

MAROOCHY SHIRE COUNCIL PLANNING SCHEME POLICY NO. 3

Rehabilitation Plans

1 Introduction

1.1 Purpose

The Purpose of this policy is to outline the information requirements required to be included in a Rehabilitation Plan.

1.2 Application of Policy

This policy provides guidance on how to prepare rehabilitation plans in accordance with the:

- (a) Code for Nature Conservation and Biodiversity, Performance Criteria 8; and
- (b) Code for Waterways and Wetlands Acceptable, Measure A1.3.

1.3 Other Reference Documents

There are a number of reference documents that may be relevant, they include:

- Planning Scheme Policy No.2 Ecological Assessment
- *Conservation Assessment and Management Plans for Coastal Bushland Remnants in Maroochy Shire*, Mary Maher and Associates 1997
- *Conservation Assessment and Management Plans for Remnant Vegetation in Maroochy Shire*, Mary Maher and Associates 1999.
- *The latest version of remnant regional ecosystem mapping*, Department of Natural Resources, Mines and Energy.
- *Regional Vegetation Management Plan*, Department of Natural Resources Mines and Energy.
- *A Rehabilitation Manual for Australian Streams Vol.2*. Rutherford, I.D., Jerie, K. & Marsh, N. 2000
- *Maroochy Waterways Management & Rehabilitation*. Hydrobiology, 4Site & Maroochy Shire Council 2004.
- *Mary River & tributaries Rehabilitation Plan*. Mary River Catchment Coordinating Committee 2001.
- *Lower Obi Obi Creek Rehabilitation Management Plan*. Earth Tech & Department of Natural Resources & Mines 2202.

- *Petrie Creek Rehabilitation Management Plan & Works Manual*. Dudgeon, S (Department of Natural Resources & Mines) 2001.
- *Checklist for Rehabilitation and Revegetation*, Department of Environment and Heritage, Canberra, June 2004, <http://www.deh.gov.au/industry/industry-performance/index.html>
- *Riparian Land Management Guidelines, Volume Two: On-ground Management Tools and Techniques*, Land and Water Australia, Lovett, S. and Price, P. (eds), Canberra, March 2002.

2 Rehabilitation Plans

2.1 Aim

The aim of this Planning Scheme Policy is to outline the necessary measures for consideration when preparing rehabilitation plans to ensure that the ecosystem functions of the areas to be rehabilitated are preserved or enhanced.

2.2 Definition of Rehabilitation Objectives

A series of rehabilitation objectives should be defined that are measurable and achievable through the implementation of the plan. Rehabilitation objectives need to have due regard to the particular functions of the ecosystem such as biodiversity, habitat, fauna corridors, stream bank protection, shading, and scenic amenity.

Objectives need to be consistent with the outcomes of the Ecological Assessment Report (Planning Scheme Policy No. 2) such that rehabilitation will achieve a floristic and structural composition consistent with environmentally sensitive areas¹ and/or regional ecosystem type and Schedule 1 of the Nature Conservation Code. Rehabilitation can be undertaken using regeneration or revegetation. Where the rehabilitation plan is for areas outside of environmentally sensitive areas, a guide to the required floristic and structural composition can be obtained from the pre-European Regional Ecosystem Extent Map available from the Queensland Herbarium. Applicants should also be aware of their obligations to comply with any relevant State or Commonwealth requirements for environmentally sensitive areas.

The objectives will need to identify short-term (pre initial planting) and long-term (post maintenance phase) objectives and reflect the need for minimizing disturbance and undertaking progressive rehabilitation as site development occurs. The ultimate goal of the rehabilitation is the creation of a self-sustaining, functional ecosystem, which can be considered as Remnant Vegetation as defined in the *Vegetation Management Act, 1999*.

1) The term 'environmentally sensitive areas' is defined in Volume 1 of this Planning Scheme.

For areas of terrestrial vegetation the objectives will need to reflect typical undisturbed vegetation composition (e.g. reference sites for the relevant pre-European regional ecosystem).

For areas of riparian vegetation, the objectives will need to reflect typical undisturbed vegetation composition (e.g. reference sites) for the waterway where the rehabilitation is to occur. Where suitable reference sites cannot be determined in the local waterway, other reference sites in neighbouring waterways can be used for guidance. Where Environmental values of waterways have been established (see the Integrated Water Management Code) the objectives need to be consistent with those values.

2.3 Weed and Pest Management

Areas of disturbance are prone to rapid invasion by weed and pest species. The Rehabilitation Plan should stipulate key management and maintenance actions necessary to reduce the likelihood of colonisation by weed species. This can include specific actions or refer to Pest Management Fact Sheets published by government agencies (e.g. Queensland Department of Primary Industries and Fisheries).

2.4 Soil Management

The Rehabilitation Plan should outline the measures proposed to ensure an adequate quantity of topsoil will be obtained for rehabilitation. This should entail procedures for stripping and stockpiling (if suitable material is on site), soil amendment and/or fertilizer requirements and management of noxious plant seed material (if soil is infected).

2.5 Erosion and Sediment Control

Requirements for managing erosion and sediment during rehabilitation will be required in the plan. These should be consistent with the overall erosion and sediment control plan for the site. Requirements for erosion and sediment control are set out in the Code for Operational Works and the Planning Scheme Policy for Operational Works.

2.6 Site Preparation Techniques

Procedures for preparing the rehabilitation site or sites will require documentation within the Rehabilitation Plan to demonstrate that suitable measures will be undertaken to ensure that the seed bed and/or planting soil will be in a condition able to support the rehabilitation. These procedures should allow for soil moisture preparation, aeration, weed removal and mulching.

2.7 Species Selection and Planting

In sourcing and selecting species for revegetation, due consideration will need to be given to the overall objectives for the Plan. This will include determination of species consistent with the regional ecosystem type defined in the objectives, identification of suitable suppliers, quantity and timing of plant deliveries, types of plant stock to be used, planting procedures and drawings, protection measures (e.g. from fauna and human activities).

2.8 Fauna Habitat Creation

Procedures for implementation of artificial components to assist the recovery of specific fauna should be considered and documented.

2.9 Maintenance Requirements

Clear and concise practices, schedules, and responsibilities will need to be included within the Plan to ensure that the rehabilitation area is properly maintained over the establishment phase and in the long-term. These practices will need to reflect long-term ownership (e.g. Council, Body Corporate, freehold). The maintenance practices will need to cover:

- (a) Replanting failure;
- (b) Erosion repair;
- (c) Fire management;
- (d) Pest and weed control;
- (e) Fauna management;
- (f) Watering;
- (g) Further soil modification (fertilisers, amendment); and
- (h) Monitoring.

2.10 Monitoring

The Rehabilitation Plan should specify indicators for monitoring the success of rehabilitation that are consistent with the Plan's objectives and at least include the following:

- (a) Physical (stability, resistance to erosion etc); and
- (b) Ecological (plant condition, fauna disturbance, human disturbance species richness, density, canopy cover, weed colonisation etc).

The Plan should also determine reporting requirements for the monitoring program as they may be required by Council to demonstrate the success of implementation of the Rehabilitation Plan.

2.11 Bonding

Performance of the revegetation works may be linked to a monetary performance bond. Bond relinquishment may be incremental and linked to a set of floristic and structural milestones to be stipulated within the revegetation plan. Any bonding arrangements are to be commensurate with the total cost of the revegetation works.