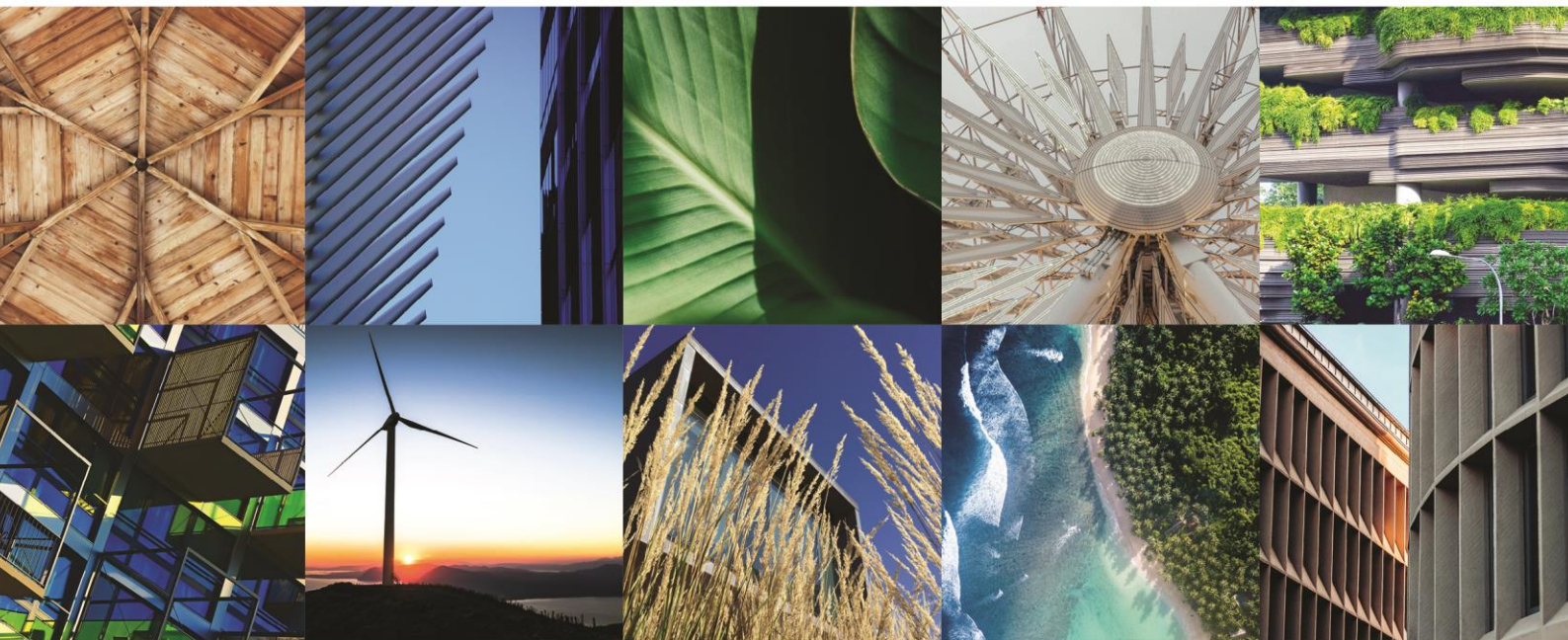




Frasers Property Proposed Residential Development

To be built at Lot 5-7 Telopea 2117

Issue	File Ref	Description	Author	Date
A	20-0598	NatHERS and BASIX Assessment	HE/AM/FM/NB	13/08/2020
B	20-0844	Update to reflect plan changes	HE	21/08/2020
C	-	Update unit 1B.1.10 and 1B.1.1	HE	28/08/2020
D	21-2016	NatHERS Thermal Comfort Assessment	FM/HE/AA/DO/JJ/SF/PJC	13/07/2021
E	22-3832R	NatHERS Thermal Comfort Update	MF/PM/MM/AA	03/11/2022
F	22-3954R	Update to 10 units	PM	18/11/22

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Integral Group. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our Client's instructions and preferred building inclusions.



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Prepared For:

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Introduction

Efficient Living has investigated the estimated thermal comfort, water and energy usage of the proposed development to be built at Lot 5-7 Telopea 2117 Stage 1A residential.

Heating and cooling loads for the development have been determined using BERS Pro Plus 4.4 thermal comfort simulation software. The report is based on the architectural drawings provided by Integral Group. For further details refer to the individual BASIX Certificate(s) and Efficient Living's inclusions summary respectively.

This report is based on the following plans prepared by Plus Architecture. Job No: 20320, Revision 6 Drawing No: PLA-AR-DA0097 – PLA-AR-DA0110, PLA-AR-DA0201 – PLA-AR-DA0208 & PLA-AR-DA0250 – PLA-AR-DA0254

Thermal Comfort

Thermal Comfort targets are set by the Department of Planning in the form of heating and cooling caps. The buildings thermal physics are measured using BERS Pro Plus V4.4 Thermal Comfort Simulation Software. This calculates the expected level of energy required to heat and cool each dwelling per annum, expressed in megajoules per square metre of floor area (MJ/m²).

Each unit has individual heating and cooling caps applied. Accompanying these individual caps are average heating and cooling caps applied to the whole development. The average caps are lower, or harder to comply with than the individual unit caps.

Inclusions Summary

The inclusions as outlined below have been incorporated in each unit to allow them to reach their BASIX thermal comfort targets.

Glazing Doors/Windows

Glazed windows and doors:

Group A – awning + bifold + casement windows + hinged glazed doors

U-value: 5.40 (equal to or lower than) SHGC: 0.49 (±10%)

Group B – sliding doors/windows + fixed glazing + louvred windows

U-value: 5.40 (equal to or lower than) SHGC: 0.58 (±10%)

Upgrade as per thermal comfort upgrade table

Group A – awning + bifold + casement windows + hinged glazed doors

U-value: 4.10 (equal to or lower than) SHGC: 0.47 ($\pm 10\%$)

Group B – sliding doors/windows + fixed glazing + louvred windows

U-value: 4.10 (equal to or lower than) SHGC: 0.52 ($\pm 10\%$)

Given values are AFRC total window system values (glass and frame)

Skylight

U-value: 4.20 (equal to or lower than) SHGC: 0.72 ($\pm 10\%$)

Roof and ceiling

Concrete roof, no insulation to top of slab

Plasterboard ceiling with R3.0 insulation (insulation only value) to soffit of concrete where roof, balcony or plant is over

Plasterboard ceiling, no insulation where neighbouring units are above

External Colour

Light ($SA < 0.475$)

Ceiling Penetrations

Sealed LED downlights at a maximum of one every 2.5m². Once lighting plan has been developed NatHERS modelling can be updated to improve specification.

Ceiling Fans

Unit E.LG.02

1200mm diameter ceiling fans to bedrooms

Unit E.LG.03

1200mm diameter ceiling fans to bedroom and living room

External Wall

Brick veneer with R2.0 insulation (insulation only value)

230mm Concrete wall with R2.0 insulation (insulation only value)

230mm Concrete columns with R1.2 insulation (insulation only value) to concrete columns

Lightweight cladding on frame with R2.0 insulation (insulation only value)

External Colour

Default medium modelled

Inter-tenancy walls

230mm concrete with plasterboard lining to walls adjacent to neighbours, no insulation required

230mm concrete with plasterboard lining to hallways, no insulation required

230mm concrete with plasterboard with R2.0 insulation to basement and plant rooms

230mm concrete with furring channel and plasterboard lining to all walls adjacent to lift shafts and fire stairs. No insulation required

Walls within dwellings

Plasterboard on studs – no insulation

Floors

230mm thick concrete slab with a minimum R2.0 insulation (insulation only value) required to units with garage and part subfloor below

Concrete between levels, no insulation required

Floor coverings

Default floor coverings modelled

External Shading

Shading screens, fins and eave lines modelled as per NatHERS stamped plans

Screens are operable with perforated area of 30%

External operable venetian blinds

Teloopa
Stage 1 and 2

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0005151380						Accreditation # HERA10033	
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
Building A							
A.B2.01	3	97	0	9.5	25	7.3	Glazing Upgrade
A.B1.01	2	66	0	16.7	28.4	6.4	Glazing Upgrade
A.B1.02	2	73	0	11.9	16.6	7.8	None
A.B1.03	3	97	0	3.5	27.3	7.6	Glazing Upgrade
A.LG.01	2	67	0	22.4	23.9	6.4	Glazing Upgrade
A.LG.02	1	50	0	32.1	13.7	6.4	None
A.LG.03	2	83	0	20.3	22.1	6.7	None
A.LG.04	3	97	0	3.8	26.8	7.6	Glazing Upgrade
A.UG.01	2	67	0	23.3	22	6.4	Glazing Upgrade
A.UG.02	1	50	0	23.5	11.6	7.3	None
A.UG.03	1	50	0	32.4	10.6	6.7	None
A.UG.04	2	83	0	21.6	17.3	7	None
A.UG.05	3	97	0	9.4	24.9	7.3	None
A.01.01	2	67	0	23.4	21.9	6.4	Glazing Upgrade
A.01.02	1	50	0	22.2	13.7	7.2	None
A.01.03	1	50	0	24.7	12	7.2	None
A.01.04	2	83	0	23.3	17.2	6.9	None
A.01.05	3	97	0	10.6	23.6	7.3	None
A.02.01	2	67	0	29.7	17.2	6.3	Glazing Upgrade
A.02.02	1	50	0	20.8	27.7	6.2	None
A.02.03	1	50	0	27.2	16.6	6.6	None
A.02.04	1	49	0	20.8	17.4	7.1	None
A.02.05	3	99	0	24.7	26.3	6	None
Building B							
B.LG.01	1	63	0	14.1	17.9	7.4	None
B.LG.02	1	63	0	5	27	7.4	None
B.LG.03	1	72	0	13.8	14.2	7.8	None
B.LG.04	2	76	0	27.2	18.4	6.4	None
B.LG.05	2	61	0	38.5	10.9	6.1	Glazing upgrade
B.UG.01	2	91	0	11.2	14.7	8	None
B.UG.02	2	100	0	12.2	20.7	7.4	None
B.UG.03	2	100	0	13.3	13.3	7.9	None
B.UG.04	1	100	0	13.4	20	7.4	None
B.UG.05	2	94	0	24.3	14.4	7	None
B.UG.06	2	74	0	24.1	28.4	5.9	Glazing upgrade
B.UG.07	1	64	0	21.9	29.1	6	Glazing upgrade

Teloopa
Stage 1 and 2

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0005151380							Accreditation # HERA10033
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
B.UG.08	1	49	0	12.5	27.3	6.9	Glazing upgrade
B.UG.09	1	49	0	21.9	21.6	6.6	None
B.UG.10	2	69	0	18.4	16.8	7.3	None
B.UG.11	2	83	0	8.3	16	8.1	None
B.UG.12	3	93	0	6.5	16.8	8.2	None
B.UG.13	2	77	0	17.9	16.1	7.4	None
B.UG.14	2	77	0	17.6	14.5	7.4	None
B.UG.15	1	53	0	0.1	28.6	7.8	Glazing upgrade
B.UG.16	1	69	0	4.4	11	8.9	None
B.UG.17	2	69	0	13.1	16.9	7.7	None
B.UG.18	1	49	0	14.5	21.6	7.2	None
B.UG.19	1	51	0	16.8	14.4	7.6	None
B.UG.20	1	73	0	25.1	9.5	7.3	None
B.UG.21	2	110	0	29.5	20.2	6.1	Glazing upgrade
B.UG.22	2	100	0	33.6	23	5.6	None
B.UG.23	2	100	0	14.9	19.6	7.3	None
B.UG.24	2	100	0	15.7	11.4	7.9	None
B.01.01	1	49	0	26.4	20.2	6.4	None
B.01.02	1	49	0	13.4	17.8	7.6	None
B.01.03	2	69	0	14.9	25.5	6.9	None
B.01.04	2	83	0	10.4	20.4	7.6	None
B.01.05	3	93	0	3.1	26.6	7.7	None
B.01.06	2	77	0	12.6	18.8	7.6	None
B.01.07	2	77	0	9.1	18.3	7.9	None
B.01.08	1	53	0	2	24.5	7.9	None
B.01.09	2	71	0	9.7	14.8	8.1	None
B.01.10	2	69	0	13.1	16.9	7.7	None
B.01.11	1	49	0	14.3	28.1	6.7	None
B.02.01	2	100	0	10.6	12.1	8.3	None
B.02.02	2	100	0	7.8	22.4	7.7	None
B.02.03	2	100	0	8.7	16.7	8	None
B.02.04	2	100	0	7.9	22.3	7.7	None
B.02.05	2	103	0	29.1	13.5	6.7	None
B.02.06	2	72	0	12.1	25	7.1	Glazing upgrade
B.02.07	1	64	0	7	27.5	7.3	Glazing upgrade
B.02.08	2	79	0	17.8	10.7	7.8	None
B.02.09	1	49	0	13.2	17.8	7.6	None

Teloopa
Stage 1 and 2

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Certificate # 0005151380							Accreditation # HERA10033
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
B.02.10	2	69	0	13.4	25.7	6.9	None
B.02.11	2	80	0	15.3	21.4	7.2	None
B.02.12	3	93	0	3.3	26.2	7.7	None
B.02.13	2	77	0	13.1	18.6	7.5	None
B.02.14	2	77	0	11.8	18.7	7.6	None
B.02.15	1	53	0	3.9	22.4	7.9	None
B.02.16	2	71	0	8.2	19.9	7.8	None
B.02.17	2	69	0	21.2	24.2	6.4	None
B.02.18	1	49	0	13.2	21.5	7.3	None
B.02.19	1	63	0	9.5	24.2	7.4	None
B.02.20	1	63	0	38.6	11.9	6	None
B.02.21	2	110	0	34.3	19.7	5.8	None
B.02.22	2	100	0	11	16.4	7.9	None
B.02.23	2	100	0	10.8	14.9	8	None
B.02.24	2	100	0	12.1	19.3	7.6	None
B.03.01	1	50	0	20.4	15.6	7.2	None
B.03.02	1	49	0	14.3	15.8	7.7	None
B.03.03	2	69	0	14.9	14.3	7.7	None
B.03.04	2	80	0	8.1	25.6	7.4	Glazing upgrade
B.03.05	3	93	0	5.1	22.6	7.9	None
B.03.06	2	77	0	15.5	16.2	7.5	None
B.03.07	2	77	0	14.2	15.3	7.7	None
B.03.08	1	53	0	6	20.3	7.9	None
B.03.09	2	71	0	10.7	14.6	8.1	None
B.03.10	2	69	0	22.6	24.7	6.3	None
B.03.11	1	50	0	15	22.7	7.1	None
B.04.01	1	49	0	15.7	15.2	7.6	None
B.04.02	2	85	0	26.9	23.1	6.1	None
B.04.03	2	85	0	19	27.9	6.3	None
B.04.04	2	75	0	18.6	22.7	6.8	None
B.04.05	1	49	0	20	13.4	7.4	None
B.04.06	3	95	0	24.5	16.6	6.8	None
B.04.07	2	80	0	10.4	22.7	7.4	Glazing upgrade
B.04.08	2	82	0	8	15	8.2	None
B.04.09	2	77	0	27.3	14.5	6.8	None
B.04.10	2	77	0	29.1	11.3	6.9	None
B.04.11	1		0	14.4	17.6	7.5	None

Teloepa
Stage 1 and 2

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0005151380							Accreditation # HERA10033
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
B.04.12	2	71	0	10.2	14.6	8.1	None
B.04.13	2	69	0	21.8	24.8	6.4	None
B.04.14	1	49	0	13	21.9	7.3	None
B.04.15	1	51	0	22.9	15.7	7	None
B.04.16	2	80	0	39.3	16.6	5.7	None
B.04.17	2	80	0	35.8	17.9	5.8	None
B.04.18	1	49	0	34.4	10.8	6.4	None
B.05.01	1	49	0	15.7	15	7.6	None
B.05.02	2	76	0	25.2	18.1	6.6	None
B.05.03	2	76	0	25.3	25.4	6	None
B.05.04	2	75	0	17.6	24.3	6.8	None
B.05.05	1	49	0	24	13.9	7.1	None
B.05.06	3	95	0	24.8	16.6	6.8	None
B.05.07	2	80	0	10.6	25.4	7.2	Glazing upgrade
B.05.08	2	70	0	11.5	15.1	7.9	None
B.05.09	2	69	0	22.3	24.3	6.4	None
B.05.10	1	49	0	21.1	14	7.3	None
B.05.11	1	49	0	19.3	14.8	7.4	None
B.05.12	2	80	0	22.1	16.3	7	Glazing Upgrade
B.05.13	2	80	0	26.1	12.9	7	Glazing Upgrade
B.05.14	1	49	0	34.7	11.1	6.4	None
B.06.01	1	49	0	15.4	15.4	7.6	None
B.06.02	2	76	0	23.6	18.3	6.8	None
B.06.03	2	76	0	26.2	25.5	5.9	None
B.06.04	2	75	0	18.1	24.2	6.7	None
B.06.05	1	49	0	24.1	13.5	7.1	None
B.06.06	3	95	0	25.1	16.2	6.8	None
B.06.07	2	80	0	24.9	23.1	6.3	None
B.06.08	2	70	0	11.5	15.5	7.9	None
B.06.09	2	69	0	20	23.7	6.6	None
B.06.10	1	49	0	21.5	14	7.3	None
B.06.11	1	49	0	19.6	14.4	7.4	None
B.06.12	2	80	0	24.8	14.7	6.9	Glazing Upgrade
B.06.13	2	80	0	26.6	12.7	6.9	Glazing Upgrade
B.06.14	1	49	0	33.8	11.1	6.5	None
B.07.01	1	49	0	26	12.9	7	None
B.07.02	2	76	0	23	18.6	6.8	None

Teloopa
Stage 1 and 2

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0005151380							Accreditation # HERA10033
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
B.07.03	2	76	0	26	25.5	5.9	None
B.07.04	2	75	0	18.1	23.8	6.7	None
B.07.05	1	49	0	24.4	13.3	7.1	None
B.07.06	3	95	0	25.3	16.1	6.8	None
B.07.07	2	80	0	11	24.9	7.2	Glazing upgrade
B.07.08	3	100	0	23.5	10.7	7.3	Glazing upgrade
B.07.09	3	112	0	38.9	17.1	5.6	None
B.07.10	2	94	0	20.7	12.2	7.4	None
B.07.11	2	49	0	33.4	18.9	5.9	None
B.07.12	3	133	0	35.1	11.8	6.3	Glazing Upgrade
B.07.13	2	80	0	23.1	8.8	7.5	Glazing Upgrade
B.07.14	1	49	0	33.5	11.4	6.5	None
B.08.01	1	49	0	15.4	15.1	7.6	None
B.08.02	2	76	0	22.8	18.6	6.8	None
B.08.03	2	76	0	25.8	25.7	5.9	None
B.08.04	2	75	0	18.8	23.4	6.7	None
B.08.05	1	49	0	24.6	13.4	7.1	None
B.08.06	3	95	0	25.7	15.5	6.8	None
B.08.07	2	80	0	11.2	24.8	7.2	Glazing upgrade
B.09.01	1	49	0	15.7	15.2	7.6	None
B.09.02	2	76	0	22.7	18.5	6.8	None
B.09.03	2	76	0	25.7	25.3	6	None
B.09.04	2	75	0	19	23.5	6.7	None
B.09.05	1	49	0	25.2	13.3	7	None
B.09.06	3	95	0	26	15.4	6.8	None
B.09.07	2	80	0	11.4	24.7	7.2	Glazing upgrade
B.10.01	1	49	0	15.9	15	7.6	None
B.10.02	2	76	0	24.4	15.8	6.9	None
B.10.03	2	76	0	27.5	21.8	6.1	None
B.10.04	2	75	0	20.9	21	6.8	None
B.10.05	1	49	0	27.2	11.5	7	None
B.10.06	3	95	0	28.1	14	6.7	None
B.10.07	2	80	0	13.6	21.8	7.3	Glazing upgrade
B.11.01	1	49	0	16.2	14.9	7.6	None
B.11.02	2	76	0	24.7	15.9	6.9	None
B.11.03	2	76	0	27.8	21.5	6.1	None

Teloopa
Stage 1 and 2

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0005151380							Accreditation # HERA10033
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
B.11.04	2	75	0	21.1	20.9	6.8	None
B.11.05	1	49	0	27.5	11.5	6.9	None
B.11.06	3	95	0	28.3	14.1	6.7	None
B.11.07	2	80	0	12.5	22.5	7.3	Glazing upgrade
B.12.01	1	49	0	16.4	14.9	7.6	None
B.12.02	2	76	0	24.8	15.9	6.9	None
B.12.03	2	76	0	27.9	21.2	6.2	None
B.12.04	2	75	0	21.2	20.7	6.8	None
B.12.05	1	49	0	27.7	11.8	6.9	None
B.12.06	3	95	0	28.6	13.7	6.7	None
B.12.07	2	80	0	12.7	22.4	7.3	Glazing upgrade
B.13.01	2	96	0	22.7	15.2	7.1	None
B.13.02	3	118	0	44.6	13.3	5.8	None
B.13.03	3	117	0	42.7	13.8	5.6	None
B.13.04	3	127	0	26.2	19.8	6.4	None
B.13.05	2	96	0	33.7	14.8	6.2	None
B.13.06	3	92	0	23	16.7	6.9	None
B.13.07	2	80	0	13.6	21.7	7.3	Glazing upgrade
B.13.08	3	111	0	37.3	11.2	6.2	None
Building C							
C.UG.01	1	59	0	15.4	19.6	7.3	Glazing Upgrade
C.UG.02	1	70	0	23.4	13.5	7.2	None
C.UG.03	1	53	0	28.6	25.4	5.8	None
C.UG.04	3	101	0	17.2	12.7	7.7	None
C.UG.05	1	57	0	16.2	15.7	7.5	None
C.UG.06	1	36	0	34	17.8	5.9	None
C.01.01	1	59	0	14.8	21.2	7.2	Glazing Upgrade
C.01.02	1	53	0	26	10.8	7.2	None
C.01.03	1	51	0	20.7	11.8	7.2	None
C.01.04	2	75	0	13.5	12.9	7.9	None
C.01.05	2	74	0	8.7	17	8	None
C.01.06	1	54	0	2.1	24.4	7.9	None
C.01.07	2	88	0	31	13.3	6.6	None
C.01.08	1	47	0	22.7	24.6	6.3	None
C.02.01	1	59	0	13.7	24.5	7.1	Glazing Upgrade
C.02.02	1	53	0	26.3	10.3	7.2	None

Teloopa
Stage 1 and 2

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0005151380							Accreditation # HERA10033
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
C.02.03	1	51	0	20.9	12.3	7.1	None
C.02.04	2	75	0	17	13.2	7.6	None
C.02.05	2	74	0	7.7	14.7	8.3	None
C.02.06	1	54	0	2.3	24	7.9	None
C.02.07	2	76	0	16.7	16.8	7.4	None
C.02.08	1	47	0	18.8	27.1	6.4	None
C.03.01	1	59	0	16.9	18.4	7.3	Glazing Upgrade
C.03.02	1	53	0	27.9	12.8	6.9	None
C.03.03	1	51	0	19.1	11.9	7.6	None
C.03.04	2	75	0	18.1	9.7	7.9	None
C.03.05	2	74	0	8.6	11.1	8.5	None
C.03.06	1	54	0	4.4	20.5	8.1	None
C.03.07	2	76	0	32	11	6.7	None
C.03.08	1	47	0	27.1	21.8	6.2	None
C.04.01	1	59	0	16.6	21.5	7.1	Glazing Upgrade
C.04.02	1	53	0	27.9	13.1	6.8	None
C.04.03	1	51	0	24.7	10.4	7.3	None
C.04.04	2	75	0	18.3	9.7	7.8	None
C.04.05	2	74	0	11.8	13.3	8.1	None
C.05.01	1	59	0	16.5	21.5	7.1	Glazing Upgrade
C.05.02	1	53	0	27.5	13.5	6.8	None
C.05.03	1	51	0	24.8	10.8	7.2	None
C.05.04	2	75	0	18.6	10	7.8	None
C.05.05	2	74	0	12.1	13.1	8.1	None
C.06.01	1	59	0	12	24.1	7.2	Glazing Upgrade
C.06.02	1	53	0	26.2	10.9	7.1	None
C.06.03	1	51	0	24	11	7.3	None
C.06.04	2	75	0	18.4	10.3	7.8	None
C.06.05	2	74	0	12.3	12.9	8.1	None
C.07.01	1	59	0	17	21.1	7.1	Glazing Upgrade
C.07.02	1	53	0	27.5	13.7	7	None
C.07.03	1	51	0	25.7	10.3	7.3	None
C.07.04	2	57	0	19.2	10.1	7.8	None
C.07.05	2	74	0	12.8	13.2	8	None
C.08.01	1	59	0	28.6	17.1	6.4	None
C.08.02	1	53	0	28.8	12.8	6.9	None
C.08.03	1	51	0	37.5	8.7	6.4	None

Teloepa
Stage 1 and 2

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0005151380							Accreditation # HERA10033
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
C.08.04	2	75	0	37.4	28.9	7.2	None
C.08.05	2	74	0	21.5	11.1	7.4	None
Building D							
D.LG.01	2	81.7	0	23.5	20.6	6.6	Glazing Upgrade Provide an awning/projection minimum of 500mm to Bedroom 1 and Living areas Provide external shading screens for the sliding door to Bedroom 1 and Living areas
D.LG.02	1	58.1	0	23.1	15.7	7	None
D.LG.03	2	98.7	0	24	22.2	6.4	None
D.LG.04	1	69.6	0	18.7	18.8	7.1	None
D.LG.05	2	80.2	0	10.2	24.4	7.3	None
D.LG.06	1	44.3	0	2.5	27.2	7.7	None
D.UG.01	2	70	0	20.5	14.3	7.3	None
D.UG.02	3	98.2	0	16.5	19.9	7.2	None
D.UG.03	2	90.8	0	6.7	16.2	8.3	None
D.UG.04	1	59.8	0	10.1	21.8	7.5	None
D.UG.05	1	59.8	0	11.2	20.9	7.4	None
D.UG.06	2	61	0	32.5	23.8	5.6	None
D.UG.07	2	65	0	14.6	18.3	7.4	None
D.UG.08	2	87.8	0	19.2	14	7.4	None
D.UG.09	1	60.3	0	17.3	14.6	7.5	None
D.UG.10	2	73.8	0	7.4	25.2	7.4	None
D.UG.11	1	50.7	0	8.1	18.1	7.9	None
D.01.01	2	70	0	22.1	14.3	7.2	None
D.01.02	3	93	0	7.7	17.2	8.1	None
D.01.03	2	79.3	0	9.3	23.6	7.4	None
D.01.04	1	50	0	16	12.9	7.8	None
D.01.05	2	74	0	15.3	16.3	7.5	None
D.01.06	2	74	0	28.2	20	6.2	None
D.01.07	2	65	0	16	21.2	7.1	None
D.01.08	2	87.8	0	20.2	13.7	6.7	None
D.01.09	1	60.3	0	16.8	14.7	7.5	None
D.01.10	2	73.8	0	8.2	23.1	7.6	None
D.01.11	1	50.7	0	8.4	16.4	8.1	None
D.02.01	2	70	0	21.2	12.1	7.4	None
D.02.02	3	93	0	7.9	16	8.2	None

Teloepa
Stage 1 and 2

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0005151380							Accreditation # HERA10033
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
D.02.03	2	79.3	0	15.6	11.5	7.9	None
D.02.04	1	50	0	16.6	13.4	7.7	None
D.02.05	2	74	0	18.3	16.2	7.3	None
D.02.06	2	74	0	29.1	18.6	6.3	None
D.02.07	2	65	0	16.6	20.8	7.1	None
D.02.08	2	87.8	0	18.7	13.7	7.4	None
D.02.09	1	60.3	0	19.1	13.4	7.4	None
D.02.10	2	73.8	0	8.5	22.9	7.6	None
D.02.11	1	50.7	0	8.7	16	8.1	None
D.03.01	2	70	0	24.4	9.3	7.4	None
D.03.02	3	93	0	9.1	11.9	8.4	None
D.03.03	2	79.3	0	16	11.5	7.9	None
D.03.04	1	50	0	20.3	12.4	7.4	None
D.03.05	2	74	0	21.2	12.8	7.4	None
D.03.06	2	74	0	32.3	15	6.3	None
D.03.07	2	65	0	19.5	17.9	7.1	None
D.03.08	2	87.8	0	21.5	10.2	7.5	None
D.03.09	1	60.3	0	22.8	10.9	7.4	None
D.03.10	2	73.8	0	11.2	15.5	7.9	None
D.03.11	1	50.7	0	11.7	11.7	8.2	None
D.04.01	2	70	0	24.8	9.3	7.4	None
D.04.02	3	93	0	10.1	12.2	8.3	None
D.04.03	2	79.3	0	18.8	9.9	7.8	None
D.04.04	1	50	0	20.4	12.2	7.4	None
D.04.05	2	74	0	21.1	13.2	7.3	None
D.04.06	2	74	0	31.8	15.7	6.3	None
D.04.07	2	65	0	19.8	17.5	7.1	None
D.04.08	2	87.8	0	21.9	9.8	7.5	None
D.04.09	1	60.3	0	23.2	10.9	7.4	None
D.04.10	2	73.8	0	11.9	14.8	7.9	None
D.04.11	1	50.7	0	12.2	11.9	8.2	None
D.05.01	2	70	0	25.3	9.2	7.3	None
D.05.02	3	93	0	8.5	11.7	8.4	None
D.05.03	2	79.3	0	19.1	10.2	7.7	None
D.05.04	1	50	0	20.9	13	7.4	None
D.05.05	2	74	0	20.8	13.7	7.3	None
D.05.06	2	74	0	29.1	15.9	6.5	None

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Stage 1 and 2

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0005151380						Accreditation # HERA10033	
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M²)		Predict. loads (MJ/M²/y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
D.05.07	2	65	0	20.2	17.5	7.1	None
D.05.08	2	87.8	0	22.4	9.5	7.5	None
D.05.09	1	60.3	0	23.8	10.8	7.3	None
D.05.10	2	73.8	0	11.9	14.8	7.9	None
D.05.11	1	50.7	0	12.4	11.8	8.1	None
D.06.01	2	70	0	27.6	9	7.2	None
D.06.02	3	93	0	8.9	12.4	8.4	None
D.06.03	2	79.3	0	19.4	9.8	7.7	None
D.06.04	1	50	0	20.8	12.4	7.4	None
D.06.05	2	74	0	20.2	14.2	7.3	None
D.06.06	2	74	0	28.2	15.9	6.6	None
D.06.07	2	65	0	22	16.8	7	None
D.06.08	2	87.8	0	22.7	9.3	7.5	None
D.06.09	1	60.3	0	26.4	10.5	7.2	None
D.06.10	2	73.8	0	13.5	12.8	7.9	None
D.06.11	1	50.7	0	14.2	11	8.1	None
D.07.01	2	70	0	27.7	9.3	7.1	None
D.07.02	3	93	0	8	11.8	8.5	None
D.07.03	2	79.3	0	21.2	9.5	7.6	None
D.07.04	1	50	0	20.9	12.7	7.4	None
D.07.05	2	74	0	18.4	14.4	7.4	None
D.07.06	2	74	0	25.8	15.8	6.8	None
D.07.07	2	90	0	23.3	15.5	7	None
D.07.08	3	98	0	30.4	19.1	6.1	None
D.07.09	3	102	0	16.6	20.6	7.1	None
D.07.10	2	79	5	12.6	7.5	8.4	None
D.08.01	2	70	0	27.9	9.3	7.1	None
D.08.02	3	93	0	13.7	11.4	8.1	None
D.08.03	2	79.3	0	21.4	9.5	7.6	None
D.08.04	1	50	0	29.7	10.5	6.9	None
D.08.05	2	74	0	26	13.1	6.9	None
D.08.06	2	74	0	32.6	14.4	6.3	None
Building E							
E.LG.01	3	117	0	13.7	14	7.9	None
E.LG.02	2	76	0	4.9	29.4	7.3	Glazing upgrade and ceiling fans to bedrooms
E.LG.03	1	51	0	4	24.4	7.8	Glazing upgrade and ceiling fans to bedroom and living

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Stage 1 and 2

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0005151380							Accreditation # HERA10033
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
E.LG.04	2	73	0	36.8	18.9	5.7	None
E.LG.05	2	96	0	24.8	10	7.3	None
E.UG.01	2	86	0	21.6	15.9	7.2	None
E.UG.02	2	80	0	17.9	21.9	6.9	None
E.UG.03	2	74	0	6.8	17	8.2	None
E.UG.04	2	83	0	3.4	16.8	8.4	None
E.UG.05	1	50	0	13.2	28.4	6.8	None
E.UG.06	2	83	0	12.9	14.9	7.8	None
E.UG.07	2	81	0	13.7	29.1	6.7	None
E.UG.08	1	53	0	30.9	13.8	6.5	None
E.UG.09	2	83	0	22.9	27.6	6	None
E.UG.10	2	73	0	19.5	18.9	7	None
E.UG.11	2	73	0	18.9	16.8	7.2	None
E.01.01	2	86	0	12.1	17.5	7.8	None
E.01.02	3	107	0	9.2	22.5	7.5	None
E.01.03	2	78	0	3.4	25	7.8	None
E.01.04	2	73	0	4.8	17.5	8.4	None
E.01.05	1	50	0	12.2	19.4	7.6	None
E.01.06	1	50	0	17.3	15.3	7.4	None
E.01.07	1	50	0	9.3	20.6	7.7	None
E.01.08	2	70	0	24	27	5.9	None
E.01.09	1	53	0	17.9	17.7	7.2	None
E.01.10	2	83	0	18.7	21.6	6.9	None
E.01.11	2	73	0	20.4	18	7	None
E.01.12	2	70	0	14.6	28.6	6.6	Glazing upgrade
E.02.01	2	86	0	12.9	15.3	7.9	None
E.02.02	3	110	0	7.3	21	7.8	None
E.02.03	2	78	0	4.5	23.7	7.8	None
E.02.04	2	73	0	7	22.8	7.7	None
E.02.05	1	52	0	17.1	12.8	7.7	None
E.02.06	1	52	0	16.1	10.6	7.9	None
E.02.07	1	50	0	14.8	16.2	7.6	None
E.02.08	2	68	0	22	21.9	6.6	None
E.02.09	2	76	0	25.1	25.8	6	None
E.02.10	2	73	0	27.7	13.3	6.9	None
E.02.11	2	73	0	13	28	6.8	Glazing upgrade
E.03.01	2	86	0	15.7	11.5	7.9	None

Teloopa
Stage 1 and 2

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Certificate # 0005151380							Accreditation # HERA10033
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
E.03.02	3	110	0	9	20.7	7.7	None
E.03.03	2	78	0	4.6	23.9	7.8	None
E.03.04	2	73	0	10.1	20.7	7.6	None
E.03.05	2	52	0	17.3	13.7	7.6	None
E.03.06	1	52	0	17	11.3	7.8	None
E.03.07	1	50	0	15.9	13.2	7.8	None
E.03.08	2	68	0	22.1	18.1	6.9	None
E.03.09	2	76	0	23.8	17.4	6.9	None
E.03.10	2	73	0	28.7	11.5	6.9	None
E.03.11	2	70	0	16	25.8	6.8	Glazing upgrade
E.04.01	2	86	0	15.6	11.3	7.9	None
E.04.02	3	110	0	11.4	14.7	7.9	None
E.04.03	2	78	0	6.2	21.1	7.9	None
E.04.04	2	73	0	9	20.8	7.7	None
E.04.05	1	52	0	21	11.4	7.4	None
E.04.06	1	52	0	20.4	9.9	7.6	None
E.04.07	1	50	0	18.2	13	7.6	None
E.04.08	2	68	0	23	18	6.8	None
E.04.09	2	76	0	24.5	16.8	6.9	None
E.04.10	2	73	0	29.1	11.2	6.9	None
E.04.11	2	70	0	16.3	25.9	6.7	Glazing upgrade
E.05.01	2	86	0	16.2	11.4	7.9	None
E.05.02	3	110	0	11.6	14.2	8	None
E.05.03	2	78	0	6.4	20.9	7.9	None
E.05.04	2	73	0	9.2	21	7.7	None
E.05.05	1	52	0	21.4	11.8	7.4	None
E.05.06	1	52	0	20.9	10	7.6	None
E.05.07	1	50	0	16.1	13.6	7.7	None
E.05.08	2	68	0	22.5	18.5	6.8	None
E.05.09	2	76	0	25	16.5	6.8	None
E.05.10	2	73	0	29.6	11	6.9	None
E.05.11	2	70	0	16.8	25.8	6.7	Glazing upgrade
E.06.01	2	86	0	16.3	11.1	7.9	None
E.06.02	3	110	0	12	14	8	None
E.06.03	2	78	0	6.7	21.2	7.8	None
E.06.04	2	73	0	9.2	22	7.6	None
E.06.05	1	52	0	21.6	11.9	7.4	None

Telopea
Stage 1 and 2

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0005151380							Accreditation # HERA10033
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
E.06.06	1	52	0	21.1	10.1	7.6	None
E.06.07	1	50	0	18.5	12.3	7.7	None
E.06.08	2	68	0	22.5	17.5	6.9	None
E.06.09	2	76	0	24.8	17	6.8	None
E.06.10	2	73	0	29.9	10.6	6.9	None
E.06.11	2	70	0	17.1	25.4	6.7	Glazing upgrade
E.07.01	2	86	0	28.8	9.3	7.1	None
E.07.02	2	110	0	15.6	12.2	7.8	None
E.07.03	2	78	0	12.5	18.6	7.6	None
E.07.04	2	73	0	17.9	19.9	6.9	None
E.07.05	1	52	0	34.7	9.6	6.6	None
E.07.06	1	52	0	32.4	8.4	6.8	None
E.07.07	1	50	0	23.4	13.4	7.2	None
E.07.08	2	68	0	30.4	17.3	6.3	None
E.07.09	2	76	0	38.2	15.9	5.8	None
E.07.10	2	73	0	39.2	12	5.9	None
E.07.11	2	73	0	34.2	9.4	6.6	Glazing upgrade

Nationwide House Energy Rating Scheme — Class 2 summary

NatHERS Certificate No. 0005151380

Generated on 10 Nov 2022 using BERS Pro v4.4.0.3 (3.21)

Property

Address Telopea , Telopea , NSW , 2117

Lot/DP 5/128229

NatHERS climate zone 56

Accredited assessor 

Tracey Cools

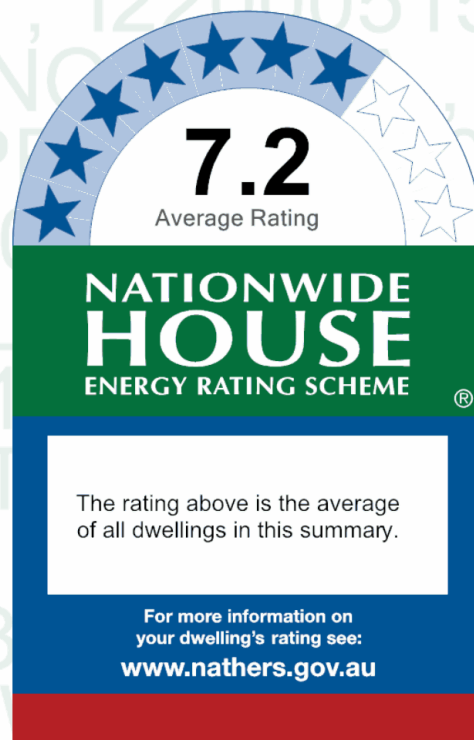
Efficient Living Pty Ltd

admin@efficientliving.com.au

02 9970 6181

Accreditation No. HERA10033

Assessor Accrediting Organisation HERA



Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=cZzZSgnmy.
When using either link, ensure you are visiting hstar.com.au

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (MJ/m ² /p.a.)	Cooling load (MJ/m ² /p.a.)	Total load (MJ/m ² /p.a.)	Star rating
0006239784	A.01.01	23.4	21.9	45.3	6.4
0008181695	A.01.02	22.2	13.7	36	7.2
0008181703	A.01.03	24.7	12	36.6	7.2
0008181711	A.01.04	23.3	17.2	40.5	6.9
0008181729	A.01.05	10.6	23.6	34.2	7.3

Continued Over

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated buildings are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

Summary of all dwellings (continued)

Certificate number and link	Unit Number	Heating load (MJ/m ² /p.a.)	Cooling load (MJ/m ² /p.a.)	Total load (MJ/m ² /p.a.)	Star rating
0008181737	A.02.01	29.7	17.2	46.8	6.3
0008181745	A.02.02	20.8	27.7	48.5	6.2
0008181752	A.02.03	27.2	16.6	43.7	6.6
0008181760	A.02.04	20.8	17.4	38.2	7.1
0008181778	A.02.05	24.7	26.3	51	6
0006242762	A.B1.01	16.7	28.4	45.1	6.4
0008181786	A.B1.02	11.9	16.6	28.4	7.8
0008181794	A.B1.03	3.5	27.3	30.8	7.6
0008181802	A.B2.01	9.5	25	34.5	7.3
0006239909	A.LG.01	22.4	23.9	46.3	6.4
0008181810	A.LG.02	32.1	13.7	45.8	6.4
0008181828	A.LG.03	20.3	22.1	42.4	6.7
0008181836	A.LG.04	3.8	26.8	30.6	7.6
0006239941	A.UG.01	23.3	22	45.3	6.4
0008181844	A.UG.02	23.5	11.6	35.2	7.3
0008181851	A.UG.03	32.4	10.6	43	6.7
0008181869	A.UG.04	21.6	17.3	38.8	7
0008181877	A.UG.05	9.4	24.9	34.4	7.3
0008181885-01	B.01.01	26.4	20.2	46.6	6.4
0008181893-01	B.01.02	13.4	17.8	31.2	7.6
0008181901-01	B.01.03	14.9	25.5	40.4	6.9
0008181919-01	B.01.04	10.4	20.4	30.8	7.6
0008181927-01	B.01.05	3.1	26.6	29.7	7.7
0008181935-01	B.01.06	12.6	18.8	31.4	7.6
0008181943-01	B.01.07	9.1	18.3	27.4	7.9
0008181950-01	B.01.08	2	24.5	26.5	7.9
0008181968-01	B.01.09	9.7	14.8	24.6	8.1
0008181976-01	B.01.10	13.1	16.9	30	7.7
0008181984-01	B.01.11	12.1	27.9	40	6.9
0006240139	B.02.01	10.6	12.1	22.6	8.3
0006242796	B.02.02	7.8	22.4	30.2	7.7
0006240147	B.02.03	8.7	16.7	25.5	8
0006240154	B.02.04	7.9	22.3	30.1	7.7
0006240162	B.02.05	29.1	13.5	42.6	6.7
0006240170	B.02.06	12.1	25	37.1	7.1
0006240188	B.02.07	7	27.5	34.5	7.3
0008181992-01	B.02.08	17.8	10.7	28.5	7.8
0008182008-01	B.02.09	13.2	17.8	31.1	7.6
0008182016-01	B.02.10	13.4	25.7	39.1	6.9
0008182024-01	B.02.11	15.3	21.4	36.6	7.2

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
0008182032-01	B.02.12	3.3	26.2	29.6	7.7
0008182040-01	B.02.13	13.1	18.6	31.6	7.5
0008182057-01	B.02.14	11.8	18.7	30.5	7.6
0008182065-01	B.02.15	3.9	22.4	26.3	7.9
0008182073-01	B.02.16	8.2	19.9	28.2	7.8
0008182081-01	B.02.17	21.2	24.2	45.4	6.4
0008182099-01	B.02.18	13.2	21.5	34.8	7.3
0008182107-01	B.02.19	24.2	9.5	33.7	7.4
0008182115-01	B.02.20	38.6	11.9	50.5	6
0006240329	B.02.21	38.5	13.3	51.8	5.9
0006240337	B.02.22	34.3	19.7	54	5.8
0006240345	B.02.23	11	16.4	27.3	7.9
0006240352	B.02.24	10.8	14.9	25.6	8
0008182123-01	B.03.01	20.4	15.6	36	7.2
0008182131-01	B.03.02	14.3	15.8	30.1	7.7
0008182149-01	B.03.03	14.9	14.3	29.2	7.7
0008182156-01	B.03.04	8.1	25.6	33.8	7.4
0008182164-01	B.03.05	5.1	22.6	27.7	7.9
0008182172-01	B.03.06	15.5	16.2	31.7	7.5
0008182180-01	B.03.07	14.2	15.3	29.5	7.7
0008182198-01	B.03.08	6	20.3	26.3	7.9
0008182206-01	B.03.09	10.7	14.6	25.2	8.1
0008182214-01	B.03.10	22.6	24.7	47.3	6.3
0008182222-01	B.03.11	15	22.7	37.7	7.1
0006240485	B.04.01	15.7	15.2	30.9	7.6
0008182230-01	B.04.02	26.9	23.1	50	6.1
0008182248-01	B.04.03	19	27.9	47	6.3
0006240519	B.04.04	18.6	22.7	41.3	6.8
0008182255-01	B.04.05	20	13.4	33.4	7.4
0008182263-01	B.04.06	24.5	16.6	41.2	6.8
0008182271-01	B.04.07	10.4	22.7	33.2	7.4
0008182289-01	B.04.08	8	15	23	8.2
0008182297-01	B.04.09	27.3	14.5	41.7	6.8
0008182305-01	B.04.10	29.1	11.3	40.3	6.9
0008182313-01	B.04.11	14.4	17.6	32	7.5
0008182321-01	B.04.12	10.2	14.6	24.8	8.1
0008182339-01	B.04.13	21.8	24.8	46.6	6.4
0008182347-01	B.04.14	13	21.9	34.9	7.3
0008182354-01	B.04.15	22.9	15.7	38.6	7
0008182362-01	B.04.16	39.3	16.6	55.8	5.7
0008182370-01	B.04.17	35.8	17.9	53.6	5.8
0008182388-01	B.04.18	34.4	10.8	45.2	6.4

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
0006240626	B.05.01	15.7	15	30.7	7.6
0006240634	B.05.02	25.2	18.1	43.3	6.6
0006240642	B.05.03	25.3	25.4	50.7	6
0006240659	B.05.04	17.6	24.3	41.9	6.8
0008182396-01	B.05.05	24	13.9	37.8	7.1
0008182404-01	B.05.06	24.8	16.6	41.4	6.8
0008182412-01	B.05.07	10.6	25.4	36	7.2
0008182420-01	B.05.08	15.1	11.5	26.6	7.9
0008182438-01	B.05.09	22.3	24.3	46.6	6.4
0006240717	B.05.10	21.1	14	35.1	7.3
0006240725	B.05.11	19.3	14.8	34.1	7.4
0006240733	B.05.12	22.1	16.3	38.4	7
0006240741	B.05.13	26.1	12.9	39	7
0006240758	B.05.14	34.7	11.1	45.8	6.4
0006240766	B.06.01	15.4	15.4	30.8	7.6
0006240774	B.06.02	23.6	18.3	42	6.8
0006240782	B.06.03	26.2	25.5	51.6	5.9
0006240790	B.06.04	18.1	24.2	42.3	6.7
0008182446-01	B.06.05	24.1	13.5	37.6	7.1
0008182453-01	B.06.06	25.1	16.2	41.3	6.8
0008182461-01	B.06.07	24.9	23.1	48	6.3
0008182479-01	B.06.08	15.5	11.5	27	7.9
0008182487-01	B.06.09	20	23.7	43.7	6.6
0006240857	B.06.10	21.5	14	35.5	7.3
0006240865	B.06.11	19.6	14.4	34	7.4
0006240873	B.06.12	24.8	14.7	39.5	6.9
0006240881	B.06.13	26.6	12.7	39.3	6.9
0006240899	B.06.14	33.8	11.1	44.9	6.5
0006240907	B.07.01	26	12.9	38.9	7
0006240915	B.07.02	23	18.6	41.6	6.8
0006240923	B.07.03	26	25.5	51.5	5.9
0006240931	B.07.04	18.4	23.8	42.1	6.7
0008182495-01	B.07.05	24.4	13.3	37.7	7.1
0008182503-01	B.07.06	25.3	16.1	41.4	6.8
0008182511-01	B.07.07	11	24.9	35.9	7.2
0008182529-02	B.07.08	23.5	10.7	34.2	7.3
0006240980	B.07.09	26.7	22.9	49.7	6.1
0008182545-01	B.07.10	20.7	12.2	32.8	7.4
0008182552-01	B.07.11	33.4	18.9	52.4	5.9
0008182560-01	B.07.12	35.1	11.8	46.9	6.3
0006241020	B.07.13	23.1	8.8	31.8	7.5
0006241038	B.07.14	33.5	11.4	44.9	6.5

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
0006241046	B.08.01	15.4	15.1	30.6	7.6
0006241053	B.08.02	22.8	18.6	41.3	6.8
0006241061	B.08.03	25.8	25.7	51.5	5.9
0006241079	B.08.04	18.8	23.4	42.2	6.7
0008182578-01	B.08.05	24.6	13.4	38	7.1
0008182586-01	B.08.06	25.7	15.5	41.2	6.8
0008182594-01	B.08.07	11.2	24.8	36	7.2
0006241111	B.09.01	15.7	15.2	30.9	7.6
0006241129	B.09.02	22.7	18.5	41.2	6.8
0006241137	B.09.03	25.7	25.3	51	6
0006241145	B.09.04	19	23.5	42.5	6.7
0008182602-01	B.09.05	25.2	13.3	38.4	7
0008182610-01	B.09.06	26	15.4	41.4	6.8
0008182628-01	B.09.07	11.4	24.7	36.1	7.2
0006241186	B.10.01	15.9	15	30.9	7.6
0006241194	B.10.02	24.4	15.8	40.3	6.9
0006241202	B.10.03	27.5	21.8	49.3	6.1
0006241210	B.10.04	20.9	21	41.9	6.8
0008182636-01	B.10.05	27.2	11.5	38.7	7
0008182644-01	B.10.06	28.1	14	42.2	6.7
0008182651-01	B.10.07	13.6	21.8	35.4	7.3
0006241251	B.11.01	16.2	14.9	31	7.6
0006241269	B.11.02	24.7	15.9	40.6	6.9
0006241277	B.11.03	27.8	21.5	49.3	6.1
0006241285	B.11.04	21.1	20.9	42	6.8
0008182669	B.11.05	27.5	11.5	39	6.9
0008182677	B.11.06	28.3	14.1	42.4	6.7
0008182685	B.11.07	12.5	22.5	35	7.3
0006241327	B.12.01	16.4	14.9	31.3	7.6
0006241335	B.12.02	24.8	15.9	40.7	6.9
0006241343	B.12.03	27.9	21.2	49.2	6.2
0006241350	B.12.04	21.2	20.7	41.9	6.8
0008182693	B.12.05	27.7	11.8	39.4	6.9
0008182701	B.12.06	28.6	13.7	42.3	6.7
0008182719	B.12.07	12.7	22.4	35.1	7.3
0008182727	B.13.01	22.9	14.8	37.8	7.1
0008182735	B.13.02	44.6	13.3	58	5.5
0008182743	B.13.03	42.7	13.8	56.4	5.6
0008182750	B.13.04	26.2	19.8	46	6.4
0008182768	B.13.05	34	14.9	48.9	6.2
0008182776	B.13.06	23	16.7	39.7	6.9
0008182784	B.13.07	13.6	21.7	35.3	7.3

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
0008182792	B.13.08	37.3	11.2	48.5	6.2
0008182800-01	B.LG.01	14.1	17.9	32	7.4
0008182818	B.LG.02	5	27	32	7.4
0008182826	B.LG.03	13.8	14.2	28.1	7.8
0006241491	B.LG.04	27.2	18.4	45.5	6.4
0008182834	B.LG.05	38.5	10.9	49.5	6.1
0006241517	B.UG.01	11.2	14.7	25.9	8
0006241525	B.UG.02	12.2	20.7	32.9	7.4
0006241533	B.UG.03	13.3	13.3	26.6	7.9
0006241541	B.UG.04	13.4	20	33.4	7.4
0006241558	B.UG.05	24.3	14.4	38.7	7
0006241566	B.UG.06	24.1	28.4	52.4	5.9
0006241574	B.UG.07	21.9	29.1	51	6
0008182842	B.UG.08	12.5	27.3	39.8	6.9
0008182859	B.UG.09	21.9	21.6	43.5	6.6
0008182867	B.UG.10	18.4	16.8	35.2	7.3
0008182875	B.UG.11	8.3	16	24.3	8.1
0008182883	B.UG.12	6.5	16.8	23.2	8.2
0008182891	B.UG.13	17.9	16.1	33.9	7.4
0008182909	B.UG.14	17.6	14.5	32.1	7.4
0008182917	B.UG.15	0.1	28.6	28.7	7.8
0008182925	B.UG.16	4.4	11	15.4	8.9
0008182933	B.UG.17	13.1	16.9	30	7.7
0006241673	B.UG.18	21.5	10.6	32.2	7.4
0008182941	B.UG.19	16.8	14.4	31.2	7.6
0008182958	B.UG.20	25.1	9.5	34.6	7.3
0008182966	B.UG.21	29.5	20.2	49.7	6.1
0008182974	B.UG.22	33.6	23	56.6	5.6
0006241715	B.UG.23	14.9	19.6	34.5	7.3
0006241723	B.UG.24	15.7	11.4	27.1	7.9
0006237770	C.01.01	14.8	21.2	36	7.2
0006237788	C.01.02	26	10.8	36.8	7.2
0006237796	C.01.03	20.7	11.8	32.4	7.4
0006237804	C.01.04	13.5	12.9	26.5	7.9
0006237812	C.01.05	8.7	17	25.7	8
0006237820	C.01.06	2.1	24.4	26.5	7.9
0008182982	C.01.07	31	13.3	44.2	6.6
0006237846	C.01.08	22.7	24.6	47.3	6.3
0006237853	C.02.01	13.7	24.5	38.2	7.1
0006237861	C.02.02	26.3	10.3	36.6	7.2
0006237879	C.02.03	20.9	12.3	33.2	7.4
0008182990	C.02.04	17	13.2	30.2	7.6

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
0008183006	C.02.05	7.7	14.7	22.4	8.3
0006237903	C.02.06	2.3	24	26.3	7.9
0006237911	C.02.07	16.7	16.8	33.5	7.4
0006237929	C.02.08	18.8	27.1	45.9	6.4
0006237937	C.03.01	16.9	18.4	35.4	7.3
0006237945	C.03.02	27.9	12.8	40.7	6.9
0006237952	C.03.03	19.1	11.9	31	7.6
0006237960	C.03.04	18.1	9.7	27.8	7.9
0008183014	C.03.05	8.6	11.1	19.7	8.5
0006237986	C.03.06	4.4	20.5	24.9	8.1
0006237994	C.03.07	32	11	43	6.7
0006238000	C.03.08	27.1	21.8	48.9	6.2
0006238018	C.04.01	16.6	21.5	38.1	7.1
0006238026	C.04.02	27.9	13.1	41	6.8
0006238034	C.04.03	24.7	10.4	35.1	7.3
0006238042	C.04.04	18.3	9.7	28	7.8
0006238059	C.04.05	11.8	13.3	25.1	8.1
0006238067	C.05.01	16.5	21.5	38	7.1
0006238075	C.05.02	27.5	13.5	41	6.8
0006238083	C.05.03	24.8	10.8	35.6	7.2
0006238091	C.05.04	18.6	10	28.5	7.8
0006238109	C.05.05	12.1	13.1	25.2	8.1
0006238117	C.06.01	12	24.1	36.1	7.2
0006238125	C.06.02	26.2	10.9	37.1	7.1
0006238133	C.06.03	24	11	35	7.3
0006238141	C.06.04	18.4	10.3	28.7	7.8
0006238158	C.06.05	12.3	12.9	25.2	8.1
0006238166	C.07.01	17	21.1	38.1	7.1
0006238174	C.07.02	27.5	13.7	41.3	7
0006238182	C.07.03	25.7	10.3	36	7.3
0006238190	C.07.04	19.2	10.1	29.3	7.8
0006238208	C.07.05	12.8	13.2	26	8
0006238216	C.08.01	28.6	17.1	45.7	6.4
0006238224	C.08.02	28.8	12.8	41.6	6.9
0006238232	C.08.03	37.5	8.7	46.2	6.4
0006238240	C.08.04	28.9	8.5	37.4	7.2
0006238257	C.08.05	21.5	11.1	32.6	7.4
0006238265	C.UG.01	15.4	19.6	35	7.3
0008183022	C.UG.02	23.4	13.5	36.8	7.2
0008183030	C.UG.03	28.6	25.4	54	5.8
0008183048	C.UG.04	17.2	12.7	29.8	7.7
0008183055	C.UG.05	16.2	15.7	31.9	7.5

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
0006238315	C.UG.06	34	17.8	51.7	5.9
0008183121-01	D.01.01	22.1	14.3	36.4	7.2
0006238398	D.01.02	7.7	17.2	25	8.1
0008183139-01	D.01.03	9.3	23.6	32.9	7.4
0006238414	D.01.04	16	12.9	28.8	7.8
0006238422	D.01.05	15.3	16.3	31.7	7.5
0006238430	D.01.06	28.2	20	48.3	6.2
0008183147-02	D.01.07	16	21.2	37.3	7.1
0008183154-01	D.01.08	20.2	13.7	33.9	7.4
0008183162-01	D.01.09	16.8	14.7	31.5	7.5
0008183170-01	D.01.10	8.2	23.1	31.2	7.6
0008183188-01	D.01.11	8.4	16.4	24.8	8.1
0008183196-01	D.02.01	21.2	12.1	33.3	7.4
0006238505	D.02.02	7.9	16	23.9	8.2
0008183204-01	D.02.03	15.6	11.5	27	7.9
0006238521	D.02.04	16.6	13.4	29.9	7.7
0006238539	D.02.05	18.3	16.2	34.5	7.3
0006238547	D.02.06	29.1	18.6	47.7	6.3
0008183212-02	D.02.07	16.6	20.8	37.3	7.1
0008183220-01	D.02.08	18.7	13.7	32.4	7.4
0008183238-01	D.02.09	19.1	13.4	32.5	7.4
0008183246-01	D.02.10	8.5	22.9	31.4	7.6
0008183253-01	D.02.11	8.7	16	24.7	8.1
0008183261-01	D.03.01	24.4	9.3	33.6	7.4
0006238620	D.03.02	9.1	11.9	21	8.4
0008183279-01	D.03.03	16	11.5	27.5	7.9
0006238646	D.03.04	20.3	12.4	32.7	7.4
0006238653	D.03.05	21.2	12.8	34	7.4
0006238661	D.03.06	32.3	15	47.3	6.3
0008183287-02	D.03.07	19.5	17.9	37.4	7.1
0008183295-01	D.03.08	21.5	10.2	31.7	7.5
0008183303-01	D.03.09	22.8	10.9	33.7	7.4
0008183311-01	D.03.10	11.2	15.5	26.7	7.9
0008183329-01	D.03.11	11.7	11.7	23.5	8.2
0008183337-01	D.04.01	24.8	9.3	34	7.4
0006238737	D.04.02	10.1	12.2	22.3	8.3
0008183345-01	D.04.03	18.8	9.9	28.8	7.8
0006238752	D.04.04	20.4	12.2	32.6	7.4
0006238760	D.04.05	21.1	13.2	34.2	7.3
0006238778	D.04.06	31.8	15.7	47.4	6.3
0008183352-02	D.04.07	19.8	17.5	37.2	7.1
0008183360-01	D.04.08	21.9	9.8	31.7	7.5

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
0008183378-01	D.04.09	23.2	10.9	34.1	7.4
0008183386-01	D.04.10	11.5	15.2	26.7	7.9
0008183394-01	D.04.11	12.2	11.9	24	8.2
0008183402-01	D.05.01	25.3	9.2	34.5	7.3
0006238844	D.05.02	8.5	11.7	20.2	8.4
0008183410-01	D.05.03	19.1	10.2	29.3	7.7
0006238869	D.05.04	20.9	13	33.9	7.4
0006238877	D.05.05	20.8	13.7	34.5	7.3
0006238885	D.05.06	29.1	15.9	45	6.5
0008183428-02	D.05.07	20.2	17.5	37.8	7.1
0006238901	D.05.08	26.4	13.9	40.2	6.9
0008183436-01	D.05.09	23.8	10.8	34.7	7.3
0008183444-01	D.05.10	11.9	14.8	26.7	7.9
0008183451-01	D.05.11	12.4	11.8	24.3	8.1
0008183469-01	D.06.01	27.6	9	36.6	7.2
0006238950	D.06.02	8.9	12.4	21.3	8.4
0008183477-01	D.06.03	19.4	9.8	29.2	7.7
0006238976	D.06.04	20.8	12.4	33.1	7.4
0006238984	D.06.05	20.2	14.2	34.4	7.3
0006238992	D.06.06	28.2	15.9	44.1	6.6
0008203481	D.06.07	22	16.8	38.7	7
0008183485-01	D.06.08	22.7	9.3	32	7.5
0008183493-01	D.06.09	26.4	10.5	36.8	7.2
0008183501-01	D.06.10	13.5	12.8	26.4	7.9
0008183519-01	D.06.11	14.2	11	25.3	8.1
0008183527-01	D.07.01	27.7	9.3	37	7.1
0006239065	D.07.02	8	11.8	19.8	8.5
0008183535-01	D.07.03	21.2	9.5	30.7	7.6
0006239081	D.07.04	20.9	12.7	33.7	7.4
0006239099	D.07.05	18.4	14.4	32.8	7.4
0006239107	D.07.06	25.8	15.8	41.6	6.8
0006239115	D.07.07	23.3	15.5	38.8	7
0006239123	D.07.08	30.4	19.1	49.5	6.1
0006239131	D.07.09	16.6	20.6	37.1	7.1
0006239149	D.07.10	12.6	7.5	20.1	8.4
0008183543-01	D.08.01	27.9	9.3	37.2	7.1
0006239164	D.08.02	13.7	11.4	25.1	8.1
0008183550-01	D.08.03	21.4	9.5	30.9	7.6
0006239180	D.08.04	29.7	10.5	40.2	6.9
0006239198	D.08.05	26	13.1	39.1	6.9
0006239206	D.08.06	32.6	14.4	47	6.3
0008183568-01	D.LG.01	20.6	23.5	44.1	6.6

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
0008183576-01	D.LG.02	23.1	15.7	38.9	7
0008183584-01	D.LG.03	24	22.2	46.2	6.4
0008183592-01	D.LG.04	17	30.9	48	6.3
0008183600-01	D.LG.05	10.2	24.4	34.6	7.3
0008183618-01	D.LG.06	2.5	27.2	29.7	7.7
0008183626-01	D.UG.01	20.5	14.3	34.8	7.3
0008183634-01	D.UG.02	16.5	19.9	36.4	7.2
0008183642-01	D.UG.03	6.7	16.2	22.9	8.3
0008183659-01	D.UG.04	10.1	21.8	31.9	7.5
0008183667-01	D.UG.05	11.2	20.9	32.1	7.4
0008183675-01	D.UG.06	32.5	23.8	56.3	5.6
0008183683-02	D.UG.07	14.6	18.3	32.9	7.4
0008183691-01	D.UG.08	19.2	14	33.3	7.4
0008183709-01	D.UG.09	17.3	14.6	31.9	7.5
0008183717-01	D.UG.10	7.4	25.2	32.6	7.4
0008183725-01	D.UG.11	8.1	18.1	26.1	7.9
0006236731	E.01.01	12.1	17.5	29.6	7.8
0008183923-02	E.01.02	9.2	22.5	31.7	7.5
0008183931-02	E.01.03	3.4	25	28.4	7.8
0006236764	E.01.04	4.8	17.5	22.3	8.4
0006236772	E.01.05	12.2	19.4	31.6	7.6
0006236780	E.01.06	17.3	15.3	32.6	7.4
0006236798	E.01.07	9.3	20.6	29.9	7.7
0006236806	E.01.08	24	27.1	51.1	5.9
0008183949-02	E.01.09	17.9	17.7	35.7	7.2
0008183956-02	E.01.10	18.7	21.6	40.3	6.9
0008183964-02	E.01.11	20.4	18	38.4	7
0008183972-02	E.01.12	14.6	28.6	43.3	6.6
0006236855	E.02.01	12.9	15.3	28.2	7.9
0008183980-02	E.02.02	7.8	21	28.8	7.8
0008183998-02	E.02.03	4.5	23.7	28.2	7.8
0006236889	E.02.04	7	22.8	29.8	7.7
0008184004-02	E.02.05	17.1	12.8	30	7.7
0008184012-02	E.02.06	16.1	10.6	26.7	7.9
0006236913	E.02.07	14.8	16.2	31	7.6
0008184020-02	E.02.08	22	21.9	43.9	6.6
0006236939	E.02.09	25.1	25.8	50.9	6
0006236947	E.02.10	27.7	13.3	41	6.9
0008184038-02	E.02.11	13	28	41	6.8
0006236962	E.03.01	15.7	11.5	27.2	7.9
0008184046-02	E.03.02	9	20.7	29.7	7.7
0008184053-02	E.03.03	4.6	23.9	28.5	7.8

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
0006236996	E.03.04	10.1	20.7	30.8	7.6
0008184061-02	E.03.05	17.3	13.7	31	7.6
0008184079-02	E.03.06	17	11.3	28.3	7.8
0006237028	E.03.07	15.9	13.2	29	7.8
0008184087-02	E.03.08	22.1	18.1	40.3	6.9
0006237044	E.03.09	23.8	17.4	41.2	6.9
0006237051	E.03.10	28.7	11.5	40.2	6.9
0008184095-02	E.03.11	16	25.8	41.8	6.8
0006237077	E.04.01	15.6	11.3	26.8	7.9
0008184103-02	E.04.02	11.4	14.7	26	7.9
0008184111-02	E.04.03	6.2	21.1	27.3	7.9
0006237101	E.04.04	9	20.8	29.7	7.7
0008184129-02	E.04.05	21	11.4	32.3	7.4
0008184137-02	E.04.06	20.4	9.9	30.4	7.6
0006237135	E.04.07	18.2	13	31.1	7.6
0008184145-02	E.04.08	23	18	41	6.8
0006237150	E.04.09	24.5	16.8	41.3	6.9
0006237168	E.04.10	29.1	11.2	40.3	6.9
0008184152-02	E.04.11	16.3	25.9	42.2	6.7
0006237184	E.05.01	16.2	11.4	27.6	7.9
0008184160-02	E.05.02	11.6	14.2	25.8	8
0008184178-02	E.05.03	6.4	20.9	27.3	7.9
0006237218	E.05.04	9.2	21	30.2	7.7
0008184186-02	E.05.05	21.4	11.8	33.2	7.4
0008184194-02	E.05.06	20.9	10	30.9	7.6
0006237242	E.05.07	16.1	13.6	29.7	7.7
0008184202-02	E.05.08	22.5	18.5	41	6.8
0006237267	E.05.09	25	16.5	41.5	6.8
0006237275	E.05.10	29.6	11	40.6	6.9
0006237283	E.05.11	28.2	10.9	39	6.9
0006237291	E.06.01	16.3	11.1	27.4	7.9
0008184210-02	E.06.02	12	14	25.9	8
0008184228-02	E.06.03	6.7	21.2	27.9	7.8
0006237325	E.06.04	9.2	22	31.2	7.6
0008184236-02	E.06.05	21.6	11.9	33.5	7.4
0008184244-02	E.06.06	21.1	10.1	31.1	7.6
0006237358	E.06.07	18.5	12.3	30.8	7.7
0008184251-02	E.06.08	22.5	17.5	40	6.9
0006237374	E.06.09	24.8	17	41.9	6.8
0006237382	E.06.10	29.9	10.6	40.5	6.9
0008184269-02	E.06.11	17.1	25.4	42.5	6.7
0006237408	E.07.01	28.8	9.3	38.2	7.1

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
0008184277-02	E.07.02	15.6	12.2	27.8	7.8
0008184285-02	E.07.03	12.5	18.6	31	7.6
0006237432	E.07.04	19.7	19.9	39.6	6.9
0008184293-02	E.07.05	34.7	9.6	44.4	6.6
0008184301-02	E.07.06	32.4	8.4	40.8	6.8
0006237465	E.07.07	23.4	13.4	36.8	7.2
0008184319-02	E.07.08	30.4	17.3	47.7	6.3
0006237481	E.07.09	38.2	15.9	54.1	5.8
0006237499	E.07.10	39.2	12	51.2	5.9
0008184327-02	E.07.11	34.2	9.4	43.6	6.6
0008184335-02	E.LG.01	13.7	14	27.7	7.9
0008184343-03	E.LG.02	4.9	29.4	34.2	7.3
0008184350-03	E.LG.03	4	24.4	28.5	7.8
0008184368-02	E.LG.04	36.8	18.9	55.7	5.7
0008184376-02	E.LG.05	24.8	10	34.8	7.3
0006237549	E.UG.01	21.6	15.9	37.5	7.2
0008184384-02	E.UG.02	17.9	21.9	39.8	6.9
0008184392-02	E.UG.03	6.8	17	23.8	8.2
0008184400-02	E.UG.04	3.4	16.8	20.2	8.4
0008184418-02	E.UG.05	13.2	28.4	41.7	6.8
0008184426-02	E.UG.06	12.9	14.9	27.9	7.8
0008184434-02	E.UG.07	13.7	29.1	42.8	6.7
0008184442-02	E.UG.08	30.9	13.8	44.7	6.5
0008184459-02	E.UG.09	22.9	27.6	50.5	6
0008184467-02	E.UG.10	19.5	18.9	38.3	7
0008184475-02	E.UG.11	18.9	16.8	35.7	7.2
Average		19.13	16.94	36.07	7.20

Explanatory Notes

About this report

This summary rating is the average rating of all NCC Class 2 dwellings in a development. The individual dwellings' ratings are a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate the energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances, or energy production of solar panels. For more details about an individual dwelling's assessment, refer to the individual dwelling's NatHERS Certificate (accessible via link).

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To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO). AAOs have specific quality assurance processes in place, and continuing professional development requirements, to maintain a high and consistent standard of assessments across the country.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

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