This report comprises three parts, the first provides some steps to integrate sustainability into the design of buildings and the second provides 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 ramping up of the industry in this area. The third part provides abstracts of three pilot case study projects, which have been used to trial and develop this approach. The following are three case studies, which have been assessed using the tool:

1. Lark Quarry, Winton, Queensland, Australia
2. Tramping Huts, New Zealand
3. Novotel, Australia

Project Aims and Objectives

1. Improve the environmental and economic performance of sustainable tourism infrastructure through providing measures of effective and efficient environmental design practices.
   - Working out a coordinated approach to the development of a Design Phase Tool for sustainable tourism infrastructure by integrating eco-efficiency in the design process.
2. Enhance and develop a tourism, facility-based assessment tool to provide evidence on the design practices used, both during the design process and to increase the operational efficiency of existing facilities.
   - Development of a team of industry partners to continue with the application of the tool to new building projects through an industry adoption strategy.
3. Increase the speed of uptake of the eco-efficiency in tourism infrastructure using the developed tool to promote industry-wide standards of best practice for design and use of facilities.

- Benchmarking of existing infrastructure projects to test eco-efficiency of the strategies used.

Project Background

The Travel and Tourism Industry

Travel and tourism (TT), contributing US$4,475.5 billion (est. 11.7% of world GDP) in 1999, is the world's largest civil industry and is forecast by the World Travel and Tourism Council (WTTC) to double in the next decade (WTTC, 1999). The World Tourism Organization (WTO) estimate there will be 689 million international travellers in 2000 (WTO, 1999). In Australia, the National Visitors Survey (NVS) for 1998-99 (BTR, 1999) showed residents aged 15 or older spent 297.4 million nights away from home and 160.3 million day trips were taken. The International Visitors Survey (IVS) (BTR, 2000) indicates 4,459,500 international visitors travelled to Australia in 1999, staying 108 million nights.

This demand drives a continual need for new and upgrading of building and road infrastructure. Each new project represents an opportunity to improve sustainability of the facilities. The benefits of this are not only environmental but also economic.

Evidence from research suggests that the benefits of this approach occur at a range of levels. At the broad industry level, industry leaders can claim a range of general improvements in the sustainability of the industry to Government. At the operator level, whilst sustainability addresses the feel-good factor and is useful for marketing, it is the economic benefits of sustainability that will drive change at this grass roots level.

Context and Relevance

This large growth in tourism is matched with a need for infrastructure facilities. Preliminary research through a pilot study (CRC for Sustainable Tourism 1999) reveals concern among stakeholders at the grass roots level regarding the plethora of tourism bodies, the wide range of assessment and accreditation systems and the casual use of 'eco-terminology' for marketing purposes. In addition, whilst there are broad design guidelines for tourism infrastructure there has been little work to directly relate these to environmental and economic performance indicators. Work is under way to customise and develop a tool appropriate for the tourism industry.

At present a number of whole internationally recognised building assessment systems such as the GBC building assessment tool (Green Building Challenge 2000) have been developed for the design and construction sector.

Application of this has been carried out in the first year of this research project. Couran Cove was used as the case study to test this methodology. Results from this lead to several conclusions:

1) Whole building assessment systems are highly complex and require a large amount of data to carry out the assessment. We estimated that approximately $20,000 is needed to carry out the assessment. We therefore concluded that this approach would be too expensive for use by industry.
2) We were not convinced also that the system would operate well with the creative nature of building design and provide opportunity for innovation. Many of the tools had fixed criteria.
3) Tools that were developed to fit more with the design process such as LEED did not work with Australian design protocols.
4) The tools also required context specific benchmarks and did not make specific recommendations concerning targets for designers.

Work has since progressed with developing a framework to suit the needs of the tourism industry. Without this tool it is difficult to link design guidelines and industry standards and to achieve appropriate benchmarking of environmental strategies. The GBC tool is designed to work with and complement existing accreditation systems such as Green Globe.