

Energy Efficiency Design Card

Mid-Century Modern Sydney

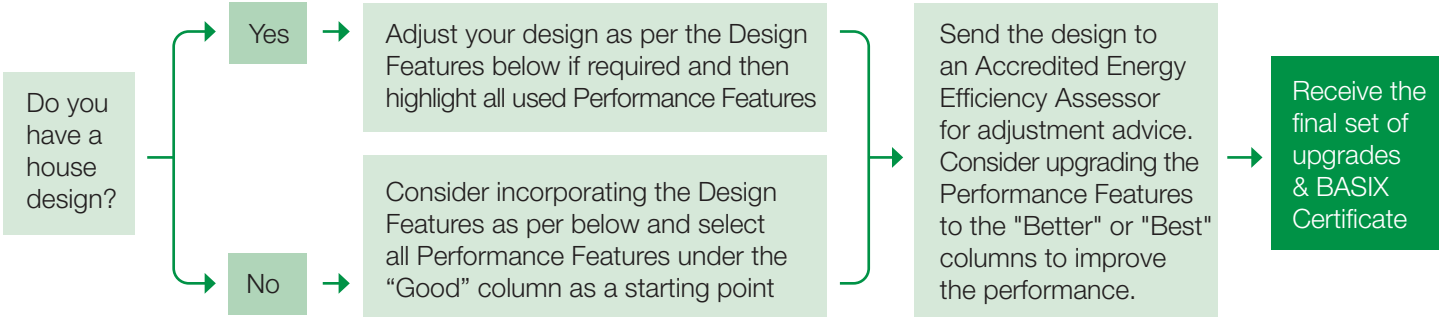
Climate Zone 5 | Warm Temperate

September 2023

The purpose of this Design Card is to aid the creative process of designing a dwelling, ensuring that the chosen direction aligns with both aesthetic and performance goals. Please keep in mind that the listed "Design Features" are key considerations, but they do not include all aspects that can be required to achieve the desired design look.

Additionally, the "Performance Features" provide a summary of features that can be incorporated into the design to achieve the desired thermal performance, such as a 6 or 7-star rating. However, these features are meant to serve as initial guidance in the design process. It is essential to subsequently have an Accredited Energy Efficiency Assessor review the design to determine its suitability.

How to use the Design Card



Design Features

Mid-Century Modern is a look first groundbreaking and popular in the 1970's. One way to design a contemporary home is to modernise a nostalgic style. Modernist hallmarks of open plan living and indoor-outdoor connection are commonly used today.

Palm Springs, California is a hotspot for celebrity homes in the 1950s and for modernist design. Palm Springs can be used as a style reference for contemporary homes today. These wide single level homes have expansive but gently sloping roof lines, colourful front doors and desert-inspired landscaping with cacti and white stones.



Mid-Century Modern

Flat or Gently Sloped Roofs

Roofs are hidden behind parapet walls or are gently sloping in skillion, butterfly and gable styles. They often feature large overhangs.

Large Windows

Floor to ceiling windows fill rooms with light and connect indoors and outdoors and open living. The front and back of homes should feature more glass than cladding.

Angular Structures

Reveal the building structure with exposed beams. The bolts that attach structures together are often exquisitely detailed.

Contrasting Shapes

Clean, geometric lines are juxtaposed with organic shapes and bright accent colours for a playful look.

Recommended
Hardie™ Products



Hardie™ Brushed
Concrete Cladding



Axon™ Cladding



Hardie™ Fine
Texture Cladding

Note: This card is designed to fit an A3 page if printed. Please consider the environment before printing.

Performance Features

	SYDNEY	GOOD	BETTER	BEST
WINDOWS	Windows Glass	Clear	Low-e glass	Argon-filled clear glass
	Window Frame	Aluminium Standard Single Glazing	Aluminium Standard Double Glazing	Thermally-broken/uPVC Double Glazing
	Orientation ¹	E, SE, S, SW & W	NW & NE	N
	Openability ²	None	Include full openability on north/south windows	Include full openability on all windows
INSULATION	Shading	450mm depth eaves	Deeper eaves over east/west	Deep east/west eaves + minimal north
	External Wall R-Value ³⁴	R2.0	R2.5	R2.7
	Suspended Floor Insulation	R3.0 over unconditioned areas	R3.0 throughout	R4.0+ throughout
	Slab Insulation	Waffle Pod	Waffle Pod + 25mm width slab-edge insulation	Waffle Pod + min 50mm + slab edge insulation
	Ceiling Insulation	R4.0	R5.0	R6.0
	Wall Cavities	Reduce wall cavities on all external walls	Include wall cavities on east/west facades	Include wall cavities on all external walls
Ventilation		Include ceiling fans in bedrooms	Include ceiling fans in bedrooms + a living area	Include ceiling fans in bedrooms/studies & living areas
Reflectivity		Include non-reflective wall sarking	Include reflective wall sarking	Include wall and roof reflective sarking
Colour		Dark tones	Medium tones	Medium/Light tones

¹ Orientation refers to the main location of windows in relation to the path of the sun.

² On double storey dwelling only, installing fall protection screens on the upper storey windows enables the use of windows with full openability, increasing cross-flow ventilation and potentially reducing the cooling loads and proving a better thermal performance.

³ Inclusion of internal walls insulation on the garage area can act as a barrier to the external environment, potentially improving the energy rating.

⁴ External Wall Insulation refers to the overall R-Value of the wall as a system.

⁵ Thermal mass can slow down the rate at which the dwelling warms up and cools down and must be used strategically to moderate internal temperatures. Thermal mass can be found on different elements of the dwelling, such as concrete slabs, tiled finished floors or walls, among others.

External Walls

The following wall systems have been assessed in accordance with AS/NZS 4859:2018 "Thermal Insulation Materials for Buildings. Part 1: General Criteria and Technical Provision, and Part 2: Design" and provide an R-Value as required on the Performance Features Table.

GOOD

Min. 8.5mm Hardie™ Cladding
Hardie™ Weather Barrier
R2.5 Wall Batts
90x45mm Timber Frame
70x35mm Timber Battens
10mm Standard Plasterboard

R-Value
Summer: 2.26
Winter: 2.37

BETTER

Min. 8.5mm Hardie™ Cladding
Hardie™ Weather Barrier
R2.5 Wall Batts
90x45mm Timber Frame
70x35mm Timber Battens
10mm Standard Plasterboard

R-Value
Summer: 2.69
Winter: 2.84

BEST

Min. 8.5mm Hardie™ Cladding
Hardie™ Weather Barrier
R2.7 Wall Batts
90x45mm Timber Frame
70x35mm Timber Battens
10mm Standard Plasterboard

R-Value
Summer: 2.83
Winter: 2.97