

KNAPDALE ECO LODGE

The owners, Mr and Mrs Weytmans, briefed architect, Graeme Nicoll of Nicoll Blackburne Architects, Gisborne, to design and plan a proposed 3 stage hospitality Eco Lodge. The owners vision is to create an upmarket conference/reception facility to cater for approximately 100 guests and to provide chalet accommodation. Stage one of the project, the family home, is now complete and won Gisborne 2006 House of the Year and

PlaceMakers Supreme Award for building contractor D Stevens Ltd.

The Weytmans had some plans drawn prior to approaching Graeme Nicoll and although they felt there were some good ideas in these plans they also felt it did not entirely fulfil their expectations to take full advantage of the site and their desire to incorporate sustainable 'green' features.

The well-developed eco-property at Knapdale near Gisborne, has a gentle north-facing slope of approximately 12 degrees. The approach to the building site was along a 400 metre driveway that passed through a large wooded area and overlooks a man made lake. The home was to take advantage of this vista and the surrounding tranquil forest and farmland.

The owner, Kees Weytmans, of European descent, has had a long association with forestry and was keen to include exotic untreated timber in the building. These

timbers, which the owner supplied, include, Lawson Cypress, Douglas Fir and Oak that was used in the large pivot doors and lintels. Only a limited amount of Pine was used in the roof trusses.

The brief encompassed Eco management in energy efficiency aspects such as solar energy, water heating, solar energy floor slab heating, extra insulation to walls and ceiling, northerly aspect, roof windows, wetback system, thermal mass considerations and the collection of rain water and redistribution of grey water.

In general the requirement was for a 3 bedroom home which included some features such as coat and boot storage, freezer room and exterior access to wash and shower facilities. The European influence is reflected in the alfresco dining area that takes full advantage of the countryside and lake panorama. The accent is on bringing the outdoors in where possible.

The vaulted ceilings in stone/precast that were detailed in the John Utzon's 'Can Feiz' house influenced the architect. This feature was

redesigned in keeping with the owners' empathy with timber and forest.

The entire concrete footprint of the building slab is heated by passive solar energy. Large expanses of glazed areas in the north facing profile capture the maximum sunlight. In addition to this skylights with double-glazing are strategically positioned to assist in heating the tiled concrete thermal mass and provide extra light. The rib-raft waffle slab floor is well insulated with polystyrene sheeting and contains built-in Alcatene piping. A separate circuit of polythene piping is also set into the floor slab.

A hundred metres of similar black plastic piping is fixed between the battens supporting the Gerard Colorite textured roof. These tiles were selected because of the lightweight benefits, to give the building a traditional European tiled appearance and to absorb heat the dark pepperstone texture was chosen. Water heated by solar energy is pumped into the floor slab and foundation piping at two levels - the lower one running under the foundations during summer to reduce heating and the floor slab circuit runs in winter to increase



heating. A significant benefit of this system has been noted during the months of autumn and spring.

Linked to the solar heating system is a wetback fire burning timber from the property, and an electric hot water system.

Walls of the lower storey are concrete block to provide thermal heat storage and reduce temperature variations. They are adobe plastered inside and out.

The Eco Lodge satisfies the owner's keen interest in environmental friendliness, looks completely 'normal' and fits beautifully into the established landscape.

Client: Mr & Mrs Weytmans,
Knapdale Eco Lodge, Gisborne.
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Architect: Graeme Nicoll,
Nicoll Blackburne Architects,
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Telephone: (06) 867 9622

Builder: D Stevens Ltd, Gisborne.
Telephone: (06) 867 5700

Roofing Manufacturer: Gerard Roofs.
Telephone: 0800 104 868
Profile: Gerard Colorite Textured.
Colour: Pepperstone.

Roofing Installation:
Tony File Roofing, Gisborne.
Telephone: (06) 867 0794

Photography: D & K Photography,
Gisborne.

Graded 4 Star PLUS Qualmark Member, Guest & Hosted.
2006 Husqvarna Farm Forester of the Year, North Island.
2006 House of the Year, Gold & Supreme Award, Gisborne.
2003 Rural Environmental Award, Gisborne.

Architect Graeme Nicoll expresses some enthusiasm for the project which set it apart from "suburban" influences and incorporates many sustainable "green" features. As with all projects there are always budget limitations and the objective is to work within the budget and achieve the result that matches or exceeds the client's expectations.