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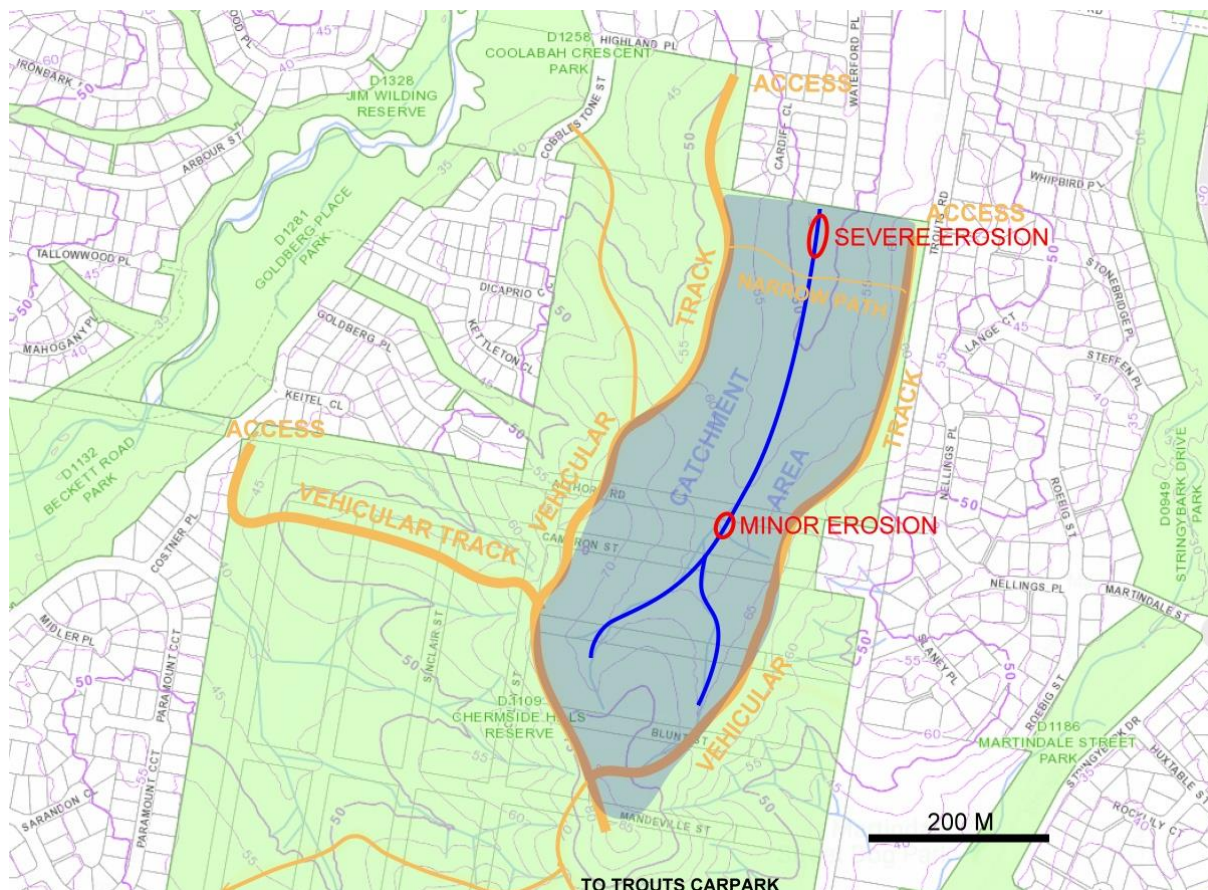
Chermside Hills Reserve - Ecological Enhancement

Overview

The Chermside Hills Reserve (Reserve) is an important part of the Mountains to Mangroves Corridor, which is a wildlife corridor that extends from the D'Aguiar Ranges to Boondall Wetlands and Moreton Bay. The Reserve is home to a variety of native fauna and in particular a dwindling colony of swamp wallabies. An area within the Reserve has been identified as a potential site for landscape rehabilitation and regeneration works (Project Site). It is expected that a major outcome of these works will be an improvement in feed and water availability for the local swamp wallaby colony. This in turn may help to retain or increase wallaby survival rates. These works are also intended to enhance overall biodiversity within the Reserve to the benefit of all flora and fauna in general.

Location

Situated in the suburb of McDowall, the Reserve is located approximately 12 kilometres north-west of Brisbane's CBD on the north-west corner of the intersection of Trouts and Hamilton Roads. A map of the Project Site being considered is set out below. This area is located in the north-east corner of the Reserve and is bordered by Stringybark Trail to the south and east, Grass Tree Trail to the west and the firebreak at the northern end of the Reserve. It is considered ideal for the purpose of this project due to the existence of a natural watercourse and large catchment area. Evidence of wallaby activity is also prevalent in this area.



Flora

The Reserve provides protection for more than 200 native plant species from 72 families, representing 25 per cent of the native plant families found in Australia. These include grass trees, banksias, casuarinas, weeping myrtles, blueberry ash, small matrush, comb ferns, bloodwoods, rough-barked apples, stringybarks and sheoaks. The Keraudrenia species, rare in this region, is also found within this reserve.

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The primary weeds in the Reserve have been introduced from people's gardens through dumping, for example Singapore daisy (*Sphagneticola trilobata*).

Fauna

There are 115 bird species that have been recorded in the area, including honeyeaters, treecreepers, pardalotes, fairy wrens, dollarbirds, rainbow bee-eaters, spangled drongos, grey shrike-thrushes, kingfishers, lorikeets, crested hawks and tawny frogmouths. Reptiles include blue-tongued lizards, goannas, water dragons, skinks and geckoes. Turtles, frogs and fish can be found in the nearby creeks. A variety of mammals also live in the Reserve including swamp wallabies, sugar gliders, possums, bats and flying foxes.

Enhancement Opportunities

The following have been identified as some of the key opportunities for enhancing the ecology in the Project Site:

- Rectifying erosion in the major watercourse running south to north terminating near Waterford Place;
- Improving hydrology, especially water retention, by slowing the flow of water throughout the catchment area. Currently heavy falls result in fast flowing storm water that enters the drain at the northern end near Waterford Place;
- Improving soil conditions through water retention, application of bush mulch and additional planting;
- Improving feed and water for wallabies and other fauna; and
- Raising flora biodiversity particularly with respect to ground covers and low and middle storey plants associated with the particular combination of geology, landform and soil in the Reserve.

Proposed Activities

Proposed project activities include:

- Perform a landscape assessment and develop a project plan by reference to one or more of the guidelines listed below under the heading Reference Material;
- Develop a formal valuation of benefits and costs;
- Removal of rubbish and foreign material;
- Undertake appropriate and flora and fauna sensitive works for the purpose of achieving the project objectives. These may include but are not limited to the following:
 - Erosion reduction and water retention, within the project site and focusing along the full length of watercourse;
 - Small increase in height of built up narrow track at northern end to act as water retention structure;
 - Mulch layer and soil improvement activities;
 - Planting works to improve flora diversity and enhance fauna habitats;
 - Specific planting for swamp wallaby feed preferences; and
 - Flora and fauna surveys.

Expected Benefits

A formal valuation of benefits will be conducted as part of enhancing this proposal once initial project approval / endorsement is obtained from Brisbane City Council. Expected Benefits of this project include:

- Environmental:
 - Wildlife preservation
 - Habitat for native wildlife is not only preserved, but increased;
 - Increased biodiversity;

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- Improvement of water quantity and quality;
 - Erosion is stabilised and reduced;
 - Enhancement of soil quality; and
 - Increment of carbon sequestration.
- Social:
 - Community involvement; and
 - Health, wellbeing and fitness benefits.
- Educational/Cultural:
 - Increased environmental and heritage awareness of the Reserve among visitors and local community; and
 - Enhancement of ecological rehabilitation and knowledge for project participants.

Estimated Cost

A full costing exercise will be conducted as part of enhancing this proposal once initial project approval / endorsement is obtained from Brisbane City Council. Labour is expected to be mainly undertaken by volunteers from the community. Wherever possible and appropriate natural materials will be sourced from within the Reserve in the first instance. Other potential costs may include one or more of the following:

- Materials to assist with erosion control and slowing water flows eg: coir logs or similar, timber stakes, tree covers.
- Plant stock;
- Delivery of materials;
- Rubbish removal of large items;
- Contractor support if significant landscape works are required;
- Consultancy advice / expert support.

Potential Funding Sources

- Brisbane City Council [Community Conservation Assistance](#) (2019/20 round opened on 1 July 2019)
- Brisbane City Council [Environmental Grants](#) (Next round closing 28 October 2019)

Reference Material

- Southeast Queensland Ecological Restoration Framework
- Cooperative Research Centre for Water Sensitive Cities - Improving the Ecological Function of Urban Waterways: A Compendium of Factsheets
- Society for Ecological Restoration - National Standards for the Practice of Ecological Restoration in Australia
- Restoring Natural Areas in Australia by Robin A. Buchanan (2009)
- Natural Sequence Farming and Landscape Improvement Methodologies

Site Photos

Refer to following page

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Site view – southern end looking north, high ground.



Gully Erosion – southern end, western branch



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Chermside Hills Reserve - Ecological Enhancement

Gully Erosion – southern end, eastern branch



Soil type example



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Vegetation – mid-point, low ground.



Gully erosion – north end of site.



