Orokonui Ecosanctuary

partnership

DESIS Otago
Otago Polytechnic
New Zealand

DESIS NETWORK
Design for Social Innovation and Sustainability

Partner:
Orokonui Ecosanctuary

orokonui ecosanctuary

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Supporters:
Halo Project
Otago Museum

Context.

Orokonui Ecosanctuary, about 20 km north of Dunedin city, protects multiple species of plants and animals from predators. A predator-proof fence surrounds 307 hectares of forest, pests have been removed, habitat enhanced with weed control and planting, and many rare and endangered species re-introduced. A not-for-profit trust runs the Ecosanctuary.

Project 1.

Students have been developing an Internet of Things device to notify Ecosanctuary staff when a gate is left open.

The students visited the site on several occasions and talked with Ecosanctuary staff to gain a full understanding of what was needed. They designed, constructed, and tested prototypes at Otago Polytechnic and then on site.

Project 2.

Orokonui Ecosanctuary provides curriculum-based learning for children. Three students created new engaging resources for children:

- a colouring book introducing young visitors to the species they might encounter,
- a graphic novel telling the story “2015: The Infamous Year of the Stoats” and
- an educational resource, **Tī Kōuka**.

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THE Kākā PROJECT
In touch with tomorrow

Project 3.

Kākā breeding at the Orokonui Ecosanctuary are flying out over the predator-proof fence. Many perils lie beyond, including stoats, domestic pets, and humans.

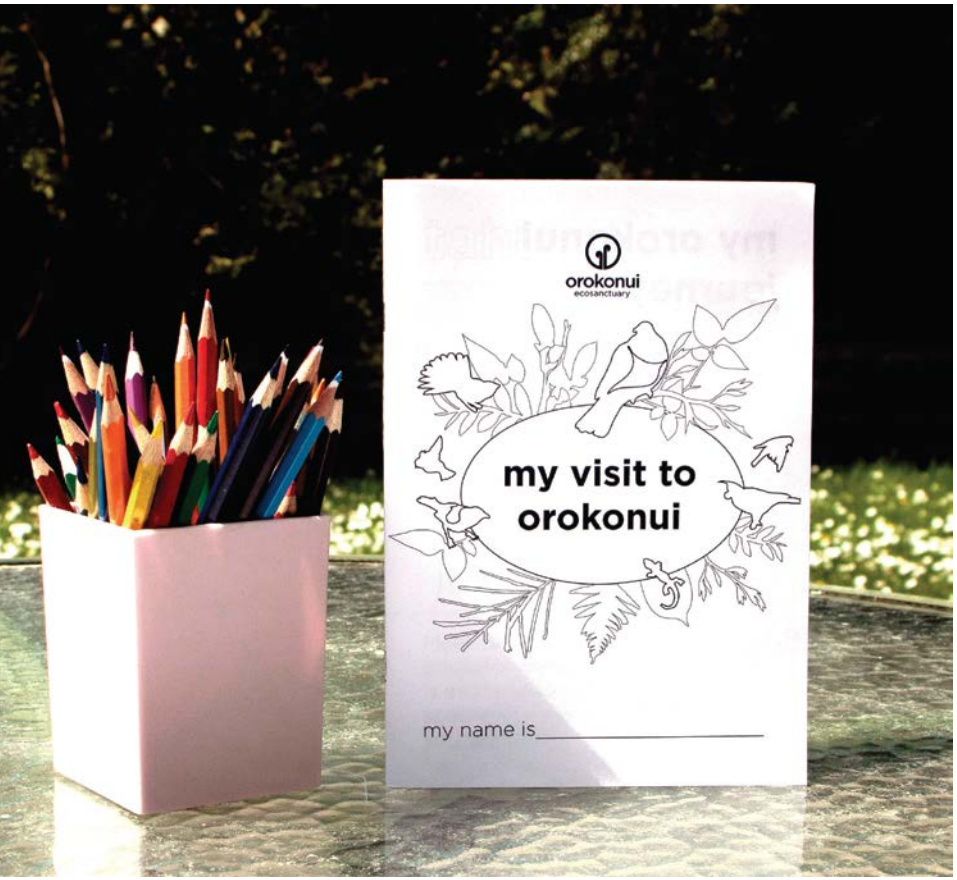
To improve the chances of survival for these birds, two students created a Virtual Reality environment teaching about **kākā** and a web-based game for members of the public to play.

Activism and Civic Participation

Project 3.

In the web-based game players have to make choices, for example about food, planting and fencing, that can make a residential property kākā friendly or not. By playing the game people will learn how to look after kākā, to create a “social halo” around the ecosanctuary where the birds will still be safe. A new website will feature this game and the Virtual Reality environment along with a web portal for people to report sightings of kākā.

Social Interactions and Relations



engagement with children

Project 2.

The Orokonui Ecosanctuary, is looking forward to using the new resources to increase children's engagement. A sponsor has covered the costs of production of 10,000 colouring books, which are in use already.

Building children's knowledge and empathy for species will help create a sense of community with them.

City and Environmental Planning

Project 1.
The gate sensor was envisaged to help keep juvenile kiwi, New Zealand's iconic flightless bird, safe in their enclosure. The project has been expanded so that the students are now working on devices for all the different gates in the predator-proof perimeter fence as well.
Project 3.
This project aligns with the Predator Free Dunedin 2050 campaign.

Skill Training and Design Education

Projects 1, 2, 3.
Students learn project management and client engagement skills as well as applying what they have been learning.

Job Creation

Projects 1, 2, 3.
Ecotourism is a growth sector in Dunedin, including for cruise ship visitors.

Storytelling and Visualisation

Project 3.
The Virtual Reality environment created by the students enables users to see kākā fly into a forest clearing to feed. The kākā talk to each other, so users can hear them tell their stories. Storytelling provides a powerful way to learn about the birds.

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