Challenges for Sustainable Regional Tourism:
A Best Practice Model for Low-impact Nature-based Tourism Facilities
in Remote Areas

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Abstract
In the wake of a major tourism development proposal being refused for the Coral Coast region of Western Australia there is again a focus on developing strategies for more sustainable facilities that support ‘low-impact nature-based tourism’. The Environmental Technology Centre at Murdoch University, together with the Faculty of Architecture, Landscape & Visual Arts at The University of Western Australia, is undertaking a study for the CRC for Sustainable Tourism to develop a Best Practice Model for Sustainable Tourism Facilities in Remote Areas. There are currently numerous environmentally sustainable guidelines, accreditation schemes and assessment systems in operation throughout the world and in Australia. The majority of these relate to the niche eco-tourism market and include the Draft International Ecotourism Standard and NEAP (Nature and Ecotourism Accreditation Program). There is also a clear and generally accepted industry understanding of what constitutes the principles and standards of sustainable tourism. Yet there is industry concern about the difficulty and cost of compliance and gaining accreditation to be considered as sustainable. This project will develop a holistic and independently verifiable ‘best practice’ assessment system that is both user friendly for operators and also sets an aspirational and creative cross-cultural bar across the full range of sustainability criteria for low impact, nature based facilities. The project has involved visits to a number of low-impact facilities throughout Australia with the intention of assessing the implementation of guiding principles and to apply the assessment criteria to such facilities. The challenges that face implementation of such a model include economic viability for industry, acceptance by Local Government Authorities, and the appropriate mechanisms to assess and license such developments in nature conservation reserves by State Government agencies.

1. Introduction
This CRC for Sustainable Tourism funded project will create a ‘Best Practice Model’ for Sustainable Tourism Facilities in Remote Areas. There are currently numerous guidelines for environmentally sustainable development, accreditation schemes and assessment systems in operation throughout the world and in Australia. There is a clear and generally accepted industry understanding of what constitutes the principles and standards of sustainable tourism. As yet there is no identified model for low impact, nature based, remote area tourism facilities. This project will develop an holistic ‘best practice’ model that is user-friendly and informative for operators and also sets an aspirational bar across the full range of environmental sustainability criteria for low impact facilities. It will also address Aboriginal cultural protocols to promote greater Aboriginal participation in the industry. The key components of the project are:

- Review current best practice facilities design criteria in Australia;
- Review local and global guidelines, accreditation criteria and assessment tools;
- Visit selected low-impact eco-tourism facilities in two locations in Australia to understand the guiding principles from the industry operator and indigenous perspectives;
- Develop an integrated model for architectural and technological features that is also inclusive of Aboriginal cultural perspectives.
2. Industry and Literature Review

2.1 Current Industry Status (State of play)
Tourism that aims to be sustainable has gained an increasing profile within the greater tourism sector since the 1992 World Summit on Sustainable Development (better known as the Rio Summit), although aspects of sustainable tourism have been in existence prior to this seminal event. As a direct result of the Rio summit, the World Travel and Tourism Council (WTTC) established Green Globe as its environmental program. Green Globe now has considerable profile across the industry and has been responsible for a heightening awareness of environmental and sustainable principles (GG21, 2003). Green Globe has regional representations, including Green Globe Asia Pacific, which has access to the research and development capacities of the Cooperative Research Centre for Sustainable Tourism (CRCST), a federally funded research body (CRCST, 2003; GGAsiaPacific, 2003). The CRCST has provided funds to enable this research project to be undertaken. Australia is one of the few countries considered to be at the forefront of sustainable tourism industry development. This is evidenced through the efforts of ECOtourism Australia (formerly known as the Ecotourism Association of Australia) and the CRCST (EA and CRCST, 2002; CRCST, 2003). These two organisations have a close working relationship and in partnership with Green Globe 21 have recently released the draft International Ecotourism Standard for Certification (ARIA, 2003; GGAsiaPacific, 2003).

The Western Australian Tourism Commission (WATC), similar to many other state governments within Australia, is committed to sustainable tourism in all its forms. It has a Nature Based Tourism Strategy for Western Australia, which sets out the Vision, Principles and Strategies to guide future tourism development (NBTAC, 1997). It has also published ‘Designing Tourism Naturally’ (Crawford, 2000), which is a review of world’s best practice in Wilderness Lodges and Safari Camps.

2.2 Sustainable Tourism, Eco-Tourism, & Nature Based Tourism: Definitions and Principles
There are numerous academic publications that discuss the evolution of sustainable tourism and clarify the distinction of the components and sub-components within the sustainable tourism sector (Diamantis and Ladkin, 1999; Weaver, Faulkner et al., 1999; UNEP, 2000; Epler Wood, 2002). Of specific concern to this paper is how the definitions and guiding principles can inform the requirements for developing sustainable low-impact facilities in remote regions, and if there are any relevant distinctions between the various sub-components of sustainable tourism, principally nature-based, low-impact and ecotourism, that may influence these facilities.

The rapid evolution of Sustainable Tourism has often challenged the ability to find a definition that goes beyond a generic concept of sustainable development. Indeed, the concept and application of sustainability to all forms of tourism has arisen directly from the broader debates of Ecologically Sustainable Development (ESD) (Diamantis and Ladkin, 1999; Weaver, Faulkner et al., 1999). The World Tourism Organisation defines Sustainable Tourism as:

"Sustainable tourism development meets the needs of the present tourists and host regions while protecting and enhancing the opportunity for the future. It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled, while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems". (WTO, 2003)

The Quebec Declaration on Ecotourism states that ecotourism "embraces the principles of sustainable tourism... and the following principles... distinguish it from the wider concept of sustainable tourism:
- Contributes actively to the conservation of natural and cultural heritage;
- Includes local and indigenous communities in its planning, development and operation, contributing to their well-being;
- Interprets the natural and cultural heritage of the destination to visitor;
- Lends itself better to independent travellers, as well as to organized tours for small size groups." (UNEP, 2002)
Ecotourism is deemed to be a sub-component of sustainable tourism and is a ‘sustainable version of nature-based tourism in the market place.’ (Epler Wood, 2002). The distinction between nature tourism or nature-based tourism and ecotourism is clearly stated by ECOtourism Australia, as shown in Table 1.1. The WATC prefers to focus on Responsible Nature-based tourism, (more than on Ecotourism), which is ‘a form of tourism in which the main motivation is the observation and appreciation of nature’ and distinguishes Ecotourism as a ‘micro’ niche (pers comm., Crawford, 2003, Savage, 2003).

<table>
<thead>
<tr>
<th>Table 1.1: ECOtourism Australia’s definitions of Nature Tourism &amp; Ecotourism</th>
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<tbody>
<tr>
<td>Nature Tourism is defined as:</td>
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<td>Ecologically Sustainable Tourism with the primary focus on experiencing</td>
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<tr>
<td>nature’s areas which fosters environmental understanding, appreciation</td>
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<td>and conservation. (EA, 2000)</td>
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The Nature Based Tourism Strategy for WA (1997), which was prepared by the WATC and DCALM under the Nature Based Tourism Advisory Committee, has the following Guiding Principles:

1. Conservation of the Natural Environment;
2. Involving and Benefiting the Local Community;
3. Improving Knowledge;
4. Providing Quality products and Services;

These principles are developed further into clear explanations of how they can be applied. The WATC brings these various aspects, especially the field of Ecotourism, into focus by stating that ‘to have any long lasting effects we need to focus the debate towards making the whole industry sustainable, NOT just one minor sector’ (pers comm., Crawford, 2003)

2.3 Parameters

It is imperative to clearly define and determine parameters in order to develop specific and meaningful outcomes. The title of the project gives a defining framework for this work and each operative component of the title can be considered in the following parts:

1. Best Practice
2. Sustainable Tourism
3. Low Impact Facilities
4. Remote Regions

**Best Practice:** is a common usage term that has two broad meanings:
1. A new development that has exceeded the previous accepted best;
2. Any development that adequately fulfils the accepted assessment or accreditation criteria across all headings and sub-headings of an assessment regimen.

**Sustainable Tourism:** as stated above, is defined by the principles of Ecological Sustainable Development (ESD), and includes as a sub-component the terms of Nature or Nature-based Tourism and Ecotourism. Despite these distinct components, all are implicitly linked in that: “Ecotourism encompasses a spectrum of nature-based activities that foster visitor appreciation and understanding of natural and cultural heritage and are managed to be ecologically, economically and socially sustainable” (TQ, 2002, p11). Even so, Ecotourism is seen to be a small niche market that sits within the broader field of Nature tourism, which is in turn a component part of sustainable tourism.

**Low Impact Facilities:** is a key operative word that gives clear definition to the parameters of this project. Facilities, in the context of this work, refer specifically to accommodation and their essential supporting services (i.e. energy, water, food and waste production). In terms of
accommodation facilities, there are key terms that are directly related to ESD and give clear
definition for this work. These are:
- Low-impact tourism accommodation;
- Ecolodge.

Both these refer to a style and category of development that recognise and meets the philosophy
and principles of ESD and Ecotourism (Crawford, 2000, p1).

Remote Regions: for the purposes of this paper refers to the relative distance or isolation from
urban centres such as townsites, and services such as medical services and telecommunications.
Included in this are basic infrastructure such as grid-supplied electricity, potable water supplies,
and waste and effluent disposal. The issues associated with remoteness have an important
influence on the viability of a successful accommodation facility (pers comm., Savage, 2003)

2.4 Key Elements of Sustainable Tourism Facilities
The ‘Designing Tourism Naturally’ study taskforce’s resulting ‘Product Assessment Criteria’
determined that facilities and their management must encompass specific broad aspects, which
are:
- Sustainable Design;
- Interpretation leading to education;
- Return to the environment;
- Involving the local community;
- High quality hospitality and services (Crawford, 2000, p18-20).

Full results of this study that relate to facilities for WA are given in the report (Crawford, 2000, p87-
88). The study concluded that a ‘Model of Best Practice Tourist Facilities’ that represents the core
tourism product would include:
- **Sustainable Design:**
  - Must be evident;
  - Design for the environment;
  - Create strong sense of place based on the site itself;
  - Underlying basics of sustainable design starts with: Good design, Choice of
    materials, Building form, landscape and factors that result in customer satisfaction;
- **Interpretation leading to education:**
  - Heightened consumer awareness, appreciation, and understanding of environmental
    processes;
  - The more personal interpretation leads to a better experience;
- **Return to the environment and involving the local community:**
  - Businesses that exist because of the natural and cultural environment must maintain,
    enhance and put something back;
  - There is a direct relationship between environmental stewardship and underlying
    profit;
- **High quality hospitality and services:**
  - Within the framework of the above, serve to provide customers with a high degree of
    quality in their food, beverage and other hospitality services;
  - These services need not be expensive, but appropriate to the setting.
    (Crawford, 2000, p88)

The report makes special note that ‘the place-making characteristics of the setting underpin
everything else. Environmental setting is the single, most important factor, and contributes to
overall attractiveness and relates directly to consumer satisfaction’ (Crawford, 2000, pp88). The
issue of the significance of the ecolodge or eco-facilities in the context of the natural environmental
setting is given a clear context in that ‘the most important thing of an ecolodge is that it is not the
most important thing’ (Ceballos-Lascuarin quoted in Adams, 1999, p5). Ceballos-Lascurarain clarifies
this by stating that; ‘it does not mean that the physical or operational characteristics of the
Ecolodge project are allowed to be mediocre’, rather that ‘the Ecolodge should be geared towards
offering a wide spectrum of interesting and imaginative ecotourism activities and services’ (Ceballos-Lascurian, 1999, p6).

The issues of local community involvement and education are highlighted as ‘posing a special challenge to an ecolodge owner or manager because they are mostly located in remote regions and therefore have minimal access to outside assistance’ (Epler Wood, 2002, p29). The issue of minimal access to services is relevant in remote regions in Australia, particularly in terms of outside emergency assistance, attaching suitable staff and cost of employment, food supplies and construction and maintenance. The Maho Bay Guidelines also give special mention to the issues of education and interpretation in stating that ‘the dwelling units must teach the relationship between guest consumption and available regional resources’. This principle is given specific application in that guests at Maho Bay Camps ‘can monitor water and energy consumption and take corrective action if pre-set allocations are being exceeded’ (Johnson, 1991, p2).

Many of the aspects and elements of Ecolodge guidelines have been considered in various development proposal recommendations in areas such as the NW Cape region and the Kimberley region in Western Australia (Adams, 1999; Ceballos-Lascurian, 1999; DEP and DPI, 1999; CALM, 2002). There are also publications that outline the benefits of ‘green tourism’ facilities and give strategies and actions for achieving better practice (Basche, 1998; Talacko and Andrews, 1998).

Additional research that is being funded by the CRC ST relates to the broader aspects of facilities infrastructure development and assessment. This project is titled ‘Designing Tourism Infrastructure: ‘Steps to Sustainable Design’ and is being undertaken as a collaborative effort through the University of Queensland and the University of NSW (Hyde and Law, 2002). The project is comprised of three parts:

1. Sustainable Design: steps to integrate sustainability into the design of buildings.
2. Design Of Sustainable Tourism Infrastructure: a brief outline of the state of play in the tourism industry and proposals to move forward with a new standard for assessing the design of tourism infrastructure through Green Globe Asia Pacific. Research to date has developed a design phase assessment tool to assist with the ramping up of the industry in this area.
3. Project Case Studies: provides abstracts of three pilot case study projects, which have been used to trial and develop this approach.

The ‘Steps to Sustainable Design’ project has some obvious similarities to this remote area facilities CRCST project # 62004 but is considered to have a much broader scope and not a specific remote area brief. Even so, the two projects can be considered complimentary and may therefore be able to exchange information where applicable.

2.4 Industry Concerns

The International Year of Ecotourism was conducted throughout 2002. Ecotourism Australia held an Ecotourism Australia-Wide Online Conference in August 2002 from which they produced a paper for the 2002 Ecotourism Australia International Conference, held in Cairns during October, 2002. The outcomes from this on-line conference are outlined in Table 2.1 (Australianwide, 2002).

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<thead>
<tr>
<th>Table 2.1: Key issues identified in the EA 2002 conference</th>
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<tr>
<td>• Coordination among operators and in regions produces results and helps raise product and regional profile.</td>
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<tr>
<td>• The desire to develop sustainable practices is strong, although people still want practical guidance.</td>
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<tr>
<td>• More information could be made accessible about the support that is available for operators and regions.</td>
</tr>
<tr>
<td>• The respect for authenticity and heritage values was highlighted as critical for developing quality tourism products.</td>
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<tr>
<td>• Community support and involvement is a key factor that encourages the sustainability of operations.</td>
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<tr>
<td>• Demand for sustainable tourism will be stimulated by more consumer awareness.</td>
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<tr>
<td>• Responsible marketing is necessary to inform visitors and create realistic expectations.</td>
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(EA and AHC, 2002, p12)
Each of these key issues is given detailed explanation within the document. The aspects that are considered relevant to facilities and facilities development, and model assessment systems are listed below.

- Accreditation programs are important, but they can be complex and there are concerns about the value they add.
- There needs to be more emphasis on the socio-cultural aspects of sustainability.
- We still need to think about how we can more effectively monitor sustainability.
- Some operators find it hard as new players developing small-scale businesses in areas where there are older, established industries. They can be very much on their own.
- Indigenous communities have particular needs for support – Indigenous communities need access to examples of how others have got involved in tourism. Different support is required recognising the very different contexts in communities across Australia.
- How to ensure and maintain authenticity in a product is concern, particularly in Indigenous tourism.
- Ecotourism and heritage tourism must recognise and incorporate local community knowledge.
- Get local people involved in planning, advising and participating – this is a wise investment.
- There needs to be greater emphasis on educating consumers so they can more effectively discriminate between what is on offer.
- There is a need for more responsible marketing to improve visitor awareness – this will help reduce unrealistic expectations. (Australiawide, 2002)

### 3.0 Case Study Sites

This project involved visits to selected existing facilities throughout Australia that were deemed to be sustainable or ecotourism facilities. These were:


**Longitude 131** (Voyages, 2003a) is Voyages Resorts newest ecotourism development at Yulara, Central Australia (Voyages, 2003b). The resort, which caters for a 30 guests, consists of fifteen luxury tents set on an isolated sand dune close to the border of Uluru - Kata Tjuta National Park. Longitude 131° has been specifically developed to appeal to the high-yield end of the “soft-adventure” tourism spectrum. Longitude 131°, which opened in early June 2002, has been voted the ‘Best New Wilderness Hotel’ in the world by The Sunday Times in Britain, and now Best New Australian Product by US trade partners. The aim in developing this resort was to set a new benchmark for eco-tourism around the world. Longitude 131° is one of the first resort developments approved under the Environmental Protection and Biodiversity Conservation Act (1999) and is the first camp of this kind in Australia. The normal tariff is $1,300 per night for a double.

Longitude 131 provided a high quality experience in an authentic natural setting. In many respects, view shed was the driving force and this is evident through the entire site selection, site planning, design and orientation of the facility. Environmental protection of the site was rigorously maintained during the construction process that helped to maintain the authenticity of the site.

The facility is entirely serviced from the out-of-sight Yulara townsit 1.4 km away, including the underground transmission of all power, water and wastewater with all solid waste being transported back to the Yulara landfill site and no recycling evident. As a result, the facility itself has a minimal on-site impact in respect to its water collection, waste removal issues and energy supply.. Although hot-water was solar-generated, all the facilities and rooms had Yulara power for lighting, air-conditioning and luxury items such as bar fridges and motorised blinds etc. Consequently, the facility as a whole would have a relatively large ecological footprint on a per occupancy basis.

Longitude 131 has been promoted as low impact facility. This is largely attributable to the advanced civil engineering approach to the deep-pile-mounted tent structures in the sand dunes and the complex site works and foundations for the Dune House. But this interpretation of “low-
impact’ can be contested in that all services for the facility are created or treated by an infrastructure already in place to service a much larger adjacent resort that has a much greater impact.

Were Longitude 131 to attempt to provide the same quality of service and setting without the back-up of this existing infrastructure, it would be doubtful if they could do it in a sustainable manner as the resort is extremely energy intensive due to design decisions driven mainly by the need to justify the extremely high tariff. Were the resort planned much more modestly (and the tariff correspondingly dropped) the resort could have tried for a much higher standard in terms of energy efficiency, water efficiency and resource recovery (waste recycling). Nevertheless, high quality resort facilities can still be provided with a sophisticated approach to sustainable construction and smart energy, water and waste management.

The resort management decided to develop Longitude 131 on the theme of European Explorers and Settlers. It seems the rationale for this was to appeal to its core European clientele. Whilst exposure to the local Aboriginal people can be experienced within the Uluru Park and tours to local communities, the resort itself has no reference to or acknowledgement of the Traditional Owners. Other than passive exposure to European Explorers and Settlers, there is no reference to any ecological or cultural education within the resort.

The trip to Longitude 131 was important for CRC62004 as it showed many of the issues inherent to remote area operation in sensitive sites. Without the extensive infrastructure supplied from the nearby Yulara resort, the most pressing issues for Longitude 131 would be supply of essential services such as food and other luxury amenities, power generation and water/waste treatment. Locating these services in the area would have been extremely challenging due to its physical isolation and proximity to both the National Park and protected fauna sites.

**Paperbark Camp** (Paperbark, 2003) is situated at Jervis Bay, 200km south of Sydney. The owners state that Paperbark Camp is Australia’s first luxury tented camp, and is Eco-tourism at its best, being a low impact, niche-market venture that adheres to the principles of ecologically sustainable tourism. The objectives of Paperback camp are:

- To promote the natural environment;
- To sustain the local ecology;
- Successfully operate a low key, niche, eco-tourism facility;
- To provide local and regional benefits.

The original landscape was carefully cleared by hand, so that delicate ecosystems, natural flora and birdlife have been preserved. No major earthworks or clearing were done. All toilet waste and wastewater is pumped off the site to protect the pristine Currambene Creek, which now forms part of the Jervis Bay Marine Park. Accommodation consists of 10 Safari tents (of equal standard) with private verandas and indoor/outdoor ensuite attached. They have private en suite facilities, comfortable queen or twin beds, pure wool doonas, insect screens, solar powered lighting and furnished with locally handcrafted bush furniture. Tariffs are:

- Double $216 per person per night;
- Single $260 per person per night;

which include three course dinners, gourmet breakfast and use of facilities such as canoes and bikes. Paperbark Camp has been awarded the ECOtourism Australia NEAP Ecotourism Accreditation.

Paperbark provided a more rudimentary level of service than Longitude 131, however, it did seem to achieve a much better balance between tariff and sustainable practices than Longitude 131. However, like Longitude 131, Paperbark Camp relied on existing infrastructure for its power, water and waste treatment.

The use of low embodied energy materials and a lack of electrical appliances makes Paperbark quite a good environmental performer, however, more could have been done in terms of water
usage reduction and reducing waste generation (or resource recovery). Considering the budget, the camp performs well and is able to provide a unique experience in an idyllic bush setting.

The owners/operators are working with some local Aboriginal people to organise cultural and environmental activities on the site, although these are in early development stages, and there is currently not much market interest. There is no explicit reference to any ecological or cultural education within the camp, although the camp/safari tents are operated on simple, low impact principles.

Some useful points for CRC 62004 were the ability to provide basic accommodation with minor servicing (battery power, canvas tented accommodation) at a modest tariff. This approach obviously lends itself to remote area application as it puts a much lower resource load on the facility as a whole. The communal facility was also good to take points from as it was of modest size given guest numbers and was quite well designed for its climate. The most important lesson to be learnt from this is that in remote areas provision of essential services (power, water, sewerage, solid waste management) will need to be considered as of paramount importance and will have major ramifications in terms of siting, site planning, design and occupation.

4.0 Design Study Sites
This project has the intent of designing a best practice model to inform the development and design of sustainable tourism facilities in remote regions. Specific to this are two areas within Western Australia: a) Purnululu and b) Southern Forests.

Purnululu; commonly known as the Bungle-Bungle Ranges, is situated in the East Kimberley. Purnululu, designated a national park due to its environmental and cultural significance, is managed by the Department of Conservation and Land Management (DCALM) and is considered to be one of the key tourist destinations for the region. It is also an area of native title claim to a number of Aboriginal groups, some of which are living in the area. This area is remote in terms of distance and location to services and towns, road conditions and travel time. There are a number of tourist travel and accommodation companies that offer a variety of services to the area. These include:
- Fly-in, fly-out day tours;
- Fly-drive tours, with accommodation at a number of semi-permanent facilities within the park;
- Overland tour companies and self drive options. Accommodation is at a camp ground with limited facilities, including water and shared pit toilet.

The semi-permanent accommodation is of particular interest to this research. All existing semi-permanent facilities, which are operated by tour companies, are situated at the southern end of the park. The accommodation is varied but is typified by simple low-impact tent design, simple service, and moderate tariff. CALM have engaged consultants to develop assessment criteria that can be applied on licensed industry operations at Purnululu. When the industry operators must apply for their license renewals, and new operators can bid to establish an enterprise, the assessment criteria will be applied to their applications. This presents an ideal opportunity for this project to collaborate with the process in the development of the best practice model.

The Southern Forest region of WA traverses Denmark, Walpole, Pemberton to Nannup. This area has high tourism potential due to the uniqueness of its forests, which include Jarrah, Karri, Marri, Blackbutt and Tingle species. The economic viability of the area is undergoing re-adjustment following the banning of all old growth timber logging in WA in 2001. Consequently, sustainable tourism is seen as offering a sound and innovative economic base for the region. Currently there are a variety of tourist accommodation facilities in the area, including bed and breakfast, resorts and hotels, and caravan and camping. None of these facilities are considered as being sustainable, but some may well exhibit some sustainability characteristics. Current thoughts by CALM and WATC are to develop an ecolodge in the Jarrah forest of St John's Brook Conservation Reserve near Nannup. This concept presents an excellent pre-design opportunity for the project to develop a conceptual design brief for the site that corresponds to the project's developing best practice model.
5.0 **Best Practice Model**

During visits to the interstate case study sites meetings were held with CRCST senior staff and other CRCST researchers primarily to clarify and refine the aims of this project, whereby it would be most beneficial to the future of sustainable tourism. As a result it was determined that the outcomes of this project would include the identification of appropriate environmental and sustainable technologies for application in remote regions. Specifically, these are:

- To determine the technological (engineering) issues that face remote area facilities (and operators)
- To determine the key technological issues (and their priorities) associated with key areas of facilities infrastructure

These outcomes are synchronous with and enhance the prior stated goals of this project. As such, the creating of a ‘best practice model’ will focus on the most appropriate environmental technologies for remote area application and how they can be integrated into facilities infrastructure. These key areas of technology include efficient energy generation and use; efficient water supply and use; waste management/resource recovery (solid, liquid, food, materials); appliances (refrigeration, ablutions, heating and cooling); access and transport; construction materials; communications. This technology focus beneficially adds to the focus which highlighted the specific nature of place, and authenticity being informed by local Aboriginal cultural and environmental heritage. The blending of the personal and the technological will help inform a sustainable tourism model.

CALM and WATC provided a brief to the research team for the development of sustainable, low-impact remote area tourism facilities at Purnululu and Southern Forests. This research team then reworked the brief into the ‘reverse brief’ as shown in Table 5.1. Existing services in these 2 regions Provide for low ($50 per night) & medium ($100 per night) budget accommodation. At the new development sites aims to provide top end of the nature-based market, commensurate with $300 per night.

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<tr>
<th>Table 5.1: <strong>Brief for Sustainable Low Impact Tourism Facilities in WA Remote Areas</strong></th>
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<tbody>
<tr>
<td>1. Development of a more detailed brief in partnership with Traditional Owners;</td>
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<td>2. Maximum view shed;</td>
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<tr>
<td>3. Located away from vehicular movements, including helicopter flights – a sense of seclusion;</td>
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<tr>
<td>4. Design, Construction and materials that are appropriate/sensitive to the site environment – isolated and exclusive;</td>
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<td>5. Price point approximately $300 per night, dependent on level of service;</td>
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<tr>
<td>6. Interpretation – Emphasise local Aboriginal and other cultural and environmental themes of the area and apply to the overall design concept, construction and ongoing operation;</td>
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<td>7. Consider logistics on how camp will be supplied and maintained, i.e. transport, storage, refrigeration;</td>
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<td>8. Appropriate carrying capacity/ numbers of visitors in the area (influences size of accommodation facilities and licensing);</td>
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<tr>
<td>9. Vehicle limitations – walk to the site – adds to “exclusivity &amp; remoteness”;</td>
</tr>
<tr>
<td>10. Tenure structure that best allows for adequate capital investment/financing;</td>
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<tr>
<td>11. Road into the site should remain a “wilderness experience”;</td>
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<tr>
<td>12. Efficient and sustainable water supply and consumption facilities;</td>
</tr>
<tr>
<td>13. Sustainable solid and liquid waste management facilities that meet public health requirements;</td>
</tr>
<tr>
<td>14. Efficient and quiet electrical energy and fuel supply and consumption/use;</td>
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<td>15. Cultural/Social commitments with emphasis on Aboriginal involvement and employment;</td>
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<tr>
<td>16. Visitor risk management;</td>
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<td>17. Responsible marketing;</td>
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<td>18. Contribution to management costs (licence fees);</td>
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<td>19. The development must meet Shire health requirements.</td>
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**Desired Outcomes:**

- A best practice model for low impact nature based remote area accommodation;
- A business and cultural model endorsed by traditional owners and promoting their values and heritage (including ownership and direct involvement based on the Aboriginal cultural brief from 1.);
- Build a quality experience, in both facilities and site interpretation.
A draft assessment tool has been developed for this project and will be applied with traditional owners, CALM and industry operators at Purnululu National Park as well as on a hypothetical new development site.

6.0 Conclusions

The review of existing literature shows that there is a clear consistency in what constitutes the key elements of low impact sustainable tourism facilities. The various models and guidelines highlight that, above all, the development, at whatever scale, must be informed by the natural and cultural environment in which it is to be situated. A sustainable tourism facility, in terms of design, is therefore location and site specific. These site-specific considerations are inextricably linked to creating an authentic sense of place, in both their destination and product. The other aspects of environmental sustainability that require consideration, such as energy, water and materials efficiency, although critical, can be considered universal. Even so, they do require site-specific consideration and evaluation.

The industry and literature review also shows a clear requirement that the critical issues of authenticity and sense of place in the facilities that compliments but does not dominate the destination can to a large extent be informed by, and developed with, the inclusion of Aboriginal and local people. All the key principles and actions of sustainable tourism seek the inclusion of Aboriginal people and local communities. It would follow therefore that sustainable facilities, both at the planning and development stages would use the local knowledge of the area. It is clear to the research team that the development of an Aboriginal cultural brief to inform the overall project brief will contribute to the long-term sustainability of the project.

The outcome of this project can now provide a structural design framework of the key components that constitute a best practice model. This framework will be inclusive of the key elements identified throughout the various inputs within this paper. These include a draft schematic design of facilities a both Purnululu and Southern forest (St Johns Brook) that integrates the design and technological requirements with the socio-environmental aspects of local Aboriginal cultural and ecological values.

The next phase of this project is to visit Purnululu National Park and Southern Forests, apply the assessment tool to existing sites and to apply the criteria above and model for the proposed new development sites while working in partnership with the local traditional owners and industry operators.

7.0 Bibliography


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