



Cape Cassini Wilderness Retreat Pty Ltd



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Re: Collaborative learning opportunities for Schools on KI

Situated on the North Coast, Cape Cassini Wilderness Retreat is surrounded by 360 Hectares of Heritage Agreement land fronting onto over 2 km of coastline and offers wonderful educational and research possibilities.

Along with a number of adjacent properties, the Cape Cassini area was classified in the late 1980's as a high priority for purchase as a Conservation Park. At the time, the State government was unable to finance the land purchases. Instead, land owners were paid to place Heritage Agreements on their properties. As part of a recent Department of Environment and Heritage Grant, we have begun a program with the consent of other land owners to initiate conservation activities for Heritage Agreement properties in the Cape Cassini area, some 1800 Ha in all.

Many schools currently visit KI and we believe we could enhance the educational experiences of students by offering additional activities. As we are in a fragile environment, **our main aim is to offer accommodation and the opportunity for a few teachers at a time to develop suitable learning programs** based around the *theme of sustainability*. Teachers would also have the opportunity to liaise with:

- Tony Bartram, Marine and Environmental Studies Coordinator, Kangaroo Island Community Education, to access further water based activities. These activities have earned a number of educational and other awards for KI Education including most recently a United Nations award for its Marine and Environmental Education Program.
- Simon Ward is the Manager at Vivonne Bay Outdoor Education Centre which provides in field outdoor education, touring experiences and accommodation.

Students could stay at either Karratta (KI Community Ed managed) or Vivonne Bay.

Currently we are developing a number of **OPTIONS**

- Intertidal zone and Reef survey work at our coastline
- Volume calculations of tanks and dams* and an Abalone farm tour.
- Geological, geographical features, hunting for fossils and a volcano vent.
- Sustainable energy and passive solar house design.
- Future Alternative Energy Options.
- Flora and bird/animal surveys
- Growing seedlings *and seed collection.
- Revegetation activities (Drooping Sheoak and other local species)
- Ant, butterfly, other insect and spider survey work
- Fungi survey work
- Construction of bird nest boxes and boxes for bats or possums*
- Water flow and quality along our gullies, Frog and Native Fish Surveying.
- **Tourism studies:** a practical example of an Ecotourism Accommodation

Options * could be carried out by students without visiting KI

More information about Cape Cassini Wilderness Retreat and **NOTES ON OPTIONS** is available at our website www.capecassini.com.au

Vivonne Bay Outdoor Education Centre website is at www.outdoored.com.au

1. Intertidal Zone and Reef surveys:

There are 3 possible methods that could be used but the Timed Search for abundance and size of molluscs is the most feasible. It is also possible to do a Quadrat Search in various rock pools.

Reef Watch carried out a Reef Fish Survey on Sat 11/2/06 at our coastline. About 35 people took part by snorkelling along about 500 m of foreshore.

2. Volume calculations and Abalone Farm Tour:

There are 3 different sized tanks, a dam, piping and rainfall run off calculations for our property and various different shaped tanks and water flow calculations at the Abalone farm. The volume calculations would involve practical measurements of circumferences, diameters, heights, timing for water flow rates along channels. The Abalone Farm Tour would give students a chance to learn about an Aquaculture Industry and the life cycle of abalone.



3. Geological, geographical features and hunting for fossils and a volcano vent

On the fore shore there are wave cut platforms, 2 rock stacks, a summer sandy beach, caves, various rock types, evidence of faults, obvious rock strata, a guest found a fossil mud skipper and wave ripple on rock surfaces is prevalent. The hunt for a volcano vent is done some distance from our property.

4. Sustainable energy and passive solar house design.



In May 2005 the Investigator Science and Technology Centre used our power system and house to present an Outreach program to 20 year 11 and 12 students from Kangaroo Island Community Education Kingscote and Parndana campuses entitled "Energy for Today and Tomorrow". The group was split into two to allow morning and afternoon activities with an Intertidal zone survey on our foreshore as the other activity.

5. Future Alternative Energy Options.

We have been investigating the possibility of installing a Wave generator on our Coast to generate electricity. At certain times, we dump large quantities of electricity which our battery bank is unable to store. A compressed air storage facility or a hydrogen generator would enable us to run a fuel cell and even power hybrid vehicles.

6. Flora and bird/animal surveys

A flora survey on the property has identified some 215 plants of which there are 173 natives including 10 orchid, 31 annual species and 42 weed varieties. Of these 1 is listed as endangered, 3 vulnerable, 13 rare, 16 uncommon and 14 requiring further information to be collected about them (as detailed by a KI plant specialist). It is hoped a bird survey will be carried out soon.



A formal animal survey has not yet been undertaken. We are especially interested to know if there are dunnarts, bandicoots, or pygmy possums on the property.

Regular viewings of goannas, kangaroos, Tamar wallabies, Wedge tail eagles, Crimson rosellas and Superb fairy wrens happen. Vagrant koalas, sea eagles, kestrels and

Native Apricot flowers and fruits

echidnas are seen less often. Glossy Black cockatoos, Beautiful Firetails and Scarlet Robins are sometimes seen. As yet, large areas of the property are still unexplored.

7. Seed collection and growing seedlings

We anticipate collecting seed from various endangered, vulnerable and rare plant as well as others according to advice from Trees for Life and other organizations.

Some plants will be grown on our property for our revegetation project but seed could also be sent to schools for students to be involved in growing seedlings. A small number of Drooping Sheoak seedlings were grown and planted out in July.



8. Revegetation activities

Part of the property was used for sheep grazing prior to purchase. About 40 Ha (100 acres) of this could be revegetated with Drooping She-oak (Glossy Black Cockatoo feeding trees), Broom Brush, Cup Gum and other small shrubs. The area needs to be formally surveyed for topographic features, soil types and plant types on adjacent areas to ascertain the full range of plants to be planted.

9. Ant, butterfly, moth, other insect and spider survey work

In our variety of environments on the property a wide range of small creatures can be seen. Of at least 5 ant species one seems to be becoming more prevalent, especially along recently cleared areas. Two of the butterfly species swarm in large numbers in late spring.

10. Fungi survey work

There are a large variety of fungi on the property. Fungi most likely have a very important role in our environments in the propagation of orchids and the nutritional value of Drooping Sheoak seeds.



11. Construction of bird nest boxes and boxes for bats or possums*

We would like to place boxes near our house easily surveyed by both a mirror on a hinged lid or video cam.

12. Water Monitoring , Frog and Native Fish Surveying

Water flow and quality are regularly tested in Orchid Gully which has a small flow all the year. Fish seen in pools in the gully have been identified as Climbing Galaxias. Frog calls are recorded for the Frog Survey in September.



13: **TOURISM STUDIES:** *a practical example of an Ecotourism Accommodation*

Last year in August we did a power point presentation “Innovation in Ecotourism” about our property to a conference of the Council for Australian Secondary Schools Tourism Teachers held in Adelaide.

Cape Cassini Wilderness Retreat is featured as a case study in a SA Tourism Commission draft publication entitled “Design Guidelines for Sustainable Tourism Development”, released in Dec 2005.



Picking Native Apricot fruits at the property