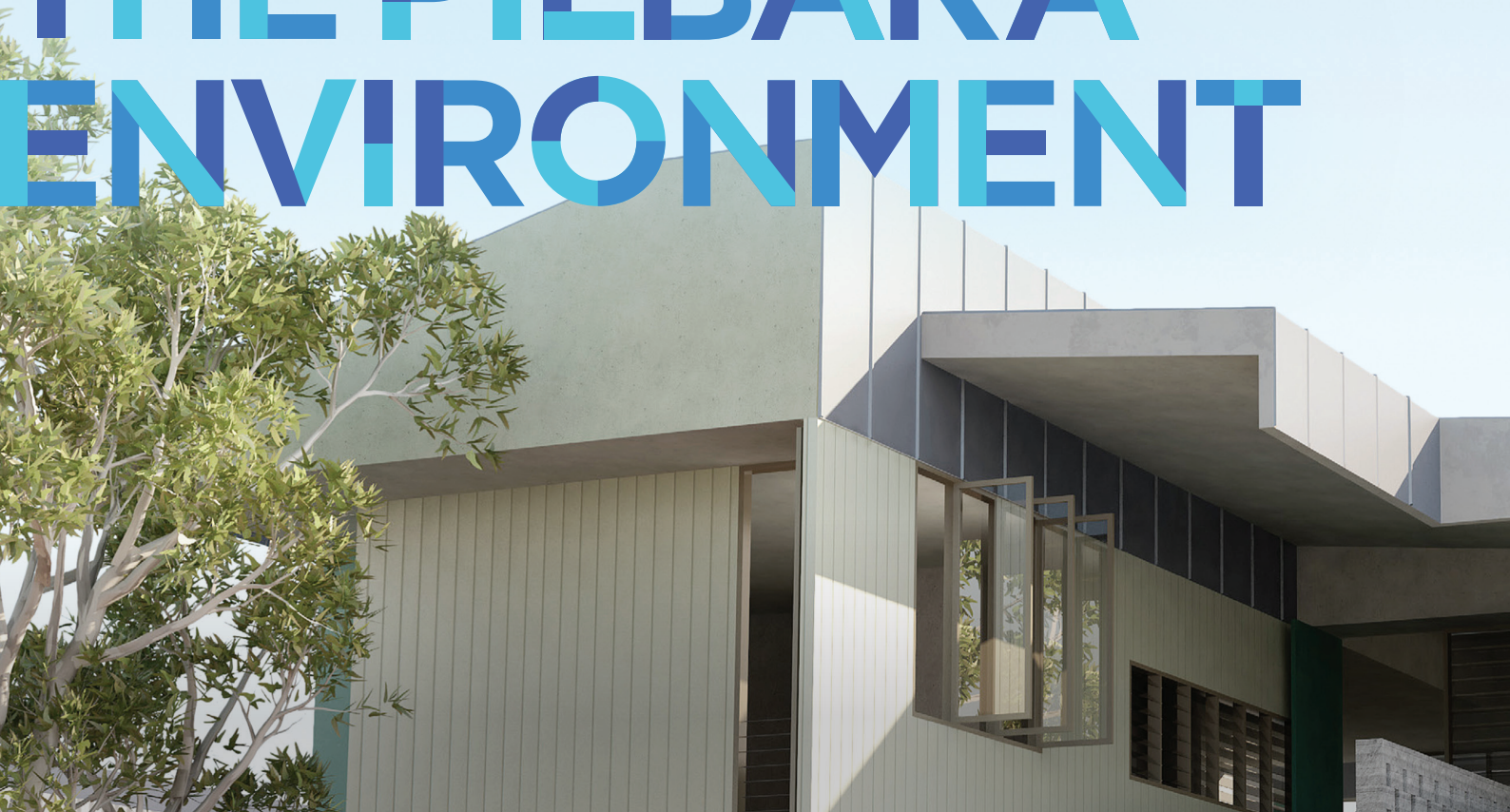




LANDCORP

BUILDING YOUR HOME TO SUIT THE PILBARA ENVIRONMENT



VERNACULAR

\v ə(r)-'na-ky ə-l ər\

1. of, relating to, or characteristic of a period, place, or group; especially : of, relating to, or being the common building style of a period or place <*vernacular* architecture>

WHY DOES THE PILBARA NEED CLIMATE RESPONSIVE DESIGN?

Take a look around the growing towns in the Pilbara region and you'll notice the majority of the buildings haven't been here for long. Most were developed in the 1960s to support the rise in mining activity and an increased demand for housing. Minimal planning was given and more than fifty years later, the need for a smarter building approach has become obvious.

To address this, we have developed the Pilbara Vernacular Handbook to help you build your home in a style more suited to the region.

The Handbook provides an overarching set of design values and strategies for building in the Pilbara as a whole, and specific guidelines for Hedland, Newman, Onslow and Dampier.

It incorporates five core values:

- ▶ Responding to climate
- ▶ Incorporating the natural landscape
- ▶ Building on the Pilbara character and identity
- ▶ Enhancing liveability
- ▶ Mobilising for change

It's essential that you make sure your builder follows the Handbook closely, so you can take advantage of the benefits this brings:



DECREASED
ENERGY COSTS



DECREASED
WATER USAGE



A HOME SUITED TO THE
SURROUNDING ENVIRONMENT

WHY YOUR BUILDER SHOULD FOLLOW THE PILBARA VERNACULAR HANDBOOK

Building a home in the Pilbara presents challenges not found elsewhere.

A home design that works in Perth is perhaps not the best choice for the extreme temperatures and cyclonic conditions that are found in the Pilbara.

Deciding to build a home in the Pilbara comes with plenty of decisions, many of which you may not have even considered. It's important that your builder uses the Handbook to help you collectively make the right decisions.

MATERIALS

Your choice of home construction materials is critical to coping with the intense sun, extreme temperatures and high winds that are a reality in the Pilbara. Specify materials with guarantees to withstand these, especially paint.

- ▶ Durable, low maintenance materials, preferably those that can be sourced locally, will be better suited to reflect heat and withstand winds and rain effectively.
- ▶ Appropriate materials can help reduce your running costs and provide better comfort inside your home.
- ▶ How materials are combined can have a significant effect on comfort levels.

BUILDING ORIENTATION

The way your home is positioned on your lot can play a large part in keeping it cool. This should be considered at the outset of planning.

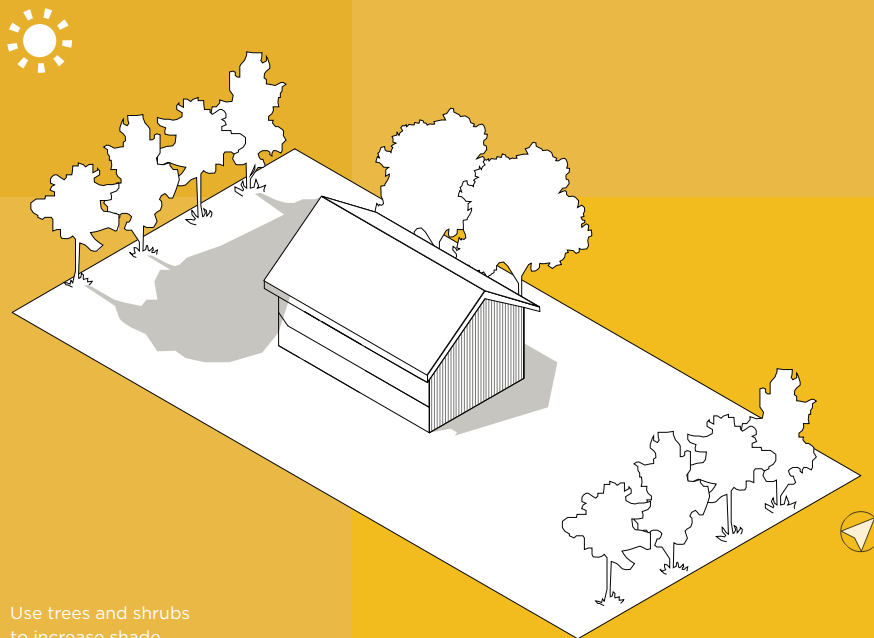
- ▶ Orient your home firstly to avoid the sun's radiation and then to capture the wind.
- ▶ Orient longer walls to the north and south, as these are the easiest to shade.
- ▶ Understand prevailing breezes and how these can be incorporated.
- ▶ Reduce the expanse of west-facing walls, windows and doors. When unavoidable, protect from afternoon sun by using vertical screens, trees or awnings.

A MORE COMFORTABLE HOME THAT USES LESS WATER

LANDSCAPING

- ▶ Match plants to your site's conditions. Consider the soil type, rainfall and special conditions such as cyclone resistant tree species and salt resistant species on the coast.
- ▶ Plant large shrubs or trees on the east and west of your lot to block morning and afternoon sun.
- ▶ Choose light-coloured ground surfaces and gravels to reduce the heat absorbed and transferred to your house.
- ▶ Opt for local plant species that need less water and are appropriate for water-efficient landscape design. They also integrate well with the surrounding landscape.

The areas surrounding your home can have a big impact on its livability. Decisions about plants, surfaces and outdoor drainage should be considered alongside views and functionality.



Use trees and shrubs to increase shade



Large courtyards incorporating shading devices and vegetation are supplemented with wall mounted fans to maintain a cool temperature at Pilbara Tafe



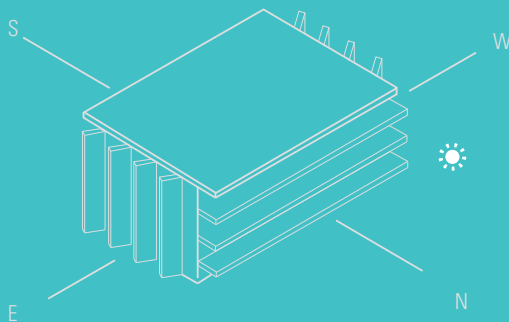
Zincalume and light colours reflect the sun

REDUCING YOUR ENERGY COSTS

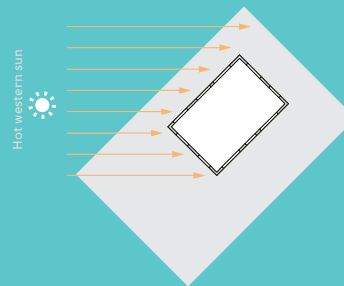
SUN AND SHADE

Sheltering your home and outdoor areas from the sun can greatly improve the indoor temperature and reduce your reliance on air-conditioning.

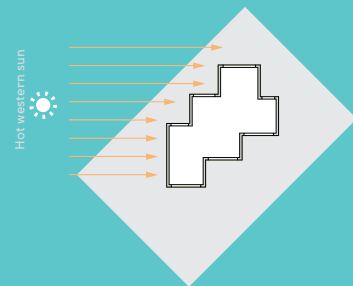
- ▶ Effective forms of shading include: deep recesses, external blinds, shutters, awnings, deep eaves, wide verandahs, screens, trellises, canopies and pergolas.
- ▶ Openings can be covered with solid panels or screens to allow air flow but also filter or block sun from entering the interior.
- ▶ Horizontal and vertical shading devices should be used for different orientations.



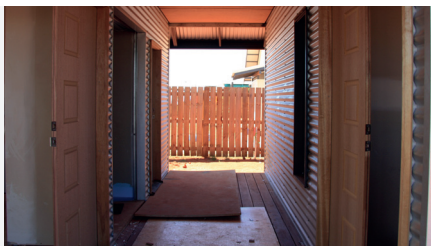
Horizontal and vertical shading devices should be used for different orientations



Windows inclined to the west are difficult to shade from the sun



Staggered walls which allow windows to face north or south are a simple design solution to western sun exposure



A breezeway allows for air flow past rooms



Design openings within interior walls

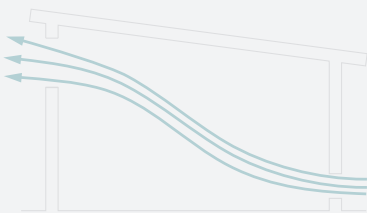


Original covered verandah with permeable screens that block direct sun while providing light and access to breeze

AIR FLOW

The more cool breezes that can move through your home, the less likely it is to heat up and the less money you'll spend on air conditioning. This will depend on several factors such as your house's shape and position, roof orientation, and ceilings.

- ▶ Breezeways, screened outdoor rooms and semi-enclosed verandahs can provide protected living areas with good air flow. In the evening, these spaces can be particularly cool and enjoyable.
- ▶ Open plan designs encourage air flow through interior spaces rather than trapping air in enclosed rooms.



Design should increase air flow

A HOME WITH STYLE AND CHARACTER

The Pilbara is just starting to get a sense of itself and as a community. Your new home can help to reinforce the region's unique identity by using historical design elements, whilst incorporating modern, climate-sensitive strategies.

As the Pilbara develops its own voice and sense of place it will attract more residents and visitors, encourage a higher quality of living and transform into a community adapted to its environment. A community that you will have helped define.

STARTING THE PROCESS

Talk to your builder about using the Pilbara Vernacular Handbook to help you create a more comfortable and cost effective living space.

For a copy of the Handbook visit landcorp.com.au/Pilbara-Vernacular or email landcorp@landcorp.com.au

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