

# BASIX THERMAL COMFORT COMMITMENTS

**Note: Table 1 must be read in conjunction with Table 2. Table 2 outlines additional thermal enhancements / treatments to meet the mandatory thermal load targets to achieve compliance.**



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Table 1: Base Case Assumptions on Construction and Fabric

Element	Material	Detail
External walls	Brick Veneer	Insulation: See Table 3
		Light colour: Absorptance< 0.475
	Metal cladding	Insulation: See Table 3
		Medium colour: 0.475<absorptance< 0.7
Internal walls	Plasterboard	
Party walls	Cavity Brick	Common corridors
	Cavity Brick	Neighbour
	Concrete Block	Fire stairs & lifts
Windows	Type 1	Total Window System Properties U-value 6.7 & SHGC 0.70 <u>for sliding doors, sliding &amp; fixed windows</u> OR Total Window System Properties U-value 6.7 & SHGC 0.57 <u>for awning windows</u>
	Type 2	Total Window System Properties U-value 5.6 & SHGC 0.41 <u>for sliding doors, sliding &amp; fixed windows</u> OR Total Window System Properties U-value 5.6 & SHGC 0.36 <u>for awning windows</u>
	Window Operability	Balcony windows: <b>45% &amp; 0% (i.e. sliding or fixed)</b> Bedroom windows: <b>10%</b> (BCA D2.24) All other non-balcony windows: <b>0% &amp; 90% (i.e. fixed &amp; awnings)</b>
	Shading device	None
	Skylight	Type 2
Roof	Concrete	Insulation: None
		Light colour: Absorptance< 0.3
Ceilings	Plasterboard	Insulation: See Table 3
Floors	Concrete	Insulation: See Table 3
		Tiles: Wet areas only
		Carpet: Bedrooms
		Tiles: Living areas
Common corridors naturally ventilated		No
Recessed downlights assessed		No
Exhaust fans (kitchens, bathrooms, laundry)		All assumed to be sealed

Table 2: BERS Pro Thermal Loads

Unit No.	Additional Treatments Required	Heating Load (MJ/m².yr)	Cooling Load (MJ/m².yr)	Stars	Pass/Fail
1	R1.0 Bulk Floor Insulation adjacent to carpark (total floor system R-value of Rt1.61), R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows, East Bedroom windows to have at least 10% ventilation opening	21.3	33.7	6.7	Pass
2	R1.0 Bulk Floor Insulation adjacent to carpark (total floor system R-value of Rt1.61), R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows	12.9	22.4	7.9	Pass
3	R1.0 Bulk Floor Insulation adjacent to carpark (total floor system R-value of Rt1.61), R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows	23.9	29.9	6.8	Pass
4	R1.0 Bulk Floor Insulation adjacent to carpark (total floor system R-value of Rt1.61), R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 to louvred window only, Type 2 to all other windows, East Bedroom windows to have at least 10% ventilation opening, West Living window to have at least 20% ventilation opening	37.2	30.0	5.9	Pass
5	R1.0 Bulk Floor Insulation adjacent to carpark (total floor system R-value of Rt1.61), R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 to louvred window only, Type 2 to all other windows, East Bedroom windows to have at least 10% ventilation opening	34.4	26.0	6.4	Pass
6	R1.0 Bulk Floor Insulation adjacent to carpark (total floor system R-value of Rt1.61), R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 to louvred window only, Type 2 to all other windows, West	33.8	35.1	5.9	Pass

Unit No.	Additional Treatments Required	Heating Load (MJ/m².yr)	Cooling Load (MJ/m².yr)	Stars	Pass/Fail
	Living window to have at least 20% ventilation opening, West Main Bedroom window to have at least 10% ventilation opening				
7	R1.0 Bulk Floor Insulation adjacent to carpark (total floor system R-value of Rt1.61), R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows	50.9	22.6	5.7	Pass
8	R1.0 Bulk Floor Insulation adjacent to carpark (total floor system R-value of Rt1.61), R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows	32.5	19.4	6.9	Pass
9	R1.0 Bulk Floor Insulation adjacent to carpark (total floor system R-value of Rt1.61), R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows	43.5	27.8	5.8	Pass
10	R1.0 Bulk Floor Insulation adjacent to carpark (total floor system R-value of Rt1.61), R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows	16.3	36.2	6.9	Pass
11	R1.0 Bulk Floor Insulation adjacent to carpark (total floor system R-value of Rt1.61), R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows	37.3	34.0	5.8	Pass
12	R1.0 Bulk Floor Insulation adjacent to carpark (total floor system R-value of Rt1.61), R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows	54.7	26.7	5.3	Pass
13	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 to louvred window only, Type 2 to all other windows, East Bedroom windows to have at least 10% ventilation opening	8.0	32.6	7.6	Pass
14	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows	4.1	25.3	8.3	Pass
15	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows	14.1	32.5	7.3	Pass
16	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 to louvred window only, Type 2 to all other windows, East Bedroom windows to have at least 10% ventilation opening, West Living window to have at least 20% ventilation opening	16.9	33.6	6.9	Pass
17	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 to louvred window only, Type 2 to all other windows, East Bedroom windows to have at least 10% ventilation opening	14.8	29.2	7.4	Pass
18	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 to louvred window only, Type 2 to all other windows, West Living window to have at least 20% ventilation opening, West Main Bedroom window to have at least 10% ventilation opening	20.2	32.4	6.9	Pass
19	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows	29.5	24.4	6.8	Pass
20	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows	12.8	23.1	7.9	Pass
21	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows, R2.5 Bulk Ceiling Insulation (total ceiling/roof system R-value Rt2.56), North Living window to have at least 10% ventilation opening	34.6	34.3	5.9	Pass
22	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows, R2.5 Bulk Ceiling Insulation (total ceiling/roof system R-value Rt2.56), North Living window to have at least 10% ventilation opening, East Bedroom window to have at least 10% ventilation opening	17.2	35.4	6.9	Pass
23	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows, R2.5 Bulk Ceiling Insulation (total ceiling/roof system R-value Rt2.56), South Living window to have at least 10% ventilation opening, East Bedroom window to have at least 10% ventilation opening, Type 2 skylights	32.1	36.1	5.9	Pass
24	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows, R2.5 Bulk Ceiling Insulation (total ceiling/roof system R-value Rt2.56), South Living window to have at least 10% ventilation opening, West Bedroom window to have at least 10% ventilation opening, Type 2 skylights	45.8	33.8	5.4	Pass

Unit No.	Additional Treatments Required	Heating Load (MJ/m <sup>2</sup> .yr)	Cooling Load (MJ/m <sup>2</sup> .yr)	Stars	Pass/Fail
25	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 to louvred window only, Type 2 to all other windows, East Bedroom windows to have at least 10% ventilation opening	8.6	32.1	7.6	Pass
26	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows	4.8	25.1	8.3	Pass
27	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows	15.0	31.6	7.3	Pass
28	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 to louvred window only, Type 2 to all other windows, East Bedroom windows to have at least 10% ventilation opening, West Living window to have at least 20% ventilation opening	17.9	33.3	6.9	Pass
29	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 to louvred window only, Type 2 to all other windows, East Bedroom windows to have at least 10% ventilation opening	15.9	28.3	7.4	Pass
30	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 to louvred window only, Type 2 to all other windows, West Living window to have at least 20% ventilation opening, West Main Bedroom window to have at least 10% ventilation opening	21.3	31.0	6.9	Pass
31	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows	30.8	24.0	6.7	Pass
32	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows	13.3	23.2	7.9	Pass
33	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 to louvred window only, Type 2 to all other windows, East Bedroom windows to have at least 10% ventilation opening, R2.5 Bulk Ceiling Insulation (total ceiling/roof system R-value Rt2.56)	23.3	31.6	6.7	Pass
34	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows, R2.5 Bulk Ceiling Insulation (total ceiling/roof system R- value Rt2.56)	15.8	25.5	7.6	Pass
35	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows, R2.5 Bulk Ceiling Insulation (total ceiling/roof system R- value Rt2.56)	29.3	27.9	6.6	Pass
36	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 to louvred window only, Type 2 to all other windows, East Bedroom windows to have at least 10% ventilation opening, West Living window to have at least 20% ventilation opening, R2.5 Bulk Ceiling Insulation (total ceiling/roof system R-value Rt2.56)	38.7	31.2	5.9	Pass
37	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 to louvred window only, Type 2 to all other windows, East Bedroom windows to have at least 10% ventilation opening, R2.5 Bulk Ceiling Insulation (total ceiling/roof system R-value Rt2.56)	36.0	25.9	6.3	Pass
38	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 to louvred window only, Type 2 to all other windows, West Living window to have at least 20% ventilation opening, West Main Bedroom window to have at least 10% ventilation opening, R2.5 Bulk Ceiling Insulation (total ceiling/roof system R-value Rt2.56)	40.9	28.5	5.9	Pass
39	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows, R2.5 Bulk Ceiling Insulation (total ceiling/roof system R- value Rt2.56), Type 2 skylight	40.6	33.0	5.7	Pass
40	R2.0 Bulk External Wall Insulation (total wall system R-value of Rt2.52), Type 1 windows, R2.5 Bulk Ceiling Insulation (total ceiling/roof system R- value Rt2.56)	21.7	26.9	7.1	Pass