

Regenerative Design

This fact sheet was produced by Cool in conjunction with Regen Studios to facilitate student's learning.

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Placemaking

Have you ever been to a place that is unique to all other places? Somewhere that you just want to keep going back to? What makes it special and how does it feel to be in this space?

Placemaking is the concept of preserving and/or improving a place with the intention of promoting people's health, happiness and well-being. It is a multi-faceted approach to planning and design that considers how to best utilise the community's assets and strengthen connections between people and place. It is usually associated with urban planning but it can also be applied to small public spaces as well.

When it comes to sustainable and regenerative design, it's important to note that it's not just about using renewable energy and sourcing sustainable materials. It's also about creating a place that is meaningful to you, members of your community, and future generations. Like placemaking, a regenerative approach puts life and connection at the centre of every decision made in the process - it is about bringing vitality and renewed growth to our urban places, communities and ecosystems.

In the context of your retrofit task, think about what is unique about the place you are retrofitting. Where is it located? What makes it special? Does it have a view? Where do you see opportunities to design the space for people to connect? How can you work with nature and bring natural elements into the design? Is there something of sentimental value that needs to be maintained, like an old fireplace, photo, or piece of furniture? How does the sun shine through the room at different times of the day?

Imagine what you could do in the space and the memories that could be created there. This fact sheet will dive into some aspects of design you can consider to help get you thinking about all the possibilities!

As Bill Reed from [Regenisis](#) (a world leader in the field of regenerative development) says: 'We can't save the world, we can only save places.'

"Creativity is the ultimate renewable energy."

– Ravi Naidoo, Design Indaba

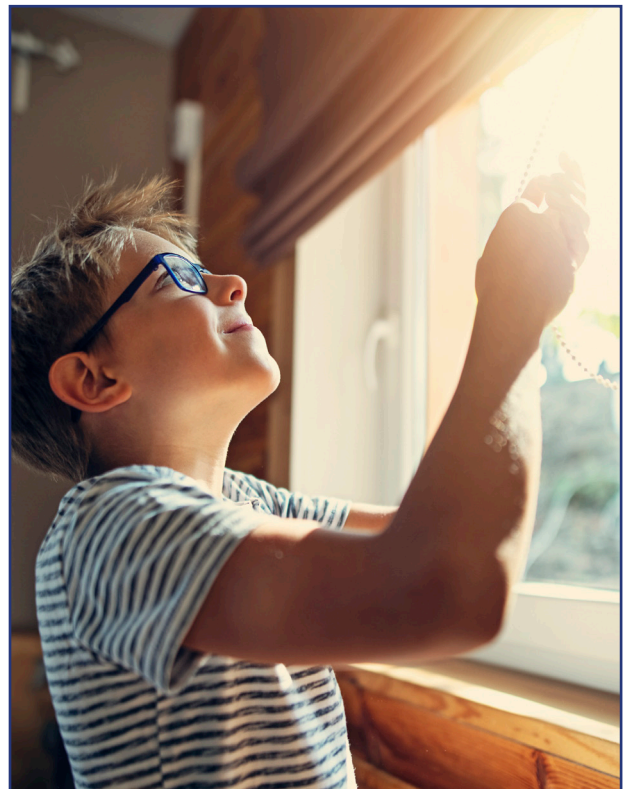
Location

Wherever you are in Australia, consider the positioning of the sun when you are designing your space. In northern parts of Australia, where it can get really hot, it might be best to avoid the sun to keep the room cool. In Tasmania and other places where the weather is fairly mild, maximising the heat from the sun can help you heat the room. Orientation and location are important to look at together when considering window openings.



Orientation

Which way is your room is facing? In the southern hemisphere, the sun rises in the East and sets in the West. Have you noticed if the room you are going to retrofit gets morning or afternoon sun? Make a decision about how much sun and natural light the space requires and determine the size of your window openings from that. Also, consider what the space looks out onto. Does it face the backyard or is there a view you want to capture? It's important to connect the room with the outdoors or what is happening around the space. This brings the outside to the inside.



‘The ultimate power to change the world does not reside in technologies. It relies on reverence, respect and compassion – for ourselves, for all people and for all life. This is regeneration.’

– Paul Hawken

Glazing & Windows

One of the best-known properties of glass is that it can be a great thermal insulator. As part of a double glazing window system, it can prove really effective for keeping indoor temperatures consistent so heat isn't lost or gained quickly. This is one of the most expensive parts of building a house but it is one of the most important things to consider. Windows also help to keep the air moving in the home and give a view to the outside world. Finally, they help us control the amount of natural light we allow into spaces. Have you ever been into a room that gets really hot in the afternoon? Perhaps the window is too big and is letting in too much afternoon sun. Consider windows in your retrofit task and how you can utilise them to rejuvenate and maintain the interior.



Soft Furnishing & Curtains

Never underestimate the power of curtains! They trap heat on cold days and keep it out on those hot days. There are many types of fabrics that can be used and so it's important to consider what they are made out of and how they have been produced. Some fabrics contain chemicals that can trigger allergic reactions whereas an all-natural material like linen is hypoallergenic. When considering fabrics and soft furnishings, find out how companies manufacture them and if they are done fairly and sustainably. For example, while there are lots of organic fibres out there, how are they farmed? What is the company doing to reduce its carbon footprint?



Passive Heating & Cooling

There are many ways to passively heat and cool a space. One way is through the use of windows and curtains to control the amount of sun coming in. Passive heating and cooling increases the comfort of a room but can also save on energy costs. Other benefits of heating and cooling can include less dust and noise, which we can all do without. An innovative way of passively cooling is to bring water features and greenery into the home.

Insulation

Insulation can be placed in walls and like soft furnishings, there are many materials that can constitute insulation. Traditionally, they are made of fibreglass, which can cause irritation to the nose, throat, eyes and skin if not wearing appropriate personal protective equipment during installation. Luckily, there are many insulation products that are sustainable, and are even made of recycled fabric which are safe to install, and give new life to otherwise disposed fabric.



Planting Green Spaces

Plants can make spaces healthier by purifying the air and contributing to our well-being by allowing us to connect to nature. Consider bringing plants inside your space and also around the edges. For example if an external window doesn't have a view or faces a wall, a planter box can 'green' the space. Plants are also another way of providing shade.

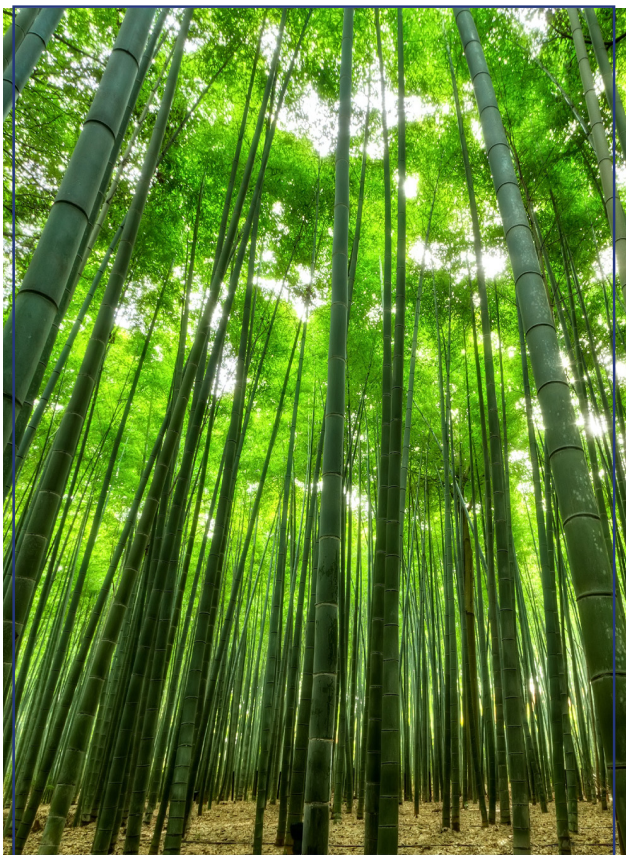


Regenerating The Economy

Have a look and see where you can purchase materials that support local businesses and research how their products or services are benefitting people and the planet. Retrofitting a space can not only improve the space you are designing, but also the community by supporting the local economy.

Recycled and Natural Materials

There are many materials that can be used when retrofitting a space. Fabrics, timber, or repurposed furniture. Consider where you can use these in the retrofit to avoid extraction of new materials. For example, if you're planning on including cabinetry, what can you recycle to build it?



Bamboo

Bamboo requires little to no irrigation. It produces more oxygen than trees and sequesters carbon dioxide. It is also carbon neutral. Bamboo can be used as an alternative to timber, which requires tree felling to be used. Bamboo can be used in buildings, clothes, furniture, and other textiles such as rugs.

Beeswax

Beeswax can be used as a natural alternative to mineral based lubricants and sealants. The uses of beeswax include waterproofing homes such as around windows, as a lubricant to avoid splintering, and as a furniture polish. For beeswax to be sustainable, it must be harvested in a way that protects the bees and the integrity of the hive. Ensure you're sourcing from farms and makers who support ethical farming.



Hemp

Hemp is a natural fibre made from a fast-growing plant that requires little water and improves soil quality. It can be used in textiles, buildings and as an alternative to plastic. It has high insulative qualities and is a natural deterrent to pests, which makes it ideal to use in homes. As a regenerative crop, it returns nitrogen back to the soil and can be harvested in 3-4 months. It's timber competitor takes 20 years! Hemp is also an alternative to using concrete and can sequester large amounts of Carbon Dioxide for over a 100 year cycle!

Nature Inspired Design or Biomimicry

Biomimicry looks to nature to inspire design. It can involve applying colours or adopting patterns or forms that occur in nature, right down to mimicking natural heating and cooling systems.

Consider the various ways you can solve challenges and renew a space by looking at designs in nature, such as:

- Planning a room to have more organic spaces
- Applying a nature-inspired colour scheme (dark colours for floors, mid-tones on walls, light on tops/ceilings to represent the sky or the sun's rays)
- Incorporating living walls (such as vertical gardens or other natural features like a garden void)
- Cooling a space with a water feature.

These are not the only ways you can create nature inspired design throughout a home. Workshop and brainstorm some ideas with nature at the forefront of your decision making and the sense of tranquility this redefined space can evoke.



“After decades of faithful study, ecologists have begun to fathom hidden likenesses among many interwoven systems. A canon of nature’s laws, strategies, and principles...

Nature runs on sunlight.

Nature uses only the energy it needs.

Nature fits form to function.

Nature recycles everything.

Nature rewards cooperation.

Nature banks on diversity.

Nature demands local expertise.

Nature curbs excesses from within.

Nature taps the power of limits.”

– Janine Benyus, Co-founder of the Biomimicry Institute



Architect Javier Senosiain has created a remarkable home inspired by the shape of a peanut. Organic House is a unique home designed to seamlessly integrate with the natural landscape: The green dune wraps itself around the inside spaces. From the outside, it almost seems invisible and all you can see is it grass, bushes, trees, and flowers.