

## Capricorn Caves, Rockhampton

Capricorn Caves are industry leaders in cave preservation and revegetation. The popular Central Queensland tourism attraction won the Steve Irwin Eco-tourism Award at the 2008 Queensland Tourism Awards and also has Advanced Ecotourism Certification under Ecotourism Australia's Certification program. Since purchasing the property in 1988, sustainable management practices have been non negotiable and preservation of the natural resource through conservation and revegetation programs has always been a priority. The property's dedicated approach has resulted in countless benefits such as decreased operating costs, increased bookings and the provision of a high quality and educational visitor experience.

Capricorn Caves are a unique system of "above-ground" caves in a limestone ridge. The caves are situated 23km north of Rockhampton and the site is a significant natural attraction with remnant vegetation and endangered fauna.

### **GETTING STARTED**

On arrival at Capricorn Caves, the owners sought assistance and education from a variety of sources. Key areas of concern for the owners were preservation of the caves and revegetation of the site. Cave managers from around Australia were consulted and the owners also sought assistance from voluntary organisations such as Conservation Trust Volunteers and successfully received Federal Government grant funding.

### **MAJOR INITIATIVES**

Capricorn Caves have undergone major changes in:

- i. Cave preservation
- ii. Revegetation
- iii. Use of resources

Outlined below is an overview of the initiatives undertaken within these three areas of the operation.

#### Cave Preservation

In preserving the caves, education on the available options was, and still remains, a key tool for success. Work in cave preservation at Capricorn Caves fits within three core areas. Outlined below are the initiatives undertaken within each of these areas:

1. Cave security and protection



- Installed infra red beams at cave entrances to alert the owners of illegal entry;
- Installed perimeter gates with locks;
- Established policies to ensure no visitors entered the cave unless accompanied by a guide;
- Trained guides to introduce visitors to the fragile environment of the cave and the code of cave ethics e.g. no touching formations, no food or drink, etc.; and,
- To minimise cave floor compaction general tours follow set routes and where necessary reflective marker tags were introduced to guide adventure cavers.

## 2. Infrastructure

- Upgraded walkways without damaging the formations and using carefully selected materials to avoid introducing any foreign elements into the cave;
- Upgraded low impact lighting to highlight the beauty of the formations and rocks; and,
- Removed any lighting that negatively impacted on the cavescape.

## 3. Cave flora and fauna

- Minimised disturbance of bats through good visitor management practices e.g. no flash photography or lights, rerouting cave tours to avoid bat clusters.

### Revegetation

Revegetation of the surrounding property was undertaken to eradicate the huge invasive weed problem and conserve the remnant vegetation. A nursery was also constructed to propagate indigenous seeds collected on the property. These seedlings were later replanted as a buffer zone around the dry rainforest.

A recent initiative at Capricorn Caves has been a recovery program for the fern *tectaria devexa*. The fern, found growing in the cave entrance, had declined to only 29 plants and was threatened with extinction. Working in partnership with Greening Australia and with a grant from the Threatened Species Network a recovery program was initiated. 750 ferns were propagated and transplanted in a controlled program into the cave entrance. Capricorn Caves' staff continue to monitor the fern, maintaining the stock in the nursery as well as irrigating the ferns in the cave.

### Resource Consumption

As visitation has increased over the years, resource consumption has also increased. In order to minimise use of resources, the property has undertaken numerous initiatives including:

- Installation of water tanks to collect roof rain water for use in the caravan park, cabins and lodge;
- Use of water minimisation devices in all new buildings and replacement of old fittings. This is supported by staff training in minimisation practices;
- Holding school challenges in which schools compete to use the least amount of water;

- Installing biocycle systems which also necessitated zero chemical use, environmentally responsible dispersal of grey water and potential to reuse for irrigation purposes;
- Use of gas appliances and instant water heaters;
- Building design which used natural light;
- Insulated roofing to reduce the need for cooling;
- Use of evaporative cooling for existing and larger buildings;
- Installing timer switches on lighting and solar lights throughout the caravan park; and,
- Implementing waste minimization techniques such as portioning food correctly, minimizing packaging, not using disposable consumer wear, buying in bulk not individually (to reduce packaging waste).

### **KEY OUTCOMES**

As a direct effect of these initiatives, operational costs at Capricorn Caves have decreased. Further to these cost savings, owner Ann Augusteyn says:

*"Sharing our experiences in sustainable management practices with the visiting public through guided cave tours and displays in the Visitor Centre has been rewarding. The initiatives have provided a basis for an environmental program for schools and tertiary education which has led to increase in school camp bookings and day visits."*

Partnerships with groups such as Greening Australia, and Australasian Cave Managers Association have also provided support and even incoming revenue from conference bookings.

### **MAJOR CHALLENGES**

In looking to reduce their environmental impact, Capricorn Caves has faced similar challenges to other businesses. While savings have been made, the drought has led to heightened operational expenses as increased labour has been required to maintain the nursery and implement revegetation programs. Further, the lack of rainfall has led to increased expenditure on water in order to fill the water tanks.

### **ADVICE TO OPERATORS**

Ann has a few words of advice for current operators who are also considering beginning on the pathway to sustainability.

1. Be genuine. Do not draw up environmental policy procedures and leave them as a document on the shelf.
2. Seek advice from professionals, organisations and government agencies
3. Apply for grants
4. Be proud of your initiatives, seek help from volunteer groups
5. Don't let jargon confuse you.

### **NEXT STEPS**

Next on the list at Capricorn Caves is to complete a carbon audit to formalise the current business practices. The carbon audit will also identify

how Capricorn Caves can further reduce their carbon emissions and offset these with managed sustainable tree planting to achieve carbon neutrality.