

# WELCOME TO THE 8 STAR HOUSE

Jade Projects and Think Brick Australia are proud to welcome you to the 8 Star House and hope that your visit is inspiring, informative and proves that sustainability and affordability can go hand in hand. This home uses 76% less energy and 72% less water than an average Perth home\*, which is why it has achieved an outstanding 8-star rating. Enjoy your visit.

## ACHIEVING THERMAL COMFORT

To achieve thermal comfort without mechanical heating and cooling, and therefore an energy efficient home, it is very important to understand your local climate and the fundamentals of how building materials perform.

Think Brick Australia is involved in two ground-breaking research projects and many of the learnings from this research have been incorporated into the 8 Star House.

The first project, run in conjunction with The University of Newcastle and the Australian Research Council, measures the performance of different construction types. It has long been understood that brick was a superior material to incorporate into building design because of its inherent quality called 'thermal mass'. Now research exists to prove the value of thermal mass which absorbs and releases heat to stabilise indoor temperature. Building in clay brick is an easy way to build thermal mass into your home.

The second research project involves analysing climate data for 22 Australian climate zones and providing simple design guides to help architects, designers, builders and homeowners to design for Australia's diverse climate, based on specific, current, climate data. We have included a quick guide on the back of this leaflet to help you apply these ideas to your own new home in Perth.

For more detailed information refer to [www.thinkbrick.com.au](http://www.thinkbrick.com.au)

\*As calculated by the Department of Planning & Infrastructure (DPI) using the Building Sustainability Assessment (BSA) tool.

# DESIGNING FOR PERTH'S CLIMATE

## TIPS FOR DESIGNING FOR PERTH'S CLIMATE

- Your home should be well insulated. It should also incorporate thermal mass into the floor, walls and/or ceilings to absorb daytime heat, keeping the interior cooler during the hottest part of the day
- In the cooler months, good insulation in the roof and walls, together with thermal mass, helps stabilise house temperatures and will offset the heating required at night time
- The orientation of your home should maximise the sun in winter and attract breezes in summer
- North-east and north-facing living areas will allow winter sun to penetrate the thermal mass inside the house (such as double clay brick walls and/or concrete floors) to gain and store warmth for release during cold nights, providing 'free' heating for the house whilst reducing energy consumption
- Include openings (doors/windows) on the east to south-west to capture breezes, such as the Fremantle Doctor, to cool the home via cross ventilation. Ideally, provide shading over openings to avoid unnecessary heating during summer
- Good shading is needed to the north, east and west windows for long periods of the year. Shading of the north facing is only required in the summer months (a removable shade works well)
- Protect the house from cold winter winds with plants or vegetation on the north and west

These tips are based on analysis of 60 years of Perth climate data. More details can be found on <http://thinkbrick.com.au/climate-design-perth.cfm>

Very shortly a dedicated website will be available covering a total of 22 locations, including Perth and Bunbury, at [www.designingforclimate.com.au](http://www.designingforclimate.com.au)

## ABOUT THINK BRICK AUSTRALIA

Think Brick Australia represents Australia's leading Clay Brick and Paver manufacturers. We undertake research and provide technical information to regulators, government and the design and construction industry.

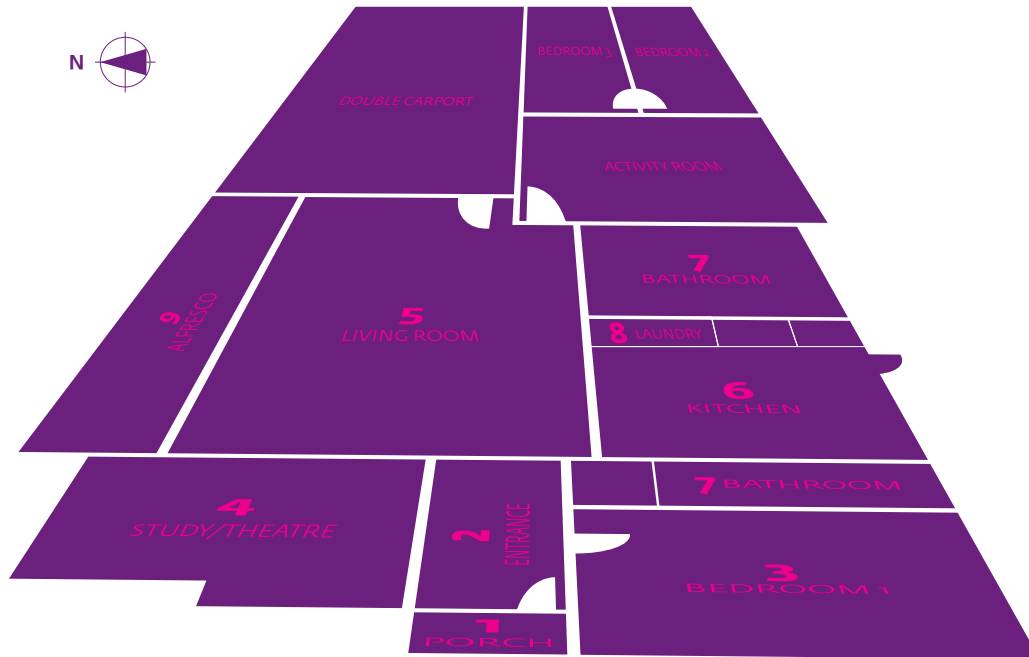
## ABOUT JADE PROJECTS

To find out more about Jade Projects, please visit [www.jadeprojects.com.au](http://www.jadeprojects.com.au)

Welcome to the



# HOME GUIDE



## 1. PORCH

From the street it might look like any modern new home but in fact, this home represents the future of sustainable building. And it's built in double clay brick – tried and trusted by Western Australians for generations.

### BRICKS AT WORK

Double clay brick homes have an acoustic advantage as they can be much quieter to live in – great news for busy families.

## 2. ENTRANCE

From the floors, to the paint, to the seals on the doors to prevent draughts, the 8 Star House has so many features to keep you comfortable.

### BRICKS AT WORK

Knock on the walls – they are strong, durable and are one of the main reasons this home achieved an 8-star rating. When used in conjunction with other good design principles, double clay brick homes are more thermally comfortable year round. Step inside and feel the difference.

## 3. BEDROOM 1

Located on the southern side of the house, the master bedroom is positioned to stay cooler for sleeping in comfort. The bedroom windows are protected by eaves, positioned and sized to control light levels and the fittings are designed and positioned to be easily accessible for everyone.

### BRICKS AT WORK

The double clay brick construction also helps to keep the bedroom cooler in summer and warmer in winter.

## 4. STUDY/THEATRE

The study is wired for future technology, whether for leisure or working from home and is designed for easy access for people of all abilities. And this is where you can find out more about how this house works – it's our Info Room.

## 5. LIVING ROOM

The heart of the home. This room is designed for living and enjoying the cooling benefits of cross-ventilation. The convenience of wide door frames and sliding doors makes moving around the area more enjoyable for all.

### BRICKS AT WORK

The combination of double clay brick construction, the tiled concrete floors, the north-facing orientation of this room and the added ceiling insulation work together to stabilise internal temperature and make you more comfortable. The exposed brick wall creates not only an attractive feature wall but is durable and requires no painting or finishing. Because bricks are clay, they don't emit any chemicals, contributing to healthier indoor air.

## 6. KITCHEN

With high rating appliances, fixtures and fittings, this kitchen shows you how easy it is to achieve energy and water savings in your home.

## 7. BATHROOMS

A grey-water recycling system and electric solar-boosted water heater make this bathroom highly efficient and the fittings and fixtures also play their part too. All you need to do is reduce showers to 3 minutes.

## 8. LAUNDRY

The laundry makes clever use of space and also saves water by using water drawn from the rainwater tanks and recycling it onto the garden after use via the grey-water recycling system.

## 9. ALFRESCO

This area captures the best of Perth's climate and makes the indoor/outdoor lifestyle possible. A large shade sail plays a key part in providing shade to the home during the summer months, enhancing your leisure time.

### BRICKS AT WORK

Clay pavers make an ideal surface for outdoor areas. They are hard wearing and colourfast and like all bricks, can be recycled for use in other projects or crushed to be used in number of ways.

## GARDEN

Matching low maintenance with drought resistance, the garden is designed to be hardy, accessible for everyone and designed to play its part in keeping the home comfortable year-round. Trees provide shade in summer while directing the breeze into the home for cross-ventilation.