

16 June 2022

Attention: Geoff Dearden
Hometown Australia Pty Ltd
Via Email: gdearden@hometownaustralia.com.au
Our Ref: E2210_220616.docx

Dear Geoff

RE: BASIX & NatHERS Assessments for Parkside Yamba, 8 Park Avenue, Yamba

We have completed a thermal simulation for Dwelling B with the façade orientated to the north and south, and both facades were also mirrored, in total, 4 variations of Dwelling B have been simulated and this provides a good representation of Dwelling Types A through to E.

We completed a preliminary BASIX assessment using the multi-dwelling tool as ultimately, the individual dwellings form part of a larger, multi-dwelling development. The use of the multi-dwelling tool in this instance for a single dwelling assessment provides good representation of the targets that will need to be met, as opposed to using the single dwelling tool in BASIX.

Thermal Comfort

The BASIX Thermal Comfort section sets the maximum heating and cooling loads permissible for each dwelling. For this assessment, the BASIX maximum heating load is 24.5 and the maximum cooling load is 33.7.

A thermal simulation was completed using the BERS Pro accredited software and I am an accredited house energy rater with HERA, assessor number 10058.

For the south facing façade simulations, standard levels of insulation were included to the external walls, ceiling and roof and the simulations achieved compliance with the BASIX Targets (min 6.3 Star Rating with a heating load of 20.7 and a cooling load of 19.8).

For the north facing façade simulations, an increased level of insulation was included to the external walls and ceiling and standard insulation to the roof. The simulations achieved compliance with the BASIX Targets (min 6.2 Star Rating with a heating load of 23.2 and a cooling load of 18.7).



Water Conservation

BASIX has a target of 40% to be achieved as an overall for the development, meaning that some dwellings may perform better than others but as an overall development, the target is met. Compliance with BASIX can be achieved through the following inclusions:

- 4 Star showerheads, toilets and tapware
- An individual rainwater tank with a minimum volume of 2,000 litres collecting a minimum roof area of 90m². The rainwater tank is to be connected to all toilets within the dwellings, the cold-water supply to the washing machine and at least 1 external tap.

Energy Efficiency

BASIX has a target of 50% to be achieved as an overall for the development, meaning that some dwellings may perform better than others but as an overall development, the target is met.

Two assessments were completed with different inclusions for the Energy Efficient section. The first assessment incorporated well-performing, energy efficient inclusions such as a high performing solar hot water system (electric boosted), well-performing ducted air-conditioning system, induction cooktop, both an indoor/sheltered and outdoor clothesline and well-ventilated fridge spaces. The assessment achieved 48% and did not achieve compliance with BASIX.

The second assessment included a 1.5kW photovoltaic system which well-exceeded the BASIX targets, however, this option allows for less energy efficient inclusions, such as an electric heat pump that does not have to achieve STC's or electric instantaneous or storage systems, both of which are not energy efficient. Additionally, a lower performing ducted air-conditioning system and an electric cooktop could be installed and an indoor/sheltered clothesline and well-ventilated fridge space would not be required.

Ceiling fans and dedicated LED light fittings were included in this assessment, however, it is worth noting that neither of these inclusions would be required to achieve compliance if a photovoltaic system is installed.

Recommendations

Improving the thermal comfort of a dwelling will have a flow on effect to the energy efficiency of a dwelling as it is less likely that active heating and cooling systems will be required to achieve and maintain a comfortable indoor temperature. On this basis, it is recommended that all dwellings have the increased levels of insulation included in the thermal simulations for the north facing facades installed. This improves the overall star ratings, heating and cooling loads.

The development achieves compliance with the water conservation target of BASIX, however, it could be further improved with the inclusion of native vegetation. Adding an area of 5m² per dwelling will improve the water usage and result in the development exceeding the BASIX target.



With regards to energy efficiency, it is recommended to install the higher performing inclusions in lieu of the photovoltaic system. Whilst this does not meet the BASIX target of 50%, it does achieve 49% and on a functionality basis, would provide a better outcome for the occupants.

As previously mentioned, BASIX works on an overall development outcome, and it is possible to achieve the overall target of 50% by installing a photovoltaic system (with the capacity to generate 1.5 peak kW) on approximately 20% of the development, ie 1 in 5 dwellings. Please note that the installation of a photovoltaic system on 20% of dwellings is more likely to result in the development well-exceeding the BASIX target of 50%.

The attached Preliminary Summary of BASIX & Thermal Comfort Commitments provides an overview of each of the thermal simulations and BASIX assessments and details the inclusions for each, along with the recommended inclusions.

Kind Regards



Tamika Collins
Accredited Energy Assessor
HERA #10058



Dwelling Type B

Dwelling simulated with the façade to the north and then mirrored and with the façade to the south and then mirrored. This building footprint is a good representation of Dwelling Types A – E. In total, 4 simulations have been completed.

Thermal Comfort Commitments – BASIX Target – Heating 24.5 Cooling 33.7 BASIX Target exceeded				
North Facing Facades (min ratings): Heating 23.2 Cooling 18.7 6.2 Star Rating				
South Facing Facades (min ratings): Heating 20.7 Cooling 19.8 6.3 Star Rating				
External Walls:	Construction: Framed incl garage Insulation: North Facing Façade - Foil + R2.0 South Facing Façade – Foil + R1.5	Roof:	Construction: Metal Sheetting Colour: North Facing Façade – Dark (SA >0.70) South Facing Façade – Medium (SA 0.475 – 0.70) Insulation: R1.3 (reflective side down, anti-glare up)	
Internal Walls:	Construction: Cavity Panel >70mm with Plasterboard lining Insulation: None	Eaves:	300mm width, 200mm offset Varying widths & offsets as per plans	
Ceiling:	Construction: Plasterboard Insulation: North Facing Façade – R3.5 South Facing Façade – R2.5 incl garage <i>Ceiling penetrations (light fittings and exhaust fans) have been calculated in accordance with BASIX Thermal Comfort Protocol defaults. All fittings are to have approved covers installed and/or be IC rated to allow for insulation to be installed closely to the top and sides of the fitting.</i>	Floor:	Construction: Concrete Sub-floor: On Ground Insulation: None required Finish: Vinyl to kitchen/living, Tiles to wet areas, Carpet to bedrooms and none to garage	
Glazing:	Type: Single, clear with aluminium frames (U 6.7 SHGC 0.70) <i>Weather stripping to be installed throughout. Windows as specified or equivalent should be installed on site – U value may be lower SHGC to be +/-5% of specified value.</i>			
Water Commitments – BASIX Target – 40% BASIX Target reached				
Showerheads:	4* (>6 but <=7.5 L/min)	Toilets:	4 Star	Kitchen Taps: 4 Star Basin Taps: 4 Star
Individual Rainwater Tank:	2,000 litres (minimum)	Individual Water Tank	ALL toilets in the development Cold water supply to washing machine	
Individual Roof Collection:	90m² (minimum)	Connection:	At least ONE outdoor tap	
Energy Commitments – BASIX Target – 50% BASIX Target not met – achieves 48%				
Hot Water System:	Solar (electric boosted) STCs 31 - 35			
Cooling System:	Ceiling Fan in at least 1 living room and 1 bedroom 1-phase air-conditioning in at least 1 living room and 1 bedroom (EER 3.0 – 3.5), day/night zoned between bedrooms & living			
Heating System:	1-phase air-conditioning in at least 1 living room and 1 bedroom (EER 3.0 – 3.5), day/night zoned between bedrooms & living			
Ventilation:	Kitchen & Bathroom – individual fan <u>ducted</u> , manual switch on/off control Laundry – no mechanical ventilation			
Artificial Lighting:	The following rooms are to be primarily lit by fluorescent or LED dedicated fittings: All Bedrooms/Study All Living/Dining Room The Kitchen All Bathrooms/Toilets The Laundry All Hallways			
Alternative Energy:	Not included			
Appliances:	Induction cooktop & electric oven to be installed Well-ventilated fridge space to be provided (click HERE)			
Clothes Line:	Fixed outdoor clothes line to be installed Fixed indoor/sheltered clothes line to be installed (click HERE)			



Dwelling Type B – with a 1.5kW photovoltaic system

Dwelling simulated with the façade to the north and then mirrored and with the façade to the south and then mirrored. This building footprint is a good representation of Dwelling Types A – E. In total, 4 simulations have been completed.

Thermal Comfort Commitments – BASIX Target – Heating 24.5 Cooling 33.7 BASIX Target exceeded				
North Facing Facades (min ratings): Heating 23.2 Cooling 18.7 6.2 Star Rating				
South Facing Facades (min ratings): Heating 20.7 Cooling 19.8 6.3 Star Rating				
External Walls:	Construction: Framed incl garage Insulation: North Facing Façade - Foil + R2.0 South Facing Façade – Foil + R1.5	Roof:	Construction: Metal Sheetting Colour: North Facing Façade – Dark (SA >0.70) South Facing Façade – Medium (SA 0.475 – 0.70) Insulation: R1.3 (reflective side down, anti-glare up)	
Internal Walls:	Construction: Cavity Panel >70mm with Plasterboard lining Insulation: None	Eaves:	300mm width, 200mm offset Varying widths & offsets as per plans	
Ceiling:	Construction: Plasterboard Insulation: North Facing Façade – R3.5 South Facing Façade – R2.5 incl garage <i>Ceiling penetrations (light fittings and exhaust fans) have been calculated in accordance with BASIX Thermal Comfort Protocol defaults. All fittings are to have approved covers installed and/or be IC rated to allow for insulation to be installed closely to the top and sides of the fitting.</i>	Floor:	Construction: Concrete Sub-floor: On Ground Insulation: None required Finish: Vinyl to kitchen/living, Tiles to wet areas, Carpet to bedrooms and none to garage	
Glazing:	Type: Single, clear with aluminium frames (U 6.7 SHGC 0.70) <i>Weather stripping to be installed throughout. Windows as specified or equivalent should be installed on site – U value may be lower SHGC to be +/-5% of specified value.</i>			
Water Commitments – BASIX Target – 40% BASIX Target reached				
Showerheads:	4* (>6 but <=7.5 L/min)	Toilets:	4 Star	Kitchen Taps: 4 Star Basin Taps: 4 Star
Individual Rainwater Tank:	2,000 litres (minimum)	Individual Water Tank:	ALL toilets in the development Cold water supply to washing machine	
Individual Roof Collection:	90m² (minimum)	Connection:	At least ONE outdoor tap	
Energy Commitments – BASIX Target – 50% BASIX Target exceeded – achieves 64%				
Hot Water System:	Electric Heat Pump STCs Not Specified ** Electric Instantaneous and Electric Storage systems will also achieve a pass			
Cooling System:	Ceiling Fan in at least 1 living room and 1 bedroom 1-phase air-conditioning in at least 1 living room and 1 bedroom (EER <2.5), day/night zoned between bedrooms & living			
Heating System:	1-phase air-conditioning in at least 1 living room and 1 bedroom (EER <2.5), day/night zoned between bedrooms & living			
Ventilation:	Kitchen & Bathroom – individual fan <u>ducted</u> , manual switch on/off control Laundry – no mechanical ventilation			
Artificial Lighting:	The following rooms are to be primarily lit by fluorescent or LED dedicated fittings: All Bedrooms/Study All Living/Dining Room The Kitchen All Bathrooms/Toilets The Laundry All Hallways			
Alternative Energy:	A photovoltaic system with a capacity to generate 1.5 peak kW must be installed and connected to the development's electrical system			
Appliances:	Electric cooktop & electric oven to be installed			
Clothes Line:	Fixed outdoor clothes line to be installed			

Recommendation:

The below recommendations exceed the BASIX Targets for Thermal Comfort and Water and achieve an average of 49% for the Energy section, 1% below the BASIX Target. The recommendation includes more energy efficiency measures than the option that meets the BASIX Target – this meets the target simply through the inclusion of a photovoltaic system which allows for lower performing appliances and inclusions.

BASIX sets maximum heating and cooling loads, which are 24.5 for heating and 33.7 for cooling. As an average, the simulations achieve 6.8 Stars, a heating load of 19.4 and a cooling load of 16.3 – well below the BASIX maximums.

Thermal Comfort Commitments – BASIX Target – Heating 24.5 Cooling 33.7 BASIX Target exceeded				
Average ratings: Heating 19.4 Cooling 16.3 6.8 Star Rating				
External Walls:	Construction: Framed incl garage Insulation: Foil + R2.0	Roof:	Construction: Metal Sheetting Colour: South Facing Façade - Medium (SA 0.475 – 0.70) North Facing Façade – Dark (SA >0.70) Insulation: R1.3 (reflective side down, anti-glare up)	
Internal Walls:	Construction: Cavity Panel >70mm with Plasterboard lining Insulation: R2.0 to Garage adj Entry Hall R2.0 Bed 1 Hall Adj Living R2.0 to Living/Dining raked wall adj Bed 1 + Laundry ceiling	Eaves:	300mm width, 200mm offset Varying widths & offsets as per plans	
Ceiling:	Construction: Plasterboard Insulation: R3.5 incl garage <i>Ceiling penetrations (light fittings and exhaust fans) have been calculated in accordance with BASIX Thermal Comfort Protocol defaults. All fittings are to have approved covers installed and/or be IC rated to allow for insulation to be installed closely to the top and sides of the fitting.</i>	Floor:	Construction: Concrete Sub-floor: On Ground Insulation: None required Finish: Vinyl to kitchen/living, Tiles to wet areas, Carpet to bedrooms and none to garage	
Glazing:	Type: Single, clear with aluminium frames (U 6.7 SHGC 0.70) <i>Weather stripping to be installed throughout. Windows as specified or equivalent should be installed on site – U value may be lower SHGC to be +/-5% of specified value.</i>			
Water Commitments – BASIX Target – 40% BASIX Target met – achieves 40%				
Showerheads:	4* (>6 but <=7.5 L/min)	Toilets:	4 Star	Kitchen Taps: 4 Star Basin Taps: 4 Star
Individual Rainwater Tank:	2,000 litres (minimum)	Individual Water Tank:	ALL toilets in the development Cold water supply to washing machine	
Individual Roof Collection:	90m² (minimum)	Connection:	At least ONE outdoor tap	
Energy Commitments – BASIX Target – 50% BASIX Target not met – achieves 49%				
Hot Water System:	Solar (electric boosted) STCs 31 – 35			
Cooling System:	Ceiling Fan in at least 1 living room and 1 bedroom 1-phase air-conditioning in at least 1 living room and 1 bedroom (EER 3.0 – 3.5), day/night zoned between bedrooms & living			
Heating System:	1-phase air-conditioning in at least 1 living room and 1 bedroom (EER 3.0 – 3.5), day/night zoned between bedrooms & living			
Ventilation:	Kitchen & Bathroom – individual fan <u>ducted</u> , manual switch on/off control Laundry – no mechanical ventilation			
Artificial Lighting:	The following rooms are to be primarily lit by fluorescent or LED dedicated fittings: All Bedrooms/Study All Living/Dining Room The Kitchen All Bathrooms/Toilets The Laundry All Hallways			
Alternative Energy:	Not Included			
Appliances:	Induction cooktop & electric oven to be installed Well-ventilated fridge space, as per BASIX definition (click HERE)			
Clothes Line:	Fixed outdoor clothes line to be installed Fixed indoor/sheltered clothes line to be installed (click HERE)			

Building Element Details

Project E2210_Hometown_Yamba_Type B_N Facade Run 1
YAMBA PC 2464 Lat -29.50 Long 153.30 Climate File climat11.TXT

Dwelling
D P Number: 1228576
Lot Number: 101
Street Number: 8
Unit Number:
Street Name: Park Avenue
Development Name: Parkside Yamba
Suburb: Yamba
State: NSW
Postcode: 2464
NCC Class: 1A

Plan
Plan Reference: Dwg No DA-01 to DA-20 | Proj Ref Yamba | 29--5-22
Prepared By: JKH Build Design

Assessor Details
Assessor Name: Tamika Collins
AAO: HERA
Assessor Number: 10058

Summary
Conditioned Area 101.2 m² (97.9 m²)
Unconditioned Area 48.0 m² (46.8 m²)
Glazed Common Area 0.0 m² (0.0 m²)
Total Floor Area 149.2 m² (144.8 m²)
Total Glazed Area 21.8 m²
Total External Solid door Area 13.7 m²
Glass to Floor Area 14.6 %
Gross External Wall Area 144.5 m²
Net External Wall Area 108.9 m²

Window
20.3 m² ALM-002-01 A DEFAULTS Uval 6.70 SHGC 0.70
Glass Clear
Frame ALM-002 Aluminium Group B SG
1.6 m² ALM-001-01 A DEFAULTS Uval 6.70 SHGC 0.57
Glass Clear
Frame ALM-001 Aluminium Group A SG

External Wall
108.9 m² Fibro Cavity Panel Direct Fix Anti-glare foil with bulk no gap R2.00

Internal Wall
102.9 m² Cavity wall, direct fix plasterboard, single gap No Insulation

External Floor
62.5 m² Concrete Slab on Ground 100mm Vinyl 3mm No Insulation
32.8 m² Concrete Slab on Ground 100mm Carpet 10mm No Insulation
18.2 m² Concrete Slab on Ground 100mm Ceramic Tiles 8mm No Insulation
35.7 m² Concrete Slab on Ground 100mm Bare No Insulation

External Ceiling
50.2 m² Plasterboard Bulk Insulation R3.5 No roofspace cavity
102.7 m² Plasterboard Bulk Insulation R3.5 Unventilated roofspace

Roof (Horizontal area)
149.2 m² Corrugated Iron Bulk, Reflective Side Down, No Air Gap Above R 1.3 22° slope Gable both ends roof

1

6.2



2

E2210_Hometown_Yamba_Type B_N Fa
climat11.TXT

Adjusted Cooling	18.7 MJ/m ²	1893 MJ
Adjusted Heating	23.2 MJ/m ²	2349 MJ
Adjusted Total	41.9 MJ/m ²	4242 MJ

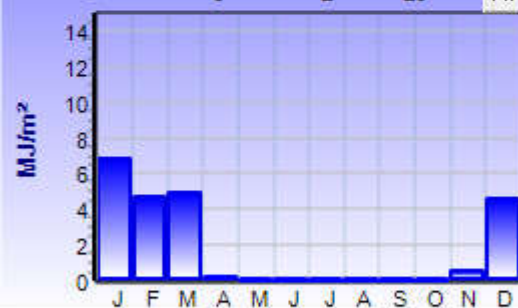
86	73	63	55	49	44	39	MJ/m ²
3.5	4.0	4.5	5.0	5.5	6.0	6.5	Stars

Area Adjustment	0.83	Area	101.24 m ²
Actual Cooling	22.6 MJ/m ²		2287 MJ
Actual Heating	28.0 MJ/m ²		2839 MJ
Actual Total	50.6 MJ/m ²		5126 MJ

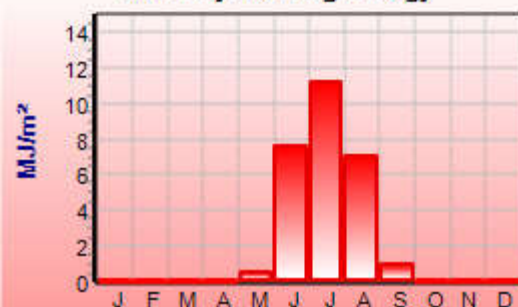
House - All Zones

Monthly Cooling Energy

Fit



Monthly Heating Energy



1

6.4

X

2

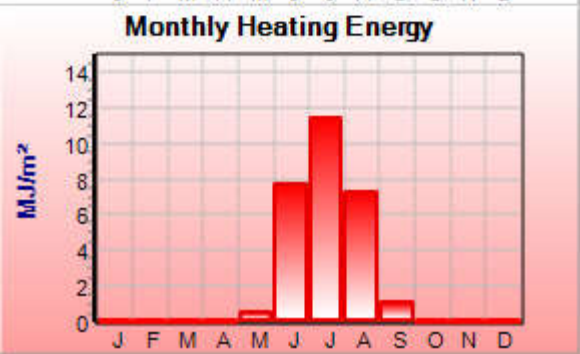
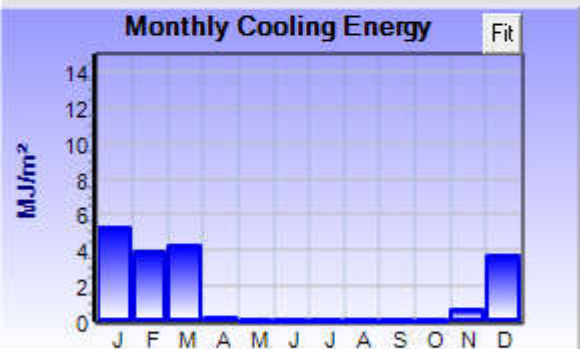
E2210_Hometown_Yamba_Type B_N Fa climat11.TXT

Adjusted Cooling	15.6 MJ/m ²	1575 MJ
Adjusted Heating	23.8 MJ/m ²	2410 MJ
Adjusted Total	39.4 MJ/m ²	3985 MJ

86	73	63	55	49	44	39	MJ/m ²
3.5	4.0	4.5	5.0	5.5	6.0	6.5	Stars

Area Adjustment	0.83	Area	101.24 m ²
Actual Cooling	18.8 MJ/m ²		1903 MJ
Actual Heating	28.8 MJ/m ²		2912 MJ
Actual Total	47.6 MJ/m ²		4815 MJ

House - All Zones



Building Element Details

Project E2210_Hometown_Yamba_Type B_S_Facade Run 1
YAMBA PC 2464 Lat -29.50 Long 153.30 Climate File climat11.TXT

Dwelling
D P Number: 1228576
Lot Number: 101
Street Number: 8
Unit Number:
Street Name: Park Avenue
Development Name: Parkside Yamba
Suburb: Yamba
State: NSW
Postcode: 2464
NCC Class: 1A

Plan
Plan Reference: Dwg No DA-01 to DA-20 | Proj Ref Yamba | 29--5-22
Prepared By: JKH Build Design

Assessor Details
Assessor Name: Tamika Collins
AAO: HERA
Assessor Number: 10058

Summary
Conditioned Area 101.2 m² (97.9 m²)
Unconditioned Area 48.0 m² (46.8 m²)
Glazed Common Area 0.0 m² (0.0 m²)
Total Floor Area 149.2 m² (144.8 m²)
Total Glazed Area 21.8 m²
Total External Solid door Area 13.7 m²
Glass to Floor Area 14.6 %
Gross External Wall Area 144.5 m²
Net External Wall Area 108.9 m²

Window
20.3 m² ALM-002-01 A DEFAULTS Uval 6.70 SHGC 0.70
Glass Clear
Frame ALM-002 Aluminium Group B SG
1.6 m² ALM-001-01 A DEFAULTS Uval 6.70 SHGC 0.57
Glass Clear
Frame ALM-001 Aluminium Group A SG

External Wall
108.9 m² Fibro Cavity Panel Direct Fix Anti-glare foil with bulk no gap R1.50

Internal Wall
102.9 m² Cavity wall, direct fix plasterboard, single gap No Insulation

External Floor
62.5 m² Concrete Slab on Ground 100mm Vinyl 3mm No Insulation
32.8 m² Concrete Slab on Ground 100mm Carpet 10mm No Insulation
18.2 m² Concrete Slab on Ground 100mm Ceramic Tiles 8mm No Insulation
35.7 m² Concrete Slab on Ground 100mm Bare No Insulation

External Ceiling
50.2 m² Plasterboard Bulk Insulation R2.5 No roofspace cavity
102.7 m² Plasterboard Bulk Insulation R2.5 Unventilated roofspace

Roof (Horizontal area)
149.2 m² Corrugated Iron Bulk, Reflective Side Down, No Air Gap Above R 1.3 22° slope Gable both ends roof

1 6.6 

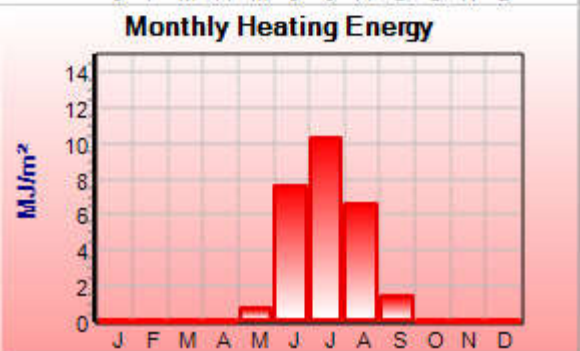
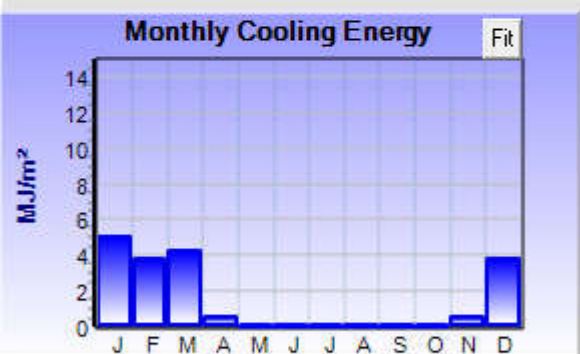
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Adjusted Cooling	15.5 MJ/m ²	1568 MJ
Adjusted Heating	22.7 MJ/m ²	2299 MJ
Adjusted Total	38.2 MJ/m ²	3866 MJ

86	73	63	55	49	44	39	MJ/m ²
3.5	4.0	4.5	5.0	5.5	6.0	6.5	Stars

Area Adjustment	0.83	Area	101.24 m ²
Actual Cooling	18.7 MJ/m ²		1894 MJ
Actual Heating	27.4 MJ/m ²		2777 MJ
Actual Total	46.1 MJ/m ²		4672 MJ

House - All Zones



1 6.3 

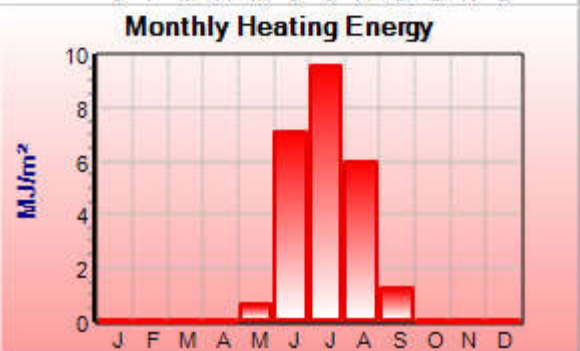
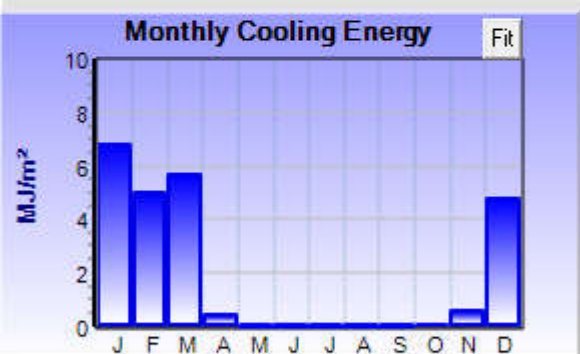
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climat11.TXT

Adjusted Cooling	19.8 MJ/m ²	2007 MJ
Adjusted Heating	20.7 MJ/m ²	2097 MJ
Adjusted Total	40.5 MJ/m ²	4104 MJ

86	73	63	55	49	44	39	MJ/m ²
3.5	4.0	4.5	5.0	5.5	6.0	6.5	Stars

Area Adjustment	0.83	Area	101.24 m ²
Actual Cooling	24.0 MJ/m ²		2425 MJ
Actual Heating	25.0 MJ/m ²		2534 MJ
Actual Total	49.0 MJ/m ²		4959 MJ

House - All Zones



Building Element Details

Project E2210_Hometown_Yamba_Type B_N Facade_Rec Run 1
YAMBA PC 2464 Lat -29.50 Long 153.30 Climate File climat11.TXT

Dwelling
D P Number: 1228576
Lot Number: 101
Street Number: 8
Unit Number:
Street Name: Park Avenue
Development Name: Parkside Yamba
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State: NSW
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NCC Class: 1A

Plan
Plan Reference: Dwg No DA-01 to DA-20 | Proj Ref Yamba | 29--5-22
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Total Glazed Area 21.8 m²
Total External Solid door Area 13.7 m²
Glass to Floor Area 14.6 %
Gross External Wall Area 144.5 m²
Net External Wall Area 108.9 m²

Window
20.3 m² ALM-002-01 A DEFAULTS Uval 6.70 SHGC 0.70
Glass Clear
Frame ALM-002 Aluminium Group B SG
1.6 m² ALM-001-01 A DEFAULTS Uval 6.70 SHGC 0.57
Glass Clear
Frame ALM-001 Aluminium Group A SG


External Wall
108.9 m² Fibro Cavity Panel Direct Fix Anti-glare foil with bulk no gap R2.00

Internal Wall
25.9 m² Cavity wall, direct fix plasterboard, single gap Bulk Insulation, No Air Gap R 2.0
76.9 m² Cavity wall, direct fix plasterboard, single gap No Insulation

External Floor
62.5 m² Concrete Slab on Ground 100mm Vinyl 3mm No Insulation
32.8 m² Concrete Slab on Ground 100mm Carpet 10mm No Insulation
18.2 m² Concrete Slab on Ground 100mm Ceramic Tiles 8mm No Insulation
35.7 m² Concrete Slab on Ground 100mm Bare No Insulation

External Ceiling
50.2 m² Plasterboard Bulk Insulation R3.5 No roofspace cavity
102.7 m² Plasterboard Bulk Insulation R3.5 Unventilated roofspace

Roof (Horizontal area)
149.2 m² Corrugated Iron Bulk, Reflective Side Down, No Air Gap Above R 1.3 22° slope Gable both ends roof

1 6.6 

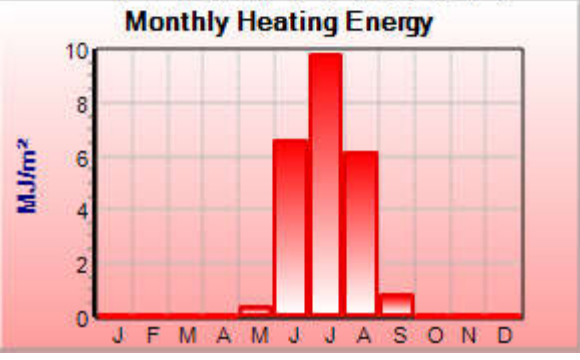
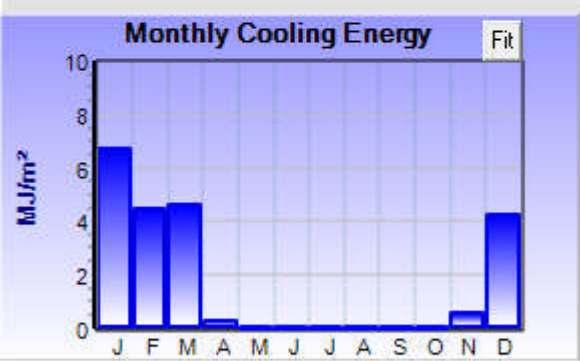
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Adjusted Cooling	17.9 MJ/m ²	1808 MJ
Adjusted Heating	19.9 MJ/m ²	2017 MJ
Adjusted Total	37.8 MJ/m ²	3825 MJ

86	73	63	55	49	44	39	MJ/m ²
3.5	4.0	4.5	5.0	5.5	6.0	6.5	Stars

Area Adjustment	0.83	Area	101.24 m ²
Actual Cooling	21.6 MJ/m ²		2185 MJ
Actual Heating	24.1 MJ/m ²		2437 MJ
Actual Total	45.7 MJ/m ²		4622 MJ

House - All Zones



1

6.9

X

2

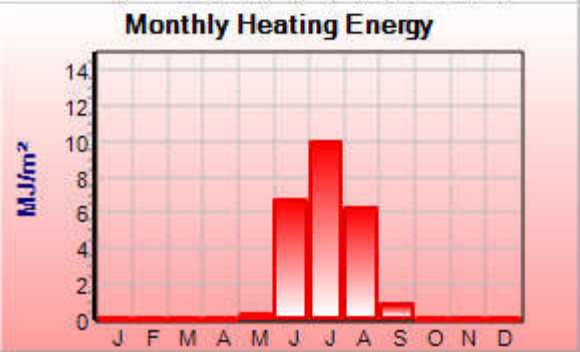
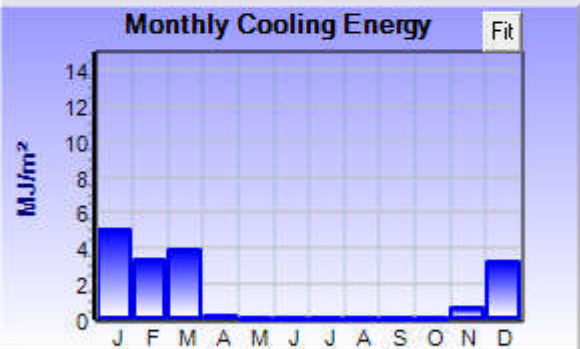
E2210_Hometown_Yamba_Type B_N Fa
climat11.TXT

Adjusted Cooling	14.3 MJ/m ²	1451 MJ
Adjusted Heating	20.5 MJ/m ²	2078 MJ
Adjusted Total	34.9 MJ/m ²	3529 MJ

86	73	63	55	49	44	39	MJ/m ²
3.5	4.0	4.5	5.0	5.5	6.0	6.5	Stars

Area Adjustment	0.83	Area	101.24 m ²
Actual Cooling	17.3 MJ/m ²		1753 MJ
Actual Heating	24.8 MJ/m ²		2510 MJ
Actual Total	42.1 MJ/m ²		4264 MJ

House - All Zones



Building Element Details

Project E2210_Hometown_Yamba_Type B_S_Facade_Rec Run 1
YAMBA PC 2464 Lat -29.50 Long 153.30 Climate File climat11.TXT

Dwelling
D P Number: 1228576
Lot Number: 101
Street Number: 8
Unit Number:
Street Name: Park Avenue
Development Name: Parkside Yamba
Suburb: Yamba
State: NSW
Postcode: 2464
NCC Class: 1A

Plan
Plan Reference: Dwg No DA-01 to DA-20 | Proj Ref Yamba | 29--5-22
Prepared By: JKH Build Design

Assessor Details
Assessor Name: Tamika Collins
AAO: HERA
Assessor Number: 10058

Summary
Conditioned Area 101.2 m² (97.9 m²)
Unconditioned Area 48.0 m² (46.8 m²)
Glazed Common Area 0.0 m² (0.0 m²)
Total Floor Area 149.2 m² (144.8 m²)
Total Glazed Area 21.8 m²
Total External Solid door Area 13.7 m²
Glass to Floor Area 14.6 %
Gross External Wall Area 144.5 m²
Net External Wall Area 108.9 m²

Window
20.3 m² ALM-002-01 A DEFAULTS Uval 6.70 SHGC 0.70
Glass Clear
Frame ALM-002 Aluminium Group B SG
1.6 m² ALM-001-01 A DEFAULTS Uval 6.70 SHGC 0.57
Glass Clear
Frame ALM-001 Aluminium Group A SG

External Wall
108.9 m² Fibro Cavity Panel Direct Fix Anti-glare foil with bulk no gap R2.00

Internal Wall
102.9 m² Cavity wall, direct fix plasterboard, single gap No Insulation

External Floor
62.5 m² Concrete Slab on Ground 100mm Vinyl 3mm No Insulation
32.8 m² Concrete Slab on Ground 100mm Carpet 10mm No Insulation
18.2 m² Concrete Slab on Ground 100mm Ceramic Tiles 8mm No Insulation
35.7 m² Concrete Slab on Ground 100mm Bare No Insulation

External Ceiling
50.2 m² Plasterboard Bulk Insulation R3.5 No roofspace cavity
102.7 m² Plasterboard Bulk Insulation R3.5 Unventilated roofspace

Roof (Horizontal area)
149.2 m² Corrugated Iron Bulk, Reflective Side Down, No Air Gap Above R 1.3 22° slope Gable both ends roof

1

6.9

X

2

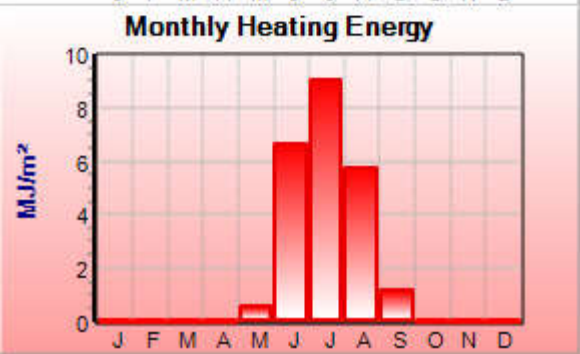
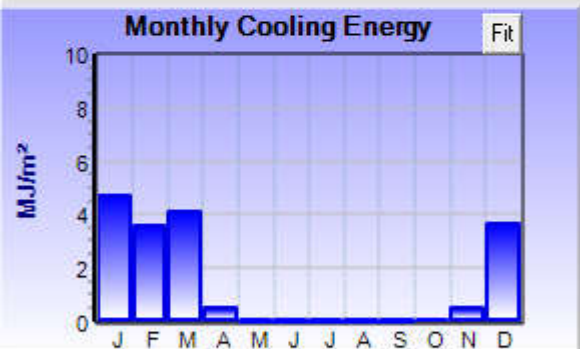
E2210_Hometown_Yamba_Type B_S Fa climat11.TXT

Adjusted Cooling	14.6 MJ/m ²	1482 MJ
Adjusted Heating	19.6 MJ/m ²	1982 MJ
Adjusted Total	34.2 MJ/m ²	3464 MJ

86	73	63	55	49	44	39	MJ/m ²
3.5	4.0	4.5	5.0	5.5	6.0	6.5	Stars

Area Adjustment	0.83	Area	101.24 m ²
Actual Cooling	17.7 MJ/m ²		1791 MJ
Actual Heating	23.7 MJ/m ²		2395 MJ
Actual Total	41.3 MJ/m ²		4186 MJ

House - All Zones



1

6.8



2

E2210_Hometown_Yamba_Type B_S Fa
climat11.TXT

Adjusted Cooling	18.4 MJ/m ²	1865 MJ
Adjusted Heating	17.8 MJ/m ²	1803 MJ
Adjusted Total	36.2 MJ/m ²	3668 MJ

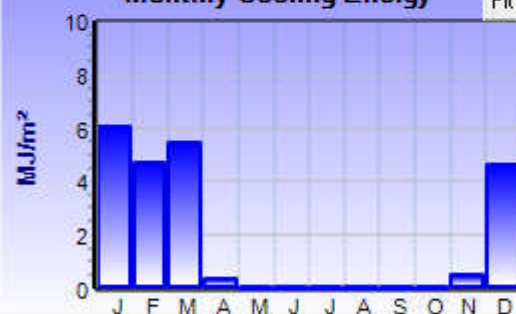
86	73	63	55	49	44	39	MJ/m ²
3.5	4.0	4.5	5.0	5.5	6.0	6.5	Stars

Area Adjustment	0.83	Area	101.24 m ²
Actual Cooling	22.3 MJ/m ²		2253 MJ
Actual Heating	21.5 MJ/m ²		2179 MJ
Actual Total	43.8 MJ/m ²		4432 MJ

House - All Zones

Monthly Cooling Energy

Fit



Monthly Heating Energy

