



# WORK BOOK

## SUSTAINABILITY FOR THE TOURISM INDUSTRY



# AN OPPORTUNITY TO DO GOOD

We are in an era of desire for green and clean. Responsible tourism is no longer a buzz word, but a genuinely book-able search term. With climate change and sea level rise, environmentally sensitive is no longer a choice but a necessity. And sustainable is now a requirement in many production industries.

The advantages are clear. By being active with our sustainable initiatives, you can contribute to the wellbeing of construction workers, staff and guests. You can gain and promote your accreditation as an eco-friendly provider while you save money on resources. You can simply improve your long term health and vitality because you live and work in a clean, healthy and flourishing environment. And you can share with your visitors and guests the joy and beauty of creating and maintaining something that has long term benefits to the earth.

So what do you need to know about when considering eco, green or sustainable?

- How to minimise impact on the surrounding ecology.
- Where products and materials are coming from.
- How materials are made and disposed of afterwards.
- Technologies and design strategies for energy and resource efficiency, waste recovery and minimisation.

You'll also need to decide how eco-design will impact your tourism offering as well as your ongoing business management. Will the property look and feel 'eco'? How will you manage temperature sensitive product? How will you manage workplace comfort and guest preferences? Will you need management guidelines and training for staff? Will you pursue accreditation as an eco-tourism offering?

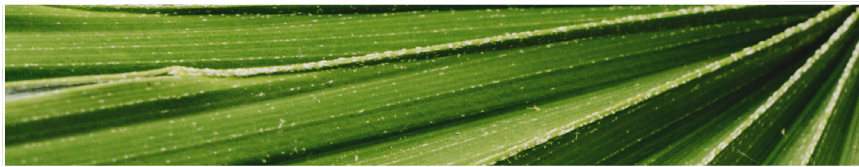
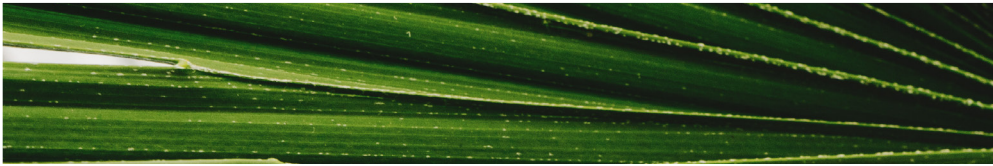
This guide and workbook is designed to help you understand the options and is provided as information to help you 'do good'. Not all items are the right fit for or relevant to every place and business, and as such assessment of appropriateness should be taken before adopting any measures. It is not intended to be a certification program, nor does it replace a formal management plan, however we hope it is a helpful tool in assessing your current practices and inspire ideas for change.

If you are interested in learning more, we recommend the following resources:

Download certification information from [Ecotourism Australia](#)

Get advice from your state or territory Department of Environment

[Contact us](#) at Studio S2 Architects for a chat.



# WHAT ARE THE SUCCESS FACTORS?

## **Location**

If you have the opportunity to revitalise a dilapidated or select a new position, choosing the right location for your activities is critical, both with regard to the regional location and siting of the buildings and infrastructure on the block. Careful selection can allow you to best minimise your impact on the site's natural flows, eco-system and biodiversity, as well as your up front costs and attractiveness to your target market.

## **Energy and Water Use, Waste Reduction**

Energy (power, gas and other fuels) and water are used throughout a building and landscape, and analysis of where these are being used in large proportion is an important first step. Heating and cooling, lighting and hot water normally account for most of the energy use, and most of the water is used in guest suites, kitchens, toilets and laundries, normally with only a small proportion in gardens and pools.

## **Landscape & Garden**

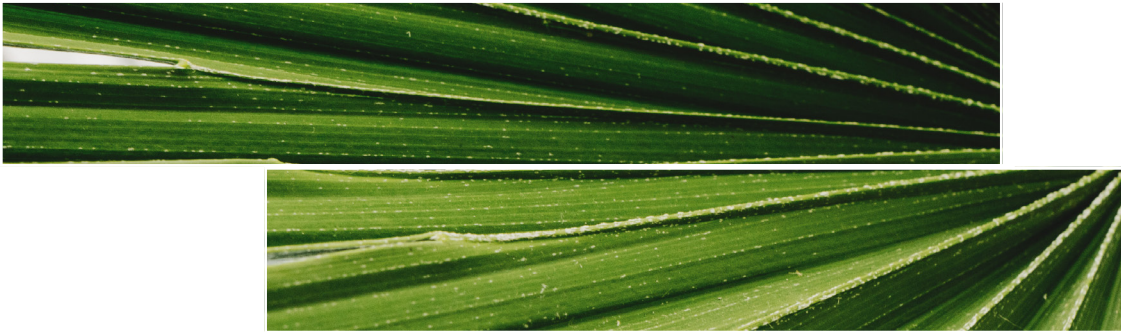
Rejuvenation and revegetation of the natural environment from past damage or damage caused by your project is an important and often overlooked aspect of environmental design. The transition between the buildings and nature is also really critical to making the psychological connection that your place cares about the environment. Purposeful drainage, soil management and storm water management can all assist with a better environmental and sustainable outcome.

## **Materials & Products**

Using low embodied energy materials, minimising waste and giving preference to recyclable and biodegradable items, and selecting products for their low toxicity are key to materials that are healthy for people and the environment. This is a preference for low embodied energy products and materials, and local, clean and natural products and suppliers. Look for opportunities to better track where things came from and how they can be disposed of responsibly.

## **Community**

The community benefit of sustainable behaviours can be felt across your business, region and local economy. Shopping local and encouraging your guests and visitors to do the same brings mutual support, and grows the local economy. This provides a variety of employment and draws more people to the region. Particular support for the uniqueness of your community helps create a flourishing destination for tourism.



## WHAT ARE THE SUCCESS FACTORS?

This workbook breaks the above categories into key ways to approach reducing impact:

**Improve Impact** – Reduce the need for the resource as a first step to minimising impact. Utilise existing rather than creating something new. Make a different choice that avoids impact in the first place.

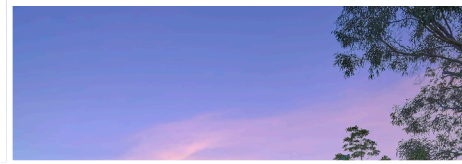
**Reuse/ treatment** – Reuse existing resources or treat resources used to make them more able to be dealt with by natural systems.

**Produce** – Grow, make, harvest or harness your own resources on site or source them locally instead of bringing them in from elsewhere.

**Access** – Make sure that what you offer is accessible to visitors.

**Experience & Educate** – Express your approach to your environment in a tangible way so that the tourist can take away an experience that they can apply to their day to day lives and extend an environmentally conscious and sustainability driven approach. Offering training and information can assist with staff understanding and participation. But it can also help build your reputation, attract like minded staff, and organise your operations so that your sustainable measures are consistently and naturally implemented.

# LOCATION



Urgent  
Acceptable  
Perfect

## IMPROVE YOUR IMPACT

- |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Protect vegetation areas, especially native zones   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Protect culturally sensitive sites  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Have cultural sites examined by the cultural owner  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Minimise disturbance on the natural land and vegetation:  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Utilise naturally flat and accessible areas   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Establish erosion controls and prevention plants or barriers                                    |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Identify and control contamination and pollution risks - chemical, industrial, fuel, pesticides |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Install sediment control to prevent blockage of natural systems and loss of top soil            |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Maintain natural flow of water, flora and fauna   |

## REUSE/TREATMENT

- |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Use previously disturbed sites rather than undisturbed sites                  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Plant new, native or region appropriate vegetation                            |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Decontaminate soil and water sources  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Plant new water filtration reed beds  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Create new habitats - creek beds, rocky outcrops, bird hides, bee sanctuaries |

## PRODUCE

- |                          |                          |                          |  |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Optimise building orientation for desirable heat from the sun                    |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Optimise building shading to minimise unwanted heat                              |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Capture cooling breezes and exclude cold winds                                   |
|                          |                          |                          | Consider how existing features can be advantages for sun, wind and water access: |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Shadow patterns from buildings and vegetation                                  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Land form, hillsides and valleys   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Waterways & catchments   |

## ACCESS

- |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Only venture off formed or designated roads where it is considered appropriate.     |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Provide accessibility for all customers with a physical or intellectual disability. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Choose sites that build upon existing infrastructure and add to local assets        |

## EXPERIENCE

- |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Provide access and exposure to nature-based experiences                       |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Tell the story of how the site was selected and outlining the above decisions |

# WHAT IS PASSIVE DESIGN?

Did you know that buildings can be designed to operate using little or zero externally produced power and water? Sometimes they have sophisticated power generation systems, but more often they use traditional systems that people have been using for hundreds of years to keep our buildings comfortable. These techniques aim to get sunlight, warmth and cooling breezes into the building, and stop too much heat getting in during summer and being lost in winter. This is what we call passive design.

The fundamentals are simple.

1. **Shade.** Locate deciduous plants, trees and vines or movable screens to keep the sun off the building in summer, but let it in during winter.
2. **Air movement.** Openable windows that are angled to capture the best of the predictable seasonal breezes are just the beginning. Creative design of air movement can mean creating a hot zone (like a greenhouse or glass chimney) and a cool one (like a fernery or water feature), so that air is naturally drawn across a building from cool to hot, or rises and is exhausted.
3. **Thermal mass.** The key to keeping a building warm at night is to heat up something really dense, and then trap that heat in overnight. Concrete floors or brick walls that are exposed to the sun during the day do a great job of this. Then we close heavy curtains and seal leaks to keep as much of that warmth inside as possible until morning.
4. **Light.** Balancing the need for good, even lighting is a delicate exercise. Too much light and you get glare and heat. Too little and you need to turn a light on. In Australia, south facing windows do the best job of getting clear and even light into a space.

# ENERGY, WATER & WASTE

Urgent

Acceptable

Perfect

## IMPROVE YOUR IMPACT

### DESIGN ADVICE OR REVIEW

- |                          |                          |                          |  |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Get a professional detailed audit done to identify areas for improvement and create a schedule for replacement/ update/ improvement on your existing building and grounds and operation. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Have a professional lighting plan done that minimises power consumption  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Conduct a greenhouse gas emissions or carbon footprint analysis  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Optimise your building size and how you use the spaces - unused or oversized spaces use more energy.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Regularly assess energy use and look for ways to optimise.   |

### HEATING, COOLING AND VENTILATION

Building design optimises natural heating and cooling opportunities:

- |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"><li>• 'Block out' or 'let in' the sun at different times of year using shading devices like screens, awnings or openable verandahs.</li></ul> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"><li>• Install doors and windows sized and located to control natural light and heat from the sun</li></ul>                                    |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"><li>• Install doors and windows sized and located to capture desirable breezes</li></ul>  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"><li>• Double glazing installed to keeping desired heat in, appropriate to the location's climate.</li></ul>                                   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"><li>• Tinted glazing installed to aid 'blocking out' incoming heat appropriate to the location's climate.</li></ul>                           |

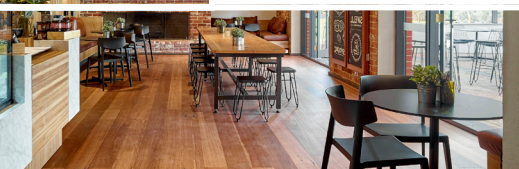
Building materials help control the comfort of the space.

- |                          |                          |                          |  |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"><li>• Thermal mass is located appropriately</li></ul>                            |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"><li>• Materials are coloured to attract or reflect heat as appropriate</li></ul> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"><li>• Skylights are treated for heat and sun control</li></ul>                   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"><li>• Install insulation</li></ul>   |

- |                          |                          |                          |  |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Natural ventilation is maximised, minimising the need for air conditioning |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Ceiling fans are installed   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Windows are openable   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Heating/cooling is restricted to areas that actually need air conditioning |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | because of the way they are used   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Air conditioned areas can be separated from unconditioned spaces           |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Air conditioners and other energy consuming appliances are controlled on   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | timers or automatic switches so they are used only when required           |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Upgrade seals around doors and windows, install self close devices         |

# ENERGY, WATER & WASTE

- | Urgent                   | Acceptable               | Perfect                  |  |
|--------------------------|--------------------------|--------------------------|--|
|                          |                          |                          | <b>WATER HEATING</b>   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Install water efficient tapware throughout the building  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Insulate hot water pipes to prevent heat loss in the walls   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Water heating uses renewable energy sources ie solar hot water system, recovered heat systems.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Reduce the temperature of the water  |
|                          |                          |                          | <b>LIGHTING</b>  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Let enough sunlight into the building that lights are not needed in daylight   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Minimise external lighting to orientation, security and safety   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Minimise illuminated signage to emergency exits and safety wayfinding  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Install energy efficient lighting  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Install movement detectors and/or lighting level detectors to control lighting   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Customers provided with portable lights to avoid fixed outside lighting  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Turn lights and appliances off in offices at the end of the day  |
|                          |                          |                          | <b>EQUIPMENT AND APPLIANCES</b>  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Cool rooms/refrigeration are designed to give maximum efficiency for the use   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Energy efficient equipment with good or excellent energy efficiency ratings  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Activate sleep or low-energy mode  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Schedule regular maintenance   |
|                          |                          |                          | <b>FUEL USE</b>  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Use manual equipment instead   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Efficient use of technologies that minimise fuel/electricity consumption and emissions generation and use of cleaner fuels can all help to reduce emissions. |
|                          |                          |                          | With respect to any equipment used by the business (e.g. mowers, generators, chain saws, vacuums/blowers, floor polishers, compressors):                     |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"><li>• Equipment operators have undertaken training in fuel-efficient operating techniques where applicable;</li></ul>      |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"><li>• All equipment is regularly serviced and maintained;</li></ul>  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"><li>• Rechargeable batteries for portable equipment are used where practical;</li></ul>                                    |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"><li>• High efficiency motors are used where possible;</li></ul>  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <ul style="list-style-type: none"><li>• Use alternative fuels such as hybrid-electric, biodiesel or bioethanol</li></ul>                                     |



# ENERGY, WATER & WASTE

- | Urgent                   | Acceptable               | Perfect                  |   |
|--------------------------|--------------------------|--------------------------|---|
|                          |                          |                          | <b>WATER USE</b>  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Conduct a professional water audit and recommend measures to reduce overall consumption.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Regularly assess water consumption.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Check for leaks, drips and unnecessary running water.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Replace inefficient water features  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Install water efficient fixtures – above base standards   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Have water saving devices fitted.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Ensure all appliances are water efficient.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Install waterless toilet systems  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Install water saving toilet systems   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Timer devices fitted to fixtures to reduce shower times   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Avoid appliances that use a lot of water (ie plumbed wok) where possible  |
|                          |                          |                          | <b>Exterior</b>   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Low water plants (local natives)  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Direct watering systems (drips)   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Add measures to aid water retention (soil treatment, mulch)   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Reduce the amount of hard surfaces (paving, roofed areas)   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Avoid washing down hard surfaces where possible   |
|                          |                          |                          | <b>VEHICLE USE</b>  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Schedule deliveries to minimise trips   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Schedule multiple deliveries along a route  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Offer alternative transportation - bikes, electric vehicles, carpooling, shuttles   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Provide bike racks  |
|                          |                          |                          | <b>WASTE REDUCTION</b>  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Conduct a waste audit/assessment  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Purchase products in reusable and/or returnable containers  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Work with suppliers and vendors to reduce packaging   |
|                          |                          |                          | Encourage recycling and responsible waste disposal  |
|                          |                          |                          | <ul style="list-style-type: none"><li>• Use rechargeable batteries where possible</li><li>• Provide cigarette disposal bins in smoking areas</li><li>• Provide recycling bins across the property</li><li>• Recycle all recyclables including: Batteries, Yard waste, Plastic, Ink cartridges and laser toner cartridges, Electronics such as computers and televisions, Carpeting.</li></ul> |

# ENERGY, WATER & WASTE

## Paper waste reduction

- Default printers and photocopiers to print double sided
- Utilise email and bulletin boards over hard copy for internal and external communications
- Collect and use the back side of single-sided printed paper as scratch paper
- Digitise processes that currently require paperwork
- Check for double-ups in physical mailing lists
- Create reusable display-boards for sales and features
- Request digital copies of catalogues from suppliers
- Print on recycled paper
- Use non-bleached paper products where applicable

## Consumables waste reduction

- Install high efficiency air hand-dryers, cloth or roll dispensers to minimise paper towel usage
- Reuse packaging materials for packaging and shipping needs
- Encourage staff to use less consumables - dishwashing liquid, paper towels, etc.
- Eliminate use of polystyrene and other difficult to recycle products
- Eliminate single-use plastics
- Put a preference on reusable over disposable, if cleaning allows
- Use disposable products that are compostable or recyclable
- Donate obsolete or unwanted equipment to charity
- Donate unused food to a community food bank or compost
- Provide incentives and discounts to customers and employees to use refillable mugs and to-go containers
- Choose products that are recyclable, and have high recycled content
- Purchase products, such as condiments, cleaning supplies, and other durable products in bulk and in concentrated form when possible
- Purchase used/antique furniture and equipment or that is made locally
- Purchase durable goods to allow reuse, refinishing, and/or reupholstering
- Recycle damaged fabrics as cleaning rags

## Stock waste reduction

- Install water filter taps instead of purchasing bottled water
- Reduce waste from expired stock by using effective inventory control

# ENERGY, WATER & WASTE

- | Urgent                   | Acceptable               | Perfect                  |  |
|--------------------------|--------------------------|--------------------------|--|
|                          |                          |                          | <b>REUSE/TREATMENT</b>   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | WASTEWATER   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Install a certified and well-maintained grey water treatment system  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Irrigate landscaping with treated grey water   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Consider composting toilets  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | For onsite septic systems, ensure system is well maintained.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Collect and recycle washdown water where appropriate   |
|                          |                          |                          | <b>HEALTH</b>  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Use biodegradable cleaners that are compatible with wastewater and effluent treatment and disposal.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Identify and monitor natural systems that can be used to assess the quality of the environment and how it changes over time.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Create enclosed or banded areas to contain run-off from washdown areas.  |
|                          |                          |                          | <b>PRODUCE</b>   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Produce clean and renewable energy on site - Solar panels for lighting, hot water, refrigeration on tour etc.; Heat exchange hot water systems; Electricity generation using biomass fuels, wind power, micro-hydroelectricity; Geothermal energy. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Purchase GreenPower from accredited energy retailers.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Invest in technology that can recover heat from equipment (e.g. waste heat from a diesel generator is used to heat hot water).   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Plant a sustainably grown wood lot to supply wood for heating systems  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Rainwater from roofs and other surfaces collected in tanks   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Rainwater reused in landscaping, toilet flushing or laundry  |
|                          |                          |                          | <b>EXPERIENCE</b>  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Provide waste reduction education to staff/employees   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Educate staff on water efficiency best practice  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Tell the story of your energy and water efficient design ideas to visitors   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Communicate how to efficiently operation within the buildings – ie when to open shading blinds, curtains.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Explain your wastewater treatment and reuse systems  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Explain your Energy and Water efficient practices  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Guests are encouraged to reuse towels and sheets before laundering   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Guests are given a water budget (small tank for water supply, time limited showers)  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Display energy and water production data   |

# PROS AND CONS OF RENEWABLE ENERGY

Renewable energy sources are becoming more readily available in the mainstream economy. They include wind power, geothermal energy, solar energy, hydropower, tidal energy, and hydrogen. There are many advantages to 'clean energy' but there are also disadvantages that need to be considered before making a commitment.

Here are some of the most important pros and cons of using clean, renewable energy:

## ADVANTAGES

- Won't run out compared with fossil fuels, which are increasingly difficult to source and with higher environmental impacts.
- Has lower maintenance requirements because they have fewer moving parts and don't rely on combustible or flammable fuels.
- Save money in maintenance and running costs.
- Cleaner air and water due to low greenhouse gas emissions produced in power generation, and less harmful and toxic pollutants.
- Has less harmful bi-products.

## DISADVANTAGES

- High upfront costs.
- Less reliable and consistent sources.
- Limited storage capabilities of batteries.
- The manufacturing, transportation, and installation of equipment and batteries is usually in factories that are powered by fossil fuels and transported on trucks.
- The materials used in manufacture in elements of renewable energy production include non-renewable, non-recyclable and environmentally damaging.

# LANDSCAPE & GARDEN

Urgent	Acceptable	Perfect	
			<b>IMPROVE YOUR IMPACT</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ensure non-native invasive species, pests and diseases are not introduced.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Create pathways and boardwalks to control movement through protected areas, constructed to minimise the impact on the area
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Consider re-landscaping with native local species if you have exotics.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Avoid pesticides and herbicides that cause residual pollution.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Avoid extreme land shaping and surface modifications.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Allow drainage to follow essentially natural paths
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stabilise and rehabilitate existing degraded areas
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Get professional advice about soil and water management
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Check rainwater drainage to ensure it is not causing damage to buildings, erosion or landscape surfaces.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use electric or manual landscaping equipment
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adjust watering cycles according to season and need, and time watering to low evaporation times of day
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Raise lawn mower cutting height to cut down on evaporation
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Inspect irrigation for leaks and uniform distribution regularly
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Place ornamental water features in shaded areas
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Avoid runoff and make sure sprinklers do not run onto sidewalks paved areas
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Install rain shut-off or moisture sensors to ensure against over watering
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mulch around plants to limit evaporation and discourage weed growth
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Avoid extravagant uses of water such as hosing down sidewalks, driveways, and parking lots
			<b>REUSE/TREATMENT</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Create an on site nursery
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Collect stormwater for reuse, infiltration or irrigation
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Create permanent sediment traps or constructed wetlands, trash racks, gross pollutant traps and/or oil and water separators
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Create a composting area
			<b>PRODUCE</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Grow fruit and vegetables on site
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Keep livestock for eggs, milk, weed maintenance
			<b>EXPERIENCE</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Offer information and tours of local native flora and fauna
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Allow visitors to get involved with revegetation programs and nurseries
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Invite visitors to participate in landscape maintenance – re-mulching etc
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ensure that interactions with wildlife is done at a safe and respectful distance

# WHAT IS EMBODIED ENERGY?

Embodied energy is the term used to describe the total energy used to produce and use materials. It includes the energy used to source the raw material, such as mining iron ore, and manufacturing energy that converts the raw material into a usable materials like steel. It also includes the energy used to produce components of buildings or equipment, and assemble the item; the transport between manufacturing, sales and construction sites; and the energy to install them in place. Energy used in repairs and renovations, and also what is required to recycle, is accounted for.

Embodied energy varies enormously between materials, manufacturers, raw sources and locations. Materials also have different capacities for reuse or recycling, so some of that energy may be recovered at the end of a building or piece of equipment's life.

In considering embodied energy, it is also important to note that sometimes low embodied energy items require more energy to operate, and sometimes high embodied energy products make a big impact on operational energy costs. A good example of this is concrete, which has a high embodied energy, but used as thermal mass can make a big impact on reducing the need for heating and cooling. So choosing the right products can be a complicated task, but one that can make a significant impact on the environmental footprint of your place.

There are a few key considerations that will help with your decision-making. In general:

- Reduce reliance on materials with high embodied energy, unless you can identify where they can reduce operational energy
- Source local materials to reduce transportation.
- Reuse existing materials and reduce the need for new
- Choose new materials that are made with recycled or biodegradable content
- Design for a long life as well as disassembly for ease of reuse and recycling.

# MATERIALS & PRODUCTS

Urgent  
Acceptable  
Perfect

## IMPROVE YOUR IMPACT

- |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Conduct a life cycle analysis for major investments               |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Consider the embodied energy of all purchases                     |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Develop an environmentally friendly procurement policy            |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Look to work with suppliers with their own environmental policies |

## AIR QUALITY

- |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Low or no-VOC materials and paints to minimise toxic fumes  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Naturally ventilate to reduce the build up of any material off-gassing  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Smoking is restricted to designated areas and prohibited in natural areas and in any vehicles, vessels, or aircraft, or in any buildings used by guests |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • The air conditioning and refrigeration systems is maintained regularly by a licensed air conditioning or refrigeration technician                       |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Bio-diesel, low sulphur diesel, LPG, ethanol, pyrolysis oils or natural gas is used for all vehicles and engines.                                       |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • There are no hydrocarbon emissions from machinery.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • No solvents are used and dry cleaning is not offered  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Use cleaning products that don't off gas any harmful chemicals  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Address the root cause of odors rather than masking them with the use of artificial air cleaners or refreshers  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Use high quality air filters  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Inspect and test for airborne toxins such as gasses, asbestos, mould  |

## ENVIRONMENT

- |                          |                          |                          |  |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Timber treated with arsenic or copper is not used  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Soil and gravel brought in is free from weeds and plant diseases   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Vehicles used to transport materials to the site are cleaned to control the transfer of weeds, fungi and diseases; |

## MATERIAL SELECTION FOR NEW BUILDINGS AND STRUCTURES

- |                          |                          |                          |  |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Excavation has been kept to a minimum    |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • A low impact foundation system           |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Sustainable materials have been selected |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Chosen materials are low embodied energy |

## CHEMICALS

- |                          |                          |                          |  |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Ensure proper use, storage, and disposal of cleaning products and other potentially harmful chemicals such as fertilizers and paints |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Limit the number of chemical products used and stored  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Ensure that all chemicals are securely stored and clearly marked   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Monitor equipment for leaks including fire extinguishers, coolant, fuels   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Change to organics   |

# MATERIALS & PRODUCTS

Urgent

Acceptable

Perfect

## ONGOING MAINTENANCE

- |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Materials are selected to reduce ongoing maintenance and replacement                  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Use an integrated pest management (IPM) system for interior and exterior pest control |

## TRANSPORT

- |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Building materials have been sourced locally where possible |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Labour has been sourced locally                             |

## DURING CONSTRUCTION

- |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Make sure that staff, employees and contractors understand the natural and cultural values of the area and measures necessary for environmental protection. |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Renewable energy is used to provide power used in construction  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Construction methods are used that reduce energy use  |

## CLEANING

- |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Use a linen service with eco-credentials, or a high efficiency washing machine with disinfecting capabilities |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | • Follow best management practices for fats, oil, and grease  |

## REUSE/TREATMENT

- |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Recycled building materials have been used as a dominant source of material;  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Waste to landfill has been minimised during construction;   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Building waste is repurposed on site (ie plaster and timbers broken down and used in landscaping where appropriate, left over materials used in smaller projects) |

## PRODUCE

- |                          |                          |                          |  |
|--------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Materials are sourced from the project site – timbers from trees needing removal, soils for rammed earth from excavations, materials from demolished existing buildings. |
|--------------------------|--------------------------|--------------------------|--|

## EXPERIENCE

- |                          |                          |                          |   |
|--------------------------|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Communicate why certain materials have been selected.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Display and explanation of different materials - Alternative materials are displayed in a way people can interact with them – ie exposed so they can be touched |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Educate staff and visitors about cleaning and containment best practice   |

# SUSTAINABLE TOURISM IS A SOCIAL INVESTMENT

The United Nations say that social sustainability is about identifying and managing business impacts, both positive and negative, on people. In tourism this might mean creating responsible travel opportunities or certified ecotourism offerings. It might also mean supporting local artisan offerings and being part of community events and organisations. It should definitely mean embracing where you are by expressing the unique customs and lifestyle of your place.

We think social sustainability is also about your people. It's about your staff, neighbours and local community. It is an investment in good neighbourliness and community mindedness, to the mutual benefit of all.

Create things that

- Benefit local communities
- Supported by local communities
- Are authentic and natural to operate
- Are respectful of place and custom
- Are an asset to the local community
- Help communities build income and employment
- Allow tourists to appreciate the local situation in a new way
- Expose local issues and foster solutions
- Help restore rather than damage
- Are safe for people who are unfamiliar with place and culture
- Don't further exploit resources
- Enhance enjoyment for local as well as tourist.

# COMMUNITY

Urgent  
Acceptable  
Perfect

## IMPROVE YOUR IMPACT

### ON A BUSINESS DEVELOPMENT LEVEL

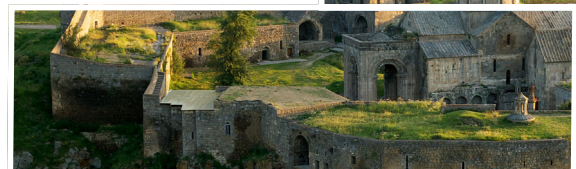
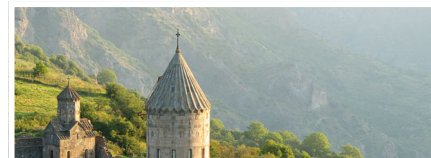
- Follow standards for development and construction that take into account community values, distinctiveness, and sense of place Use regional/ traditional and locally grown agricultural products
- Adopt development strategies that result in a constructive and collaborative relationship with local community
- Direct development towards existing local communities that are already served by infrastructure and utilize the resources they have to offer
- Develop methods of establishing dialogue with local representatives to determine socio-cultural and economic impacts
- Ensure that operational demands for basic services (water, electricity, roads, food, and other resources) do not compete with local needs

### ON A LOCAL LEVEL

- Participate in community events and support local and conservation initiatives
- Give preference to local product, trades and services, where appropriate
- Screen noisy areas to avoid nuisance to neighbours
- Train staff to ensure they are well-informed on local customs
- Make your property available for community events
- Incorporate traditional local arts and crafts in your facility and make information available to customers
- Use regional/traditional and locally grown agricultural products
- Support volunteer opportunities for customers and staff
- Participate in local conservation efforts.
- Provide information on how staff and customers can become involved in community projects such as posting project information in common areas and offer transportation assistance when needed

### ON A WELLBEING LEVEL

- Allow flexible staff schedules to minimize staff travel during heavy traffic
- periods
- Maintain “quiet” hours in the evening and early morning for staff and customers. Avoid noise intrusion by scheduling service and repairs at optimum hours
- Place insulation around loud equipment



# COMMUNITY

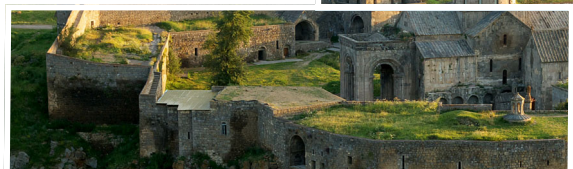
Urgent  
Acceptable  
Perfect

## PRODUCE

- Provide Economic Benefits to Local and Indigenous Communities
- Provide information to and encourage customers to purchase local products and services
- Provide employment opportunities for local community members
- Allow local artists to display and sell their handicrafts and art work at your property
- Provide information to customers on local attractions and cultural activities
- Form partnerships with locally owned businesses (e.g., transportation and guide services)
- Support training for community members for non-competitive tourism-related activities that compliment your business

## EXPERIENCE

- Develop informative educational materials for customers about the local community and local history
- Use appropriate and authentic cultural elements from the local region
- Create an environmental program that includes stakeholder participation and input
- Place informational signing about your organization's sustainable practices is placed around the property in appropriate places
- Provide an incentive program for staff and customers to participant in your business's' current sustainable practices
- Notification about sustainable efforts is provided to customers in publications, advertising, and web site
- Offer feedback or comment cards to get customers and staff input on further sustainable practices
- Educate other businesses about sustainability by speaking at events and conferences and providing tours of facility's sustainable practices
- Provide continuing sustainability training for staff and forums for staff input
- Participate in an environmental or sustainable tourism certification program.



# TIME TO PUT YOUR TOOLS TO GOOD USE

Studio S2 Architects are not your average design team. We specialise in tourism because we love it - we live and breathe tourism and we have a network of connections as well as insight into the industry because we spend so much time digging around behind the scenes. It is our delight to be able to provide you the latest information about how buildings can attract visitors, meet and exceed demand and drive growth for your business, and connect you with a team of people who can help bring it all together.

Need help to design your space and place?

ACCESS OUR OTHER RESOURCES AT

[www.studio-s2.com.au](http://www.studio-s2.com.au)

GOT QUESTIONS?

Contact us at the details below and let's just start with a coffee.

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