/K]	209.61
Per m2	2.21		

Lighting and Internal Gains

Lighting Design Calculation Method	Bulb type only	Average Efficacy [lm/W]	85.00
Fixed lighting provision [klmh/y]	3758.55	Top up lighting requirement [klmh/y]	0.00
Energy required for fixed lighting [kWh/y]	78.88	Energy required for top up lighting [kWh/y]	0.00
Energy required for portable lighting [kWh/y]	157.38		
Basic energy consumption for lighting [kWh/y]	814.87	Water heating (In watts [W])	148.14
Annual energy used for lighting [kWh/y]	236.26	Occupants (In watts [W])	134.44
Internal gains from lighting during heating season [kWh/hs] (In watts [W])	180.74 (30.99)	Mechanical ventilation (In watts [W])	0.00
Lighting (In watts [W])	30.99	Heat loss to the cold water network (In watts [W])	-38.20
Appliance and cooking (In watts [W])	202.15	Net internal gains (In watts [W])	477.51

Lights

Name	Description	Type	Efficiency
Default LED/CFL		LED/CFL	85.00

Water heating details

Are there distribution losses?	Yes	Is supplementary electric water heating used in summer?	N/A
Are there storage losses?	Yes	Is there a combi-boiler?	No
Is there a solar water heating system?	No	Total hot water demand [kWh/y]	1603.21
Standard number of occupants	2.69	Temperature factor unadjusted	0.60
Number of mixer showers	2	Temperature Factor Multiplier	1.30
Number of electric showers	0	Hot water storage loss factor [kWh/l d]	0.00
Number of baths	0	Volume factor	0.00
Daily hot water use [Litres/d]	102.24	Combi-boiler electricity consumption [kWh/y]	0.00
Hot water energy reqs. at taps [kWh/y]	1362.72	Adjusted storage loss [kWh/y]	654.81
Distribution losses [kWh/y]	240.48	Adjusted primary circuit loss [kWh/y]	300.99
Water storage volume [Litres]	180.00	Heat gains from water heating system [W]	148.14
Is manufacturers declared loss factor available?	Yes	Output from supplementary heater [kWh/y]	0.00
Declared loss factor [kWh/d]	2.30	Solar input to main system [kWh/y]	0.00
Manufacturer and Model name	LG HP	Solar input to supplementary system [kWh/y]	0.00
Insulation type	N/A		
Insulation thickness [mm]	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 + pump	Yes	6.000		Any / Any			
Vented hot water system + pump	Yes	6.000		Any / Any			

Total :	61.89	0.00
---------	-------	------

Combi-boiler Type	None	Output from main water heater [kWh/y]	2559.01
Combi-boiler loss [kWh/y]	0.00	Annual Heat gains from water heating system [kWh/y]	1297.71
Keep Hot facility	None	WWHRS input to main system [kWh/y]	0.00
Storage Loss	654.81	WWHRS input to supplementary system [kWh/y]	0.00
Storage Type	Cylinder, indirect		

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

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

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	30.51	Heat use during heating season [kWh/y]	7623.90
Required mean internal temperature [°C]	18.92	Heat use for full year [kWh/y]	8173.93
Thermal mass category of dwelling	Medium		

	Utilisation factor	Intermittent heating
Internal heat capacity of dwelling [per m²]	0.20	0.11
Internal heat capacity [MJ/K]	19.01	10.46

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	5.8	16.81	2309	1333	0.23	0.99	1791	518	48
February	6.0	16.85	2274	1146	0.25	0.98	1706	568	101
March	6.8	16.97	2133	1136	0.29	0.97	1527	605	144
April	8.4	17.23	1851	855	0.38	0.95	1187	664	219
May	11.5	17.73	1305	458	0.60	0.88	615	690	307
June	13.7	18.08	918	226	0.83	0.79	314	604	285
July	16.2	18.48	478	47	1.58	0.55	63	415	279
August	15.8	18.42	548	75	1.31	0.62	100	448	240
September	14.3	18.18	812	202	0.82	0.79	281	531	191
October	11.8	17.78	1253	521	0.48	0.92	700	553	122
November	8.5	17.25	1833	943	0.29	0.97	1310	524	61
December	6.6	16.94	2168	1233	0.24	0.98	1657	511	42

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	55	24	364.41	214.99	Yes	Assessor

Heating System

Air-to-water heat pump (electric)

Model

HM091M.U

Manufacturer

LG

Back Up Space Heater Fuel

N/A

Back Up Space Heater Efficiency [%]

N/A

Back Up Water Heater Fuel

N/A

Back Up Water Heater Efficiency [%]

N/A

Space Heating - Space Heating Test Data

Space Heating Standard		I.S. EN 14825		Test Condition		Medium (55°C)
	A (88%)	B (54%)	C (35%)	D (15%)	E* (100%)	
	-7°C	2°C	7°C	12°C	TOL	
Source	A-7	A2	A7	A12	A-15	
Sink	W52	W42	W36	W30	W55	
Heating Capacity [kW]	4.90	3.00	3.10	3.80	5.00	
Coefficient of Performance [kW/kW]	1.76	3.09	4.60	6.72	1.50	

Space Heating - Water Heating Test Data

Water Heating Standard		I.S. EN 16147
Source of Data	Water heating energy efficiency [%]	
Co-efficient of Performance [kW/kW]	0.00	
Water heating energy efficiency [%]	116.00	
Reference Hot water Temperature [°C]	52.00	
Hot water Rated Heat output P_{rated} [kW]	9.00	
Declared load profile	L	
Standing heat loss of test storage tank [kWh/day]	1.76	
Volume of DHW accounted for in test [litre]	210	
Heat Pump Type	Air to Water	

Water Heating - Water Heating Test Data

Water Heating Standard	I.S. EN 16147	
Source of Data		Water heating energy efficiency [%]
Co-efficient of Performance [kW/kW]		0.00
Water heating energy efficiency [%]		116.00
Reference Hot water Temperature [°C]		52.00
Hot water Rated Heat output P_{rated} [kW]		9.00
Declared load profile		L
Standing heat loss of test storage tank [kWh/day]		1.76
Volume of DHW accounted for in test [litre]		210
Heat Pump Type		Air to Water

Water Heating - Space Heating Test Data

Space Heating Standard	I.S. EN 14825		Test Condition		Medium (55°C)
	A (88%)	B (54%)	C (35%)	D (15%)	E* (100%)
	-7°C	2°C	7°C	12°C	TOL
Source	A-7	A2	A7	A12	A-15
Sink	W52	W42	W36	W30	W55
Heating Capacity [kW]	4.90	3.00	3.10	3.80	5.00
Coefficient of Performance [kW/kW]	1.76	3.09	4.60	6.72	1.50

Dist. System Losses and Gains

Temperature adjustment [°C]	0.0	Additional heat emissions due to non ideal control and responsiveness [kWh/y]	1442.43
Heating system control category	2		
Heating system responsiveness category	3	Gross heat emission to heated space [kWh/y]	9066.33
Mean internal temperature during heating hours [°C]	19.26	Is the heat distribution system inside the dwelling able to work at low or more efficient temperature levels?	No
Mean internal temperature [°C]	18.37		

	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	No			0	0
Totals				130	10

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]	58	Is there underfloor heating on the ground floor?	Yes
Average utilisation factor, October to May	0.96	U-Value of ground floor [W/m ² K]	0.23
Useful net gain [kWh/y]	56	Fraction of heating system output from ground floor	0.67
Net heat emission to heated space [kWh/y]	9011	Additional heat loss via envelope element [kWh/y]	165.79
Annual space heating requirement [kWh/y]	9176		

Energy Requirements: Individual Heating Systems

Manufacturer name			LG
Model name			HM091M.U
Brand name			N/A
Model Qualifier			N/A
Indoor unit identifier			N/A
Outdoor unit identifier			N/A
Efficiency of main heating system [%]	364.41	Fraction of heat from secondary system	N/A
Efficiency adjustment factor	1.00	Efficiency of secondary system [%]	N/A
Adjusted efficiency of main heating system [%]	364.41	Energy required for main heating system [kWh/y]	2518.16
Product index number	N/A	Energy required for secondary heating system [kWh/y]	0
Manufacturer's reference number	N/A	Low temperature test condition (35°C)	N/A
Appliance ID	N/A	Intermediate temperature test condition (45°C)	N/A
Rated air flow rate [m³/h]	N/A	Medium temperature test condition (55°C)	N/A
		High temperature test condition (65°C)	N/A

Heat Pump Details - Space Heating

Capacity [kW]	9.00	Compressor control	Unknown
Fuel type	Electricity	Low temperature heat pump	No
Space heating standard	I.S. EN 14825	Water heating standard	I.S. EN 16147

Heat Pump Details - Water Heating

Capacity [kW]	9.00	Compressor control	Unknown
Fuel type	Electricity	Low temperature heat pump	No
Space heating standard	I.S. EN 14825	Water heating standard	I.S. EN 16147

Fraction of main space and water heat from CHP		Efficiency adjustment factor	1.0000
Heat demand from CHP	0.0	Adj. efficiency of main water heating system [%]	214.99
Efficiency of main water heating system [%]	116	Water Heating Efficiency [%]	116
Manufacturer name	LG	Energy req. for main water heater [kWh/y]	1785.44
Model name	HM091M.U	Energy req. for secondary water heater [kWh/y]	0.00
Heat Pump Type	Air to Water	Back Up Water Heating Fuel	N/A
Water Heating Standard	I.S. EN 16147	Back up Water Heating Efficiency [%]	N/A

	Fuel Type	Primary energy conversion factor	CO₂eq Emissions Factor [kg/kWh]
Main space heating system	Electricity	1.50	0.169
Secondary space heating system	None	0.00	0.000
Main water heating system	Electricity	1.50	0.169
Supplementary water heating system	Electricity	0.00	0.000
Cooling System	None	0.00	0.000
Pumps, fans	Electricity	1.50	0.169
Energy for lighting	Electricity	1.50	0.169

CHP data

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

Summer internal gains

Dwelling volume [m ³]	211.543	Total gains in summer [W]	775.33
Effective air change rate for summer period [ac/h]	4	Temperature increment due to gains [°C]	1.86
Ventilation heat loss coefficient [W/K]	279.24	Summer mean external temperature [°C]	15
Fabric heat loss coefficient [W/K]	138.33	Heat capacity parameter	0.20
Heat loss coefficient under summer conditions [W/K]	417.57	Temperature increment related to thermal mass [°C]	0.60
Total Solar Gain for Summer Period [W]	297.81	Threshold internal temperature [°C]	17.46
Internal gains [W]	477.51		

Zero Emissions Building (ZEB)

Check of whether primary energy use is covered by carbon free sources

% of grid electricity generated by carbon free sources	80
PE associated with regulated energy uses [kWh/yr]	5,779.592
Of which electricity [kWh/yr]	5,779.592
Amount covered by on-site renewables and consumed on-site [kWh/yr]	0
Amount of electricity supplied by the grid [kWh/yr]	5,779.592
Amount of electricity supplied by the grid using fossil fuels [kWh/yr]	1,155.918
Difference between PE and ZEB threshold [kWh/yr]	-1,787.492
Exported renewables energy [kWh/yr]	0
Amount covered by energy from carbon free grid sources [kWh/yr]	4,623.674
Amount covered by efficient district heating and cooling systems [kWh/yr]	0
Net primary energy use [kWh/yr]	1,155.918

ZEB Compliance Check

	Value	Threshold / Requirement	Compliance Status
Total Primary Energy Use [kWh/(m ² .y)]	67.56	<=42.00	Non Compliant
Primary energy use covered by carbon free sources?	No	Yes	Non Compliant
Operational GHG Emissions [kgCO ₂ eq/(m ² .y)]	7.59	<=5.00	Non Compliant
Fossil fuel used on site?	No	No	Compliant
Ability to accept external signals?	Yes	Yes	Compliant
Achieves NZEB?	No	Yes	Non Compliant
Overall ZEB Compliant?	-	-	Non Compliant

NZEB Compliance Check

	Value	Threshold / Requirement	Compliance Status
EPC	0.42	<=0.30	Non Compliant
CPC	0.25	<=0.35	Compliant
RER	0.56	>=0.20	Compliant
Overall NZEB Compliant?	-	-	Non Compliant

Global Warming Potential (GWP)

Value of GWP [kgCO₂eq/(m².y)] N/A

Renewable Energy Ratio (RER)

	Source	Renewables Primary Energy	Total Primary Energy	RER
+ Delivered energy	PV/Wind	0.00	0.00	
+ Delivered energy	Other	0.00	0.00	
+ Delivered energy	Solar	0.00	0.00	
+ Delivered energy	Biomass	0.00	0.00	
+ Delivered energy	Biodiesel	0.00	0.00	
+ Delivered energy	Bioethanol	0.00	0.00	
+ Environmental energy	HP	8026.89	8026.89	
+ Saved energy	CHP	0.00		
+ Delivered energy	District Heating	0.00	0.00	
+ Delivered energy	Grid	0.00	6421.77	
+ Delivered energy	Thermal	0.00	0.00	
TOTAL STEP A		8026.89	14448.66	0.56
- Electricity exported	PV/Wind	0.00	0.00	
Including exported electricity	PE from grid			
	PE from renewables	8026.89		
	Total PE (incl. export)		14448.66	0.56 - Pass
Including renewable portion of the grid	FF PE from grid			
	Carbon free PE (grid + renewables)	11879.95		
	Total PE (incl. export)		14448.66	0.82

Results

	Delivered energy [kWh/y]	Primary energy [kWh/y]	CO ₂ eq emissions [kgCO ₂ eq/(m ² .y)]
Main space heating system	2518	3777	424
Secondary space heating system	0	0	0
Network distribution loss (group heating systems only)			
Main water heating system	1190	1785	201
Supplementary water heating system	0	0	0
Cooling	0	0	0
Pumps and fans	336	505	57
Energy for lighting	236	354	40
CHP input (individual heating systems only)	0	0	0
CHP electrical output used on site	0	0	0
CHP electrical output exported to grid	0	0	0
Photovoltaic / Wind Turbine used on site	0	0	0
Photovoltaic / Wind Turbine exported to grid	0	0	0
Thermal Renewables - energy produced or saved	0	0	0
Thermal Renewables - energy consumed	0	0	0
Total	4281	6422	721
Per m² floor area	45.04	67.56	7.59
Energy Rating	A		