Property details

MPRN	0	**Shared MPRN**	
BER Number	N/A	**BER number assigned to shared dwelling**	N/A
Address line 1	Unit 4 Tig Mo Chroi	**Type of Rating**	Existing Dwelling
Address line 2	Glenamuck Road West	**Purpose of Rating**	Major Renovation
Address line 3	Rathdown	**Building Regulations**	None
County	Co. Dublin	**Planning Reference**	
Eircode		**Date of Plans**	
Dwelling Type	Detached house	**Assessor Name**	Jason Moran
Year of construction	2013	**Assessor Number**	107217
Dwelling Extension	Yes	**Date of Assessment**	07/08/2025
Storeys	1	**Assessor Comments**	
		Assessor Description	24-143 TIG MO CHROI TAU BAY-4 Rev3

Dimension details

	Area [m^2]	Height [m]	Volume [m^3]
Ground floor	120.59	2.50	301.48
First floor	0.00	0.00	0.00
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	120.59		301.48

Living Area	37.10 m^2
Living Area Percentage	30.77 %

Ventilation details

	Number	Air Change Rate [m3/h]
Chimneys	0	0.00
Open Flues	1	20.00
Fans & vents	4	40.00
Flueless combustion room heaters	0	0.00

Manufacturer	N/A
Model	N/A

Has a permeability test been carried out	No	**Is there a draught lobby on main entrance?**	No
Infiltration rate due to structure [ac/h]	0.40	**Draught lobby air change [ac/h]**	0.05
Intermediate infiltration rate	0.65	**Openings infiltration [ac/h]**	0.25
Number of sides sheltered	2	**Structure type**	Masonry
Adjusted infiltration rate [ac/h]	0.55	**Is there a suspended wooden ground floor?**	No
Effective air change rate [ac/h]	0.65	**Windows/doors/attic hatches draught stripped [%]**	100.00
Ventilation heat loss [W/K]	64.88	**Ventilation method**	Natural ventilation
Adjusted result of air permeability test [ac/h]	0.00	**How many wetrooms (inc. kitchen)? Is the vent. ducting flexible/rigid/both?**	N/A
Specific fan power [W/(l/s)]	0.00	**Is MVHR ducting uninsulated where outside of insulated envelope?**	N/A
Heat exchanger efficiency [%]	0.00	**Adjusted heat exchanger efficiency**	0.00
Electricity for ventilation fans [Kwh/y]	0.00		
Heat gains from ventilation fans [W]	0.00		

Building Elements - Floors

Type	Description	U/F Heating	Include in compliance check	In Roof	Age Band	Exposed Perimeter [m]	Area [m^2]	U-Value [W/m^2K]	Heat Loss (AU) [W/K]
Ground Floor - Solid	Existing Floor	No	No	No	2010 - 2013	23.5	54.11	0.24	12.99
Ground Floor - Solid	Ground Floor New Construction With U=0.15	Yes	No	No	2014 onwards	28.48	66.48	0.15	9.97
Total area [m^2]									120.59

Building Elements - Roofs

Type	Description	Include in compliance check	Insulation Thickness [mm]	Age Band	Area [m^2]	U-Value [W/m^2K]	Heat Loss (AU) [W/K]
Pitched Roof - Insulated on Ceiling	Existing ceiling with new insulation to 250mm Fibre Wool	No	250	2010 - 2013	54.11	0.16	8.66
Flat Roof	Extension Flat Roof with U-value of 0.2	No		2014 onwards	13.54	0.20	2.71
Pitched Roof - Insulated on Ceiling	Extension with 300mm Wool Insulation	No	300	2014 onwards	52.94	0.13	6.88
Total area [m^2]							120.59

Building Elements - Walls

Type	Description	Wall is semi-exposed	Include in compliance check	Age Band	Area [m^2]	U-Value [W/m^2K]	Heat Loss (AU) [W/K]
Unknown	Existing Walls	No	No	2010 - 2013	48.27	0.27	13.03
425mm Filled Cavity	New Extension Walls With U-value of 0.18	No	No	2014 onwards	56.11	0.18	10.10
Total area [m^2]							104.38

Building Elements - Doors

Count	Type	Description	Draught Stripped	Area [m^2]	U-Value [W/m^2K]	Heat Loss (AU) [W/K]
1	Solid exposed door	Existing Door	Yes	2.39	3.00	7.17
1	Solid exposed door	New Door U-value 1.4	Yes	1.89	1.40	2.65
Total area [m^2]						4.28

Building Elements - Windows

Count	Glazing Type	Frame Type	Frame Factor	Solar Transm.	In Roof	Over shading	Orient.	Area [m^2]	U-value [W/m^2K]
1	Double-glazed, argon filled (low-E, en = 0.15, hard coat)	Wood/PVC	0.700	0.720	No	Average or Unknown	Southeast	3.03	2.00
1	Double-glazed, argon filled (low-E, en = 0.15, hard coat)	Wood/PVC	0.700	0.720	No	Average or Unknown	Northwest	3.03	2.00
1	Double-glazed, argon filled (low-E, en = 0.15, hard coat)	Wood/PVC	0.700	0.720	No	Average or Unknown	Southwest	1.98	2.00
1	Double-glazed, argon filled (low-E, en = 0.05, soft coat)	Wood/PVC	0.700	0.730	No	Average or Unknown	Southeast	5.33	1.20
1	Double-glazed, argon filled (low-E, en = 0.05, soft coat)	Wood/PVC	0.700	0.730	No	Average or Unknown	Northwest	5.01	1.20
Total area [m^2]									18.38

Heat loss details

Total glazed area [m^2]	18.38	**Glazing ratio**	0.06
Total glazed heat loss [W/K]	26.73	**Summer solar gain [W/m^2]**	796.8
Total effective collection area [m^2]	6.47	**Total element area [m^2]**	368.22
Total plane heat loss [W/K]	100.88	**Thermal bridging factor [W/m^2K]**	0.1500
Fabric heat loss [W/K]	156.12	**Total heat loss [W/K]**	221.00
Per m2	1.83		

Lighting and Internal Gains

Lighting Design Calculation Method	Bulb type only	**Average Efficacy [lm/W]**	66.90
Fixed lighting provision [klmh/y]	3977.19	**Top up lighting requirement [klmh/y]**	0.00
Energy required for fixed lighting [kWh/y]	106.05	**Energy required for top up lighting [kWh/y]**	0.00
Energy required for portable lighting [kWh/y]	166.54		
Basic energy consumption for lighting [kWh/y]	939.40	**Water heating (In watts [W])**	135.03
Annual energy used for lighting [kWh/y]	272.58	**Occupants (In watts [W])**	143.28
Internal gains from lighting during heating season [kWh/hs] (In watts [W])	208.52 (35.76)	**Mechanical ventilation (In watts [W])**	0.00
Lighting (In watts [W])	35.76	**Heat loss to the cold water network (In watts [W])**	-39.79
Appliance and cooking (In watts [W])	236.15	**Net internal gains (In watts [W])**	510.43

Lights

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

Water heating details

Are there distribution losses?	Yes
Are there storage losses?	Yes
Is there a solar water heating system?	No
Standard number of occupants	2.87
Number of mixer showers	2
Number of electric showers	0
Number of baths	1
Daily hot water use [Litres/d]	122.91
Hot water energy reqs. at taps [kWh/y]	1638.24
Distribution losses [kWh/y]	289.10
Water storage volume [Litres]	189.00
Is manufacturers declared loss factor available?	Yes
Declared loss factor [kWh/d]	1.87
Manufacturer and Model name	Joule 200L IND Standard Kodiak PP HP 3Z G6
Insulation type	N/A
Insulation thickness [mm]	N/A

Is supplementary electric water heating used in summer?	N/A
Is there a combi boiler?	No
Total hot water demand [kWh/y]	1927.34
Temperature factor unadjusted	0.60
Temperature Factor Multiplier	0.90
Hot water storage loss factor [kWh/l d]	0.00
Volume factor	0.00
Combi-boiler electricity consumption [kWh/y]	0.00
Adjusted storage loss [kWh/y]	368.58
Adjusted primary circuit loss [kWh/y]	308.95
Heat gains from water heating system [W]	135.03
Output from supplementary heater [kWh/y]	0.00

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]
Unvented hot water system	Yes	6.000		Any / Any			
Total :			50.24				0.00

Combi-boiler Type	None
Combi-boiler loss [kWh/y]	0.00
Keep Hot facility	None
Storage Loss	368.58
Storage Type	Cylinder, indirect

Output from main water heater [kWh/y]	2604.86
Annual Heat gains from water heating system [kWh/y]	1182.86
WWHRS input to main system [kWh/y]	0.00
WWHRS input to supplementary system [kWh/y]	0.00

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

Primary circuit loss [kWh/y]	360.00
Is hot water storage indoors or in group heating system	Yes

Heat Pump Type of DHW	Separate 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	30.77	**Heat use during heating season [kWh/y]**	7571.40
Required mean internal temperature [°C]	18.92	**Heat use for full year [kWh/y]**	8084.27
Thermal mass category of dwelling	Medium-low		

	Utilisation factor	Intermittent heating
Internal heat capacity of dwelling [per m^2]	0.14	0.09
Internal heat capacity [MJ/K]	16.88	10.85

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	2522	1383	0.27	0.97	1859	663	174
February	5.5	16.74	2485	1154	0.32	0.95	1717	768	294
March	7.0	16.99	2207	996	0.43	0.92	1339	869	431
April	8.3	17.20	1967	722	0.56	0.87	1003	964	592
May	11.0	17.64	1467	385	0.85	0.76	518	949	734
June	13.5	18.04	1004	161	1.24	0.63	223	781	730
July	15.5	18.37	634	54	1.89	0.47	73	561	684
August	15.2	18.32	689	73	1.66	0.52	98	591	634
September	13.3	18.01	1041	225	0.98	0.71	313	728	508
October	10.4	17.54	1578	606	0.55	0.88	814	764	360
November	7.5	17.07	2115	1024	0.35	0.95	1423	692	219
December	6.0	16.83	2393	1301	0.28	0.97	1749	644	155

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	454.79	257.62	Yes	Assessor

Model			AE080RXYDEG EU
Manufacturer			Samsung
Back Up Space Heater Fuel	N/A	**Back Up Space Heater Efficiency [%]**	N/A
Back Up Water Heater Fuel	Electricity	**Back Up Water Heater Efficiency [%]**	100.00

Room heaters	N/A	Solid fuel	0	0	60	60	N/A	SEAI

Model			Any
Manufacturer			Any
Back Up Space Heater Fuel	N/A	**Back Up Space Heater Efficiency [%]**	N/A

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)	7.10	4.30	3.10	2.60	7.00
Coefficient of Performance (kW/kW)	2.63	4.24	6.39	8.22	2.48

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)	7.10	4.30	2.80	2.40	6.80
Coefficient of Performance (kW/kW)	1.90	3.11	4.55	5.77	1.66

Heating System Test data: I.S. EN 16147

Source of Data	Water heating energy efficiency [%]
Co-efficient of Performance [kW/kW]	0.00
Water heating energy efficiency [%]	141.00
Reference Hot water Temperature [°C]	54.34
Hot water Rated Heat output P_{rated} [kW]	8.00
Declared load profile	L
Standing heat loss of test storage tank [kWh/day]	2.06
Volume of DHW accounted for in test [litre]	200
Heat Pump Type	Air to Water

Dist. System Losses and Gains

Temperature adjustment [°C]	0	**Additional heat emissions due to non ideal control and responsiveness [kWh/y]**	472.59
Heating system control category	3	**Gross heat emission to heated space [kWh/y]**	8043.99
Heating system responsiveness category	2	**Mean internal temperature [°C]**	17.46
Mean internal temperature during heating hours [°C]	18.92		

	Number present	Boiler controlled by thermostat	Inside dwelling	Electricity consumption [kWh/y]	Heat gain [W]
Central heating pumps	2	Yes	Yes	52	20
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				52	20

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]	117	**Is there underfloor heating on the ground floor?**	No
Average utilisation factor, October to May	0.91	**U-Value of ground floor [W/m^{2}K]**	0.15
Useful net gain [kWh/y]	106	**Fraction of heating system output from ground floor**	1.00
Net heat emission to heated space [kWh/y]	7938	**Additional heat loss via envelope element [kWh/y]**	142.88
Annual space heating requirement [kWh/y]	8081		

Energy Requirements: Individual Heating Systems

Manufacturer name	Samsung
Model name	AE080RXYDEG EU
Brand name	N/A
Model Qualifier	N/A
Indoor unit identifier	N/A
Outdoor unit identifier	N/A

Efficiency of main heating system [%]	454.79	**Fraction of heat from secondary system**	0.10
Efficiency adjustment factor	1.00	**Efficiency of secondary system [%]**	60
Adjusted efficiency of main heating system [%]	454.79	**Energy required for main heating system [kWh/y]**	1599.14
Product index number	N/A	**Energy required for secondary heating system [kWh/y]**	1340.66
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 [m^3/h]	0	**Medium temperature test condition (55°C)**	N/A
		High temperature test condition (65°C)	N/A

Fraction of main space and water heat from CHP	N/A	**Efficiency adjustment factor**	1.0000
Heat demand from CHP	0.0	**Adj. efficiency of main water heating system [%]**	257.62
Efficiency of main water heating system [%]	257.62	**Water Heating Efficiency [%]**	141
Manufacturer name	Samsung	**Energy req. for main water heater [kWh/y]**	1769.47
Model name	AE080RXYDEG EU	**Energy req. for secondary water heater [kWh/y]**	0.00
Heat Pump Type	Air to Water		
Water Heating Standard	I.S. EN 16147		

	Fuel Type	Primary energy conversion factor	CO_2 emission factor
Main space heating system	Electricity	1.75	0.224
Secondary space heating system	Manufactured Smokeless Fuel	1.20	0.392
Main water heating system	Electricity	1.75	0.224
Supplementary water heating system	Electricity	0.00	0.000
Cooling System	None	0.00	0.000
Pumps, fans	Electricity	1.75	0.224
Energy for lighting	Electricity	1.75	0.224

	Type	Part L Total Contribution [kWh/y]	Delivered Energy [kWh/y]	Primary energy conversion factor	CO_2 emission factor [kg/kWh]
Energy produced or saved 1	Electrical (Solar PV/Wind)	0.000	702.450	1.75	0.224
Energy consumed by the technology 1			0.000	0.00	0.000
Energy produced or saved 2	Electrical (Solar PV/Wind)	0.000	211.970	1.75	0.224
Energy consumed by the technology 2			0.000	0.00	0.000
Energy produced or saved 3	N/A	0.000	0.000	0.00	0.000
Energy consumed by the technology 3			0.000	0.00	0.000

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]	301.475	**Total gains in summer [W]**	1307.23
Effective air change rate for summer period [ac/h]		**Temperature increment due to gains [°C]**	8.37
Ventilation heat loss coefficient [W/K]	0.00	**Summer mean external temperature [°C]**	15
Fabric heat loss coefficient [W/K]	156.12	**Heat capacity parameter**	0.14
Heat loss coefficient under summer conditions [W/K]	156.12	**Temperature increment related to thermal mass [°C]**	1.02
Total Solar Gain for Summer Period [W]	796.80	**Threshold internal temperature [°C]**	24.39
Internal gains [W]	510.43		

Results

	Delivered energy [kWh/y]	Primary energy [kWh/y]	CO_2 emissions [$kgCO_2/y$]
Main space heating system	1599	2798	358
Secondary space heating system	1341	1609	526
Main water heating system	1011	1769	226
Supplementary water heating system	0	0	0
Cooling	0	0	0
Pumps and fans	52	91	12
Energy for lighting	273	477	61
CHP input (individual heating systems only)	0	0	0
CHP electric output (individual heating systems only)	0	0	0
Renewable and energy saving technologies			
Energy produced and saved	914	1600	205
Energy consumed by the technology	0	0	0
Total	3361	5145	978
Per m^2 floor area	27.87	42.66	8.11
Energy Rating	A2		