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UNIVERSITY of BALLARAT

April 2000

Canadian Wetlands Project

Timelines

- **1992** Property purchased fronting Geelong Road, Ballarat.
- **1994** Additional adjoining property purchased.
- **1995** Wetlands included in the Corporate plan for the area.
- **1997** Launch of Wetlands Development by Minister Maclennan.
- **1998** Preliminary planning and plant identification underway.

  Contract signed for funding - Department of Employment, Workplace Relations and Small Business (DEWRSB).
- **1999** Stage 1: Planning finalised, earthworks undertaken and weed infestation assaulted.

  "Work for the Dole" project undertaken at the site.

  Deluge of rain on Boxing Day provides the centrepiece of the project, the just-completed dam, with a body of water to overflowing level.

  Waterbirds move in and the germination of native wetland plant species begins.
- **2000** Stage 2: Plans developed.

  "Work for the Dole" project planned to plant native vegetation.

Direct Funding

University of Ballarat.

Department of Employment, Workplace Relations and Small Business.

Corangamite Catchment Management Authority.

Background

In the mid 1990's, the University of Ballarat created the Ballarat Technology Park. The City of Ballarat was contracted to prepare a Development Plan for the Technology Park. The plan, which was completed in January 1995, incorporated the establishment of a wetland reserve as part of the development. The establishment of the wetlands created an opportunity to ameliorate severe bank erosion and flash flooding in the headlands of the Canadian Creek, which have historically caused problems in both urban and rural areas downstream. As time has progressed, two major buildings have been constructed on the park and to utilise the low-lying areas, the most recent initiative has been the development of Stage 1 of the Canadian Wetlands. It provides a pleasant and aesthetic outlook, however on closer examination, you will discover the area provides the habitat for many waterbirds and regeneration of numerous native plants.

The Project - Canadian Wetlands

Planning and execution of the Canadian Wetlands has drawn together a wide range of bodies. These include the University environmental scientists and the physical resources section, City of Ballarat, The Mt Helen Residents Group Inc, Central Highlands Water, Corangamite Catchment Management Authority, Department of Natural Resources, Vicroads, LINCS (Linear Network of Community Spaces) Co-ordinator, Workready Ballarat Inc, Buninyong & District Historical Society Inc and many local residents. The expertise and resources from such a wide range of groups has enabled the project to establish credibility in its field.

Canadian Wetlands provide a keystone in sensible water and wetland management in Greater Ballarat and form part of a wider project throughout the state of Victoria.

Stage 1

Implementation of the project commenced in April 1999 with Stage 1 and has covered planning, earth-works and removal of some weed infestations, such as blackberries, gorse and watsonia. No pesticides or fertilisers have been used on the project. Low toxic herbicides have been used on wood and weed stumps to minimise the impact that it could have on wildlife. There is a number of walking tracks throughout the area and more are planned. This allows recreational use by nearby residents and an opportunity for "passive education" in the value of wetlands and their wildlife. The project presented an opportunity for a "Work for the Dole" scheme and an enthusiastic, John Thomas, Manager, Workready Ballarat Inc assisted with project management work.

The Mt Helen Residents Group Inc has been supportive of the project since inception. The residents of Mt Helen have a new panoramic view as a result of the development. Secretary Allan Arthars commented "*The process has been excellent. A walk through the area is interesting and it is rare not to meet somebody jogging, or taking their grandchildren for a walk.*" Consultation is continuing with the group and involvement in the developments has been well founded.

The university environmental scientists have provided valuable input by identifying a number of plant and animal species that are native to the area. Lecturer, Dr. Graeme Ambrose, who has a passion for the project, has provided expert advice and some training. The importance of this resource will be evident for students undertaking environmental science studies.

The influx of residents to the area over time has changed the terrain of the water catchment areas. An estimated 10 hectares of urban stormwater drains into the wetland from nearby Mt Helen. This has raised the potential for floods and erosion after heavy rain. Excessive stormwater flows were causing erosion in places and this was identified and addressed. A spillway on one dam and some culverts were incorporated in the overall project and the redirection of the water flow minimised the soil erosion that was evident. There are two dams that have emergent and submerged water plants that assist in settling sediments when a flow of water arrives. Micro organisms clean up the water contaminate naturally. The inflow of water also provides nutrients that promote growth of water plants in the dams. There is a litter trap incorporated into the project to collect packaging, paper cups and the like. A more orderly water flow is now in place as these catchments of the upper reaches of the Canadian Creek flow through to the Yarrowee River and eventually into the Barwon River and out to sea.

Two large trees are positioned in water on the bank of the main dam. These trees have been deliberately retained to provide roosting places for the wetland bird species such as cormarants. Other large trees have been retained along the creek to provide nesting and roosting hollows for rosellas, pardalotes, feathertail gliders and other species. The tree roots help to hold the banks in place and the existing pine trees will play a role in this regard. A stand of *Yarra Gums,* of local significance, can be found on the wetlands.

Soon after the construction of the dams was completed, the 1999 Boxing Day downpour filled them and wildlife immediately took up residence of the area. Over 50 wood ducks, a dozen black ducks and a pair of masked plovers were noticed soon after this fall of rain. The largest dam includes an island and nesting boxes have been placed on the island to facilitate breeding and minimising the fear from predators interfering with the multiplying flocks of birds already there. Autumn blooming wild flowers have been observed and an expectation of spring growth of plants is eagerly awaited. Some local provenance plants have been propagated for planting, once weed control is completed.

Stage 2

Stage 2 of the project is underway and a plan prepared by Thomson Hay & Associates Pty. Ltd., Landscape Architects. Negotiations have taken place with Rex Carland, Manager, Ballarat Regional Industries for a further "Work for the Dole" project to undertake plantings and further general maintenance. A grant of $11,300 from Corangamite Catchment Management Authority for non-labour costs has ensured delays will be minimal with the seasonal planting. The Thomson Hay management plan has established the next professional direction for the project - the revegetation plan.

Revegetation will comprise native plants of local origin, with some growing at present in the University hothouse. This policy will eliminate the possibility of inappropriate genes being introduced into the area. The upkeep and maintenance will be a challenge for all concerned. Hard coated seeds which no doubt are stored in the soil at present, when they germinate will require constant weed control.

There are other features in Stage 2 that will prove to be attractions and they include:

- Additional walkways
- Bird hides
- Interpreting facilities such as sign boards and pamphlets.

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