

The following BASIX and thermal comfort specifications have been prepared by Integreco. The specifications are also utilised in the following documents:

- BASIX – Certificate –26/09/2023
- NatHERS – Certificate – 26/09/2023

<b>BASIX WATER SPECIFICATIONS</b>	
<b>Water Item</b>	<b>Specifications proposed</b>
Toilets	4 stars
Kitchen Taps	5 stars
Bathroom Taps	6 stars
Showers	≤ 7.5 L/min (mid-range-flow in BASIX)
Pools	Yes 39 kL or less
Pool details	Heat pump heating + pump with timer (but optional cover)
Hot water recirculation/diversion	No
Rainwater Tank	5 kL collects ≥ 158 m2 top roof (used for irrigation, pool, laundry)
Total Grass + Planting area	≤ 442.4 m2 total
Plants locally indigenous or 1-drop	76 m2 or more are locally indigenous or 1-drop (out of 442.4m2)
<b>BASIX ENERGY SPECIFICATIONS</b>	
<b>Energy Item</b>	<b>Specifications proposed</b>
Hot Water	Heat pumps with 26 STC rating or better
Heating for Living	3 phase AC – EER = 3.5 or better
Heating for Beds	3 phase AC – EER = 3.5 or better
Cooling for Living	3 phase AC – EER = 3.0 or better
Cooling for Beds	3 phase AC – EER = 3.0 or better
AC zoning (bed/living zones)	None – so both zones can be used simultaneously
Kitchen Exhaust	Fan to façade or roof - manual on/off
Bathroom Exhaust	Fan to façade or roof - manual on/off
Laundry Exhaust	Fan to façade or roof - manual on/off
Lighting for each room	LEDs or CFLs for ≥80% fittings each room
Cooking	Induction cooktop & electric oven
Photovoltaic Systems	Yes 3 kW peak or more (Note: >6 kW gives a score near 100)
Vented fridge	No (since it needs 1 side or top totally open)
Fixed External clothes lines	Yes
Internal/balcony clothes lines	No
Pool details (as above)	Heat pump heating + pump with timer (but optional cover)

THERMAL COMFORT SPECIFICATIONS	
External Walls 1	Concrete + R2.5 (as shown)
External Walls 2	Concrete + R2.5 (as shown) with stone cladding
External Walls 3	Block-filled + R2.5 (basement and next to earth)
Internal Walls 1	Plasterboard on studs
Internal Walls 2	Concrete internal columns/walls as shown
Internal Walls 3	Concrete internal wall +R2.5 added (rooms next to garage)
External Floors 1	Suspended slab floor + R2.3 under subfloor
External Floors 2	On-ground slab floor for garage and entry (optional insul.)
External Floors Insul.	R2.3 added under suspended floors over open air (see above)
Floor Finishes	Tiles wet areas, floating timber elsewhere
Roof colour	Light colour roof
Roofs 1 (top floor)	Concrete roof + R4.0 added ceiling insulation
Roofs 2 (lower levels)	Concrete roof + R4.0 added ceiling insulation
Internal. Ceilings 1	Plasterboard and concrete floor (optional insulation except garage ceiling)
Internal. Ceilings 2	Plasterboard and concrete floor (R2.3 added between garage and rooms above)
Ext. Ceilings 1 – under roof	Plasterboard + R4.0 (as per above)
Windows – hinged/awning	Metal frames + clear double-glazing
Windows - U-value	≤ 3.6 hinged
Windows – SHGC	0.47 ± 5% hinged
Windows – sliders/fixed/hung	Metal frames + clear double-glazing
Windows - U-value	≤ 3.1 fixed/sliders
Windows - SHGC	0.49 ± 5% fixed/sliders
Window openings	Openings as shown but assume servery is 50% openable
Skylights	Double glazed, generic (U<2.7 and SHGC 0.24)
Ceiling Fans	Optional, but can add almost 1 star if used generously
Doors	Solid or hollow-core internal + solid-core for external and next to garage
Exhaust Fans	Dampers minimise infiltration (when fans are off)
Weather Stripping	All external doors and windows
Shading devices	Devices, eaves, overhangs as shown (angled blades on large device for winter sun)
Downlights affecting insulation	LED downlights with seals (but no generic holes in insulation due to light covers)
Exhaust fans affecting insulation	All wet areas (i.e. generic holes assumed in insulation <300 mm2)

**Simulation Notes:**

- Building on site are modelled as shown (for overshadowing) but no tree preservations in place and no trees are modelled.
- Shading devices used from elevations, sections and plans (may need re-checking at CC stage).
- No RCP provided at DA but no generic insulation holes assumed for downlights (due to proposed LED light covers – recheck at CC stage)
- No RCP provided at DA so generic holes assumed for exhaust fans (must have extra checking and rerunning at CC stage)
- Floor thickness need checking at CC stage, due to complexity of the proposed construction.
- All wall types and ceiling types need checking at CC stage, due to complexity of the proposed construction.
- Window sizes used from elevations, sections and plan mark-ups (mark-ups take priority and all this needs re-checking at CC stage).
- Door sizes used from elevations, sections and plan mark-ups (this needs re-checking at CC stage).