

## DESIGNING FOR CLIMATE WITH PAAL

There's much to consider when you embark on your home building journey. You need to decide where and how you want to live. What will your budget look like? How will your home suit your lifestyle and long-term needs? And that's just for starters.

Another increasingly significant factor, and one that influences all of the above, is the energy efficiency of your potential home. In Australia, we must comply with standards set out by the National Construction Code (NCC), and this year a significant increase in the energy rating will be required, possibly affecting how you build and the materials you use.

### WHAT WILL THIS CHANGE MEAN?

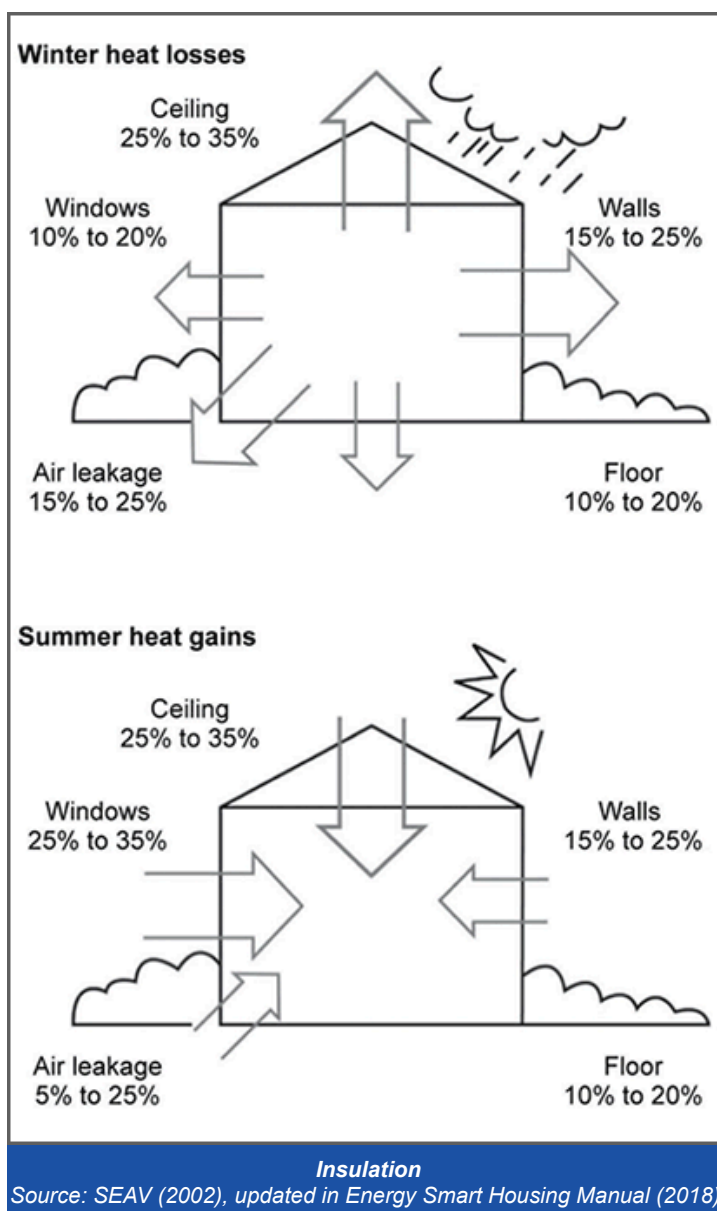
From 1st October 2023, a 7-star energy rating will be introduced, insisting homes be created with greater energy efficiency. And while this will require extra thought and preparation, it's not difficult to achieve – and in the long term, will help bring down living costs and provide a more comfortable home to live in.

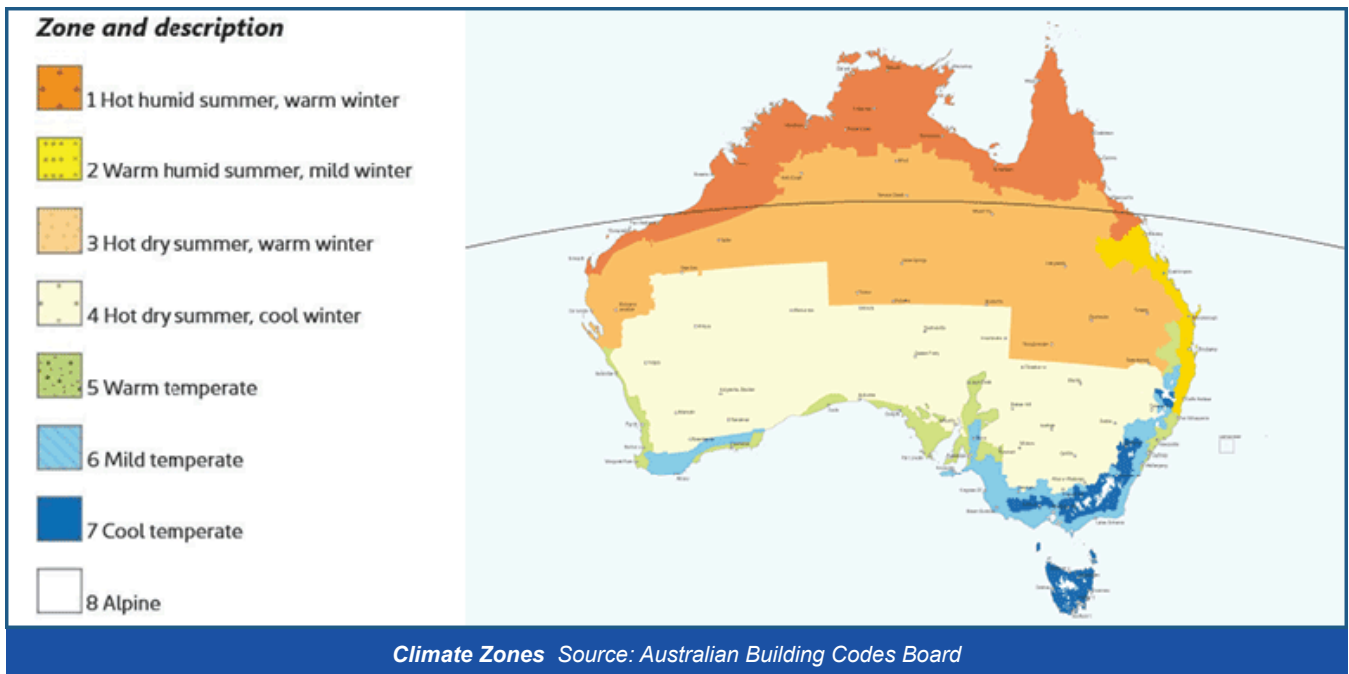
Basically, it comes down to minimising energy usage. The better a house is at controlling its internal temperature, the less reliant it is on external energy. A house in a cold climate with access to sun's rays will require less energy for heating. Likewise in a hot climate, a house with adequate shading will stay cool more naturally. Meanwhile in every climate, good insulation in walls, ceilings and windows helps maintain the desired internal temperature.

The first step, however, is to identify the climate in which you plan to build. This will ensure you choose an effective design and appropriate materials to suit your location.

### WHAT ARE THE CLIMATE ZONES?

The NCC has defined eight climate zones in Australia, from the extreme heat of the northern territory to the colder Alpine areas. The way you build will depend on the zone in which you are located. For example, how you build in the hotter climates of Zones 1, 2, and 3, which include Queensland and parts of NSW, will differ to how you build in the cold climates of Zones 7 and 8, which encompass parts of Victoria.





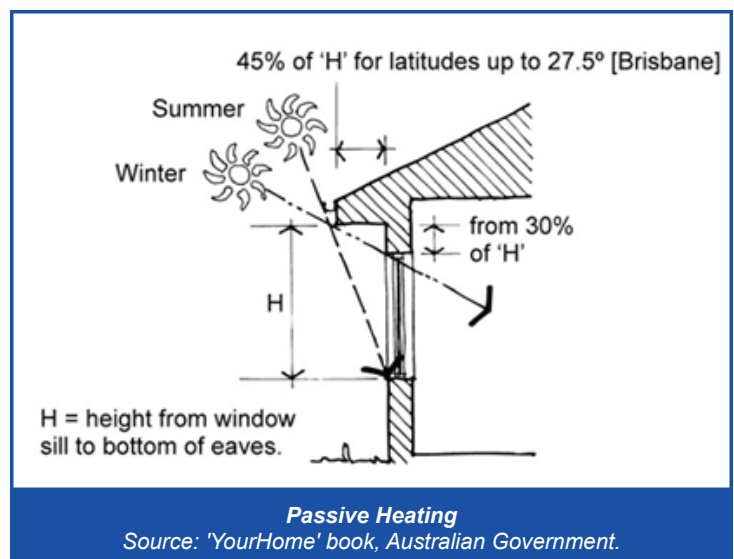
Below is a general list of building features required for a 7-star rating, specific to hot, cold and mild climate zones.

## BUILDING REQUIREMENTS FOR HOT CLIMATES:

- Window shading, including verandahs and/or wide eaves
- With non-shaded elevations, eaves may need to be widened and window sill heights raised
- Good cross ventilation and window openings
- External wall and ceiling insulation, including floor insulation if the house is elevated
- Ceiling fans
- Light coloured roofs
- House orientation avoiding excessive glazing on the western elevation

## BUILDING REQUIREMENTS FOR COLD CLIMATES:

- No verandahs or excessive window shading on north facing elevation of house
- A north-side entry may need an entrance portico, an alfresco or recessed entry area under main roof
- Waffle pod floor slabs. (Raft slabs or elevated floors will be difficult to pass requirements)
- Dark coloured roofs
- Isolation of living zones throughout the house as opposed to an open plan layout, with doors closing off internal rooms and/or zoned areas
- Insulation of some internal walls, especially between the wet areas of the house and adjoining rooms



- Increasing of bulk ceiling insulation
- Upgrading of window glazing to low-e or double glazed (timber framed windows will rate better than aluminium)
- A north-south house orientation with the living areas orientated towards the north and minimal glazing on the southern elevation

## BUILDING REQUIREMENTS FOR MILD CLIMATES:

The milder zones will be expected to consider elements based between these two lists. The degree to which you will need to comply is not as severe. However, if you choose to include verandahs on northern elevations, you may need to compensate that with improved glazing and bulk insulation. Elevated floors may comply with additional sub-floor insulation.

## PAAL IS HERE TO HELP

Before you start designing your home, it's a good idea to talk to one of Paal's expert consultants. And sooner rather than later. Meeting the 7-star rating will demand a high degree of design consideration, particularly in cooler zones. You might envisage certain features that are unsuitable for the location, which could ultimately add significant cost to your build. Our consultants are familiar with the requirements of their local climate zones and will help you meet the energy compliance obligations in advance, minimising any extra cost.

Paal provides an Energy Compliance Certificate for every house purchased, with every single home individually tested and rated for its design and location. Our team is ready to offer you advice and practical solutions, so that you will achieve the new 7-star rating well in advance – which means, when the time comes, all you have to do is get on with building your dream home.



## When building a home exceeds all expectations



*David and Alison Lilly modified the Elizabeth to create a beautiful expansive home with a drive-through portico.*

Alison and David Lilly have always lived in Sydney's north west, however with two young children they wanted more space so bought 6.9 acres in beautiful Glenorie. "Our children would go to my parents' home on acreage, and they loved it," says Alison. "We wanted to give our children that same lifestyle."

## AMAZINGLY FLEXIBLE

The couple had built many project homes before but found the companies difficult to work with. "They're inflexible and restrictive with the products they use," says Alison. "It's difficult to make changes and I could never get the exact style of home or inclusions I wanted."

This time their parents suggested they try Paal. So, after looking at the website, the couple went and met with Michael Christie (who has since moved to the Canberra office). "Michael was so thorough in explaining everything," says David.



*The Lilly's Hamptons style kitchen is yet another standout feature of this exquisite Paal home.*

## BRINGING THE OUTSIDE IN

Initially, the couple liked the U-shape of the Castlereagh, however they had specific requirements such as a drive through portico, attached garage and no verandahs. "Michael modified the Elizabeth to give us everything we'd asked for and we were thrilled with the design," says Alison.

This gave the couple the open layout they were hoping for, with multiple living areas and a modern contemporary feel. The back of the house features glass right around to take in the beautiful surrounds and when you walk in the front entry you can see straight through to the back garden.

"Paal was so flexible, nothing was too much trouble," says the couple. "We made numerous changes throughout the build and the entire PAAL team was so patient and accommodating of our requests."

Although Alison and David went owner-builder, they both work full-time, so engaged Jason Gillett of Gilcraft Building & Carpentry to assist, and the build was completed in eight months. "We were extremely pleased with how quickly and smoothly the build went," says David.

Working with Paal also gave the couple much-needed guidance and support. "The customer service didn't waver from start to finish" says Alison. "If any questions arose, they answered your calls and got back to you with the information promptly."



*The Lilly family are thrilled with their spacious new home.*

## BETTER THAN EXPECTED

Now the home is finished the couple is absolutely delighted. With so many modifications, they were unsure how it would turn out, but the result exceeded all their expectations. "We love it, we really love it," says the couple. "It's the perfect home for our family."

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